DRAFT
ENVIRONMENTAL IMPACT REPORT
VOLUME 1
GLAMIS SPECIFIC PLAN
SCH NO: 2020100348

Glamis Specific Plan (SP 19-0001)
Zone Change (19-0006)

January 2023

Prepared for:
Imperial County
Planning & Development Services

Prepared by:
McIntyre Environmental

DRAFT

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Glamis Specific Plan (SP 19-0001)
Zone Change (19-0006)

Prepared for
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ACRONYMS AND ABBREVIATIONS

AAQP	Ambient Air Quality Plan
AB	Assembly Bill
ACI	American Concrete Institute
ADT	Average Daily Traffic
AEP	annual exceedance probability
AF	acre feet
AFY	Acre feet per year
APCD	Air Pollution Control District
APE	Area of Potential Effect
APN	Assessor's Parcel Number
APS	alternate planning strategy
AQAP	Air Quality Attainment Plan
AQIA	Air Quality Impact Assessments
BACM	Best Available Control Measure
BACT	best available control technologies
BAU	Business as Usual
BLM	Bureau of Land Management
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEnergy	CalEnergy Operating Corporation
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CESA	Cumulative Effects Study Area
CFR	Code of Federal Regulations
CGC	California Government Code
CGS	California Geological Survey

ACRONYMS AND ABBREVIATIONS

CHP	California Highway Patrol
CH_4	Methane
CMAGR	Chocolate Mountain Aerial Gunnery Range
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
CO_2	Carbon dioxide
CPUC	California Public Utilities Commission
CR	Commercial Recreation
CRHR	California Register of Historical Resources
CSSC	California Species of Special Concern
CTCs	county transportation commissions
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
CWA	Clean Water Act
DEIR	Draft Environmental Impact Report
DIF	Development Impact Fee
DOT	Department of Transportation
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
EAP	Energy Action Plan
EHS	Environmental Health Services
EIR	Environmental Impact Report
EO	Executive Order
EOP	Emergency Operations Plan
EPAct	Energy Policy Act of 1992
ESA	Endangered Species Act
ESA	Environmentally Sensitive Area
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping & Monitoring Program
FTA	Federal Transit Administration
FTHL	Flat-tailed horned lizard
GHG	Greenhouse gases
GSP	Groundwater sustainability plan

ACRONYMS AND ABBREVIATIONS

GSPA	Glamis Specific Plan Area
GWP	global warming potential
H_2S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HDM	Highway Design Manual
HMTS	Hazardous Materials Technical Study
HRP	Habitat Restoration Plan
HUD U.S.	U.S. Department of Housing and Urban Development
ICAPCD	Imperial County Air Pollution Control District
ICE	Intersection Control Evaluation
ICFD	Imperial County Fire Department
ICPDSD	Imperial County Planning & Development Services Department
ICTC	Imperial County Transportation Commission
IEPR	Integrated Energy Policy Report
IID	Imperial Irrigation District
IRWMP	Imperial Integrated Regional Water Management Plan
IS	Initial Study
ISDRA	Imperial Sand Dunes Recreation Area
ITP	Incidental Take Permit
IVT	Imperial Valley Transit
JCP	joint contingency plan
KOP	Key Observation Points
LCFS	Low Carbon Fuel Standard
LEA	Local Enforcement Agency
LLG	Linscott Law and Greenspan
LOS	Levels of Service
LSA	Lake and Streambed Alteration
LTF	Local Transportation
MBTA	Migratory Bird Treaty Act
MPO	Metropolitan Planning Organizations
MHMP	Multi-Jurisdictional Hazard Mitigation Plan
MLD	most likely descendant
MMTs	million metric tons
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration

ACRONYMS AND ABBREVIATIONS

MOU	memorandum of understanding
mph	miles per hour
MPO	Metropolitan Planning Organizations
MT	metric ton
MW	megawatt
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NADW	North Algodones Dunes Wilderness
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NIMS	National Incident Management System
NO_2	Nitrogen Dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NORM	Naturally Occurring Radioactive Materials
NOx	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Place
O3	Ozone
OA	Operational Area
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHV	Off highway vehicle
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Pb	Lead
PDPM	Project Development Procedures Manual
PGAM	Peak Ground Acceleration Mean
PM_{10}	Respirable Particulate Matter 10 micrometers or less in diameter
$PM_{2.5}$	Fine Particulate Matter 2.5 micrometers or less in diameter
PRC	Public Resources Code
PV	Photovoltaic

ACRONYMS AND ABBREVIATIONS

R&D	Research and Development
RAMP	Recreation Area Management Plan
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Assessment
RMS	root mean squared
RMZ	Recreation Management Zones
ROG	Reactive Organic Gases
ROW	right of way
RPS	renewable performance standard
RTP	Regional Transportation Plan
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
S-1	Open Space/Recreation
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCH	California State Clearinghouse
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SDNHM	San Diego Natural History Museum
SEMP	Special Events Management Plan
SEMS	Standardized Emergency Management System
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SOx	Sulfur Oxide
SR	State Route
SRMA	Special Recreation Management Area
SSAB	Salton Sea air Basin
STA	State Transit Assistance
SVRA	State Vehicular Recreation Areas
SWRCB	California State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
UPRR	Union Pacific Railroad
TDA	Transportation Development Act
TIA	Traffic Impact Analysis

ACRONYMS AND ABBREVIATIONS

TMDL	total maximum daily load
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USBRS	US Bicycle Route System
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
VMT	vehicle miles traveled
VRI	Visual Resources Inventory
VRM	Visual Resource Management
WSA	Water Supply Assessment
ZC	Zone Change
ZNE	Zero Net Energy

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1.0 EXECUTIVE SUMMARY

This Draft Environmental Impact Report (EIR) has been prepared for the Glamis Specific Plan Project (Project); a development project located in Imperial County, California. This document analyzes the potential environmental effects associated with implementation of the Project (including direct and indirect impacts, secondary impacts, and cumulative effects).

1.1. Purpose and Scope of the Environmental Impact Report

This Draft EIR has been prepared for the Imperial County Planning and Development Services Department (ICPDSD), with the County of Imperial (County) acting as the lead agency under California Environmental Quality Act (CEQA) Guidelines Sections 15050 and 15367, to analyze the potential environmental effects associated with implementation of the proposed Glamis Specific Plan Project.

An EIR is a public informational document used in the planning and decision-making process. The purpose of the EIR is to demonstrate that the County has made a good faith effort at disclosing the potential for the Project to result in significant impacts to the physical environment. As such, the EIR does not consider potential fiscal impacts, cost-benefit assessment, or social impacts. Nor does the EIR present recommendations to the decision-making bodies for approval or denial of the Project based on the environmental findings. Rather, the EIR is intended to provide additional information about the Project when, if, and at which time it is reviewed and considered by the County in its discretionary decision-making.

This Draft EIR provides decision-makers, public agencies, and the public in general with detailed information about the potential significant adverse environmental impacts of the proposed Glamis Specific Plan Project. By recognizing the environmental impacts of the proposed project, decisionmakers will have a better understanding of the physical and environmental changes that would accompany the Project should it be approved. The Draft EIR includes recommended mitigation measures which, when implemented, would provide the lead agency with ways to substantially lessen or avoid significant effects of the Project on the environment, whenever feasible. Alternatives to the proposed project are presented to evaluate alternative development scenarios that can further reduce or avoid significant impacts associated with the Project.

In accordance with Section 15082 of the CEQA Guidelines, the County prepared and distributed a Notice of Preparation (NOP) for the proposed Project that was circulated for public review in October 2020. The NOP comment period is intended to notify responsible agencies, trustee agencies, and the public that the County, acting as the lead agency, was going to prepare an EIR. The scope of the analysis for this EIR was determined by the County as a result of initial project review and consideration of agency and public comments received in response to the NOP. A copy of the NOP and comments received during the public comment period are included in Appendix A-1 to this Draft EIR.

The County will consider the information in the EIR, public and agency comments on the EIR, and testimony at public hearings in their decision-making process. As a legislative action, the final decision to approve, conditionally approve, or deny the proposed project is made by the Board of Supervisors. Other discretionary actions, approvals and permits are described in Chapter 3.0, Project Description.

1.2. Project Location and Setting

The Glamis Specific Plan Area (GSPA) is located on private land that is directly adjacent to the Imperial Sand Dunes Recreation Area (ISDRA) in an unincorporated area of Imperial County. It contains the small unincorporated community of Glamis which is centered around the Glamis Beach Store. The Planning Area encompasses 143 acres and is composed of seven (7) parcels of land identified as assessor parcel numbers (APN) 039-310-017; -022; -023; -026; -027; -029; and -030. The Planning Area is regionally accessible via State Route 78 (SR 78) (a.k.a. Ben Hulse Highway), which serves as the primary form of access for motorists. Ted Kipf Road, a County-maintained dirt road, serves as a secondary access extending northwesterly for approximately 17 miles from SR-78 to Niland-Glamis Road. The eastern half of the Planning Area is also traversed by the Union Pacific Railroad (UPRR) which runs north and south and by Wash Road which parallels the UPRR south of SR-78.

1.3. Project Objectives

The location and historical recreational use of the GSPA is key to planning the GSPA. The Specific Plan Area designation in the County's General Plan establishes the intended general land use character. However, the Glamis community is unique in that it has served, and will continue to serve, as the premiere locale for hundreds of thousands of OHV riders and recreational visitors from around the world. The GSPA's location within the County, together with SR-78 bisecting the project site, the proximity to Interstate 8 to the south and the State of Arizona to the east, makes it a desirable location for recreational visitors to travel efficiently east or west. The GSPA attempts to build off the historical Glamis experience by providing expanded recreational, commercial, entertainment, and hospitality experiences while addressing environmental, engineering, commercial, public safety, and aesthetic needs that have been identified during the planning process. Finally, the GSPA will eliminate the need for special event-related annual CUPs and/or discretionary temporary event permits through implementation of a Special Events Management Plan (SEMP) notification that will include standards and protocols in accordance with the regulatory requirements of the County and key stakeholder agencies for regulation of special events.

The objectives for the GSP are the following:

- Create a man-made environment that is compatible with the natural environment, surrounding land uses, and the desert climate.

- Ensure that development within the GSPA is consistent with the County's General Plan and will protect public health, safety and general welfare, while complementing surrounding land uses and zoning.
- Provide design criteria that will guide developer(s) and the County in the development of proposed land uses by including descriptive text and illustrative exhibits setting forth the foundation of the overall development of the project site.
- Enable Special Events through implementation of a SEMP.
- Adhere to the Zoning Ordinance for the GSPA in Section 3, Zoning Ordinance.
- Provide recreational and ancillary facilities that serve the needs of the Glamis community and recreational visitors.

1.4. Project Synopsis

The proposed Specific Plan creates a distinctive masterplan for recreation-serving land uses which are consistent with the historical use of the GSPA. It provides for a great deal of flexibility as to the development of potential land uses within the GSPA to promote the concept of an open desert playground that derives from the "Camp RZR" event, historically held in October of each year at the GSPA, and the surrounding ISDRA. This area attracts hundreds of thousands of OHV enthusiasts every Halloween, Thanksgiving, Christmas, New Years, and President's Day weekend.

The GSPA consists of eight (8) Planning Areas. Planning Areas 1, 2, 3, and 4 would be zoned as Commercial-Recreation 3 (CR-3) (Figure 4-1, Proposed Zoning and Planning Areas). This designation is intended to accommodate a large variety of commercial uses that are generally supportive of OHV activities and provide for large scale events. Planning Areas 5 and 6 would be zoned Commercial-Recreation 1 (CR-1). This zone is intended to allow small scale, low density development that will not enhance or contribute to the use of off-road vehicles on public highways or roads. This could include employee housing, research and development (R & D) facilities, Recreational Vehicle (RV) park with restrictions, and other similar uses.

Planning Area 7 is designated Commercial-Recreation 2 (CR-2). This designation is intended to accommodate recreational related commercial opportunities and projects that will support the Off Highway Vehicle (OHV) and recreational uses of the area at a higher density and allowable uses than CR-1 but still be limited to specific uses that are less intense and more occasional than those allowed in CR-3. This could include small repair shops, limited housing, RV park with restrictions and the like.

Planning Area 8 would be re-zoned to the County's existing S-1 (Open Space/Recreation) designation. S-1 is used to recognize areas that embody the unique Open Space and Recreational character of Imperial County including the deserts, mountains and water-front areas. The S1 designation is primarily characterized by low intensity human utilization and small-scale recreation related uses.

As envisioned, the proposed Specific Plan will facilitate an entertainment enclave among the iconic dunes. This enclave will enhance the historic experiences that OHV riders and visitors expect when they visit the dunes.

The following is a brief description of the proposed land uses within the GSPA (Figure 4-2).

Recreational - The GSPA provides an opportunity for a variety of recreational activities to complement the established "Glamis" sand dunes experience of the surrounding ISDRA. These include an Adventure Center (offering activities such as OHV training, OHV rentals, etc.), amusement facilities, desert tours (off road experience), racetrack, shooting range, park/playground/picnic area, and other recreational-based activities.

Commercial/Retail - The GSPA will allow for a wide range of commercial and retail development, which include fuel stations, rental facilities, and sporting goods stores to accommodate the needs of visitors to the Glamis area. It may also provide for RV Park(s) to accommodate a small number of users that desire to have conveniences not found in open dry camping.

Storage - OHV and RV storage is an existing land use within the project vicinity. The GSPA will provide for storage for OHVs and RVs to allow visitors to store their vehicles at Glamis year around.

Entertainment - The Glamis area has long been known as the premier destination for OHV enthusiasts to enjoy their recreational activities within the world-renowned ISDRA. The GSPA will allow for a range of entertainment land uses whose purpose is to enhance the visitors experience to the Glamis area. Entertainment land uses could include an obstacle course, fireworks display area, and racetrack.

Hospitality - With an average annual attendance of 200,000 visitors to the Glamis area, the GSPA will provide for the development of various hospitality services to provide visitors with the accommodations they need to fully enjoy all that the Glamis area has to offer. Hospitality land uses may include medical services facility, mobile food trucks, tourist information center, public showers, public restrooms, and hotel/motel facilities.

Residential - The GSPA will allow for limited residential development to accommodate those who require temporary housing in Glamis. Housing will be developed in the form of guest, employee housing, seasonal private residences and temporary use of RVs.

Renewable Energy - Due to the remote location of the project vicinity, renewable energy facilities will be developed to provide electricity to the project vicinity. The GSPA will allow for the development of a solar generation facilities (including battery storage) located throughout the project vicinity (Figure 4-2).

Infrastructure Improvements - In order to properly accommodate the large volume of visitors to the project vicinity, existing water and wastewater facilities will need to be improved along with the

development of additional infrastructure. The GSPA will allow for the development of utility buildings, utility substation(s), and water/wastewater treatment facilities.

Research & Development Facility - The GSPA provides for a R&D facility that will take advantage of the close proximity of the ISDRA. This R&D facility will allow Polaris to test their equipment in a natural and private setting.

1.5. Summary of Significant Impacts and Mitigation Measures

Based on the analysis contained in Chapter 4 of this Draft EIR, the proposed Project would result in the potential for significant impacts to agricultural and forestry, air quality, biological resources, cultural resources, geology and soils, paleontological resources, hazards and hazardous materials, hydrology and water quality, public services, and tribal cultural resources. Mitigation measures have been identified which would reduce impacts to all resources to below a level of significance.

On the following page, Table 1-1 summarizes the potential environmental impacts of the Vikings Solar Battery Storage Project by impact area. It also provides a summary of the mitigation measures proposed to avoid or reduce significant adverse impacts and the level of significance after mitigation.

1.6. Environmental Effects Found not to be Significant

Several environmental topics were found to be less than significant without mitigation including agricultural and forest resources, mineral resources, recreation, and wildfires. These topics are described in Chapter 7.0, Environmental Effects Found not to be Significant.

1.7. Areas Of Controversy

Pursuant to CEQA Section 15123(b)(2), an EIR shall identify areas of controversy known to the lead agency, including issues raised by the agencies, and the public, and issues to be resolved. The NOP for the EIR was distributed on October 20, 2020. The 35-day public review and comment period began on October 20, 2020, and a scoping meeting was held on October 29, 2020. Public comments were received on the NOP that reflect controversy on several environmental issues.

Issues of controversy raised include concerns related to transportation and traffic. The NOP and comment letters received are included in this EIR as Appendix A-1.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 AESTHETICS			
Impact 5.1-1: Would the Project have a substantial adverse effect on a scenic vista?	Less than Significant.	**None**	Less than Significant.
Impact 5.1-2: Would the Project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	Less than Significant.	**None**	Less than Significant.
Impact 5.1-3: Would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	Less than Significant.	**None**	Less than Significant.
Impact 5.1-4: Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	Less than Significant.	**MM AES-1: Selection of Appropriate Solar Panels** Future renewable energy facilities would be required to select solar panels that would help minimize reflectivity and would be oriented in a manner that would minimize reflectivity towards high use recreational areas on surrounding BLM lands.	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		MM AES-2: Glint and Glare Analysis for Solar Generating Facilities Future renewable energy facilities would be required to consider siting and design features that would minimize glint and glare and take appropriate actions. These actions include identifying glint and glare effects, assessing and quantifying these effects to determine potential safety and visual impacts, having qualified people conduct such assessments and identifying mitigation measures to address significant impacts. Methods to minimize night-sky effects include using minimum intensity lighting of an appropriate color consistent with safety needs, prohibiting strobe lighting except where it is required for safety; shielding all permanent lighting unless otherwise required for safety; mounting lighting so that light is focused downward; controlling lighting with timers, sensors, and dimmers; and using vehicle-mounted lights for nighttime maintenance work rather than permanently mounted lighting.	
5.2 AIR QUALITY			
Impact 5.2-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant.	**MM AQ-1: Dust Control Plan** Prior to the issuance of a grading permit or building permit, the project applicant shall be required to submit a Dust Control Plan to the ICAPCD for approval. The Dust Control Plan will identify all sources of PM10emissions and associated mitigation measures during the construction and operational phases (see Rule801F.2) to ensure there would be no exceedances of the ICAPCD fugitive dust threshold. The applicant shall submit a "Construction Notification Form" to the ICAPCD 10 days prior to the commencement of any earthmoving activity. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		the no greater than 20-percent opacity performance standard for dust control and address the following parameters: • All disturbed areas, including bulk material storage that is not being actively used, shall be effectively stabilized; and visible emissions shall be limited to no greater than 20-percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing particulate matter with 5 percent or greater silt content. For modeling purposes, it was assumed that watering would occur twice daily. • All on-site unpaved roads segments or areas used for hauling materials shall be effectively stabilized. Visible emissions shall be limited to no greater than 20percent opacity for dust emissions by restricting vehicle access, paving, application of chemical stabilizers, dust suppressants and/or watering. • The transport of bulk materials on public roads shall be completely covered, unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks shall be cleaned and/or washed at the delivery site after removal of bulk material, prior to using the trucks to haul material on public roadways. • All track-out or carry-out on paved public roads, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment(including tires) that may then fall onto the pavement, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line except where such material or activity is exempted from stabilization by the rules of ICAPCD.	
		MM AQ-2: NOX Emissions Controls Each project shall implement all applicable standard measures for construction combustion equipment for the reduction of excess NOx emissions as contained in the Imperial County CEQA Air Quality Handbook and associated regulations at the time the proposals are brought forward. As of the date of publication of the Draft EIR, these measures include: • Use alternative-fueled or catalyst-equipped diesel construction equipment, including all off-road and portable diesel-powered equipment. • Minimize idling time, either by shutting equipment off when not in use or reducing the time of idling to five minutes at a maximum. • Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use. Replace fossil-fueled equipment with electrically driven equivalents (assuming powered by a portable generator set and are available, cost effective, and capable of performing the task in an effective, timely manner). • Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing construction activity during the peak hour of vehicular traffic on adjacent roadways. • Implement activity management (e.g., rescheduling activities to avoid overlap of construction phases, which would reduce short-term impacts).	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.2-2: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Less than Significant.	**MM AQ-1** **MM AQ-2**	Less than Significant.
Impact 5.2-3: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant.	**None**	Less than Significant.
Impact 5.2-4: Would the Project expose sensitive receptors to substantial pollutant concentrations?	No Impact.	**MM AQ-1** **MM AQ-2**	No Impact.
5.3 BIOLOGICAL RESOURCES			
Impact 5.3-1: Would the Project have a substantial effect on candidate, sensitive, or special status species identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Potentially Significant	**MM BR-1: Mitigation of Impacts to flat-tailed horned lizards and their habitat** Prior to construction of each Specific Plan activity, a Capture/Relocation Plan for flat-tailed horned lizard shall be prepared by a qualified biologist. The plan shall include preconstruction survey and monitoring methods, capture and relocation methods, and suitable relocation areas. The Capture/Relocation Plan may include additional protection measures during construction including: • Creating areas of land or small paths/culverts between project facilities for wildlife movement; • Installing silt fencing around work areas to prevent migration of adjacent wildlife into impact areas;	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Installing pitfall traps in spring/summer/fall to trap any individuals that remain on the site for removal from work areas); and/or • Biological monitoring during construction to inspect fencing and pitfall traps and relocate wildlife species out of harm's way, if required. The Capture/Relocation Plan shall be submitted to an approved by CDFW and the County of Imperial (or an agency delegated to oversee this program).	
		MM BR-2: Mitigation of Impacts to Jurisdictional Waters A jurisdictional delineation survey shall be performed to determine potential jurisdictional resources under Section404/401 of the CWA Section 1600-1616of the California Fish and Game Code, and the Porter-Cologne Water Quality Control Act for any activities that may substantially divert or obstruct the natural flow of or deposit debris, waste or other materials into any river, stream or lake. Current USACE delineation procedures and guidance consistent with "A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States" (Lichvar and McColley 2008) should be used to identify and delineate any wetlands or waters of the U.S.(WoUS) or both that may be subject to USACE and RWQCB jurisdiction (Lichvar et al. 2016; USACE 1987, 2008). Likewise, current CDFW procedures and guidance shall be used to identify and delineate any streambeds, rivers, or associated riparian habitat potentially subject to CDFW jurisdiction (California Fish and Game Code 2019). Temporary and permanent impacts to all jurisdictional resources shall be compensated through a combination of habitat creation (i.e., establishment),enhancement, preservation, and/or and restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Any creation, enhancement, preservation, and/or restoration effort shall be	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		implemented pursuant to a Habitat Restoration Plan (HRP), which shall include success criteria and monitoring specifications, and shall be approved by the permitting agencies and County of Imperial. A habitat restoration specialist will be designated and approved by the permitting agencies and will determine the most appropriate method of restoration. Temporarily impacted drainage features shall be recontoured to preconstruction conditions. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the permitting agencies (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the appropriate agency, the temporary impact shall be considered a permanent impact and compensated accordingly. A biological monitor shall be present prior to initiation of ground disturbing activities to demark limit of disturbance boundaries. Flagging and/or staking will be used to clearly define the work area boundaries and avoid impacts to adjacent drainage features. Erosion protection and sediment control best management practices (BMPs)shall be implemented in compliance with the General Construction General Permit and the Stormwater Pollution Prevention Plan (SWPPP). Graded areas would be stabilized to promote infiltration and reduce run-off potential. Any excess soil would be spread on site outside of jurisdictional drainages.	
Impact 5.3-2: Would the Project have a substantial adverse effect on	Less than Significant.	**None**	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
riparian habitat or other sensitive natural community.			
Impact 5.3-3: Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less than Significant.	**MM BIO-2**	Less than Significant.
Impact 5.3-4: Would the Project substantially interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less than Significant.	**MM BIO-3 Nesting Bird Surveys** If activities associated with vegetation removal, construction, or grading are planned during the bird nesting/breeding season (generally February 1 through August 31; January 1 for raptors), a qualified biologist shall conduct pre-construction surveys for active nests in all suitable areas, including trees, shrubs, bare ground, burrows, cavities, and structures, at the appropriate time of day/night, and during appropriate weather conditions. Pre-construction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior (e.g., copulation, carrying of food or nest materials, nest building, flushing suddenly from atypically close range, agitation, aggressive interactions, or other behaviors). Preconstruction nesting bird surveys should be conducted weekly beginning 14 days prior to initiation of ground-disturbing activities, with the last survey conducted no more than three (3) days prior to the start of clearance/construction work. If ground-disturbing activities are delayed, additional preconstruction surveys should be conducted so that no more than 3 days have elapsed between the survey and ground-disturbing activities. If active	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		nests are identified, the biologist shall establish suitable buffers around the nest and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. The buffer should generally be a minimum of 300 feet for reports and 100 feet for songbirds, unless a smaller buffer is specifically determined by a qualified biologist familiar with the nesting phenology of the nesting species.	
Impact 5.3-5: Would the Project conflict with local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance?	Less than Significant.	**MM BIO-1** **MM BIO-2**	Less than Significant.
Impact 5.3-6: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact.	**None**	No Impact.
5.4 CULTURAL RESOURCES			
Impact 5.4-1: Would the Project result in a change in the significance of an historical resource?	Potentially Significant	**MM CR-1: Cultural Resources Construction Monitor** A cultural resources monitor shall be present during all excavation or other earth-moving activities within the Project site. The applicant shall immediately notify the Imperial County Planning and Development Services Department if any undocumented and/or buried prehistoric or historic resource is uncovered. All construction must stop in the vicinity of the find until the find can be evaluated for its eligibility for listing in the CRHR. The cultural resources monitor shall have the authority to halt construction activity in the immediate	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		vicinity of the encountered historic resource for a sufficient interval of time to allow avoidance or recovery of the encountered historic resources and shall also have the authority to redirect construction equipment in the event that any cultural resource is inadvertently encountered. All cultural resources are assumed to be eligible for the CRHR until determined otherwise by the monitor. Work will not resume in the area of the discovery until authorized by the monitor.	
		MM CR-2: Establishment of Environmentally Sensitive Areas A qualified archaeologist, as approved by the County, will prepare an archaeological testing and evaluation plan prior to conducting any field work. If an archaeological site is determined significant under CEQA, avoidance is recommended by establishing Environmentally Sensitive Areas (ESAs). ESAs shall encompass the site boundary plus a 200-foot buffer around the site. ESAs should be staked and/or flagged in a conspicuous manner. Spot checking by a qualified archaeologist shall be completed throughout construction to ensure ESAs are not entered. If it is necessary for the Project to encroach on any ESA, full time monitoring by a qualified archaeologist, who is approved by the County, will be required to ensure there are no impacts to the archaeological site. If avoidance is not an option, then a data recovery program should be undertaken.	
		MM CR-3: Data Recovery Program The proposed Specific Plan was designed to avoid and preserve archaeological resources in place where possible. Where avoidance and preservation are not possible, data recovery through excavation is the most feasible mitigation. Prior to excavation, a data recovery plan must be prepared that makes provision for adequately recovering the scientifically consequential information from and about the historical resource. Data recovery includes the documentation, recordation, and	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		removal of the archeological deposit from a project site in a manner consistent with professional (and regulatory) standards; and the subsequent inventorying, cataloguing, analysis, identification, dating, interpretation of the artifacts and "ecofacts" & the production of a report of findings.	
Impact 5.4-2: Would the Project Disturb archaeological resources and remains?	Potentially Significant	**MM CR-1** **MM CR-2** **MM CR-3**	Less than Significant.
Impact 5.4-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Potentially Significant	**MM CR-4: Unanticipated Discovery – Human Remains** In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery will be halted or diverted and the Imperial County Coroner will be notified (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner will notify the NAHC within 24-hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American (Section 5097.98 of the PRC). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB-2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB-2641).	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.5 ENERGY			
Impact 5.5-1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than Significant	None	Less than Significant
Impact 5.5-2: Would the Project Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant.	None	Less than Significant.
5.6 GEOLOGY AND SOILS			
Impact 5.6-1: Would the Project result in substantial adverse effects from the rupture of a known earthquake fault?	Less than Significant.	None.	Less than Significant.
Impact 5.6-2: Would the Project result in substantial adverse effects from strong seismic ground shaking?	Potentially. Significant	**MM GEO-1 Retain qualified professional staff for design** a. A qualified professional should design any permanent structure constructed on the site. The minimum seismic design should comply with the CBC in effect at the time specific developments are proposed. b. Preventative measures to reduce seasonal flooding and erosion should be incorporated into site grading plans. Dust control should also be implemented during construction. Site grading should be in strict compliance with the requirements	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		of the South Coast Air Quality Management District [SCAQMD]. c. Preventative measures to reduce collapse should be incorporated into site grading plans. Storm drainage should flow away from foundations per the minimum building code regulations and water conduits should be repaired immediately or the design should follow the potential for maximum collapse not based on an active water depth as assumed in this report. Water introduction into the subsurface should be kept well away from planned structures and improved areas. **d.** Proper geotechnical observation and testing during construction is imperative to allow the geotechnical engineer the opportunity to verify assumptions made during the design process, to verify our geotechnical recommendations from future design-level studies have been properly interpreted and implemented during construction and as required by the CBC in effect at the time of construction. Observation of fill placement by the Geotechnical Engineer of Record should be in conformance with the CBC in effect at the time.	
Impact 5.6-3: Would the project result in substantial adverse effects from seismic-related ground shaking including liquefaction?	Less than Significant.	None	Less than Significant.
Impact 5.6-4: Would the Project result in substantial adverse effects from landslides?	No Impact.	None	No Impact.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.6-5: Would the Project result in substantial soil erosion or the loss of topsoil?	Less than Significant.	None	Less than Significant.
Impact 5.6-6: Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less than Significant.	None	Less than Significant.
Impact 5.6-7: Would the Project result in the potential for substantial risks to life or property due to expansive soils?	Less than Significant.	None	No Impact.
Impact 5.6-8: Would the Project directly or indirectly destroy a unique paleontological resource, site or unique geologic feature?	Less than Significant.	None	Less than Significant.
5.7 GHG EMISSIONS			
Impact 5.7-1: Would development of the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant.	**None**	No Impact.
Impact 5.7-2: Would the Project conflict with an applicable plan or policy or regulation adopted for the	Less than Significant.	**None**	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
purpose of reducing the emissions of greenhouse gases?			
5.8 HAZARDS AND HAZARDOUS MATERIALS			
Impact 5.8-1: Would the Project result in the creation of a significant public hazard from the routine transport, use, or disposal of hazardous materials?	Less than Significant.	**None**	Less than Significant.
Impact 5.8-2: Would the Project Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less than Significant	**None**	Less than Significant.
Impact 5.8-3: Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?	Less than Significant.	**None**	Less than Significant.
Impact 5.8-4: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project result in a safety hazard	Less than Significant.	**None**	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
for people residing or working in the Project area?			
Impact 5.8-5: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than Significant.	**None**	Less than Significant.
Impact 5.8-6: Would the Project expose people or structures to a significant risk of loss, injury or death involving wildland fires?	Less than Significant.	**None**	Less than Significant.
5.9 HYDROLOGY AND WATER QUALITY			
Impact 5.9-1: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	Potentially Significant.	**MM HWQ-1: Prepare SWPPP and Implement BMPs Prior to Construction** For each implementation activity that is greater than one-acre in size, the project applicant or its contractor shall prepare a SWPPP specific to the project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity(Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the project applicant prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the project. The SWPPP(s) shall incorporate control measures in the following categories:	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching). • Flow diversion practices, if required (Mitigation Measure HWQ-2). • Sediment control practices (temporary sediment basins, fiber rolls). • Temporary and post-construction on- and off-site runoff controls. • Special considerations and BMPs for water crossings, wetlands, and drainages. • Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity. • Waste management, handling, and disposal control practices. • Corrective action and spill contingency measures. • Agency and responsible party contact information. • Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP. The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.	
		MM HWQ-2: Properly Dispose of Construction Dewatering in Accordance with the Construction General Permit (SWRCB Order No. 2009-0009-DWQ and Associated Amendments) If required, all construction dewatering shall be discharged or utilized for dust control in accordance with the Construction General Permit. The Storm Water Pollution Prevention Plan shall provide Best Management Practices to be implemented if groundwater is encountered during construction.	
		MM HWQ-3: Incorporate Post-Construction Runoff BMPs into Project Drainage Plan. A Drainage Plan/Drainage Report shall be prepared for each future development activity under the GSP. The project Drainage Plan shall adhere to guidelines in the County's Engineering Guidelines Manual, or whatever regulations are in place at the time of project implementation, to control and manage the on- and off-site discharge of stormwater to existing drainage systems and shall include a project description, project setting including discussions of existing and proposed conditions, any drainage issues related to the site, summary of the findings or conclusions, off-site hydrology, onsite hydrology, hydraulic calculations and a hydrology map. The drainage study and specifications for improvements of all drainage easements, culverts, drainage structures, and drainage channels shall be provided to the DPW for approval. Required plans and specifications shall provide a drainage system capable of handling and disposing of all surface waters originating within the subdivision and all surface waters that may flow onto the subdivision	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		from adjacent lands. Said drainage system shall include any easements and structures required by the DPW or the affected Utility Agency to properly handle the drainage on site and off site. The report should detail any vegetation and trash/debris removal, as well as address any standing water. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from project impervious surfaces as necessary.	
		MM HWQ-4 Comprehensive Drainage and Sedimentation Control Plan. A Comprehensive Drainage and Sedimentation Plan (Plan) shall be prepared for all future development activities under the GSP, prior to the initiation of construction prior to the issuance of a grading and/or building permit. Detailed hydrologic analysis shall be performed prior to final design. Results of these analyses will be submitted to the County for review. All proposed grading and impervious surfaces on site shall be reviewed and approved by the County with respect to its potential to cause or result in additional erosion and sedimentation, increased stormwater flows, or altered drainage patterns that could lead to unintentional ponding or flooding on site or downstream, and/or additional erosion and sedimentation. The Plan shall include, but not be limited to, the following measures: Construction of access corridors and temporary and permanent access roads shall not block existing drainage channels and shall not significantly alter the existing topography. The project proponent shall delineate the active drainage channels and avoid placement of proposed flood protection berms within active	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		drainage channels. The drainage avoidance areas shall protect no less than 90 percent of the area of the active drainage channels from construction impacts. A hydraulic analyses shall be prepared for each future development activity that estimates the pre- and post- development peak discharges, water depths, and velocities for both smaller, more frequent events (2-, 5-, and 10-year events), as well as larger design storm events (100-year event) that would flow through each future project site, drainage avoidance area, and/or on either side of each proposed flood protection berm. The County shall be provided design details for the flood protection berms including subgrade preparation, construction methods, and armoring or scour protection.	
Impact 5.9-2: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less than Significant.	**None**	Less than Significant.
Impact 5.9-3a: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site?	Less than Significant.	**None**	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.9-3b: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Less than Significant.	**None**	Less than Significant.
Impact 5.9-3c: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?	Less than Significant.	**None**	Less than Significant.
Impact 5.9-4: Would a Project located in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less than Significant.	**None**	No Impact.
Impact 5.9-5: Would the Project conflict with or obstruct implementation of a water quality	Less than Significant.	**None**	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
control plan or sustainable groundwater management plan?			
5.10 LAND USE AND PLANNING			
Impact 5.10-1: Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No Impact.	**None**	No Impact.
5.11 NOISE			
Impact 5.11-1: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels?	Less than Significant.	**None**	Less than Significant.
Impact 5.11-2: Generation of excessive groundbourne vibration or groundbourne noise levels?	Less than Significant.	**None**	Less than Significant.
5.12 POPULATION AND HOUSING			
Impact 5.12-1:Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly(for example, through extension of road or other infrastructure)?	Less than Significant.	None	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.13 PUBLIC SERVICES			
Impact 5.13-1: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire or police protection services?	Less than Significant	**None**	Less than Significant.
5.14 TRANSPORTATION AND TRAFFIC			
Impact 5.14-1: Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Less than Significant	**MM T-1: Traffic-related Improvements** Construct the future intersection of SR-78 / Glamis Mainstreet per the sketch provided in Appendix F in the applicant prepared traffic study. • Conduct an annual signal warrant assessment at the future intersection of SR-78 / Glamis Mainstreet to determine when / if signalization should be implemented. • Install fencing along SR-78 to limit vehicle access to the Specific Plan areas to established intersections. • An OHV tunnel running under SR-78 connecting the northern and southern portions of the GSPA is recommended to be constructed at the time the Planning Areas north of SR-78 are developed. • Access to Planning Areas 5 and 6, just east of the UPRR, via SR-78 will be required. Given the very low expected traffic volumes, signalization of the intersection is likely not needed, however, dedicated left-turn lanes onSR-78 are recommended.	Less than Significant

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• A secondary emergency only access point to/from the GSPA to SR-78shallbe provided on the west side of the GSPA.	
Impact 5.14-2: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) relative to Vehicle Miles Traveled?	Less than Significant	**MM T-1**	Less than Significant
Impact 5.14-3: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than Significant	**MM T-1**	Less than Significant
Impact 5.14-4: Would the Project result in an inadequate emergency access?	Less than Significant	**MM T-1**	Less than Significant
5.15 UTILITIES AND SERVICE SYSTEMS			
Impact 5.15-1: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant	**None**	Less than Significant
Impact 5.15-2: Would the Project have sufficient water supplies available to serve the project and	Less than Significant	**None**	Less than Significant

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
reasonably foreseeable future development during normal, dry and multiple dry years?			
Impact 5.15-3: Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	Less than Significant	**None**	Less than Significant
Impact5.17-4: Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less than Significant	**None**	Less than Significant
5.16 TRIBAL CULTURAL RESOURCES			
Impact 5.16-1: Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource?	Impact 5.16-1: Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource?		
Impact 5.16-2: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe	Impact 5.16-2: Would the Project cause a substantial adverse change in the significance of a tribal cultural		

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
determined to be significant the County of Imperial?	resource with cultural value to a California Native American tribe determined to be significant the County of Imperial?		

1.8. Issues to Be Resolved by the Decision-Making Body

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choice among alternatives and whether or how to mitigate significant impacts. The following major issues are to be resolved:

- Determine whether the EIR adequately describes the environmental impacts of the proposed Project;
- Choose among the Project alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified; and
- Determine whether additional mitigation measures need to be applied to the proposed Project.

1.9 Project Alternatives

The Alternatives section (Chapter 8.0) of this Draft EIR focuses on alternatives capable of avoiding or substantially lessening any of the significant effects of the Project, even if the alternatives would impede, to some degree, the attainment of project objectives. The Alternatives section discusses the Project alternatives that were determined to represent the range of reasonable alternatives to the Project that have the potential to feasibly attain most of the basic Project objectives, but which may avoid or substantially lessen one or more the Project's significant effects. A brief summary is provided below.

1.9.1. No Project/No Expansion Alternative (Alternative 1)

The No Project/No Development Alternative assumes that the Project, as proposed, would not be implemented and the Project site would not be developed. The No Project/No Development Alternative would not meet any of the Project objectives.

1.9.2 Modified Footprint Alternative (Alternative A)

An alternative site plan (Alternative A) for the proposed Specific plan was developed that avoids all development of the existing RV storage facility which is located in Areas 2 and 3 and are proposed for a change in zoning to Commercial Recreation (C-3). This alternative is being considered due to the length of the current lease, 30 years, for the existing RV storage facility. This alternative is being considered to evaluate the feasibility of developing the proposed Specific Plan.

1.9.3 Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines states that if the No Project Alternative is the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. The context of an environmentally superior alternative is based on consideration of several factors, including the Project's objectives and the ability to fulfill the goals while reducing potential impacts to the environment.

Table 1-2 summarizes the potential impacts of the alternatives evaluated as compared to the potential impacts of the Project.

TABLE 1-2. SUMMARY OF ALTERNATIVES COMPARED TO THE PROPOSED PROJECT

Environmental Resource	Proposed Project	No Project/ No Expansion (Alternative 1)	Modified Project Footprint (Alternative A)
1. Aesthetics	LTS-MM	NI / +	LTS-MM / =
2. Air Quality	LTS-MM	NI / +	LTS-MM / =
3. Biological Resources	LTS-MM	NI / +	LTS-MM /=
4. Cultural Resources	LTS-MM	NI / +	LTS-MM / =
5. Energy	LTS	NI / +	LTS
6. Geology and Soils	LTS-MM	NI / +	LTS-MM / =
7. Greenhouse Gas Emissions	LTS	NI / -	LTS / =
8. Hazards and Hazardous Materials	LTS-MM	NI / +	LTS-MM / =
9. Hydrology and Water Quality	LTS-MM	NI / +	LTS-MM / =
10. Land Use and Planning	LTS	NI / +	LTS / =
11. Noise	LTS	NI / +	LTS / =
12. Population and Housing			
13. Public Services	LTS-MM	NI / +	LTS-MM / =
14. Transportation and Traffic	LTS-MM	NI / +	LTS-MM / =
15. Utilities and Service Systems			
16. Tribal Cultural Resources	LTS-MM	NI / +	LTS-MM / =
		+ 15 - 1 = 0	+ 1 - 0 = 15
Meets Most of the Basic Project Objectives?	Yes	No	Yes

Notes:
NI: Finding of no environmental impact
LTS: Finding of less than significant environmental impact
LTS-MM: Finding of less than significant environmental impact with mitigation measure
SU: Finding of significant and unmitigable impact
+Alternative is superior (reduced impacts compared) to the proposed Project
-Alternative is inferior (greater impacts compared) to the proposed Project
=Alternative is environmentally similar to the proposed Project or there is not enough information to make a superior or inferior determination.

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2.0 INTRODUCTION

2.1. Purpose of the Draft EIR

The County of Imperial (County) is the Lead Agency under the California Environmental Quality Act (CEQA) responsible for preparing the Environmental Impact Report (EIR) for the proposed Glamis Specific Plan (the Specific Plan) (State Clearinghouse No. 2020100348). This EIR has been prepared in accordance with CEQA (Public Resources Code [PRC] Section 21000 et seq); the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Chapter 3, Section 15000 et. Seq); and the County of Imperial CEQA Regulations (Imperial County, 2017). The principal CEQA Guidelines sections governing content of this document are Sections 15120 through 15132 (Content of an EIR).

In accordance with Section 15121 of the CEQA Guidelines, a primary purpose of this EIR is to provide decision-makers and the public with specific information regarding the environmental effects associated with the Project, identify ways to minimize the significant effects and describe reasonable alternatives to the Project. Mitigation measures are provided in order to reduce the significance of impacts resulting from the Project, as are alternatives to the Project. In addition, this EIR is the primary reference document in the formulation and implementation of a mitigation monitoring program for the Project.

The County, which has the principal responsibility of processing and approving the Project, will use and consider information in this EIR, along with other information that may be presented during the CEQA process, during the decision to approve, disapprove, or modify the Project. Significant environmental impacts cannot always be mitigated to a level considered less than significant; in those cases, impacts are considered significant and unavoidable. In accordance with Section 15093(b) of the CEQA Guidelines, if a public agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency shall state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is termed, per Section 15093(b) of the CEQA Guidelines, a "statement of overriding considerations."

This document analyzes the environmental effects of the Project to the degree of specificity appropriate to the current proposed actions, as required by Section 15146 of the CEQA Guidelines. This analysis considers the actions associated with the Project, to determine the short-term and long-term effects associated with their implementation. This EIR discusses both the direct and indirect impacts of this Project, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects. CEQA requires the preparation of an objective, full disclosure document to inform agency decision makers and the general public of the direct and indirect environmental effects of the Project; provide mitigation measures to reduce or eliminate

significant adverse effects; and identify and evaluate reasonable alternatives to the Project that can reduce or eliminate significant adverse effects of the Project.

2.2. Program EIR

This EIR has been prepared as a Program EIR because the Glamis Specific Plan constitutes a series of actions that can be characterized as one large project that is related: "a) geographically; b) as logical parts in a chain of contemplated actions; and c) in connection with the issuance of…plans…to govern the conduct of a continuing program…" (CEQA Guidelines 15168[a]). A Program EIR generally establishes a foundation for "tiered" or project-level environmental documents that may be subsequently prepared in accordance with the overall program. According to CEQA Guidelines Section 15168(b), a Program EIR can provide the following advantages:

- Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action;
- Ensure consideration of cumulative impacts that might be slighted in a project-level analysis;
- Avoid duplicative reconsideration of basic policy considerations;
- Allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures at the earliest possible time when the agency has greater flexibility to deal with basic problems or cumulative impacts; and
- Allow a reduction in paperwork.

The Program EIR analyzes, at a general level, the maximum extent of potential development scenarios within the Specific Plan area, policies, development standards and protocols. In this way, decision-makers and the public can get a sense of the overall physical effects of the whole Project. The purpose of the Program EIR is to focus attention to those aspects of a future project (often a long-range plan) that could bring about adverse physical impacts. A Program EIR in this way serves as a foundation for subsequent environmental documentation and/or clearance. CEQA Guidelines Section 15146 indicates that "the degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR."

The Program EIR identifies and analyzes the potential environmental impacts of the program- wide policies and management actions presented in the Specific Plan, and proposes mitigation measures to reduce impacts determined to be significant. With the Program EIR, the County and the public will be able to consider the Project in its entirety and the impacts of associated with policies and management actions in the Specific Plan, some of which might be overlooked if considered on a case-by-case basis. The Program EIR also allows for consideration of broad policy alternatives and their possible environmental effects in a more exhaustive manner than would otherwise be possible. Optimally, this process allows for development of program-wide mitigation measures at a stage

when the County has greater flexibility to deal with basic problems or cumulative environmental impacts, and provides an opportunity to reduce paperwork. Program-level analysis differs from project-level analysis, which is based on evaluation of detailed site-specific development plans and proposals.

2.3. Tiering

Tiering refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or specific plan) with later environmental documents on narrower projects, incorporating by reference the general discussions from the broader EIR. Where a Lead Agency is using the tiering process in connection with an EIR for a large-scale planning approval, such as a specific plan, the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the Lead Agency prepares a future environmental document in connection with a project of a more limited geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand.

Approval of the Specific Plan itself would not directly result in any specific development project. However, the environmental analysis and mitigation measures provided within Chapter 5.0, Environmental Analysis, have been prepared utilizing a programmatic approach under CEQA, intended to provide the opportunity for tiering (per Section 15152 of the CEQA Guidelines) when future development applications are received. As a Program EIR, it should be understood that certain of the impacts identified, and the mitigation measures recommended in this document, are inherently limited in their specificity. As such, future developments within the Specific Plan area would need to be reviewed in the context of this Program EIR to determine if additional environmental documentation would be required. If subsequent individual project proposals would result in environmental impacts that have not been addressed in this Program EIR, additional environmental review would be required. If additional impacts are not identified and no new mitigation measures would be required, the subsequent individual project could be approved without additional environmental documentation. If an EIR were required for a subsequent individual project, the EIR should implement the applicable mitigation measures developed in this Programmatic EIR and focus its analysis on specific environmental impacts that were not previously addressed.

With subsequent environmental review, this Program EIR will be used as the basis for Initial Study (IS) determinations of impact significance, to focus subsequent project review, if required, on only those effects not adequately considered before, and to incorporate relevant information and analysis by reference.

2.4. Issues to be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choice among alternatives and whether or how to mitigate significant impacts. The following major issues are to be resolved:

- Determine whether the EIR adequately describes the environmental impacts of the proposed Project;
- Choose among the Project alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified; and
- Determine whether additional mitigation measures need to be applied to the proposed Project.

2.5. Definitions of Key Terms

The terms listed below are defined to assist reviewers in understanding this EIR. Additional definitions of terms are listed in CEQA Article 20 Sections 15350 to 15387.

- **Project** means the whole of an action that has the potential to result in a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.
- **Environment** means the physical conditions that exist in the area and would be affected by the proposed Project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is that in which significant direct or indirect impacts would occur as a result of the proposed Project. The environment includes both natural and man-made (artificial) conditions.
- **Impacts** analyzed under CEQA must be related to a physical change. Impacts are:
  - Direct or primary impacts that would be caused by a project and would occur at the same time and place; or
  - Indirect or secondary impacts that would be caused by a project and would be later in time or further removed in distance, but that would still be reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other impacts related to induced changes in the pattern of land use, population density, growth rate, or related effects on air and water and other natural systems, including ecosystems.
- **Significant Impact on the Environment** means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by the proposed Project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not

considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

- **Mitigation** consists of measures that avoid or substantially reduce the proposed Project's significant environmental impacts by:
  - Avoiding the impact altogether by not taking a certain action or parts of an action;
  - Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
  - Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
  - Reducing or eliminating the impact over time through preservation and maintenance operations during the life of the action; or
  - Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.
- **Cumulative impact** refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.
  - The individual impacts may be changes resulting from a single project or separate projects.
  - The cumulative impact from several projects is the change in the environment which results from the incremental impact of the proposed Project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period.

This EIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- A designation of "No Impact" indicates no adverse changes to the environment are expected.
- A "Less than Significant Impact" will not cause a substantial adverse change to the environment.
- A "Less than Significant Impact with Mitigation Incorporated" avoids a substantial adverse impact on the environment through adoption of mitigation measures.
- A "Significant and Unavoidable Impact" is a substantial adverse effect on the environment that cannot be reduced to a less than significant level even with the implementation of feasible mitigation measures.

2.6. Agency Roles and Responsibilities

The Project would require permits and approvals from various federal, state and local regulatory agencies. The agencies are identified below.

2.6.1. Lead Agency

The County of Imperial (County) is the lead agency for the environmental review and certification of the EIR for the Glamis Specific Plan. The County will be required to consider a General Plan Amendment for development of the Specific Plan (SP 19-0001); a Zone Change (#19-0006) that would change the zoning within the Planning Area from C-2 (Medium Commercial) and S-2 (Open Space/Preservation) to CR-1, CR-2, and CR-3 (Commercial Recreation) and S-1 (Open Space/Recreation); and a permit for a new public water system well to increase the annual water withdrawal to 25 acre-feet per year. The County will also be responsible for certification of the EIR.

The Specific Plan would implement the County's objectives for the development of this area (Imperial County, 2015) which are to:

- Accommodate recreation supporting land uses including retail and service commercial, motel accommodations, recreational vehicle and mobile home parks, and community facilities;
- Coordinate specific plan with the Bureau of Land Management and affected local agencies; and
- Provide public services to the specific planning area concurrent with the need.

The Specific Plan would also eliminate with the need for conditional use permits for special events.

2.6.2. Responsible and Trustee Agencies

Projects or actions undertaken by the lead agency, in this case the Imperial County Planning and Development Services Department (ICPDSD), may require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Other such agencies are referred to as responsible agencies and trustee agencies. Pursuant to §15381 and §15386 of the CEQA Guidelines, as amended, responsible agencies and trustee agencies are defined as follows:

- A responsible agency is a public agency that proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term responsible agency includes all public agencies other than the lead agency that have discretionary approval power over the project (§15381).
- A trustee agency is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California (§15386).

The Project may require permits or approvals from various agencies for the facility and activities that constitute the project including but are not limited to the following:

Federal

- U.S. Army Corps of Engineers (USACE)

State

- California Department of Transportation (Caltrans)
- California Department of Fish & Wildlife (CDFW)
- California Department of Public Health
- State Water Resources Control Board (SWRCB)
- California Regional Water Quality Control Board (RWQCB), Region 7

Regional and Local

- Imperial County Department of Public Health (DPH)
- Imperial County Air Pollution Control District (ICAPCD)
- Imperial County Department of Public Works (DPW)

The specific approvals anticipated to be required from the lead agency, trustee agencies, and/or responsible agencies are listed in Table 4-1.

2.7. Environmental Review Process

CEQA establishes mechanisms whereby the public and affected public agencies can be informed about the nature of the project being proposed and the extent and types of impacts that the proposed Project and its alternatives would have on the environment should the proposed Project or alternatives be implemented. The CEQA review process allows interested parties to share expertise, discuss the analyses, check for accuracy, detect omissions, discover public concerns, and solicit mitigation measures and alternatives capable of avoiding or reducing the significant effects of a project, while still attaining most of the basic objectives of the proposed Project.

The CEQA process for this EIR includes:

- Preparation of an IS which determined that the proposed Project requires preparation of an EIR;
- Filing and distribution of the Notice of Preparation (NOP);
- Holding a CEQA public agency scoping meeting;

- Preparation of the Draft EIR;
- Release of the Draft EIR for public review;
- Preparation and release of the Final EIR, including responses to comments on the Draft EIR

2.7.1. Notice of Preparation and Initial Study

In accordance with Section 15082 of the CEQA Guidelines, the ICPDSD issued a NOP of an EIR for the Project and an accompanying IS (SCH# 2020100348) (Appendices A-1 and A-2, respectively). The NOP was published in the *Imperial Valley Press* newspaper on October 20, 2020, and was submitted to federal, state, and local agencies and other interested parties for a 35-day public review period beginning on October 20, 2020, and ending on November 24, 2020.

In response to the NOP, the County received comment letters from the following agencies: Caltrans, CDFW, and the Native American Heritage Commission (NAHC). **Table 2-1** summarizes written comments received during the public scoping process.

2.7.2. Public Scoping Meeting

One public scoping meeting was held by the County of Imperial to solicit input from governmental agencies, non-governmental organizations, and the public regarding the proposed Project, alternatives, mitigation measures, and environmental impacts to be analyzed in the EIR. The meeting was held on Thursday, October 29th, 2020, at 6:00 p.m. in the County Administrative Center, Board Chambers, El Centro, California. No members of the public attended the scoping meeting and no oral and/or written comments were received. Copies of the Scoping Meeting Materials are presented in Appendix B.

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) – NOVEMBER 24, 2020	
Implementation of the Glamis Specific Plan may impact Caltrans' Right-of-Way (ROW) in the future. Future projects should be based upon the Program EIR and have elements and/or mitigation measures for changes to Caltrans ROW. Caltrans welcome the opportunity to be a Responsible Agency under CEQA and to continue coordination of our efforts.	• Section 2.4.2, Responsible and Trustee Agencies • Table 2-3, • Section 5.14, Transportation
Traffic Engineering and Analysis	
In accordance with Senate Bill (SB) 743 public agencies are required to use Vehicle Miles Traveled (VMT) to	• Section 5.14, Transportation

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
evaluate transportation impacts associated with development. Please provide a traffic impact study using the Caltrans-Vehicles Miles Traveled-Focused-Transportation Impact Study Guide -May 20, 2020. Provide a Vehicle Miles Traveled (VMT) analysis for the Polaris Glamis Specific Plan Traffic Study.	• Traffic Impact Report (App. L)
Caltrans recommends use of OPR's significance thresholds for determination of transportation impacts from land use projects. OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA is available online at http://opr.ca.gov/ceqa/updates/sb-743/.	• Section 5.14, Transportation
Any proposed intersection expansion or modification will require an Intersection Control Evaluation (ICE) report as required by the Caltrans Traffic Operations Policy Directive #13-02. Submit an ICE report for the proposed intersection at Glamis Main Street on Figure 8 of the Draft Study & Environmental Analysis of the Glamis Specific Plan dated October 2020.	• Section 5.14, Transportation • Traffic Impact Report (App. L)
Comments on Environmental Initial Study	
• Description of Project – The brief description of the proposed land uses does not account for other land uses that are mentioned in the project trip generation.	• Chapter 4.0, Project Description
• Please revise the project trip generation "Table A" (provided by Polaris' Consultant) to include the following: Fuel station, rental facilities, entertainment and hospitality uses, sporting goods stores, adventure center, amusement facilities, movie theater, obstacle courses, fireworks and light display area and racetrack.	• Section 5.14, Transportation • Traffic Study (App. L)
• Page 43 - Section XVII Transportation/Traffic – Caltrans does not concur that the impacts from the Polaris development will result in Less Than Significant impacts. The full environmental process and determination of impacts under CEQA will describe the project impacts and mitigations.	• Section 5.14, Transportation • Traffic Study (App. L)
• Page 44 - Discussion c) Less than Significant Impact. Add sentences to mention the Intersection Control Evaluation (ICE) requirements in addition to the proposal of a signal at the intersection.	• Section 5.14, Transportation • Traffic Study (App. L)

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
Comments on Environmental Initial Study	
• Page 3-1 - Sections 1.0 and 2.0 appear to be missing.	Chapter 1.0 and 2.0, Executive Summary and Introduction
• Page 4-2 - Section 4.2 - Proposed Project Section – Paragraph 2 - "This designation is intended to accommodate a large variety of commercial uses that are generally supportive of OHV activities and provide for large scale events to be held both on private property as well as adjoining federal lands." Does Bureau of Land Management (BLM) support large variety of commercial uses adjoining Federal lands?	Comment Noted. The planning area is under the jurisdiction of the County of Imperial. No BLM approvals are required for implementation.
• Page 4-4 - Hospitality – "With an average annual attendance of 200,000 visitors to the Glamis area." According to the Visitation Data provided by LLG Engineers, the annual attendance for 2019 was over 600,000 for this area.	Chapter 4.0, Project Description
• Page 4-7 – Section 4.3 - Project Components – "In compliance with CEQA, only those components of the proposed Glamis Specific Plan that would have the potential to result in potential environmental effects are addressed in this EIR." Impacts to the transportation network need to be addressed as well.	Section 5.14, Transportation
• Page 4-8 - Section 4.3.3- Circulation Plan - Paragraph 1 stated "There are a total of 6 proximate vehicular access points to the project vicinity with a gateway feature on SR-78 (Figure 4-3)". The entire stretch for vehicular access west of the proposed signalized intersection will be required to have a fence installed along SR-78. • Justify the need to have additional accesses if the proposed signalized Glamis Mainstreet intersection is not enough for Area 1. • Each of these requested accesses will need to be evaluated as they could potentially create illegal crossings of SR-78.	• Chapter 4.0, Project Description • Section 5.14, Transportation
• Page 4-8 - Section 4.3.3- Circulation Plan - Paragraph 1 - "There are a total of 6 proximate vehicular access point to the project vicinity with a gateway feature on SR-78 (Figure 4-3)." Clarify the type of gateway and the installation location.	Chapter 4.0, Project Description

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
• Non-essential highway appurtenances like a gateway will need to be 52 feet from the edge of travel way.	
• Page 4-8 - Section 4.3.3- Circulation Plan - Paragraph 2 - "…To accommodate the anticipated vehicular traffic flow, the applicant has proposed a conceptual intersection plan with proposed cross-sections subject to final design and approval from Caltrans (Figure 4-4)." Any proposed intersection expansion or modification will require an Intersection Control Evaluation (ICE) report as required by the Caltrans Traffic Operations Policy Directive #13-02. Submit an ICE report for the proposed intersection at this intersection for review. Operations Policy Directive #13-02 can be provided upon request. • "The Glamis Specific Plan proposes a transportation concept that proposes a significant level of expansion of the State Highway System, and close coordination with Caltrans will be required. Caltrans has made no determination on the proposed concepts.	Chapter 4.0, Project Description
• Page 4-8 - Section 4.3.3- Circulation Plan - Paragraph 3 - All proposed accesses along SR-78 for the proposed development Area 1-8 will need to be improved to meet Caltrans latest driveway standards with acceleration and deceleration lane based on the proposed development phasing (safety).	Chapter 4.0, Project Description
• Page 4-11 Circulation Plan - "The project vicinity includes the Sand Highway that runs parallel to SR-78 along the northwestern edge of Planning Area 1." Is there a plan for separating the "Sand Highway" from SR-78 using physical barriers such as K-rail, fencing, or other means? • Please specify location of signs and under whose authority signs will be posted.	Chapter 4.0, Project Description
• Page 4-26 - Table 4-2 "Anticipated Land Use Changes Through 2051/2071. Please include the growth rate used for the proposed traffic ADT in the report. Also, include this future growth volume in the future project traffic trips scenario in the Traffic Impact Analysis (TIA).	Section 5.14, Transportation

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
• Page 4-27 – Section 4.4 Project Phasing - "… the earliest construction beginning in late 2021. No uses would be opened prior to 2022 (opening year). The build-out year would be 2051 /2071." What are the phases of the project to be constructed between 2021 and 2051?	Chapter 4.0, Project Description
• 1. The Project Development Procedures Manual (PDPM) Chapter 29 must be consulted regarding the requirements for Gateway Monuments.	Chapter 4.0, Project Description
• 2. In addition, above ground gateway monuments are considered fixed objects and must comply with the Highway Design Manual (HDM) standard for Index 309.1(2)(b) Clear Recovery Zone for Discretionary Fixed Objects and/or HDM Index 309.1(3) Minimum Horizontal Clearances.	Chapter 4.0, Project Description
• 3. The HDM should be consulted for the design of any proposed grade-separated structures and at-grade intersections.	Chapter 4.0, Project Description
• 4. Proposed utility lines (new or relocated) within the R/W should comply with the policies in the PDPM Chapter 17.	Chapter 4.0, Project Description
• 5. If a frontage road along SR-78 is to be included, consult the HDM for design standards, including barrier separation.	Chapter 4.0, Project Description
• 6. New access points along the right of way may need to be evaluated based on access controlled guidance.	Chapter 4.0, Project Description
• 7. If an access opening on SR-78 is being requested, Caltrans Design will need to evaluate the geometric proposal once the specific roadway access plans has been submitted. The Caltrans Design Branch will need to review and comment on the roadway access opening per the HDM.	Chapter 4.0, Project Description
• Provide a letter from the Floodplain Administrator stating that this project has no rise or a letter showing coordination with the Floodplain Administrator.	Section 5.9, Hydrology and Water Quality
• Per the draft IS/EA, Page 19, Figure 9 is insufficient:	Updated figures are provided in Chapter 4.0, Project Description

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
• a) Provide existing topographic information with labels (typically 0.1' contours in the desert areas). • b) Provide proposed topographic information with labels (typically 0.1' contours in the desert areas). • c) Both maps/exhibits must clearly show the drainage patterns along SR-78, which in the current figure is not visible at all.	
• Coordinate with Caltrans' Survey Branch to obtain Caltrans R/W and SR-78 stationing, centerline, and alignment name to be shown and labeled on all plans and maps containing SR-78.	Updated figures are provided in Chapter 4.0, Project Description
• Provide information on the maps/exhibits to show how the conceptual offsite drainage will cross the Ted Kipf Road along SR-78.	• Chapter 4.0, Project Description • Section 5.9, Hydrology and Water Quality
• Hydrology and Hydraulics Study may be required to determine the effect of the proposed project to the existing drainage system in the area.	• Section 5.9, Hydrology and Water Quality
• US Bicycle Route System (USBRS) designates SR-78 as part of the "Southern Tier Route" in this area. Cyclists are present and use this road for regional and cross-country trips.	• Section 5.14, Transportation • Traffic Study (App. M)
• As the Glamis Specific Plan develops and is implemented, consider how cyclists and off-highway vehicles may interact. Namely when off-highway vehicles take the shoulder of SR-78, where cyclists may be present.	• Section 5.14, Transportation • Traffic Study (App. M)
• The document mentions "Urban hardscape (i.e., paved roads, curb and gutter, etc.) will be built in tandem with all proposed permanent structures." Please specify the locations of sidewalks and bike lanes, and other complete streets elements.	• Chapter 4.0, Project Description • Section 5.14, Transportation • Traffic Study (App. M)

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
NATIVE AMERICAN HERITAGE COMMISSION (NAHC) – OCTOBER 21, 2020	
• Assembly Bill 52 (AB 52) applies to any project for which an NOP, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.	• Section 5.4, Cultural Resources • Section 5.15, Tribal Cultural Resources • AB-52 Consultation Letters and Responses (App. G-2)
• NAHC recommends that lead agencies consult with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the Project.	• Section 5.4, Cultural Resources • Section 5.15, Tribal Cultural Resources • AB-52 Consultation Letters and Responses (App. G-2) • SB-18 Consultation Letters and Responses (App. G-3)
• Both Senate Bill (SB 18) and AB 52 have tribal consultation requirements.	• Section 5.4, Cultural Resources • Section 5.15, Tribal Cultural Resources • AB-52 Consultation Letters and Responses (App. G-2) • SB-18 Consultation Letters and Responses (App. G-3)
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW) –NOVEMBER 20, 2020	
• Include an assessment of various habitat types located within the Project footprint, and a map that identifies the location of each.	Section 5.4, Biological Resources
• Include a general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the Project.	Section 5.4, Biological Resources
• Conduct a complete, recent inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species. Species to be addressed should include all those which meet the CEQA definition.	Section 5.4, Biological Resources
• CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be	Comment noted

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.	
• Conduct a thorough, recent, floristic-based assessment of special status plants and natural communities, following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (see https://www.wildlife.ca.gov/Conservation/Plants).	• Section 5.4, Biological Resources • Biological Technical Report (App. F)
• Include information on the regional setting, with special emphasis on resources that are rare or unique to the region.	Section 5.4, Biological Resources
• Conduct a full accounting of all open space and mitigation/conservation lands within and adjacent to the Project.	Section 5.4, Biological Resources
• The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources and include the following: – A discussion of potential impacts from lighting, noise, human activity (e.g., recreation), defensible space, and wildlife-human interactions created by zoning of development projects or other Project activities adjacent to natural areas, exotic and/or invasive species, and drainage; – Project related changes on drainage patterns and water quality within, upstream, and downstream of the Project site, including volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and – Post-Project fate of runoff from the Project site.	• Section 5.4, Biological Resources • Section 5.9, Hydrology/ Water Quality

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
– A discussion of potential indirect Project impacts on biological resources, including resources in areas adjacent to the Project footprint, such as nearby public lands (e.g., National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Natural Community Conservation Plan, or other conserved lands).	Section 5.4, Biological Resources
– An evaluation of impacts to adjacent open space lands from construction, long-term operations and maintenance.	• Section 5.1, Aesthetics • Section 5.2, Air Quality • Section 5.4, Biological Resources • Section 5.10, Noise
– A cumulative effects analysis developed as described under CEQA Guidelines section 15130. Please include all potential direct and indirect project-related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis.	• Section 5.4. Biological Resources • Chapter 7, Cumulative Impacts
Alternatives Analysis • CDFW recommends the DEIR describe and analyze a range of reasonable alternatives to the Project would "feasibly attain most of the basic objectives of the Project," and would avoid or substantially lessen any of the Project's significant effects • The alternatives analysis should also evaluate a "no project" alternative	Section 8.0, Alternatives
Mitigation Measures for Project Impacts to Biological Resources • DEIR should identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, to the extent feasible. • The DEIR should assess all direct, indirect, and cumulative impacts that are expected to occur.	Section 5.4, Biological Resources

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
Fully Protected Species: • Project activities described in the DEIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the Project area. • DEIR should analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. • Lead Agency should include in the analysis how appropriate avoidance, minimization, and mitigation measures will reduce indirect impacts to fully protected species.	Section 5.4, Biological Resources
Sensitive Plant Communities: • CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. The DEIR should include measures to fully avoid and otherwise protect sensitive plant communities from Project-related direct and indirect impacts.	Section 5.4, Biological Resources
California Species of Special Concern (CSSC): • CSSC status applies to animals generally not listed under the federal Endangered Species Act or the CESA, but which nonetheless are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CSSCs should be considered during the environmental review process. CSSC that have the potential or have been documented to occur within or adjacent to the Project area, include flat-tailed horned lizard, burrowing owl, Le Conte's thrasher, and Palm Springs pocket mouse.	Section 5.4, Biological Resources
Mitigation: • CDFW considers adverse Project-related impacts to sensitive species and habitats to be significant and the DEIR should include mitigation measures for adverse Project-related impacts to local and regional ecosystems.	Section 5.4, Biological Resources

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
• Mitigation measures should emphasize avoidance and reduction of Project impacts.	Section 5.4, Biological Resources
• For unavoidable impacts, onsite habitat restoration and/or enhancement, and preservation should be evaluated and discussed in detail. Where habitat preservation is not available onsite, offsite land acquisition, management, and preservation should be evaluated and discussed in detail.	Section 5.4, Biological Resources
• The DEIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset Project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.	Section 5.4, Biological Resources
• If sensitive species and/or their habitat may be impacted from the Project, CDFW recommends the inclusion of specific mitigation in the DEIR.	Section 5.4, Biological Resources
• CDFW recommends that the DEIR specify mitigation that is roughly proportional to the level of impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). The mitigation should provide long-term conservation value for the suite of species and habitat being impacted. Furthermore, in order for mitigation measures to be effective, they need to be specific, enforceable, and feasible actions that will improve environmental conditions.	Section 5.4, Biological Resources
Habitat Revegetation/Restoration Plans: • Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used in their development.	Biological Technical Report (App. G-1)

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
• Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought. CDFW recommends that local onsite propagules from the Project area and nearby vicinity be collected and used for restoration purposes.	Biological Technical Report (App. G-1)
Nesting Birds and Migratory Bird Treaty Act: • CDFW recommends that the DEIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur.	Section 5.4, Biological Resources
• The DEIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the Project site.	Section 5.4, Biological Resources
• If pre-construction surveys are proposed in the DEIR, the CDFW recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.	Section 5.4, Biological Resources
Moving out of Harm's Way: • To avoid direct mortality, CDFW recommends that the lead agency condition the DEIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground-and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from Project-related activities.	Comment noted
• Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety (i.e., CDFW does not recommend relocation to other areas).	Comment noted
• Temporary relocation of onsite wildlife does not constitute effective mitigation for the purposes of offsetting Project impacts associated with habitat loss.	Comment noted

TABLE 2-1. SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
Translocation of Species: • CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful.	Comment noted
California Endangered Species Act (CESA) • CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to CESA. CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" of State-listed CESA species, either through construction or over the life of the Project.	Comment noted
• CDFW recommends that the DEIR address all Project impacts to listed species and include a mitigation monitoring and reporting program that will meet the requirements of CESA.	Section 5.4, Biological Resources
Lake and Streambed Alteration Program • Based on review of material submitted with the NOP and review of aerial photography at least two drainage features traverse the site. It is likely that the Project applicant will need to notify CDFW per Fish and Game Code Section 1602 prior to commencing any activity that may substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or deposit debris, waste or other materials that could pass into any river, stream or lake. • Early consultation with CDFW is recommended.	• Chapter 4.0, Project Description • Section 5.4, Biological Resources

2.7.3. Public Notice/Review of Draft EIR Review

The Draft EIR will be circulated to the California State Clearinghouse (SCH), responsible and trustee agencies, and interested parties for a 50-day public review period (45-day minimum per CEQA, plus five days per County of Imperial CEQA Guidelines). The Draft EIR will also be made available review online at the ICPDSD website: http://www.icpds.com.

Hard copies will also be available at the at the ICPDSD, 801 Main Street, El Centro, California 92243.

All public comments on the Draft EIR should be directed to David Black@co.imperial.ca.us, Imperial County Planning and Development Services Department, 801 Main Street, El Centro, California 92243.

The public review and comment period ends on March 16, 2023. Comments received during the public review period of the Draft EIR will be reviewed and responded to in the Final EIR. The Final EIR will then be reviewed by the Imperial County Planning Commission (Commission) and Board of Supervisors (Board) as a part of the procedures to certify the EIR.

2.7.4. Certification of Final EIR/Project Consideration

The Commission will consider the Final EIR and make its recommendation to the Board regarding the Project. If, in the exercise of its independent judgment and review, the finds that the Final EIR is "adequate and complete," the Board may certify the Final EIR at a public hearing. The "rule of adequacy" generally holds that the Final EIR can be certified if it shows a good faith effort at full disclosure of environmental information and provides sufficient analysis to allow decisions to be made regarding the Project in contemplation of its environmental consequences.

Upon review and consideration of the Final EIR, the Board may take action to approve, revise, or reject the Project. A decision to approve the Project would be accompanied by written findings in accordance with CEQA Guidelines, Section 15091, and, if applicable, Section 15093. A Mitigation Monitoring and Reporting Plan (MMRP), as described below, would also be adopted for mitigation measures that have been incorporated into or imposed upon the Projects to reduce or avoid significant impacts to the environment. The MMRP would be designed to ensure that these measures are carried out during project implementation.

2.7.5. Mitigation Monitoring And Reporting Program

Section 21086.1 of CEQA requires that public agencies adopt a program for monitoring mitigation measures or conditions of project approval that reduce or eliminate significant impacts to the environment. As such, the County has prepared an MMRP for the proposed. The MMRP will be submitted to approving agencies along with the Final EIR prior to considering the Projects for approval. Any mitigation measures adopted by the Commission (or Board) as conditions for approval of the Project will be included in each of the MMRPs to track and verify compliance.

2.8. Intended Uses of the EIR

An EIR is an informational document used to inform public agency decision makers and the general public of the significant environmental effects of a project, identify possible ways to mitigate or avoid the significant effects, and describe a range of reasonable alternatives to the project that could

feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project. The EIR is intended to provide documentation pursuant to CEQA to cover all local, regional, and state permits and approvals which may be needed or are desirable in order to implement the proposed Project.

2.9. EIR Content and Organization

This Draft EIR includes all applicable information required by Article 9 of the CEQA Guidelines (Sections 15120-15130). Table 2-2 contains a list of sections required under CEQA, along with a reference to the chapter in which they can be found in this document.

TABLE 2-2. REQUIRED EIR CONTENTS

Requirement (CEQA Section)	Location in EIR
Table of Contents (Section 15122)	Table of Contents
Executive Summary (Section 15123)	Chapter 1
Project Description (Section 15124)	Chapter 4
Environmental Setting (Section 15125)	Chapter 5, (Sections 5.1 through 5.16)
Significant Environmental Effects of Proposed Project (Section 15126.2(a))	Chapter 1; Chapter 5
Unavoidable Significant Environmental Impacts (Section 15126.2(b))	Chapter 1; Chapter 6
Significant Irreversible Environmental Changes (Section 15126.2(c))	Chapter 1; Chapter 6
Growth Inducing Impacts (Section 15126.2(d))	Chapter 1; Chapter 6
Mitigation Measures (Section 15126(e) and Section 15126.4)	Chapter 1; Chapter 5
Cumulative Impacts (Section 15130)	Chapter 1; Chapter 7
Effects Found not to be Significant (Section 15128)	Chapter 1; Chapter 8
Alternatives to Project (Section 15126.6(f))	Chapter 9
Organizations and Persons Contacted/List of Preparers (Section 15129)	Chapter 10

The content and organization of this EIR are in accordance with the most recent guidelines and amendments to CEQA and the State CEQA Guidelines. Technical studies have been summarized within individual environmental analysis sections and/or summary sections. Full technical studies have been included in the appendices to this EIR (see Volume II of the EIR) and are available for review during the public comment period.

This EIR has been organized in the following manner:

- **Chapter 1.0, Executive Summary** is provided at the beginning of the EIR that outlines the conclusions of the environmental analysis and a summary of the proposed Project as compared to the alternatives analyzed in this EIR. The Executive Summary also includes a table summarizing all identified environmental impacts, along with the associated mitigation measures proposed to reduce or avoid each impact.
- **Chapter 2.0, Introduction,** provides an overview of the EIR, introducing the proposed Project, applicable environmental review procedures, and format of the EIR.
- **Chapter 3.0, Project Background,** provides complete description of the proposed Project's background.
- **Chapter 4.0, Project Description,** provides a description of the proposed Project, including its objectives, location (regional and local), general environmental setting, identification of discretionary actions and interested parties, and a list of cumulative projects. The setting discussion also addresses the relevant planning documents and existing land use designations of the Project site.
- **Chapter 5.0, Environmental Analysis,** provides a detailed impact analysis for each environmental issue, cumulative impacts and required mitigation measures, as applicable, that would result with project implementation.
- **Chapter 6.0, Analysis of Long-Term Effects,** addresses significant unavoidable impacts of the proposed Project, including those that can be mitigated but not reduced to below a level of significance; significant irreversible environmental changes that would result from the proposed Project, including the use of nonrenewable resources; and growth inducement.
- **Chapter 7.0, Cumulative Effects,** addresses the potential cumulative impacts associated with the proposed Project and other existing, approved, and proposed development in the area.
- **Chapter 8.0, Environmental Effects Found Not to Be Significant,** provides, for each environmental parameter analyzed, a description of the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the proposed Project; the existing environmental setting; the potential adverse and beneficial effects of the proposed Project; the level of impact significance before mitigation; the mitigation measures for the proposed Project; and, the level of significance of the adverse impacts of the proposed Project after mitigation is incorporated.
- **Chapter 9.0, Alternatives,** provides a description and evaluation of alternatives to the proposed Project. This section addresses the mandatory "No Project" alternative, as well as

development alternatives that would reduce or avoid the proposed Project's significant impacts.

- **Chapter 10.0, Preparers,** identifies persons involved in the preparation of this EIR and/or those contacted during preparation of this EIR who provided information or data incorporated into the document.
- **Chapter 11.0, References,** provides a list of informational sources and technical reports utilized in preparation of the EIR.
- **Appendices** provide information and/or relevant technical studies in support of the environmental analysis contained in this EIR.

Environmental issues evaluated in Chapter 5.0 of this EIR include:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

Approach To Analysis

CEQA Guidelines §15125(a) addresses how a lead agency should establish the baseline conditions against which potential environmental impacts of a project are measured, as follows:

> An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or, if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

For the Glamis Specific Plan, this EIR describes physical environmental conditions, from both a local and regional perspective, as they existed at the time the Notice Of Preparation was published.

Each environmental issue area in **Chapter 5.0**, *Environmental Analysis,* contains a description of the following:

- The physical environmental setting as it existed at the time the Notice of Preparation was published along with the existing land uses on the site. The environmental setting constitutes the baseline physical conditions against which the County determines whether an impact is considered significant and adverse;
- The regulatory framework governing each issue;
- The threshold(s) of significance determined to be appropriate by the County pursuant to Section 15064.7 of the CEQA Guidelines;
- The methodology used in identifying and considering the issues;
- An evaluation of the project-specific impacts and identification of mitigation measures for each environmental parameter for which the proposed Project may result in potentially significant adverse impacts;
- A determination of the level of significance after mitigation measures are implemented. If significant unavoidable adverse impacts are identified (i.e., significant adverse impacts which cannot be mitigated or that remain significant even after mitigation is incorporated), it will be necessary for the County of Imperial to determine if the benefits from implementing the proposed Project outweigh the unavoidable adverse effects and adopt a Statement of Overriding Considerations.; and,
- The identification of any residual significant impacts following mitigation.

Environmental issues discussed in **Chapter 8.0**, *Environmental Effects Found Not to Be Significant*, include:

- Agriculture and Forestry Resources
- Mineral Resources
- Recreation
- Wildfires

2.10. Incorporation By Reference

This EIR relies upon previously adopted regional and statewide plans and programs, agency standards, and background studies in its analysis, such as the County of Imperial General Plan, Title 9 Land Use Ordinance; Noise Abatement and Control Ordinance, and Imperial County Air Pollution Control District ’s (ICAPCD CEQA Air Quality Handbook). Whenever existing environmental documentation or previously prepared documents and studies are used in the preparation of the EIR, the information is summarized for the convenience of the reader and incorporated by reference. In addition, each section which relies upon previously adopted plans, programs, environmental documentation and background studies notes how it specifically relates to the proposed Project and that the information has been reconfirmed. In accordance with the CEQA

Guidelines, Section 15150(b), the documents referenced in the EIR will be made available to the public for inspection at the County upon request. In addition, referenced documents and other sources used in preparation of the EIR are identified in Chapter 11.0 (References).

Technical studies and reports prepared for the proposed Project are included in the Appendices of and are considered part of the EIR.

3.0 PROJECT BACKGROUND

3.1 Project Location

The Glamis Specific Plan Area (GSPA) is located in the unincorporated community of Glamis, a remote area in the eastern portion of Imperial County. Glamis is located approximately 27 miles east of the City of Brawley; approximately 32 miles northeast of the City of El Centro; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea. See **Figure 3--1**, *Regional Location* and **Figure 3-2**, *Project Vicinity*).

3.2 Project Background

3.2.1 History of the Glamis Specific Plan Area

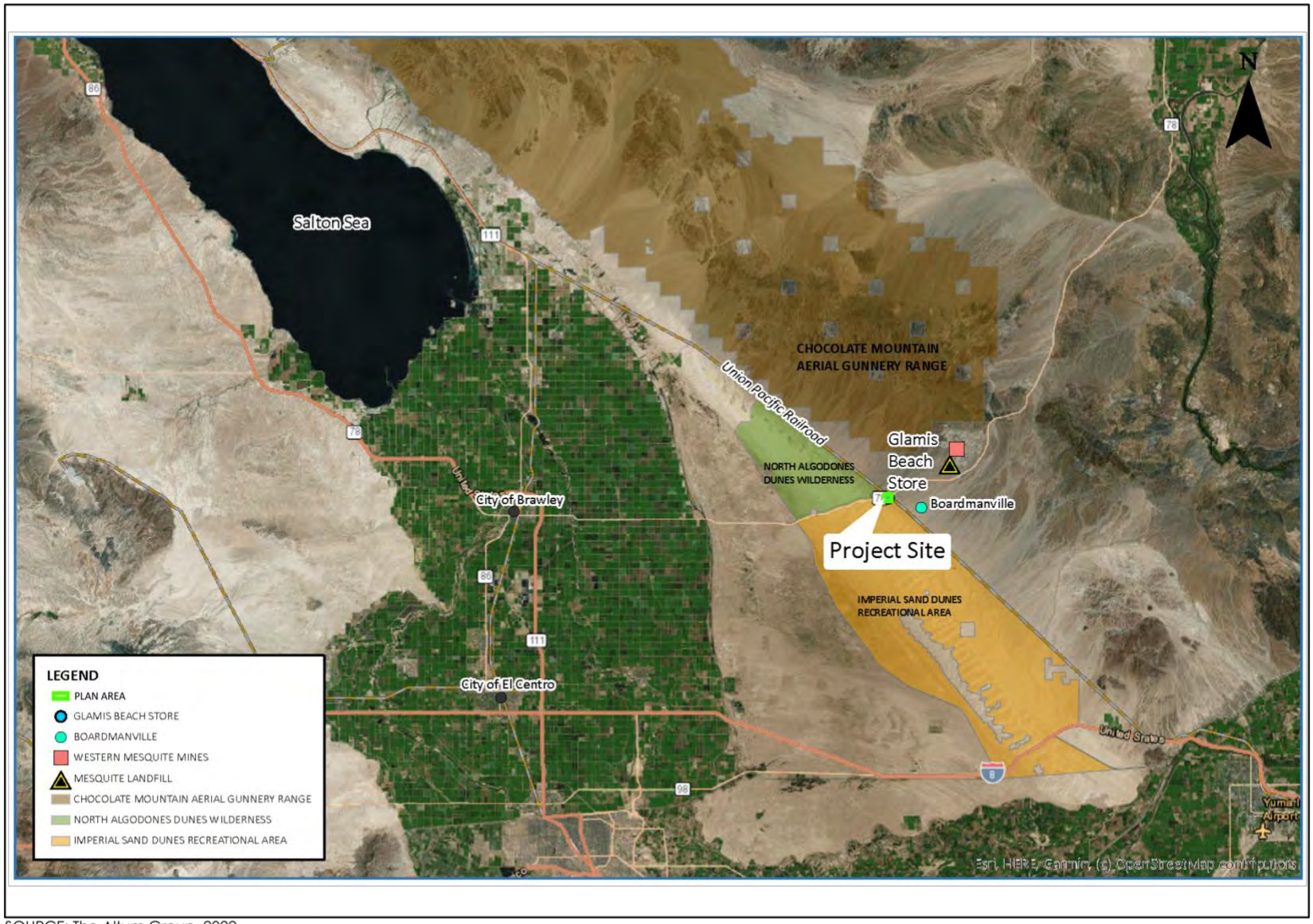
Glamis and the Imperial Sand Dunes Recreation Area (ISDRA) have been utilized for off-highway vehicle (OHV) recreational activities since the 1960s. Enthusiasm for dune buggies and other sand vehicles brought 30,000 people to Glamis during the 1979 Thanksgiving weekend. By the 2010s, tens of thousands of OHV enthusiasts were visiting the ISDRA during the holidays in autumn, winter and early spring months, many of them camping in Recreational Vehicles (RVs) near Glamis. Glamis became known as the Sand Toy Capital of the World. As a result, events and activities such as "Camp RZR" started to occur within Glamis that attracted as many as 20,000 visitors from the ISDRA annually.

3.3 Current Activities at the Glamis Specific Plan Area

3.3.1 Existing Characteristics

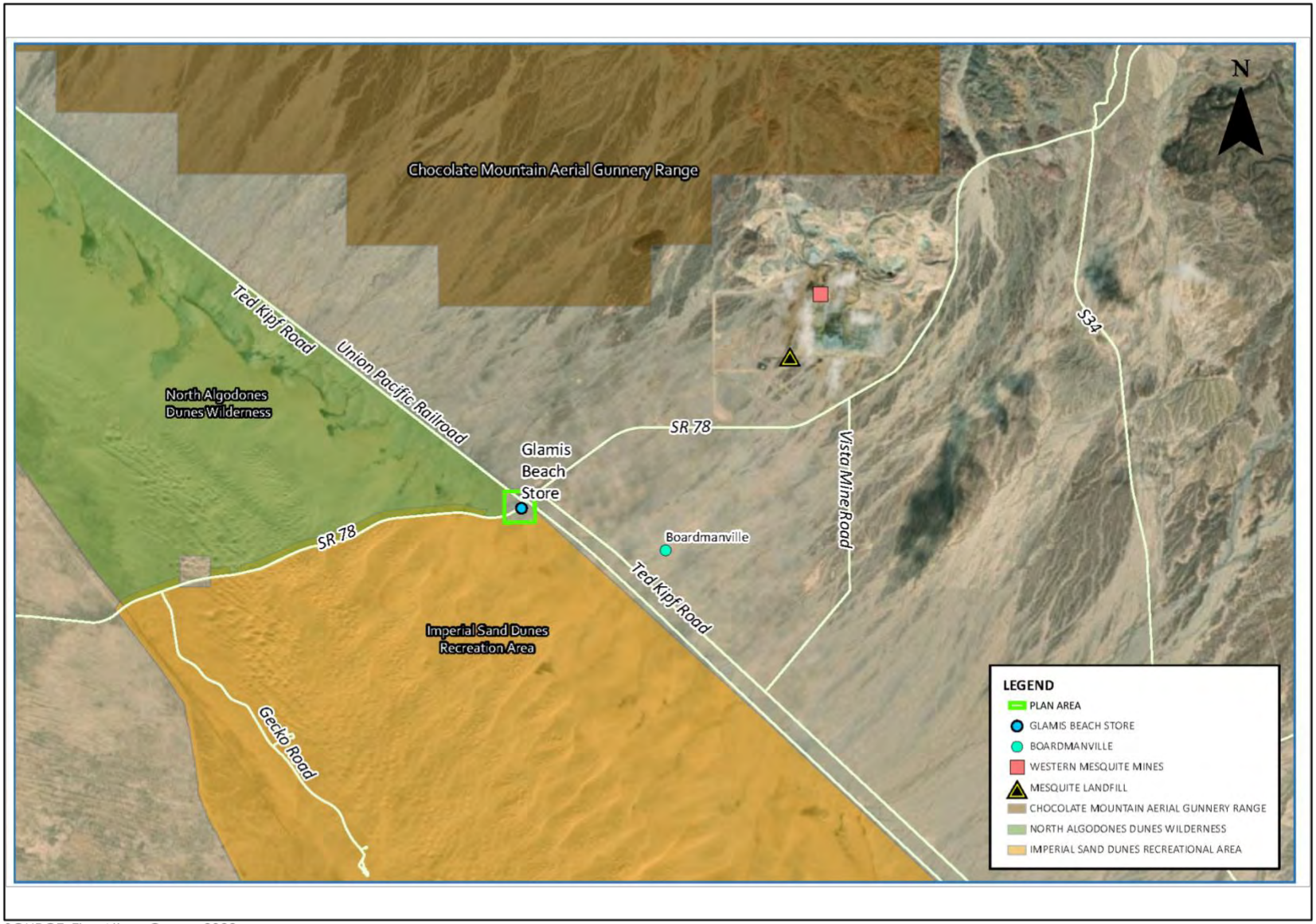
The GSPA is located on private land that is directly adjacent to the ISDRA in an unincorporated area of Imperial County. It contains the small unincorporated community of Glamis which is centered around the Glamis Beach Store (**Figure 3-3**, *Project Site*). The Planning Area encompasses 143 acres and is composed of seven (7) parcels of land identified as assessor parcel numbers (APN) 039-310-017; -022; -023; -026; -027; -029; and -030. The Planning Area is regionally accessible via State Route 78 (SR-78) (a.k.a. Ben Hulse Highway), which serves as the primary form of access for motorists. Ted Kipf Road, a County-maintained dirt road, serves as a secondary access extending northwesterly for approximately 17 miles from SR-78 to Niland-Glamis Road. The eastern half of the Planning Area is also traversed by the Union Pacific Railroad (UPRR) which runs north and south and by Wash Road which parallels the UPRR south of SR-78.

The Planning Area can be characterized as an area of open desert with several adjoined one- and two-story metal building structures representing the Glamis Beach Store, and metal corrugated water tanks situated directly behind the store.



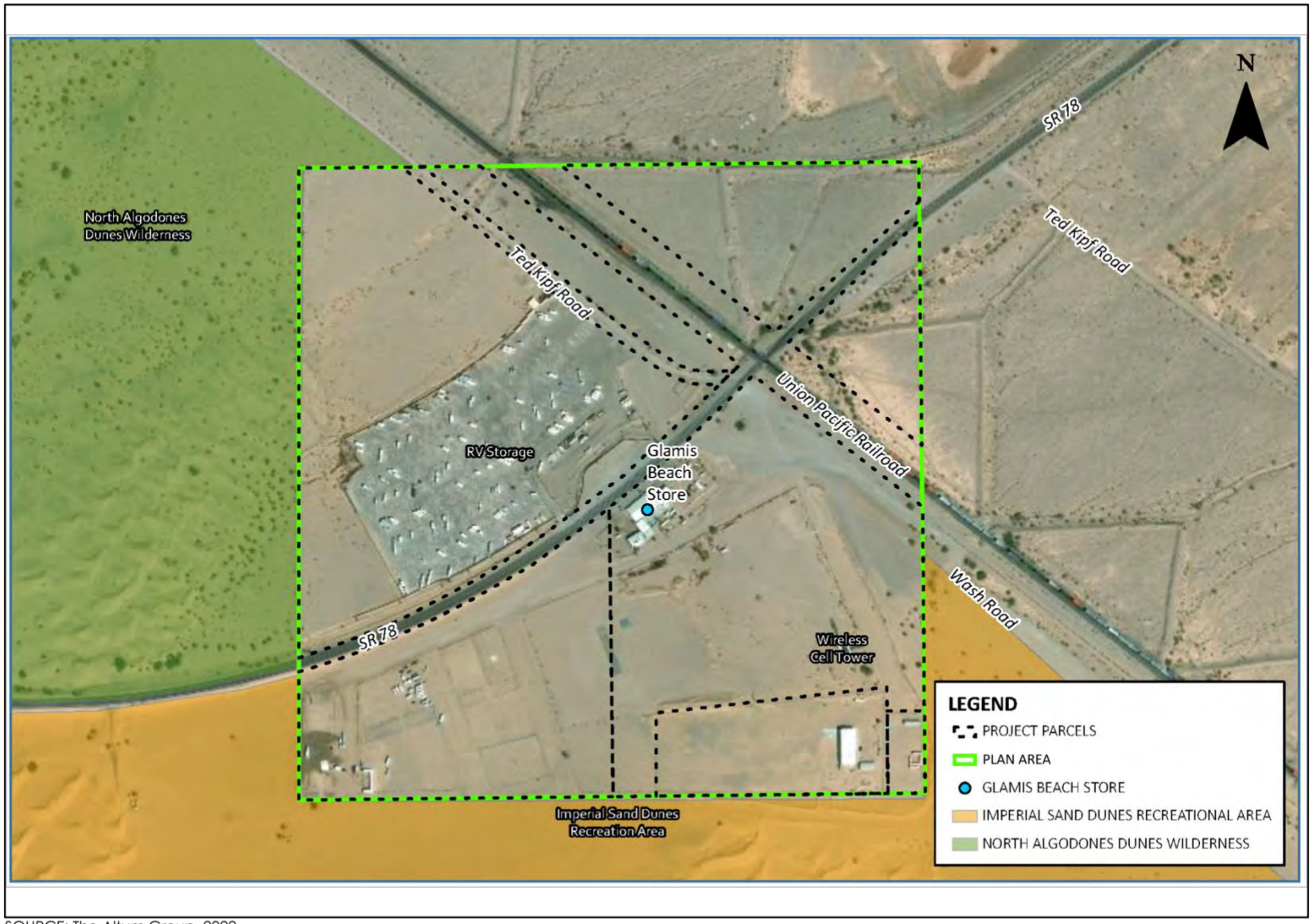
SOURCE: The Altum Group, 2022.

Regional Setting
Glamis Specific Plan
Figure 3-1



SOURCE: The Altum Group, 2022.

Project Vicinity
Glamis Specific Plan
Figure 3-2



SOURCE: The Altum Group, 2022.

Glamis Specific Plan Area
Glamis Specific Plan
Figure 3-3

Additionally, there is a separate seasonal OHV repair business connected to the Glamis Beach Store. A wood fence for delineated parking/vendor areas is located directly west of the store. A communications facility tower, approximately 180 feet in height, is located at the southeast portion of the project vicinity. Due south is a single-family residence, large RV storage garage, and other related equipment storage buildings. Additionally, a prefabricated residential structure is located on the southeast corner of the project vicinity. To the west, across SR-78 and opposite the Glamis Beach Store, there is an existing RV storage area as well as vacant desert land. There is also an existing 20-acre paved RV storage area for Glamis Dunes Storage and Luv 2 Camp RV Trailer Rentals, and the existing historical cemetery located at the southwest corner of SR-78 and Ted Kipf Road. Last, on the northeast side of the project vicinity, crossing the UPRR, there are two triangular parcels that are currently vacant.

The topography for the project vicinity can be characterized as relatively flat. The only minor changes in topography are found along the northeast portion of the property (northeast side of the UPRR), which can be attributed to existing elevated flood control earthen dikes and a slight, gradual southwest to northeast trending slope contour. Overall, elevation contours of the project vicinity range from 325 feet above mean sea level (AMSL) at the southwest corner of the Planning Area to 344 feet AMSL at the northeast corner. Areas of wind-blown sand dunes with sporadic native vegetation are found situated and encroaching upon the southeast corner of the Planning Area.

As discussed above, the project vicinity and the ISDRA have been a popular OHV recreational destination since the 1960s. By the 2010s, Glamis and the ISDRA were experiencing exponential growth from RV and OHV enthusiasts. As a result, events and activities such as "Camp RZR" started to occur within the project vicinity that attracted as many as 20,000 ISDRA visitors during Halloween weekend or the weekend before Halloween. With the advent of special events within the Glamis area discretionary temporary event permits and conditional use permits (CUPs) required by the County of Imperial were deemed necessary to allow for the continued provision of such events. Currently, special and temporary events are permitted under CUP #08-0025. Events such as "Camp RZR" are required to undergo review and approval of event operations and protocols with the County and key stakeholder agencies.

Currently, special and temporary events are permitted under CUP #08-0025. Events such as "Camp RZR" are required to undergo review and approval of event operations and protocols with the County and key stakeholder agencies.

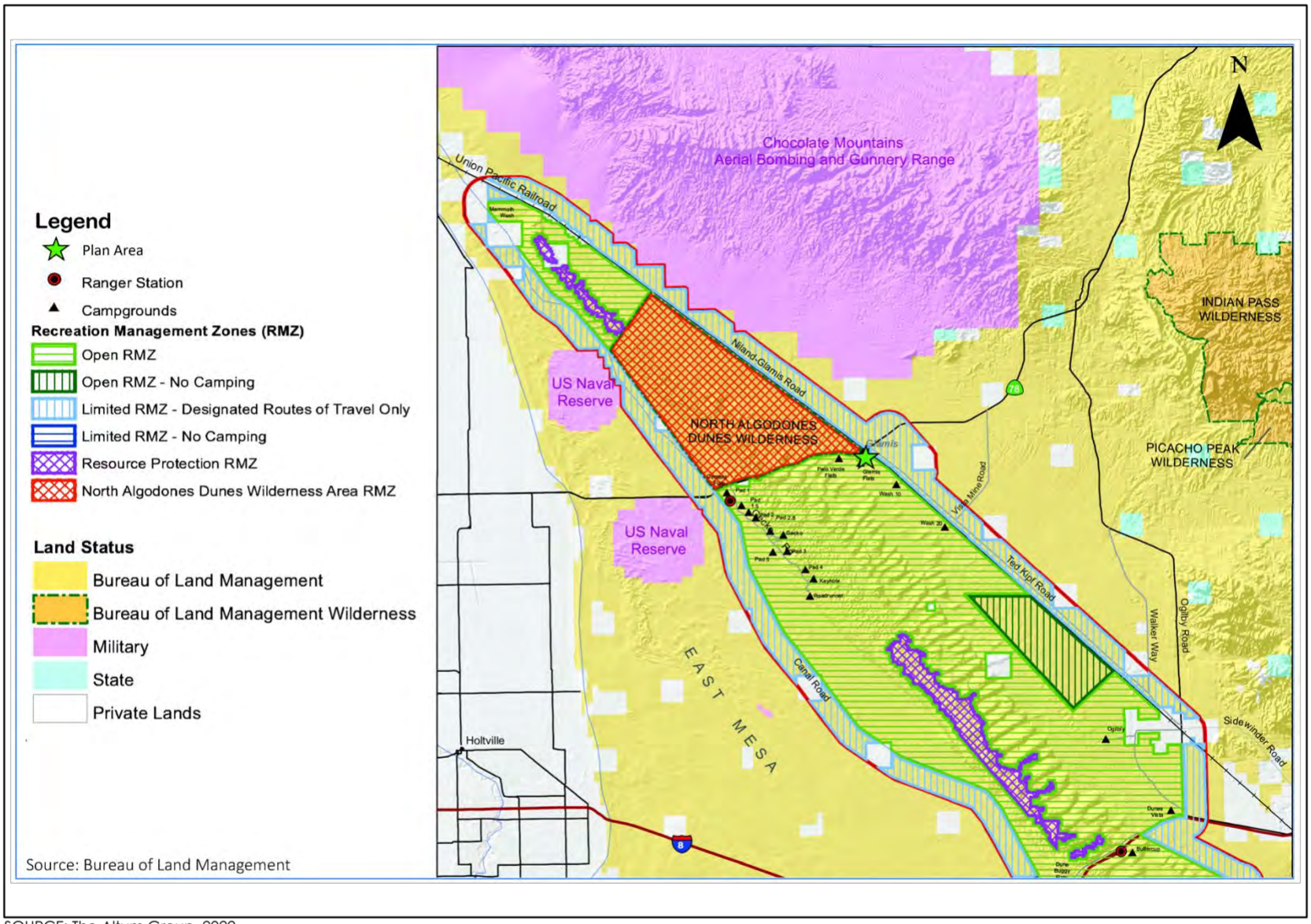
3.3.2 Surrounding Land Uses

The Planning Area is surrounded by open desert land that is managed almost entirely by the Bureau of Land Management (BLM). Directly northwest of the planning area, is the North Algodones Dunes Wilderness (NADW); which consists of approximately 26,000 acres of land managed by the BLM as part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use, however, camping is allowed. The project vicinity is directly adjacent to the ISDRA

to the southwest, south and southeast. The ISDRA is the largest mass of sand dunes in the State of California. North of the NADW is the Chocolate Mountain Aerial Gunnery Range (CMAGR) which is a live-fire training range used for developing and training Marine Corps and Navy aviators. The area to the northeast of the Planning Area is BLM land but is not part of the ISDRA (**Figure 3-4**, *Surrounding Land Uses*).

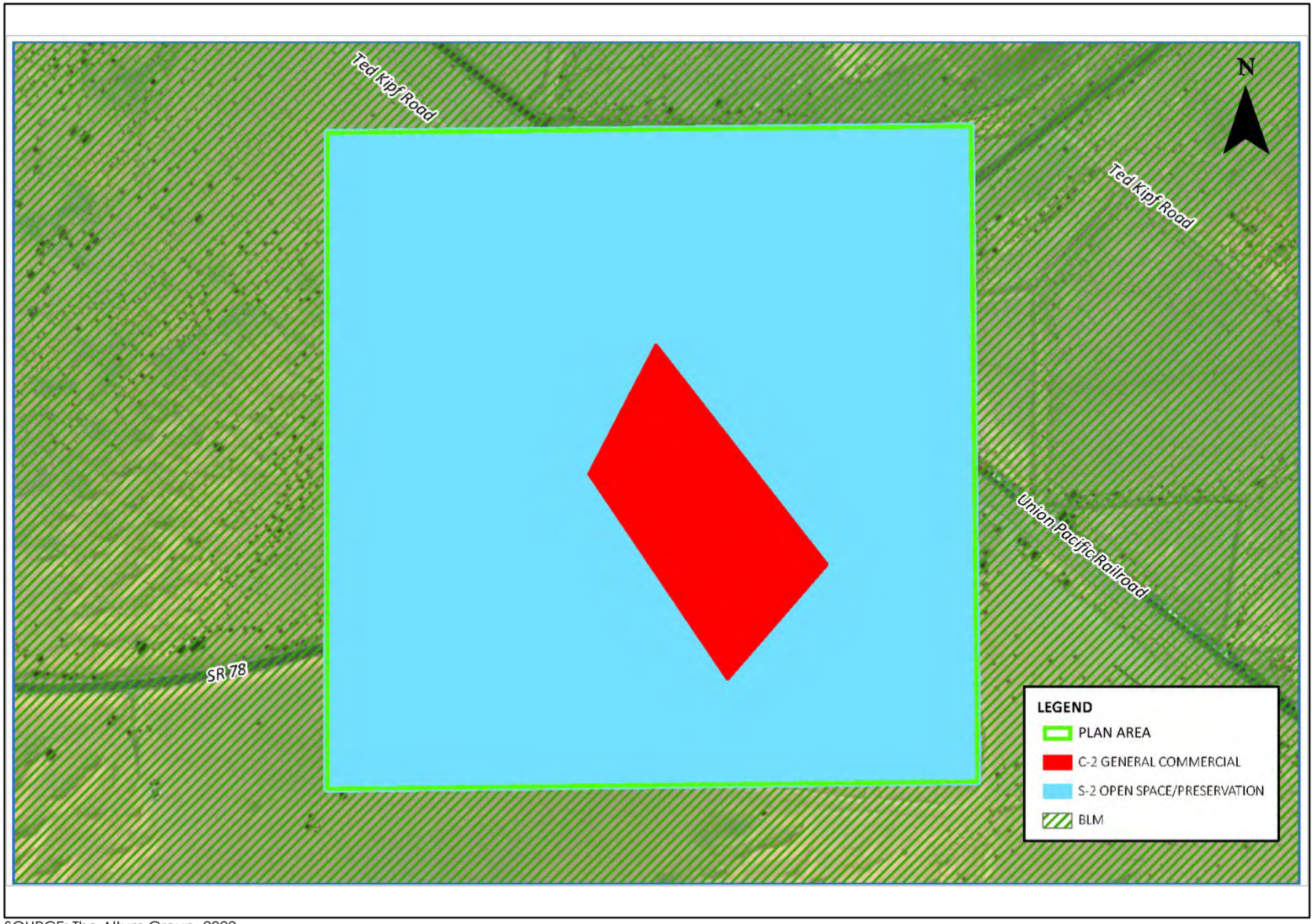
3.3.3 General Plan and Zoning Designation

The project vicinity is designated on the adopted Land Use Element of the County of Imperial's General Plan as the GSPA (County of Imperial, 2015). As noted in the County's Land Use Element, approval of a Specific Plan by the Imperial County Board of Supervisors (Board) is required prior to any significant new use or development in this area, except agricultural use. The GSPA allows for the development of a Specific Plan in accordance with design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. The general area of the Glamis Beach Store is currently zoned as C-2 (Medium Commercial), while the remainder of the GSPA is zoned as S-2 (**Figure 3-5**, *Existing Zoning*).



SOURCE: The Altum Group, 2022.

Surrounding Land Use
Glamis Specific Plan
Figure 3-4



SOURCE: The Altum Group, 2022.

Existing Zoning
Glamis Specific Plan
Figure 3-5

4.0 PROJECT DESCRIPTION

4.1 Introduction and Overview

Polaris Inc. (the Applicant) is proposing a Specific Plan (Appendix M) for the development of the Glamis Specific Plan Area (GSPA). The proposed Specific Plan would implement the County's objectives for the development of this area which are to:

- Accommodate recreation supporting land uses including retail and service commercial, motel accommodations, recreational vehicle and mobile home parks, and community facilities;
- Coordinate specific plan with the Bureau of Land Management (BLM) and affected local agencies; and;
- Provide public services to the GSPA concurrent with the need.

4.1.1 Specific Plan Process

A specific plan is a regulatory tool for the thoughtful and systematic implementation of a General Plan for a defined area. The proposed Specific Plan is intended to meet the Specific Plan requirements as set forth in California State Law (California Government Code [CGC] Section [§] 65450) through which the State authorizes cities and counties to adopt Specific Plans as appropriate tools in implementing their General Plans. Under the provision of this Statute the County has the authority to include detailed regulations, conditions, programs and all proposed legislation within the Specific Plan that are necessary for the systematic implementation of the General Plan.

During the preparation of the proposed Specific Plan, stakeholder meetings were held (in June through August 2019) with California Department of Transportation (Caltrans) District 11, the Imperial County Transportation Commission (ICTC), the County of Imperial Department of Public Works (DPW), the BLM – El Centro Field Office, and other local governmental agencies, to get input into the overall development and implementation of the proposed Specific Plan. Stakeholder meetings were also held to make sure the proposed circulation plan for the GSPA would be consistent with each agency's requirements and general direction, and to ensure that the proposed Specific Plan would be properly integrated into the County's Regional Transportation System.

4.1.2 Regulatory Context

4.1.2.1 Land Use Designations

The GSPA is designated on the adopted Land Use Element of the County of Imperial's General Plan (County of Imperial, 2015). As noted in the Land Use Element, approval of a specific plan by the Imperial County Board of Supervisors (Board), is required prior to any significant new use or development in this area, except agricultural use.

4.1.2.2 Zoning Regulations

The County's Zoning Ordinance (Title 9, Division 5 of the County's Land Use Ordinance) establishes regulations to protect the public health, safety and welfare, to provide for orderly development, classify, regulate and where applicable segregate land uses and building uses; to regulate the height and size of buildings; to regulate the area of yards and other open spaces around buildings; to regulate the density of population, and to provide the economic and social advantages resulting from orderly planned land uses and resources (Imperial County Zoning Ordinance).

The general area of the Glamis Beach Store is currently zoned as C-2 (Medium Commercial), while the remainder of the project vicinity is zoned as S-2 (Figure 3-5).

4.1.3 Description of Proposed Project

The proposed Specific Plan creates a distinctive masterplan for recreation-serving land uses which are consistent with the historical use of the GSPA. It provides for a great deal of flexibility as to the development of potential land uses within the GSPA to promote the concept of an open desert playground that derives from the "Camp RZR" event, historically held in October of each year at the GSPA, and the surrounding ISDRA. This area attracts hundreds of thousands of OHV enthusiasts every Halloween, Thanksgiving, Christmas, New Years, and President's Day weekend.

4.1.3.1 Planning Areas

The GSPA consists of eight (8) Planning Areas. Planning Areas 1, 2, 3, and 4 would be zoned as Commercial-Recreation 3 (CR-3) (Figure 4-1, *Proposed Zoning and Planning Areas*). This designation is intended to accommodate a large variety of commercial uses that are generally supportive of OHV activities and provide for large scale events.

Planning Areas 5 and 6 would be zoned Commercial-Recreation 1 (CR-1). This zone is intended to allow small scale, low density development that will not enhance or contribute to the use of off-road vehicles on public highways or roads. This could include employee housing, research and development (R & D) facilities, Recreational Vehicle (RV park with restrictions)[1] and other similar uses.

Planning Area 7 is designated Commercial-Recreation 2 (CR-2). This designation is intended to accommodate recreational related commercial opportunities and projects that will support the Off Highway Vehicle (OHV) and recreational uses of the area at a higher density and allowable uses than CR-1 but still be limited to specific uses that are less intense and more occasional than those allowed in CR-3. This could include small repair shops, limited housing, RV park with restrictions and the like.

[1] Within this zone the Specific Plan will restrict the use of off-road vehicles accessing the highway.

SOURCE: The Altum Group, 2022.

N

0 400 800 Feet

Proposed Zoning Designations and Planning Areas
Glamis Specific Plan
Figure 4-1

Planning Area 8 would be re-zoned to the County's existing S-1 (Open Space/Recreation) designation. S-1 is used to recognize areas that embody the unique Open Space and Recreational character of Imperial County including the deserts, mountains and water-front areas. The S-1 designation is primarily characterized by low intensity human utilization and small-scale recreation related uses.

As envisioned, the proposed Specific Plan will facilitate an entertainment enclave among the iconic dunes. This enclave will enhance the historic experiences that OHV riders and visitors expect when they visit the dunes.

The following is a brief description of the proposed land uses within the GSPA (Figure 4-2).

Recreational - The GSPA provides an opportunity for a variety of recreational activities to complement the established "Glamis" sand dunes experience of the surrounding ISDRA. These include an Adventure Center (offering activities such as OHV training, OHV rentals, etc.), amusement facilities, desert tours (off road experience), racetrack, shooting range, park/playground/picnic area, and other recreational-based activities.

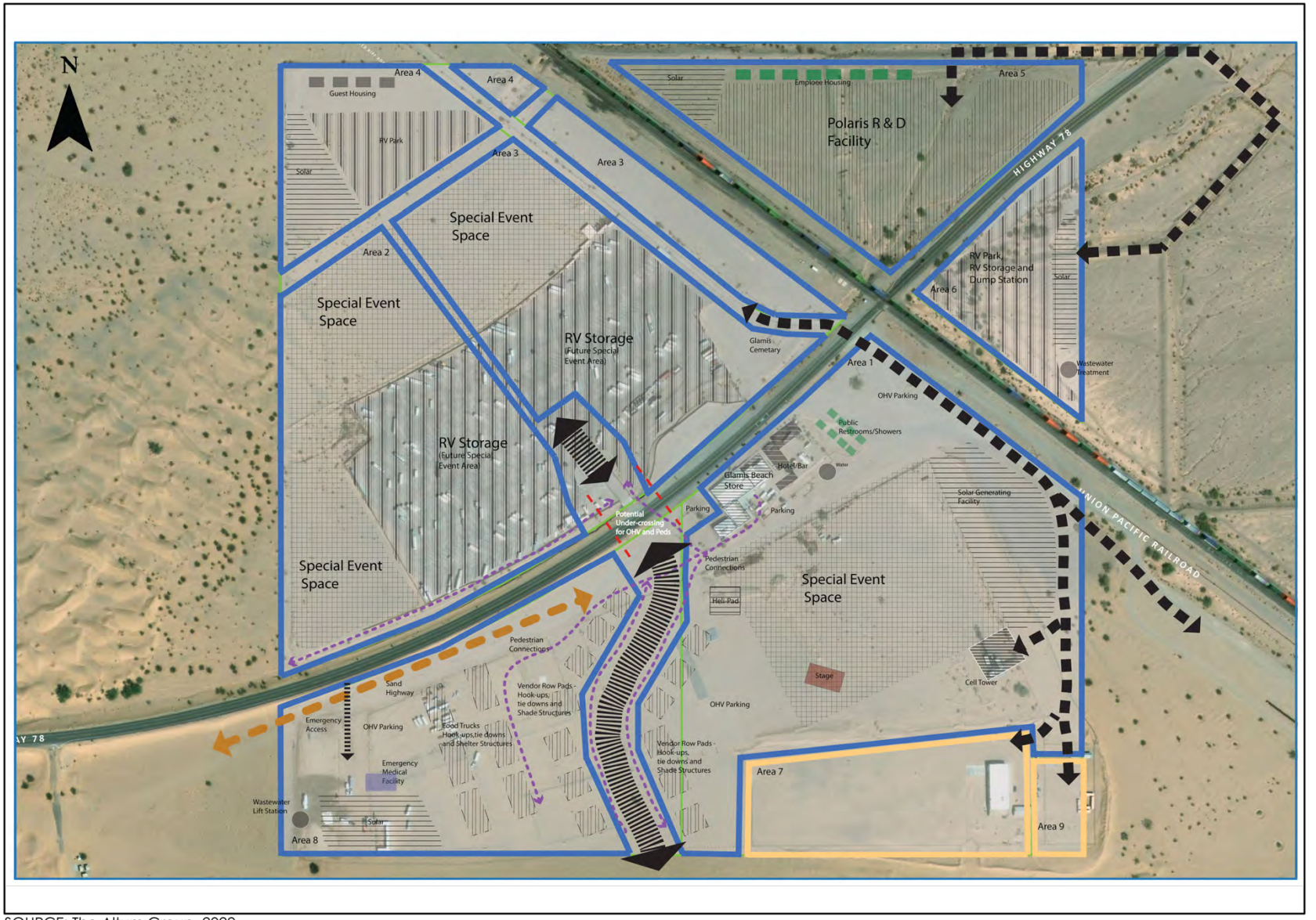
Commercial/Retail - The GSPA will allow for a wide range of commercial and retail development, which include fuel stations, rental facilities, and sporting goods stores to accommodate the needs of visitors to the Glamis area. It may also provide for RV Park(s) to accommodate a small number of users that desire to have conveniences not found in open dry camping.

Storage - OHV and RV storage is an existing land use within the project vicinity. The GSPA will provide for storage for OHVs and RVs to allow visitors to store their vehicles at Glamis year around.

Entertainment - The Glamis area has long been known as the premier destination for OHV enthusiasts to enjoy their recreational activities within the world-renowned ISDRA. The GSPA will allow for a range of entertainment land uses whose purpose is to enhance the visitors experience to the Glamis area. Entertainment land uses could include an obstacle course, fireworks display area, and racetrack.

Hospitality - With an average annual attendance of 200,000 visitors to the Glamis area, the GSPA will provide for the development of various hospitality services to provide visitors with the accommodations they need to fully enjoy all that the Glamis area has to offer. Hospitality land uses may include medical services facility, mobile food trucks, tourist information center, public showers, public restrooms, and hotel/motel facilities.

Residential - The GSPA will allow for limited residential development to accommodate those who require temporary housing in Glamis. Housing will be developed in the form of guest, employee housing, seasonal private residences and temporary use of RVs.



SOURCE: The Altum Group, 2022.

Conceptual Site Plan
Glamis Specific Plan
Figure 4-2

Renewable Energy - Due to the remote location of the project vicinity, renewable energy facilities will be developed to provide electricity to the project vicinity. The GSPA will allow for the development of a solar generation facilities (including battery storage) located throughout the project vicinity (Figure 4-2).

Infrastructure Improvements - In order to properly accommodate the large volume of visitors to the project vicinity, existing water and wastewater facilities will need to be improved along with the development of additional infrastructure. The GSPA will allow for the development of utility buildings, utility substation(s), and water/wastewater treatment facilities.

Research & Development Facility - The GSPA provides for a R&D facility that will take advantage of the close proximity of the ISDRA. This R&D facility will allow Polaris to test their equipment in a natural and private setting.

4.1.4 Project Objectives

The location and historical recreational use of the GSPA is key to planning the GSPA. The Specific Plan Area designation in the County's General Plan establishes the intended general land use character. However, the Glamis community is unique in that it has served, and will continue to serve, as the premiere locale for hundreds of thousands of OHV riders and recreational visitors from around the world. The GSPA's location within the County, together with SR-78 bisecting the project site, the proximity to Interstate 8 to the south and the State of Arizona to the east, makes it a desirable location for recreational visitors to travel efficiently east or west. The GSPA attempts to build off the historical Glamis experience by providing expanded recreational, commercial, entertainment, and hospitality experiences while addressing environmental, engineering, commercial, public safety, and aesthetic needs that have been identified during the planning process. Finally, the GSPA will eliminate the need for special event-related annual CUPs and/or discretionary temporary event permits through implementation of a Special Events Management Plan (SEMP) notification that will include standards and protocols in accordance with the regulatory requirements of the County and key stakeholder agencies for regulation of special events.

The objectives for the GSP are the following:

1) Create a man-made environment that is compatible with the natural environment, surrounding land uses, and the desert climate.
2) Ensure that development within the GSPA is consistent with the County's General Plan and will protect public health, safety and general welfare, while complementing surrounding land uses and zoning.
3) Provide design criteria that will guide developer(s) and the County in the development of proposed land uses by including descriptive text and illustrative exhibits setting forth the foundation of the overall development of the project site.

4) Enable Special Events through implementation of a SEMP.

5) Adhere to the Zoning Ordinance for the GSPA in Section 3, Zoning Ordinance.

6) Provide recreational and ancillary facilities that serve the needs of the Glamis community and recreational visitors.

4.2 Specific Plan Components

The proposed Specific Plan is a regulatory document that addresses the GSPA included in the County's General Plan. The County's General Plan requires a Specific Plan to be developed for the GPSA, in accordance with the GSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. The proposed Specific Plan provides a planning framework which accommodates recreation-supporting land uses including retail and service commercial; hotel accommodations; recreational vehicles; RV parks and fuel stations and Special Events. The proposed Specific Plan has been prepared to minimize changes to the natural topography of the project site, and to reduce intrusions upon the existing landscape and to any scenic views. A full draft of the proposed Specific Plan is available online at http://www.icpds.com. In compliance with CEQA, only those components of the proposed Specific Plan that would have the potential to result in potential environmental effects are addressed in this EIR.

4.2.1 Development Standards

The proposed Specific Plan provides development standards for maintaining recreation-serving land uses which are consistent with the historical use of the Glamis area. These associated components define the overall master development concept for the Glamis planned mixed-use development and identifies the objectives, descriptions and applicable development standards for each. Development standards for the GSPA have been established at two levels: (1) standards that apply universally to the overall project which are discussed in Sections 4.3.3 through 4.3.8 below, and (2) those standards that apply specifically to the individual Planning Areas and further reinforce the overall project standards.

The only Planning Area that would apply the County's existing Zoning Designations would be Planning Area 8. Development standards of Planning Area 8 would be consistent with the standards contained within the S-1 Zoning Ordinance of the County's Municipal Code.

4.2.2 Design Guidelines

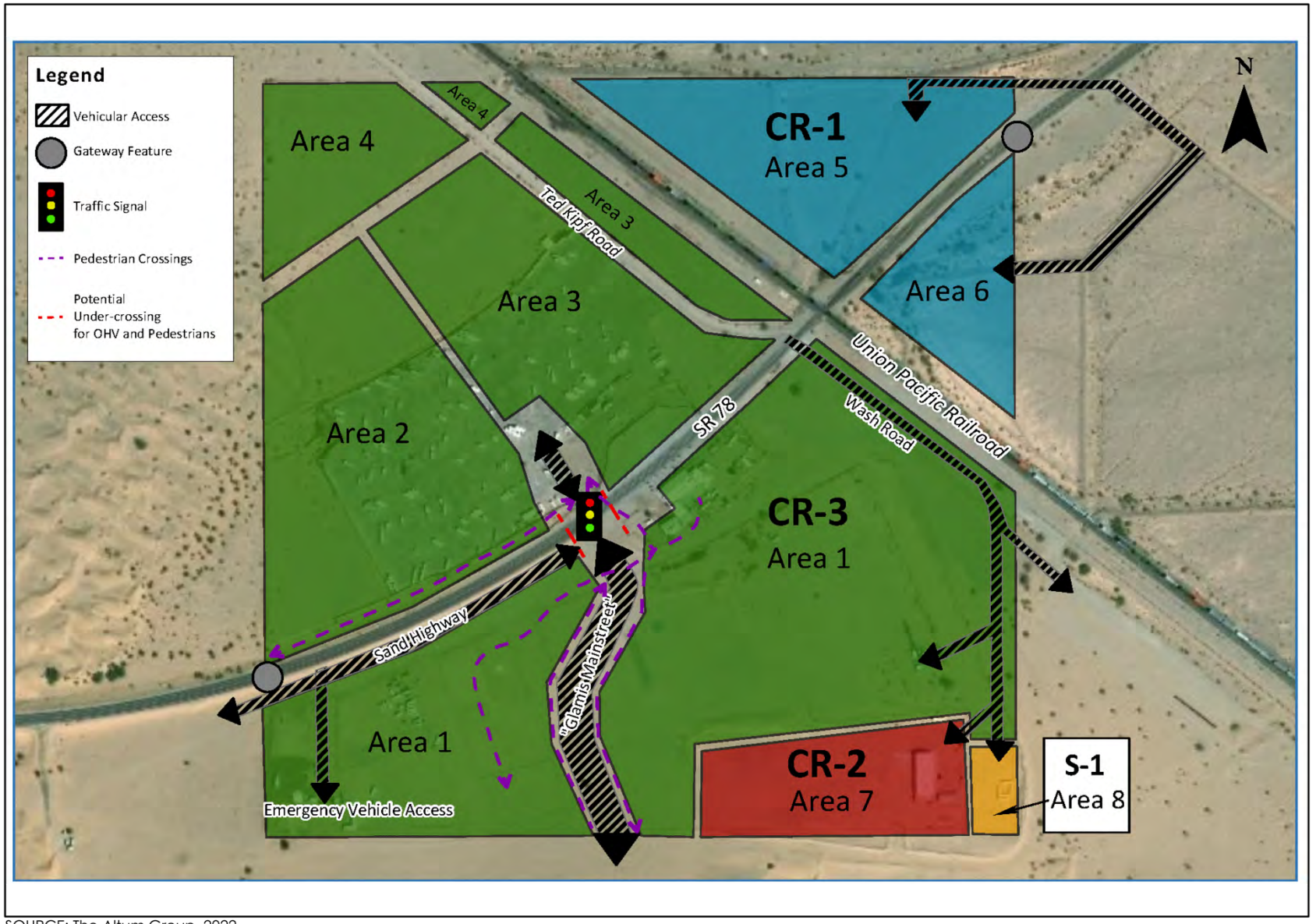
The GSPA includes design guidelines for the physical arrangement of land uses and open space/recreation areas. Adequate open space shall be provided within the developed areas to complement the open space character of the area. Each Planning Area will be seasonally occupied and be left as open space the majority of the year (Figure 4-2), and as allowed for within (particularly) CR-3.

4.2.3 Circulation Plan

The primary objective of the Circulation Plan for the GSPA is to meet the vehicular/OHV traffic needs of the recreational visitors by providing safe, direct and convenient access to the project vicinity and the ISDRA. There are a total of six (6) proximate vehicular access points to the project vicinity with a gateway feature on SR-78 at the east and west boundary of the project vicinity (Figure 4-3). Primary accessibility to the project vicinity will be via SR-78 which serves as the main transportation route for cars and trucks traveling between Brawley and Blythe. The primary access point will be an intersection of "Glamis Mainstreet" and SR-78. This intersection may, in the future as traffic counts warrant, be signalized and will provide access to the project vicinity north and south of SR-78.

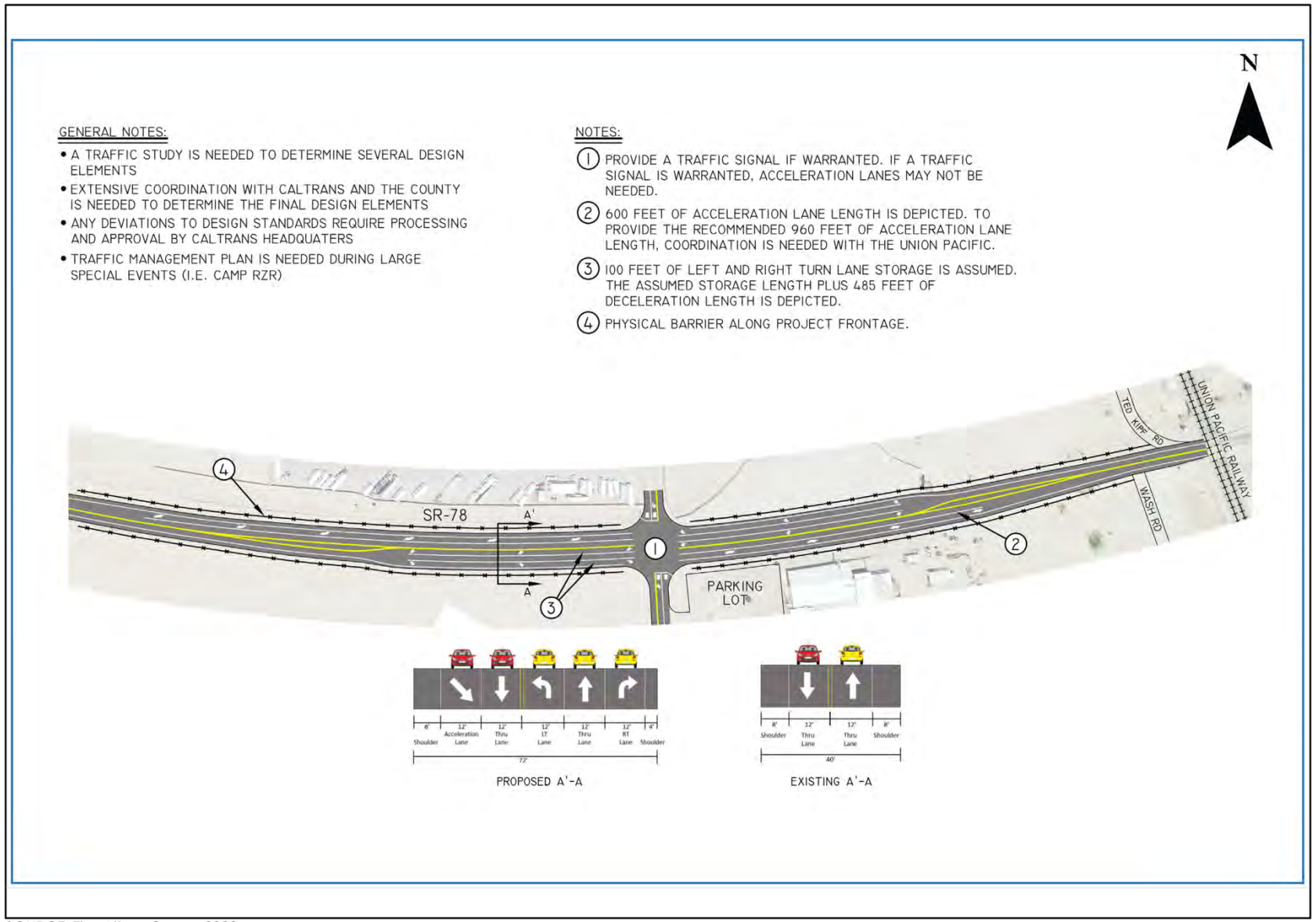
The "Glamis Mainstreet" will serve as the main thoroughfare for circulation across Planning Areas 1, 2, 3, and 4 and currently serves as the main OHV access route to the ISDRA directly to the south. To accommodate the anticipated vehicular traffic flow, the Applicant has proposed a conceptual intersection plan with proposed cross-sections subject to final design and approval from Caltrans (Figure 4-4). This concept shows the portion of SR-78 traversing through the Planning Area being expanded from two thru lanes with an ultimate right-of-way (ROW) width of 40 feet to a total of five (5) lanes with an ultimate ROW width of 72 feet. The segment of SR-78 west of the proposed intersection would have three easterly lanes – one thru lane, one left turn lane and one right turn lane – and two westerly lanes with one thru lane and an acceleration lane terminating approximately 1,000 feet from the intersection. The segment of SR-78 east of the intersection is of a similar configuration of the western segment with the number of lanes in each direction reversed and the acceleration lane terminating approximately 600 feet from the intersection. The proposed lane configuration would accommodate anticipated turning movements from all directions in a manner that would prevent collisions and provide safe circulatory direction. Extensive coordination with Caltrans and the County will be needed to determine the final design elements for SR-78 within the project vicinity.

Access will also be provided along Wash Road (an unimproved road parallel to the Union Pacific Railroad [UPRR]) from SR-78 from which Planning Areas 1, 7 and 8 will be accessible. Wash Road, which is maintained by the BLM, will continue to function as a primary access road providing access in a southeasterly direction (parallel and west of the UPRR) to ISDRA (and camping areas, etc.) located further southeast. Access to Planning Areas 5 and 6 will be provided east of the UPRR along SR-78 via dirt roads. Access to Planning Areas 5 and 6 will be restricted to passenger and service vehicles and RVs, this will prevent unsafe pedestrian and OHV crossing of the UPRR. Ted Kipf Road is a County-maintained dirt road which serves as access to ISDRA from the NADW and other BLM lands to the north of the project vicinity. Access will not be provided to Ted Kipf Road. Emergency vehicle access will be provided via the south side of SR-78 immediately due east of the western gateway feature for emergency access to Planning Area 1. The emergency access is



SOURCE: The Altum Group, 2022.

Conceptual Site Circulation Plan
Glamis Specific Plan
Figure 4-3



SOURCE: The Altum Group, 2022.

Conceptual Intersection Plan
Glamis Specific Plan
Figure 4-4

primarily intended for use during special events when there is the possibility of large numbers of visitors being on the project site. This access will have minimal improvements and will generally be controlled with a gate when not needed.

The proposed Specific Plan will address the historical uncontrolled OHV and pedestrian movement through implementation of circulatory project design features to promote safe circulation. The proposed Specific Plan will have strategically placed signage for speed limits throughout the project vicinity in order to prevent OHV/pedestrian/vehicular collisions as well as to assist with dust control measures. An OHV and pedestrian undercrossing is a proposed alternative in the vicinity of the SR-78/Glamis Mainstreet intersection (Figure 4-3). This undercrossing would allow OHVs and pedestrians to cross underneath SR-78, providing for easy and safe access from Planning Area 1 to Planning Areas 2, 3, and 4. The potential undercrossing is intended to eliminate OHVs from crossing SR-78. Furthermore, pedestrian connections throughout the project vicinity are proposed (Figure 4-3 and Figure 4-4). These pedestrian connections will provide for logical and safe movement throughout the project site.

The project vicinity includes the Sand Highway that runs parallel to SR-78 along the northwestern edge of Planning Area 1 (Figure 4-3). The Sand Highway is an existing OHV thoroughfare providing access to the Glamis Beach Store from the adjacent BLM land located to the west of the project site. As such, the Sand Highway will remain as an OHV thoroughfare. OHV circulation will occur primarily via the "Glamis Mainstreet" for access to the ISDRA to the south. While Pedestrian and OHV crossing of UPRR at various locations along the track has occurred for years, this plan attempts to discourage such crossing from the project vicinity and will require the posting of appropriate signage. Keeping the public from crossing the UPRR is beyond the ability of the project and with or without this project those crossings will continue.

Permanent signs and circulatory elements will be implemented as necessary to support the phased build-out of permanent structures within the GSPA. All future signs and circulation elements will be implemented in compliance with Federal, State, and local standards and be designed in concert with the designed connectivity of the Conceptual Circulation Plan. Urban hardscape (i.e., paved roads, curb and gutter, etc.) will be built in tandem with all proposed permanent structures. All such improvement will be subject to County and Caltrans review and approval, as applicable. As the GSPA is built-out with permanent and/or temporary structures per the proposed phasing plan, driven by market conditions, special design elements (i.e., signage) will be developed with Caltrans during final design. Furthermore, build-out of permanent uses within the GSPA will incorporate clearly marked areas designated only for OHVs and passenger vehicles to prevent collisions.

The GSP would consult the Caltrans Project Design Procedures Manual regarding the requirements and the Highway Design Manual for above ground Gateway Monuments. The Project Design Procedures Manual and the Highway Design Manual would also be consulted for the following:

- Design of any proposed grade separated structure and at-grade intersections.

- Proposed utility lines (new or relocated) within the right of way.
- Frontage roads along SR-78 including barrier separation.
- New access points along the right of way.
- Access openings on SR-78.

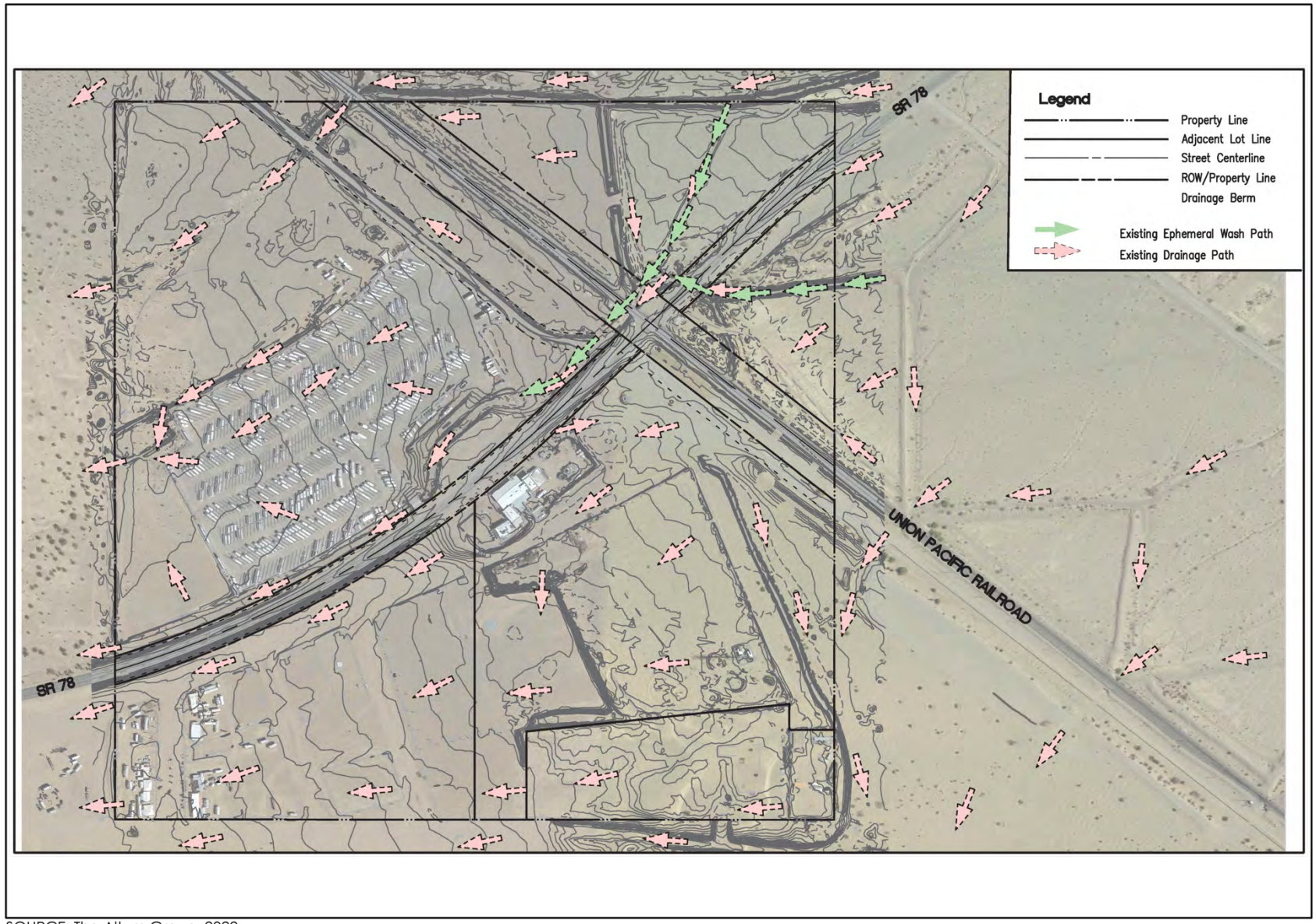
4.2.4 Special Events

Special events to be held within the GSPA, such as Camp RZR, that often include large assemblages of people and equipment, will benefit from the circulation improvements described herein, and will also be required to adhere to the traffic regulation standards set forth in the proposed Zoning Ordinance, including notification of Caltrans, the County, California Highway Patrol (CHP), Imperial County Sheriff, and other affected agencies, along with preparation of a Traffic Management Plan. In combination with the standards set forth in the proposed Zoning Ordinance, all special events will also be required to prepare a SEMP notification that subjects special events to standard protocols and conditions, including circulation-related protocols and conditions, to allow for special events to occur. The SEMP is further discussed below.

4.2.5 Drainage Plan

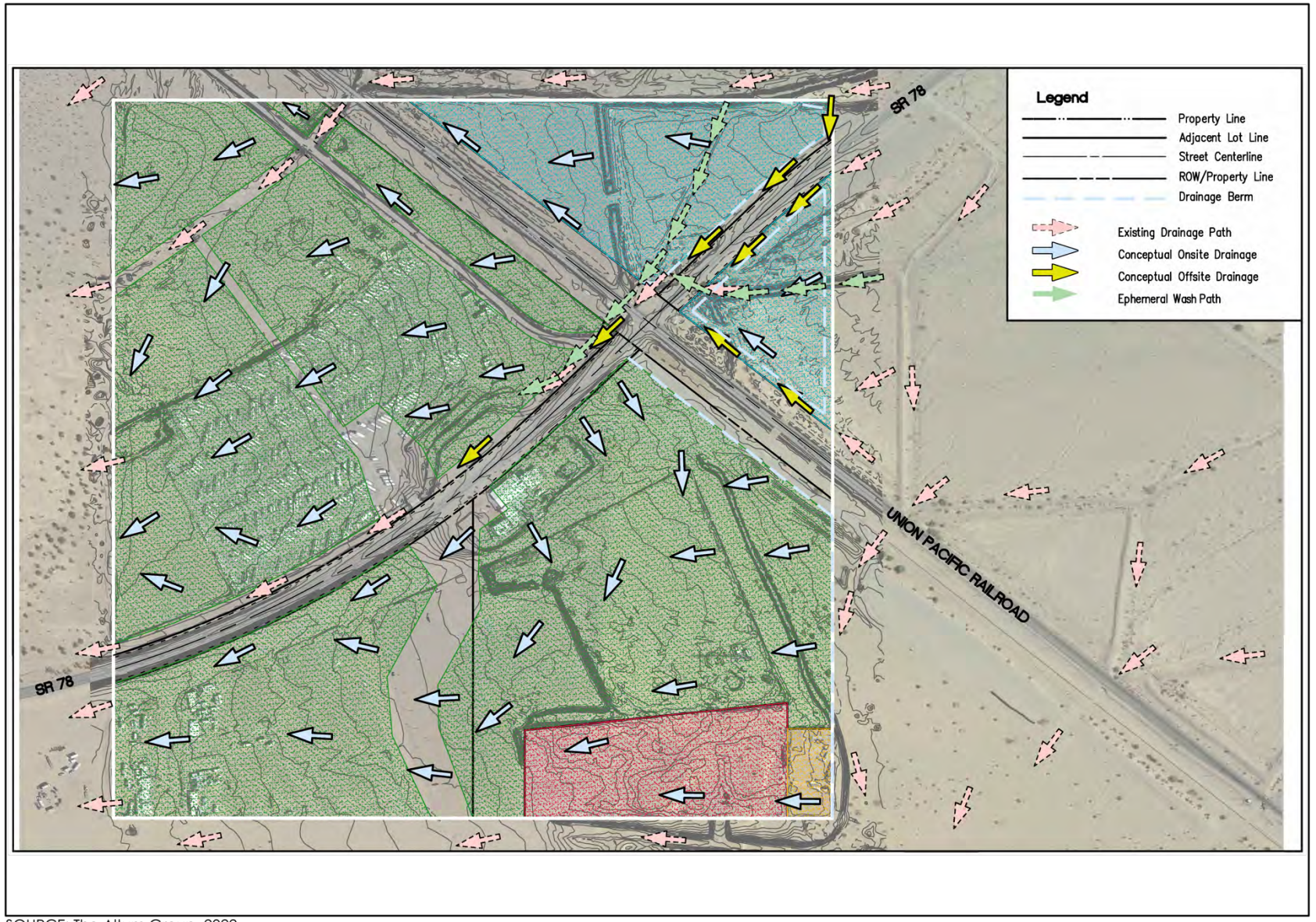
As shown in Figure 4-5, *Existing Drainage*, the existing topography and drainage of the GSPA generally drains from the northeast to the southwest via existing earthen channels and berms. The northeast portion of the project vicinity (Planning Areas 5 & 6) are openly affected by offsite flows and are directed towards three existing concrete culverts that pass under the UPRR. The drainage flows from these three concrete culverts underneath the UPRR, flow through and/or around portions of the existing project vicinity (Planning Areas 1, 2, 3, 4, 7 and 8) towards the southwest, which are located north and south of SR-78. All Planning Areas southwest of the UPRR, where future land uses are proposed, are protected by earthen channels and berms. The remaining open areas, throughout the entire site, have areas that are protected by existing earthen channels and berms.

The conceptual grading provides flood protection for future land uses within the entire project site and release the drainage to the southwest in an overall equivalent historical pattern of natural drainage courses consistent with California drainage law (Figure 4-6). The on-site design northeast of the UPRR will provide flood protection (Planning Areas 5 and 6) by continuing the off-site flows with modifications to each of the earthen drainage berms and channels. These modifications will re-direct the drainage around each of the Planning Areas to the southwest towards the three existing concrete culverts that pass under the UPRR. The modified existing earthen berm north of Planning Area 5 will continue to redirect flows north and west as will a new earthen berm to the southeast for Planning Area 6, to the south and west. The remainder of the drainage will be directed into the modified existing earthen channels along each side of SR 78. Each of these earthen channels and berms will be constructed on-site and will re-direct the existing flows in a manner consistent with



SOURCE: The Altum Group, 2022.

Existing Drainage
Glamis Specific Plan
Figure 4-5



SOURCE: The Altum Group, 2022.

Conceptual Drainage Plan
Glamis Specific Plan
Figure 4-6

the surrounding drainage patterns and practices. The manner and release of the drainage flows will be equivalent to the existing capture, conveyance and release to the southwest under the UPRR, via existing concrete culverts.

4.2.6 Public Services and Utilities

4.2.6.1 Utilities

Water Supplies

Water supplies for existing uses within the GSPA are currently provided by an existing on site well (CUP #13-0059). This well is designed specifically for domestic water use to serve a residence and its ancillary buildings. This well was constructed to domestic water well standards and cannot be used as a potable water source for the larger project area. It is currently authorized to pump 1.5 acre-feet (AF) per year. There is one permitted public water system well (CUP #13-0060) that supplies water to the yet to be permitted Glamis Beach Store public water system, System No. 1300684. It also is currently authorized to pump 1.5 AF per year.

Groundwater is treated to potable water standards to service existing uses within the GSPA. A water treatment plant (reverse osmosis) has been constructed to meet the needs of the current and future uses but is as of yet unpermitted. The water treatment plant has a production capacity of 15 gallons per minute, which amounts to approximately 22 acre-feet per year although it is currently only producing two to five acre-feet per year which reflects current demand. The plant has room for expansion, and similar to the water and sewer distribution facilities (Figure 4-7, *Conceptual Water and Sewer Plan*), would be expanded to serve the various phases of development, as needed.

Wastewater Treatment Plan

Wastewater generated by the Glamis Beach Store, restaurant and bar is currently being discharged into an existing septic tank located near to those buildings. Future wastewater treatment needed (i.e., secondary and tertiary treatment) will be determined by the amount of wastewater forecasted to be generated by each phase of structural improvement. According to the Water Supply Assessment (WSA) (Appendix K) prepared for the project operational water use would be 3,011,440.5 gallons per year, Assuming an average water use of 82 gallons per person per day (USEPA, 2022) this equates to 36,724 people. Assuming a wastewater generation of 40 gallons per person per day this would result in a wastewater generation of 1,468,995 gallons of wastewater per day which would be generated predominantly in the winter season. The proposed Specific Plan will implement water efficient appliances (i.e., sinks, toilets, showers, wash-down areas, etc.) that will minimize potential water waste and conserve water to the maximum extent possible. As new development is implemented, this wastewater plant will be expanded as determined by the regulatory agencies (Figure 4-7).

Conceptual Water and Wastewater Treatment Plan Standards

- All water lines shall be placed underground in accordance with County requirements.
- All domestic water and sewer facilities shall be designed per County requirements. Facility sizing and location will be refined during final site plan development.
- Water and sewer facilities shall be designed and installed in accordance with the requirements and specifications of the County.
- Construction of domestic water and sewer facilities shall be timed to adequately serve the GSPA in each stage of development or as needed to ensure adequate service and public health.

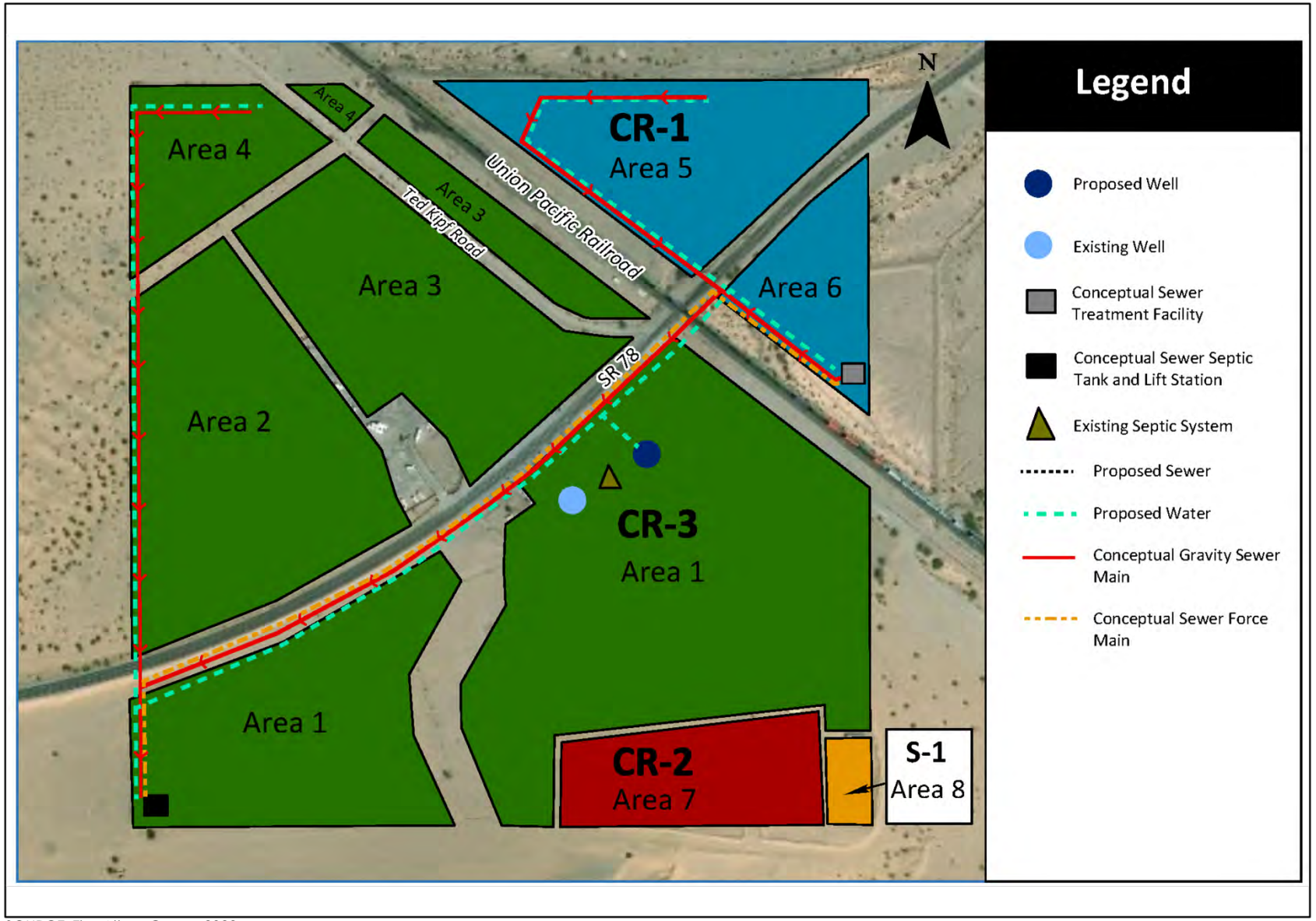
Electricity

The project vicinity currently rely on diesel generators for all of their electrical needs. Diesel generators may not be a feasible option if significant new development occurs in the future since air quality and greenhouse gas (GHG) emissions regulations are likely to become more restrictive over time. Two (2) options are being evaluated to determine which available source of power would best fit as the preferred option for the GSP. The first option would to be for Imperial Irrigation District (IID) to construct and install a power line from the nearest substation (approximately 7.2 miles to the northeast. A second option would be to develop a small commercial solar photovoltaic (PV) system, with a backup battery storage component or another green power system. The option applied will be determined/implemented with subsequent development plans.

4.2.6.2 Public Services

Fire Protection

Fire protection services are provided to the project vicinity through the Brawley Fire Department Station, located in the City of Brawley approximately 25 miles east of the project vicinity. There are existing Fire hydrant connections within the “Vendor Row” area. Additional connections will be implemented to meet the needs of the further build-out of the project vicinity. During Special Events, onsite fire protection will be provided with applicable fire protection services and apparatus.



SOURCE: The Altum Group, 2022.

Conceptual Water and Sewer Plan
Glamis Specific Plan
Figure 4-7

Law Enforcement

The County Sheriff's Department provides law enforcement to the project vicinity. Sheriff's officers that patrol the area are based at the Brawley Police Department located approximately 27 miles east of the project vicinity. During Special Events, on-site law enforcement will be provided with applicable services and apparatus.

Waste Removal

Municipal solid waste collection and disposal is provided by Republic Industries. There will be an appropriate number of dumpsters provided onsite for each Event. The number of dumpsters will be determined by the type of event, the time of day of the event, the projected number of attendees and the size of the designated area.

4.2.7 Open Space and Recreation Plan

The Conceptual Open Space and Recreation Plan is intended to complement the existing and future recreational use of adjacent BLM land. In accordance with the policies listed in the County of Imperial General Plan Land Use Element, the proposed Specific Plan provides for adequate open space within the development areas that will complement and maintain the existing open space character of the area. Proposed permanent structures will be sited appropriately to allow views from SR-78 to the open space beyond and will consider the adjacent natural resources. As shown in Figure 4-2, *Conceptual Site Plan,* there are open space areas that have been identified within Planning Areas 1, 2 and 3 to preserve the existing open space character of the area while allowing for adequate space for temporary special events and activities to be held, such as service stations and mobile food trucks located within Vendor Row.

Recreational amenities of the project vicinity will build upon the existing Glamis Beach Store through development of a restaurant and bar. Additionally, recreational amenities will consist of an Adventure Center that will offer both off-site and on-site recreational activities that are conducive to the Glamis area. Among the activities that may be included are:

- Off-site training;
- OHV rental;
- Hiking and biking;
- On-site activities that could include a sporting goods store; desert tours; and
- Activities connected with the adjacent BLM lands.

Furthermore, both vehicular and pedestrian oriented desert tour excursions into certain portions of the desert will be provided to allow the public to see the natural resources of the area generally under the direction and control of a tour guide. These tours could be excursions through the sand dunes

via OHVs in a controlled tour environment either through vehicles driven by the tour operator or with vehicles driven by individuals that would follow the tour guide in a controlled manner. In concert with the OHV-oriented recreational activities, vehicle repair vendors will be located within Vendor Row. All vehicle repair vendors will be required to conduct all operations over raised impervious concrete pads, or an equivalent station in order to prevent accidental spillage of hazardous materials (i.e., brake fluids) as a result of vehicle repair activities.

With the NADW directly to the northwest of the project vicinity, fencing will be installed along the north-western boundary of Planning Area 4 with interspersed signage to prevent OHV travel into the NADW as restricted by BLM. Prevention of OHV travel into the NADW will serve to preserve the natural resources present within the NADW. Interpretive signs describing the natural resources (i.e., desert tortoise and other wildlife, as well as native plants) and history of Glamis will be strategically placed throughout the project vicinity, with specific emphasis along the frontage abutting the NADW, for educational purposes. Interpretive signs will be collaboratively developed with BLM. Additionally, development of the project vicinity will incorporate avoidance and minimization measures to mitigate potential impacts to onsite and/or adjacent natural resources to the greatest extent. Such measures will include preconstruction surveys of sensitive wildlife species (i.e., flat-tailed horned lizard), presence of a biological monitor for each area of active construction, removal of all invasive plant species, among other applicable measures. The proposed Specific Plan will allow for the operation of multiple special events to enjoy the unique natural resources and elements provided by the Glamis area. Special events to be held within the project vicinity will allow for either public or private activity events allowing the assembly of a large numbers of people, including but not limited to; a concert, a trade show, an exhibition, a carnival, fireworks display, OHV activities including races, a stunt show, or exhibition, and similar uses. Proposed temporary special events will enhance and continue to build from the historical momentum of the Glamis area regarding past off-road events and the world-wide notoriety as the epicenter of the sand dunes OHV experience. Special events, such as Camp RZR, to be held at the project vicinity will be subject to the standards set within the proposed Zoning Ordinance, and the standards/protocols listed within the SEMP (described further below in this Section). All proposed special events will implement adequate safety procedures and protocols to ensure safe OHV accessibility to ISDRA.

4.2.7.1 Conceptual Open Space and Recreation Plan Guidelines

- All private recreational facilities and open spaces shall be maintained by the Applicant.
- Landscaping will be desert scape and minimal to be consistent with the existing nature of the project site and achieve reduced water consumption.
- Preservation operations and physical development will consider and protect the adjacent natural resources.

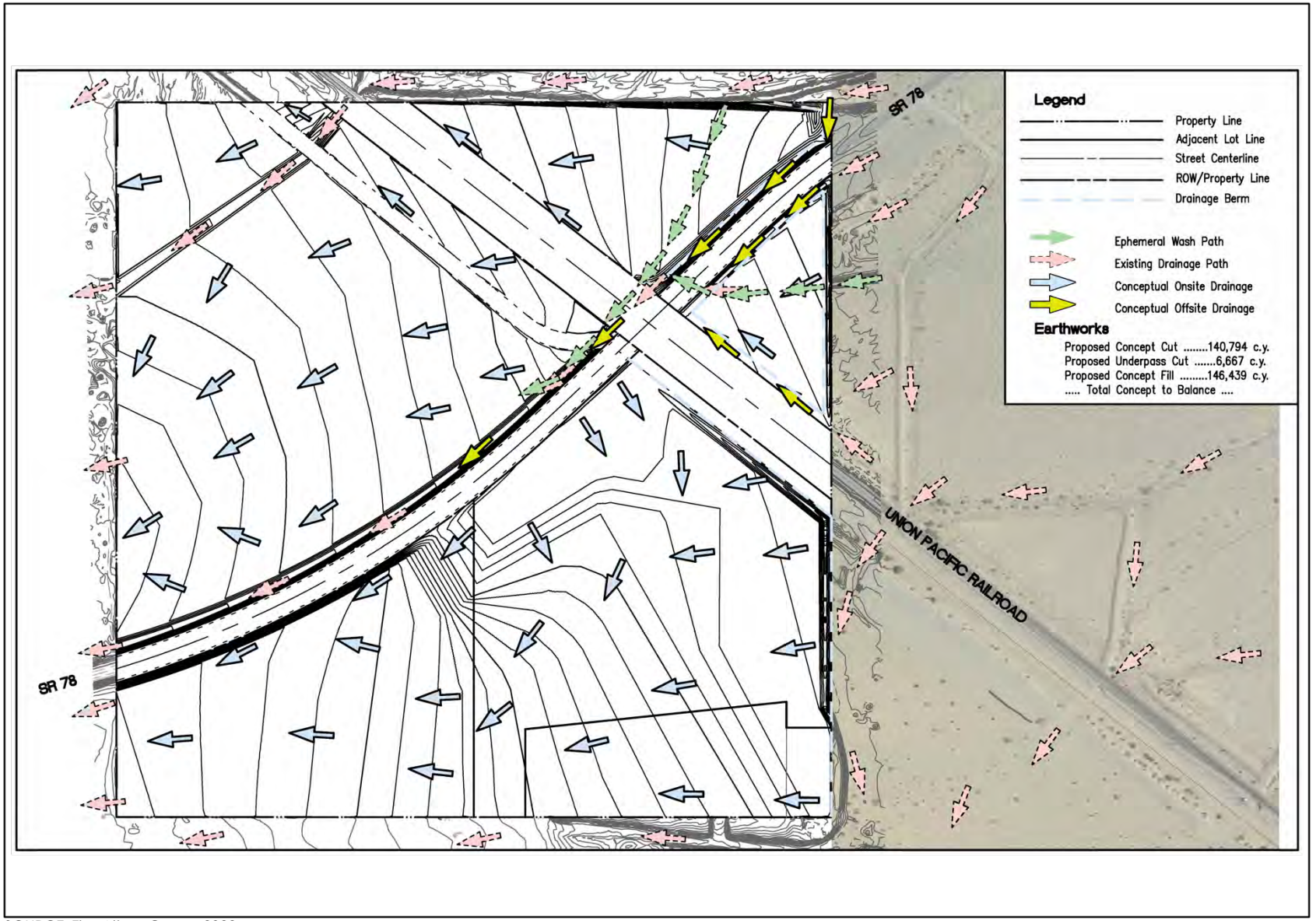
4.2.8 Grading Plan

The purpose of the conceptual grading plan (Figure 4-8) promotes contours similar to existing conditions of the project site; however, it increases the area protected from flooding and provides for more flexibility in creating fluent layouts for each of the conceptual Planning Area needs.

The use of the existing and modified earthen channels and berms for the project assist in providing an environment similar and consistent with the surrounding drainage patterns and practices. The manner of capture, conveyance and release of the drainage flows around and/or through the Planning Areas also assists in preserving the historical pattern of natural drainage courses. Finally, the conceptual grading and drainage plan, helps the proposed Specific Plan to meet the site drainage requirements and County guidelines.

4.2.8.1 Conceptual Grading Plan Standards

- Precise grading plans will be prepared for each phase of development of the proposed Specific Plan. Precise grading plan(s) will comply with the basic development standards and criteria described herein.
- All grading activities shall conform to County standards, shall be in substantial conformance with the Conceptual Grading Plan and shall implement any grading related mitigation measures.
- Prior to development within any Planning Area, an overall Conceptual Grading Plan for the site and the individual development area shall be submitted for County Planning Department approval. The overall Conceptual Grading Plan shall be used as a guideline for subsequent detailed grading plans for individual stages of development within that Planning Area. Such plans shall include techniques employed to prevent erosion and sedimentation as well as eliminate source pollutants during and after the grading process; approximate time frames for grading activity; identification of areas which may be graded during high probability rain months; and preliminary pad elevations. Grading work shall be balanced onsite wherever possible.
- A grading permit shall be obtained from the County prior to the start of grading activities.
- If any historic or prehistoric resources are discovered during grading, a qualified archaeologist shall be consulted to ascertain their significance, as specified in the project environmental document.
- The proposed Specific Plan will comply with all National Pollutant Discharge Elimination System permit requirements prior to commencing grading activities.



SOURCE: The Altum Group, 2022.

Conceptual Grading and Drainage
Glamis Specific Plan
Figure 4-8

- If human remains are discovered, work shall halt in that area and procedures set forth in California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be followed, including notification of the County Coroner. If Native American remains are present, the County Coroner shall contact the Native American Heritage Commission to determine and designate a Most Likely Descendant.

4.2.9 Special Events

4.2.9.1 Short Term Event Standards and Approval

The project vicinity has hosted a number of exciting OHV and entertainment programs over the years that are open to the general public, with attendance ranging from a few hundred to 20000 persons. The GSP provides for the continuation of such specialty events. To ensure proper health, safety and environmental management, the GSP requires the preparation of SEMP that addresses protocols and topics contained herein. The SEMP and the SEMP Notification are described in Section II of the Glamis Specific Plan. The SEMP will be applicable to individual public events and include standards and protocols to be implemented for each type of event based on the size of the attendance of that event. The SEMP will establish a distinctive set of Standard Conditions to allow Special Events to occur without the need for an annual CUP or other discretionary approval by the County. These Standards are intended to be adhered to by the event sponsor at each public event (Table 4-1).

The SEMP will be accompanied with a SEMP Notification which will act as a checklist by the agencies involved in each event to ensure and convey compliance with the applicable protocols necessary to protect the public health and safety. Private events with limited attendance (300 or less attendees) and which are not open to the general public would not be considered a Special Event and would be exempted from submitting a SEMP notification. Prior to each event, a SEMP would be prepared and accompany the Special Event Management Plan notification to the County. The SEMP notification would be subject to administrative approval outlined in the GSP Zoning Ordinance. If the applicant's SEMP Notification is approved by the County there will be no need to have a public hearing for the event. However, if there are Standards within the SEMP Notification that are not approved by the Director then the application can be forwarded to the Planning Commission and Board of Supervisors on appeal for their review.

Once approved by the County of Imperial, the SEMP will be disbursed to all involved agencies. Special Events that are not open to the general public but held within the GSP boundary and that have no more than 300 participants would be exempt from the SEMP. Table 4-2 below shows the components of current special events in the project vicinity. Under the GSP, it is anticipated this number could double to six events per year to coincide with the major holiday periods during the season. Lighting, water, and wastewater services would be provided as part of the overall proposed improvements for the project vicinity.

TABLE 4-1 SUMMARY OF SPECIAL EVENTS STANDARD CONDITIONS

Event Type	Attendance	Standard Conditions
OHV and other entertainment programs including but not limited to product displays, music concerts, shows, vendor displays, etc.)	Up to 5,000 people per day.	<u>Medical</u> Based upon the type of event, site layout and projected attendance the SEMP shall address the following: 1. The specific number of medical personnel will be established based on the size of the Event. 2. There shall be adequate medical staff onsite during all event operating hours. 3. Locations of medical facilities based on event layout and projected attendance. 4. Sample of appropriate signage to be used to direct event attendees to the medical facilities. 5. A helipad is proposed on the property to allow for quick access. The helipad will be used for both general use as well as emergency use. A description of appropriate fencing and signage that will be placed to provide a safe and secure area for helicopters to land and take off. <u>Imperial County Sheriff's Department</u> Based upon the type of event, site layout and projected attendance the SEMP shall address the following: 1. The specific number of law enforcement personnel will be established; and 2. There shall be adequate law enforcement staff onsite during all event operating hours. <u>Imperial County Fire Department</u> Based upon the type of event, site layout and projected attendance the SEMP shall address the following: 1. The specific number of fire department personnel will be established; 2. There shall be adequate fire department staff onsite during all event operating hours; and

TABLE 4-1 SUMMARY OF SPECIAL EVENTS STANDARD CONDITIONS

Event Type	Attendance	Standard Conditions
		3. An appropriate amount of fire apparatus will be provided. California Highway Patrol Based upon the type of event, site layout and projected attendance the SEMP shall address the following: 1. The specific number of officers will be established; and 2. If required, adequate California Highway Patrol personnel will be onsite during all event operating hours. California Highway Patrol may be directing traffic on Hwy 78 and on/off the event parking lots. They will manage the highway traffic. California Dept. of Transportation (CALTRANS) Based on the type of event coordination with CALTRANS the SEMP shall address the following: 3. An interim traffic management plan. Imperial County Public Health Department When an event has food vendors, the event and those food vendors will file for a "Community Event Organizer Permit" and Temporary Food Facility Permits as required by the Public Health Department. Private Security 1. In order to supplement the efforts of law enforcement staff, additional private security will be contracted to help monitor all gates within the Event. The security contractor will be onsite beginning with the staging activities before the event. 24-hour security will be provided throughout the weekend. Parking Attendants 1. Parking areas will be delineated for each Event. Attendants will be assigned

TABLE 4-1 SUMMARY OF SPECIAL EVENTS STANDARD CONDITIONS

Event Type	Attendance	Standard Conditions
		to direct traffic to the parking areas. There will also be signage placed to efficiently direct travelers to the parking areas. <u>Trash & Recycling Attendants</u> 1. There will be an appropriate number of dumpsters provided onsite for each Event. The number of dumpsters will be determined by the type of event, the time of day of the event, the projected number of attendees and the size of the designated area. <u>Venue Entry Points</u> 1. Based upon the type of event and attendants the SEMP will provide an appropriate number of points of entry around the venue. 2. These will be clearly marked as entry points with directional signage. 3. Any secondary fenced-in entertainment areas inside the special event venue that requires a ticket for entry will have two security guards at each entrance. 4. If tickets are required, staff will be checking tickets upon entry and there will be a minimum of two security guards at each entrance. 5. All attendees that enter a Special Event requiring a ticket must have a ticket <u>Special Event Lighting</u> 1. All on-site lighting shall comply with Title 9 of the Land Use Ordinance of the County of Imperial and the following: 2. Lighting within the project area shall be low intensity and shielded to prevent spillover to adjacent properties. 3. All lighting at the property line shall have back-flow screens to prevent spillover to the adjacent properties.

TABLE 4-1 SUMMARY OF SPECIAL EVENTS STANDARD CONDITIONS

Event Type	Attendance	Standard Conditions
		4. All building mounted lighting shall also be focused down directly on the ground so to avoid spillover to adjacent properties. 5. All lighting on the project site shall follow the guidelines listed above, except that: 6. Both private events and large special events with 100 or more attendants expected are allowed to use higher intensity lighting for the duration of the event in order to create a safe environment for all attendees. <u>Emergency Evacuation Plan</u> 7. An emergency evacuation plan will be included in the SEMP that indicates escape routes to vacate the site. These will be posted on several placards throughout the site, as indicated in the SEMP. <u>Service Areas</u> 1. The SEMP will also include the following: • Temporary RV and Trailer Parking • The SEMP may provide for temporary RV and trailer parking for Event sponsors, staff, participants and attendees, within the Special Event area. Temporary RV and trailer parking guidelines will include general requirements for site access, layout, temporary services (if any) and emergency access. The Temporary RV and trailer parking will have time limits on the length of stay for all event staff. Event sponsors, staff, participants, and attendees shall be limited to entering the RV and trailer parking area no more than ten days prior to the event for event set up and must leave the RV and trailer parking area no more than

TABLE 4-1 SUMMARY OF SPECIAL EVENTS STANDARD CONDITIONS

Event Type	Attendance	Standard Conditions
		seven days following the event, for the purpose of event tear down. <u>Handicap Parking</u> 1. Handicap parking will be available at the venue. The number of handicapped spaces will be determined by the number of anticipated event attendees. These areas will be clearly marked with signage for each space. <u>Portable Toilets and Hand Wash Stations</u> 1. The number of portable toilets and hand wash stations based on the size of the event, that will be located throughout the venue as indicated on the site layout <u>Drinking Fountains</u> 1. An appropriate amount of drinking fountains will be placed throughout the venue. If drinking fountains are not to be used, the SEMP shall include alternative sources for drinking water. <u>Temporary structures/stages</u> 2. Any temporary structures or stages shall comply with the California Building Code and be reviewed and approved by the Imperial County Building and Safety Department as applicable.

TABLE 4-2 CURRENT SPECIAL EVENTS IN THE GSPA

Event Description						
Number of Events	**Anticipated Daily Attendees**	**Hours per Day**	**Days per Event**	**Number of Display Areas**	**Individual Display Areas (SF)**	**Season**
3	20,000	13	4	25-44	5,000	Oct 1 to May 1
Services						
Water Trucks	**Lighting**		**Water**		**Waste-water**	
• 10 per day Holiday (Weekends & Weekdays) • 4 per day (Non-Holiday Weekend) • 2 per day (Weekday)	Diesel Generators		Unknown		Porta John	

4.3 Project Build Out

The proposed Specific Plan would guide the evolution of the GSPA. The proposed Specific Plan would implement the County's objectives for the development of this area which is to *accommodate recreation supporting land uses including retail and service commercial, motel accommodations, recreational vehicle and mobile home parks, and community facilities* (Imperial County General Plan Land Use Element, 2015).

Projections of future land use changes in the project vicinity must account for factors such as the size of the site, existing levels of development; natural and built environmental constraints (e.g., water availability and SR-78), which may limit development potential; economic growth forecasts; market demand for new land uses; and the effect of County policies and standards on the location, type and amount of allowable growth.

This Program EIR analyzes the effect of potential land use changes that could occur in the GSPA from 2023 to 2050 as a result of the implementation of the proposed Specific Plan. Potential land use changes were assessed based on a methodology that reflects the proposed land use changes that would be projected to occur over a 20 to 50-year period beginning with the County's adoption of the proposed Specific Plan. The methodology consisted of:

- Reviewing the proposed land uses in the proposed Specific Plan.
- Estimating the amount of potential developable area in each Planning Area.
- Reviewing pending projects (pipeline proposals).

- Assessing historical development trends and market conditions.
- Assessing anticipated future improvements relative to regional land use trends.
- Evaluating potential horizon year projects tempered by local knowledge, market analysis by economic consultants, and proposed County Development policies and standards.

Based on this methodology, it is estimated that land use changes potentially occurring over the next 20 to 50 years would potentially result in a maximum of approximately 75 acres of net new development (see Tables 4-3a and b). These 75 acres of net new development represents the maximum development that could occur in the project vicinity. This scenario reflects the County's commitment to managing and monitoring change in ensuring that new projects.

Financing Plan

The project will be implemented in four phases as described below. The major infrastructure and facilities within the project vicinity will be financed through appropriate funding mechanisms acceptable to the County of Imperial, which may include, but necessarily be limited to: private and/or developer(s) financing; the formation of one or more assessment district(s); and/or the application of funds from County, State and other agency programs.

4.4 Project Phasing

The timing of development within the GSPA would be subject to local, regional, and national market conditions. Accordingly, the Project Site could be developed in up to four (4) phases, with the earliest construction beginning in late 2012 (Table 4-3a and Figure 4-9). No uses would be opened prior to 2023 (opening year). The build-out year would be 2051/2071.

Market conditions will be the primary determinant of project phasing. In addition, phases may need to be adjusted due to unforeseen circumstances. The GSP establishes "areas" which are not to be confused with parcels nor with any specific land uses allowed. The approach to Phasing is driven by a number of factors, including, but not necessarily limited to: (1) market conditions; (2) connectivity with and proximity to access; (3) the logical extension of key utility and infrastructure facilities; (4) efficient grading progression; and, (5) Polaris goals and objectives prioritization of projects.

Additionally, infrastructure requirements, public safety including legal and safe vehicular and pedestrian travel on and off the project site shall always be carefully considered and to the extent that there are regulatory requirements, or industry standards where available and applicable, they shall be met. The Phasing Plan does not apply to short term special events, only permanent development within the GSPA.

TABLE 4-3A: PROPOSED DEVELOPMENT SCENARIO AND PROJECT TRIP GENERATION (UPDATED BASED ON MEETING JUNE 24, 2021)

Proposed Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate (a)	Volume	Rate	In: Out Split	Volume In	Volume Out	Rate	In: Out Split	Volume In	Volume Out
Phase One											
R&D Facility (b)	5,000 SF	16.19 /KSF	81	1.92	83:17	8	2	2.45	32:68	4	8
Hotel / Motel	20 Rooms	8.36 /Room	167	0.47	59:41	6	3	0.60	51:49	6	6
Restaurant Expansion	4,000 SF	112.18/KSF	449	9.94	55:45	22	18	9.77	62:38	24	15
Retail Expansion	2,000 SF	37.75 /KSF	76	0.94	50:50	1	1	3.81	48:52	4	4
Service Center (c)	4 Bays	12.48/Bay	50	1.52	68:32	4	2	2.17	32:68	3	6
RV Park (d)	10 Sites **(2)**	4.00/Site	40	0.21	36:64	1	2	0.27	65:35	2	1
Phase Two											
Vendors (e)	-	NA	200	-	-	5	5	-	-	5	5
Special Event Area	-	NA	Note 3	-	-	-	-	-	-	-	-
Emergency Medical Facility	-	NA	Note 3	-	-	-	-	-	-	-	-
Phase Three											
Multi-Family Residential / Staff/Guest Housing	14 DU	7.32 /DU	102	0.46	23:77	1	5	0.56	63:37	5	3
RV Park	20 (**2**)	4.00/Site	80	0.21	36:64	1	2	0.27	65:35	3	2
Phase Four											
Guest Housing	Note 3	NA	Note 3	-	-	-	-	-	-	-	-
RV Storage		NA	Note 3	-	-	-	-	-	-	-	-
Special Event Space		NA	Note 3	-	-	-	-	-	-	-	-
TOTAL TRIPS			**1,245**			**49**	**41**			**56**	**50**

TABLE 4-3A: PROPOSED DEVELOPMENT SCENARIO AND PROJECT TRIP GENERATION (UPDATED BASED ON MEETING JUNE 24, 2021)

Proposed Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate (a)	Volume	Rate	In: Out Split	Volume In	Volume Out	Rate	In: Out Split	Volume In	Volume Out

Notes

a Trip generation rates are based on the 10th edition of the Trip Generation Manual, Institute of Transportation Engineers (ITE).

Notes:

b. "Small Office Building" Rate assumed.

c. Weekday ADT rate not provided by ITE. Therefore, the Saturday ADT rate of 12.48 trips per service bay was used.

d. Weekday ADT rate not provided by ITE. Therefore, the SANDAG ADT rate of 4 trips per site was used.

e. No additional vendors are expected as a part of the Project. However, in order to provide a conservative trip generation calculation, an additional 200 ADT was assumed.

(1) Use shown on Specific Plan (Conceptual Land Use Plans)

(2) Total of 30 RV Spaces split between Phase Two and Phase Three (pers. comm. J. Heuberger June 23, 2021.

(3) Included under “Vendors”

(4) Trips included under Phase Three development

NA = Not Applicable

SF= Square Feet

TABLE 4-3B: PROPOSED PUBLIC IMPROVEMENTS

Public Improvements	Summary Description	Phase	Planning Area (s)	Notes
INFRASTRUCTURE				
Public Restrooms/Showers	No description provided in Specific Plan	Phase One	Planning Area 1	
Potable Water Facilities (3)				
Water Well	New water well (25 AFY)	Phase One	Planning Area 1	
Potable Water Distribution Pipelines	Install potable water distribution lines to serve proposed uses	Phase One	Planning Areas 1 and 5	
		Phase Two	Planning Area 1	
		Phase Three	Planning Area 6	
		Phase Four	Planning Areas 2 and 4	
Wastewater Facilities				
Sewage Treatment Facility (Package Plant) **(4)**	Sewage Package Plant, Effluent Discharge Basin(s)/Pond(s)	Phase Three	Planning Area 6	
Sewer Pipeline - Gravity	Install wastewater pipelines to transport wastewater from proposed development(s) to Septic Tank/ Lift Station	Phase One	Planning Area 1	Development Scenario assumes wastewater will be collected in Septic Tank until Sewage Treatment Facility is operational.
	Install wastewater pipelines to transport wastewater from proposed development(s) to Septic Tank/ Lift Station	Phase Two	Planning Area 1	
Wastewater (Continued)				

TABLE 4-3B: PROPOSED PUBLIC IMPROVEMENTS

Public Improvements	Summary Description	Phase	Planning Area (s)	Notes
Sewer Pipeline - Gravity	Install wastewater pipelines to transport wastewater from proposed development(s) to Septic Tank/ Lift Station	Phase Three	Planning Areas 5 & 6	
Sewer Pipeline - Gravity	Install wastewater pipelines to transport wastewater from proposed development(s) to Septic Tank/ Lift Station	Phase Four	Planning Areas 2 and 4	
Sewer Septic Tank and Lift Station (2)	Sewer Septic Tank	Phase Two	Planning Area 1	
Sewer Pipeline - Force Main	Install wastewater pipelines to transport wastewater from Lift Station to Sewage Package Plant	Phase One	Planning Area 1	
		Phase Two	Planning Area 1	
		Phase Three	Planning Area 6	
TRANSPORTATION				
Helipad	No description provided in Specific Plan	Phase One	Planning Area 1	
Glamis Main Street Corridor (7)	• Circulation/Pedestrian interconnection between Phase One and Phase Four areas (undercrossing or overcrossing). • Will serve as a circulation corridor for OHV traffic to and from the dunes and to Planning Areas 2, 3, & 4 located directly north of SR 78	Phase One	Planning Area 1	
		Phase Two	Planning Area 1	
		or Phase Four4	Planning Areas 2, 3 & 4	
TRANSPORTATION (Continued)				
		Phase One	Planning Area 1	

TABLE 4-3B: PROPOSED PUBLIC IMPROVEMENTS

Public Improvements	Summary Description	Phase	Planning Area (s)	Notes
Glamis Main Street Corridor (Continued) (7)	• Includes new intersection and associated improvements (acceleration/deceleration lanes, left/right turn pockets, physical barrier along project frontage, etc.)	Phase Two	Planning Area 1	
		or Phase Four4	Planning Areas 2 & 3	
	• Traffic Signal at intersection (6)	Phase One	Planning Area 1	
		Phase Two	Planning Area 1	
		Phase Three or Four	Planning Areas 2 & 3	
Sand Highway Emergency Access	Provide emergency vehicle access from SR 78 to Planning Area 1	Phase Two	Planning Area 1	
Wash Road	Provide vehicle access to Planning Areas 7 and 8.	Phase One	Planning Areas 7 and 8	
ENERGY				
Option A - PV Solar Energy Generation + Battery Energy Storage System (BESS) (1) (5)	6.5 MW (Total at Build Out) with 4 MW/25 MWh BESS (*)	Phases One	Planning Area 1	Option selected will be determined subsequent development plans.
		Phase Two	Planning Area 1	
		Phase Three	Planning Area 5	
		Phase Four	Planning Area 4	
Option B - IID constructs transmission/distribution line from nearest substation. (8)	7.2 miles in length from nearest substation	Phase One	Planning Area 1 + off site alignment and connection to substation	Development Scenario assumes improvement would be implemented during Phase One.

TABLE 4-3B: PROPOSED PUBLIC IMPROVEMENTS

Public Improvements	Summary Description	Phase	Planning Area (s)	Notes

Sources: Altum Group, 2022.
(*) Response to Request for Development of Polaris Experience Microgrid. Prepared by ZGlobal, June 2020.

Notes:

AFY = Acre-feet per year
BESS = Battery Energy Storage System

(1) Uses shown on Specific Plan (Conceptual Land Use Plans)
(2) Development Scenario assumes septic tank and lift station will be housed underground to prevent odors. Monitoring equipment may be above ground.
(3) Water treatment plant with 15 gal/min capacity currently in operation.
(4) Development Scenario assumes wastewater will be collected in Septic Tank until Sewage Treatment Facility is operational.
(5) Final Option will be determined as part of subsequent development plans.
(6) Signalization of intersection would occur when warranted by future traffic volumes
(7) Final design to be coordinated with County Dept. of Public Works and Caltrans to determine specific design elements.
(8) Development Scenario assumes improvement would be implemented during Phase One.

SOURCE: The Altum Group, 2022.

Project Phasing Plan
Glamis Specific Plan
Figure 4-9

4.4.1 Phase One

It is noted that while market conditions constitute the primary determinant for the incremental development within the Planning Area, said conditions are inextricably linked to the other factors. As shown in Figure 4-10 and 4-11 and Table 4-3a, development of Phase One will occur where the existing Glamis Beach Store, Restaurant and Bar, and OHV repair facility are located as contained within Land Use Area One (Assessor Parcel Number [APN] 039-310-029). Phase One would be contained within Planning Area 1, with the exception of possible development of a research and development (R&D) facility which would occur in Planning Area 5 (039-310-026) and an RV park in Planning Area 6 (APN 039-301-023). Part of Land Use Area Seven (APN 039-310-030) could be developed during Phase One as it slightly overlaps onto current land used for Camp RZR.

This area also represents the closest point of access to surrounding public roadways, most notably SR-78 and Ted Kipf Road, both of which will continued to be travelled by visitors to the area.

Infrastructure /Public Improvements

Before certain significant permanent structural improvements are made to this area, required and necessary infrastructure improvements will be made. Potable water, wastewater treatment and electrical service may need to be expanded to accommodate the projected demand from the specific improvements and visitors. There may be some improvements made within this parcel that are not dependent on such services and therefore could be implemented ahead of the infrastructure. The first required infrastructure improvement would be the expansion of a water treatment system, which would treat ground water extracted from an existing onsite well and a proposed new well. An as yet unpermitted public water treatment plant complying with California standards has been constructed to meet the needs of the current uses, and with room for expansion to future water needs of the GSPA. This system would eventually need to be re-permitted as a community water system.

As new development is implemented, this water plant may need to be expanded as determined by the regulatory agencies.

The second required infrastructure improvement may be the development of a wastewater treatment system. Currently, wastewater generated by the Glamis Beach Store, restaurant and bar is discharged into an existing septic tank located near those buildings. For some initial development(s) septic system(s) may be possible and allowed. However, this decision relies entirely upon regulatory requirements. If and when a development is proposed, and a wastewater treatment system is required, that project will implement the required system(s). The amount of wastewater treatment infrastructure needed (i.e., secondary and tertiary treatment) would be determined by the amount and intensity of each structural improvement envisioned, and the amount of wastewater forecasted to be generated by each structural improvement. To assure wastewater does not exceed the treatment capacity at any given time during development of Phase One (and for all other subsequent phases), a wastewater generation analysis will be required for each structural improvement to determine whether existing wastewater infrastructure would, or would not need upgraded improvements in order to maintain wastewater treatment capacity.

SOURCE: The Altum Group, 2022.

Phase One Area
Glamis Specific Plan
Figure 4-10

SOURCE: The Altum Group, 2022.

Phase One with Conceptual Land Uses
Glamis Specific Plan
Figure 4-11

Infrastructure /Public Improvements

Before certain significant permanent structural improvements are made to this area, required and necessary infrastructure improvements will be made. Potable water, wastewater treatment and electrical service may need to be expanded to accommodate the projected demand from the specific improvements and visitors. There may be some improvements made within this parcel that are not dependent on such services and therefore could be implemented ahead of the infrastructure. The first required infrastructure improvement would be the expansion of a water treatment system, which would treat ground water extracted from an existing onsite well and a proposed new well. An as yet unpermitted public water treatment plant complying with California standards has been constructed to meet the needs of the current uses, and with room for expansion to future water needs of the GSPA. This system would eventually need to be re-permitted as a community water system.

As new development is implemented, this water plant may need to be expanded as determined by the regulatory agencies.

The second required infrastructure improvement may be the development of a wastewater treatment system. Currently, wastewater generated by the Glamis Beach Store, restaurant and bar is discharged into an existing septic tank located near those buildings. For some initial development(s) septic system(s) may be possible and allowed. However, this decision relies entirely upon regulatory requirements. If and when a development is proposed, and a wastewater treatment system is required, that project will implement the required system(s). The amount of wastewater treatment infrastructure needed (i.e., secondary and tertiary treatment) would be determined by the amount and intensity of each structural improvement envisioned, and the amount of wastewater forecasted to be generated by each structural improvement. To assure wastewater does not exceed the treatment capacity at any given time during development of Phase One (and for all other subsequent phases), a wastewater generation analysis will be required for each structural improvement to determine whether existing wastewater infrastructure would, or would not need upgraded improvements in order to maintain wastewater treatment capacity.

The third system of infrastructure improvement would be electrical service upgrades. The project site currently relies on diesel generators for all of its electrical power demand needs. It may not be a feasible option for significant new development to be reliant upon diesel generators in the future since air quality and GHG emissions regulations are likely to become more restrictive over time. With this in mind, three options are being evaluated to determine which available source of power supply would best fit as the preferred option for the project vicinity. The first option would to be for IID to construct and install a power line (transmission line and/or distribution line) to extend from the nearest substation (approximately 7.2 miles to the northeast). A second and potentially more viable option would be to develop a small commercial solar PV system, with a backup battery storage component or another green power system.

4.4.2 Phase Two

Phase Two would most likely be within Planning Area 1, immediately west of Phase One (Figure 4-12 and Table 4-3a). Phase Two development would serve as an extension to development occurring within Phase One by incorporating land uses permitted under the CR Zone similar to those permitted in Phase One. Phase Two would also incorporate the Glamis Mainstreet to serve as a circulation corridor for OHV traffic to and from the dunes and to Phase Four (Planning Areas 2, 3, and 4) located directly north of SR 78. Figure 4-13 conceptually shows the layout for Planning Area 8. The Glamis Mainstreet corridor is proposed to provide an optional circulation interconnection between Phase One and Phase Four. The project applicant will first need to work with and create a nexus for interconnection as well as approvals between State, County of Imperial, and agencies as to the appropriate safe type of highway crossing (undercrossing or overcrossing) to be constructed across SR-78. This process will ensure that the crossing is designed to incorporate all required safety measures to the fullest extent possible.

4.4.3 Phase Three

The Phase Three area is located on the northeast side of the UPRR and is located south of SR-78 (Figure 4-14 and Table 4-3a). Phase Three is located within Planning Areas 5 and 6. No major public use facilities would be considered for development within these two APNs to discourage OHV traffic from crossing the UPPR lines to access these areas. Phase Three however, would is projected to include development of uses relevant to employee housing, RV park, and/or a R&D facility and possible PV Solar array system (Figure 4-15).

4.4.4 Phase Four

Phase Four would be located on the north side of SR-78 within Planning Areas 2, 3 and 4 (Figure 4-16 and Table 4-3a). Most of the infrastructure improvements for this phase will be based on regulatory, safety and liability concerns, and consequently, will require specific infrastructure improvements to be in place prior to development (Figure 4-17, *Phase 4 with Conceptual Land Uses*).

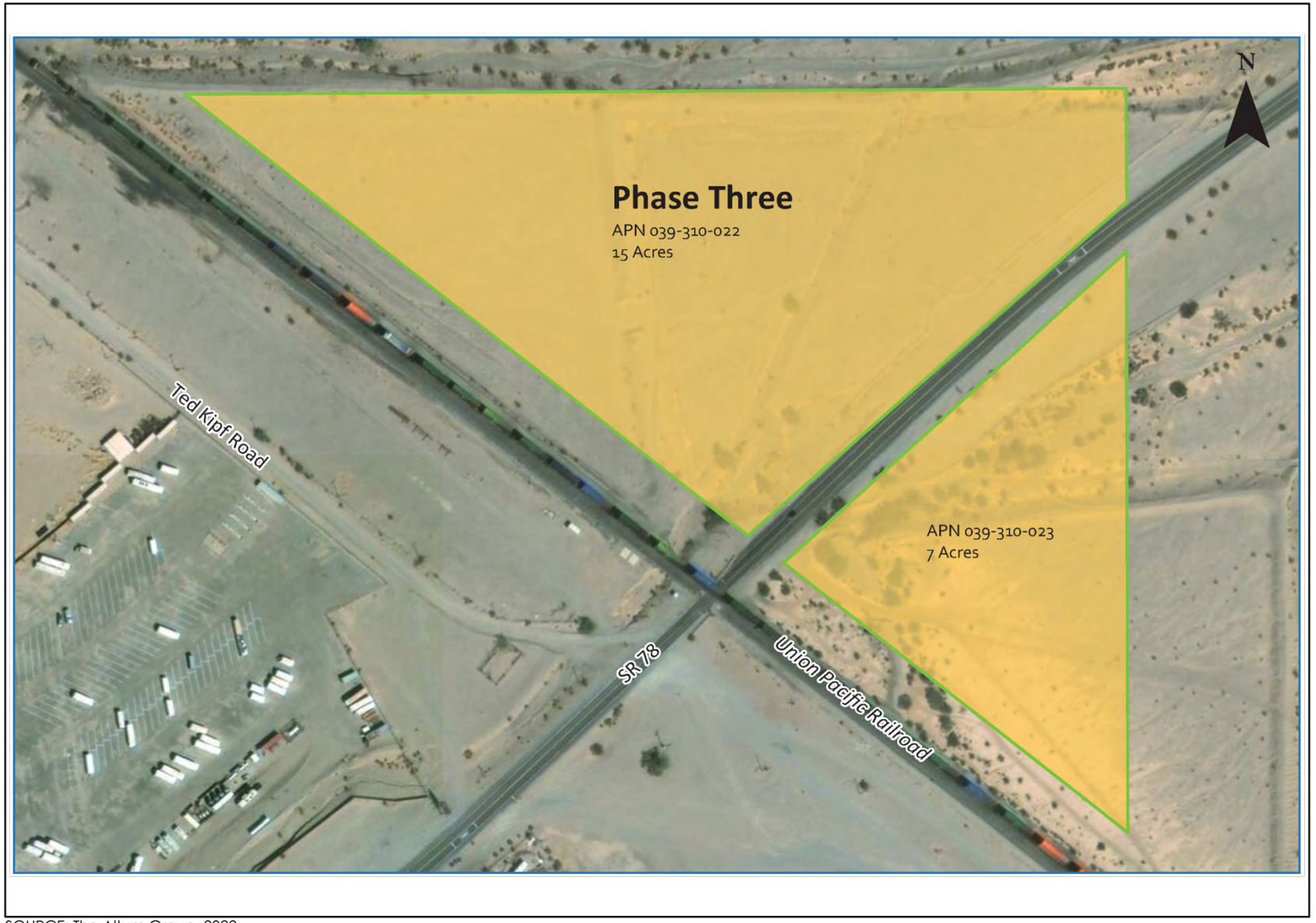
All Phasing as proposed will be impacted by possible requirements that Caltrans may impose along SR 78 and for crossing the UPRR. As a separate project, the ICTC recently concluded a feasibility study for a safe crossing over the UPRR lines for OHVs using a new overhead structure located just south of SR 78 and carrying a new OHV trail over the UPRR rail line and Wash Road.,. The proposed Specific Plan does not encourage or desire to have OHVs cross the UPRR lines, therefore the proposed Specific Plan parcels on the northeast side of the UPRR are proposed to have very restricted uses.

SOURCE: The Altum Group, 2022.

Phase Two Area
Glamis Specific Plan
Figure 4-12

SOURCE: The Altum Group, 2022.

Phase Two Conceptual Land Uses
Glamis Specific Plan
Figure 4-13



SOURCE: The Altum Group, 2022.

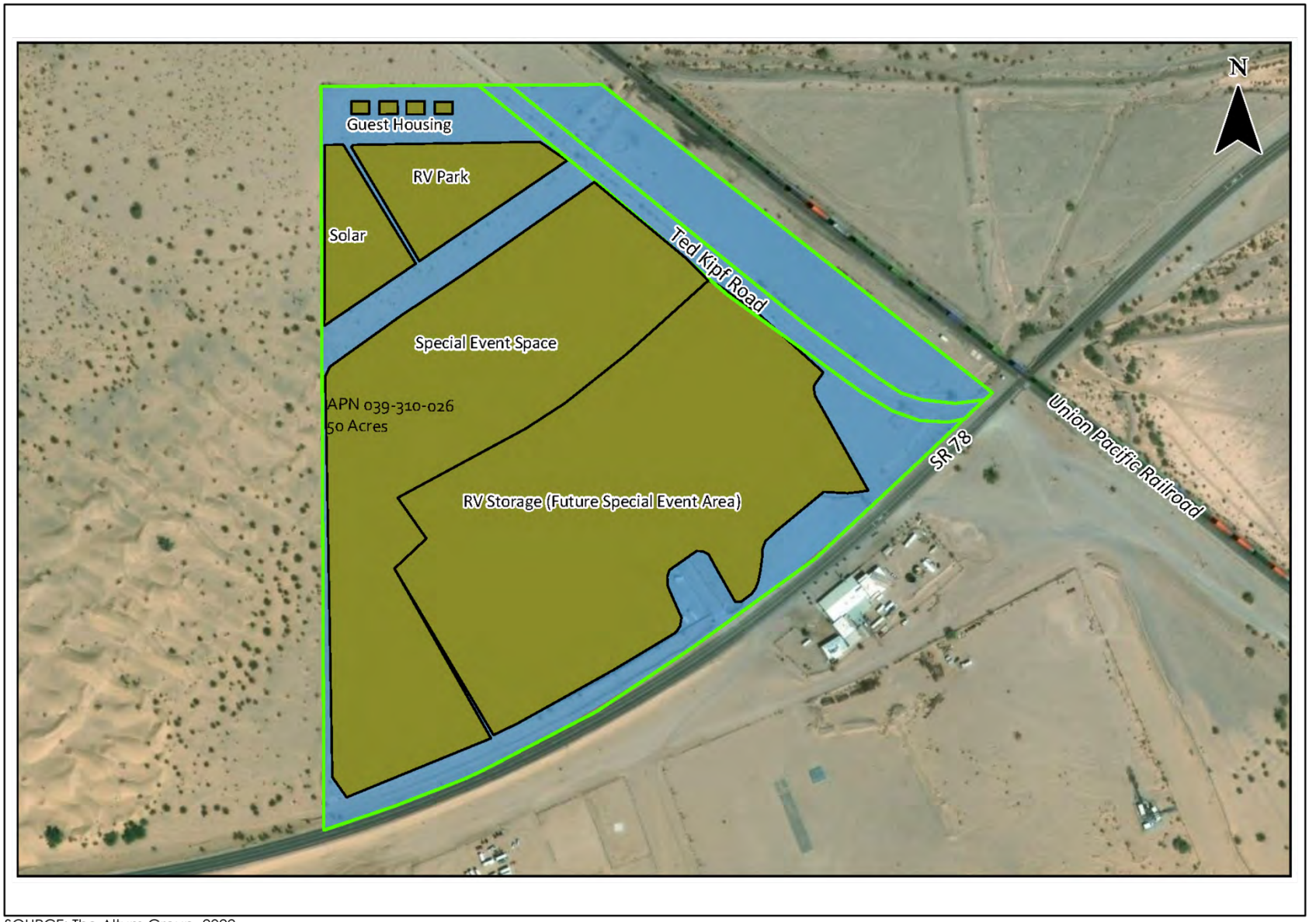
Phase Three Area
Glamis Specific Plan
Figure 4-14

SOURCE: The Altum Group, 2022.

Phase Three Conceptual Land Uses
Glamis Specific Plan
Figure 4-15

SOURCE: The Altum Group, 2022.

Phase 4 Planning Area
Glamis Specific Plan
Figure 4-16



SOURCE: The Altum Group, 2022.

Phase Four Conceptual Land Uses
Glamis Specific Plan
Figure 4-17

4.5 Required Actions and Approvals

If adopted, the proposed Specific Plan would replace any currently applicable standards from the County's General Plan. The County is the Lead Agency for the proposed Specific Plan, consistent with CEQA Guidelines Section 15065(b). As such, this Program EIR will be used by the County to both evaluate the potential environmental impacts that could result from implementation of the proposed Specific Plan and develop conditions of approval and adopt mitigation measures which would address those impacts. The Board will consider adoption of the proposed Specific Plan concurrently with certification of the Final EIR. Pursuant to CEQA Guidelines Section 15093, the decision-makers must "balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposal project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." If the County, as Lead Agency, approves the proposed Specific Plan, a statement of overriding considerations must be written, which shall state the specific reasons to support its action based on the Final EIR and/or other information in the record.

Implementation of the proposed Specific Plan would require the following regulatory and/or legislative actions by the Board of Supervisors, with a recommendation from the Planning Commission:

- General Plan Amendment;
- Specific Plan Adoption;
- Change of Zone; and
- Conditional Use Permit(s) for a new water well.

Subsequent ministerial actions would be required for the implementation of the proposed project, including issuance of grading and building permits.

The specific approvals anticipated to be required from the lead agency, trustee agencies, and/or responsible agencies are listed in Table 4-4.

TABLE 4-4. ANTICIPATED FUTURE DISCRETIONARY ACTIONS

Jurisdiction Level	Permit, Approval or Report	Agency	Purpose
Federal	Section 404 of the Federal Clean Water Act Permit	U.S. Army Corps of Engineers (USACE)	Regulates discharge of dredged and/or fill material into Waters of the United States
State	Encroachment Permit	California Department of Transportation (Caltrans)	Required for construction activities and/or improvements within the SR-78 right-of-way (ROW)
State	Intersection Control Evaluation	Caltrans	Required for proposed improvements to intersections on SR-78.
State	Encroachment Policy Exception per Project Development Procedures Manual (PDPM) Chapter 17.	Caltrans	Required for any new propose access point with SR-78 ROW.
State	1602 Lake and Streambed Alteration Agreement	California Dept. of Fish & Wildlife (CDFW)	Required for construction activities in or adjacent to streams, wetlands and waterbodies
State	401 Water Quality Certification	California Regional Water Quality Control Board, Colorado River Basin, Region 7 (RWQCB)	Required for federal permits that may result in discharges of pollutants to Waters of the United States
State	Section 401 of the Federal CWA, National Pollutant Discharge Elimination System (NPDES) General Permit for Discharge of Construction Related Stormwater	RWQCB, Region 7	Management of stormwater during construction. Preparation and implementation of Stormwater Pollution Prevention Plans (SWPPPs). Notice of Intent (NOI) to obtain covered under the general permit also required.
State	Section 402 of the Federal CWA, National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater	California State Water Resources Control Board (SWRCB)	Regulates the discharge of storm water associated with industrial activities that could occur with the RV Service Center(s).

TABLE 4-4. ANTICIPATED FUTURE DISCRETIONARY ACTIONS

Jurisdiction Level	Permit, Approval or Report	Agency	Purpose
	Discharges Associated with Industrial Activities		
State	Waste Discharge Requirements	RWQCB, Region 7	Required for waste discharges exceeding 5,000 gallons to land from expansion of the existing wastewater treatment plant
Local	General Permit for Discharge of Construction Related Stormwater	RWQCB, Region 7	As directed by the RWQCB, monitor development and implementation of Stormwater Pollution Prevention Plans (SWPPPs) and other aspects of the NPDES permit for stormwater discharges associated with construction activities that disturb more than 1 acre of land.
Local	Specific Plan (SP 19-0001), CUP amendment (#19-0027), and Zone Change (#19-0006)	ICPDSD	Required for development of the Glamis Specific Plan.
Local	Authority to Construct, Permit to Operate, Permit for Alteration/ Modification, Emission Reduction Credits, Rule 310 and Rule 403 Permit (Fugitive Dust)	Imperial County Air Pollution Control District (ICAPCD)	Consultation and permitting for air pollution, including fugitive dust, and Greenhouse Gas (GHG emissions that may result from the implementation of future development activities. Authority to Construct - required prior to constructing, erecting, installing, modifying, or replacing any article, machine, equipment or contrivance, the use of which may emit or control air contaminants.

TABLE 4-4. ANTICIPATED FUTURE DISCRETIONARY ACTIONS

Jurisdiction Level	Permit, Approval or Report	Agency	Purpose
			Permit to Operate – required prior to operation of any article, machine, equipment, or other contrivance that emits air contaminants.
Local	Grading Permit	ICPDSD/ Imperial County DPW	Excavation or earthwork that involves over 2 feet in depth and/or fills over 1 foot in depth that may be required for implementation of future development activities.
Local	Traffic Control Plan	Imperial County DPW	Traffic management for lane closures during construction and during special events (if warranted)

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5.0 ENVIORNMENTAL ANALYSIS

This chapter evaluates the direct and indirect environmental impacts that would result from implementation of the Glamis Specific Plan (Specific Plan or proposed Specific Plan) which has been proposed by Polaris Industries (Polaris or the Applicant). The chapter includes sections for each of the following resource areas:

5.1 Aesthetics
5.2 Air Quality
5.3 Biological Resources
5.4 Cultural Resources
5.5 Energy
5.6 Geology and Soils
5.7 Greenhouse Gas Emissions
5.8 Hazards and Hazardous Materials
5.9 Hydrology/Water Quality
5.10 Land Use and Planning
5.11 Noise
5.12 Population and Housing
5.13 Public Services
5.14 Transportation
5.15 Utilities and Service System
5.16 Tribal Cultural Resources

Resource Area Format

Each resource area section is organized under the following headings:

- Environmental Setting;
- Regulatory Setting;
- Impact Analysis; and
- Mitigation Measures.

Information contained under each heading is described below.

Environmental Setting

Each resource area section contains a discussion of the environmental setting (the existing environmental conditions in the vicinity of the entire Specific Plan area [project area]) and identifies the baseline physical conditions by which the significance of the Project's environmental impacts will be assessed. The baseline physical conditions for the proposed Specific Plan are the existing environmental conditions in the Glamis Specific Plan Area (GSPA) at the time of the publication of the Notice of Preparation (NOP) (October 2020). The discussion of the environmental setting in each resource area section contains information necessary to understand the potential impacts of the Project as well as alternatives to the Project (California Environmental Quality Act [CEQA] Guidelines §15125(a)).

Regulatory Setting

Laws, ordinances, regulations, standards, and policies applicable to the proposed Specific Plan and resource areas are discussed in the regulatory setting sections for each resource area. Laws and regulations may also identify permits, reviews and approvals necessary for authorization or evaluation and require agency consultation.

Impact Analysis

A discussion of environmental impacts and mitigation measures for the Project is presented for each environmental resource area, as applicable.

Significance Thresholds

Significance thresholds serve as a benchmark for determining if the proposed Specific Plan would result in significant impacts when evaluated against the baseline conditions established in the environmental setting and regulatory setting sections for each resource area. The significance criteria used are from the checklist presented in the Appendix G of the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, Sections 1500015387).

Environmental Impacts

The impacts analyses presented in this chapter evaluate impacts that may occur from the potential development of the GSPA. The discussion evaluates the significance of impacts, identifies mitigation measure(s) for significant impacts, and provides a determination of significance after mitigation. The analysis also evaluates additional impacts that could result from implementation of the mitigation measures, if any.

Mitigation Measures

This section provides the text of mitigation measures specific to the resource area that would be implemented to reduce significant impacts of the Project.

Terminology

The following terminology is used in this EIR to denote the significance of the proposed Specific Plan's environmental impacts:

- **No Impact** indicates that the construction, operation, and maintenance of the project would not have any direct or indirect effects on the environment. It means no change from existing conditions. This impact level does not need mitigation.

- A **Less Than Significant Impact** is one that would not result in a substantial or potentially substantial adverse change in the physical environment. This impact level does not require mitigation, even if feasible, under CEQA.
- A **Significant Effect** on the environment is defined in CEQA Section 21068 as one that would cause "a substantial, or potentially substantial, adverse change in the environment", which includes any of the physical conditions within the area affected by the project as they exist at the time the notice of preparation is published." Levels of significance can vary by project, based on the change in the existing physical condition. Under CEQA, mitigation measures or alternatives to the project must be provided, where feasible, to reduce the magnitude of significant impacts.
- An **Unmitigable Significant Impact** is one that would result in a substantial or potentially substantial adverse effect on the environment, and that could not be reduced to a less than significant level even with any feasible mitigation. Under CEQA, a project with significant and unmitigable impacts could proceed, but the lead agency would be required to prepare a "statement of overriding considerations" in accordance with State CEQA Guidelines Section 15093, explaining why the lead agency would proceed with the project in spite of the potential for significant impacts.

Approach to the Cumulative Impact Analysis

CEQA Guidelines, Section 15130 requires that EIRs include an analysis of the cumulative impacts to determine if the project's effect is considered cumulatively considerable. As defined by CEQA Guidelines, Section 15065(a)(3), "…'Cumulatively considerable' means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects..." Section 15130(b)(1) goes on to identify two approaches for performing a cumulative analysis: (1) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or (2) A summary of projections contained in an adopted local, regional, or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. The cumulative analysis for the proposed Specific Plan utilized the list approach. According to Section 15130(b)(2), when using a list it is important to consider the nature of each environmental resource being examined, the location of the project, and its type. In keeping with these provisions, a list of cumulative projects was developed and includes projects known at the time of release of the NOP of the Draft EIR, as well as additional projects that have been proposed since the NOP date. Potential cumulative impacts are addressed in Chapter 7.0 of this EIR. Table 7-1 lists the potential cumulative projects, the locations of which are shown on Figure 7-1.

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5.1 Aesthetics

This section addresses potential direct and indirect environmental impacts to aesthetics and visual resources that would result from implementation of the proposed Glamis Specific Plan . The following discussion addresses the existing conditions in the planning area, identifies applicable regulations, analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Specific Plan, as applicable.

Information used in preparing this section and in the evaluation of potential aesthetic impacts was derived, in part, from the *Glamis Specific Plan Area Visual Impact Assessment (VIA*) prepared by the Altum Group which is provided as Appendix D this Draft EIR (Altum Group, 2020c). While the Planning area is not within land under the jurisdiction of the Bureau of Land Management (BLM), the VIA used BLM's Visual Resources Inventory (VRI) classes system to describe and assess potential impacts on scenic values.

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from regulatory agencies. The following issues related to aesthetics were raised by the California Department of Fish and Wildlife (CDFW) and are addressed in this section:

- An evaluation of impacts to adjacent open space lands from construction, long-term operations and maintenance.

5.1.1. Environmental Setting

Regional Character

The Glamis Specific Plan Area (GSPA) is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR-78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the GSPA is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County. The GSPA contains the only private commercial land uses within the project vicinity and is surrounded by open desert land that is managed by BLM. The Plan area is adjacent to the Imperial Sand Dunes Recreation Area (ISDRA), the largest sand dunes area in the State of California.

Directly northwest of the GSPA is the North Algodones Dunes Wilderness (NADW); which consists of approximately 26,000 acres of land managed by the BLM as part of the National Wilderness Preservation System. Additionally, the Chocolate Mountain Aerial Gunnery Range (CMAGR) is located approximately three (3) miles north of the GSPA. Within all of the various BLM lands surrounding the GSPA, the BLM has designated Recreation Management Zones (RMZs) which dictate the allowable recreation activities and provide for BLM's management objectives within those areas (Figure 3-4).

Existing Visual Character

The GSPA is mostly comprised of open, sandy, disturbed desert and is intersected by SR-78 and the UPRR. All existing development occurs within approximately 0.25 miles of the intersection of SR-78 and the UPRR and consists of several adjoined one- and two-story metal building structures with water tanks which comprise the Glamis Beach Store. The GSPA also contains an existing paved RV storage lot immediately north of SR-78, wood posting for sectioned-off parking/vendor areas within the southwest portion of the GSPA, a wireless communications facility located within the southeast portion of the GSPA, a private residence/storage building next to an unmaintained storage shed with shipping containers at the southeastern corner of the GSPA, and an existing historical cemetery immediately south of Ted Kipf Road. There are no rock outcroppings and very few trees present within the GSPA. Currently, the only existing light sources within or nearby to the GSPA come from the Glamis Beach Store.

Glamis Specific Plan Area

The GSPA is relatively flat with a southwest-to-northeast trending grade of less than one percent or an approximate difference in elevation of 23 feet above mean sea level (AMSL) between the southwest corner (approximate elevation of 324 feet AMSL) and the northeast corner (approximately 347 feet AMSL). Areas of wind-blown sand dunes with sporadic native vegetation are found situated and encroaching upon the southeast corner of the GSPA. Public views of the GSPA would be primarily seen by viewers who are traveling east or west along SR-78. In addition, the GSPA is visible from adjoining BLM land such as the ISDRA and the NADW.

Light and Glare

Because of the limited development within the GSPA, substantive sources of light and glare, such as streetlights, parking lots, interior lights, and light emitted from non-residential buildings throughout the GSPA are minimal.

Wilderness Areas

Wilderness Areas are managed under the Wilderness Act of 1964 (Pub. L. 88–577) and generally do not allow motorized equipment, motor vehicles, mechanical transport, temporary roads, or permanent structures or installations. The NADW covers more than 26,000 acres and is managed by the BLM as a part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use. Camping is allowed throughout the area, however there is no water and no facilities for visitors within the NADW.

5.1.2. Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable in the GSPA.

Federal

Bureau of Land Management Visual Resource Management

The BLM uses a Visual Resources Inventory (VRI) classes system as a baseline description of the existing scenic values in the environment that does not provide objectives as to how the land should be used or managed. Given that the Project site is surrounded by BLM land, it was determined that the BLM VRI class system was an appropriate methodology to utilize for purposes of assessing baseline scenic values in the project area. All VRI descriptions used for this analysis are based on the BLM's VRI Classes identified in the Desert Renewable Energy Conservation Plan (BLM, 2016).

VRI classes are assigned through the inventory process. Class I is assigned to those areas where a management decision has been made previously to maintain a natural landscape. This includes National Wilderness Preservation System areas, National Wild and Scenic River System units, and other congressionally and administratively designated areas where decisions have been made to preserve a natural landscape. Classes II, III, and IV are assigned based on a combination of scenic quality, sensitivity level, and distance zones. This is accomplished by combining the three overlays for scenic quality, sensitivity levels, and distance zones and using the guidelines to assign the proper class. Inventory classes are informational in nature and provide the basis for considering visual values in the Resource Management Plan process. They do not establish management direction and should not be used as a basis for constraining or limiting surface disturbing activities. VRI classes surrounding the GSPA are depicted on Figure 5.1-1.

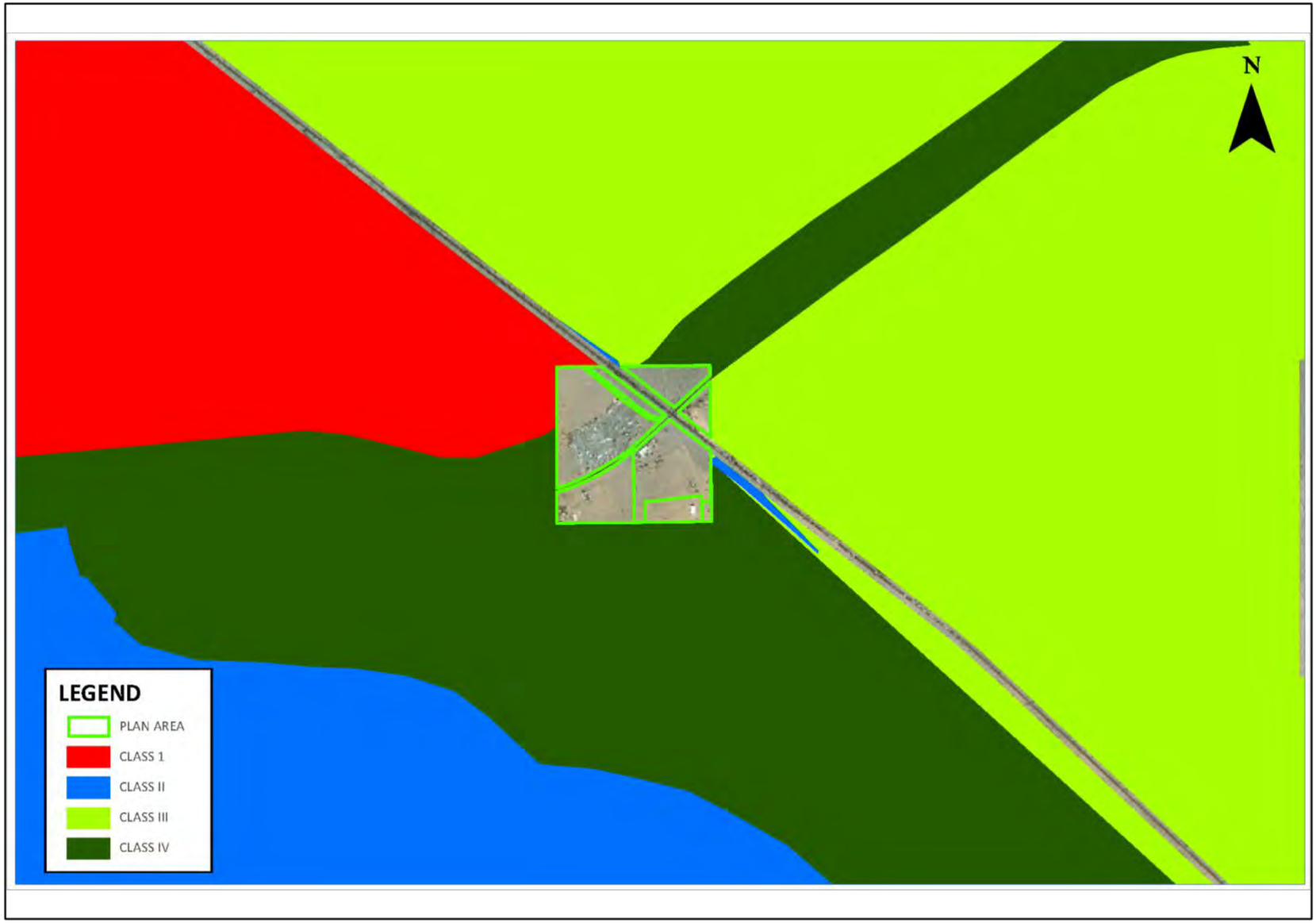
Local

General Plan

The GSPA is under the County of Imperial jurisdiction and subject to the County Development Code and conformance with the General Plan. The County General Plan does not specifically contain a visual element; however, it addresses related topics in the following General Plan Sections:

- Conservation and Open Space Element;
- Land Use Element; and
- Circulation & Scenic Highways Element.

In addition, the Renewable Energy and Transmission Element (Imperial County, 2015b) includes specific goals, policies and standards for renewable energy and specifically solar projects. **Table 5.1-1** provides an analysis of the project's consistency with the Land Use, Circulation & Scenic Highways, Conservation and Open Space and Renewable Energy & Transmission Element (Imperial County, 2008, 2015a, 2016).



SOURCE: Altum Group, 2020c.

VRI Classifications Surrounding Planning Area
Glamis Specific Plan
Figure 5.1-1

Scenic Highways

Per the List of Officially Designated County Scenic Highways from Caltrans, SR-78 is not a County designated scenic route (Caltrans, 2017).

Scenic Vistas

The nearest vista point, Inspiration Point, is approximately 103 miles west of the GSPA. There are no Caltrans designated vista points in the vicinity of the GSPA.

TABLE 5.1-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN AESTHETICS GOALS AND OBJECTIVES

General Plan Goals and Objectives	Consistent with General Plan?	Analysis
LAND USE ELEMENT (LUE)		
Regional Vision		
Goal 3: Achieve balanced economic and residential growth while preserving the unique natural, scenic, and agricultural resources of Imperial County.	Yes	The proposed Specific Plan is located in eastern Imperial County in an area characterized by rolling sand dunes used for off highway vehicle activities. The GSPA is currently developed with a general store and RV storage area and does not contain any designated scenic features. Implementation of the proposed Specific Plan would not obstruct views of distant mountain ranges or degrade any scenic vistas as none are visible in the vicinity of the GSPA. The proposed Specific Plan is consistent with the OHV activities in this portion of the County. The GSPA is already disturbed and does not contain any agricultural resources. Therefore, the proposed Specific Plan is consistent with this Goal.
Objective 3.4 Protect/ improve the aesthetics of Imperial County and its communities.	Yes	Refer to the discussion above under Land Use Element Goal 3.
CIRCULATION AND SCENIC HIGHWAYS ELEMENT		
Scenic Highways		
Goal 4: The County shall make every effort to develop a circulation system that highlights and preserves the environmental and scenic amenities of the area.	Yes	The proposed Specific Plan accommodates a circulation system that highlights and preserves the environmental and scenic amenities of the area. Therefore, the proposed Specific Plan is consistent with this goal.
Objective 4.3: Protect areas of outstanding scenic beauty along any scenic highways and protect the aesthetics of those areas.	Yes	There are no officially designated State Scenic Highways in Imperial County. The nearest eligible State Scenic Highway segment is located 51 miles west of the GSPA along SR-78. The GSPA is not visible from this segment due to distance and natural topography. Refer also to discussion above under Land Use Element Goal 3.

TABLE 5.1-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN AESTHETICS GOALS AND OBJECTIVES

General Plan Goals and Objectives	Consistent with General Plan?	Analysis
CONSERVATION AND OPEN SPACE ELEMENT		
Preservation of Visual Resources		
Goal 5: The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.	Yes	The proposed Specific Plan includes building setbacks from SR 78 which would preserve the view corridor. Large portions of the Planning area would be left open when special events are not occurring.
Objective 5.1: Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.	Yes	The proposed Specific Plan includes building setbacks from SR 78 which would preserve the view corridor. Large portions of the Project site would be left open when special events are not occurring.
Policy: Develop a Scenic Highway program that identifies scenic high-ways for future state-designation and visual resource preservation.	Yes	The proposed Specific Plan would not impede the development of a Scenic Highway program.
Program: Work with property owners to preserve prominent ridgelines and scenic backdrops through open space agreements, contracts, or other appropriate instruments along designated scenic corridors.	Yes	The proposed Specific Plan would not alter existing views of the desert and mountains and therefore is consistent with this objective.
Renewable Energy and Transmission Element		
Goal 1 – Support the safe and orderly development of renewable energy while providing for the protection of environmental resources.	Yes	See discussion below regarding Objective 1.2.
Objective 1.2: Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources.	Yes	Solar facilities that would be potentially developed as part of the proposed Specific Plan would be sited within the boundary of the Planning area and would not affect agricultural, natural, or cultural resources.
Goal 2 – Encourage development of electrical transmission lines along routes which minimize potential environmental effects.	Yes	See discussion below regarding Objective 2.1.
Objective 2.1: To the extent practicable, maximize utilization of IID's transmission capacity in existing easements or rights-of-way. Encourage the location of all major transmission lines within designated corridors, easements, and rights-of-way.	Yes	The proposed Specific Plan would interconnect with existing IID transmission lines using the SR 78 corridor as a ROW.

5.1.3. Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

Except as provided in Public Resources Code Section 21099, a project would be considered to have a significant impact if it would:

1. Have a substantial adverse effect on a scenic vista?
2. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?
3. Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?
4. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Analysis

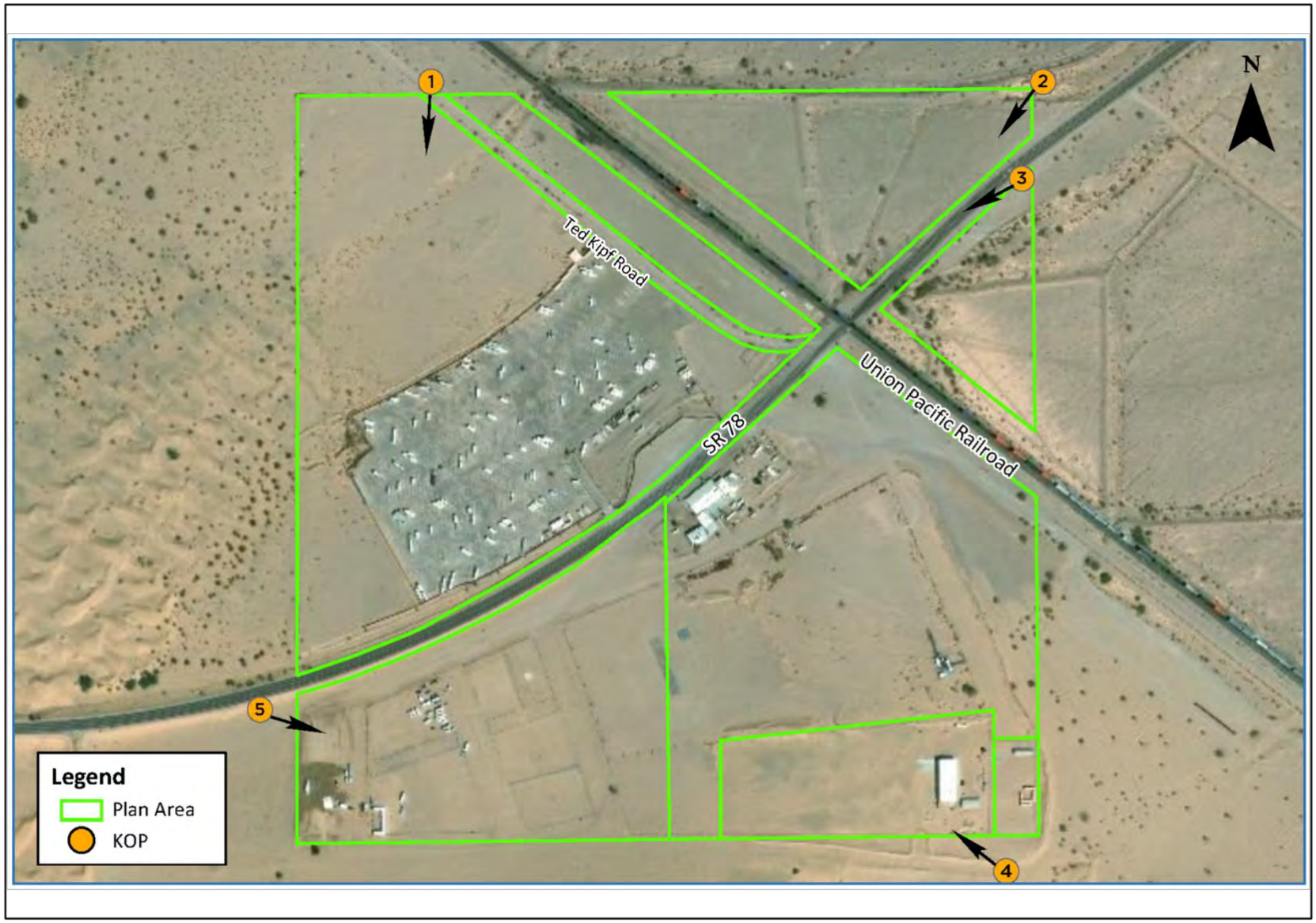
Principal Public Viewpoints Considered (Key Observation Points)

Five (5) Key Observation Points (KOPs) were selected to assess the potential level of visual change that could result from implementation of the Project. The locations of the five (5) KOPs are presented in Figure 5.1-2. The KOPs were selected to capture representative vantages from SR-78. Photos from each KOP are presented in Figure 5.1-3, Figure 5.1-4 and Figure 5.1-5.

Key Observation Point 1

KOP 1 is located on the northwest parcel of the GSPA directly above Ted Kipf Road. This KOP displays views oriented south toward the ISDRA (see Exhibit 7, KOP 1 in Appendix D) with the Project site contained in the middleground. The foreground in KOP 1 contains visual encroachments such as fencing. The middleground in KOP 1 contains a combination of open disturbed desert and the RV storage area. The spanning background provides views of the ISDRA. The scenic attractiveness of KOP 1 is typically based on its common scenic quality and the commercial uses in the middle, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features.

The scenic quality of KOP 1 is moderate (Class III of the BLM's VRI) since the existing visual encroachment appear subordinate to the overall landscape. This KOP provides a typical view for a pedestrian, car, OHV or truck traveling on Ted Kipf Road, likely traveling at a low to medium speed based on the posted speed limit. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the Project site is more or less unobstructed from view.



SOURCE: Altum Group, 2020c.

Location of Key Observation Points (KOPs)
Glamis Specific Plan
Figure 5.1-2

KOP 1 Facing South

KOP 2 Facing Southeast

SOURCE: Altum Group, 2020c.

KOPs 1 and 2
Glamis Specific Plan
Figure 5.1-3

KOP 3 Facing West

KOP 4 Facing Northwest

SOURCE: Altum Group, 2020c.

KOPs 3 and 4
Glamis Specific Plan
Figure 5.1-4

KOP 5 Facing Southwest

SOURCE: Altum Group, 2020c.

KOP 5
Glamis Specific Plan
Figure 5.1-5

Key Observation Point 2

KOP 2 is located on the westbound side of SR-78 on the right corner of the northeast parcel of the GSPA. This KOP displays views from the highway, oriented southeast (see Exhibit 8, KOP 2 in Appendix D) with the Project site in the middleground. The foreground and middleground in KOP 2, contains visual encroachments such as fencing, wireless communications facility, transmission lines, and the Glamis Beach Store. The scenic attractiveness of KOP 2 is typical based on its common scenic quality and few visual encroachments, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features.

The scenic quality of KOP 2 is moderate (Class III of the BLM's VRI) since the existing visual encroachment including, fencing, wireless communications facility, transmissions lines, and Glamis Beach Store appear subordinate to the overall landscape. This KOP provides a typical view for a motorist traveling east on SR-78, likely traveling at a high rate of speed based on the posted speed limit. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the GSPA is more or less unobstructed from view.

Key Observation Point 3

KOP 3 is located on the eastbound side of SR-78 just east of the GSPA. This KOP displays views from the highway, oriented west (see Exhibit 9, KOP 3 in Appendix D) with the Project site contained in the middleground. The foreground in KOP 3 contains visual encroachments such as fencing and highway signage. The middleground in KOP 3 contains a combination of open, disturbed desert, transmissions line, and the RV storage area. The scenic attractiveness of KOP 3 is typically based on its common scenic quality and the commercial uses in the middle, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features.

The scenic quality of KOP 3 is moderate (Class III of the BLM's VRI) since the existing visual encroachment including signage, utility distribution lines, commercial facilities, and the UPRR appear subordinate to the overall landscape. This KOP provides a typical view for a motorist traveling west on SR-78, likely traveling at a high rate of speed based on the posted speed limit. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the GSPA is more or less unobstructed from view.

Key Observation Point 4

KOP 4 is located on the southeast corner of the GSPA and depicts views from the ISDRA oriented northwest (see Exhibit 10, KOP 4 in Appendix D) with the GSPA contained in the middleground. The foreground in KOP 4 contains visual encroachments such as fencing and a private residence/storage building. The middleground in KOP 4 contains a combination of open, disturbed desert and the metal building structures representing the Glamis Beach Store. The ridgelines of the Chocolate Mountains are visible in the background to the north. The scenic attractiveness of KOP 4

is typical based on its common scenic quality and the commercial uses in the middle, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features. The scenic quality of KOP 4 is moderate (Class III of the BLM's VRI) since the existing visual encroachment including fencing and commercial uses appear subordinate to the overall landscape. This KOP provides a typical view for a pedestrian walking on or OHV traveling along the southern border of the GSPA. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the Project site is more or less unobstructed from view.

Key Observation Point 5

KOP 5 is located on the eastbound side of SR-78; just east of the GSPA and depicts views from the highway, oriented southwest (see Exhibit 11, KOP 5 in Appendix D). The foreground in KOP 5 contains visual encroachments such as wood posting for sectioned-off parking and vendor areas. The middleground in KOP 5 is mostly comprised of open, disturbed desert and a wireless communications tower. The Chocolate Mountains ridgeline is visible in the background to the north. The scenic attractiveness of KOP 5 is typical based on its common scenic quality and wood posting, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features.

The scenic quality of KOP 5 is moderate (Class III of the BLM's VRI) since the existing visual encroachment including the wood posting and wireless communications tower. This KOP provides a typical view for a motorist traveling westbound on SR-78, likely traveling at a moderate to high rate of speed based on the posted speed limit. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the GSPA is more or less unobstructed from view.

Impact 5.1-1: Would the project have a substantial adverse effect on a scenic vista?

A *Visual Impact Assessment* was prepared for the Specific Plan in March 2020 (Altum Group, 2020c, Appendix D). This assessment found that no designated scenic vistas as identified by the County are located within visible distance of the GSPA. Per the List of Officially Designated County Scenic Highways from Caltrans, the GSPA is not located along a County designated scenic route. The GSPA is located in a relatively flat area and does not have any rock outcroppings and contains very few trees. The GSPA, as viewed from multiple vantage points, is already developed with commercial and infrastructure uses. The southwest portion of the GSPA contains an existing RV Storage facility, directly northwest of the Glamis Beach Store. The SR-78 and the UPRR bisect each other, running northeast and northwest respectively. The GSPA is bordered by the ISDRA to the south, the NADW to the west, and BLM land to the north and east. Immediate surrounding views from the GSPA consist of the NADW to the northwest, and the CMAGR to the north and east.

The NADW is managed by the BLM as Visual Resource Management (VRM) Class I. VRM Class I objectives are to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. None of the activities associated with implementation of the proposed Specific Plan would occur on the NADW or on BLM lands, thus, the implementation of the proposed Specific Plan would not result in a substantial adverse effect on a scenic vista and a less than significant impact would occur. No mitigation would be required.

Impact 5.1-2: Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

According to the California Scenic Highway Mapping System (Caltrans, 2020), within Imperial County, a portion of SR-78, between the Anza Borrego State Park Road and SR-86 near Salton City, is eligible for designation as a state scenic highway. However, that portion of SR-78 within the GSPA and its immediate vicinity are not designated as a state scenic highway nor is it eligible for designation.

The GSPA is not located along a County designated scenic route. The GSPA does not contain any rock outcroppings and has very few trees. According to the *Class III Cultural Resources Inventory Report* prepared for the Proposed Project, the Glamis Beach Store is not considered a historical resource (ASM Affiliates, 2019). As such, implementation of the proposed Specific Plan is not anticipated to substantially damage scenic resources within a state scenic highway. Impacts would be less than significant. No mitigation would be required.

Impact 5.1-3: Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?

The GSPA is rural in character with a few visual encroachments, including existing commercial and residential structures, a wireless communications tower, and railroad infrastructure. It is located in an area that has been extensively used by OHVs due to the recreational nature of the ISDRA. The proposed Specific Plan's Conceptual Open Space and Recreational Plan provides for the inclusion of open space within Planning Areas 1, 2 and 3 to preserve their existing open space character. The proposed Specific Plan also recommends that new structures be sited to provide public views from SR-78, Ted Kipf Road and other publicly accessible vantage points. Implementation of the proposed Specific Plan is not anticipated to substantially degrade the existing visual character or quality of public views of the GSPA or its surroundings.

Add discussion of solar panels, battery storage, water treatment plant or other infrastructures projects. Including mitigation measures from County PEIR.

Impacts would be **less than significant**. No mitigation would be required.

Impact 5.1-4: Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Implementation of the proposed Specific Plan is not expected to create a substantial new source of nighttime lighting or day-time glare and would provide external safety lighting for both normal and emergency conditions at the primary access points. All subsequent development, in addition to the Special Events, will be conditioned to provide the minimum illumination needed to achieve safety and security and to be downward facing and shielded in order to focus the illumination in the immediate area. Lighting of monument signs shall be arranged and installed as not to produce glare on other properties in the vicinity or upon the adjacent highway.

All lighting associated with implementation of the Specific Plan will be subject to County approval and compliance with Imperial County Requirements (Altum Group, 2020c). Therefore, implementation of the proposed Specific Plan would not result in the creation of a new sources of substantial light that would adversely affect day or nighttime views in the area. Lighting impacts would be less than significant and no mitigation would be required.

The proposed Specific Plan includes the potential development of solar arrays and solar generating facilities as a permitted use to provide onsite power to the Glamis area. Although there would be some level of potential reflectivity from the operation of solar panels, during the final design, solar panels would be selected that would help minimize reflectivity and would be oriented in a manner that would minimize reflectivity towards high use recreational areas on surrounding BLM lands (Mitigation Measures [MM] AES-1). Nevertheless, future development of renewable ground-based solar energy generating facilities could have the potential to have an adverse effect regarding light or glare and result in a significant impact. MM AES-2 requires the preparation of a full glint/glare analysis prior to the issuance of building permits for ground-based solar generating facilities. The analyses will ensure that ground-based solar arrays would be designed to orient away from any known air travel routes for private, commercial, or military airplanes and avoid causing glare to users of SR-78. Therefore, with the implementation of MM-AES-1 and 2, implementation of the proposed Specific Plan is anticipated to result in less than significant glare impacts.

5.1.4. Mitigation Measures

AES-1: Selection of Appropriate Solar Panels
Future renewable energy facilities would be required to select solar panels that would help minimize reflectivity and would be oriented in a manner that would minimize reflectivity towards high use recreational areas on surrounding BLM lands.

Timing/Implementation: *Prior to building permit issuance for ground-based solar generating facilities*

Enforcement/Monitoring: *County of Imperial Development Services*

AES-2: Glint and Glare Analysis for Solar Generating Facilities

Future renewable energy facilities would be required to consider siting and design features that would minimize glint and glare and take appropriate actions. These actions include identifying glint and glare effects, assessing and quantifying these effects to determine potential safety and visual impacts, having qualified people conduct such assessments and identifying mitigation measures to address significant impacts.

Methods to minimize night-sky effects include using minimum intensity lighting of an appropriate color consistent with safety needs, prohibiting strobe lighting except where it is required for safety; shielding all permanent lighting unless otherwise required for safety; mounting lighting so that light is focused downward; controlling lighting with timers, sensors, and dimmers; and using vehicle-mounted lights for nighttime maintenance work rather than permanently mounted lighting.

Timing/Implementation: *Prior to building permit issuance for ground-based solar generating facilities*

Enforcement/Monitoring: *County of Imperial Development Services*

Significance After Mitigation

Implementation of **MM-AES-1** and **-2** would reduce the effects of glint and glare from ground-based solar generating facilities to below a level of significance.

5.2 Air Quality

This section addresses potential direct and indirect air quality impacts to air quality from implementation of the proposed Specific Plan. The following discussion addresses the existing conditions in the planning area, identifies applicable regulations, analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Specific Plan, as applicable.

Information used in preparing this section and in the evaluation of potential air quality impacts was derived from the Glamis Specific Plan Area (GSPA) *Air Quality Assessment* prepared by LdN Consulting which is provided as Appendix C-1 this Draft EIR (LdN Consulting, 2020a).

Scoping Issues Addressed

- During the scoping period for the project, a public scoping meeting was conducted, and written comments were received from regulatory agencies. No comments related to air quality impacts were raised.

5.2.1. Environmental Setting

The GSPA is located in Imperial County, the southeastern most county in California in the Salton Sea Air Basin. The GSPA experiences mild and dry winters with daytime temperatures ranging from 65 to 75 ºF, extremely hot summers with daytime temperatures ranging from 104 to 115 ºF, and very little rain. Imperial County usually receives approximately three (3) inches of rain per year mostly occurring in late summer or midwinter. Summer weather patterns are dominated by intense heat induction low- pressure areas over the interior desert. The flat terrain of the Imperial Valley and the strong temperature differentials created by intense solar heating produce moderate winds and deep thermal convection. The general wind speeds in the GSPA are less than 10 miles per hour (mph), but occasionally experience winds speeds of greater than 30 mph during the months of April and May. Statistics reveal that prevailing winds blow from the northwest-northeast; a secondary trend of wind direction from the southeast is also evident (LdN Consulting, 2020a).

Table 5.2-1 shows the Basin attainment status for the national and state standards.

Currently, the Basin is in "non-attainment" status for ozone (O_3) and serious nonattainment for Respirable Particulate Matter (PM_{10}). As a result, the Imperial County Air Pollution Control District (ICAPCD) developed an Ambient Air Quality Plan (AAQP) to provide control measures to achieve attainment status. The AAQP was adopted in 1991. A new National Ambient Air Quality Standard (NAAQS) for O_3 was adopted by the U.S. Environmental Protection Agency (USEPA) in 1997 and required modified strategies to decrease higher O_3 concentrations. To guide non-attainment areas closer to NAAQS requirements an 8-hr O_3 Air Quality Management Plan (AQMP) was approved by ICAPCD in 2009 and was accepted by the USEPA in 2010.

TABLE 5.2-1. IMPERIAL COUNTY AIR BASIN ATTAINMENT STATUS BY POLLUTANT.

Pollutant	CAAQS	NAAQS
Ozone (O_3)	Nonattainment	Nonattainment - marginal
Carbon Monoxide (CO)	Attainment	Unclassified/ Attainment
Respirable Particulate Matter (PM_{10})	Nonattainment	Attainment
Fine Particulate Matter ($PM_{2.5}$)	Attainment	Moderate Nonattainment – partial*
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/ Attainment
Lead (Pb)	Attainment	Unclassified / Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Sulfates	Attainment	No Federal Standards
Vinyl Chloride	Unclassified	No Federal Standards
Hydrogen Sulfide (H_2S)	Attainment	No Federal Standards
Visibility Reducing Particles	Unclassified	No Federal Standards

Note: * = Indicates only a portion of the county is included in the designated nonattainment area (NA
Source: LdN Consulting, 2020a.

The ICAPCD meets its regulatory responsibilities through the State of California State Implementation Plan (SIP). The ICAPCD adopted its first SIP in 1971 and has prepared periodic updates to the SIP. SIPs for controlling PM_{10}, O_3, and a reasonably available control technology SIP are in place for Imperial County and constitute the Air Quality Attainment Plan (AQAP) for Imperial County.

A SIP revision for revised rules under ICAPCD Regulation VIII for fugitive dust PM_{10} was reviewed by the USEPA and the final rule was signed on March 27, 2013, and published in the Federal Register (Federal Register 2013). The ICAPCD adopted the rules on October 16, 2012, to regulate PM_{10} emissions from sources of fugitive dust (e.g., unpaved roads and disturbed soils in open and agricultural areas). The California Air Resources Board (CARB) submitted these rules to the USEPA for approval on November 7, 2012; the USEPA proposed approval of these revisions to the ICAPCD portion of the California SIP on January 7, 2013.

Rules and regulations promulgated by the ICAPCD and in the SIP revision applicable to the proposed Glamis Specific Plan include the following:

- **ICAPCD Rule 207.C.1, New and Modified Stationary Source Review** (Best Available Control Technologies [BACT]), requires that any new or modified emissions unit that has a potential to emit 25 pounds per day or more of any nonattainment pollutant or its precursors, or 55 pounds per day of Hydrogen Sulfide (H_2S), must include BACT as a part of the project.
- ICAPCD Rule 400, Nuisances, forbids the emission of air contaminants or other materials that would cause a nuisance to the public, including non-agricultural related odors.

- **ICAPCD Rule 800 General Requirements for Control of Fine Particulate Matter** (PM_{10}), requires actions to prevent, reduce, or mitigate PM_{10} emissions from anthropogenic (man-made) PM_{10} sources generated within Imperial County.
- **ICAPCD Regulation VIII, Rule 801** (Construction and Earthmoving Activities) establishes a 20 percent opacity limit, requires the implementation of a dust management control plan for all nonresidential projects of 5 acres or more, and requires compliance with other portions of Regulation VIII regarding bulk materials (Rule 802), carry-out and track-out (Rule 803), and paved and unpaved roads (Rule 805). The rule exempts single-family homes and waives the 20 percent opacity limit in winds over 25 mph under certain conditions. To comply with this regulation, the applicant would implement Mitigation Measure (MM) AQ-1 which requires preparation of a Fugitive Dust Suppression Plan to minimize dust generated during construction and ground disturbing activities.
- **ICAPCD Rule 804 Open Areas**, requires actions to prevent, reduce or mitigate the amount of PM_{10})emissions generated from Open Areas. Open areas are defined as any open area having 0.5 acres or more within urban areas, or 3.0 acres or more within rural areas; and contains at least 1,000 square feet of disturbed surface area.

On October 23, 2018, the ICAPCD Board of Directors approved the Imperial County 2018 Redesignation Request and Maintenance Plan for PM_{10}. During a December 13, 2018, Public Hearing, CARB approved the Imperial County 2018 Redesignation Request and Maintenance Plan for PM_{10}.

ICAPCD adopted the 2013 Fine Particulate Matter ($PM_{2.5}$) plan on December 2, 2014. The plan was transmitted to CARB on December 9, 2014. CARB reviewed and approved the plan on December 18, 2014, as a revision to the California SIP for Imperial County. The plan was submitted to the EPA on January 9, 2015, and is pending approval.

Any development with a potential to emit criteria pollutants below significance levels defined by the ICAPCD is referred to as a "Tier I Project," and is considered by the ICAPCD to have less than significant potential adverse impacts on local air quality. For Tier I Projects, a project proponent is required to implement a set of feasible "standard" design measures (determined by the ICAPCD) to reduce the air quality impacts to an insignificant level.

A "Tier II project" is one whose emissions exceed any of the thresholds. Its impact is significant, and the project proponent should select and implement all feasible "discretionary" design measures (as determined by the ICAPCD) in addition to the standard measures.

Criteria pollutants are measured continuously throughout Imperial County and the data is used to track ambient air quality patterns throughout the county. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and California Ambient Air Quality Standard (CAAQS). The ICAPCD is responsible for monitoring four sites which collect

meteorological and criteria pollutant data used by the district to assist with pollutant forecasting, data analysis and characterization of air pollutant transport. Also, a fifth monitoring location is located in the City of Calexico which is monitored by CARB. The monitoring station that is closest to the Planning area is the 9th Street monitoring station in El Centro, which is approximately 31 miles west of the GSPA. Table 5.2-2 provides the criteria pollutant levels monitored at the 9th Street Monitoring Station for 2016, 2017 and 2018, which is the most current data at the time of the Draft EIR's preparation (LdN Consulting, 2020a).

Based on a review of the ambient data, both O_3 and PM emissions exceed AAQS and therefore are in non-attainment status. The 8-hour O_3 non-attainment is considered "Moderate" Non-Attainment while the 24-Hour PM_{10} is considered "Serious" Non-Attainment. Therefore, to comply with the ICAPCDs SIP and AAQP, the proposed Specific Plan must implement Best Available Control Measure (BACM) and BACT as outlined in the standard design measures that all projects must implement.

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. There is a single-family residence (apartment) located within the GSPA, however, it is not occupied year-round. The next nearest receptors are located approximately 15 miles to the west.

Methodology

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2016.3.2 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2017. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the Project and uses methodologies presented in the USEPA AP-42 document with emphasis on Chapter 11.9 (LdN Consulting, 2020a).

TABLE 5.2-2: AMBIENT AIR QUALITY DATA NEAR PLANNING AREA (2016, 2017, 2018)

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2016	2017	2018
O_3 (ppm)	El Centro – 9th Street	1 Hour	0.09 ppm	No Standard	0.108	0.110	0.102
		8 Hour	0.070 ppm	0.070 ppm	0.082	0.092	0.090
PM_{10}		24 Hour	50 µg/m3	150 µg/m3	284.9	268.5	253.0

TABLE 5.2-2: AMBIENT AIR QUALITY DATA NEAR PLANNING AREA (2016, 2017, 2018)

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2016	2017	2018
(µg/m3)		Annual Arithmetic Mean	20 µg/m3	No Standard	45.0	41.3	46.9
$PM_{2.5}$ (µg/m3)		24 Hour	No standard -	35 µg/m3	31.3	23.2	22.4
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	9.4	8.4	8.6
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.005	No Data	No Data
		1 Hour	0.18 ppm	0.100 ppm	0.042	0.040	0.032

Notes: ppm=Parts per Million µg/m^3 = micrograms per cubic meter
Source: LdN Consulting, 2020a

5.2.2. Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the Specific Plan.

Federal and State

The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate emissions of airborne pollutants and have established ambient air quality standards for the protection of public health. The USEPA is the federal agency designated to administer air quality regulation, while the CARB is the state equivalent in California. Federal and state standards have been established for six criteria pollutants, including O_3, carbon monoxide (CO), Nitrogen Dioxide (NO_2), Sulfur Dioxide (SO_2), PM_{10} and $PM_{2.5}$, and; lead (Pb). California has also set standards for sulfates, H_2S, vinyl chloride, and visibility reducing particles. Table 5.2-3 lists the current federal NAAQS and CAAQS for each of these pollutants. Standards have been set at levels intended to be protective of public health. California standards are more restrictive than federal standards for each of these pollutants except lead and the eight-hour average for CO.

TABLE 5.2-3. SUMMARY OF FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS.

Pollutant	Averaging Time	Federal Primary Standards	California Standards
O_3	1-hour	----	0.09 ppm
	8-hour	0.070 µg/m^3	0.070 µg/m^3
PM_{10}	24-hour	150 µg/m^3	50 µg/m^3

TABLE 5.2-3. SUMMARY OF FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS.

Pollutant	Averaging Time	Federal Primary Standards	California Standards
	Annual	---	20 µg/m^3
$PM_{2.5}$	24-hour	35 µg/m^3	---
	Annual	12 µg/m^3	12 µg/m^3
CO	8-hour	9.0 ppm	9.0 ppm
	1-hour	35.0 ppm	0.030 ppm
	Annual	0.053 ppm	0.030 ppm
NO_2	1-hour	0.100 ppm	0.18 ppm
SO_2	24-hour	---	0.04 ppm
	3-hour	0.5 ppm (secondary)	---
	1-hour	0.075 ppm (secondary)	0.25 ppm
pb	30-day average	---	1.5 µg/m^3
	3-month average	0.15 µg/m^3	---

Notes:
ppm = parts per million
µg/m^3 = micrograms per cubic meter
Source: LdN Consulting, 2020a.

Local

Local control in air quality management is provided by the CARB through county-level or regional (multi-county) air pollution control districts (APCDs). The CARB establishes air quality standards and is responsible for control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 air basins statewide. The Planning area is located within the Salton Sea Air Basin (SSAB), which includes all of Imperial County and a portion of central Riverside County. Air quality conditions in the Imperial County portion of the SSAB are under the jurisdiction of the ICAPCD. The remainder of the Basin is managed by the SCAQMD. The ICAPCD is required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "non-attainment."

The ICAPCD has established significance thresholds in the 2017 ICAPCD California Environmental Quality Act (CEQA) Handbook for the preparation of Air Quality Impact Assessments (AQIA). The screening criteria within this handbook can be used to determine whether a project's total emissions would result in a significant impact as defined by CEQA. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in

Table 5.2-4. The CEQA handbook further states that any proposed project with a potential to emit less than the Tier I thresholds during operations may potentially still have adverse impacts on the local air quality and would be required to develop an Initial Study (IS) to help the Lead Agency determine whether the project would have a less than significant impact. On the other hand, if the proposed project's operational development fits within the Tier II classification, it is considered to have a significant impact on regional and local air quality. Therefore, Tier II projects are required to implement all standard design measures as well as all feasible discretionary design measures.

TABLE 5.2-4: SCREENING THRESHOLD FOR CRITERIA POLLUTANTS

Construction Emissions		
Pollutant	**Total Emissions (Pounds per Day)**	
PM_{10} and $PM_{2.5}$	150	
Nitrogen Oxide (NOx)	100	
CO	550	
Reactive Organic Gases (ROG)	75	
Operational Emissions		
Pollutant	**Tier I (Pounds per Day)**	**Tier II (Pounds per Day)**
PM_{10} and Sulfur Oxide (SOx)	< 150	150 or greater
NOx and ROG	< 137	137 or greater
CO	< 550	550 or greater
Level of Significance:	Less Than Significant	Significant Impact
Level of Analysis:	Initial Study	Comprehensive Air Quality Analysis Report
Environmental Document:	Negative Declaration	Mitigated ND or EIR

Source: LdN Consulting, 2020a.

Additionally, ICAPCD defined standard design measures for construction equipment and fugitive PM_{10} must be implemented at all construction sites. The implementation of design measures, as listed in the ICAPCD CEQA handbook, apply to those construction sites which are 5 acres or more for non- residential developments such as the proposed Project. Additionally, in an effort to reduce PM_{10}or Fugitive Dust from ambient air, the Project would be required to develop a dust management plan consistent with Regulation VIII of ICAPCD's Rules and Regulations. Additionally, the project shall not exceed the 20 percent opacity threshold under Rule 801.

The Imperial County General Plan contains goals, objectives, policies and/or programs to conserve the natural environment of Imperial County, including air quality. Table 5.2-5 summarizes the Project's consistency with the applicable air quality goal and objectives from the General Plan.

TABLE 5.2-5 CONSISTENCY WITH APPLICABLE GENERAL PLAN AIR QUALITY GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
Land Use Element (LUE)		
Goal 9: Identify and preserve significant natural, cultural, and community character resources and the County's air and water quality. • Objective 9.6: Incorporate the strategies of the Imperial County AQAP in land use planning decisions and as amended.	Yes	The AQAP includes the rules and regulations promulgated by the ICAPCD that are applicable to land use projects in Imperial County. The proposed Project must comply with applicable ICAPCD rules and regulations, either through project design or inclusion of mitigation, to qualify for the necessary permits to implement construction and operation. Mitigation Measures (MM) AQ-1 and AQ-2 would ensure the proposed Project is consistent with the County's General Plan.
Objective 9.7: Implement a review procedure for land use planning and discretionary project review which includes the Imperial County Air Pollution Control District.	Yes	As the air pollution control district for the County, the ICAPCD must review all projects subject to environmental documentation. This review may entail the required inclusion of mitigation or other measures to reduce project emissions to levels acceptable per ICAPCD rules and regulations. The ICAPCD will review the proposed Project as part of the CEQA process.
Conservation and Open Space Element		
Goal 7: The County shall actively seek to improve and maintain the quality of air in the region. • **Objective 7.1:** Ensure that all projects and facilities comply with current Federal, State, and local requirements for attainment of air quality objectives. • **Objective 7.2:** Develop management strategies to mitigate fugitive dust. Cooperate with all Federal, State and local agencies in the effort to attain air quality objectives. • **Objective 7.4:** Enforce and monitor environmental mitigation measures relating to air quality. • **Objective 7.5:** Coordinate efforts with Imperial County Transportation Commission (ICTC) and other appropriate agencies to reduce fugitive dust from unpaved streets.	Yes	The proposed Specific Plan focuses on providing internal clearly marked signage for both passenger vehicles and Off Highway Vehicles (OHVs), including speed limits for dust control and lighted signage for nighttime circulation. Activities and development of the proposed Specific Plan will comply with the Mitigation Monitoring and Reporting Program in the Draft EIR for the proposed Specific Plan. Therefore, the proposed Specific Plan is consistent with this goal.
Protection of Air Quality and Addressing Climate Change Policy: Reduce PM_{10} and $PM_{2.5}$ emissions from unpaved roads, agricultural fields, and exposed Salton Sea lakebed.	Yes	The ICAPCD seeks to improve and maintain the quality of air in Imperial County through issuance of air quality management plans, rules, and regulations that reflect both state and federal requirements for meeting air quality objectives. The proposed Specific Plan must comply with the

TABLE 5.2-5 CONSISTENCY WITH APPLICABLE GENERAL PLAN AIR QUALITY GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
Programs: Implement all ICAPCD particulate matter (PM) emission controls including the Final PM_{10} 2009 State Implementation Plan and the 2013 State Implementation Plan for the 2006 24- Hour $PM_{2.5}$ Moderate Nonattainment Area.		requirements of these plans, rules, and regulations to gain approval from the County.
Circulation and Scenic Highways Element (CSHE)		
Objective 3.8: Attempt to reduce motor vehicle air pollution. Require all major projects to perform an air quality analysis to determine the amount of pollution, as well as the alternative reduction options.	Yes	An air quality analysis has been prepared for the proposed Specific Plan, which mobile source emissions.

Source: Imperial County, 2008, 2015, 2016.

5.2.3. Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan?
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
3. Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?
4. Expose sensitive receptors to substantial pollutant concentrations?

Analysis

Impact 5.2-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Construction Emissions

The Project construction dates were estimated based on a "conservative development scenario" whereby all construction occurs over a three-year period with kickoff starting in 2022 and ending sometime in 2024. In reality construction could occur over a 20- to 50-year period. Therefore, the annual construction emissions could be substantially lower than those presented on Table 5.2-5 because they would be spread out over a 50-year period. CalEEMod 2016.3.2, the most current version of the model, was utilized for all construction calculations. It should be noted that standard

construction design measures that are in place at the time the specific developments are brought forward would be required for all future implementation activities. The current standard construction design measures are listed below:

1. Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel-powered equipment.
2. Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
3. Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
4. Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

A summary of the construction emissions is shown below in Table 5.2-6. Given these findings, there would be no exceedances of the ICAPCD threshold for fugitive dust.

TABLE 5.2-6: EXPECTED CONSTRUCTION EMISSIONS SUMMARY (POUNDS PER DAY)

Year	ROG	NOx	CO	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2022 (lb. /day)	20.05	43.19	61.68	18.21	1.64	19.82	9.97	1.51	11.45
2023 (lb. /day)	19.42	35.24	57.78	7.61	0.83	8.44	2.07	0.78	2.85
2024 (lb. /day)	19.01	33.82	55.39	7.61	0.73	8.34	2.07	0.69	2.76
Significance Threshold (lb. /day)	75	100	550	-	-	150	-	-	150
ICAPCD Impact	No	No	No	-	-	No	-	-	No

Source: LdN Consulting, 2020a (Appendix C-1).

The emissions shown in Table 5.2-6 are mitigated to primarily control fugitive dust (PM_{10}) emissions during construction and assume exposed soil areas would be watered twice daily. To minimize fugitive dust and general construction emissions, the applicant would be required to implement fugitive dust control measures per ICAPCD Rules 801 and 804 which are included as Mitigation Measures (MM) AQ-1 and MM AQ-2.

Operational Emissions

Project Buildout is expected within 20 to 50 years however development within the planning area was modeled to include buildout in 2024. CalEEMod was also updated to reflect a net increase in average daily vehicle trips (ADT) during operation of 1,750 ADT. (LLG Engineers, 2019; Appendix L-1). trips would be expected to be heaviest Friday through Monday and would be operational from October through May. Modeling assumed the proposed Specific Plan scenario

shown in Table 5.2-7 below. Also, it should be noted that daily trips are generated from existing patrons within the Glamis area. The daily operational pollutants calculated within CalEEMod for both Summer and Winter scenarios is as typical of the model. These emissions are presented in Tables 5.2-8 and 5.2-9.

TABLE 5.2-7: OPERATIONAL USE SCENARIO

Land Use Type	Land Use Sub Type	Land Use Unit Amount
Commercial	Research & Development	10,000 SF
Industrial	Water/Wastewater Plants	1 Unit
Parking	Other Non-Asphalt Surfaces	25 acres
Recreational	Hotel	150 Rooms
Residential	Employee Housing	5 Units
Retail	Shopping or amenities	10,000 SF

Source: LdN Consulting, 2020a.

TABLE 5.2-8 DAILY OPERATIONAL EMISSIONS (SUMMER)

Emissions (lb./Day)	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source Emission Estimates	6.67	0.05	0.45	0.00	0.01	0.01
Energy Source Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Operational Vehicle Emissions	4.59	25.89	40.49	0.11	5.48	1.50
TOTAL	**11.26**	**25.94**	**40.94**	**0.11**	**5.49**	**1.51**
ICAPCD Thresholds	55	55	550	150	150	150
Significant?	No	No	No	No	No	No

Note: Daily pollutant generation assumes trip distances within-CalEEMod 2016.3.2
Source: LdN Consulting, 2020a.

TABLE 5.2-9: DAILY OPERATIONAL EMISSIONS (WINTER)

Emissions (lb./Day)	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source Emission Estimates	6.67	0.05	0.45	0.00	0.01	0.01
Energy Source Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Operational Vehicle Emissions	3.43	25.53	34.60	0.10	5.48	1.50
TOTAL	**10.11**	**25.57**	**35.05**	**0.10**	**5.49**	**1.51**
ICAPCD Thresholds	55	55	550	150	150	150
Significant?	No	No	No	No	No	No

Note: Daily pollutant generation assumes trip distances within-CalEEMod 2016.3.2
Source: LdN Consulting, 2020a.

Based upon these calculations, the proposed Project would not exceed ICAPCD operational air quality significance thresholds and would not be required to implement mitigation design measures to comply with CEQA and ICAPCD thresholds. Given this, a less than significant impact is expected. It should be noted that the Project would not be operational in the summer months though CalEEMod software provides these estimates. The inclusion of summer operational emissions data shows that if the Project did operate in the summer, operational emissions would be also less than significant.

Impact 5.2-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

As discussed under Impact 5.2-1 implementation of the proposed Project would temporarily increase air pollutant emissions during construction of the individual implementation activities. The proposed Project is consistent with ICAPCD plans and would not exceed pollutant thresholds during operation. The Project's potential to result in a cumulatively considerable net increase of any criteria pollutant is considered less than significant with mitigation incorporated. With implementation of MM AQ-1 and MM AQ-2 impacts would be less than significant.

Impact 5.2-3: Would the project result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

There is one single family residence (apartment) within the GSPA. Given this, the project would not affect a substantial number of people with exposure to odors either short or long term from the proposed Specific Plan. Therefore, a less than significant odor impact is expected. It should be noted that the proposed Specific Plan would create a limited amount of seasonal employee housing. These units may be exposed to short term odors from construction activities, though, because they are short term, a less than significant odor impact would be expected.

Impact 5.2-4: Would the project expose sensitive receptors to substantial pollutant concentrations?

There is one single family residence (apartment) within the GSPA. Given this, the project would not affect a substantial number of people with exposure to substantial pollutant concentrations either short or long term from the proposed Specific Plan. It should be noted that the proposed Specific Plan includes the development of on-site employee housing. These homes are accessory uses to the GSPA. These units may be exposed to short term odors from construction activities, though, because they are short term, a less than significant odor impact would be expected. As discussed above, neither the construction or operation emissions would exceed the ICAPCD thresholds with implementation of mitigation measures AQ-1 and AQ-2. Sensitive receptors would not be exposed to substantial pollutant concentrations, and impacts would be less than significant.

5.2.4. Mitigation Measures

The following MM would reduce impacts to below a level of significance.

MM AQ-1: Dust Control Plan

Prior to the issuance of a grading permit or building permit, the project applicant shall be required to submit a Dust Control Plan to the ICAPCD for approval. The Dust Control Plan will identify all sources of PM_{10} emissions and associated mitigation measures during the construction and operational phases (see Rule 801 F.2) to ensure there would be no exceedances of the ICAPCD fugitive dust threshold. The applicant shall submit a "Construction Notification Form" to the ICAPCD 10 days prior to the commencement of any earthmoving activity. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control and address the following parameters:

- All disturbed areas, including bulk material storage that is not being actively used, shall be effectively stabilized; and visible emissions shall be limited to no greater than 20-percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing particulate matter with 5 percent or greater silt content. For modeling purposes, it was assumed that watering would occur twice daily.
- All on-site unpaved roads segments or areas used for hauling materials shall be effectively stabilized. Visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by restricting vehicle access, paving, application of chemical stabilizers, dust suppressants and/or watering.
- The transport of bulk materials on public roads shall be completely covered, unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks shall be cleaned and/or washed at the delivery site after removal of bulk material, prior to using the trucks to haul material on public roadways.
- All track-out or carry-out on paved public roads, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement, shall be cleaned at the

end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.

- Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line except where such material or activity is exempted from stabilization by the rules of ICAPCD.

Timing/Implementation: *Prior to building permit issuance for all construction.*

Enforcement/Monitoring: *ICAPCD*

MM AQ-2: NOx Emission Controls

Each project shall implement all applicable standard measures for construction combustion equipment for the reduction of excess NOx emissions as contained in the Imperial County CEQA Air Quality Handbook and associated regulations at the time the proposals are brought forward. As of the date of publication of the Draft EIR, these measures include:

- Use alternative-fueled or catalyst-equipped diesel construction equipment, including all off-road and portable diesel-powered equipment.
- Minimize idling time, either by shutting equipment off when not in use or reducing the time of idling to five minutes at a maximum.
- Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use. Replace fossil-fueled equipment with electrically driven equivalents (assuming powered by a portable generator set and are available, cost effective, and capable of performing the task in an effective, timely manner).
- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing construction activity during the peak hour of vehicular traffic on adjacent roadways.
- Implement activity management (e.g., rescheduling activities to avoid overlap of construction phases, which would reduce short-term impacts).

Timing/Implementation: *Prior to building permit issuance for ground-based solar generating facilities.*

Enforcement/Monitoring: *County of Imperial Development Services*

Level of Significance After Mitigation

Impacts would be less than significant after mitigation.

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5.3 Biological Resources

This section addresses potential direct and indirect environmental impacts to biological resources that may result from implementation of the proposed Specific Plan. The following discussion addresses the existing biological conditions within the Glamis Specific Plan Area (GSPA), the regulatory framework, analyzes the direct and indirect impacts to biological resources that could result from implementation of the proposed Specific Plan and provides mitigation measures to reduce these impacts. The regulatory framework discussion focuses on the federal, state, and local regulations that apply to sensitive plants, animals and their habitats. The affected environment discussion focuses on topography and soils; general vegetation; general wildlife; sensitive biological resources; riparian habitat and sensitive natural communities; jurisdictional waters; and habitat connectivity and wildlife corridors.

Information used in preparing this section and in the evaluation of potential impacts to biological resources was derived from a number of sources, including a *Biological Resources Assessment Report* prepared by Barrett Biological (Barrett Biological, 2020: Appendix E).

The purpose of the survey was to determine the inventory of biological resources; the possibility of the existence of endangered, threatened, sensitive or species of concern within the GSPA: map habitats, and ascertain the probability of the presence of sensitive species within the Project site. Pedestrian biological surveys of the approximately 141-acre GSPA and buffer zones, where possible, were conducted to develop an inventory of species (plant and animal) present at the time of the surveys, map vegetative communities, if present and ascertain the potential for occurrence of sensitive, endangered or threatened species within the GSPA and vicinity.

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a public scoping meeting was conducted, and written comments were received from regulatory agencies. The following issues related to biological and natural resources were raised by the California Department of Fish and Wildlife (CDFW) and are addressed in this section:

- Include an assessment of various habitat types located within the Project footprint, and a map that identifies the location of each.
- Include a general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the Project.
- Conduct a complete, recent inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully

Protected Species. Species to be addressed should include all those which meet the CEQA definition.

- CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.
- Conduct a thorough, recent, floristic-based assessment of special status plants and natural communities, following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities.
- Include information on the regional setting, with special emphasis on resources that are rare or unique to the region.
- Conduct a full accounting of all open space and mitigation/conservation lands within and adjacent to the Project.
- The Draft EIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources and include the following:
- A discussion of potential impacts from lighting, noise, human activity (e.g., recreation), defensible space, and wildlife-human interactions created by zoning of development projects or other Project activities adjacent to natural areas, exotic and/or invasive species, and drainage.
- An evaluation of impacts to adjacent open space lands from construction, long-term operations and maintenance.
- A cumulative effects analysis developed as described under California Environmental Quality Act (CEQA) Guidelines section 15130. Please include all potential direct and indirect project-related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis.
- The Draft EIR should identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, to the extent feasible.
- The Draft EIR should assess all direct, indirect, and cumulative impacts that are expected to occur.
- Project activities described in the Draft EIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the Project area.

- The Draft EIR should analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors.
- Lead Agency should include in the analysis how appropriate avoidance, minimization, and mitigation measures will reduce indirect impacts to fully protected species.
- CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. The Draft EIR should include measures to fully avoid and otherwise protect sensitive plant communities from Project-related direct and indirect impacts.
- California Species of Special Concern should be considered during the environmental review process. CSSC that have the potential or have been documented to occur within or adjacent to the Project area, include flat-tailed horned lizard, burrowing owl, Le Conte's thrasher, and Palm Springs pocket mouse.
- CDFW considers adverse Project-related impacts to sensitive species and habitats to be significant and the Draft EIR should include mitigation measures for adverse Project-related impacts to local and regional ecosystems.
- Mitigation measures should emphasize avoidance and reduction of Project impacts.
- For unavoidable impacts, onsite habitat restoration and/or enhancement, and preservation should be evaluated and discussed in detail.
- The Draft EIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset Project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.
- If sensitive species and/or their habitat may be impacted from the Project, CDFW recommends the inclusion of specific mitigation in the Draft EIR. CEQA Guidelines section 15126.4, subdivision (a)(1)(8) states that formulation of feasible mitigation measures should not be deferred until some future date.
- CDFW recommends that the Draft EIR specify mitigation that is roughly proportional to the level of impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). The mitigation should provide long-term conservation value for the suite of species and habitat being impacted by the Project.

Furthermore, in order for mitigation measures to be effective, they need to be specific, enforceable, and feasible actions that will improve environmental conditions.

- Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity.

- Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

- Local onsite propagules from the Project area and nearby vicinity should be collected and used for restoration purposes. Onsite seed collection should be initiated in order to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various project components as appropriate.

- Restoration objectives should include protecting special habitat elements or recreating them in areas affected by the Project.

- CDFW recommends that the Draft EIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur.

- Project-specific avoidance and minimization measures may include, but not be limited to: project phasing and timing, monitoring of project related noise (where applicable), sound walls, and buffers, where appropriate.

- The Draft EIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the Project site.

- If pre-construction surveys are proposed in the Draft EIR, the CDFW recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

- CDFW recommends that the lead agency condition the Draft EIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-

disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities.

- Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety. Temporary relocation of onsite wildlife does not constitute effective mitigation for the purposes of offsetting project impacts associated with habitat loss.
- CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful.
- CDFW recommends that a California Endangered Species Act (CESA) Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" of State-listed CESA species, either through construction or over the life of the project.
- CDFW encourages early consultation, as significant modification to the proposed Project and avoidance, minimization, and mitigation measures may be necessary to obtain a CESA ITP. The California Fish and Game Code requires that CDFW comply with CEQA for issuance of a CESA ITP. CDFW therefore recommends that the Draft EIR addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of CESA.
- Based on review of material submitted with the Notice of Preparation and review of aerial photography the Project applicant will need to notify CDFW per Fish and Game Code Section 1602 prior to commencing any activity that may substantially divert or obstruct the natural flow of any river, stream or lake, or deposit debris, waste or other materials that could pass into any river, stream or lake.
- Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required.
- CDFW may suggest ways to modify your Project that would eliminate or reduce harmful impacts to fish and wildlife resources. CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code § 21065). If necessary, the Draft EIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended.

Issues Scoped Out

The Imperial County Planning and Development Services Department determined in the Initial Study located in Appendix A-2, that the following environmental issue area resulted in "No

Impact" and was scoped out of requiring further review in this Draft EIR. Please refer to Appendix A-2 of this Draft EIR for a copy of the Initial Study and additional information regarding this issue.

- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan. The GSPA is not located within an area that is subject to a HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

5.3.1 Environmental Setting

The GSPA is located in the remote community of Glamis, an unincorporated area in Imperial County. The GSPA is located approximately 27 miles east of the City of Brawley; approximately 32 miles northeast of the City of El Centro; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea. Figure 3-4 shows the relationship between the GSPA and surrounding vicinity with the Imperial Sand Dunes Recreation Area (ISDRA) located immediately to the southwest, the North Algodones Dunes Wilderness (NADW) immediately to the northwest, and the Chocolate Mountains and Chocolate Mountain Aerial Gunnery Range (CMAGR) located to the northeast.

Vegetation Communities

Vegetation within the Specific Plan area is sparse and consists of a combination of native and ruderal, primarily creosote bush-brittle bush scrub species (Table 5.3-1). No annuals were found on site. A majority of the Specific Plan area is bare ground or has been previously developed.

TABLE 5.3-1. VEGETATION OBSERVED WITHIN THE GSPA

Common name	Scientific name	Cal-IPC Rating*
White bursage	*Ambrosia dumosa*	None
Smoketree	*Dalea spinosa*	None
Palo verde	*Parkinsonia floridum*	None
Brittlebush	*Encelia farinosa*	None
Creosote	*Larrea tridentata*	None
Fanleaf crinklemat	*Tiquilia plicata*	None
Acacia	*Senegalia greggii*	None
Sahara mustard	*Brassica tournefortii*	Ca Noxious Weed Cal-IPC rating: High *
Saltcedar	*Tamarix sp.*	Ca Noxious Weed Cal-IPC rating: High *
Russian thistle	*Salsola tragus*	Ca Noxious Weed Cal-IPC rating: Limited*

Source: Barrett Biological, 2020.

*High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Limited – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

General Fauna

A variety of wildlife species were observed within the GSPA or have the potential to occur (Table 5.3-2). No mammals were observed within the GSPA, but signs of mammals were observed and were assumed to be coyotes, rabbits and kangaroo rats. Bat roosting sites are not available within the GSPA.

Bird species diversity varies with seasons, variety and quality of vegetative communities and both quail and mourning dove were observed. Reptiles utilize habitat dependent upon their dietary requirements. The diets of some retile species includes vegetation, while others consume insects. All require vegetation for shelter. Sparse vegetation is available on site. Lizard tracks were observed. Reliable moisture is a requirement for a portion of amphibian life cycle and no amphibians were observed within the GSPA. Due to the lack of available water, none would be expected. Ants and grasshoppers were observed. There are no permanent water sources observed within the GSPA; therefore, no fish would be expected. Biological resources found are listed in Table 5.3-3 and are their locations are shown on Figure 5.3-1.

TABLE 5.3-2. ANIMALS/INVERTEBRATES OBSERVED WITHIN THE GSPA

Common Name	Scientific Name
Quail	*Callipepla gambelii*
Mourning dove	*Zenaida macroura*
Ants	*various*
Grasshoppers	*various*
Lizard tracks	*various*
Kangaroo rat tracks	*Various*
Canine tracks	*various*
Jackrabbit	*Lepus californicus*

Source: Barrett Biological, 2020.

TABLE 5.3-3. BIOLOGICAL RESOURCES OBSERVED WITHIN THE GSPA

Location	Description	Recommendations
1. 32º59’55.7”/115º4’14.4”	Small burrows with tracks	Observe prior to construction activities to see if active
2. 32º59’53.4”/115º4’10.4”	2 avian nests	Observe prior to construction activities to see if active
3. 32º59’53.5”/115º4’10.2”	1 avian nest	Observe prior to construction activities to see if active
4. 32º59’53.2”/115º4’10.5”	Small burrows with tracks	Observe prior to construction activities to see if active
5. 32º59’33.7”/115º4’6.4”	Small burrows with tracks	Observe prior to construction activities to see if active

Source: Barrett Biological, 2020.

Sensitive Biological Resources

Sensitive Natural Communities

No sensitive natural communities were observed within the GSPA. Wetland or riparian habitat communities are considered sensitive by CDFW, these are discussed in more detail below (Barrett Biological, 2020).

Special Status Plant Species

No special status plant species were observed within the GSPA or have the potential to occur (Barrett Biological, 2020).

Special Status Animal Species

No special status animal species were observed within the GSPA, however, there are several that have the potential to occur (Table 5.3-4) (Barrett Biological, 2020).

Nesting Birds and Raptors

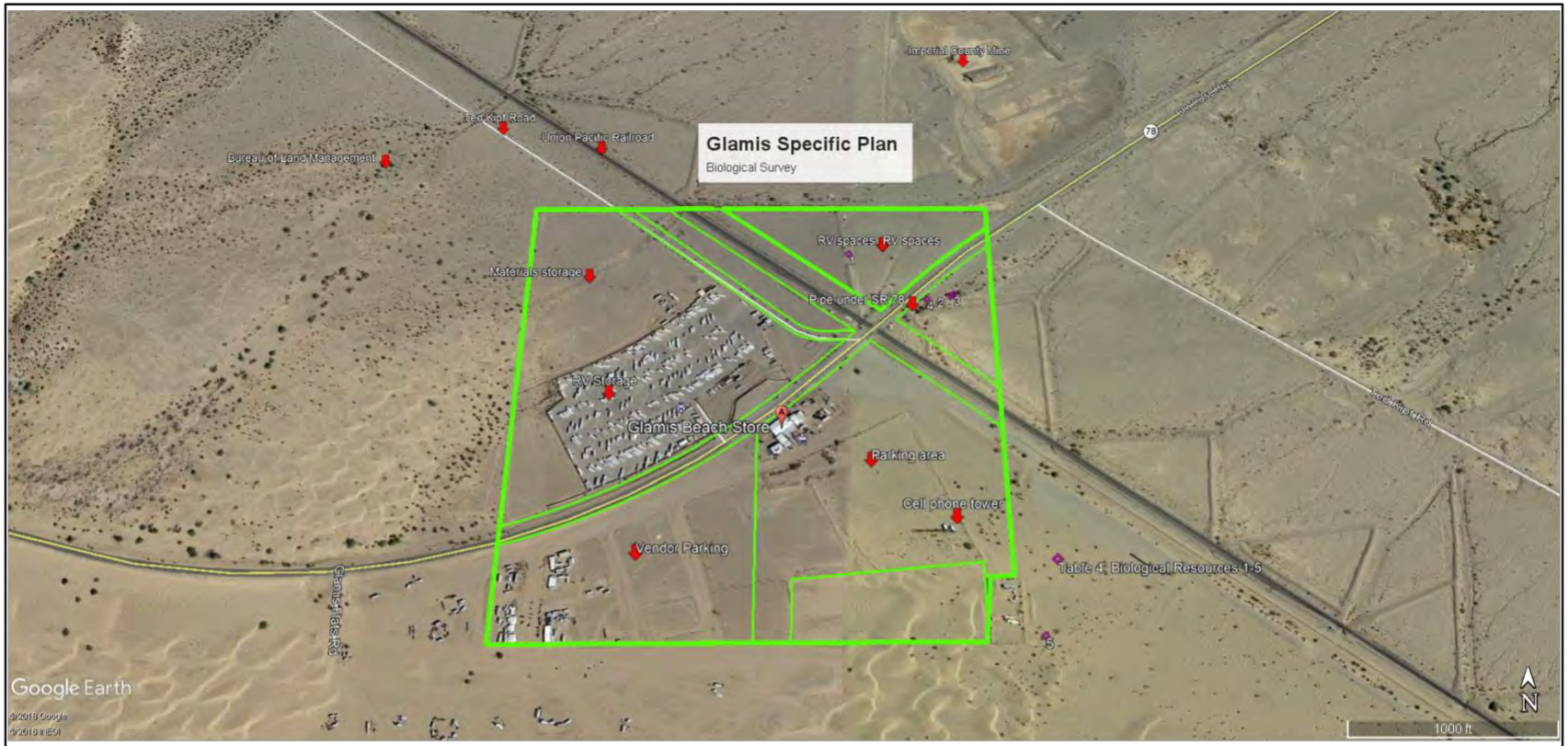
There are small trees on site that encourage bird nesting. Nests were observed in the palo verde (*Cercidium microphyllum*) and mesquite (*Prosopis sp*p) on site. Ground nesting species, such as lesser nighthawk, could use the area. No raptors were observed (Barrett Biological, 2020).

Jurisdictional Waters and Wetlands

Wetlands and other "waters of the United States" that are subject to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act are under the jurisdiction of the U.S. Army Corp of Engineers (USACE). There are no wetlands found on site. A stormwater channel runs through a small portion of the northeast which is channeled under the railroad track. On the southeast portion, a wash is piped under SR 78. Several established washes and ephemeral washes were observed within Planning Areas 1 and 3.

Wildlife Corridors

The ability for wildlife to freely move about an area and not become isolated is considered connectivity and is important to allow dispersal of a species to maintain exchange genetic characteristics; forage (food and water) and escape from predation (Barrett Biological, 2020).



Location	Description	Recommendations
1. 32°59'55.7"/115°4'14.4"	Small burrows with tracks	Observe prior to construction activities to see if active
2. 32°59'53.4"/115°4'10.4"	2 avian nests	Observe prior to construction activities to see if active
Location	Description	Recommendations
3. 32°59'53.5"/115°4'10.2"	1 avian nest	Observe prior to construction activities to see if active
4. 32°59'53.2"/115°4'10.5"	Small burrows with tracks	Observe prior to construction activities to see if active
5. 32°59'33.7"/115°4'6.4"	Small burrows with tracks	Observe prior to construction activities to see if active

SOURCE: Barrett's Biological Surveys, 2019.

Biological Resources Map
Glamis Specific Plan
Figure 5.3-1

TABLE 5.3-4. SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR WITHIN THE GSPA

Special-Status Species	Status		Found	Potential for Occurrence
	Federal	State		
Flat-tailed horned lizard (FTHL) *Phrynosoma mcallii*	None	Protected, SCS	No	Medium - Highly disturbed acreage. Loose soils occur on site. - Ants were observed onsite. - No FTHL, scat or tracks were identified in the general biological survey. This area is not within a FTHL Management Area. - Two occurrence records were found on the California Natural Diversity Database (CNDDB); one 3.8 miles (1969); the other 5.78 miles (2002) from Planning area.
Colorado fringe toed lizard *Uma notata*	Threatened	Endangered	No	Very Low - Primarily found in wind-blown sand areas. Highly degraded acreage with no windblown sand areas. Habitat is present to the west.
Burrowing owl *Athene cunicularia*	None	CDFW: Species of Special Concern	No	Very Low - Highly disturbed acreage with sparse available burrow opportunities; limited prey observed.
Gila Woodpecker *Melanerpes uropygialis*	None	CDFW: Endangered	No	Very Low - Highly disturbed acreage with sparse available nesting opportunities; no palm trees.
Le Conte's thrasher *Toxostoma lecontei*		CDFW: Species of Special Concern	No	Very Low - Highly disturbed acreage with sparse available nesting opportunities; medium offsite.
Loggerhead shrike *Lanius ludovicianus*		CDFW: Species of Special Concern	No	Very Low - Highly disturbed acreage with sparse available nesting opportunities. Lizards which are prey were seen so loggerhead shrikes could - use area; medium offsite.

Source: Barrett Biological, 2020.
SCS = Species of Concern

5.3.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA is enforced by U. S. Fish and Wildlife Service (USFWS). This act prohibits the killing of any migratory birds. Any activity which contributes to unnatural migratory bird mortality could be prosecuted under this act. With few exceptions, most birds are considered migratory under this act.

Federal Water Pollution Control Act (Clean Water Act)

The Clean Water Act (CWA) provides a structure for regulating discharges into the waters of the U.S. The U.S. Environmental Protection Agency (USEPA) is given the authority to implement pollution control programs. Section 404 of the CWA regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other U.S. waters. The USACE is the federal agency authorized to issue 404 Permits for certain activities conducted in wetlands or other U.S. waters. Section 401 of the CWA grants each state the right to ensure that the State's interests are protected on any federally permitted activity occurring in or adjacent to Waters of the State. In California, the Regional Water Quality Control Boards (RWQCB) are the agency mandated to ensure protection of the State's waters. For a Preferred Action that requires an USACE CWA 404 permit and has the potential to impact Waters of the State, the RWQCB will regulate the project and associated activities through a Water Quality Certification determination.

State

California Endangered Species Act

The California Endangered Species Act of 1984 (CESA) provides a framework for the listing and protection of wildlife species determined to be threatened or endangered in California.

California Fish and Game Code 3503.5

Raptors (birds of prey) and active raptor nests are protected by the California Fish and Game Code 3503.5. This code prohibits the "taking" of any birds of prey or their nests or eggs unless authorized.

California Fish and Game Code 3513

Protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame birds.

California Fish and Game Code, Section 1602

Section 1602 of the California Fish and Game Code, as amended, requires an entity to notify CDFW regarding any proposed activity within a stream or river channel. This includes activities which may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream or lake. CDFW may determine that the proposed activity will not substantially adversely affect an existing fish or wildlife resource. If not, the proposed activity may not be undertaken until the entity and CDFW enter into an agreement. The agreement would include reasonable measures necessary to protect the existing fish or wildlife resource.

Native Plant Protection Act

The Native Plant Protection Act (*California Fish and Game Code Section. 1900-1913)* (NPPA) prohibits the taking, possessing, or sale within the state of any plant listed by CDFG as rare, threatened, or endangered.

Local

County of Imperial General Plan

Relevant County of Imperial General Plan policies related to biological resources are provided below. Table 5.3-5 summarizes the project's consistency with the County's General Plan policies.

While this EIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 5.3-5 CONSISTENCY WITH THE GENERAL PLAN'S BIOLOGICAL AND NATURAL RESOURCE POLICIES

General Plan Policies	Consistency	Analysis
Conservation and Open Space Element (COSE)		
Goal 1: Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value. - **Objective 1.1**: Encourage uses and activities that are compatible with the	Yes	The proposed Specific Plan conserves environmental resources by avoiding, minimizing, and/or mitigating environmental impacts that may occur within the project site and will comply with the Mitigation Monitoring and Reporting Program (MMRP) included in this EIR.

TABLE 5.3-5 CONSISTENCY WITH THE GENERAL PLAN'S BIOLOGICAL AND NATURAL RESOURCE POLICIES

General Plan Policies	Consistency	Analysis
fragile desert environment and foster conservation. - **Objective 1.4**: Ensure the conservation and management of the County's natural and cultural resources.		
Goal 2: The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability. - **Objective 2.1:** Designate critical habitats for Federally and State-listed species. - **Objective 2.2**: Develop management programs, including preservation of habitat for flat-tailed horned lizard, desert pupfish, and burrowing owl. - **Objective 2.3:** Support investigation of long-term climate change effects on biological resources. - **Objective 2.4:** Use the CEQA and NEPA process to identify, conserve and restore sensitive vegetation and wildlife resources. - **Objective 2.6:** Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.	Yes	The proposed Specific Plan integrates programmatic strategies in order to promote the conservation of critical habitats to manage their integrity, function, productivity and long-term viability. The NADW is located northwest of the GSPA which prompts the development of the proposed Specific Plan to incorporate avoidance and minimization measures to mitigate potential impacts to onsite and/or adjacent natural resources to the greatest extent. Restricted access to OHV travel is enforced by the fencing installation on the north-western boundary of the GSPA. Additionally, interspersed signage will be located throughout the GSPA. By incorporating such measures, the proposed Specific Plan remains consistent with this goal.
Biological Resource Conservation Policy: Provide a framework for the conservation and enhancement of natural and created open space which provides wildlife habitat values. **Program:** Projects within or in the vicinity of a Resource Area should be designed to minimize adverse impacts on the biological resources it was created to protect. **Program:** Protect riparian habitat and other types of wetlands from loss or modification by dedicating open space easements with adequate buffer zones, and by other means to avoid impacts from adjacent land uses. Road crossings or other disturbances of riparian habitat should be minimized and only allowed when alternatives have been considered and determined infeasible.	Yes	The Project site would not have an effect on the NADW. There is not riparian habitat or wetlands on site. The project has been designed to minimize impacts on biological resources. Mitigation measures have been identified that will reduce to below a level of significant all biological resource impacts that could not be avoided.

TABLE 5.3-5 CONSISTENCY WITH THE GENERAL PLAN'S BIOLOGICAL AND NATURAL RESOURCE POLICIES

General Plan Policies	Consistency	Analysis
Open Space and Recreation Conservation Policy: The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County. **Program:** Allow only compatible land uses and consistent zoning adjacent to protected areas. **Program:** Notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat.	Yes	A Biological Resources Assessment Report was prepared for the project. The CDFW has provided input on the project.
Water Element		
Protection of Surface Waters Policy: Preservation of riparian and ruderal habitats as important biological filters, and as breeding and foraging habitats for native and migratory birds and animals.	Yes	There is no riparian habitat or wetlands on site.
Coordinated Water Management Policy: Encourage and provide inter-agency and inter-jurisdictional coordination and cooperation for the management and wise use of water resources for contact and noncontact recreation, groundwater recharge, hydroelectric energy production, and wildlife habitat as well as for domestic and irrigation use.	Yes	There is no riparian habitat or wetlands on site. A Water Supply Assessment has been prepared and is included as Appendix K of the EIR..
Renewable Energy and Transmission Element		
Goal 1 – Support the safe and orderly development of renewable energy while providing for the protection of environmental resources. - **Objective 1.1:** The County of Imperial supports the overall goals of the Desert Renewable Energy Conservation Plan to provide a balance between the development of renewable energy resources while preserving sensitive environmental resources within its jurisdiction. - **Objective 1.2:** Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources.	Yes	Any renewable energy/ solar project developed under the Specific Plan would contribute to the development of renewable energy resources.

TABLE 5.3-5 CONSISTENCY WITH THE GENERAL PLAN'S BIOLOGICAL AND NATURAL RESOURCE POLICIES

General Plan Policies	Consistency	Analysis
- **Objective 1.4:** Analyze potential impacts on agricultural, natural, and cultural resources, as appropriate. - **Objective 1.5**: Require appropriate mitigation and monitoring for environmental issues associated with developing renewable energy facilities. - **Objective 1.6:** Encourage the efficient use of water resources required in the operation of renewable energy generation facilities.		

Sources: County of Imperial General Plan 1997, 2015, 2016

5.3.3 Analysis of Project Effects and Significance Determination

Methodology

Direct impacts are considered to be those that involve the loss, modification or disturbance of natural habitats (i.e., vegetation or plant communities), which, in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case in species of no or low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals in these manners may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and, hence, population stability.

Indirect impacts are considered to be those that involve the effects of increases in ambient levels of sensory stimuli (e.g., noise, light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants, non-native animals). Indirect impacts may be associated with the construction and/or eventual habitation/operation of a project; therefore, these impacts may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites. Such impacts include increased pollutant discharges to receiving water bodies such as wetlands or marine environments, harassment by humans and/or their pets, light and glare, or increased ambient noise levels.

The determination of impacts in this analysis is based on both the features of the proposed Specific Plan and the biological values of the habitat and/or sensitivity of plant and wildlife species potentially affected. The Goals and Objectives of the proposed Specific Plan that avoid, preserve, or restore biological resources are taken into consideration and specifically described below prior to the assessment of potential adverse impacts.

Those direct and indirect impacts determined to be less than significant included impacts to biological resources that are relatively common or exist in a degraded or disturbed state, rendering them less valuable as habitat, or impacts that do not meet or exceed the significance thresholds defined below. Those impacts determined to be significant are those that do meet the thresholds of significance defined below. Conclusions are based on both the features of the proposed Specific Plan and the biological values of the habitat and/or sensitivity of plant and wildlife species to be affected. Specific considerations included the overall size of habitats to be affected, the GSPA's previous land uses and disturbance history, the GSPA's surrounding environment and regional context, the GSPA's biological diversity and abundance, the presence of special status plant and wildlife species, the GSPA's importance to regional populations of these species, and the degree to which habitats within the GSPA are limited or restricted in distribution on a regional basis and, therefore, are considered special-status in themselves.

Guidelines for Determination of Significance

Except as provided in Public Resources Code (PRC) Section 21099, the proposed Specific Plan would be considered to have a significant impact if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Analysis

Impact 5.3-1:	**Would the Project have a substantial effect on candidate, sensitive, or special status species identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS?**

Construction of projects approved under the proposed Specific Plan have the potential to adversely affect candidate, sensitive, or special status species including flat-tailed horned lizard (FTHL)

(Barrett Biological, 2020). FTHL could potentially occur within the softer sands (within and around the washes, and along the roadsides) in the creosote bush scrub on-site. There is an abundance of prey (ants) that could support FTHL presence. There is potential that there would be direct and/or indirect impacts to this species if construction occurs during the active period of mid-February to mid-November. Ground disturbance from heavy equipment, which may potentially impact the FTHL, would be considered significant. Overall, with implementation of mitigation measure (MM) BIO-1 discussed below, the proposed Specific Plan's minor direct impacts on sensitive habitat are not expected to result in significant effects on sensitive species.

Impact 5.3-2: Would the Project have a substantial adverse effect on riparian habitat or other sensitive natural community?

There is no riparian habitat or other sensitive natural community found with the GSPA, therefore, the construction of projects under the proposed Specific Plan would not have a substantial adverse effect on any riparian habitat or other sensitive natural community.

Impact 5.3-3: Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

A stormwater channel runs through a small northeast portion of Planning Area 3 which is channeled under the railroad track. On the southeast portion of Planning Area 1, a wash is piped under SR-78. Several established washes and ephemeral washes were observed on site and there would be significant impacts if construction occurs where they are located. It is recommended that the ACOE and CDFW be consulted to determine permitting requirements (Barrett Biological, 2020). There are no wetlands found within the GSPA; therefore, this project will have no impact on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Mitigation measure MM BIO-2 will mitigate permanent impacts to established washes and ephemeral washes within Planning Area 3 and Planning Area 1.

Impact 5.3-4: Substantially interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The proposed Specific Plan is in a predominately developed and fenced community. The GSPA is bisected on by SR-78, Ted Kipf Road and Union Pacific railroad and as a result of these existing barriers, the projects will not interfere substantially with the currently restricted movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Thus, the impact would be less than significant. MM BIO-3 will mitigate impacts to nesting birds within Planning Area.

Impact 5.3-5: Conflict with local policies or ordinances protecting biological resources?

The Imperial County General Plan Open Space and Conservation Element (Imperial County, 2016) contains an Open Space Conservation Policy that requires detailed investigations to be conducted to determine the significance, location, extent, and condition of natural resources in the County, and to notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat. As noted above, implementation of the proposed Specific Plan has the potential to result in significant impacts to candidate, sensitive, or special status species, and washes and ephemeral streams. Such impacts could conflict with Open Space and Conservation Element and are considered potentially significant. Implementation of MM-BIO-1 and BIO-2 would reduce these impacts to below a level of significance.

5.3.4 Mitigation Measures

The following Mitigation Measures would reduce impacts to below a level of significance.

MM BIO-1: Mitigation of Impacts to flat-tailed horned lizards and their habitat

Prior to construction of each Specific Plan activity, a Capture/Relocation Plan for flat-tailed horned lizard shall be prepared by a qualified biologist. The plan shall include preconstruction survey and monitoring methods, capture and relocation methods, and suitable relocation areas. The Capture/Relocation Plan may include additional protection measures during construction including:

- Creating areas of land or small paths/culverts between project facilities for wildlife movement,
- Installing silt fencing around work areas to prevent migration of adjacent wildlife into impact areas,
- Installing pitfall traps in spring/summer/fall to trap any individuals that remain on the site for removal from work areas), and/or
- biological monitoring during construction to inspect fencing and pitfall traps and relocate wildlife species out of harm's way, if required.

The Capture/Relocation Plan shall be submitted to an approved by CDFW and the County of Imperial (or an agency delegated to oversee this program).

Timing/Implementation: *Prior to the commence of construction for each Specific Plan activity.*

Enforcement/Monitoring: *Imperial County Planning and Development Services*

MM BIO-2: Mitigation of Impacts to Jurisdictional Waters

- A jurisdictional delineation survey shall be performed to determine potential jurisdictional resources under Section 404/401 of the CWA Section 1600-1616 of the California Fish and Game Code, and the Porter-Cologne Water Quality Control Act for any activities that may substantially divert or obstruct the natural flow of or deposit debris, waste or other materials into any river, stream or lake.

- Current USACE delineation procedures and guidance consistent with "A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States" (Lichvar and McColley, 2008) should be used to identify and delineate any wetlands or waters of the U.S. (WoUS) or both that may be subject to USACE and RWQCB jurisdiction (Lichvar et al. 2016; USACE 1987, 2008). Likewise, current CDFW procedures and guidance shall be used to identify and delineate any streambeds, rivers, or associated riparian habitat potentially subject to CDFW jurisdiction (California Fish and Game Code, 2019).

- Temporary and permanent impacts to all jurisdictional resources shall be compensated through a combination of habitat creation (i.e., establishment), enhancement, preservation, and/or and restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Any creation, enhancement, preservation, and/or restoration effort shall be implemented pursuant to a Habitat Restoration Plan (HRP), which shall include success criteria and monitoring specifications, and shall be approved by the permitting agencies and County of Imperial. A habitat restoration specialist will be designated and approved by the permitting agencies and will determine the most appropriate method of restoration.

- Temporarily impacted drainage features shall be recontoured to preconstruction conditions. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the permitting agencies (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the appropriate agency, the temporary impact shall be considered a permanent impact and compensated accordingly.

- A biological monitor shall be present prior to initiation of ground disturbing activities to demark limit of disturbance boundaries. Flagging and/or staking

will be used to clearly define the work area boundaries and avoid impacts to adjacent drainage features.

- Erosion protection and sediment control best management practices (BMPs) shall be implemented in compliance with the General Construction General Permit and the Stormwater Pollution Prevention Plan (SWPPP).
- Graded areas would be stabilized to promote infiltration and reduce run-off potential.
- Any excess soil would be spread on site outside of jurisdictional drainages.

Timing/Implementation:	*Prior to building permit issuance for all construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services*

MM BIO-3: Nesting Bird Surveys

If activities associated with vegetation removal, construction, or grading are planned during the bird nesting/breeding season (generally February 1 through August 31; January 1 for raptors), a qualified biologist shall conduct pre-construction surveys for active nests in all suitable areas, including trees, shrubs, bare ground, burrows, cavities, and structures, at the appropriate time of day/night, and during appropriate weather conditions. Pre-construction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior (e.g., copulation, carrying of food or nest materials, nest building, flushing suddenly from atypically close range, agitation, aggressive interactions, or other behaviors). Preconstruction nesting bird surveys should be conducted weekly beginning 14 days prior to initiation of ground-disturbing activities, with the last survey conducted no more than three (3) days prior to the start of clearance/construction work. If ground-disturbing activities are delayed, additional preconstruction surveys should be conducted so that no more than 3 days have elapsed between the survey and ground-disturbing activities.

If active nests are identified, the biologist shall establish suitable buffers around the nest and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. The buffer should generally be a minimum of 300 feet for reports and 100 feet for songbirds, unless a smaller buffer is specifically determined by a qualified biologist familiar with the nesting phenology of the nesting species.

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *CDFW*

Level of Significance After Mitigation

Upon implementation of the above mitigation measures all significant impacts would be reduced to a level of less than significant.

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5.4 CULTURAL RESOURCES

This section addresses potential direct and indirect environmental impacts to cultural resources that would result from implementation of the proposed Specific Plan. The following discussion addresses the existing conditions in the vicinity of the Glamis Specific Plan Area (GSPA), identifies applicable regulations, analyzes direct and indirect environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Specific Plan, as applicable. Please see Section 5.16 for a discussion of project-related impacts to Tribal Cultural Resources.

The analysis in this section is based on the *Class III Cultural Resources Inventory Report* prepared by ASM Affiliates (ASM Affiliates, 2019). The Class III Cultural Resources Inventory Report included as Appendix F-1.

Cultural resources encompass archaeological, traditional, and built environmental resources, including buildings, structures, objects, districts, and sites. For purposes of the analysis of cultural resources under the California Environmental Quality Act (CEQA), the area of direct impacts to cultural resources is identified herein as the "Area of Potential Effect (APE)."

A total of approximately 141 acres was subject to 100 percent intensive Class III survey. Prior to the survey, a cultural resources records search was completed at the South Coastal Information Center (SCIC) of the Project APE. In all, seven cultural resources were identified within the Project APE. Three of these were discovered during the survey while the remaining four were previously recorded. A single isolated prehistoric artifact was identified within a disturbed context, while historic cultural resources include refuse deposits, roads, a railroad, and a cemetery.

Scoping Issues Addressed

During the scoping period for the Project, a scoping meeting was conducted, and written comments were received from regulatory agencies. The following issue related to Cultural Resources and were raised by the Native American Heritage Commission (NAHC) and are addressed in this section:

- Assembly Bill (AB) 52 applies to any project for which a Notice of Preparation (NOP), a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.
- NAHC recommends that lead agencies consult with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the Project.
- Both Senate Bill (SB) 18 and AB 52 have tribal consultation requirements.
- NAHC provided recommendations for Cultural Resource Assessments.

5.4.1. Environmental Setting

Ethnography and Archaeology

The GSPA was utilized prehistorically by a variety of Native American groups, including the Desert Cahuilla, the Quechan, the Halchidhoma, and the Kamia. These groups are discussed in more detail in the Class III Cultural Resources Technical Report (ASM Affiliates, 2019) which is included as Appendix F-1.

Cultural Periods and Patterns

Six successive periods, each with distinctive cultural patterns, may be defined for the Colorado Desert, extending back in time over a period of more than 12,000 years. They include: (1) Early Man (Malpais); (2) Paleoindian (San Dieguito); (3) Archaic (Pinto and Amargosa); (4) Late Prehistoric (Patayan); (5) Ethnohistoric Native American occupation; and (6) Historic Euro-American occupation. These periods are discussed in more detail in the Class III Cultural Resources Technical Report (ASM Affiliates, 2019) which is included as Appendix F-1.

5.4.2. Regulatory Setting

Cultural resources may be subject to federal, state, and local laws, policies, and regulations that are developed to ensure that adequate consideration is given to mitigating impacts to historical resources. The Project is subject to the following regulations, plans, goals, and policies.

Federal

National Historic Preservation Act

Federal regulations (36 Code of Federal Regulations [CFR] Part 800.2) define historic properties as "any prehistoric or historic district, site, building, structure, or object included, or eligible for inclusion in, in the National Register of Historic Places." Section 106 of the National Historic Preservation Act (NHPA) (Public Law 89-665; 80 Stat 915; U.S. Code [USC] 470, as amended) requires a federal agency with jurisdiction over a project to take into account the effect of the project on properties included in or eligible for listing on the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The term "cultural resource" is used to denote a historic or prehistoric district, site, building, structure, or object, regardless of whether it is eligible for the NRHP.

Native American Graves Protection and Repatriation Act (1990); Title 25, United States Code Section 3001, et seq.

The statute defines “cultural items,” “sacred objects,” and “objects of cultural patrimony;” establishes an ownership hierarchy; provides for review; allows excavation of human remains but

stipulates return of the remains according to ownership; sets penalties; calls for inventories; and provides for the return of specified cultural items.

State

California Register of Historic Places

Under the provisions of CEQA, including the CEQA Statutes (Public Resources Code [PRC] §§ 21083.2 and 21084.1), the CEQA Guidelines (Title 14 California Code of Regulations [CCR], § 15064.5), and PRC § 5024.1 (Title 14 CCR § 4850 et seq.), properties expected to be directly or indirectly affected by a proposed project must be evaluated for CRHR eligibility (PRC § 5024.1).

The purpose of the California Register of Historical Resources (CRHR) is to maintain listings of the state's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from material impairment and substantial adverse change. The term historical resources include a resource listed in or determined to be eligible for listing in the CRHR; a resource included in a local register of historical resources; and any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (CCR § 15064.5[a]). The criteria for listing properties in the CRHR were expressly developed in accordance with previously established criteria developed for listing in the NRHP. The California Office of Historic Preservation regards "any physical evidence of human activities over 45 years old" as meriting recordation and evaluation.

A cultural resource is considered "historically significant" under CEQA if the resource meets one or more of the criteria for listing on the CRHR. The CRHR was designed to be used by state and local agencies, private groups, and citizens to identify existing cultural resources within the state and to indicate which of those resources should be protected, to the extent prudent and feasible, from substantial adverse change. The following criteria have been established for the CRHR. A resource is considered significant if it:

Criterion 1: is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

Criterion 2: is associated with the lives of persons important in our past;

Criterion 3: embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

Criterion 4: has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, historical resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be able to convey the reasons for their significance. Such integrity is evaluated in regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

Under CEQA, if an archeological site is not a historical resource but meets the definition of a "unique archeological resource" as defined in PRC § 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined as follows:

> An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Resources that neither meet any of these criteria for listing in the CRHR nor qualify as a "unique archaeological resource" under CEQA PRC § 21083.2 are viewed as not significant. Under CEQA, "A nonunique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects" (PRC § 21083.2[h]).

Impacts that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. Impacts to historical resources from a proposed project are thus considered significant if the project (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature within the setting of the resource, which contributes to its significance; or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

Assembly Bill 52

California Assembly Bill 52 of 2014 (AB 52) was enacted on July 1, 2015, and expands CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources:

1. "Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe" and meets either of the following criteria: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or

2. A cultural resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe."

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires that lead agencies "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the formal consultation process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

Senate Bill 18

Senate Bill 18 (SB 18) of 2004 (California Government Code §65352.3) requires local governments to contact, refer plans to and consult with tribal organizations prior to making a decision to adopt or amend a general or specific plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction and are identified, upon request, by the NAHC. As noted in the California Office of Planning and Research's Tribal Consultation Guidelines (2005), "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

Native American Historic Resource Protection Act

PRC Sections 5097 et seq. codify the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal public lands. Section 5097.9 states that no public agency or private party on public property shall "interfere with the free expression or exercise of Native American Religion." The code further states that:

"No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine… except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, expect for parklands larger than 100 acres."

California Health and Safety Code

California Health and Safety Code, Section 7050.5 requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines

that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

Local

Imperial County General Plan

The County of Imperial General Plan (General Plan) provides goals, objectives, and policies for the identification and protection of significant cultural resources (Table 5.4-1). Specifically, the Conservation and Open Space Element of the General Plan calls for the protection of cultural resources and scientific sites and contains requirements for cultural resources that involve the identification and documentation of significant historic and prehistoric resources and the preservation of representative and worthy examples. The Conservation and Open Space Element also recognizes the value of historic and prehistoric resources and the need to assess current and proposed land uses for impacts upon these resources.

TABLE 5.4-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN TRIBAL CULTURAL RESOURCES GOALS AND POLICIES

General Plan Policies	Consistency	Analysis
Conservation and Open Space Element		
Conservation of Environmental Resources for Future Generations, Goal 1: - Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value	Yes, with mitigation	The proposed Specific Plan conserves environmental resources by avoiding, minimizing, and/or mitigating environmental impacts that may occur within the planning area and will comply with the Mitigation Monitoring and Reporting Program (MMRP) included in the Final EIR prepared for the proposed Specific Plan.
Conservation of Environmental Resources for Future Generations, Goal 1: - Objective 1.4: Ensure the conservation and management of the County's natural and cultural resources.	Yes, with mitigation	The proposed Specific Plan conserves environmental resources by avoiding, minimizing, and/or mitigating environmental impacts that may occur within the Project site and will comply with the MMRP included in the Final EIR prepared for the proposed Specific Plan.
Preservation of Cultural Resources, Goal 3: **Objective 3.1:** Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance. **Objective 3.3:** Engage all local Native American Tribes in the protection of tribal cultural resources, including prehistoric trails and burial sites.	Yes, with mitigation	The proposed Specific Plan preserves the spiritual and cultural heritage of the diverse communities of Imperial County by preserving the Glamis Beach Store, existing historical cemetery and avoiding impacts to the Union Pacific Railroad (UPRR). The proposed Specific Plan preserves such resources by avoiding, minimizing, and/or mitigating impacts to such resources and will comply with the MMRP

TABLE 5.4-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN TRIBAL CULTURAL RESOURCES GOALS AND POLICIES

General Plan Policies	Consistency	Analysis
		included in the Final EIR for the proposed Specific Plan.
Cultural Resources Conservation Policy: - Identify and document significant historic and prehistoric resources, and provide for the preservation of representative and worthy examples; and recognize the value of historic and prehistoric resources, and assess current and proposed land uses for impacts upon these resources.	Yes, with mitigation	A Cultural Resources Assessment has been conducted for the proposed Specific Plan.
Cultural Resources Conservation Program: - The County will use the CEQA process to conserve cultural resources and conform to Senate Bill 18 "Consultation with Tribal Governments" and Assembly Bill 52 "Consultation with Tribal Governments". Public awareness of cultural heritage will be stressed. All information and artifacts recovered in this process will be stored in an appropriate institution and made available for public exhibit and scientific review.	Yes, with mitigation	Cultural resources investigations have been conducted for the proposed Specific Plan. The County's compliance with the requirements of SB 18 and AB 52 are documents in Section 5.11, Tribal Cultural Resources.
Renewable Energy and Transmission Element		
Goal 1 – Support the safe and orderly development of renewable energy while providing for the protection of environmental resources. - Objective 1.2: Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources. - Objective 1.4: Analyze potential impacts on agricultural, natural, and cultural resources, as appropriate.	Yes	The effects of development of energy or wind energy projects would be analyzed in this Draft EIR.

Source: County of Imperial, 2015, 2016.

Study Methods and Findings

Records Search

A records-search and literature review was conducted in June 2019 at the SCIC at San Diego State University, which covered 100 percent of the current GSPA APE. The records search covered a 0.5-mile buffer around the GSPA APE. The records search identified five previously recorded cultural resources within the 0.5-mile buffer, and four previously recorded cultural resources within the GSPA APE.

Pedestrian Field Survey

For the current Class III intensive inventory, standard transect spacing was 5 meters, although spacing was reduced significantly within identified archaeological sites to adequately define the site character. The systematic 5-meter transects were interrupted to do judgmental inspections of locations such as potential artifact scatters within the APE. The survey transects generally began at the outer edge of the APE and followed its orientation, working inward, to maintain survey efficiency.

Within areas with a low potential for cultural resources due to development or other disturbances, were addressed by a mixed strategy survey. This focused more on areas of less ground disturbance and closer inspection of historic to modern features. Areas covered by standard systematic 20-meter transects and those covered using a mixed strategy were distinguished on project maps. The interiors of fenced, private businesses were not surveyed.

One new prehistoric resource was recorded and three previously recorded resources within the APE were updated, confirming or correcting information on their locations, spatial extent, general characteristics, and likely eligibility status.

Summary of Findings

Seven cultural resources were identified within the GSPA APE (Table 5.4-2 below). Three of these were discovered during the pedestrian field survey while the remaining four were previously recorded. A single isolated prehistoric artifact was identified, which consisted of a single pied of red-brown chert[1], while historic cultural resources included refuse deposits, roads, a railroad, and a cemetery. All resources were assessed for their potential for CRHR listing based on surface inventory data. ASM assessed two cultural resources as potentially eligible for listing on the CRHR, the historic-era Glamis Cemetery and Union Pacific Railroad (UPRR).

The Union Pacific Railroad (IMP-3424) had previously been recommended as eligible for the National Register of Historic Places (NRHP) listing under Criterion A. The Glamis Cemetery (IMP-

[1] A fine-grained sedimentary rock composed of quartz.

4621) is recommended here as eligible for CRHR listing under Criterion 1. All other sites were assessed as likely ineligible because they could not be associated with significant events or persons. Likewise, they do not embody distinctive characteristics of a period, type of engineering, method of construction, or represent the work of a master. These remaining sites lack research potential to yield further information about the region's history or prehistory.

TABLE 5.4-2. CULTURAL RESOURCES IDENTIFIED IN THE CLASS III INVENTORY

Site	Survey	New or Existing	Age	Site Type	Potential Eligibility
Class 3 Eligible Sites					
IMP-3424	Class 3	Record Search	Historic	Railroad	Recommended Eligible
IMP-4621	Class 3	Record Search	Historic	Cemetery	Recommended Eligible
Class 3 Ineligible Sites and Sites with Uncertain Eligibility					
IMP-8214	Class 3	Record Search	Historic	Refuse Scatter	Likely Ineligible
IMP-8634	Class 3	Record Search	Historic	Railroad Depot	Likely Ineligible
GSP-KM-S-1	Class 3	New	Historic	Road	Likely Ineligible
GSP-KM-S-2	Class 3	New	Historic	Highway	Likely Ineligible
GSP-TRT-1-1	Class 3	New	Prehistoric	Artifact Isolate	Likely Ineligible

Source: ASM Affiliates, 2019.

5.4.3. Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

This section presents the significance criteria used for considering project impacts related to cultural resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

A project would be considered to have a significant impact if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines § 15064.5?
3. Disturb any human remains, including those interred outside of formal cemeteries?

Impact 5.4-1: Would the Project result in a change in the significance of an historical resource?

To be considered historically significant, a resource must meet one of four criteria for listing outlined in the CRHR (CEQA Guidelines 15064.3 (a)(3)). In addition to meeting one of the criteria outlined the CRHR, a resource must retain enough intact and undisturbed deposits to make a meaningful data contribution to regional research issues (CCR Title 14, Chapter 1.5 Section 4852 [c]). Further, based

on CEQA Guidelines Section 15064.5 (b), substantial adverse change would include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired. This can occur when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR, NRHP, a local register, or historic resources.
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its identification in an historical resources survey meeting the requirements of PRC §5024.1(g), unless the public agency establishes by a preponderance of the evidence that the resource is not historically or culturally significant.

Ground disturbing activities during construction of the proposed Specific Plan facilities and improvements have the potential to cause substantial adverse changes to resources that escaped detection on the survey and/or buried prehistoric and historic resources due to the moderately high potential of the GSPA. If such resources are encountered during construction and those resources meet the eligibility criteria of the CRHR, the impact would cause a substantial adverse change in the significance of a historical or archaeological resource. This would be a potentially significant impact to cultural resources. With implementation of Mitigation Measures (MMs) CR-1, CR-2 and CR-3 impacts would be less than significant.

The UPRR (IMP-3424) had previously been recommended as eligible for the NRHP listing under Criterion A. The Glamis Cemetery (IMP-4621) is recommended here as eligible for CRHR listing under Criterion 1. The proposed Specific Plan does not include any ground disturbing activities near either of these sites, and both would be avoided by the proposed Specific Plan. A 10-meter buffer from the current site boundaries shall be established and an archaeological monitor shall be present during all preparation and construction activities that may take place near or within that buffer.

Impact 5.4-2: Would the Project disturb archaeological resources and remains?

Pursuant to CEQA Guidelines §15064.5(c)(1) and (2), an archaeological resource includes an archaeological site that qualifies as a significant historical resource as described for Impact 5.4-1. If an archaeological site does not meet any of the criteria outlined in the provisions under Impact 5.4-1, but meets the definition of a "unique archaeological resource" in PRC 21083.2, the site shall be treated in accordance with the provisions of PRC 21083.2, unless the project applicant and public agency elect to comply with all other applicable provisions of CEQA with regards to archaeological resources. "Unique archaeological resource" means an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions that there is a demonstrable public interest in that information.

- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important historic event or person.

CEQA Guidelines 15064.5(c)(4) confirms that if an archaeological resource is neither a unique archaeological nor an historic resource, the effects of the project on those resources shall not be considered a significant effect on the environment.

The proposed Specific Plan has the potential to affect a previously recorded resource (CA-IMP-6146 and CA-IMP-6145). The proposed Specific Plan does not include any ground disturbing activities near either of these sites and both sites will be avoided by the Project during construction. The UPRR (IMP-3424) had previously been recommended as eligible for the NRHP listing under Criterion A. The Glamis Cemetery (IMP-4621) is recommended here as eligible for CRHR listing under Criterion 1. The Project does not include any ground disturbing activities near either of these sites, and both will be avoided by the proposed Specific Plan. A 10-meter buffer from the current site boundaries will be established and an archaeological monitor be present during all preparation and construction activities that may take place near or within that buffer.

Ground disturbing activities associated with the proposed Specific Plan during construction would have the potential to cause substantial adverse changes to resources that escaped detection on the survey and/or buried prehistoric and historic resources due to the moderately high potential of the GSPA. If such resources are encountered during construction and those resources meet the eligibility criteria of the CRHR, the impact would cause a substantial adverse change in the significance of a historical or archaeological resource. This would be a potentially significant impact to cultural resources. With implementation of MMs CR-1, CR-2 and CR-3 impacts would be less than significant.

Impact 5.3-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?

Site Preparation and Construction

During the construction and phases of the proposed Specific Plan, grading, excavation and trenching will be required. While no potential human remains have been identified in the project area, subsurface activities always have some potential to impact previously unknown remains. This potential impact is considered a significant impact. MM CR-4 will ensure that the potential impacts to previously unknown human remains do not rise to the level of significance pursuant to CEQA. Implementation of MM CR-4 will reduce the potential impact associated with inadvertent discovery of human remains to a level less than significant.

5.4.4. Mitigation Measures

The following MMs would reduce impacts to below a level of significance.

MM CR-1: Cultural Resources Construction Monitor

A cultural resources monitor shall be present during all excavation or other earth-moving activities within the Project site. The applicant shall immediately notify the Imperial County Planning and Development Services Department if any undocumented and/or buried prehistoric or historic resource is uncovered. All construction must stop in the vicinity of the find until the find can be evaluated for its eligibility for listing in the CRHR. The cultural resources monitor shall have the authority to halt construction activity in the immediate vicinity of the encountered historic resource for a sufficient interval of time to allow avoidance or recovery of the encountered historic resources and shall also have the authority to redirect construction equipment in the event that any cultural resource is inadvertently encountered. All cultural resources are assumed to be eligible for the CRHR until determined otherwise by the monitor. Work will not resume in the area of the discovery until authorized by the monitor.

Timing/Implementation:	*During construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services*

MM CR-2: Establishment of Environmentally Sensitive Areas

A qualified archaeologist, as approved by the County, will prepare an archaeological testing and evaluation plan prior to conducting any field work. If an archaeological site is determined significant under CEQA, avoidance is recommended by establishing Environmentally Sensitive Areas (ESAs). ESAs will encompass the site boundary plus a 200-foot buffer around the site. ESAs should be staked and/or flagged in a conspicuous manner. Spot checking by a qualified archaeologist should be completed throughout construction to ensure ESAs are not entered. If it is necessary for the Project to encroach on any ESA, full time monitoring by a qualified archaeologist, who is approved by the County, will be required to ensure there are no impacts to the archaeological site. If avoidance is not an option, then a data recovery program should be undertaken.

Timing/Implementation:	*Prior to building permit issuance for all construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services*

MM CR-3: Data Recovery Program

The proposed Specific Plan was designed to avoid and preserve archaeological resources in place where possible. Where avoidance and preservation are not possible, data recovery through excavation is the most feasible mitigation. Prior to excavation, a data recovery plan must be prepared that makes provision for adequately recovering the scientifically consequential information from and about the historical resource. Data recovery includes the documentation, recordation, and removal of the archeological deposit from a project site in a manner consistent with professional (and regulatory) standards; and the subsequent inventorying, cataloguing, analysis, identification, dating, interpretation of the artifacts and "ecofacts" & the production of a report of findings.

Timing/Implementation:	*Prior to building permit issuance for all construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services*

MM CR-4: Unanticipated Discovery – Human Remains

In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery will be halted or diverted and the Imperial County Coroner will be notified (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner will notify the NAHC, which will designate a most likely descendant (MLD) for the project (Section 5097.98 of the PRC). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641).

Timing/Implementation:	*During construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services*

Level of Significance After Mitigation

The Project will have less than significant impacts after implementation of MMs CR-1 through CR-4 because these measures require the performance of professionally accepted and legal compliant procedures for the monitoring, discovery, data recovery, and treatment of previously undocumented significant archaeological resources and human remains.

5.5 ENERGY

This section describes the existing energy systems in the vicinity of the Glamis Specific Plan Area (GSPA) and identifies the potential physical environmental impacts that would result from the inefficient, wasteful, and unnecessary consumption of energy from the proposed Project.

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments related to energy systems were received.

Issues Scoped Out

The Imperial County Planning and Development Services Department determined in the Initial Study/Notice of Preparation (IS/NOP), located in Appendix A-1, that the following environmental issue areas resulted in no impact and was scoped out of requiring further review in this Draft EIR. Please refer to Appendix A-1 of this Draft EIR for a copy of the NOP/IS and additional information regarding this issue.

- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? Implementation of the proposed Specific Plan would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and no impacts would occur under this criteria.

5.5.1 Environmental Setting

The Imperial Valley area is located within the south-central part of Imperial County and is bound by Mexico on the south, the Algodones Sand Hills on the east, the Salton Sea on the north and San Diego County on the northwest, and the alluvial fans bordering the Coyote Mountains and the Yuha Desert to the southwest. The Imperial Irrigation District (IID) supplies water and power to most users in the Imperial Valley although they do not provide water to the GSPA. Operations are divided between a water division responsible for distribution and collection of water, and a power division responsible for generation and distribution of electrical power. Natural gas service in the area is provided by the Southern California Gas Company.

Regulatory Setting

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the U.S. Environmental Protection Agency's [USEPA] EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Code of Regulations (CCR) sets forth energy standards for buildings. Further, the State provides rebates/tax credits for installation of renewable energy systems and offers the Flex Your Power program promotes conservation in multiple areas. At the local level,

individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and to the use of renewable energy sources.

Federal

Energy Policy and Conservation Act, and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the country. The USEPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the USEPA city and highway fuel economy test results. Based on information generated under the CAFE program, the DOT is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in EPAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change.

The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

State

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The Act established state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Public Utilities Commission (CPUC) regulates privately-owned utilities in the energy, rail, telecommunications, and water fields.

State of California Energy Action Plan

CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 California Energy Action Plan (2008 update). The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), CEC and the California Air Resources Board (CARB) prepared and adopted a joint agency report in 2003, Reducing California's Petroleum Dependence. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003). Further, in response to the CEC's 2003 and 2005 Integrated Energy Policy Reports, Governor Davis directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required CEC to: "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (Public Resources Code Section 25301(a)). This work culminated in the Integrated Energy Policy Report (IEPR).

CEC adopts an IEPR every two years and an update every other year. The 2017 IEPR is the most recent IEPR, which was adopted March 16, 2018. The 2017 IEPR provides a summary of priority energy issues currently facing the State, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the State's energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; and issues facing California's nuclear power plants.

Senate Bill 1078: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002) establishes a renewable portfolio standard (RPS) for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. This target date was moved forward by SB 1078 to require compliance by 2010. In addition, electricity providers subject to the RPS must increase their renewable share by at least 1 percent each year. The outcome of this legislation will impact regional transportation powered by electricity. As of 2016, the State has reported that 21 percent of electricity is sourced from certified renewable sources (see Section 5.6.2, "Environmental Setting").

Senate Bill X1-2: California Renewable Energy Resources Act

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the

renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014-2016 compliance period, and at least 75 percent for 2016 and beyond.

Senate Bill 100: California Renewables Portfolio Standard Program

SB 100 requires that all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, supply 44 percent of retail sales from renewable resources by December 31, 2024, 50 percent by December 31, 2026, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. The law requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Energy Action Plan

The first Energy Action Plan (EAP) emerged in 2003 from a crisis atmosphere in California's energy markets. The State's three major energy policy agencies (CEC, CPUC, and the Consumer Power and Conservation Financing Authority [established under deregulation and now defunct]) came together to develop one high-level, coherent approach to meeting California's electricity and natural gas needs. It was the first time that energy policy agencies formally collaborated to define a common vision and set of strategies to address California's future energy needs and emphasize the importance of the impacts of energy policy on the California environment.

In the October 2005 Energy Action Plan II, CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues and research and development activities. CEC recently adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statues of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan (SAF Plan) in

partnership with CARB and in consultation with other State, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce greenhouse gas (GHG) emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

California Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. In 2016, CEC updated the California Energy Code again, effective January 1, 2017. CEC estimates that the 2016 California Energy Code is 28 percent more efficient than 2013 California Energy Code for residential construction and is 5 percent more efficient for non-residential construction.

The 2019 California Energy Code was adopted by CEC on May 9, 2018 and will apply to projects constructed after January 1, 2020. The 2019 California Energy Code is designed to move the State closer to its zero-net energy goals for new residential development. It does so by requiring all new residences to install enough renewable energy to offset all the electricity needs of each residential unit (CCR, Title 24, Part 6, Section 150.1(c)4). CEC estimates that the combination of mandatory on-site renewable energy and prescriptively required energy efficiency standards will result in a 53 percent reduction in new residential construction as compared to the 2016 California Energy Code. Non-residential buildings are anticipated to reduce energy consumption by 30 percent as compared to the 2016 California Energy Code primarily through prescriptive requirements for high-efficiency lighting (CEC 2018). The Energy Code is enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in the California Energy Code.

Assembly Bill 32, Senate Bill 32, and Climate Change Scoping Plan and Update

In December 2008, CARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) of carbon dioxide-equivalent (CO_2e) emissions, or approximately 21.7 percent from the State's projected 2020 emission level of 545 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 47 MMT CO_2e, or almost 10 percent, from 2008 emissions). In May 2014, CARB

released and has since adopted the First Update to the Climate Change Scoping Plan to identify the next steps in reaching AB 32 goals and evaluate progress that has been made between 2000 and 2012 (CARB 2014). According to the update, California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 (CARB 2014). The update also reports the trends in GHG emissions from various emissions sectors (e.g., transportation, building energy, agriculture).

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by Executive Order (EO) B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050. Achievement of these goals will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017:1, 3, 5, 20, 25–26). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). In 2015, electricity generation accounted for 11 percent of the State's GHG emissions. California plans to significantly reduce GHG emissions from the energy through the development of renewable electricity generation in the form of solar, wind, geothermal, hydraulic, and biomass generation. The State is on target meet the SB X1-2-33 percent renewable energy target by 2020 and will continue to increase statewide renewable energy to 50 percent by 2030, as directed by SB 350. Additionally, the State will further its climate goals through improving the energy efficiency of residential and non-residential buildings by continual updates (i.e., every 3 years) to the California Energy Code, which contains mandatory and prescriptive energy efficiency standards for all new construction.

More details about the statewide GHG reduction goals and 2017 Scoping Plan measures are provided in the regulatory setting of Section 5.7, "Greenhouse Gas Emissions and Climate Change."

Senate Bill 375

SB 375, signed by the Governor in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or Alternative Planning Strategy, showing prescribed land use allocation in each MPO's Regional Transportation Plan. CARB, in consultation with the MPOs, is to provide each affected region with

reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035. Implementation of SB 375 will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

The Southern California Association of Governments (SCAG) serves as the MPO for Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties. The Project site is located within Imperial County. SCAG adopted its 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy in 2020. The final recommended reduction targets established for SCAG are to achieve an 8 percent per-capita reduction compared to 2012 emissions from cars and trucks by 2020 and a 13 percent per-capita reduction by 2035.

Executive Order B-30-15

On April 20, 2015 Governor Edmund G. Brown Jr. signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB, 2016).

Local

Southern California Association of Government's (SCAG) Connect SOCAL 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions (CTCs), tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

County of Imperial General Plan

The project site is under the County of Imperial jurisdiction and subject to the County Development code and General Plan guidelines. The County General Plan Renewable Energy and Transmission Element (revised on October 6, 2015) includes specific goals, policies and standards for renewable energy and specifically solar projects (Table 5.5-1).

TABLE 5.5-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN ENERGY GOALS AND POLICIES

General Plan Policies	Consistency	Analysis
Renewable Energy and Transmission Element		
Goal 1 – Support the safe and orderly development of renewable energy while providing for the protection of environmental resources.	Yes	The proposed Specific Plan supports the safe and orderly development of renewable energy (solar. The proposed zoning ordinance allows for on-site solar panels and are a preferred use as shown in the proposed Specific Plan.
Objective 1.2: Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources.	Yes	See response to Goal 1.
Goal 3 – Support development of renewable energy resources that will contribute to and enhance the economic vitality of Imperial County.	Yes	The development of a small commercial solar PV system facilities are supported by the proposed Specific Plan and are allowed through the zoning ordinance in the CR1, CR2, and CR3 zones. This is a viable option to provide the GSP with efficient renewable energy.

Source: Imperial County, 2015.

5.5.2 Existing Conditions

Energy related to land use is primarily associated with direct energy consumption for on-site electricity/heating/cooling facilities at the Glamis Beach Store and the RV Park. Transportation energy use is related to the efficiency of cars, trucks, and public transportation; choice of travel modes (e.g., automobile, carpool, vanpool, and transit); and miles traveled by these modes. energy is also consumed with construction and routine operation and maintenance of land uses.

5.5.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Analysis

Impact 5.5-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The existing use at the GSPA requires diesel generators to supply power. These generators would be phased out once the project has been connected to a constant electricity source. Upgrades to the electrical system could include construction and installation of a power line (transmission line and/or distribution line) by Imperial Irrigation District (IID) to extend power from the nearest substation (approximately 7.2 miles to the northeast). A second and potentially more viable option would be to develop a small commercial solar photovoltaic (PV) system, with a backup battery storage component or another green power system. Retirement of the diesel generators and the use of renewable energy resources would have beneficial impacts. According to the air quality technical study and the GHG screening letter, the generation of energy from solar would not result in any energy related emissions. Interconnection with the IID power grid would tap into an existing energy source and also not result in any new energy emissions related to the proposed Specific Plan. No wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation would occur. This is considered a less than significant impact.

5.5.4 Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant.

5.6. Geology and Soils

This section addresses potential impacts to geology, soil and paleontological resources that may result from implementation of the proposed Specific Plan. The following discussion addresses the existing conditions in the Glamis Specific Plan Area; identifies the regulatory framework; identifies and analyzes environmental impacts; and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Specific Plan, as applicable.

Information used in preparing this section and in the evaluation of potential impacts to geology, soils, and paleontological resources was derived from of the following sources,

- *Geotechnical Engineering Feasibility Report* prepared by Earth Systems Pacific (August 2019: Appendix G),
- *Paleontological Resources Assessment* prepared by San Diego Natural History Museum (SDNHM, 2019, Appendix H).

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a public scoping meeting was conducted, and written comments were received from regulatory agencies. No comments related to geology and soils, or paleontological resources were received.

Issues Scoped Out

The Imperial County Planning and Development Services Department (County) determined in the Initial Study (IS), located in Appendix A-2, that the following environmental issue area resulted in no impact and was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this Draft EIR for a copy of the IS and additional information regarding this issue.

- Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. Soils within the GSPA currently support the existing septic system and leach field that provide the small amount of wastewater needed for Glamis Beach Store employees. The proposed Specific Plan includes a wastewater treatment plant that would replace the septic system. No impacts related to the soils ability to support septic tanks would occur.

5.6.1. Environmental Setting

Regional Geology

The GSPA lies within the Imperial Valley, a part of the Colorado Desert geomorphic province (**Figure 5.6-1**). A significant feature within the Colorado Desert geomorphic province is the Salton

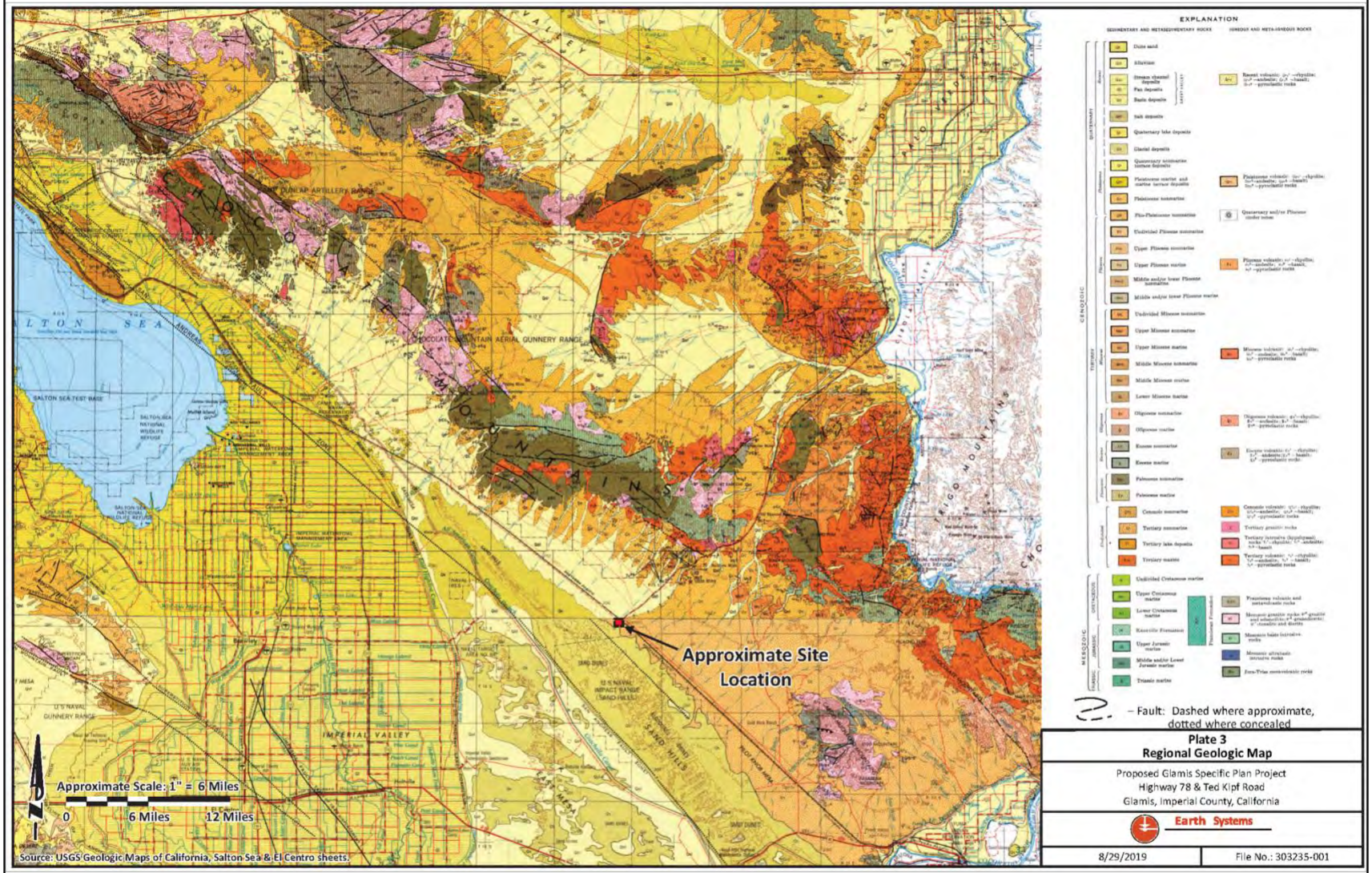
Trough, a large northwest-trending structural depression that extends approximately 180 miles from the San Gorgonio Pass to the Gulf of California. Much of this depression in the area of the Salton Sea is below sea level. The Imperial Valley forms the southerly part of the Salton Trough and exhibits a thick sequence of Miocene to Holocene sedimentary deposits. Mountains bounding the Imperial Valley include the Chocolate Mountains to the northeast, the Santa Rosa Mountains to the west, and associated mountain ranges to the southwest, including the Vallecito, Pinyon, Inkopah, and Jacumba Mountains. These mountains expose primarily Precambrian metamorphic and Mesozoic granitic rocks, with some Tertiary sedimentary deposits and volcanics. Other geologic/geomorphic features in the southern Imperial Valley area include the Salton Sea, Sand Hills (Algodones Dunes), East Mesa, West Mesa, and Borrego Badlands. The geologic conditions present within the County contribute to a wide variety of hazards that can result in loss of life, bodily injury, and property damage. Fault displacement is the principal geologic hazard affecting public safety in Imperial County (Earth Systems Pacific, 2019).

Planning Area Geology

Within the immediate GSPA, native geologic lithologic units consist of a mix of younger (Holocene) dune sand and alluvium, and Pleistocene alluvial fan (fanglomerates) deposits associated with the western flank of the Chocolate Mountains. The San Andreas fault zone within the Imperial Valley consists of the San Andreas fault trending along the northeast shore of the Salton Sea which transitions to the southeast into the Brawley Seismic Zone and Imperial fault (Plate 4). Other significant active faults associated with the San Andreas rift zone, west of the Salton Sea, include the extensions and traces of the Elsinore and San Jacinto fault zones. No major active (last 11,700 years) faults are in the immediate vicinity of the Project site. The San Andreas fault and associated subsidiary faults are considered the primary sources for seismic ground shaking with approximately 15 recognized active faults within 70 miles of the Planning area (Earth Systems Pacific, 2019).

The GSPA is located slightly northeast of the Sand Hills and is located within a mapped area of borderline sedimentary deposit called Pleistocene nonmarine (Qc) and alluvium (Qal), which are associated with deposits from the southwestern flanks of the Chocolate Mountains. Immediately east are the Sand Hills, which is mapped as “Dune Sand” associated with wind-blown deposits. Artificial fill associated with various areas of the GSPA, including building pads, graded parking areas, elevated roadways, railroad beds/right-of-way, and drainage control berms are present. The fills are considered uncompacted and locally contain debris and aggregate base.

Native soils consist of thin deposits of dune sand overlying Quaternary younger and older alluvial deposits. Fills are a mix of locally derived materials. Within the GSPA, the thickness of the true dune sand is generally less than two feet. Fills vary in thickness, being the thickest for roadways and flood control berms (+10 feet) (Earth Systems Pacific, 2019).



SOURCE: Earth Systems Pacific, 2019.

Regional Geology Map
Glamis Specific Plan
Figure 5.6-1

Planning Area Soil Conditions

Twenty-one exploratory borings were drilled to depths ranging from 21½ to 51½ feet below the existing ground surface to observe soil profiles and obtain samples for laboratory testing (**Figure 5.6-2**). The field exploration indicates that GSPA soils consist generally of poorly and well graded sand, poorly and well graded sand with silt, silty sand, silty-clayey-sand and poorly graded gravels to the maximum depth of exploration of 51½ feet below the ground surface. These soils have designations of SP, SW, SP-SM, SW-SM, SM, SC-SM, and GP soil types and were classified according to the Unified Soil Classification System. Cobbles and boulders may be present at depth and were noted based on drilling operations. Refusal was not encountered however high blow counts were encountered at shallow depths ranging between 5 and 20 feet below the ground surface (bgs) or greater. Dune sand deposits are relatively thin (<2 feet) across the site. Fills are considered undocumented and for the most part are probably poorly compact. Clay zones could exist (Earth Systems Pacific, 2019).

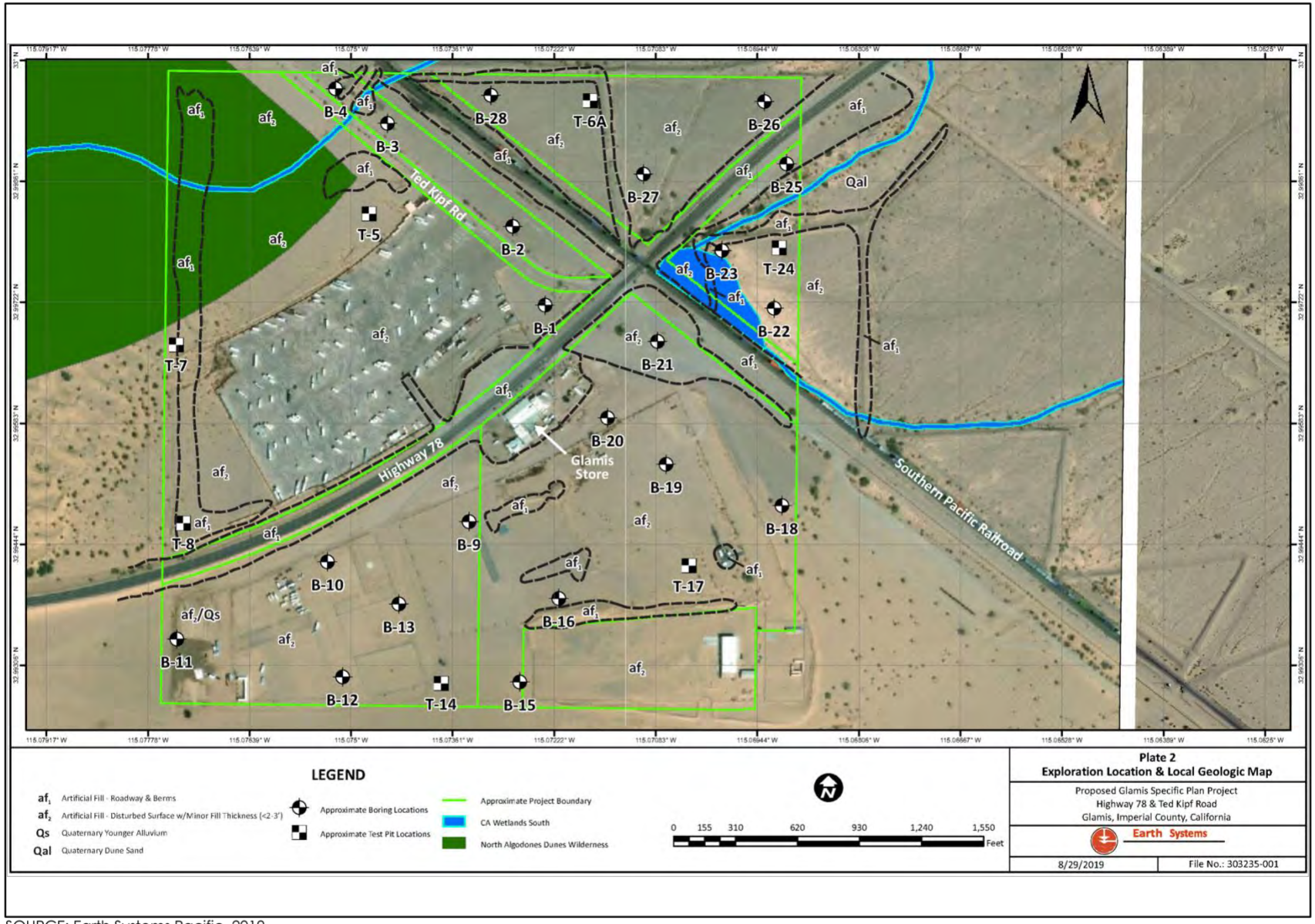
Seismic and Geologic Hazards

Active Faults

The GSPA is within an active seismic region subject to regular earthquake events, resulting in potential seismic hazards as described below. Approximately 15 active faults or seismic zones lie within 70 miles of the GSPA. The primary seismic hazard to the GSPA is strong ground shaking from earthquakes along regional faults including the Brawley and Imperial faults. The Brawley segment of the San Andreas fault is located approximately 24 miles west of the site. The Imperial segment of the San Andreas fault is located approximately 27 miles west of the site (Earth Systems Pacific, 2019).

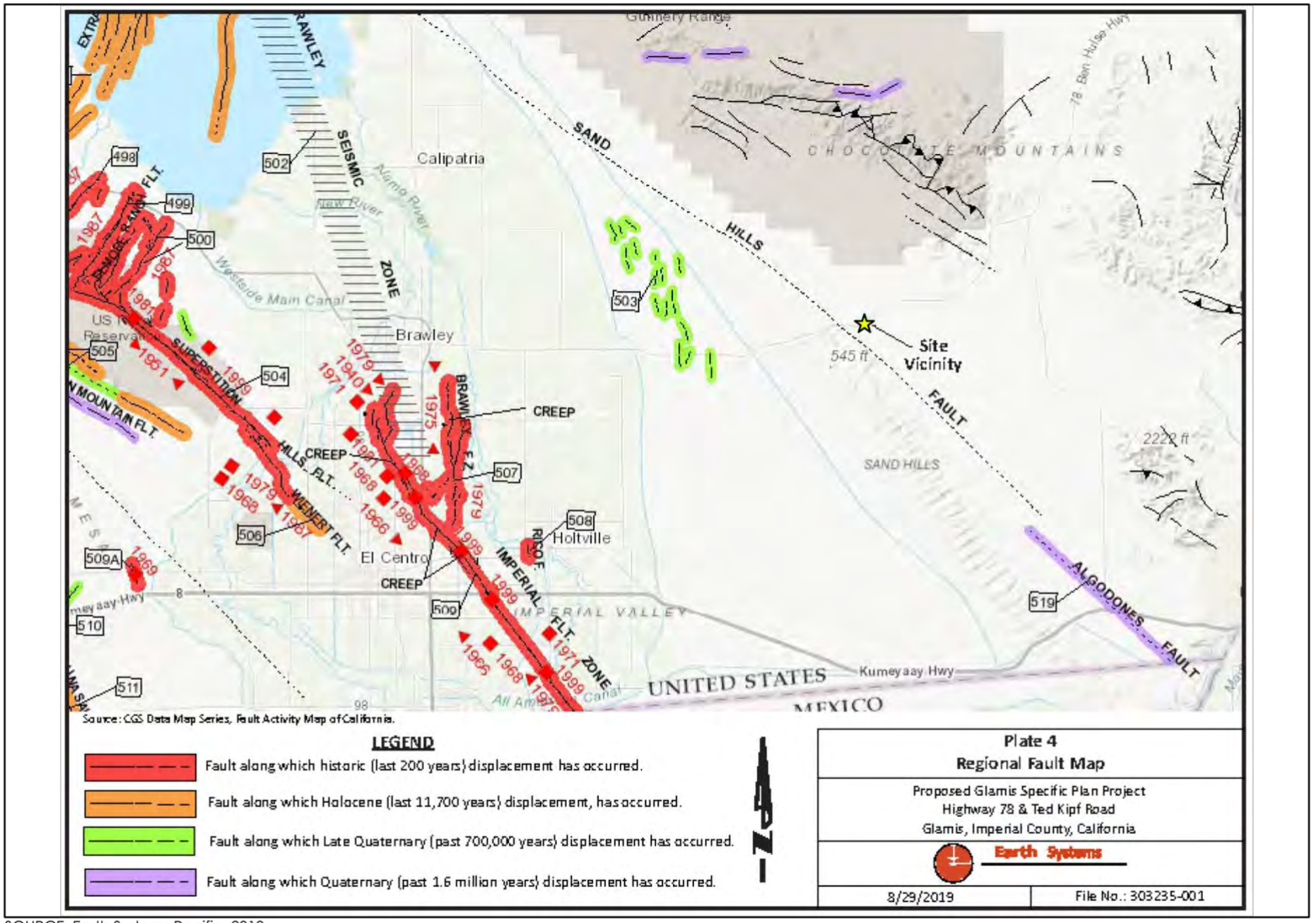
Seismicity

The site is located within a very active seismic area in southern California where large numbers of earthquakes are recorded each year. Approximately 31 magnitude 5.5 or greater earthquakes have occurred within 60 miles of the site since 1852. Significant local Imperial Valley earthquakes have included the 1940 Imperial Valley (6.9), 1942 Fish Creek Mountains (6.6), 1968 Borrego Mountain (6.6), 1979 Imperial (6.4), 1987 Elmore Ranch and Superstition Hills (6.6), and 2010 Baja (7.2) earthquakes. Most of the historic earthquakes have occurred along segments of the San Jacinto fault or Brawley seismic zone which produces very regular ground shaking of low (magnitude 1) to higher magnitude as described above. Ground shaking which may be tolerable from a structural design perspective, can have psychological effects that need to be understood by buyers and users of the site. There are no active faults currently mapped within the Project site. The nearest mapped faults are the inactive and buried Sand Hills fault, located approximately one mile southwest of the Planning area and several Quaternary faults about nine miles west of the GSPA (**Figure 5.6-3**). Several inactive faults within the Chocolate Mountains are located several



SOURCE: Earth Systems Pacific, 2019.

Site Soil Conditions
Glamis Specific Plan
Figure 5.6-2



SOURCE: Earth Systems Pacific, 2019.

Regional Faults Map
Glamis Specific Plan
Figure 5.6-3

miles northwest of the site. The nearest mapped active fault zone is the Brawley seismic zone, located approximately 24 miles west of the GSPA, and the Imperial fault located approximately 27 miles west-southwest of the GSPA (Earth Systems Pacific, 2019).

Seismic Risk

The recent Working Group of California Earthquake Probabilities estimated a 35 to 41 percent conditional probability that a magnitude 6.7 to 7.0 or greater earthquake may occur in 30 years (2014 as base year) along the nearby Coachella segment of the San Andreas fault, 37 to 45 percent for the Brawley seismic zone, 30 to 41 percent for the Imperial fault, and about 5 to 7 percent for the San Jacinto (Superstition Hills section) fault. The revised estimate for an 8+ magnitude earthquake along the local San Andreas fault is about 7%. The primary seismic risk at the GSPA is a potential earthquake along the Brawley seismic zone and San Andreas, San Jacinto, and Imperial faults that are northwest and west of the GSPA. Geologists believe that the San Andreas fault has characteristic earthquakes that result from rupture of each fault segment.

The estimated characteristic earthquake is magnitude 8.1 for a multi-segment San Andreas rupture event. The San Jacinto fault is historically one of the most active faults in southern California, especially in the southern Imperial Valley and San Jacinto Valley. Multi-segment magnitudes for a San Jacinto fault rupture is approximately 7.9 (Earth Systems Pacific, 2019).

Ground Rupture

The GSPA does not lie within a currently delineated State of California, Alquist-Priolo Earthquake Fault Zone (CGS, 2018). Well-delineated fault lines cross through this region (Figure 5.6-3); however, no active faults are mapped in the immediate vicinity of the GSPA. Therefore, active fault rupture is unlikely to occur at the GSPA. While fault rupture would most likely occur along previously established fault traces, future fault rupture could occur at other locations. Aerial photographs from 1961 to 2016 were reviewed and no naturally occurring lineaments were observed within or adjacent to the site. Anthropic lineal features associated with drainage control are common in the GSPA (Earth Systems Pacific, 2019)

Ground Acceleration

The GSPA may be subject to severe ground shaking due to potential fault movements along regional faults. The site soils are not subject to liquefaction induced bearing failure. As such, the minimum seismic design should comply with the 2016 edition of the California Building Code (CBC) using the seismic coefficients given below (Table 5.6-1).

TABLE 5.6-1 2016 CBC (ASCE 7-10 W/ JULY 2013 ERRATA) SEISMIC PARAMETERS

Site Location	32.99677°N/115.07081°W (approximate central site location)
Site Class	D
Maximum Considered Earthquake [MCE] Ground Motion	
Short Period Spectral Response Ss	0.974 g
1 second Spectral Response, S1	0.358 g
Design Earthquake Ground Motion	
Short Period Spectral Response	SDS 0.721 g
1 second Spectral Response	SD1 0.402 g
PGAM	0.39 g

Source: Earth Systems Pacific, 2019.

The intent of the CBC lateral force requirements are to provide a structural design that will resist collapse to provide reasonable life safety from a major earthquake, but may experience some structural and nonstructural damage. A fundamental tenet of seismic design is inelastic yielding is allowed to adapt to the seismic demand on the structure. In other words, damage is allowed. The CBC lateral force requirements should be considered a minimum design. The owner and the designer may evaluate the level of risk and performance that is acceptable. Performance based criteria could be set in the design. The design engineer should exercise special care so that all components of the design are fully met with attention to providing a continuous load path. An adequate quality assurance and control program is urged during project construction to verify the design plans and good construction practices are followed. This is especially important for sites lying close to major seismic sources. Design peak horizontal ground accelerations are estimated to be above 0.4 g. Vertical accelerations are typically 1/3 to 2/3 of the horizontal acceleration but can equal or exceed horizontal accelerations depending upon underlying geologic conditions and basin effects (Earth Systems Pacific, 2019).

Seiches

A small water storage tank and basin are located approximately 4 miles northeast and upgradient of the GSPA, associated with mining activities. In the event of tank rupture or basin failure due to seiching, there is a remote possibility of some flooding within the defined drainages of the alluvial fan, although it appears, that any runoff would trend southerly of the project, depending on localized drainage courses and man-made modifications to drainage paths (Earth Systems Pacific, 2019).

Liquefaction and Dynamic Settlement

Liquefaction is the loss of soil strength from sudden shock (usually earthquake shaking), causing the soil to become a fluid mass. Liquefaction describes a phenomenon in which saturated soil loses shear strength and deforms as a result of increased pore water pressure induced by strong ground shaking during an earthquake. Dissipation of the excess pore pressures will produce volume

changes within the liquefied soil layer, which can cause settlement. Shear strength reduction combined with inertial forces from the ground motion may also result in lateral migration (lateral spreading). Factors known to influence liquefaction include soil type, structure, grain size, relative density, confining pressure, depth to groundwater (typically occurs in the upper 50 feet), and the intensity and duration of ground shaking. Soils most susceptible to liquefaction are saturated, loose sandy soils and low plasticity clay and silt. The results of the geotechnical analyses indicate that groundwater depth is more than 50 feet below the ground surface and therefore liquefaction potential is low (Earth Systems Pacific, 2019).

Ground Subsidence

Based on research of nearby State-monitored groundwater wells, elevations of groundwater and the well ground surface has been generally stable for the last 20 years. Groundwater has deviated approximately 26 feet between 1979 and 2005. As areal subsidence typically occurs on a regional basis and with a large fluctuation of groundwater levels, the effects of subsidence on structures within the GSPA should have a low potential. Based on a United States Geological Survey (USGS) web site, the GSPA is not located within an area of land subsidence in California (Earth Systems Pacific, 2019).

Landsliding

Seismically-induced landsliding is not considered a significant hazard on the GSPA due to the fact the topography is generally level.

Non-Seismic Hazards

Non-seismic geologic hazards include a number of potential physical and chemical effects such as compaction, expansion, erosion, and reactive soils.

Dry Seismic Settlement

The amount of dry seismic settlement is dependent on relative density of the soil, ground motion, and earthquake duration. In accordance with current California Geological Survey (CGS) policy, a site peak ground acceleration of ⅔ Peak Ground Acceleration Mean (PGAM), where PGAM was found to be 0.39 and an earthquake magnitude of 7.9 was used. The potential for seismically induced dry settlement of soils above the groundwater table and the full soil column heights ranging between 7.5 feet and 50 feet bgs was calculated for all borings (Figure 5.6-2). The largest settlement was less than ⅛ inch due to dry seismic forces found at boring B-11, which had a maximum depth of 50 feet. Although the 50-foot-deep boring had the largest settlement, the highest differential settlement occurred for the 25 feet bgs borings (B-15 and B-28). The highest differential settlements were found less than ⅛ inch. Due to the general uniformity of the soils encountered, seismic settlement is expected to occur on an areal basis and as such per Special

Publication 117 (2008), the calculated differential settlement (after Section 5.1 mitigation) between all borings is estimated to be less than ¼ inch (Earth Systems Pacific, 2019).

Expansive Soils

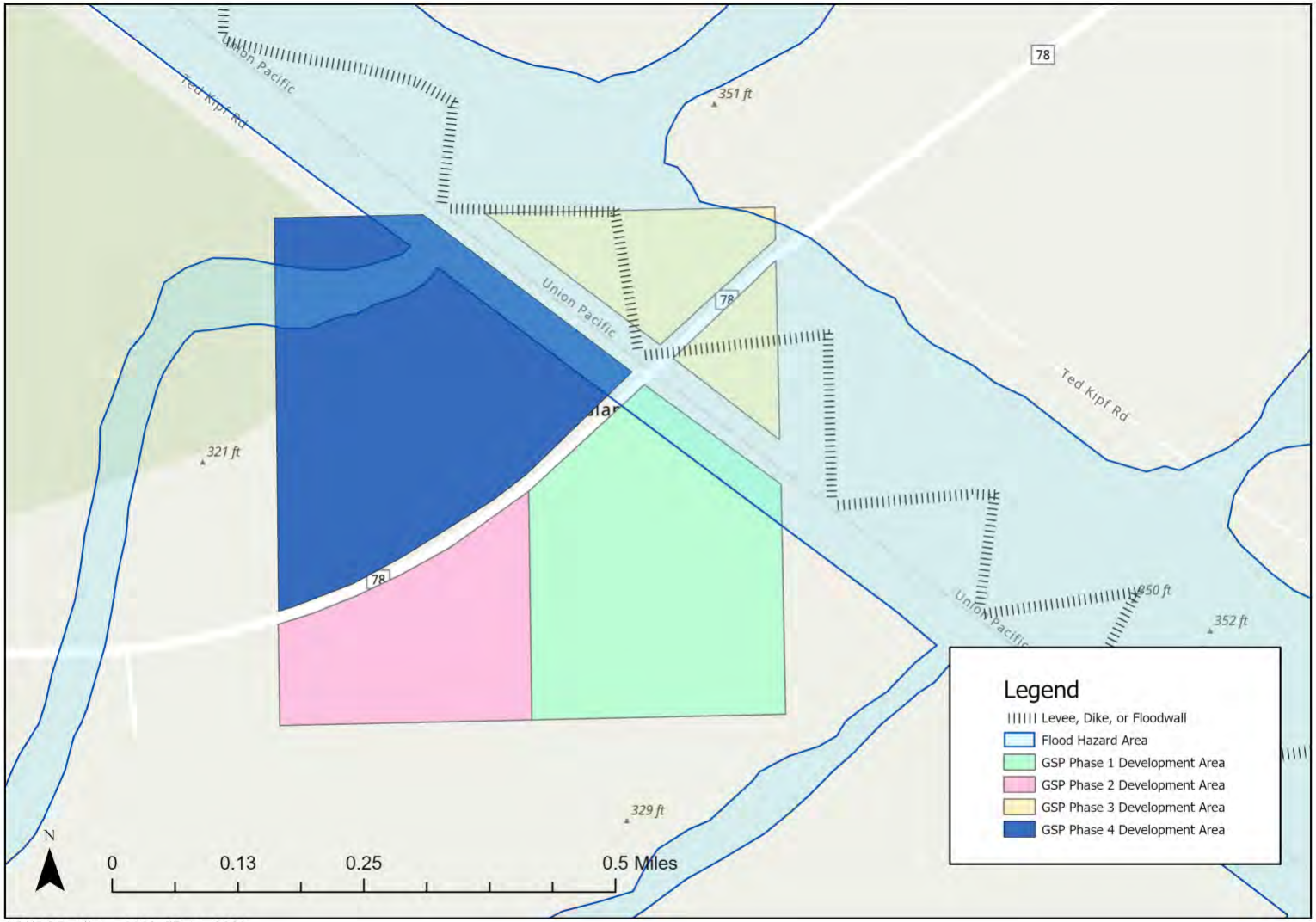
Expansive soils are characterized by their ability to undergo significant volume change (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors, and may cause unacceptable settlement or heave of structures, concrete slabs supported-on-grade, or pavements supported over these materials. Depending on the extent and location below finished subgrade, expansive soils can have a detrimental effect on structures. Based on our visual observations, site soils were observed to be granular however clayey zones could be present. As such, the Expansion Index of the onsite soils is anticipated to be "very low" for granular soils, and if encountered, could be medium-to-high for clayey soils as defined by American Society of Testing and Materials (ASTM) D 4829. Samples of building pad soils should be observed or tested during grading to confirm or modify these findings (Earth Systems Pacific, 2019).

Erosion Potential

The GSPA lies within an area of high potential for wind and water erosion. Planning area soils have a fine-grained component of their composition. As such, exposed soil surfaces may be subject to disturbed fine particulate matter (PM_{10}) which can create airborne dust if the soil surface or roadways are not maintained (Earth Systems Pacific, 2019).

Flooding:

As illustrated on Federal Emergency Management Agency (FEMA) map panels 06025C1125C and 06025C1475C (dated September 26, 2008),the GSPA lies within two designated Federal Emergency Management Agency (FEMA) Flood Zones: "A" and "X" (see Figure 5.6-4) Zone "A" is defined as "Without Base Flood Elevation" and Zone "X" is defined as "Areas of 0.2% annual chance floodplain; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas of less than 1 square mile; and areas protected by levees from 1% annual chance flood." The GSPA is in an area where sheet and concentrated flow and erosion could occur. Aerial imagery from 2006 shows what looks like natural storm channel erosion (dry stream beds) present in the middle of the project and south of the Glamis store. Therefore, uncontrolled concentrated flows may exist at or near the GSPA and debris flow may occur (Earth Systems Pacific, 2019).



SOURCE: Altum, 2021; FEMA, 2023.

FEMA Flood Zone Boundary
Glamis Specific Plan
Figure 5.6-4

Reactive Soils

Three samples of the near-surface blended soil and one in situ sample from a depth of 10 feet within the GSPA were tested for potential to corrosion of concrete and ferrous metals. The tests were conducted in general accordance with the ASTM test methods to evaluate pH, resistivity, and water-soluble sulfate and chloride content. These tests should be considered as only an indicator of corrosivity for the samples tested. Other earth materials found on site may be more, less, or of a similar corrosive nature.

In general, the lower the pH (the more acidic the environment), the higher the soil corrosivity will be with respect to ferrous structures and utilities. As soil pH increases above 7 (the neutral value), the soil is increasingly more alkaline and less corrosive to buried steel structures, due to protective surface films, which form on steel in high pH environments. A pH between 5 and 8.5 is generally considered relatively passive from a corrosion standpoint. High chloride levels tend to reduce soil resistivity and break down otherwise protective surface deposits, which can result in corrosion of buried steel or reinforced concrete structures. Soil resistivity is a measure of how easily electrical current flows through soils and is the most influential factor. Four samples recovered from our field sampling were tested for pH, Resistivity, Chlorides, and Sulfate Content. Test results shows pH values ranging from 7.9 to 8.6, chloride contents from 17 ppm to 808 ppm, sulfate contents from 11 ppm to 348 ppm, and resistivities from 520 Ohm-cm to 6,400 Ohm-cm. The corrosion values from the soil tested are normally considered as being “Mildly to Very Severely Corrosive” to buried metals and as possessing a “Negligible” exposure to sulfate attack for concrete as defined in American Concrete Institute (ACI) 318, Section 4.3 (Earth Systems Pacific, 2019).

Paleontological Setting

Paleontological resources (i.e., fossils) are the buried remains and/or traces of prehistoric organisms (i.e., animals, plants, and microbes). Body fossils such as bones, teeth, shells, leaves, and wood, as well as trace fossils such as tracks, trails, burrows, and footprints, are found in the geologic deposits within which they were originally buried. The primary factor determining whether an object is a fossil or not isn’t how the organic remain or trace is preserved (e.g., “petrified”), but rather the age of the organic remain or trace. Although typically it is assumed that fossils must be older than ~11,700 years (i.e., the generally accepted end of the last glacial period of the Pleistocene Epoch), organic remains of early Holocene age can also be considered to represent fossils because they are part of the record of past life (SDNHM, 2019).

Fossils are considered important scientific and educational resources because they serve as direct and indirect evidence of prehistoric life and are used to understand the history of life on Earth, the nature of past environments and climates, the membership and structure of ancient ecosystems, and the pattern and process of organic evolution and extinction. In addition, fossils are considered to be non-renewable resources because typically the organisms they represent no longer exist. Thus, once destroyed, a particular fossil can never be replaced. And finally, for the purposes of

this report, paleontological resources can be thought of as including not only the actual fossil remains and traces, but also the fossil collecting localities and the geologic units containing those localities (SDNHM 2019).

GSPA Paleontology

There are no SDNHM fossil collection localities known from within a 5-mile radius of the GSPA. However, there is one SDNHM locality recorded from Pleistocene-age gravel deposits located approximately 22 miles southeast of the GSPA from another portion of the Algodones Dunes, where a partial lower jaw with two cheek teeth identified as horse, *Equus sp*., were found in excavation spoils along the south side of the All-American Canal (SDNHM, 2019).

Portions of the GSPA that have been previously developed consisted of graded pads that were raised above original grade, supported by what appears to be imported gravel fill. Based on the alluvial fan deposits of Pleistocene age are generally assigned an undetermined paleontological potential due to variation in the concentration of fossil resources, typically linked to the grain size of individual alluvial deposits (i.e., fine-grained sediments reflective of low energy conditions more likely to preserve fossil remains vs. coarse-grained and gravelly sediments reflective of high-energy conditions less likely to preserve fossil remains). In addition, paleontological potential typically varies with geologic age (i.e., Pleistocene and older sediments more likely to contain fossil remains than younger, Recent or modern sediments). Among the various methods for determining the age of surficial sedimentary deposits is the degree of surface erosion/dissection evident at a given location (i.e., heavily dissected ground surfaces reflect prolonged time period vs. undissected ground surfaces reflect short time period).

Given these criteria, the sedimentary deposits observed during the paleontological field survey appeared to be Holocene in age (undissected ground surface indicating that these deposits have not been subjected to significant erosion by the action of streams and are, therefore, likely Holocene in age). Holocene-age alluvial fan deposits are assigned a “low” paleontological potential because of their relatively young geologic age (i.e., less than 11,700 years old). These deposits appear to be present throughout the GSPA, except in previously graded portions of the GSPA, where they appear to be overlain by imported gravel fill materials, which are assigned no paleontological potential.

The underlying sedimentary deposits were undissected by the action of modern ephemeral streams, and therefore appeared to be younger than the mapped Pleistocene-age alluvial fan deposits. Based on the distribution and character of these deposits, they likely represent Holocene-age or modern distal-fan deposits derived from the Chocolate Mountains to the northeast of the GSPA. No fossils were encountered during the field survey (SDNHM, 2019).

5.6.2. Regulatory Setting

Geologic resources and geotechnical hazards are governed by local jurisdictions. The conservation elements and seismic safety elements of city and county general plans contain policies for the protection of geologic features and avoidance of hazards. The California Environmental Quality Act (CEQA) is the major environmental statue that guides the design and construction of projects on non-federal lands in California. This statute sets forth a specific process of environmental impact analysis and public review. In addition, the project proponent must comply with other applicable State and local statutes, regulations and policies. Relevant and potentially relevant statutes, regulations and policies are discussed below.

State

Geology

California Building Code

The CBC (2019), as contained in Title 24 California Code of Regulations (CCR) Part 2, has been adopted by the California Building Standards Commission and other agencies within the State of California, including Imperial County. This Code implements the requirements contained in the 2018 International Building Code and consists of 12 parts that contain administrative regulations of the California Building Standards Commission. Local agencies must ensure that development in their jurisdictions complies with guidelines contained in the CBC. Cities and counties can, however, amend the CBC to adopt more stringent building standards beyond those provided because of unique climatic, geological, or topographical conditions.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 regulates development near active faults, with the specific intention of mitigating the hazard of surface fault rupture on buildings intended for human occupancy. In accordance with this law, the CGS maps active faults and designates Earthquake Fault Zones along mapped faults. This Act groups faults into categories of active (historic or Holocene-age faults), potentially active (Quaternary-age faults), and inactive (pre-Quaternary age faults).

Local government agencies are mandated by this Act to require site-specific geologic investigations for proposed projects contained within a designated Alquist-Priolo Earthquake Fault Zone area. Such investigations typically include subsurface trenching to determine the presence, or lack of faulting.

Under this Act, the California State Geologist identifies areas in the state that are at risk from surface fault rupture. The main purpose of this Act is to prevent construction of buildings used for human occupancy where traces of active faults are evident on the earth’s surface. Fault rupture

generally occurs within 50 feet of an active fault line and is limited to the immediate area of the fault zone where the fault breaks along the surface. Such a rupture could potentially displace and/or deform the ground surface. The GSPA is not located within a delineated Earthquake Fault Zone.

Seismic Hazards Mapping Act of 1990

In accordance with Public Resources Code, Chapter 7.8, Division 2, the California Department of Conservation, CGS, the State Geologist compiled maps identifying Seismic Hazard Zones. The Seismic Hazards Mapping Act of 1990 addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. The purpose of this Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes.

Cities, counties, and state agencies are directed to use and incorporate site-specific geotechnical hazard investigations and seismic hazard zone maps developed by CGS in their land use planning, as part of their permit approval process. This Act provides a mechanism to identify when provisions beyond standard building codes are necessary to ensure safe development and to reduce future losses.

Paleontology

California Code of Regulations, Title 14, Division 3, Chapter 1, Sections 4307-4309

These code sections prohibit the removal and destruction of geological features and any object of archaeological or historical interest or value. Section 4309 provides that the Department of Parks and Recreation may grant a permit to remove, treat, disturb, or destroy plants or animals or geological, historical, archaeological, or paleontological materials.

California Environmental Quality Act (CEQA)

CEQA affords paleontological resources explicit protection, specifically in item V(c) of CEQA Guidelines Appendix G, the Environmental Checklist Form, which addresses the potential for adverse impacts to "unique paleontological resource[s] or site[s] or … unique geological feature[s]." This provision covers fossils of significant importance—remains of species or genera new to science, as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth.

In addition, CEQA provides that generally, a resource shall be considered "historically significant" if it has yielded or may be likely to yield information important in prehistory (Public Resources Code [PRC] Section 15064.5[a][3][D]). Paleontological resources would fall within this category. Sections 5097.5 and 30244 of PRC Chapter 1.7 also define unauthorized removal of fossil resources as a misdemeanor and require mitigation of disturbed sites.

Paleontological resources are classified as nonrenewable scientific resources and are protected by state statute (PRC Section 5097.5). However, neither state nor local agencies have specific jurisdiction over paleontological resources, but all must evaluate potential impacts and provide applicable mitigation measures. State and local agencies do not require a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earthmoving on state or private land in a project site.

Local

Imperial County General Plan Seismic and Public Safety Element

The Imperial County General Plan includes a "Seismic and Public Safety Element." The Seismic and Public Safety Element identifies potential natural and human-induced hazards and provides policy to avoid or minimize the risk associated with hazards. Potential hazards must be addressed in the land use planning process to avoid the unfolding of dangerous situations. The policies and implementation measures in the General Plan applicable to the Project are outlined below (Table 5.6-2).

TABLE 5.6-2 CONSISTENCY WITH APPLICABLE GENERAL PLAN GEOLOGY, SOILS, AND SEISMICITY POLICIES

General Plan Policies	Consistency	Analysis
Seismic and Public Safety Element		
Goal 1: Include public health and safety considerations in land use planning. ● **Objective 1.1**: Ensure that data on geological hazards is incorporated into the land use review process, and future development process. ● Objective 1.4: Require, where possessing the authority, that avoidable seismic risks be avoided; and that measures, commensurate with risks, be taken to reduce injury, loss of life, destruction of property, and disruption of service. ● Objective 1.7: Require developers to provide information related to geologic and seismic hazards when siting a proposed project.	Yes	The proposed Specific Plan is committed to protecting public health and safety by providing proposed zoning with compatible allowable uses, a Conceptual Site plan showing preferred land uses within a compatible physical arrangement. Future development within the Planning area will be required to comply with California and County building codes, and seismic standards. Proposed development will be regulated within flood-way areas in accordance with the Federal Emergency Management Agency (FEMA). Avoidable seismic risks will be avoided. The GSP implements measures, commensurate with risks, to reduce injury, loss of life, destruction of property and disruption of service. Environmental hazards will be considered when siting critical proposed facilities within the Glamis Specific Plan Area (GSPA).
Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena.	Yes	The proposed Specific Plan ensures that adequate emergency preparedness and evacuation plans to respond to identified hazards and potential emergencies by implementing additional hydrant connections within Vendor Row as well as, during Special Events, on-site

TABLE 5.6-2 CONSISTENCY WITH APPLICABLE GENERAL PLAN GEOLOGY, SOILS, AND SEISMICITY POLICIES

General Plan Policies	Consistency	Analysis
● **Objective 2.2:** Reduce risk and damage due to seismic hazards by appropriate regulation. ● **Objective 2.5:** Minimize injury, loss of life, and damage to property by implementing all state codes where applicable. ● **Objective 2.8:** Prevent and reduce death, injuries, property damage, and economic and social dislocation resulting from natural hazards including flooding, land subsidence, earthquakes, other geologic phenomena, levee or dam failure, urban and wildland fires and building collapse by appropriate planning and emergency measures.		law enforcement and fire protection will be provided with applicable services and apparatus. The proposed Specific Plan is appropriately regulated with applicable provisions including the Alquist – Priolo Special Studies Zone Act, California Building Code and Title 9 Division 15 of the County Land Use Ordinance. Furthermore, the proposed Specific Plan implements all site-specific recommendations set-forth in the Geotechnical Report prepared for the project. Additionally, signage will be strategically located throughout the GSPA to prevent unsafe crossings of State Route 78 (SR-78) and the Union Pacific Railroad (UPRR). A proposed off highway vehicle (OHV) and pedestrian under-crossing in the vicinity of SR-78 and the Glamis Mainstreet will be built in concert with the build-out of the project.
Seismic/Geologic Hazards Policy 4: Ensure that no structure for human occupancy, other than one-story wood frame structures, shall be permitted within fifty feet of an active fault trace as designated on maps compiled by the State Geologist under the Alquist – Priolo Special Studies Zone Act.	Yes	In the Geotechnical Engineering Feasibility Report it is found that there are no active faults within the GSPA. The nearest mapped active fault is the Brawley seismic zone which is located 24 miles west of the site, and the Imperial fault located 27 miles west-southwest of the site. As a result, future development within the GSPA is not located within fifty feet of an active fault trace as designated on maps compiled by the State Geologist under the Alquist-Priolo Special Studies Zone Act.

Source: County of Imperial, n.d.

While this Draft EIR analyzes the Project's consistency with the County of Imperial General Plan pursuant to CEQA Guidelines, Section 15125(d), the Imperial County Planning Commission ultimately determines consistency with the General Plan.

5.6.3. Analysis of Project Effects and Significance Determination

Methodology

Geology and Soils

The potential impacts associated with the proposed Specific Plan are evaluated on a qualitative and quantitative basis through a comparison of the anticipated Specific Plan effects on geologic resources. The change in the land use to develop the GSPA would be significant if the effects described below would occur. The evaluation of Specific Plan impacts is based on the significance

criteria adopted by the Imperial County, which the County has determined to be appropriate criteria for this Draft EIR.

Paleontological Resources

To evaluate the proposed Project's potential impacts on significant paleontological resources, a paleontological records search was conducted at the SDNHM to determine if any documented fossil collection localities occur within the GSPA or its immediate surroundings. This involved examination of the SDNHM paleontological database for any records of known fossil collection localities within a 5-mile radius of the GSPA. A paleontological field survey of the GSPA was conducted to confirm the published geologic mapping, to field check the results of the literature and record searches, and to determine the paleontological potential of the strata present. As discussed previously, Museum records indicate that no vertebrate fossil localities have been documented within the GSPA and no fossils were found during the pedestrian survey.

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?
2. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving strong seismic ground shaking?
3. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving seismic-related ground failure, including liquefaction?
4. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving landslides?
5. Result in substantial soil erosion or the loss of topsoil?
6. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
7. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?
8. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact 5.6-1: Would the project result in substantial adverse effects from the rupture of a known earthquake fault?

The GSPA is located in southern California, an area known to be geologically active, and which is subject to seismic events. The Planning area does not lie within a currently delineated State of California, Alquist-Priolo Earthquake Fault Zone. Well-delineated fault lines cross through this region as shown on CGS maps; however, no active faults are mapped in the immediate vicinity of the GSPA. Therefore, active fault rupture is unlikely to occur at the GSPA. While fault rupture would most likely occur along previously established fault traces, future fault rupture could occur at other locations. Aerial photographs from 1961 to 2016 were reviewed and no naturally occurring lineaments were observed within or adjacent to the site. Anthropic lineal features associated with drainage control are common in the site vicinity (Earth Systems Pacific, 2019). Thus, there would be a less than significant impact from rupture of a known earthquake fault.

Impact 5.6-2: Would the project result in substantial adverse effects from strong seismic ground shaking?

Approximately 15 active faults or seismic zones lie within 70 miles of the GSPA. The primary seismic hazard to the site is strong ground shaking from earthquakes along regional faults including the Brawley and Imperial faults. The Brawley segment of the San Andreas fault is located approximately 24 miles west of the GSPA. The Imperial segment of the San Andreas fault is located approximately 27 miles west of the GSPA. The GSPA is located within a very active seismic area in southern California where large numbers of earthquakes are recorded each year. Approximately 31 magnitude 5.5 or greater earthquakes have occurred within 60 miles of the site since 1852. Significant local Imperial Valley earthquakes have included the 1940 Imperial Valley (6.9), 1942 Fish Creek Mountains (6.6), 1968 Borrego Mountain (6.6), 1979 Imperial (6.4), 1987 Elmore Ranch and Superstition Hills (6.6), and 2010 Baja (7.2) earthquakes (Earth Systems Pacific, 2019).

Most of the historic earthquakes have occurred along segments of the San Jacinto fault or Brawley seismic zone which produces very regular ground shaking of low (magnitude 1) to higher magnitude as described above. Ground shaking which may be tolerable from a structural design perspective, can have psychological effects that need to be understood by buyers and users of the site (Earth Systems Pacific, 2019).

While accurate earthquake predictions are not possible, various agencies have conducted statistical risk analyses. In 2013, the CGS and the USGS presented new earthquake forecasts for California (USGS UCERF3). The recent Working Group of California Earthquake Probabilities estimated a 35 to 41 percent conditional probability that a magnitude 6.7 to 7.0 or greater earthquake may occur in 30 years (2014 as base year) along the nearby Coachella segment of the San Andreas fault, 37 to 45 percent for the Brawley seismic zone, 30 to 41 percent for the Imperial fault, and about 5 to 7 percent for the San Jacinto (Superstition Hills section) fault. The revised estimate for

an 8+ magnitude earthquake along the local San Andreas fault is about 7%. The primary seismic risk at the site is a potential earthquake along the Brawley seismic zone and San Andreas, San Jacinto, and Imperial faults that are northwest and west of Glamis. Geologists believe that the San Andreas fault has characteristic earthquakes that result from rupture of each fault segment. The estimated characteristic earthquake is magnitude 8.1 for a multi-segment San Andreas rupture event. The San Jacinto fault is historically d San Jacinto Valley. Multi-segment magnitudes for a San Jacinto fault rupture is approximately 7.9.

Mitigation Measures (MMs) GEO-1a through d would be required to mitigate impacts. With the implementation of MMs GEO-1a through d, impacts under this criterion would be reduced to less than significant.

Impact 5.6-3: Would the project result in substantial adverse effects from seismic-related ground including liquefaction?

Liquefaction is the loss of soil strength from sudden shock (usually earthquake shaking), causing the soil to become a fluid mass. Liquefaction describes a phenomenon in which saturated soil loses shear strength and deforms as a result of increased pore water pressure induced by strong ground shaking during an earthquake. Dissipation of the excess pore pressures will produce volume changes within the liquefied soil layer, which can cause settlement. Shear strength reduction combined with inertial forces from the ground motion may also result in lateral migration (lateral spreading). Factors known to influence liquefaction include soil type, structure, grain size, relative density, confining pressure, depth to groundwater (typically occurs in the upper 50 feet), and the intensity and duration of ground shaking. Soils most susceptible to liquefaction are saturated, loose sandy soils and low plasticity clay and silt. Groundwater depth at the GSPA is more than 50 feet below the ground surface and therefore liquefaction potential is low. (Earth Systems Pacific, 2019). Thus, the impact would be less than significant.

Impact 5.6-4: Would the project result in substantial adverse effects from landslides.

Due to the flat topography of the site the potential for a landslide is very low. No mitigation is required.

Impact 5.6-5: Would the project result in substantial soil erosion or the loss of topsoil?

The proposed Specific Plan would result in changes to the current topography because of grading and site preparation activities. Although these changes will be designed to meet stringent regulatory requirements, there is a potential for soil erosion, loss of topsoil, and geologic instability.

Impact 5.6-6: Landslides, lateral spreading, subsidence, liquefaction or collapse?

Potential effects from landslides and liquefaction, which can include excessive settlement, ground rupture and lateral spreading were discussed in Impact 5.4-3 and 5.4-4.

Impact 5.4-7: Would the project result in the potential for substantial risks to life or property due to expansive soil?

Expansive soils are characterized by their ability to undergo significant volume change (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors, and may cause unacceptable settlement or heave of structures, concrete slabs supported-on-grade, or pavements supported over these materials. Depending on the extent and location below finished subgrade, expansive soils can have a detrimental effect on structures. Site soils were observed to be granular however clayey zones could be present. As such, the Expansion Index of the onsite soils is anticipated to be "very low" for granular soils, and if encountered, could be medium-to-high for clayey soils as defined by ASTM D 4829. Samples of building pad soils should be observed or tested during grading to confirm or modify these findings (Earth Systems Pacific, 2019).

Impact 5.6-8: Direct or indirect destruction of a unique paleontological resource, site or unique geologic feature?

Previous geologic mapping reports indicate that the Planning area is immediately underlain by "Pleistocene nonmarine sedimentary deposits." Although in most cases Pleistocene sedimentary deposits are typically assigned an undetermined paleontological potential, the observation of probable Holocene-age undissected alluvial deposits on-site during the paleontological field survey supports a low paleontological potential rating for the sedimentary deposits underlying the GSPA. In addition, the artificial fill present in previously graded portions of the Planning area has no paleontological potential. Given the no-to-low paleontological potential of the deposits present within the GSPA, it is unlikely that their disturbance by earthwork related to future development within the GSPA will result in negative impacts to paleontological resources (SDNHM, 2019). Thus, potential impacts to paleontological resources would be less than significant and no mitigation is required.

5.6.4. Mitigation Measures

The following MMs would reduce impacts to below a level of significance.

MM GEO-1: Retain qualified professional staff for design

(a) A qualified professional should design any permanent structure constructed on the site. The minimum seismic design should comply with the CBC in effect at the time specific developments are proposed.

(b) Preventative measures to reduce seasonal flooding and erosion should be incorporated into site grading plans. Dust control should also be implemented during construction. Site grading should be in strict

compliance with the requirements of the South Coast Air Quality Management District [SCAQMD].

(c) Preventative measures to reduce collapse should be incorporated into site grading plans. Storm drainage should flow away from foundations per the minimum building code regulations and water conduits should be repaired immediately or the design should follow the potential for maximum collapse not based on an active water depth as assumed in this report. Water introduction into the subsurface should be kept well away from planned structures and improved areas.

(d) Proper geotechnical observation and testing during construction is imperative to allow the geotechnical engineer the opportunity to verify assumptions made during the design process, to verify our geotechnical recommendations from future design-level studies have been properly interpreted and implemented during construction and as required by the CBC in effect at the time of construction. Observation of fill placement by the Geotechnical Engineer of Record should be in conformance with the CBC in effect at the time.

Timing/Implementation:	*Prior to building permit issuance for all construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services*

Level of Significance After Mitigation

Implementation of MMs GEO-1a through GEO-1d would reduce the risk from strong seismic ground shaking to a level that is less than significant by ensuring proper engineering designs standards are used.

5.7 Greenhouse Gas Emissions

This section addresses potential impacts on greenhouse gases that may result from implementation of the proposed Specific Plan. The following discussion addresses the existing conditions in the Planning area, the regulatory framework, identifies and analyzes environmental impacts from greenhouse gas emissions, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Specific Plan, as applicable.

The analysis in this section is based on the *Glamis Specific Plan Greenhouse Gas Screening Letter* prepared by LdN Consulting (LdN Consulting, 2020b). The report and its attachments are included as Appendix C-2.

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a public scoping meeting was conducted, and written comments were received from regulatory agencies. No issues related to greenhouse gas emissions were raised.

Issues Scoped out as part of the Initial Study

None.

5.7.1 Environmental Setting

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and sulfur hexafluoride (SF_6). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a GWP of one. By

contrast, CH_4 has a GWP of 28, meaning its global warming effect is 28 times greater than carbon dioxide on a molecule per molecule basis.

California produced 440.4 million metric tons (MMT) CO_2e in 2015. The major source of GHG in California is transportation, contributing 37 percent of the state's total GHG emissions. The industrial sector is the second largest source, contributing 21 percent of the state's GHG emissions. California emissions result in part to its geographic size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. The California Air Resources Board (CARB) has projected statewide unregulated GHG emissions for the year 2020 is projected to be 509 MMT CO_2e. These projections are based on Business as Usual (BAU) conditions and represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

5.7.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

State

Executive Order S-3-05

In 2005, former Governor Schwarzenegger issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 states that by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent of 1990 levels. In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report"). The 2006 CAT Report recommended various strategies that the state could pursue to reduce GHG emissions. These strategies could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture.

Assembly Bill 32 and CARB Scoping Plan

To further the goals established in EO S-3-05, the Legislature passed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. Under AB 32, the CARB is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is

required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO_2e). CARB's adoption of this limit is in accordance with Health and Safety Code, Section 38550.

Further, in 2008, CARB adopted the Scoping Plan in accordance with Health and Safety Code, Section 38561. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and CAT early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following:

1. Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33%;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions;
4. Establishing targets for transportation related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In the Scoping Plan (CARB 2008), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5% from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020) absent GHG reducing laws and regulations (referred to as BAU). To calculate this percentage reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. In the 2011 Final Supplement to the AB 32 Scoping Plan Functional Equivalent

Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7% (down from 28.5%) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (RPS) (12% to 20%), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 28.5%) from the BAU conditions.

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update; CARB 2014). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050" (CARB 2014). The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the First Update, CARB identified six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050. Those six areas are (1) energy, (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure), (3) agriculture, (4) water, (5) waste management, and (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

Based on CARB's research efforts presented in the First Update, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050". Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the Intergovernmental Panel on Climate Change (IPCC). Using the recalculated 1990 emissions level (431 MMT CO_2e) and the revised 2020-emissions-level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 28.5% or 16%) from the BAU conditions.

In January 2017, CARB released, *The 2017 Climate Change Scoping Plan Update*, for public review and comment. This update proposes CARB's strategy for achieving the state's 2030 GHG target as

established in Senate Bill (SB) 32, including continuing the Cap-and-Trade Program through 2030, and includes a new approach to reduce GHGs from refineries by 20%. The Second Update incorporates approaches to cutting short-lived climate pollutants (SLCPs) under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by CARB in March 2017), acknowledges the need for reducing emissions in agriculture, and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon. During development of the Second Update, CARB held a number of public workshops in the Natural and Working Lands, Agriculture, Energy, and Transportation sectors to inform development of the 2030 Scoping Plan Update. The Second Update has not been considered by CARB's Governing Board at the time this analysis was prepared.

Executive Order S-01-07

EO S-01-07 was enacted on January 18, 2007. The order mandates that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.

Assembly Bill 939 and Senate Bill 1374

AB 939 requires that each jurisdiction in California divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. SB 1374 requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004, suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

Senate Bill 1368

SB 1368 is the companion Bill of AB 32 and was adopted September 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007, and for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all electricity provided to the State, including imported electricity, must be generated by plants that meet the standards set by the CPUC and the California Energy Commission (CEC).

Senate Bill 97

SB 97 was adopted August 2007 and acknowledges that climate change is an environmental issue that requires analysis under the California Environmental Quality Act (CEQA). SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural

Resources Agency was required to certify and adopt those guidelines by January 1, 2010. Pursuant to the requirements of SB 97 as stated above, on December 30, 2009, the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed sections of the CEQA Guidelines and incorporated GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided, and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010, and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09

SB 1078 requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 changed the target date to 2010. EO S-14-08 was signed on November 2008 and expands the State's Renewable Portfolio Standard (RPS) to 33 percent renewable energy by 2020. EO S-21-

09 directed CARB to adopt regulations by July 31, 2010, to enforce S-14-08. SB X1-2 codifies the 33 percent renewable energy requirement by 2020.

California Code of Regulations Title 24, Part 6

California Code of Regulations (CCR) Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions. The Energy Commission adopted 2008 Standards on April 23, 2008, and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. All buildings for which an application for a building permit is submitted on or after July 1, 2014, must follow the 2013 standards. The 2013 commercial standards are estimated to be 30 percent more efficient than the 2008 standards; 2013 residential standards are at least 25 percent more efficient. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

Senate Bill 375

SB 375 was adopted in September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable community's strategy or alternate planning strategy for consistency with its assigned targets.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, CEQA incentivizes, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as "transit priority projects."

Senate Bill X7-7 (SB X7-7)

SB X7-7, enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water

Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. Additionally, SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

California Green Building Standards Title 24, Part 6

. Title 24 of the CCR was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the CEC (and revised if necessary) (California Public Resources Code [PRC], Section 25402(b)(1)). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California PRC, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California PRC, Section 25402(d)) and cost effectiveness (California PRC, Sections 25402(b)(2) and (b)(3)). These standards are updated to consider and incorporate new energy efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2022 Title 24 standards are the currently applicable building energy efficiency standards were adopted on August 11, 2021 and will become effective on January 1, 2023. According to the California Energy Commission (California Energy Commission 2022), the benefits of the 2022 standards are that they:

- Increase on-site renewable energy generation from solar.
- Increases electric load flexibility to support grid reliability.
- Reduces emissions from newly constructed buildings.
- Reduces air pollution for improved public health; and
- Encourage adoption of environmentally beneficial efficient electric technologies.

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as "CALGreen," and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code

requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings and schools and hospitals. The CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings;
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance;
- Diversion of 65% of construction and demolition waste from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency;
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations; and
- Low-pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle board.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements, stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 25% cement reduction, and cool/solar-reflective roofs (24 CCR Part 11).

The CPUC, CEC, and CARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. The key policy timelines include the following: (1) all new residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by 2030. As most recently defined by the CEC in its 2015 Integrated Energy Policy Report, a ZNE code building is "one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building" using the CEC's Time Dependent Valuation metric.

Title 20. Title 20 of the CCR requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning

heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Executive Order B-30-15 (EO B-30-15)

Executive Order B-30-15, signed by Governor Jerry Brown on April 20, 2015, identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achievement of this goal, EO B- 30-15 calls for an update to CARB's Scoping Plan to express the 2030 target in terms of MMT CO_2e. EO B-30-15 also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

Senate Bill 32 and Assembly Bill 197

SB 32 and AB 197 (enacted in 2016) are companion bills that set new statewide GHG reduction targets, make changes to CARB's membership, increase legislative oversight of CARB's climate change–based activities, and expand dissemination of GHG and other air quality–related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

Local

Currently, greenhouse gas emission limits for projects such as the proposed Project, have not been adopted by the Imperial County Air Pollution Control District (ICAPCD). In the absence of GHG significance thresholds, it's acceptable to utilize thresholds from South Coast Air Quality Management District (SCAQMD) as these thresholds have been utilized throughout imperial county (SCAQMD, 2008). These thresholds state that screening thresholds for industrial should be 10,000 MT/year CO2e, 3,500 MT/year CO2e for residential projects and 3,000 MT/year CO2e for mixed use projects. Given this, using a 3,000 MT/year CO2e threshold would be recommended (LdN Consulting, 2020b).

General Plan Consistency

The Imperial County General Plan contains goals, objectives, policies and/or programs to conserve the natural environment of Imperial County, including air quality. Table 5.7-1 summarizes the Project's consistency with the applicable air quality goal and objectives from the General Plan.

TABLE 5.7-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN AIR QUALITY GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
Conservation and Open Space Element		
Goal 7: The County shall actively seek to improve and maintain the quality of air in the region. • **Objective 7.6:** Explore and assess strategies to reduce greenhouse gas emissions in the County.	Yes	The Imperial County Air Pollution Control District (ICAPCD) seeks to improve and maintain the quality of air in Imperial County through issuance of air quality management plans, rules, and regulations that reflect both state and federal requirements for meeting air quality objectives. The proposed Specific Plan must comply with the requirements of these plans, rules, and regulations to gain approval from the County.

Source: Imperial County, 2016.

5.7.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
2. Conflict with an applicable plan or policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Analysis

Impact 5.7-1: Would development of the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

Construction activities for Phase 1 through Phase 4 would occur within a timeframe of 20 to 50 years. Grading and construction of the Project will produce approximately 2,956.83 MT of CO_2e over a three-year buildout. Based on SCAQMD methodology, it is recommended to average the construction emissions over the Project life, which is assumed to be 30 years (SCAQMD, 2008). Given this, the annual construction emission for the proposed Project is 98.56 MT of CO_2e per year and is shown in Table 5.7-2.

TABLE 5.7-2: PROPOSED PROJECT CONSTRUCTION CO2E EMISSIONS SUMMARY MT/YEAR

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
2021	0.00	862.49	862.49	0.17	0.00	866.83
2022	0.00	1872.25	1872.25	0.14	0.00	1875.75
2023	0.00	213.85	213.85	0.02	0.00	214.25
					TOTAL	**2,956.83**
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						98.56

Source: LdN Consulting, 2020b.

Operational Emissions

The proposed Project buildout would generate 872.85 MT CO2e annually, which is shown in Table 5.7-3. These emissions include the design as identified within this report and assume all electrical emissions are offset with renewable sources. The site would be operational roughly 67% of the time. During the season when the facilities are not operational, some energy use is expected though would be minimal. Solar however will produce power year-round. Based on this, GHG emissions from energy sources are anticipated to be zero. It should be noted: if the solar offset only 15 percent of the electrical use the project emissions would still be under the 3,000 MT/year CO2e threshold.

TABLE 5.7-3: OPERATIONAL GHG EMISSIONS (MT/YEAR) – OCTOBER THROUGH MAY

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	0.11	0.11	0.00	0.00	0.11
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	678.19	678.19	0.05	0.00	679.46
Waste	12.95	0.00	12.95	0.77	0.00	32.10

TABLE 5.7-3: OPERATIONAL GHG EMISSIONS (MT/YEAR) – OCTOBER THROUGH MAY

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Water	2.07	53.63	55.70	0.21	0.01	62.62
					Construction Emissions	98.56
					Project Total GHG Emissions	872.85

Data is presented in decimal format and may have rounding errors. Data is reduced 67% due to operational year (October to May)
Source: LdN Consulting, 2020b.

As shown on Table 5.7-3, neither construction activities nor operational activities would generate yearly GHG emissions in excess of the 3,000 MT/year CO_2e threshold. Therefore, no significant impacts would be expected.

Impact 5.7-2: Would the project conflict with an applicable plan or policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

A proposed project exceeding the 20,000 annual MT screening threshold could have a significant environmental impact under CEQA. The proposed Project would not exceed the threshold; thus, emissions, when combined with existing, approved, proposed, and reasonably foreseeable projects within the County would not result in cumulative emissions that would conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases. Implementation of the project would not exceed the IPAPCD GHG emission thresholds; and thus, would not cumulatively contribute to significant or adverse impacts.

5.7.4 Mitigation Measures

No mitigation is required.

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5.8. Hazards and Hazardous Materials

This section describes the existing conditions with regard to potential hazards within the Glamis Specific Plan Area (GSPA), the regulatory framework, potential hazards created as a result of implementing the proposed Specific Plan and provides mitigation measures to reduce these impacts. The regulatory framework discussion focuses on the federal, state, and local regulations that apply.

The analysis presented in this section is based, in part, on the *Hazardous Materials Technical Study* prepared by Ninyo & Moore (2020). This report is provided as Appendix I of this EIR.

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments were received on hazardous materials and waste.

Issues Scoped out as part of the Initial Study

The Imperial County Planning and Development Services Department (County) determined in the Initial Study/Notice of Preparation (IS/NOP), located in Appendices A-1 and A-2, that the following environmental issue areas resulted in no impact or less-than-significant impact, and were scoped out of requiring further review in this draft EIR. Please refer to Appendices A-1 and A-2 of this Draft Environmental Impact Report (EIR) for a copy of the NOP/IS and additional information regarding these issue areas:

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Based on a search of the Government Code Section 65962.5 “Cortese” list, the Glamis Beach Store is not listed as a hazardous materials site and is not listed on the Cortese Knox list. According to the State Water Resources Control Board (SWRCB), there are no Underground Storage Tanks (USTs) in the vicinity of the landfill. This environmental parameter is not proposed for further analysis in the Draft EIR.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The nearest school Magnolia Union Elementary School) is located 21 miles west of the Project site.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. Based on a search of the Government Code Section 65962.5 “Cortese” list, the Glamis Beach Store is not listed as a hazardous materials site.

- Result in a safety hazard or excessive noise for people residing or working in an area located within an airport land use plan or, within two miles of a public airport or public use airport. The Project is not located within the Airport Land Use Compatibility Plan for Imperial County Airports (County of Imperial, 1996) or within two miles of a public airport or public use airport. The nearest public use airport, Holtville Airport, is located 14 miles southwest the project vicinity.

5.8.1. Environmental Setting

The GSPA is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR-78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the Project site is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County. The GSPA contains the only private commercial land uses within the project vicinity and is surrounded by open desert land that is managed by the Bureau of Land Management (BLM). The GSPA is adjacent to the Imperial Sand Dunes Recreation Area (ISDRA), the largest sand dunes area in the State of California.

Directly northwest of the GSPA is the North Algodones Dunes Wilderness (NADW); which consists of approximately 26,000 acres of land managed by the BLM as part of the National Wilderness Preservation System. Additionally, the Chocolate Mountain Aerial Gunnery Range (CMAGR) is located approximately 3 miles to the north of the GSPA. Within all of the various BLM lands surrounding the GSP, the BLM has designated Recreation Management Zones (RMZs) which dictate the allowable recreation activities within those areas and provide for BLM's management objectives within those areas.

Hazardous Materials Technical Study

A Hazardous Materials Technical Study (HMTS) was prepared for the proposed Project (Ninyo & Moore, 2020), which is included as Appendix K of this Draft EIR. The analysis contained in this section is based, in part on the findings of this technical report.

The HMTS consisted of a review and summary of publicly available federal, state, and local regulatory databases and historical resources. Historical and regulatory research was performed in August and September 2020. This report addresses existing environmental conditions at the site.

This HMTS included the activities listed below.

- Reviewed physical setting information (e.g., topographic and geologic maps, groundwater elevation data, etc.) for the site.
- Reviewed federal, state, and local regulatory agency databases for the site. The purpose of this review was to document the locations of facilities with unauthorized releases of

hazardous materials or wastes to soil and/or groundwater, as well as the regulatory status, where available.

- Reviewed fire insurance map, historical aerial photographs, and historical topographic maps to document, in general, areas at the site and vicinity that may have been historically developed with uses indicative of potential environmental concerns (e.g., agricultural, commercial, industrial, etc.).
- Reviewed the State Water Resources Control Board (SWRCB) GeoTracker website, the California Department of Toxic Substances Control (DTSC) EnviroStor website, and other regulatory online databases to supplement information in the database report.

Based upon the results of this HMTS, the following findings and opinions are provided.

- The Glamis Beach Store property has a closed unauthorized release case (7T2227016) associated with a release from an unspecified UST. The case was opened in June 1991 and closed in August 1992. The RWQCB and ICPHD were both contacted for additional information related to the closed unauthorized release case; however, the agencies did not have records for the case.
- Potential environmental concerns in the site vicinity include a petroleum pipeline operated by Kinder Morgan along the UPRR and commonly encountered environmental conditions associated with the railroad rights-of-way (ROW) including the potential for creosote-treated railroad ties and herbicides to be present in the immediate vicinity of the railroad. Based on the absence of a reported release from the fuel pipeline and distance from railroad tracks, these off-site potential issues are not a concern to the site at this time.

Wildland Fire

The GSPA is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan, the potential for a major fire in the unincorporated areas of the County is generally low (County of Imperial, n.d.). Additionally, according to the Draft Fire Hazard Severity Zone Map for Imperial County prepared by the California Department of Forestry and Fire Protection (CALFIRE), the GSPA is not located in or near state responsibility areas or lands classified as very high hazard severity zones (CALFIRE, 2007).

5.8.2. Regulatory Setting

A variety of federal, state, and local laws, regulations, and/or policies pertain to protection of public safety from hazardous materials and waste (including radioactive waste), wildfire, and disease vectors. These are described below.

Federal

United States Environmental Protection Agency (USEPA)

The U.S. Environmental Protection Agency (USEPA) provides leadership in the nation's environmental science, research, education, and assessment efforts. The USEPA works closely with other federal agencies, state and local governments, and Indian tribes to develop and enforce regulations under existing environmental laws. The USEPA is responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes responsibility for issuing permits, and monitoring and enforcing compliance. Prior to August 1992, the principal agency of the federal level regulating the generation, transport, and disposal of hazardous waste was the EPA under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the California DTSC was authorized to implement the State's hazardous waste management for the USEPA.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 was enacted to create a management system to regulate waste from "cradle-to-grave." The USEPA states that RCRA's goals are to protect the public from harm caused by waste disposal, to encourage reuse, reduction, and recycling, and clean up spilled or improperly stored wastes. Waste management involves the collection, transportation, processing, recycling or disposal of waste materials. In response to the 1984 Hazardous and Solid Waste Amendments to the RCRA, the USEPA revised the *Criteria for Classification of Solid Waste Disposal Facilities and Practices* set forth in 40 Code of Federal Regulations (CFR) Part 257 and Part 258. Subtitle D of the RCRA addresses non-hazardous solid wastes, as well as certain hazardous wastes which are exempted from the Subtitle C regulations such as: hazardous wastes from households and from conditionally exempt small quantity generators. Subtitle D also includes national technical criteria (regulations) which include specific requirements for location, operation, design (liner, leachate collection, run-off controls, etc.), groundwater monitoring, corrective action, closure and post-closure care, and financial assurance responsibility. Subtitle D also fulfills EPA's mandate under Section 405(d) of the Clean Water Act, regulations governing the use and disposal of sewage sludge.

State

Safety and Health Regulations – California Occupational Safety and Health Administration

Workers who handle or come in contact with hazardous materials or potentially hazardous wastes or other workplace hazards are subject to worker safety requirements to protect employees. In both instances, site safety plans are mandatory as required by federal and state Occupational Safety and Health Administration (OSHA) requirements. Such site safety plans typically include provisions for safety training, safety equipment, accident and illness prevention programs, hazardous

substance exposure warnings, and emergency response and fire prevention plan preparation. The California OSHA (Cal/OSHA) is the State agency responsible for assuring worker safety in the handling and use of chemicals in the workplace. Cal/OSHA assumes primary responsibility for developing and enforcing state workplace safety regulations. Because the State of California has a federally approved OSHA program, it is required to, and has, adopted regulations that are at least as stringent as those found in Title 29 CFR.

Cal/OSHA regulations concerning the use of hazardous materials in the workplace, as detailed in Title 8 California Code of Regulations (CCR), include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that Material Safety Data Sheets be available to employees and that employee information and training programs be documented.

Hazardous Materials Release Response Plans and Inventory Act of 1985

The *Hazardous Materials Release Response Plans and Inventory Act*, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a hazardous materials business plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined as raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous waste.

Assembly Bill (AB) 2948 (Tanner) – County Hazardous Waste Management Plans

In 1988, the State Assembly passed Assembly Bill (AB) 2948 in response to the growing concern regarding hazardous waste management in California (CalRecycle, 2012). AB 2948 enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within its jurisdiction. The *Imperial County Hazardous Materials Area Plan* addresses the use, storage, and transportation of hazardous materials, as well as the generation and transportation of hazardous wastes and is discussed in more detail below.

Hazardous Waste Control Act

The *Hazardous Waste Control Act* created the state hazardous waste management program, which is similar to, but more stringent than, the federal RCRA program. The Act is implemented by regulations contained in Title 22 CCR, *California Hazardous Waste Control Law*, which describes

the following required aspects for the proper management of hazardous waste: identification and classification; generation and transport; design and permitting of recycling, treatment, storage, and disposal facilities; treatment standards; operation of facilities and staff training; and closure of facilities and liability requirements.

Department of Toxic Substance Control

The management of hazardous materials and waste within the State of California falls within the jurisdiction of the California Environmental Protection Agency (Cal-EPA) and the DTSC. DTSC regulates hazardous waste, cleans existing contamination, and looks for ways to reduce hazardous waste produced in California. DTSC's authority to regulate hazardous waste in California stems from USEPA authorization to carry out the federal RCRA of 1976. Additional authority is given to DTSC by the California Health and Safety Code. DTSC also oversees the implementation of the hazardous waste generator and on-site treatment program, which is one of six environmental programs implemented at the local level within the Certified Unified Program Authority (CUPA). There are 72 CUPAs, which are generally part of the local fire department or environmental health department, that have authority to enforce regulations, conduct inspections, administer penalties, and hold hearings. On January 1, 2005, the DTSC was authorized by the Cal/EPA as the Imperial County CUPA (DTSC, 2020).

Government Code Section 65962.5 (Cortese List)

The provisions in Government Code section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA). Because this statute was enacted over twenty years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information to be included in the Cortese List does not exist. Government Code section 65962.5 was originally enacted in 1985, and per subsection (g), the effective date of the changes called for under the amendments to this section was January 1, 1992. While Government Code Section 65962.5 makes reference to the preparation of a "list," many changes have occurred related to web-based information access since 1992 and this information is now largely available on the Internet sites of the responsible organizations. Those requesting a copy of the Cortese "list" are now referred directly to the appropriate information resources contained on the Internet web sites of the boards or departments that are referenced in the statute.

California Highway Patrol

The California Highway Patrol (CHP) is an agency of the State of California with patrol jurisdiction over all California highways. The CHP performs inspections of hazardous materials carriers and enforces hazardous materials transport regulations. The CHP under the Title 13 CCR,

Chapter 6, Hazardous Materials, and the CFR Title 49 regulates transport of hazardous materials. When a hazardous material/waste spill originates on a highway, the CHP is responsible for direction of cleanup and enforcement.

California Department of Transportation

Caltrans, CHP, and the Imperial County Department of Public Works (DPW) regulate transportation of hazardous materials. Drivers must have a hazardous materials endorsement to operate a commercial vehicle carrying hazardous materials. During the transporting of materials, a route map must be maintained that indicates safe routing and safe stopping places along the route.

Local

Imperial County General Plan Seismic and Public Safety Element

The Imperial County General Plan includes a "Seismic and Public Safety Element." The "Seismic and Public Safety Element" identifies potential natural and human-induced hazards and provides policy to avoid or minimize the risk associated with hazards. Potential hazards must be addressed in the land use planning process to avoid the unfolding of dangerous situations. The policies and implementation measures in the General Plan applicable to the Project are outlined in Table 5.8--1. In January 2021, the Imperial County Board of Supervisors voted to incorporate the updated Multi-Jurisdictional Hazard Mitigation Plan into the County's Seismic and Public Safety Element as an appendix.

Imperial County-Mexicali Emergency Response Plan

The Binational Prevention and Emergency Response Plan between Imperial County, California, and the city of Mexicali, Baja California, was established as part of a joint contingency plan (JCP) between the United States of America (U.S.) and Mexico. The JCP was signed in 1999 and provided a foundation for collaboration for the border area and the basis for preparedness, mitigation, response, and prevention of hazardous substances along the inland international boundary. A memorandum of understanding (MOU) was developed to reinforce the jurisdictional cooperation between the two nations. The MOU with the corresponding emergency preparedness and response plan was developed with the support of the USEPA (Imperial County, 2005).

Imperial County Multi-Jurisdictional Hazard Mitigation Plan Update

The Imperial County Multi-Jurisdictional Hazard Mitigation Plan (MHMP) Update was developed in partnership with the County of Imperial, the City of Brawley, the City of Calexico, the City of Calipatria, the City of El Centro, the City of Holtville, the City of Imperial, the City of Westmorland, the Imperial Irrigation District (IID), and the Imperial County Office of Education. This document is a comprehensive update to the updated MHMP from 2014. The purpose of the MHMP is to reduce death, injury, and disaster losses from both natural and human-caused disasters

in Imperial County through outlining goals, strategies, and actions regarding hazard mitigation (Imperial County, 2020).

Imperial County Hazardous Materials Area Plan

The Imperial County Hazardous Materials Area Plan addresses the use, storage, and transportation of hazardous materials, as well as the generation and transportation of hazardous wastes. The Hazardous Materials Area Plan identified the federal, State, and local agencies responsible for incidents involving the release or threatened release of hazardous materials. The primary responsibility and authority lie with the Incident Commander, who activates the responses consistent with the plan. The Hazardous Materials Area Plan also identifies the existing mutual aid agreements with Yuma County and the California Department of Forestry and Fire Protection (Cal Fire). Existing plans and documents that have also been taken into account include the Imperial County Emergency Operations Plan (EOP), the MHMP, the Imperial Valley Hazardous Emergency Assistance Team Joint Powers Agreement, and the U.S. – Mexico Environmental Program (November 2016).

Imperial County Office of Emergency Services – Emergency Operations Plan

The Imperial County Office of Emergency Services (OES) provides emergency management services for Imperial County including the seven cities/towns in the county as well as special districts. The OES coordinates emergency operations and develops plans for emergency preparedness, response, recovery and mitigation to natural/man-made disasters, and technological disasters. The Imperial County Fire Department (ICFD) is the local OES and is the lead agency for the Imperial County Operational Area (OA), in which the ICFD develops emergency management plans, conducts public education, establishes emergency operations center operations, and participates in interagency coordination (Imperial County, 2007). The OES serves as a liaison between the state and local government political subdivisions (California Emergency Services Act, Chapter 7, Division 1, Title 2).

Imperial County has developed an OA EOP which describes coordinated guidance and procedures to prepare for and respond to emergency risks. The EOP is consistent with the requirements of the Standardized Emergency Management System (SEMS), which is required by California Government Code Section 8607(a). All local government agencies are required to use SEMS when responding to multi-jurisdictional or multi-agency emergencies to be eligible for state reimbursement of response-related personnel costs. The EOP is also consistent with the requirements of the U.S. Department of Homeland Security National Incident Management System (NIMS), which is a national standardized methodology to incident management and response.

County of Imperial Fire Prevention and Explosives Ordinance

Imperial County has a Fire Prevention and Explosives Ordinance (Section 53101-53300), which provides regulations related to fire or explosion risks. The ordinance includes regulations related to the storage of flammable materials and radioactive materials; fireworks permits; and abatement standards for weeds and other vegetation.

TABLE 5.8-1 CONSISTENCY WITH GENERAL PLAN HAZARDOUS MATERIALS AND PUBLIC HEALTH GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
Seismic and Public Safety Element		
Goal 1: Include public health and safety considerations in land use planning. • **Objective 1.8** Reduce fire hazards by the design of new developments.	Yes	The proposed Specific Plan is committed to protecting public health and safety by providing proposed zoning with compatible allowable uses, a Conceptual Site plan showing preferred land uses within a compatible physical arrangement. Future development within the Project site will be required to comply with California and County building codes, and seismic standards. Proposed development will be regulated within flood-way areas in accordance with the Federal Emergency Management Agency (FEMA). Avoidable seismic risks will be avoided. The proposed Specific Plan implements measures, commensurate with risks, to reduce injury, loss of life, destruction of property and disruption of service. Environmental hazards will be considered when siting critical proposed facilities within the Glamis Specific Plan Area (GSPA).
Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena. • **Objective 2.1** Ensure the adequacy of existing emergency preparedness and evacuation plans to deal with identified hazards and potential emergencies.	Yes	The proposed Specific Plan ensures that adequate emergency preparedness and evacuation plans to respond to identified hazards and potential emergencies by implementing additional hydrant connections within Vendor Row as well as, during Special Events, on-site law enforcement and fire protection will be provided with applicable services and apparatus (refer to Chapter II. Specific Plan, F. Public Safety Services). The proposed Specific Plan is appropriately regulated with applicable provisions including the Alquist – Priolo Special Studies Zone Act, California Building Code and Title 9 Division 15 of the County Land Use Ordinance. Furthermore, the proposed Specific Plan implements all site-specific recommendations set-forth in the Geotechnical Report prepared for the project. Additionally, signage will be strategically located throughout the GSPA to prevent unsafe crossings of State Route 78 (SR-78) and the Union Pacific Railroad (UPRR). A proposed off highway vehicle (OHV)

TABLE 5.8-1 CONSISTENCY WITH GENERAL PLAN HAZARDOUS MATERIALS AND PUBLIC HEALTH GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
		and pedestrian under-crossing in the vicinity of SR-78 and the Glamis Mainstreet will be built in concert with the build-out of the project.
Goal 3: Protect the public from exposure to hazardous materials and wastes. • **Objective 3.1:** Discourage the transporting of hazardous materials/waste near or through residential areas and critical facilities. • **Objective 3.2:** Minimize the possibility of hazardous materials/waste spills. • **Objective 3.4:** Adopt and implement ordinances, policies, and guidelines that assure the safety of County ground and surface waters from toxic or hazardous materials and wastes.	Yes	Vehicle repair within the GSPA may result in accidental spillage and public exposure of hazardous materials and waste. Vehicle repair uses will be on raised impervious concrete pads to prevent public exposure and groundwater contamination of hazardous materials (as described in Chapter II, Section C, Subsection 4). If a use provides fuels or other hazardous material or repairs that include such fuels or material, the operator of such a space shall secure, in addition to any building permits that may be required the approval from the ICFD and shall meet all such regulations that may apply to such services (see Chapter. III, Section 93308.03).
Flood Hazards Policy 2: Regulate and restrict development near major water courses and floodplains through application of appropriate land use measures.	Yes	The proposed Specific Plan adheres to the regulations and restrictions proposed in the Seismic and Public Safety Element to implement procedures that avoids development near major water courses and floodplains.
Flood Hazards Policy 3: Both the ground floor elevation of any building for human occupancy and the driving surface, if designated evacuation routes within the 100-year floodplain, shall be constructed above the projected profile of a 100-year flood event.	Yes	The conceptual grading for the proposed Specific Plan is designed to meet the County of Imperial's drainage requirements, provide flood protection for future land uses within the entire GSPA and release the drainage to the southwest in an overall equivalent historical pattern of natural drainage courses consistent with State drainage law. The GSPA will be graded so as to protect all building pads from the 100-year storm event and convey offsite flow in accordance with County of Imperial approval.
Flood Hazards Policy 4: Require all new development for human occupancy within the 100-year floodplain to be adequately flood-proofed.	Yes	All new permanent development within the GSPA is adequately flood-proofed.
Flood Hazards Policy 5: Establish technical design criteria which minimizes or mitigates impacts associated with crossing of floodplains by development. Unless such engineering alternatives are implemented, development in floodplains is to be restricted or prohibited.	Yes	The GSPA follows technical design criteria that either minimizes or mitigates impacts associated with crossing of floodplains by development. Future development of structures in floodplains is to be avoided.

Source: County of Imperial, n.d, 1997

5.8.3. Analysis of Project Effects and Significance Determination

The potential impacts associated with the proposed Specific Plan are evaluated on a qualitative basis through a comparison of existing conditions within the Project site and the anticipated proposed Specific Plan effects. The potential for impacts to hazards/hazardous materials would exist if the effect described under the criteria below occurs. The evaluation of proposed Specific Plan impacts is based on the significance criteria adopted by Imperial County, which the County has determined to be appropriate criteria for this Draft EIR.

Guidelines for Determination of Significance

The proposed Specific Plan would be considered to have a significant impact if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
2. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
3. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Analysis

Impact 5.8-1: Would the Project result in the creation of a significant public hazard from the routine transport, use, or disposal of hazardous materials?

The GSPA is characterized as an area of open desert consisting of several adjoined one- and two-story metal building structures representing the Glamis Beach Store, and metal corrugated water tanks situated directly behind the store. Additionally, there is a separate seasonal off highway vehicle (OHV) repair business connected to the Glamis Beach Store. A wood fence for delineated parking/vendor areas is located directly west of the store. A communications facility tower is located at the southeast portion of the property. Due south is an apartment, large recreational vehicle storage garage, and other related equipment storage buildings. Additionally, a dilapidated pre-fabricated residential structure is located on the southeast corner of the GSPA. To the west, on the opposite side of the Glamis Beach Store, there is an existing RV storage area as well as vacant desert land. There is also an existing 20-acre paved RV storage area for Glamis Dunes Storage and Luv 2 Camp RV Trailer Rentals, and the existing historical cemetery located at the southwest corner of SR-78 and Ted Kipf Road. Lastly, on the northeast side of the GSPA, crossing the Union Pacific Railroad, there are two triangular parcels that are currently vacant. The proposed Specific Plan would not require the limited transport, storage, and use of fuels, polymer-based sealants, and other fluids for the fueling/servicing of construction equipment. These practices are already in place for current operations and the proposed Specific Plan would not substantially increase the transport or use of hazardous materials above current levels.

Transportation, storage, and disposal/recycling of such products are extensively regulated at the local, state and federal levels. Current and future construction and operations are, and will be, required to be in compliance with these regulations. The current inventory of chemicals on site are not expected to increase markedly as a result of the proposed Specific Plan. Because operations would be similar to current operations, impacts would be less than significant.

Impact 5.8-2: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Implementation of the proposed Specific Plan would generate construction trips and the potential for temporary roadway lane closures during construction of proposed traffic improvements, which could temporarily affect an emergency response or evacuation plan.

Impact 5.8-3: Expose people or structures to a significant risk of loss, injury or death involving wildland fires?

The GSPA is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan, the potential for a major fire in the unincorporated areas of the County is generally low (County of Imperial, n.d.). This is considered a less than significant impact and no mitigation would be required.

5.8.4. Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant.

5.9 Hydrology/Water Quality

This section addresses potential hydrology and water quality resource impacts that may result from implementation of the proposed Specific Plan. The following discussion addresses the existing conditions in the Glamis Specific Plan Area, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Specific Plan, as applicable.

Information used in preparing this section and in the evaluation of potential impacts to geology, soils, and paleontological resources was derived from of the following sources,

- *Geotechnical Engineering Feasibility Report* prepared by Earth Systems Pacific (August 2019: Appendix G), and
- *Hazardous Materials Technical Study* prepared by Ninyo and Moore (Ninyo and Moore 2020, Appendix I).

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a public scoping meeting was conducted, and written comments were received from regulatory agencies. The following issues related to hydrology and water quality were raised by the California Department of Fish and Wildlife (CDFW) and the California Department of Transportation (Caltrans) and are addressed in this section:

- A discussion of … Project related changes on drainage patterns and water quality within, upstream, and downstream of the Project site, including volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site.
- Based on review of material submitted with the NOP and review of aerial photography, the Project may be subject to Notification to CDFW pursuant to Fish and Game Code section 1602. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: Substantially divert or obstruct the natural flow of any river, stream or lake; Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or Deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.
- Provide a letter from the Floodplain Administrator stating that this project has no rise or a letter showing coordination with the Floodplain Administrator.
- The Specific Plan’s Conceptual Grading and Drainage Plan is insufficient:

  - Provide existing topographic information with labels (typically 0.1' contours in the desert areas).
  - Provide proposed topographic information with labels (typically 0.1' contours in the desert areas).
  - Both maps/exhibits must clearly show the drainage patterns along SR-78, which in the current figure is not visible at all.
- Coordinate with Caltrans' Survey Branch to obtain Caltrans R/W and SR-78 stationing, centerline, and alignment name to be shown and labeled on all plans and maps containing SR-78.
- Provide information on the maps/exhibits to show how the conceptual offsite drainage will cross the Ted Kipf Road along SR-78. Additional runoff coming from the culvert at northeast side of the site will have potential impact to the existing Caltrans drainage inlet located at the southwestern side of the project.
- Hydrology and Hydraulics Study may be required to determine the effect of the proposed project to the existing drainage system in the area.

5.9.1. Environmental Setting

The GSPA is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR-78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the Project site is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County. The Project site contains the only private commercial land uses within the project vicinity and is surrounded by open desert land that is managed by the Bureau of Land Management (BLM). The Project site is adjacent to the Imperial Sand Dunes Recreation Area (ISDRA), the largest sand dunes area in the State of California.

Directly northwest of the Project site is the North Algodones Dunes Wilderness (NADW); which consists of approximately 26,000 acres of land managed by the BLM as part of the National Wilderness Preservation System. Additionally, the Chocolate Mountain Aerial Gunnery Range (CMAGR) is located approximately 3 miles to the north of the Project site. Within all of the various BLM lands surrounding the GSP, the BLM has designated Recreation Management Zones (RMZs) which dictate the allowable recreation activities within those areas and provide for BLM's management objectives within those areas.

Localized Draining Conditions

As shown in Figure 4-5, *Existing Drainage*, the existing topography and drainage of the GSPA generally drains from the northeast to the southwest via existing earthen channels and berms. The northeast portion of the GSPA (Planning Areas 5 & 6) are openly affected by offsite flows and are directed towards three existing concrete culverts that pass under the UPRR. The drainage flows from

these three concrete culverts underneath the UPRR, flow through and/or around portions of the existing GSPA (Planning Areas 1, 2, 3, 4, 7 and 8) towards the southwest, which are located north and south of SR-78. All planning areas southwest of the UPRR, where future land uses are proposed, are protected by earthen channels and berms. The remaining open areas, throughout the entire site, have areas that are protected by existing earthen channels and berms.

Flooding

The Project site lies within two designated Federal Emergency Management Agency (FEMA) Flood Zones: A and X (see Figure 5.6-4, *Zone A Flood Boundary*) Zone "A" is defined as "Without Base Flood Elevation" and Zone "X" is defined as "Areas of 0.2% annual chance floodplain; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas of less than 1 square mile; and areas protected by levees from 1% annual chance flood." These zones are defined on FEMA Map Number 06025C1125C and 06025C1475C both effective 9/26/2008. As shown on Figure 5.6-4, the Project site is in an area where sheet and concentrated flow and erosion could occur (Earth Systems Pacific, 2019).

Aerial photos depict a natural storm channel erosion (dry stream beds) present in the middle of the GSPA and south of the Glamis Beach store. Therefore, uncontrolled concentrated flows may exist at or near the GSPA and debris flow may occur (Earth Systems Pacific, 2019).

Surface Water

A stormwater channel runs through a small portion of the northeast GPSA which is channeled under the railroad track. On the southeast portion, a wash is piped under SR 78. Several established washes and ephemeral washes were observed within Planning Areas 1 and 3 (Barrett Biological, 2019).

Groundwater

Depth to Groundwater

Free groundwater was not encountered in borings or test pits during explorations conducted in January of 2019. Boring depths exceeded 50 feet below the ground surface. Moisture contents observations of the soils indicate the soils are dry to moist (Earth Systems Pacific, 2019).

Perched Water Table

By definition, perched ground water conditions were not observed during our exploration. Observations did not indicate "wet" soils meaning free water was noted on the soil. Impermeable type soils (generally clay) were not found at depths ranging from the ground surface to 50 feet below ground surface (bgs). Moisture contents performed in the lab indicated values between 1 percent and 9 percent, which indicates degrees of saturation less than approximately 50 percent (Earth Systems Pacific, 2019).

Based on the information provided above, it is anticipated that the current depth of groundwater below the GSPA surface is over 100 feet. Groundwater levels may fluctuate with precipitation, irrigation, drainage, regional pumping from wells, site grading, and nearby faults (Earth Systems Pacific, 2019).

According to the Water Supply Assessment (Appendix K) prepared in support of this Draft EIR, groundwater levels in the vicinity of the GSPA have been influenced by the presence of the canal systems, including the Coachella Canal, East Highline Canal, and associated laterals and drains. Seepage from the unlined Coachella Canal created a groundwater mound in the shallow alluvial aquifer of East Mesa, with water levels rising over 70 feet in some areas (Dubose, 2020). Groundwater level decline in the vicinity of the Coachella Canal has been monitored since the late 1970s when the first 49 miles of the earthen canal channel was replaced with a concrete channel. United States Geological Survey (USGS) well 11S/15E-23M, which is approximately nine (9) miles southeast of the proposed well, shows an asymptomatic groundwater level decline from 20.68 feet bgs in 1979 to approximately 50 feet bgs at present. The water level elevations as of March 2020 were approximately 70 feet above mean sea level (AMSL). No groundwater levels have been reported along the Coachella Canal section that was lined in the late 2000s. However, a similar asymptotic decline could be expected. Groundwater levels in Imperial Valley have been historically measured at two multi-level wells located approximately 6.5 to 7.5 miles southwest of the GSPA. Water levels at these locations were within 10 feet of the ground surface in 1989. The groundwater elevation at that time was approximately 215 feet below mean sea level (bmsl). Groundwater levels in the irrigated areas have been controlled by the drain systems (Dubose, 2020). Current groundwater levels, although sparse, generally agree with historical groundwater elevation distributions. Groundwater elevations are higher in mountainous areas and East Mesa and decline towards Imperial Valley and the Salton Sea. This distribution of groundwater elevations suggests groundwater flow directions roughly coincide with topography. However, the flow of groundwater and distribution of groundwater levels is likely influenced by faults, which act as barriers, and changes in transmissivity.

The GSPA is located in the Amos Valley Groundwater Basin which is part of the East Mesa Groundwater Management Planning Area. The groundwater aquifer in the GSPA is estimated to have a capacity of approximately 1-to-1.5-million-acre feet (MAF) per year.

5.9.2. Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

Clean Water Act

The U.S. Environmental Protection Agency (USEPA) is the lead federal agency responsible for managing water quality. The Clean Water Act (CWA) of 1972 is the primary federal law that governs and authorizes the USEPA and the states to implement activities to control water quality. The various elements of the CWA that address water quality and that are applicable to the project is discussed below. Wetland protection elements administered by the U.S. Army Corps of Engineers (USACE) under Section 404 of the CWA, including permits for the discharge of dredged and/or fill material into waters of the U.S., are discussed in Section 5.3, Biological Resources.

Under federal law, the USEPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the U.S. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question; and (2) criteria that protect the designated uses. Section 304(a) requires the USEPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. The USEPA is the federal agency with primary authority for implementing regulations adopted under the CWA. The USEPA has delegated the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969, described below.

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the U.S. must obtain a water quality certification from the State Water Resources Control Board (SWRCB) in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate.

CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit program to control point source discharges from industrial, municipal, and other facilities if their discharges go directly to surface waters. The 1987 amendments to the CWA created a new section of the CWA devoted to regulating storm water or nonpoint source discharges (Section 402[p]). The EPA has granted California primacy in administering and enforcing the provisions of the CWA and the NPDES program through the SWRCB. The SWRCB is responsible for issuing both general and individual permits for discharges from certain activities. At the local and regional levels, general and individual permits are administered by Regional Water Quality Control Boards (RWQCBs).

Clean Water Act Section 303(d) Impaired Waters List

CWA Section 303(d) requires states to develop lists of water bodies that will not attain water quality standards after implementation of minimum required levels of treatment by point-source dischargers. Section 303(d) requires states to develop a total maximum daily load (TMDL) for each of the listed pollutants and water bodies. A TMDL is the amount of loading that the water body can receive and still be in compliance with applicable water quality objectives and applied beneficial uses. TMDLs can also act as a planning framework for reducing loadings of a specific pollutant from various sources to achieve compliance with water quality objectives. TMDLs prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows links between loading reductions and the attainment of water quality objectives.

Surface waters in the Imperial Valley Planning Area mostly drain toward the Salton Sea. The New and Alamo Rivers convey agricultural irrigation drainage water from farmlands in the Imperial Valley, surface runoff, and lesser amounts of treated municipal and industrial waste waters from the Imperial Valley. The flow in the New River also contains agricultural drainage, treated and untreated sewage, and industrial waste discharges from Mexicali, Mexico. The impaired water bodies listed on the 303(d) list for the New River Basin include the Imperial Valley Drains (managed by the Imperial Irrigation District [IID]), New River, and the Salton Sea. Further discussion of specific pollutant listings is provided on Table 5.9-1.

TABLE 5.9-1 303(d) WATERBODY IMPAIRMENTS

Water Body	Impairments
Imperial Valley Drains	
• Chlordane	• PCBs (Polychlorinated biphenyls)
• Chlorpyrifos	• Sedimentation/Siltation
• DDT (Dichlorodiphenyltrichloroethane)	• Selenium
• Dieldrin	• Toxaphene
• Imidacloprid	• Toxicity
New River (Imperial County)	
• Ammonia	• Imidacloprid
• Bifenthrin	• Indicator Bacteria
• Chlordane	• Malathion
• Chloride	• Mercury
• Chlorpyrifos	• Naphthalene
• Cyhalothrin, Lambda	• Nutrients
• Cypermethrin	• Organic Enrichment/Low Dissolved Oxygen
• DDD (Dichlorodiphenyldichloroethane)	• PCBs (Polychlorinated biphenyls)
• DDT (Dichlorodiphenyltrichloroethane)	• Sediment

TABLE 5.9-1 303(d) WATERBODY IMPAIRMENTS

Water Body	Impairments
Imperial Valley Drains	
• Diazinon	• Selenium
• Dieldrin	• Toxaphene
• Disulfoton	• Toxicity
• Hexachlorobenzene/ HCB	• Trash
Salton Sea	
• Ammonia	• Enterococcus
• Arsenic	• Low Dissolved Oxygen
• Chloride	• Nutrients
• Chlorpyrifos	• Salinity
• DDT (Dichlorodiphenyltrichloroethane)	• Toxicity

Source: SWRCB, Statewide Section 303(d)List, 2018.

Federal Emergency Management Agency/Executive Order 11988 – Floodplain Management

Executive Order (EO) 11988 directs federal agencies to avoid, to the extent practicable and feasible, short- and long-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever a practicable alternative can be found. Further, EO 11988 requires the prevention of uneconomic, hazardous, or incompatible use of floodplains; protection and preservation of the natural and beneficial floodplain values; and consistency with the standards and criteria of the National Flood Insurance Program (NFIP). The basic tools for regulating construction in potentially hazardous floodplain areas are local zoning techniques and Federal Emergency Management Agency (FEMA) floodplain mapping.

The FEMA administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues flood insurance rate maps (FIRM) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection covered by the FIRMs is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 (0.01) annual exceedance probability [AEP]) (i.e., the 100-year flood event).

For projects that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and, thus, result in the modification of the existing regulatory floodway, effective Base Flood Elevations (BFEs), SFHA, or conditional letter of map revision (CLOMR) would need to be prepared and approved by the California Department of Transportation (Caltrans), the County, and FEMA prior to any work occurring.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this act, the state must adopt water quality policies, plans, and objectives that protect the state's waters. The act sets forth the obligations of the SWRCB and RWQCBs pertaining to the adoption of Water Quality Control Plans and establishment of water quality objectives. Unlike the CWA, which regulates only surface water, the Porter-Cologne Water Quality Control Act of 1969 regulates both surface water and groundwater.

Water Quality Control Plan for the Colorado River Basin

The Water Quality Control Plan for the Colorado River Basin (or Basin Plan) prepared by the Colorado River Basin RWQCB (Region 7) identifies beneficial uses of surface waters within the Colorado River Basin region, establishes quantitative and qualitative water quality objectives for protection of beneficial uses, and establishes policies to guide the implementation of these water quality objectives. According to the Basin Plan the beneficial uses established for the Imperial Valley Drains, which include the Westside Main Canal, New River, and the Salton Sea include: industrial service supply; freshwater replenishment; water contact recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; preservation of rare, threatened, or endangered species; and aquaculture.

California Fish and Wildlife Code, Section 1602

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation pursuant to Section 1602 of the California Department of Fish and Game Code. Section 1602 makes it unlawful for an entity (i.e., any person, state, or local governmental agency or public utility) to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake without first notifying the California Department of Fish and Wildlife (CDFW) of such activity. The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW Streambed Alteration Agreement (SAA) must be obtained for any project that would result in an impact to a river, lake, or stream that would adversely affect any fish or wildlife resource.

California Toxics Rule

Under the California Toxics Rule, the USEPA has proposed water quality criteria for priority toxic pollutants for inland surface waters, enclosed bays, and estuaries. These federally promulgated criteria create water quality standards for California waters. The California Toxics Rule satisfies CWA requirements and protects public health and the environment.

National Pollutant Discharge Elimination System (NPDES) General Industrial and Construction Permits

The NPDES General Industrial Permit requirements apply to the discharge of stormwater associated with industrial sites. The permit requires implementation of management measures that will achieve the performance standard of the best available technology economically achievable and best conventional pollutant control technology.

Under the statute, operators of new facilities must implement industrial best management practices (BMPs) in a storm water pollution prevention plan (SWPPP) and perform monitoring of stormwater discharges and unauthorized non–stormwater discharges. Construction activities are regulated under the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit) which covers stormwater runoff requirements for projects where the total amount of ground disturbance during construction exceeds 1 acre. Coverage under a General Construction Permit requires the preparation of a SWPPP and submittal of a Notice of Intent (NOI) to comply with the General Construction Permit. The SWPPP includes a description of BMPs to minimize the discharge of pollutants from the sites during construction. Typical BMPs include temporary soil stabilization measures (e.g., mulching and seeding), storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or stormwater, and using filtering mechanisms at drop inlets to prevent contaminants from entering storm drains. Typical post construction management practices include street sweeping and cleaning stormwater drain inlet structures. The NOI includes site-specific information and the certification of compliance with the terms of the General Construction Permit.

Local

County of Imperial Land Use Ordinance, Title 9

The County's Ordinance Code provides specific direction for the protection of water resources and for the minimization of losses due to flood conditions. Applicable ordinance requirements are summarized below and are contained in Division 10, Building, Sewer, and Grading Regulations, and Division 16 - Flood Damage Prevention Regulations.

Chapter 10 – Grading Regulations. Section 91010.02 of the Ordinance Code outlines conditions required for issuance of a Grading Permit. These specific conditions include:

1. If the proposed grading, excavation or earthwork construction is of irrigatable land, that said grading will not cause said land to be unfit for agricultural use.

2. The depth of the grading, excavation or earthwork construction will not preclude the use of drain tiles in irrigated lands.

3. The grading, excavation or earthwork construction will not extend below the water table of the immediate area.

4. Where the transition between the grading plane and adjacent ground has a slope less than the ratio of 1.5 feet on the horizontal plane to 1 foot on the vertical plane, the plans and specifications will provide for adequate safety precautions.

Chapter 16 – Flood Damage Prevention Regulations. Section 91604.00 of the Ordinance Code specifies that a development permit shall be obtained before construction or development begins within any area of special flood hazards. It also outlines the conditions for issuance of the Floodplain Development Permit.

1. All development permits must be reviewed by the Flood Administrator to determine that the permit requirements of this ordinance have seen satisfied.

2. All other required State and Federal permits have been obtained.

3. The site is reasonably safe from flooding.

4. The proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined, but a floodway has not been designated. For purposes of this ordinance, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point.

Chapter 5 of Division 16 includes construction standards for all development within special floor hazard areas.

Imperial County Engineering Guidelines Manual

Based on the guidance contained in the County's Engineering Guidelines Manual, the following drainage requirements would be applicable to the Glamis Specific Plan.

III A. GENERAL REQUIREMENTS

1. All drainage design and requirements are recommended to be in accordance with the IID "Draft" Hydrology Manual or other recognized source with approval by the County Engineer

and based on full development of upstream tributary basins. Another source is the Caltrans I-D-F curves for the Imperial Valley.

2. Public drainage facilities shall be designed to carry the 10-year, 6-hour storm underground, the 25-year storm between the top of curbs provided two 12-foot minimum width dry lanes exist and the 100-year frequency storm between the right-of-way lines with at least one 12-foot minimum dry lane open to traffic. All culverts shall be designed to accommodate the flow from a 100-year frequency storm.

3. Permanent drainage facilities and right-of-way (ROW), including access, shall be provided from development to point of satisfactory disposal.

4. Retention volume on retention or detention basins should have a total volume capacity for a 3-inch minimum precipitation covering the entire site with no C reduction factors. Volume can be considered by a combination of basin size and volume considered within parking and/or landscaping areas. There is no guarantee that a detention basin outletting to an IID facility or other storm drain system will not back up should the facility be full and unable to accept the project runoff. This provides the safety factor from flooding by ensuring each development can handle a minimum 3-inch precipitation over the project site.

5. Retention basins should empty within 72 hours and no sooner than 24 hours in order to provide mosquito abatement. Draining, evaporation or infiltration, or any combination thereof can accomplish this. If this is not possible then the owner should be made aware of a potential need to address mosquito abatement to the satisfaction of the Imperial County Public Health Department. Additionally, if it is not possible to empty the basin within 72 hours, the basin should be designed for 5 inches, not 3 inches as mentioned in Item #4 above. This would allow for a saturation condition of the soil because of a 5-inch storm track. EHS must review and approve all retention basin designs prior to Imperial County Department of Public Works (DPW) approval. Nuisance water must not be allowed to accumulate in retention basins. The Imperial County Public Health Department may require a nuisance water abatement plan if this occurs.

6. The minimum finish floor elevation shall be 12 inches above top of fronting street curb unless property is below street level and/or 6 inches above the 100-year frequency storm event or storm track. A local engineering practice is to use a 5-inch precipitation event as a storm track in the absence of detailed flood information. The 100-year frequency storm would be required for detention calculations.

7. Finish pad elevations should be indicated on the plans, which are at or above the 100-year frequency flood elevation identified by the engineer for the parcel. Finish floor elevations should be set at least 6 inches above the 100-year flood elevation.

8. The developer shall submit a drainage study and specifications for improvements of all drainage easements, culverts, drainage structures, and drainage channels to the DPW for approval. Unless specifically waived herein, required plans and specifications shall provide a drainage system capable of handling and disposing of all surface waters originating within the subdivision and all surface waters that may flow onto the subdivision from adjacent lands. Said drainage system shall include any easements and structures required by the DPW or the affected Utility Agency to properly handle the drainage on site and off site. The report should detail any vegetation and trash/debris removal, as well as address any standing water.

9. Hydrology and hydraulic calculations for determining the storm system design shall be provided to the satisfaction of the Director, DPW. When appropriate, water surface profiles and adequate field survey cross-section data may also be required.

10. An airtight or screened oil/water separator or equivalent is required prior to permitting on-site lot drainage from entering any street right of way or public storm drain system for all industrial/commercial or multi residential uses. A maximum 6-inch drain lateral can be used to tie into existing adjacent street curb inlets with some exceptions. Approval from the DPW is required.

11. The County is implementing a storm water quality program as required by the SWRCB, which may modify or add to the requirements and guidelines presented elsewhere in this document. This can include ongoing monitoring of water quality of storm drain runoff, implementation of BMPs to reduce storm water quality impacts downstream or along adjacent properties. Attention is directed to the need to reduce any potential of vectors, mosquitoes, or standing water.

12. A Drainage Report is required for all developments in the County. It shall include a project description, project setting including discussions of existing and proposed conditions, any drainage issues related to the site, summary of the findings or conclusions, off-site hydrology, onsite hydrology, hydraulic calculations and a hydrology map.

County of Imperial General Plan

Because of the economic, biological, and agricultural significance water plays in the Imperial County, the Water Element and the Conservation and Open Space Element of the General Plan contain policies and programs, created to ensure water resources are preserved and protected. Table 5.9-2 identifies General Plan policies and programs for water quality and flood hazards that are relevant to the project and summarizes the project's consistency with the General Plan. While this EIR analyzes the project's consistency with the General Plan pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 5.9-2 CONSISTENCY WITH GENERAL PLAN WATER AND HYDROLOGY GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
Water Element		
Goal 1: The County will secure the provision of safe and healthful sources and supplies of domestic water adequate to assure the implementation of the County General Plan and the long-term continued availability of this essential resource. • **Objective 1.1:** The efficient and cost-effective utilization of local and imported water resources through the development and implementation of urban use patterns. • **Objective 1.2:** Cooperation between the Cities and County for the need to maintain, upgrade, and expand domestic water and sewage treatment facilities of the communities within the County, the need for the implementation of appropriate development fees, and the	Yes	As part of the proposed Specific Plan the applicant would seek a conditional use permit (CUP) for a new public water system well that would be able to pump up to 25 AF per year. As new development is implemented, this wastewater plant will be expanded as determined by the regulatory agencies.
Water Element (Continued)		
raising of service fees to off-set limited public financial resources. **Objective 1.3:** The efficient regulation of land uses that economizes on water consumption, enhances equivalent dwelling unit demand for domestic water resources, and that makes available affordable resources for continued urban growth and development.		
Goal 2: Long-term viability of the Salton Sea, Colorado River, and other surface waters in the County will be protected for sustaining wildlife and a broad range of ecological communities. • **Objective 2.2** A balanced ecology associated with the riparian and ruderal biological communities important as breeding and foraging habitats for native and migratory birds and animals occurring within the County. • **Objective 2.3** Preservation of riparian and ruderal habitats as important biological filters as breeding and foraging habitats for native and migratory birds and animals.	Yes	Riparian habitat and wetlands are not present on the Glamis Specific Plan Area (GSPA).

TABLE 5.9-2 CONSISTENCY WITH GENERAL PLAN WATER AND HYDROLOGY GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
Goal 4: The County will adopt and implement ordinances, policies, and guidelines that assure the safety of County ground and surface waters from toxic or hazardous materials and wastes. • **Objective 4.2** The provision of safe and efficient community wastewater treatment facilities which adequately service the present and future needs of residential, commercial, and industrial development within the Imperial Irrigation District service area.	Yes	The development and implementation of infrastructure abides by the ordinances, policies, and guidelines that reduce contamination and assure the safety of County ground and surface waters from toxic or hazardous materials and wastes. Therefore, the GSP is consistent with and results in the implementation of, this policy of the General Plan.
Conservation and Open Space Element		
Goal 2: The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability. • **Objective 2.6:** Attempt to identify, reduce, and eliminate all forms of	Yes	Riparian habitat and wetlands are not present on the GSPA.
Conservation and Open Space Element (Continued)		
pollution; including air, noise, soil, and water.		
Goals 6: The County will conserve, protect, and enhance water resources in the County. • **Objective 6.1:** Ensure the use and protection of all the rivers, waterways, and groundwater sources in the County for use by future generations. • **Objective 6.2**: Ensure proper drainage and provide accommodation for storm runoff from urban and other developed areas in manners compatible with requirements to provide necessary agricultural drainage. • **Objective 6.3:** Protect and improve water quality and quantity for all water bodies in Imperial County. • **Objective 6.4:** Eliminate potential surface and groundwater pollution through regulations as well as educational programs. • **Objective 6.7:** Prohibit the inappropriate siting of solid or hazardous waste facilities next to water bodies or over sources of potable groundwater or	Yes	The conceptual grading plan for the GSPA provides flood protection for future land uses within the entire GSPA and would release the drainage to the southwest in an overall equivalent historical pattern of natural drainage courses consistent with California drainage law. The on-site design northeast of the Union Pacific Railroad (UPRR) will provide flood protection (Planning Areas 5 and 6) by continuing the off-site flows with modifications to each of the earthen drainage berms and channels. These modifications will re-direct the drainage around each of the planning areas to the southwest towards the three existing concrete culverts that pass under the UPRR. The modified existing earthen berm north of Planning Area 5 will continue to redirect flows north and west as will a new earthen berm to the southeast for Planning Area 6, to the south and west. The remainder of the drainage will be directed into the modified existing earthen channels along each side of State Route 78 (SR-78). Each of these earthen

TABLE 5.9-2 CONSISTENCY WITH GENERAL PLAN WATER AND HYDROLOGY GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
recharge basins. In association with the cleanup of the New River, all existing landfills in or near the river should eventually be closed. • **Objective 6.8:** Discourage the use of hazardous materials in areas of the County where significant water pollution could pose hazards to humans or biological resources. • **Objective 6.9:** Identify and protect watersheds and key recharge areas for the protection of water quality and groundwater. • **Objective 6.10:** Encourage water conservation and efficient water use among municipal and industrial water users, as well as reclamation and reuse of wastewater. • **Objective 6.11**: Coordinate with the appropriate agencies for the availability of water to meet future domestic, industrial/commercial and agricultural needs.		channels and berms will be constructed on-site and will re-direct the existing flows in a manner consistent with the surrounding drainage patterns and practices. The manner and release of the drainage flows will be equivalent to the existing capture, conveyance and release to the Southwest under the UPRR, via existing concrete culverts. The proposed Project would protect water quality during construction through compliance with National Pollutant Discharge Elimination System (NPDES) General Construction Permit, storm water pollution prevention plan (SWPPP), and best management practices (BMPs). Design features and BMPs have also been identified to address water quality for the project. Water quantity would be maintained for the proposed Specific Plan by retaining the majority of the GSPA with pervious surfaces. Although the proposed Specific Plan may not improve water quality and quantity, it would protect existing conditions and satisfy County requirements. Therefore, the proposed Specific Plan is consistent with this objective.
Program: Structural development normally shall be prohibited in the designated floodways. Only structures which comply with specific development standards (Flood Drainage Prevention Regulation, Division 6) should be permitted in the floodplain.	Yes	The project has a very small residential component, and it would it place housing or other structures within a 100-year flood hazard area.
Land Use Element		
Goal 9: Identify and preserve significant natural, cultural, and community character resources and the County's air and water quality. • **Objective 9.2:** Reduce risk and damage from flood hazards by appropriate regulations.	Yes	The proposed Specific Plan has a very small residential component, and it would it place housing or other structures within a 100-year flood hazard area.

Sources: County of Imperial, 1997, 2015, 2016.

5.9.3. Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site?
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
5. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?
6. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
7. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Analysis

Impact 5.9-1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Construction

A stormwater channel runs through a small portion of the northeast section of the GSPA which is channeled under the railroad track. On the southeast portion, a wash is piped under SR-78. Several established washes and ephemeral washes were observed within the Planning Areas 1 and 3 (Barrett Biological, 2019). Implementation of the GSP would include demolition of the existing structures, site preparation, construction of new buildings, as well as infrastructure improvements including water, wastewater, transportation and renewable energy facilities (see Tables 4-3A and 4-3B). Demolition of existing structures, grading, stockpiling of materials, excavation and the import/export of soil and building materials, construction of new structures, and landscaping activities would expose and loosen sediment and building materials, which have the potential to mix with stormwater and urban runoff and degrade surface and receiving water quality.

Additionally, construction generally requires the use of heavy equipment and construction-related materials and chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents, and paints. In the absence of proper controls, these potentially harmful materials could be accidentally spilled or improperly disposed of during construction activities and could wash into and pollute surface waters or groundwater, resulting in a significant impact to water quality.

Pollutants of concern during construction activities generally include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. In addition, chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and concrete-related waste may be spilled or leaked during construction, which would have the potential to be transported via storm runoff into nearby receiving waters and eventually may affect surface or groundwater quality. During construction activities, excavated soil would be exposed, thereby increasing the potential for soil erosion and sedimentation to occur compared to existing conditions. In addition, during construction, vehicles and equipment are prone to tracking soil and/or spoil from work areas to paved roadways, which is another form of erosion that could affect water quality. However, the use of construction BMPs implemented as part of a SWPPP as required by the State Water Resources Control Board would avoid potential water quality degradation of receiving waters. All future development within the GSPA would require project-specific BMPs and a SWPPP as well, which are implemented as part of the County's construction permitting process.

Groundwater was not encountered in borings or test pits during explorations conducted in January of 2019. Boring depths exceeded 50 feet from the ground surface. Moisture contents observations of the soils indicate the soils are dry to moist. By definition, perched ground water conditions were not observed during exploration. Observations did not indicate "wet" soils meaning free water was noted on the soil. Impermeable type soils (generally clay) were not found at depths ranging from the ground surface to 50 feet bgs. Moisture contents performed in the lab indicated values between 1 percent and 9 percent, which indicates degrees of saturation less than approximately 50 percent (Earth Systems Pacific, 2019). Thus, the introduction of these materials into groundwater resources through percolation or inundation would result in less than significant water quality impacts.

The potential to create substantial erosion and siltation or violate any water quality standards or waste discharge requirements is considered significant. With implementation of Mitigation Measures (MMs) HWQ-1, 2, 3 and 4 impacts would be less than significant.

Operation

Implementation of MM HYQ-2 would require the Project to incorporate post-construction BMPs into the Project's final drainage plan that would include but would not be limited to, source control, and treatment control BMPs. Impacts would be reduced to less than significant with mitigation.

The proposed Specific Plan allows for the expansion of the existing wastewater treatment plant. Future wastewater treatment needed (i.e., secondary and tertiary treatment) will be determined by the amount of wastewater forecasted to be generated by each phase of structural improvement. Please see Section 5.15 of the EIR for a discussion of wastewater generation. Potential discharges could be wastewater generated by the Glamis Beach Store, restaurant and bar which is currently being discharged into an existing septic tank located near to those buildings and potential discharges related to the water and wastewater treatment systems.

The Imperial County Public Health Department coordinates with the Colorado River RWQCB to permit Onsite Wastewater Treatment Systems (OWTSs) on new development projects. An OWTS permit from the Public Health Department would be required prior to the construction of the on-site septic leach field system proposed to support the O&M building.

The Project site lies within Imperial Valley groundwater basin but is outside the basin's areas of special concern for high nitrate levels (PHD 2015). Approval of an OWTS permit from the County for the septic system would require compliance with requirements identified in the Local Agency Management Programs (LAMP) and reduce potential impacts on water quality standards, waste discharge, or degradation of surface or groundwater quality to a less than significant level.

A Reverse Osmosis Water Treatment Plant is currently located onsite. Residual material from this facility is mostly liquids with solids and is discharged to a holding tank. The residual liquid is used for dust suppression. A public water system permit is expected to be issued in the Spring of 2023 by the Imperial County Public Health Department Division of Environmental Health. An NPDES permit is currently not required but may be required in the future, as the volume of water produced increases.

Impact 5.9-2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

As described in Section 3.1.1 of the EIR, the GSPA is developed with existing uses and the area around the Glamis Beach store is paved or otherwise contains impervious surfaces. While implementation of the GSP would increase development in the area, it would also include landscaped areas and would retain the stormwater channel within the northeast section of the GSPA, the wash under SR-78, along with the established washes and ephemeral washes within Planning Areas 1 and 3. The Project is not anticipated to substantially interfere with groundwater recharge.

Water supplies for existing uses within the GSPA are currently provided obtained from the Amos Valley Groundwater Basin by an existing on site well (CUP #13-0059). This well is designed specifically for domestic water use to serve a residence and its ancillary buildings. This well was constructed to domestic water well standards and cannot be used as a potable water source for the larger project area. It is currently authorized to pump 1.5 acre-feet (AF) per year. There is one

permitted public water system well (CUP #13-0060) that supplies water to the yet to be permitted Glamis Beach Store public water system, System No. 1300684. It also is currently authorized to pump 1.5 AF per year. As part of the proposed Specific Plan the applicant would seek a CUP for a new public water system well that would be able to pump up to 25 AF per year.

According to the Water Supply Assessment (WSA) (Appendix K) prepared in support of this EIR, water demand for Phase One is approximately 19.93 AF over a three-year period of construction (6.64 AF annually for three years) and 10.66 AF annually for operational use. During the first three years of Phase One the Applicant would be using 17.3 AF per year. Once construction is completed this amount would be reduced to 10.66 AF per year. This assumes the demand would be year-round, however, the project would only require this amount on a seasonal basis so the anticipated demand would be less than half this amount. Special events would bring in water from outside the Project site and would not utilize groundwater from wells. Development of Phases Two through Four would only result in minor increases in the overall annual use. Overall annual use would be less than the 25 AF the Applicant is asking for in their revised CUP. Given the basin's recharge is 200 AF per year the Project would not substantially decrease groundwater supplies and impacts would be less than significant.

Impact 5.9-3a: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site?

A stormwater channel runs through a small portion of the northeast portion of the GSPA which is channeled under the railroad track. On the southeast portion, a wash is piped under SR-78. Several established washes and ephemeral washes were observed within the Planning Areas 1 and 3 (Barrett Biological, 2019). According to the Conceptual Drainage and Grading Plan Element of the proposed Specific Plan, the existing topography and drainage of the GSPA generally drains from the northeast to the southwest via existing earthen channels and berms. The northeast portion of the GSPA (Planning Areas 5 & 6) are openly affected by offsite flows and are directed towards three existing concrete culverts that pass under the UPRR). The drainage flows from these three concrete culverts underneath the UPRR, flow through and/or around portions of the existing GSPA (Planning Areas 1, 2, 3, 4, 7 and 8) towards the southwest, which are located north and south of SR-78. All planning areas southwest of the UPRR, where future land uses are proposed, are protected by earthen channels and berms. The remaining open areas, throughout the entire site, have areas that are protected by existing earthen channels and berms.

Grading for the proposed Specific Plan would provide flood protection for future land uses within the entire GSPA and release the drainage to the southwest in an overall equivalent historical pattern of natural drainage courses consistent with California drainage law. The on-site design northeast of the UPRR will provide flood protection (Planning Areas 5 and 6) by continuing the off-site flows with modifications to each of the earthen drainage berms and channels. These modifications will re-

direct the drainage around each of the planning areas to the southwest towards the three existing concrete culverts that pass under the UPRR. The modified existing earthen berm north of Planning Area 5 will continue to redirect flows north and west as will a new earthen berm to the southeast for Planning area 6, to the south and west. The remainder of the drainage will be directed into the modified existing earthen channels along each side of SR-78. Each of these earthen channels and berms will be constructed on-site and will re-direct the existing flows in a manner consistent with the surrounding drainage patterns and practices. The manner and release of the drainage flows will be equivalent to the existing capture, conveyance and release to the Southwest under the UPRR, via existing concrete culverts.

With implementation of Mitigation Measures (MMs) HWQ-1, 2, 3 and 4 erosion and sedimentation impacts would be less than significant.

Impact 5.9-3b: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

See response to Impact 5.9-3a.

Impact 5.9-3c: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?

Construction and Operation

Portions of the GSPA are located within the FEMA 100-Year Flood Zone. As shown on Figure 5.6-4, FEMA Flood Zone Boundary, the majority of Planning Areas 5 and 6, east of the Union Pacific Railroad (UPRR) are within the 100-Year Flood Zone. Additionally, the eastern edges of the Planning Areas 1 and 3, adjacent to Ted Kipf Road, and a portion of Planning Area 4 are all within the FEMA 100-Year Flood Zone.

Implementation of future GSP developments, public utilities and infrastructure improvements would affect the 100-Year Flood Zone and could also affect natural surface water systems The Conceptual Drainage Plan included in the GSP provides flood protection for future land uses within the entire project site and would releases the drainage to the southwest in an overall equivalent historical pattern of natural drainage courses consistent with California drainage law (Figure 4-6). The on-site design northeast of the UPRR will provide flood protection (Planning Areas 5 and 6) by continuing the off-site flows with modifications to each of the earthen drainage berms and channels. These modifications will re-direct the drainage around each of the Planning Areas to the southwest towards the three existing concrete culverts that pass under the UPRR. The modified existing earthen berm

north of Planning Area 5 will continue to redirect flows north and west as will a new earthen berm to the southeast for Planning Area 6, to the south and west. The remainder of the drainage will be directed into the modified existing earthen channels along each side of SR 78. Each of these earthen channels and berms will be constructed on-site and will re-direct the existing flows in a manner consistent with the surrounding drainage patterns and practices. The manner and release of the drainage flows will be equivalent to the existing capture, conveyance and release to the southwest under the UPRR, via existing concrete culverts.

The modification of streams, washes, and drainages would alter surface runoff timing and drainage patterns and could increase peak flows and water flow velocities of downgradient streams. All these processes could lead to increased erosion, sediment transport, and sediment deposition impacts. The discharge of stormwater could also increase the flow rates of the receiving surface waters. These alterations of exiting drainage patterns could also result in flooding on or off site. These factors related to the alteration of existing drainage patterns could result in potentially significant impacts.

As discussed in Section 5.9.2, Regulatory Setting, all development within any special flood hazard area, which includes the FEMA 100-Year Flood Zone, shall be required to obtain a Floodplain Development permit, in accordance with Title 9, Division 16 of the County's Ordinance Code. Issuance of the permit will ensure that future development activities under the GSP will not increase the water surface elevation of the base flood more than on foot at any point; that all other required State and federal permits have been obtained; and, that construction standards for flood hazard reduction have been incorporated into the project(s).

Adherence to Title 9, Division 16 of the County's Ordinance Code, along with implementation of Mitigation Measures (MMs) HWQ-1, 2, and 4 would reduce impacts to below a level of significance.

Impact 5.9-4: Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

A small water storage tank and basin are located approximately 4 miles northeast and upgradient of the GSPA, associated with mining activities. In the event of tank rupture or basin failure due to seiching, there is a remote possibility of some flooding within the defined drainages of the alluvial fan, although it appears, that any runoff would trend southerly of the Specific Plan Area, depending on localized drainage courses and man-made modifications to drainage paths.

The Specific Plan lies within two designated FEMA Flood Zones: A and X. Zone "A" is defined as "Without Base Flood Elevation" and Zone "X" is defined as "Areas of 0.2% annual chance floodplain; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas of less than 1 square mile; and areas protected by levees from 1% annual chance flood." These zones are defined on FEMA Panel Numbers 06025C1125C and 06025C1475C both effective 9/26/2008. The Project site is in an area where sheet and concentrated flow and erosion could occur. Appropriate project design by the civil engineer, construction, and maintenance can minimize the

sheet flooding potential (Earth Systems Pacific, 2019). The site is far inland, so the hazard from tsunamis is non-existent. Potential impacts from floods and seiches would be less than significant.

Impact 5.9-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The GSPA is located within the Amos Valley Groundwater Basin, as defined by the California Department of Water Resources. The Amos Valley Groundwater Basin does not fall within the basin classification that requires implementation of a sustainable groundwater management plan (also known as a groundwater sustainability plan, or GSP, under the Sustainable Groundwater Management Act definitions). However, in April 2017 the County amended a comprehensive Groundwater Management Ordinance to preserve, protect and manage groundwater resources. The Groundwater Ordinance, codified as Division 22 of Title 9 of the Imperial County Code, aims to avoid or minimize impacts on existing and proposed groundwater extraction activities and groundwater resources. The Groundwater Ordinance requires that existing extraction facilities be permitted and registered with the County. New extraction facilities must also obtain a permit from the County. As part of the proposed Specific Plan the applicant would seek a conditional use permit (CUP) for a new public water system well that would be able to pump up to 25 AF per year in compliance with the Groundwater Ordinance, and less than significant impacts are expected.

5.9.4. Mitigation Measures

The following Mitigation Measures would reduce impacts to below a level of significance.

MM HWQ-1: Prepare SWPPP and Implement BMPs Prior to Construction

For each implementation activity that is greater than one-acre in size, the project applicant or its contractor shall prepare a SWPPP specific to the project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the project applicant prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the project. The SWPPP(s) shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching)
- Flow diversion practices, if required (Mitigation Measure HWQ-2)

- Sediment control practices (temporary sediment basins, fiber rolls)
- Temporary and post-construction on- and off-site runoff controls
- Special considerations and BMPs for water crossings, wetlands, and drainages
- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity
- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

Timing/Implementation:	*Prior to building permit issuance for all construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services*

MM HWQ-2 Properly Dispose of Construction Dewatering in Accordance with the Construction General Permit (SWRCB Order No. 2009-0009-DWQ and Associated Amendments).

If required, all construction dewatering shall be discharged or utilized for dust control in accordance with the Construction General Permit. The Storm Water Pollution Prevention Plan shall provide Best Management Practices to be implemented if groundwater is encountered during construction.

Timing/Implementation:	*Prior to building and/or grading permit issuance for all construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services*

MM HWQ-3 Incorporate Post-Construction Runoff BMPs into Project Drainage Plan.

A Drainage Plan/Drainage Report shall be prepared for each future development activity under the GSP. The project Drainage Plan shall adhere to guidelines in the County's Engineering Guidelines Manual, or whatever regulations are in place at the time of project implementation, to control and manage the on- and off-site discharge of stormwater to existing drainage systems and shall include a project description, project setting including discussions of existing and proposed conditions, any drainage issues related to the site, summary of the findings or conclusions, off-site hydrology, onsite hydrology, hydraulic calculations and a hydrology map.

The drainage study and specifications for improvements of all drainage easements, culverts, drainage structures, and drainage channels shall be provided to the DPW for approval. Required plans and specifications shall provide a drainage system capable of handling and disposing of all surface waters originating within the subdivision and all surface waters that may flow onto the subdivision from adjacent lands. Said drainage system shall include any easements and structures required by the DPW or the affected Utility Agency to properly handle the drainage on site and off site. The report should detail any vegetation and trash/debris removal, as well as address any standing water.

Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from project impervious surfaces as necessary.

Timing/Implementation:	*Prior to building and/or grading permit issuance for all construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services* *Imperial County Department of Public Works*

MM HWQ-4 Comprehensive Drainage and Sedimentation Control Plan.

A Comprehensive Drainage and Sedimentation Plan (Plan) shall be prepared for all future development activities under the GSP, prior to the initiation of construction

prior to the issuance of a grading and/or building permit. Detailed hydrologic analysis shall be performed prior to final design. Results of these analyses will be submitted to the County for review. All proposed grading and impervious surfaces on site shall be reviewed and approved by the County with respect to its potential to cause or result in additional erosion and sedimentation, increased stormwater flows, or altered drainage patterns that could lead to unintentional ponding or flooding on site or downstream, and/or additional erosion and sedimentation. The Plan shall include, but not be limited to, the following measures:

- Construction of access corridors and temporary and permanent access roads shall not block existing drainage channels and shall not significantly alter the existing topography.
- The project proponent shall delineate the active drainage channels and avoid placement of proposed flood protection berms within active drainage channels. The drainage avoidance areas shall protect no less than 90 percent of the area of the active drainage channels from construction impacts.
- A hydraulic analyses shall be prepared for each future development activity that estimates the pre- and post- development peak discharges, water depths, and velocities for both smaller, more frequent events (2-, 5-, and 10-year events), as well as larger design storm events (100-year event) that would flow through each future project site, drainage avoidance area, and/or on either side of each proposed flood protection berm.
- The County shall be provided design details for the flood protection berms including subgrade preparation, construction methods, and armoring or scour protection.

Timing/Implementation:	*Prior to building and/or grading permit issuance for all construction.*
Enforcement/Monitoring:	*Imperial County Planning and Development Services*

Level of Significance After Mitigation

Impacts would be less than significant.

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5.10 Land Use and Planning

This section describes the affected environment and regulatory setting for land use and planning resources at the Glamis Specific Plan Area (GSPA) and vicinity. This section also examines the proposed Specific Plan's consistency with applicable plans and policies and describes potential land use and planning impacts that would result from construction and operation of the proposed Specific Plan.

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan a public scoping meeting was conducted, and written comments were received from regulatory agencies. No comments related to land use and planning were received.

Issues Scoped Out

The Imperial County Planning and Development Services Department determined in the Initial Study (IS) located in Appendix A-2, that the following environmental issue area resulted in "No Impact" and was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this Draft EIR for a copy of the Initial Study and additional information regarding this issue.

- Would the proposed project physically divide an established community? Implementation of the Specific Plan would not physically divide an established community.

5.10.1 Environmental Setting

The GSPA is located on private land that is directly adjacent to the Imperial Sand Dunes Recreation Area (ISDRA) in an unincorporated area of Imperial County. It contains the small unincorporated community of Glamis which is centered around the Glamis Beach Store. The project vicinity encompasses approximately 143 acres and is composed of seven (7) parcels of land identified as assessor parcel numbers (APN) 039-310-017; -022; -023; -026; -027; -029; and -030. The project vicinity is regionally accessible via State Route 78 (SR-78) (a.k.a. Ben Hulse Highway), which serves as the primary form of access for motorists. Ted Kipf Road, a County-maintained dirt road serves as a secondary form of access extending northwesterly for approximately 17 miles to Niland-Glamis Road from SR-78. The GSPA is also crossed by the Union Pacific Railroad (UPRR) which runs north and south through the eastern half of the project vicinity and Wash Road which parallels the UPRR south of SR-78.

Planning Area Land Uses

The GSPA can be characterized as an area of open desert with several adjoined one- and two-story metal building structures representing the Glamis Beach Store, and metal corrugated water tanks

situated directly behind the store. Additionally, there is a separate seasonal off highway vehicle (OHV) repair business connected to the Glamis Beach Store. A wood fence for delineated parking/vendor areas is located directly west of the store. A communications facility tower, approximately 180 feet in height, is located at the southeast portion of the GSPA. Due south is a single-family residence, large RV storage garage, and other related equipment storage buildings. Additionally, a prefabricated residential structure is located on the southeast corner of the GSPA. To the west, across SR-78 and opposite the Glamis Beach Store, there is an existing recreational vehicle (RV) storage area as well as vacant desert land. There is also an existing 20-acre paved RV storage area for Glamis Dunes Storage and Luv 2 Camp RV Trailer Rentals, and the existing historical cemetery located at the southwest corner of SR-78 and Ted Kipf Road. Last, on the northeast side of the project vicinity, crossing the UPRR, there are two triangular parcels that are currently vacant.

The topography for the GSPA can be characterized as relatively flat. The only minor changes in topography are found along the northeast portion of the GSPA (northeast side of the UPRR), which can be attributed to existing elevated flood control earthen dikes and a slight, gradual southwest to northeast trending slope contour. Overall, elevation contours of the GSPA range from 325 feet above mean sea level (AMSL) at the southwest corner of the property to 344 feet AMSL at the northeast corner. Areas of wind-blown sand dunes with sporadic native vegetation are found situated and encroaching upon the southeast corner of the GSPA.

The GSPA and the ISDRA have been a popular OHV recreational destination since the 1960s. By the 2010s, Glamis and the ISDRA were experiencing exponential growth from RVers and OHV enthusiasts. As a result, events and activities such as “Camp RZR” started to occur within the GSPA that attracted as many as 20,000 visitors each year during Halloween weekend or the weekend before Halloween. With the advent of special events within the Glamis area discretionary temporary event permits and conditional use permits (CUPs) required by the County of Imperial were deemed necessary to allow for the continued provision of such events. Currently, special and temporary events are permitted under CUP #08-0025. Events such as “Camp RZR” are required to undergo review and approval of event operations and protocols with the County and key stakeholder agencies.

Surrounding Land Uses

The GSPA is surrounded by open desert land that is managed almost entirely by the Bureau of Land Management (BLM). Directly northwest of the project vicinity, is the North Algodones Dunes Wilderness (NADW); which consists of approximately 26,000 acres of land managed by the BLM as part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use, however, camping is allowed. The GSPA is directly adjacent to the ISDRA to the southwest, south and southeast. The ISDRA is the largest mass of sand dunes in the State of California. North of the NADW is the Chocolate Mountain Aerial Gunnery Range (CMAGR) which

is a live-fire training range used for developing and training Marine Corps and Navy aviators. The area to the northeast of the project vicinity is BLM land but is not part of the ISDRA.

General Plan and Zoning Designation

The GSPA is designated on the adopted Land Use Element of the County of Imperial's General Plan as the GSPA (County of Imperial, 2015). As noted in the County's Land Use Element, approval of a specific plan by the Imperial County Board of Supervisors is required prior to any significant new use or development in this area, except agricultural use. The GSPA allows for the development of a Specific Plan in accordance with design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. The general area of the Glamis Beach Store is currently zoned as C-2 (Medium Commercial), while the remainder of the GSPA is zoned as S-2 (Figure 3-5).

Land Use Designations

The GSPA is designated on the adopted Land Use Element of the County of Imperial's General Plan (County of Imperial, 2015). As noted in the Land Use Element, approval of a specific plan by the Imperial County Board of Supervisors, is required prior to any significant new use or development in this area, except agricultural use.

5.10.2 Regulatory Setting

State

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning.

The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period or more.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific zone district, are required to be consistent with the general plan and any applicable specific plans.

Local

Imperial County General Plan

The purpose of the Imperial County General Plan is to guide growth throughout the County. Urban development is directed to areas where public infrastructure can be readily extended to areas with limited health and safety hazards. Likewise, development should avoid natural, cultural, and economic resources.

The General Plan includes ten elements: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; Renewable Energy and Transmission; Water; Parks and Recreation. These elements satisfy the California Government Code requirements for general plan elements. Each element includes goals, objectives, and implementing policies and programs.

Relevant County of Imperial General Plan policies related to land use are provided below. Table 5.10-1 summarizes the proposed Specific Plan's consistency with the County's General Plan policies.

While this EIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Imperial County Land Use Ordinance – Title 9

The County of Imperial Land Use Ordinance (Title 9) provides the physical land use planning criteria, development standards, and zoning regulations for development in the unincorporated areas of the County. Title 9 specifies permitted and conditional uses for the various zoning designations within unincorporated areas of the County. Development and performance standards included in Title 9 are adopted to protect the health, safety, and general well-being of the public through the orderly regulation of land uses within the County.

Imperial County Airport Land Use Compatibility Plan

The Imperial County Airport Land Use Compatibility Plan (ALUCP) provides the criteria and policies used by the Imperial County Airport Land Use Commission to assess compatibility between the principal airports in Imperial County and proposed land use development in the areas surrounding the airports. The ALUCP emphasizes review of local general and specific plans, zoning ordinances, and other land use documents covering broad geographic areas.

TABLE 5.10-1 CONSISTENCY WITH GENERAL PLAN LAND USE GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
Land Use Element		
Section D.3. – Designated Specific Plan Areas – Glamis Specific Plan Area Policies: The Specific Plan shall focus on visitor-serving facilities and accommodations. Residential uses shall not be intended for permanent occupancy except as needed for on-site employees.	Yes	As detailed in Chapter II, Section B, the proposed Specific Plan provides visitor-serving facilities and accommodations to visitors to the Glamis Specific Plan Area (GSPA). Proposed residential uses and employee housing are intended solely as seasonal uses.
The Specific Plan shall include design guidelines for the physical arrangement of land uses and open space/recreation areas. Adequate open space shall be provided within the developed areas to complement the open space character of the area. Buildings should be sited to allow through views from Highway 78 to scenic vistas surrounding the site.	Yes	The proposed Specific Plan includes design guidelines for the physical arrangement of proposed land uses and open space/recreation areas. Adequate open space is provided within Planning Areas of the GSPA. These Planning Areas will be seasonally occupied and be left as open space the majority of the year.
The Specific Plan shall include a public facilities financing plan outlining capital improvements needed for the project, feasible financing mechanisms and timing for their construction. This includes sewer, water, and fire and police protection.	Yes	The proposed Specific Plan includes a public-facilities financing plan that addresses public facilities including sewer, water, and fire and police protection needed to serve the proposed uses and activities described in the proposed Specific plan.
The Specific Plan shall be accompanied by an Environmental Impact Report (EIR) which includes an analysis of project impacts to include the following: Air and water quality, biology, noise, traffic, visual/aesthetics, and such other issues as required by the County of Imperial and other agencies.	Yes	The proposed Specific Plan will have a corresponding Environmental Impact Report (EIR) that will analyze project impacts such as air and water quality, biology, noise, traffic, visual/aesthetics and such other issues as required by the County of Imperial and other agencies.

Source: Imperial County, 2015.

5.10.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact 5.10-1: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Imperial County General Plan

The Specific Plan Area is contained within the County's designated GSPA. The GSPA allows for the development of a Specific Plan in accordance with design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. Polaris Inc. (the Applicant) is proposing a Specific Plan for the development of the GSPA. The proposed Glamis Specific Plan would implement the County's objectives for the development of this area which is to accommodate recreation supporting land uses including retail and service commercial, motel accommodations, recreational vehicle and mobile home parks, and community facilities. Thus, the proposed Specific Plan would be consistent with the County's General Plan Land Use Element and there would be no impact.

The proposed Specific Plan will require an amendment to Imperial County's General Plan Land Use Element to change the land use designation on the general area of the Glamis Beach Store from C-2 (Medium Commercial) and remainder of the GSPA which is zoned as S-2 to Commercial Recreation I, II, and III and a small portion to S-1 (Open Space/Recreation (Figure 4-1).

The proposed General Plan Amendment and rezone would place the proposed Specific Plan in conformance with county land use policies.

Imperial County Airport Land Use Compatibility Plan

The proposed Specific Plan is not located within the ALUCP for Imperial County Airports (County of Imperial, 1996) or within two miles of a public airport or public use airport. The nearest public use airport, Holtville Airport, is located 14 miles southwest the project vicinity.

5.10.4 Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant.

5.11 Noise

This section addresses potential noise impacts that may result from implementation of the Glamis Specific Plan. The following discussion addresses the existing conditions at the Glamis Specific Plan Area (GSPA), identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Specific Plan, as applicable.

Information used in preparing this section and in the evaluation of potential noise impacts was derived from the *Glamis Specific Plan Area Noise Study* prepared by LdN Consulting, (LdN Consulting, 2020). This report is provided as Appendix J of this EIR.

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a public scoping meeting was conducted, and written comments were received from regulatory agencies and the public. The following issues related to noise were raised by the California Department of Fish and Wildlife (CDFW) are addressed in this section:

- An evaluation of impacts to adjacent open space lands from construction, long-term operations and maintenance.

Issues Scoped Out

The Imperial County Planning and Development Services Department determined in the Initial Study (IS) located in Appendix A-2, that the following environmental issue area resulted in "No Impact" and was scoped out of requiring further review in this DEIR. Please refer to Appendix A-2 of this DEIR for a copy of the Initial Study and additional information regarding this issue.

- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? The proposed Project is not located within the vicinity of a private airstrip and the nearest privately-owned/public use airport, Salton Sea Airport, is located 13 miles northwest the Project Site.

5.11.1 Environmental Setting

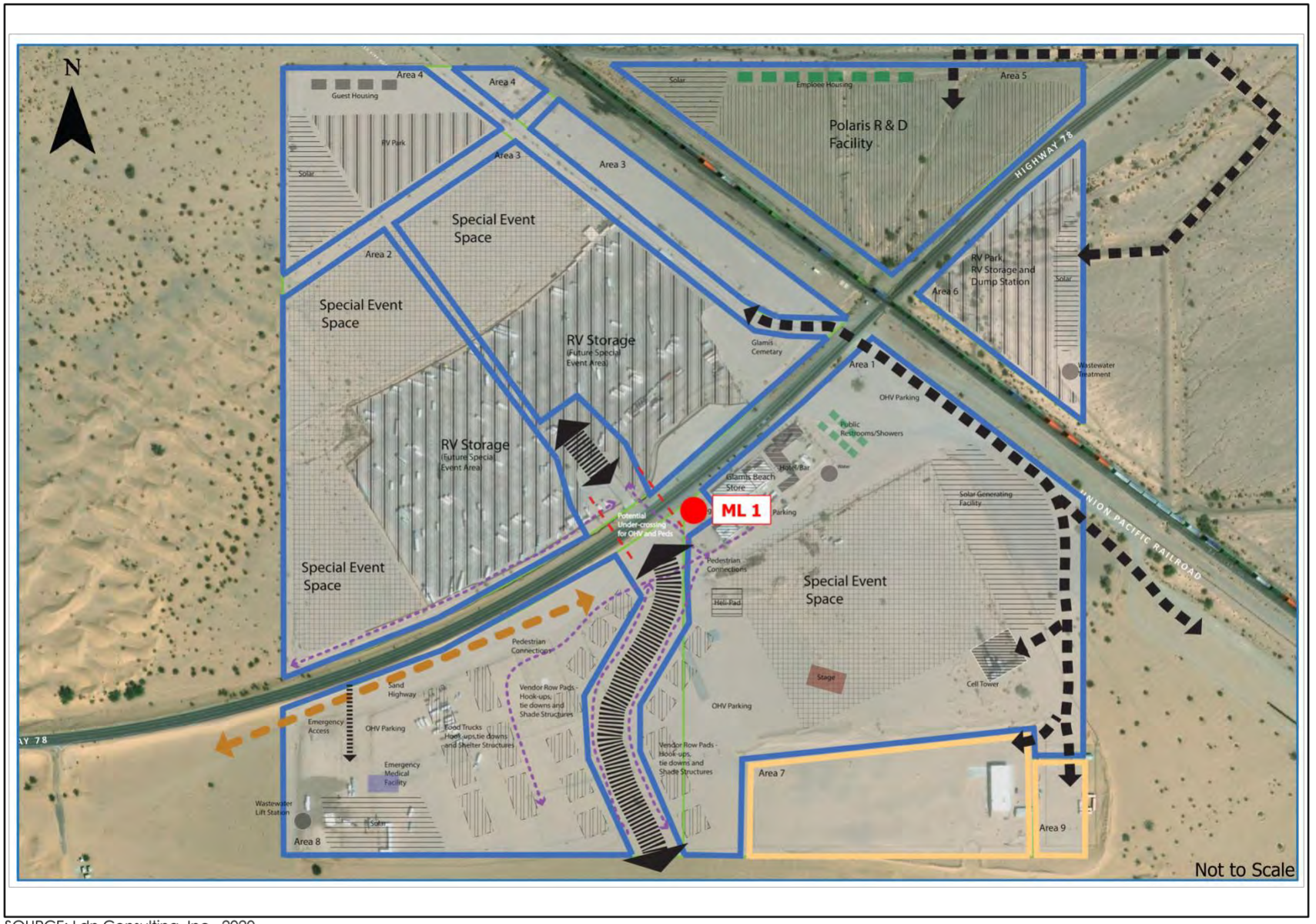
The GSPA is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR-78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the GSPA is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County. The GSPA contains the only private commercial land uses within the project vicinity and is surrounded by open desert land that is managed by the Bureau of Land

Management (BLM). The Project site is adjacent to the Imperial Sand Dunes Recreation Area (ISDRA), the largest sand dunes area in the State of California. It contains the small unincorporated community of Glamis which is centered around the Glamis Beach Store. The project vicinity encompasses approximately 143 acres and is composed of seven (7) parcels of land identified as assessor parcel numbers (APN) 039-310-017; -022; -023; -026; -027; -029; and -030. The project vicinity is regionally accessible via SR-78 (a.k.a. Ben Hulse Highway), which serves as the primary form of access for motorists. Ted Kipf Road, a County-maintained dirt road serves as a secondary form of access extending northwesterly for approximately 17 miles to Niland-Glamis Road from SR-78. The project vicinity is also crossed by the UPRR which runs north and south through the eastern half of the project vicinity and Wash Road which parallels the UPRR south of SR-78.

Directly northwest of the GSPA is the North Algodones Dunes Wilderness (NADW); which consists of approximately 26,000 acres of land managed by the BLM as part of the National Wilderness Preservation System. Additionally, the Chocolate Mountain Aerial Gunnery Range (CMAGR) is located approximately 3 miles to the north of the GSPA. Within all of the various BLM lands surrounding the GSPA, the BLM has designated Recreation Management Zones (RMZs) which dictate the allowable recreation activities within those areas and provide for BLM's management objectives within those areas.

Ambient noise measurements were taken June 6, 2019 using a Larson-Davis Model LxT Type 1 precision sound level meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

Due to site constraints and fencing, monitoring location 1 (ML1) was located along SR-78. The result of the noise level measurements are presented in Table 5.11-3. The noise measurement was monitored for a time period of 15 minutes. The existing noise levels in the GSPA consisted primarily of traffic from adjacent SR-78. The ambient Leq noise level measured in the GSPA during the morning hours was found to be roughly 48 dBA Leq. The statistical indicators Lmax, Lmin, L10, L50 and L90, are given for the monitoring location. As can be seen from the L90 data, 90% of the time the noise level is 43 dBA. The traffic volumes consisted of several dozen passenger vehicles and 4 larger trucks along SR 78 and no OHV activities were occurring due to the time of the year. The noise monitoring location is shown on Figure 5.11-1 (LdN Consulting, 2020).



SOURCE: Ldn Consulting, Inc., 2020.

Noise Monitoring Locations
Glamis Specific Plan
Figure 5.11-1

TABLE 5.11-1: MEASURED AMBIENT NOISE LEVELS

Measurement Identification	Location	Time	Noise Levels (dBA)					
			Leq	Leq	Leq	Leq	Leq	Leq
M1	Along SR-78	3:15–3:30 p.m.	48.2	41.9	72.7	48.5	44.4	42.5

Source: Ldn Consulting, 2020c.

A noise study and survey was conducted for the Final Environmental Impact Report (EIR) Heber Dunes Special Vehicle Recreation Area (SVRA) General Plan, December 2011 by AECOM. The survey was conducted between Friday, April 17 and Sunday, April 19, 2009, to document the existing noise environment at various locations in the vicinity. During the survey, average daytime hourly noise levels within the project area ranged from approximately 55 dBA to 63 dBA Leq, with maximum noise levels that ranged from 60 dBA to 88 dBA Lmax. Additional information is provided below (LdN Consulting, 2020). According to the Final EIR Heber Dunes SVRA, the primary noise sources at the noise measurement locations for the Heber Dunes SVRA were off highway vehicle (OHV) operations for measurement locations on the Project site and adjacent to the Heber Dunes SRVA boundary. At the time of the measurements, OHV use was moderate and it is estimated that peak use would be approximately double the activity at the time the measurements were conducted; thus, hourly noise levels during peak activity would likely be 3 dBA higher than the measured noise levels. Maximum noise levels, as they are associated with individual events, would not likely increase with the increased activity (LdN Consulting, 2020c).

Overview of Sound Measurement

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA, and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations. Noise levels typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from point sources (i.e., industrial machinery). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from

heavily traveled roads typically attenuates at about 3 dBA per doubling of distance. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed (approximately 30 years old or older) generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units and office buildings construction to California Energy Code standards is generally 30 dBA or more.

In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance average noise level). Typically, equivalent continuous sound level (Leq) is summed over a one-hour period. Lmax is the highest root mean squared (RMS) sound pressure level within the measuring period, and Lmin is the lowest RMS sound pressure level within the measuring period. The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (Ldn), which is the 24-hour average noise level with a 10-dBA penalty for noise occurring during nighttime (10 PM to 7 AM) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a 5 dBA penalty for noise occurring from 7 PM to 10 PM and a 10 dBA penalty for noise occurring from 10 PM to 7 AM Daytime Leq levels are louder than Ldn or CNEL levels; thus, if the Leq meets noise standards, the Ldn and CNEL are also met.

5.11.2 Regulatory Setting

Federal

The Federal Noise Control Act (1972) addressed the issue of noise as a threat to human health and welfare. To implement the Federal Noise Control Act, the U.S. EPA (USEPA) undertook a number of studies related to community noise in the 1970s. The USEPA found that 24-hour averaged noise levels less than 70 dBA would avoid measurable hearing loss, levels of less than 55 dBA outdoors and 45 dBA indoors would prevent activity interference and annoyance (USEPA, 1972).

The U.S. Department of Housing and Urban Development (HUD) published a Noise Guidebook for use in implementing the Department's noise policy. In general, HUD's goal is exterior noise levels that are less than or equal to 55 dBA Ldn. The goal for interior noise levels is 45 dBA Ldn. HUD suggests that attenuation be employed to achieve this level, where feasible, with a special focus on sensitive areas of homes, such as bedrooms (HUD, 2009).

State

Title 24 of the California Code of Regulations (CCR) establishes standards governing interior noise levels that apply to all new single-family and multi-family residential units in California.

These standards require that acoustical studies be performed before construction at building locations where the existing Ldn exceeds 60 dBA. Such acoustical studies are required to establish mitigation measures that will limit maximum Ldn levels to 45 dBA in any habitable room. Although there are no generally applicable interior noise standards pertinent to all uses, many communities in California have adopted an Ldn of 45 as an upper limit on interior noise in all residential units.

In addition, the State of California General Plan Guidelines, provides guidance for noise compatibility. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Local

County of Imperial General Plan

The County of Imperial General Plan, specifically the Noise Element, outlines the goals and objectives for identifying and managing existing and future noise sources in County of Imperial. The General Plan also contains plans and policies to protect the public from noise intrusion. Table 5.11-2 identifies applicable General Plan policies, goals, and objectives applicable to the Project's consistency with the General Plan. While this Draft EIR analyzes the Project's consistency with the County of Imperial General Plan pursuant to California Environmental Quality Act (CEQA) Guidelines, Section 15125(d), the County of Imperial Planning Commission will determine the Project's consistency with the General Plan.

TABLE 5.11-2 CONSISTENCY WITH APPLICABLE GENERAL PLAN NOISE GOALS AND POLICIES

General Plan Policies	Consistency	Analysis
Noise Element[(a)]		
Goal 1: Provide an acceptable noise environment for existing and future residents in Imperial County. ● **Objective 1.1:** Adopt noise standards which protect sensitive noise receptors from adverse impact. ● **Objective 1.3:** Control noise levels at the source where feasible. ● **Objective 1.5:** Identify sensitive receptors with noise environments which are less than acceptable, and evaluate measures to improve the noise environment.	Yes	The Glamis Specific Plan Area (GSPA) is surrounded by open desert land managed by the Bureau of Land Management (BLM). There are no residential uses (and therefore no sensitive noise receptors) within close proximity to the GSPA. All various BLM lands surrounding the GSPA are designated Recreation Management Zones (RMZs) which do not include any residential areas or other sensitive noise receptors in close proximity to the GSPA.

TABLE 5.11-2 CONSISTENCY WITH APPLICABLE GENERAL PLAN NOISE GOALS AND POLICIES

General Plan Policies	Consistency	Analysis
• **Objective 1.6:** Collect data for existing noise sources in the County in order to improve the data base and enhance the ability to evaluate proposed projects and land uses.		
Goal 2: Review proposed projects for noise impacts and require design which will provide acceptable indoor and outdoor noise environments. • **Objective 2.1:** Adopt criteria delineating projects which should be analyzed for noise impact to sensitive receptors. • **Objective 2.3:** Work with project proponents to utilize site planning, architectural design, construction, and noise barriers to reduce noise impacts as projects are proposed.	Yes	During construction activities the proposed Specific Plan will comply with the County of Imperial's Noise Ordinance to minimize disturbance to surrounding areas. Furthermore, the proposed Specific Plan is consistent with varying policies established in the Noise Element in which goals, objectives and procedures will be taken into careful consideration to minimize adverse impacts to sensitive noise receptors. This includes consideration of design to provide adequate noise mitigation to provide acceptable indoor and outdoor noise standards.
Conservation and Open Space Element[(b)]		
Objective 2.6: Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.	Yes	An analysis of project noise levels is included in Appendix M, Glamis Specific Plan Noise Assessment (November 2020). No significant noise impacts were identified.

Source: Imperial County, n.d., 2016

The Property Line Noise Limits listed in Table 9 of the County's General Plan Noise Element and the County's Ordinance, Title 9, Division 7 (Noise Abatement and Control) Section 90702.00 Subsection A provides acceptable Sound level limits based on the property zoning. The applicable property line sound level limits are provided in Table 5.11-2 below and shall apply to noise generation from one property to an adjacent property. The standards imply the existence of a sensitive receptor on the adjacent, or receiving, property. In the absence of a sensitive receptor, an exception or variance to the standards may be appropriate. These standards do not apply to construction noise.

TABLE 5.11-3: PROPERTY LINE NOISE LEVEL LIMITS

Zone	Time	Applicable Limit One-hour Average Sound Level (Decibels)
Residential Zones	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
Multi-residential Zones	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50

TABLE 5.11-3: PROPERTY LINE NOISE LEVEL LIMITS

Zone	Time	Applicable Limit One-hour Average Sound Level (Decibels)
Commercial Zones	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
Light Industrial/Industrial Park Zones	Anytime	70
General Industrial Zones	Anytime	75

Notes:

When the noise-generating property and the receiving property have different uses, the more restrictive standard shall apply. When the ambient noise level is equal to or exceeds the Property Line noise standard, the increase of the existing or proposed noise shall not exceed 3 dB Leq.

The sound level limit between two zoning districts (different land uses) shall be measured at the property line between the properties.

Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise level limits of subsection A of this section, measured at or beyond six feet from the boundary of the easement upon which the equipment is located.

This section does not apply to noise generated by helicopters at heliports or helistops authorized by a conditional use permit.

This section does not apply to noise generated by standard agricultural field operating practices such as planting and harvesting of crops. The County of Imperial has a Right to Farm Ordinance (1031) which serves as recognition to agricultural practices to new development. Agricultural/industrial operations shall comply with the noise levels prescribed under the general industrial zones.

Source: LdN Consulting, 2020c.

These standards are enforced through the County's code enforcement program on the basis of complaints received from persons impacted by excessive noise. It must be acknowledged that a noise nuisance may occur even though an objective measurement with a sound level meter is not available. In such cases, the County may act to restrict disturbing, excessive, or offensive noise which causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

Based on the County of Imperial's Noise Element of the General Plan, construction noise from a single piece of equipment or a combination of equipment, shall not exceed 75 dB Leq, when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB Leq when averaged over a one (1) hour period.

Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays. In cases of a person constructing or modifying a residence for himself/herself, and if the work is not being performed as a business, construction equipment operations may be performed on Sundays and holidays between the hours of 9 a.m. and 5 p.m. Such non-commercial construction activities may be further restricted where disturbing, excessive, or offensive noise causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

The Noise/Land Use Compatibility Guidelines are not intended to allow the increase of ambient noise levels up to the maximum without consideration of feasible noise reduction measures. The

following guidelines are established by the County of Imperial for the evaluation of significant noise impact.

A. If the future noise level after the Project is completed will be within the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, but will result in an increase of 5 dB CNEL or greater, the Project will have a potentially significant noise impact and mitigation measures must be considered.

If the future noise level after the Project is completed will be greater than the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, a noise increase of 3 dB CNEL or greater shall be considered a potentially significant noise impact and mitigation measures must be considered.

Vibration Standards

Vibration is a unique form of noise as the energy is transmitted through buildings, structures and the ground whereas audible noise energy is transmitted through the air. Thus, vibration is generally felt rather than heard. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB). The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels.

The County Noise Ordinance do not provide vibration standards. The Federal Transit Administration's (FTA) uses a threshold of 65 VdB for buildings where low ambient vibration is essential for interior operations. These buildings include hospitals and recording studios. A threshold of 72 VdB is used for residences and buildings where people normally sleep (i.e., residences and hotels). A threshold of 75 VdB is used for institutional land uses where activities occur primarily during the daytime (i.e., churches and schools). With respect to ground-borne vibration impacts on structures, the FTA states that ground-borne vibration levels in excess of 100 VdB would damage fragile buildings and levels in excess of 95 VdB would damage extremely fragile historic buildings.

5.11.3 Analysis of Project Effects and Significance Determination

Methodology

A noise study and survey was conducted for the Final EIR Heber Dunes SVRA General Plan, December 2011 by AECOM. The survey was conducted between Friday, April 17 and Sunday, April 19, 2009, to document the existing noise environment at various locations in the vicinity. During the survey, average daytime hourly noise levels within the project area ranged from approximately 55 dBA to 63 dBA Leq, with maximum noise levels that ranged from 60 dBA to 88 dBA Lmax. Additional information is provided below (LdN Consulting, 2020). According to the Final EIR Heber Dunes SVRA, the primary noise sources at the noise measurement locations

for the Heber Dunes SVRA were OHV operations for measurement locations on the Project site and adjacent to the Heber Dunes SRVA boundary. At the time of the measurements, OHV use was moderate and it is estimated that peak use would be approximately double the activity at the time the measurements were conducted; thus, hourly noise levels during peak activity would likely be 3 dBA higher than the measured noise levels. Maximum noise levels, as they are associated with individual events, would not likely increase with the increased activity (LdN Consulting, 2020c).

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
2. Result in generation of excessive groundborne vibration or groundborne noise levels?

Analysis

Impact 5.11-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels?

Construction Noise

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders, and scrapers and can reach relatively high levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours.

The USPA has compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from 60 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor, and reduced to 63 dBA at 200 feet from the source.

Construction activities for Phase 1 through Phase 4 would occur within a timeframe of 20 to 50 years. The construction scenario includes construction of a conceptual scenario which includes multiple uses to include a water/wastewater infrastructure, potentially a hotel use, retail uses, additional employee residential uses, research and development uses, renewables such as photovoltaics or wind turbines to offset electrical usage and additional recreational vehicle

parking. The noise levels utilized in this analysis for the mass grading are based upon the anticipated list of equipment proved by the Project Applicant and is shown in Table 5.11.4 below. Most of the construction activities for Phases will consist of clearing and grubbing the site and the trenching of utilities. The equipment is anticipated to be spread out over the entire GSPA of each Phase with some equipment potentially operating at or near the property line while the rest of the equipment may be located over 500 feet from the same property line. This would result in an acoustical center for the grading operation of more than 200 feet from the nearest property line. It should be noted: no sensitive uses existing adjacent to or near the site. Construction activities from subsequent Phases may potentially elevate noise levels at the previous Phases if constructed with sensitive uses (i.e., employee housing).

TABLE 5.11-4 CONSTRUCTION GRADING NOISE LEVELS

Construction Equipment	Quantity	Duty Cycle (Hours/Day)	Source Level @ 50-Feet (dBA)	Cumulative Noise Level @ 50-Feet (dBA Leq-8h)
Rubber Tired Dozers	3	6.8	72	76.1
Excavators	2	6.8	73	75.3
Graders	2	6.8	74	73.3
Scrapers	1	6.8	74	76.3
Tractors/Loaders/Backhoes	2	6.8	73	77.1
Cumulative Levels @ 50 Feet (dBA)				82.8
Average Distance to Property Line				200
Noise Reduction Due to Distance				-12.0
Property Line Noise Level				70.8
County of Imperial Threshold				75
IMPACT?				**NO**

Source: Ldn Consulting, 2020c

As can be seen in Table 5.11-4, if all the equipment was operating in the same location, which is not physically possible, at an average distance of 200 feet from the nearest property line a noise level of less than 75 dBA over an 8-hour period at the property line is anticipated. Given this and the spatial separation of the equipment, the noise levels will comply with the County of Imperial's 75 dBA standard at all GSPA property lines of each Phase and no impacts are anticipated.

The project may also include the installation of off-site utility infrastructure which will generate temporary noise. Unlike construction associated with on-site development, utility construction is linear and usually extends roughly 300 feet along the alignment. Excavation and utility equipment would be limited due to alignment and work area constraints. Based on a construction area of approximately 50 feet by 300 feet, the average hourly off site construction noise levels would be approximately 75 dBA Leq at the edge of the right-a-way and 72 dBA Leq 8 hour or lower at 50

feet from the edge of construction. No sensitive uses are located along the utility alignment and no impacts are anticipated.

To further minimize noise from construction activities, the construction equipment should be equipped with properly operating and maintained muffler. Therefore, a less than significant noise impact would result from construction activities.

Operation

This section examines the potential stationary noise source levels associated with the development and operation of the proposed Specific Plan. Noise from a fixed or point source drops off at a rate of 6 dBA for each doubling of distance. Which means a noise level of 70 dBA at 5-feet would be 64 dBA at 10-feet and 58 dBA at 20-feet. A review of the proposed Specific Plan indicates that noise sources such as deliveries, parking lot activities and mechanical ventilation system (HVAC) are the primary sources of stationary noise from the project. This section provides a description and reference noise level measurement results.

Deliveries

The proposed Specific Plan includes commercial uses that would involve occasional truck deliveries. Typically, trucks used to make deliveries can generate a maximum noise level of 70-75 dBA at a distance of 50 feet depending on the size of the truck. The proposed Specific Plan is not anticipated to require a significant number of truck deliveries or the need for larger trucks. The deliveries for the proposed Specific Plan would consist of smaller deliveries in smaller trucks and/or step side vans and would be somewhat infrequent. The noise associated with one large truck delivery and smaller truck would not result in a significant number of truck trips to significantly increase noise within the GSPA. Therefore, truck deliveries would not be intrusive or result in substantially greater noise levels than currently exist and impacts would be less than significant.

Parking Lots

Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale. However, the instantaneous sound levels generated by a car door slamming and engine starting up and acceleration may be an annoyance to adjacent sensitive receptors. The estimated noise levels associated with parking lot activities typically range from 60-65 dBA and are short term. It should be noted that parking lot noise are instantaneous noise levels compared to noise standards in the CNEL scale, which are averaged over time. As a result, actual noise levels over time resulting from parking lot activities would be far lower. Therefore, the proposed parking would not result in substantially greater noise levels than currently exist at the GSPA and impacts would be less than significant.

Mechanical Ventilation

Typically, mechanical equipment (HVAC) noise is 50-55 dBA at 50 feet from the source. HVAC units would be included on the roof of the proposed building and would be shielded by a mechanical screen and/or the roof parapet, which would further reduce the noise. The noise from the HVAC units would meet the County's Noise Standards at the nearest residents. It is important to note that the roof-top mounted mechanical ventilation (HVAC) all occurring at the same time. Additionally, mechanical ventilation system will cycle on and off throughout the day. No sensitive uses existing adjacent to the proposed Specific Plan and impacts from mechanical equipment would be less than significant.

Impact 5.11-2: Generation of excessive groundborne vibration or groundborne noise levels?

Construction activities such as blasting, pile driving, demolition, and excavation have the potential to generate ground vibrations. Vibration levels will attenuate to approximately 69 VdB at 200 feet from the source assuming a grader and excavator are the heaviest pieces of equipment used during grading or site clearing. As discussed, 100 VdB is the threshold where minor damage can occur in fragile buildings. Vibration levels are projected to be under this threshold; thus, structural damage is not expected to occur as a result of construction activities associated with the proposed Specific Plan. Vibration levels would be below the groundborne velocity threshold level of 72 VdB for residences and/or buildings where people sleep at the property line of the nearest sensitive receptor, 2 miles from the GPSA. Vibration would not be perceptible at the nearest receiver. Vibration-related impacts would be less than significant.

5.15.4 Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant.

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5.12 POPULATION AND HOUSING

This section describes the affected environment and regulatory setting for population and housing at within the Glamis Specific Plan Area (GSPA) and its vicinity. This section also examines the proposed Specific Plan's consistency with applicable plans and policies and describes population and housing impacts that would result from implementation of the proposed Specific Plan.

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a public scoping meeting was conducted, and written comments were received from regulatory agencies. No comments related to population and housing were received.

Issues Scoped Out

The Imperial County Planning and Development Services Department determined in the Initial Study (IS) located in Appendix A-2, that the following environmental issue area resulted in "No Impact" and was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this Draft EIR for a copy of the IS and additional information regarding this issue.

- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? There are no year-round residents within the GSPA. The proposed Specific Plan would not result in the demolition of existing housing or result in the displacement of any residents.

5.12.1 Environmental Setting

The GSPA is located on private land that is directly adjacent to the Imperial Sand Dunes Recreational Area (ISDRA) in an unincorporated area of Imperial County. It contains the small unincorporated community of Glamis which is centered around the Glamis Beach Store (Figure 3-3). The project vicinity encompasses approximately 143 acres and is composed of seven (7) parcels of land identified as assessor parcel numbers (APN) 039-310-017; -022; -023; -026; -027; -029; and -030. The GSPA is regionally accessible via State Route 78 (SR-78) (a.k.a. Ben Hulse Highway), which serves as the primary form of access for motorists. Ted Kipf Road, a County-maintained dirt road serves as a secondary form of access extending northwesterly for approximately 17 miles to Niland-Glamis Road from SR-78. The GSPA is also crossed by the Union Pacific Railroad (UPRR) which runs north and south through the eastern half of the GSPA and Wash Road which parallels the UPRR south of SR-78. There are no year-round residents within the GSPA.

5.12.2 Regulatory Setting

State

Senate Bill 375 and Assembly Bill 1233

Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act, was approved in 2008. SB 375 focuses on reducing greenhouse gas emissions, as discussed further in Section 4.6.2. As a part of this effort, this act requires that regional housing needs be addressed in conjunction with regional transportation in order to integrate housing, land use, and transportation planning together. SB 375 also requires the RHNA be completed every eight years and, if a jurisdiction does not meet this requirement, penalties may be incurred in accordance with SB 375 and Assembly Bill 1233.

Local

Imperial County General Plan

The purpose of the Imperial County General Plan is to guide growth throughout the County. Urban development is directed to areas where public infrastructure can be readily extended to areas with limited health and safety hazards. Likewise, development should avoid natural, cultural, and economic resources.

The General Plan includes ten elements: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; Renewable Energy and Transmission; Water; Parks and Recreation. These elements satisfy the California Government Code requirements for general plan elements. Each element includes goals, objectives, and implementing policies and programs. The County is currently in the process of updating its Housing Element.

Relevant County of Imperial General Plan policies related to land use are provided below. Table 5.12-1 summarizes the project's consistency with the County's General Plan policies.

While this Draft EIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 5.12-1 CONSISTENCY WITH GENERAL PLAN LAND USE AND HOUSING GOALS AND OBJECTIVES

General Plan Policies	Consistency	Analysis
Land Use Element		
Goal 5: Encourage the compatible development of a variety of housing types and densities to accommodate regional population projections and special housing needs. ● **Objective 5.1:** Provide sufficient, suitable residential sites and housing supply to meet projected housing needs of all segments of the population. ● **Objective 5.2:** Promote affordable housing for residents of all income groups, including low and moderate income households.	Yes	The proposed Specific Plan will allow for limited residential development to accommodate those who require temporary housing in Glamis. Housing will be developed in the form of guest, employee housing, seasonal private residences and temporary use of recreational vehicles (RVs).
Housing Element		
Policy 6.1: Promote architectural design and orientation of residential developments in a way that promotes energy conservation.	Yes	The proposed Specific Plan does allow for some limited permanent residential land uses within the Glamis Specific Plan Area (GSPA), which consist mostly of employee housing. In addition, the proposed Specific Plan allows for the development of rooftop solar that could power residential development and could be used to meet future greenhouse gas (GHG) emission reduction regulations. Therefore, the proposed Specific Plan is consistent with and results in the implementation of, this policy of the General Plan. The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The 2019 California Energy Code was adopted by California Energy Commission (CEC) on May 9, 2018, and will apply to projects constructed after January 1, 2020. The 2019 California Energy Code is designed to move the State closer to its zero-net energy goals for new residential development.

Source: Imperial County, 2013 and 2015.

5.12.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Result in a substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?

Analysis

Impact 5.12-1: Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?

The implementation of the proposed Specific Plan could result in a seasonal population growth (October through May) through the expansion of commercial and recreational activities within the GSPA. These activities would result in the development of new businesses and would require the construction of employee housing to be constructed. The proposed Specific Plan allows for some limited permanent residential land uses within the GSPA, which consist mostly of employee housing. The proposed zoning changes allow for the development of condominiums. Thus, the proposed Specific Plan could induce unplanned population growth through the development of new businesses, however, this population growth would be seasonal (October through May) and minimal. The impacts would be less than significant.

5.12.4 Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant.

5.13 Public Services

This section describes the existing public services in the vicinity of the Glamis Specific Plan Area (GSPA) and identifies the potential physical environmental impacts that would result from implementation of the proposed Specific Plan.

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a public scoping meeting was conducted, and written comments were received from regulatory agencies. No comments related to public services were received.

Issues Scoped Out

The Imperial County Planning and Development Services Department determined in the Initial Study (IS), located in Appendix A-2, that the following environmental issue areas resulted in no impact was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this Draft EIR for a copy of the IS and additional information regarding this issue.

- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any public services, specifically schools, parks and other public facilities? Implementation of the proposed Specific Plan would not include the provision of, or the need for, new schools, parks or other public facilities. The proposed Specific Plan would not result in new long-term housing. Any new housing would be for employees of the new businesses and would be seasonal only. There would not be a permanent increase in the population. Because the proposed Specific Plan would not result in a substantial increase in population, it does not require additional schools, parks, or other public facilities beyond that which already exists. No physical impacts related to the provision of schools, parks, or other facilities would occur.

5.13.1 Environmental Setting

The SPA) is located in the unincorporated community of Glamis, a remote area in the central portion of Imperial County. Glamis is located approximately 27 miles east of the City of Brawley; approximately 32 miles northeast of the City of El Centro; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea.

Fire Protection Services

Fire protection services are provided to the GSPA by the Imperial County Fire Department (ICFD) through the Brawley Fire Department Station, located in the City of Brawley approximately 25 miles to the east. There are existing fire hydrant connections within the "Vendor Row" area. Additional connections would be installed, as necessary to meet the needs of the GSP. During Special Events, onsite fire protection would be provided with applicable fire protection services and apparatus.

Police Protection Services

The Imperial County Sheriff's Department provides law enforcement to the GSPA. Sheriff's officers that patrol the GSPA are based at the Brawley Police Department in the City of Brawley located approximately 27 miles east of the GSPA. During Special Events, on-site law enforcement will be provided with applicable services and apparatus.

5.13.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

State

Fire Protection

The California Fire and Building Codes address general and specialized fire safety requirements for buildings. Topics addressed in the codes include, but are not limited to, fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, and industrial processes.

Local

County of Imperial General Plan

The Imperial County General Plan provides goals, objectives, policies, and programs regarding the preservation and use of water. Table 5.13-1 provides a consistency analysis of the applicable Imperial County General Plan goals and objectives as they relate to the proposed Project. While the Draft EIR analyzes the project's consistency with the General Plan pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 5.13-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN UTILITY GOALS AND POLICIES

General Plan Policies.	Consistency	Analysis
Seismic and Public Safety Element		
Goal 1: Include public health and safety considerations in land use planning. ● Objective 1.8: Reduce fire hazards by the design of new developments.	Yes	There are existing Fire hydrant connections within the "Vendor Row" area. Additional connections will be implemented to meet the needs of the further build-out of the Glamis Specific Plan Area (GSPA). During Special Events, onsite fire protection will be provided with applicable fire protection services and apparatus.

Source: Imperial County, n.d.

5.13.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for the following public services:
    - Fire Protection
    - Police Services

Analysis

Impact 5.13-1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for the following public services:
1. Fire Protection
2. Police Services

Fire Protection

Fire protection services are provided to the GSPA by the ICFD through the Brawley Fire Department Station, located in the City of Brawley approximately 25 miles to the east. There are existing fire hydrant connections within the "Vendor Row" area. Additional connections would be installed, as necessary to meet the needs of the proposed Specific Plan. As discussed in Section

5.14, the Proposed Specific Plan is not anticipated to draw additional visitors to the GSPA beyond the numbers the site currently experiences.

During Special Events, the Special Events Management Plan (SEMP) shall address the following based upon the type of event, site layout and projected attendance:

- The specific number of fire department personnel will be established;
- There shall be adequate fire department staff onsite during all event operating hours; and
- An appropriate amount of fire apparatus will be provided.

During Special Events, onsite fire protection would be provided with applicable fire protection services and apparatus.Click here to enter text.

Police Services

The Imperial County Sheriff's Department provides law enforcement to the GSPA. Sheriff's officers that patrol the area are based at the Brawley Police Department in the City of Brawley located approximately 27 miles east of the GSPA. As discussed in Section 5.14, the Proposed Specific Plan is not anticipated to draw additional visitors to the Project site beyond the numbers the site currently experiences.

During Special Events, the SEMP shall address the following based upon the type of event, site layout and projected attendance:

- The specific number of officers will be established; and
- If required, adequate California Highway Patrol (CHP) personnel will be onsite during all event operating hours.

CHP may be directing traffic on State Route 78 (SR-78) and on/off the event parking lots. They will manage the highway traffic. During Special Events, on-site law enforcement will be provided with applicable services and apparatus.

The County of Imperial has a Development Impact Fee (DIF) which is authorized by County of Imperial Ordinance No. 4.32. This fee is applied to all development projects in incorporated and unincorporated County of Imperial land. Payment of the DIF is required of developers to fund public facilities such as fire protection facilities and sheriff facilities. As the GSPA is developed, DIF fees will be required to ensure that resources will be available for capital improvements to implement the County's capital and operational funding of future facilities. Potential impacts on fire and police services would be less than significant.

5.13.4 Mitigation Measures

None required.

Level of Significance After Mitigation

To be determined.

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5.14 Transportation/Traffic

This section addresses potential transportation and traffic impacts that may result from development of the proposed Specific Plan. The following discussion addresses the existing traffic in the Glamis Specific Plan Area (GSPA), identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the Proposed Specific Plan, as applicable.

Information used in preparing this section and in the evaluation of potential transportation/traffic was derived from the *Traffic Impact Study* prepared by Linscott Law and Greenspan (LLG) (LLG, 2022: Appendix M).

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from regulatory agencies. The following issues related to transportation and traffic were raised by the California Department of Transportation (Caltrans) and are addressed in this section:

- Implementation of the Glamis Specific Plan may impact Caltrans' Right-of-Way (ROW) in the future. Future projects should be based upon the Program EIR and have elements and/or mitigation measures for changes to Caltrans ROW. Caltrans welcome the opportunity to be a Responsible Agency under CEQA and to continue coordination of our efforts.
- Please provide a traffic impact study using the Caltrans-Vehicles Miles Traveled-Focused-Transportation Impact Study Guide -May 20, 2020.
- Any proposed intersection expansion or modification will require an Intersection Control Evaluation (ICE) report as required by the Caltrans Traffic Operations Policy Directive #13-02. Submit an ICE report for the proposed intersection at Glamis Main Street on Figure 8 of the Draft Study & Environmental Analysis of the Glamis Specific Plan dated October 2020.

Comments for the Glamis Specific Plan – First Screen Check Draft EIR

- Page 4-2 - Section 4.2 - Proposed Project Section – Paragraph 2 - "This designation is intended to accommodate a large variety of commercial uses that are generally supportive of OHV activities and provide for large scale events to be held both on private property as well as adjoining federal lands." Does Bureau of Land Management (BLM) support large variety of commercial uses adjoining Federal lands?
- Page 4-4 - Hospitality – "With an average annual attendance of 200,000 visitors to the Glamis area." According to the Visitation Data provided by LLG Engineers, the annual attendance for 2019 was over 600,000 for this area.

- Page 4-7 – Section 4.3 - Project Components – "In compliance with CEQA, only those components of the proposed Glamis Specific Plan that would have the potential to result in potential environmental effects are addressed in this EIR." Impacts to the transportation network need to be addressed as well.
- The entire stretch for vehicular access west of the proposed signalized intersection will be required to have a fence installed along SR-78.
- Clarify the type of gateway and the installation location. Non-essential highway appurtenances like a gateway will need to be 52 feet from the edge of travel way.
- Any proposed intersection expansion or modification will require an Intersection Control Evaluation (ICE) report as required by the Caltrans Traffic Operations Policy Directive #13-02. Submit an ICE report for the proposed intersection at this intersection for review. Operations Policy Directive #13-02 can be provided upon request.
- "The Glamis Specific Plan proposes a transportation concept showing the portion of SR-78 traversing through the project vicinity being expanded from two thru lanes with an ultimate ROW width of 40 feet to a total of five (5) lanes with an ultimate ROW width of 72 feet. The segment of SR-78, west of the proposed intersection would have three easterly lanes - one thru lane, one left turn lane and one right turn lane - and two westerly lanes with one thru lane and an acceleration lane terminating approximately 1,000 feet from the intersection. The segment of SR-78 east of the intersection is of a similar configuration of the western segment with the number of lanes in each direction reversed and the acceleration lane terminating approximately 600 feet from the intersection." This concept proposes a significant level of expansion of the State Highway System, and close coordination with Caltrans will be required. Caltrans has made no determination on the proposed concepts.
- All proposed accesses along SR-78 for the proposed development Area 1-8 will need to be improved to meet Caltrans latest driveway standards with acceleration and deceleration lane based on the proposed development phasing.
- Page 4-11 Circulation Plan - "The project vicinity includes the Sand Highway that runs parallel to SR-78 along the northwestern edge of Planning Area 1." Is there a plan for separating the "Sand Highway" from SR-78 using physical barriers such as K-rail, fencing, or other means?
- Please specify location of signs and under whose authority signs will be posted.
- Page 4-26 - Table 4-2 "Anticipated Land Use Changes Through 2051/2071. Please include the growth rate used for the proposed traffic ADT in the report. Also, include this future growth volume in the future project traffic trips scenario in the Traffic Impact Analysis (TIA).
- Page 4-27 – Section 4.4 Project Phasing - "… the earliest construction beginning in late 2021. No uses would be opened prior to 2022 (opening year). The build-out year would be 2051/2071." What are the phases of the project to be constructed between 2021 and 2051?

Design

- The Project Development Procedures Manual (PDPM) Chapter 29 must be consulted regarding the requirements for Gateway Monuments.
- In addition, above ground gateway monuments are considered fixed objects and must comply with the Highway Design Manual (HDM) standard for Index 309.1(2)(b) Clear Recovery Zone for Discretionary Fixed Objects and/or HDM Index 309.1(3) Minimum Horizontal Clearances.
- The HDM should be consulted for the design of any proposed grade-separated structures and at-grade intersections.
- Proposed utility lines (new or relocated) within the R/W should comply with the policies in the PDPM Chapter 17.
- If a frontage road along SR-78 is to be included, consult the HDM for design standards, including barrier separation.
- New access points along the right of way may need to be evaluated based on access-controlled guidance.
- If an access opening on SR-78 is being requested, Caltrans Design will need to evaluate the geometric proposal once the specific roadway access plans has been submitted. The Caltrans Design Branch will need to review and comment on the roadway access opening per the HDM.
- US Bicycle Route System (USBRS) designates SR-78 as part of the "Southern Tier Route" in this area. Cyclists are present and use this road for regional and cross-country trips.
- As the Glamis Specific Plan develops and is implemented, consider how cyclists and off-highway vehicles may interact. Namely when off-highway vehicles take the shoulder of SR-78, where cyclists may be present.
- The document mentions "Urban hardscape (i.e., paved roads, curb and gutter, etc.) will be built in tandem with all proposed permanent structures." Please specify the locations of sidewalks and bike lanes, and other complete streets elements.

5.14.1 Environmental Setting

Access

The GSPA is regionally accessible via State Route 78 (SR-78) and serves as the primary transportation route for cars and trucks. Wash Road, a County-maintained dirt road, serves as access to BLM land and extends southeasterly from SR 78 for approximately 18.4 miles to County Highway S34 (Ogilby Road), a County maintained and paved two-lane highway. Circulation flow will be provided via the proposed "Glamis Mainstreet", which will interconnect by crossing SR-78. A secondary and emergency only access point to/from the GSPA to SR-78 will be provided on the west side of the GSPA, immediately south of SR-78.

Existing Street Network

The following is a description of the existing street network in the GSPA (Figure 5.14-1).

State Route 78 (SR 78) is a state highway that runs from Oceanside east to Blythe. Its western terminus is at Interstate 5 (I-5) in San Diego County and its eastern terminus is at I-10 in Riverside County. In Imperial County, SR 78 travels through the desert near the Salton Sea and passes through the City of Brawley before turning north and passing through an area of sand dunes on the way to its terminus in Blythe. Through the City of Brawley SR-78 is classified as a Major Arterial on the City of Brawley Circulation Element. Outside the City of Brawley it comes under the jurisdiction of the California Department of Transportation (Caltrans). Within the GSPA, SR-78 is constructed as a four-lane undivided roadway west of Best Avenue / Old Highway 111 and as a two-lane undivided roadway east of Best Avenue / Old Highway 111, through the GSPA. Bike lanes and bus stops are not provided, and the posted speed limit is 45 mph. Curbside parking is prohibited along both sides of the roadway (LLG, 2022; APPENDIX L).

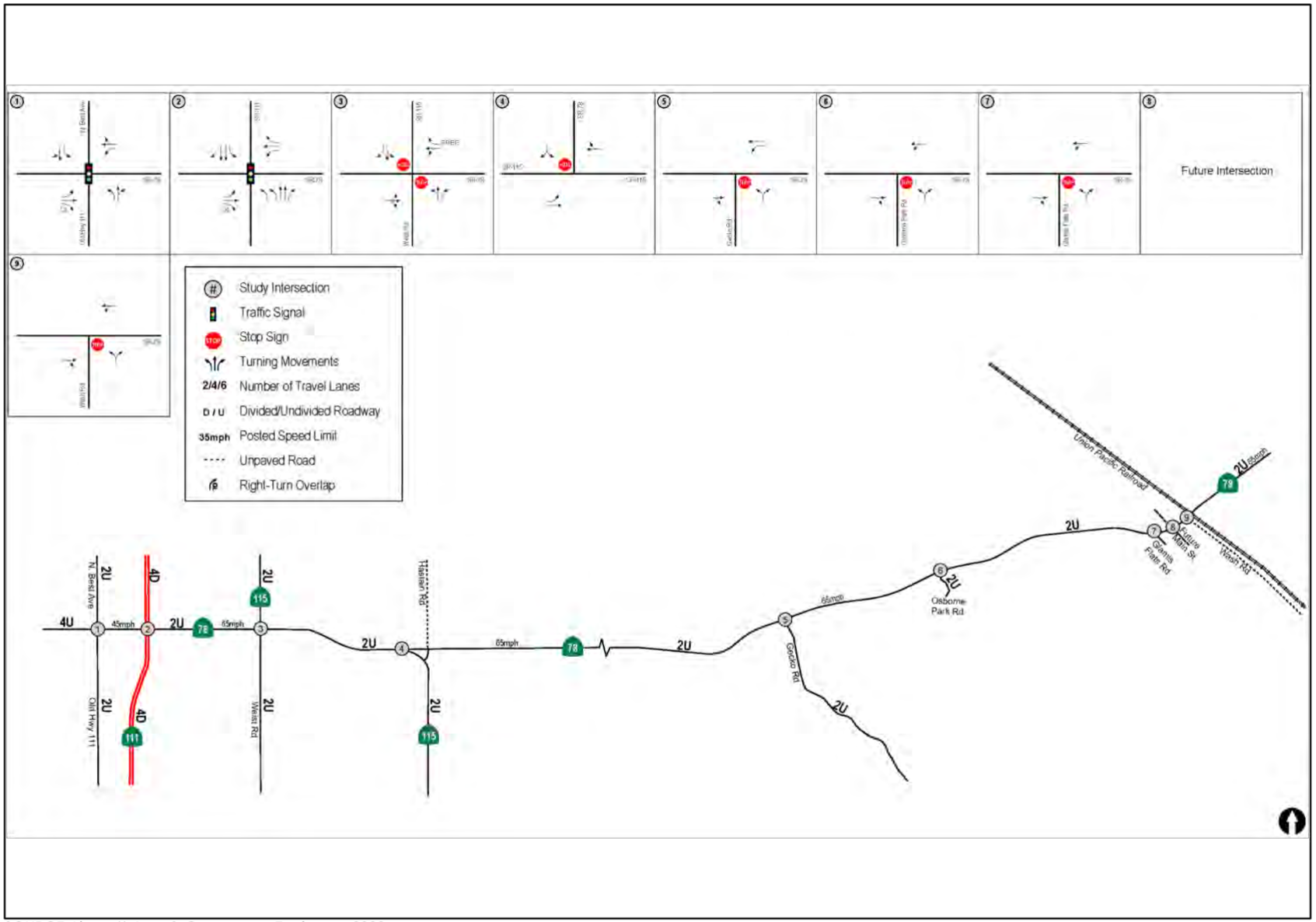
Existing Traffic Volumes

Existing Weekday and Weekend PM (5-7 PM) peak hour turning movement counts for the GSPA intersections were conducted in October / November 2019. The counts were conducted over the Halloween weekend (Thursday October 31– Sunday November 3), which is one of the busiest times of the year at the dunes. Traffic volumes are much lower during most of the year and therefore this analysis is conservative (LLG, 2022: Appendix L).

Daily traffic counts along Gecko Road, Osborne Park Road, Glamis Flats Road, and Wash Road were also conducted at the same time to assist in estimating trip distribution within the GSPA. These four (4) roadways provide direct access to the campgrounds for the majority of the visitors to the northern dunes.

Average daily traffic (ADT) counts along SR-78 were obtained from the Caltrans 2017 Traffic Volumes document, which provided the most recent data available at the time this report was prepared. Based on previous traffic studies conducted in the area and discussions with Caltrans, the peak 2017 volumes were adjusted upward by 2% per year for two years to estimate the 2019 baseline volumes (LLG, 2022: Appendix L).

Best Avenue / Old Highway 111. Through the City of Brawley Best Avenue / Old Highway 111 is classified as a Major Arterial on the City of Brawley Circulation Element. In the vicinity of the Project study area Best Avenue / Old Highway 111 is constructed as a four-lane divided roadway north of Main Street (SR-78), and as a two-lane undivided roadway south of Main Street (SR-78) and is under the jurisdiction of Caltrans. Bike lanes and bus stops are not provided and the posted speed limit ranges from 40-50 mph. Curbside parking is prohibited along both sides of the roadway (LLG, 2022: Appendix L).



SOURCE: Linscott, Law & Greenspan, Engineers, 2022.

Existing Street Network
Glamis Specific Plan
Figure 5.14-1

SR 111. Through the City of Brawley is classified as an Expressway on the City of Brawley Circulation Element. In the vicinity of the Project Study Area it is a north/south four-lane divided roadway and is under the jurisdiction of Caltrans. Bike lanes or bus stops are not provided and the posted speed limit ranges from 55 to 60 mph. Curbside parking is prohibited along both sides of the roadway.

SR-115 is an east-west two-lane undivided state highway within the GSPA and per the County of Imperial Circulation Element is classified as a Major Collector and is under the jurisdiction of CALTRANs. The posted speed limit is 45 mph. Curbside parking is prohibited along the highway (LLG, 2022; Appendix L).

Transit

Airports

The Holtville Airport, located approximately 16 miles southwest the GSPA, is the nearest public airport.

Transit Service

Imperial Valley Transit (IVT) is a fixed route public bus service. IVT was created in 1989 and began operations as a five-route system with 3 buses running Monday through Friday. The passenger ridership averaged approximately 3,000 passengers a month. Today, the service has 12 routes and over 20 buses in operation. The passenger ridership averages approximately 55,000 passengers a month. The transit service is operated as a turnkey operation by First Transit, Inc. The service is administrated and funded by the Imperial County Transportation Commission (ICTC). ICTC members represent each City, the County and the Imperial Irrigation District (IID). Funding is provided annually through the ICTC adopted Overall Work Program Budget and Finance Plan. The source of the funding includes but is not limited to the Federal Transportation Administration (FTA) 5307, 5311 and 5317 funds, State Transportation Development Act (TDA) including Local Transportation (LTF) and State Transit Assistance (STA), and local fare revenue (Imperial Valley Transit, 2021). Routes are categorized as:

- Fixed routes which operate over a set pattern of travel and with a published schedule;
- Deviated fixed routes which accommodate people with disabilities and limited mobility; and
- Remote zone routes, which operate once a week.

No transit service is provided in the immediate vicinity of the GSPA. The nearest bus stop is located in Brawley approximately 15 mile west and the nearest rail station is the Yuma, Arizona Station approximately 50 miles southeast of the GSPA.

Bicycle and Pedestrian Facilities

The U.S. Bicycle Route System (USBRS) designates SR-78 as part of the "Southern Tier Route" in this area. Cyclists are present and use this road for regional and cross-country trips (USBRS, 2021).

5.14.2 Regulatory Setting

State

California Department of Transportation (Caltrans)

The California Department of Transportation (Caltrans) has jurisdiction over state highways and establishes maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Transportation and traffic impacts are regulated by Caltrans codes pertaining to licensing, size, weight, and load of vehicles operated on highways (California Vehicle Code [CVC], Division 15, Chapters 1 through 5) as well as the Street and Highway Code (Code §§660-711, 670-695) which requires permits from Caltrans for any roadway encroachment during truck transportation and delivery. The Street and Highway Code includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Senate Bill 743

Senate Bill 743/State California Environmental Quality Act (CEQA) Guidelines Senate Bill (SB) 743, signed in 2013, required a change in the way that transportation impacts are analyzed under CEQA. Historically, environmental review of transportation impacts has focused on the delay vehicles experience at intersections and roadway segments, as expressed in Levels of Service (LOS). The legislation, however, sets forth that upon certification of new guidelines by the Secretary of the Natural Resources Agency, automobile delay, as described solely by LOS or other similar measures of traffic congestion shall not be considered a significant impact on the environment. Local jurisdictions may continue to consider LOS with regard to local general plan policies, zoning codes, conditions of approval, thresholds, and other planning requirements. New criteria for measuring traffic impacts under CEQA are to focus on the reduction of greenhouse gas emissions, the development of multi-modal transportation networks, and a diversity of land uses.

State CEQA Guidelines Section 15064.3 was adopted in December 2018 to implement SB 743. In addition to establishing Vehicle Miles Traveled (VMT) as the most appropriate measure of transportation impacts, and shifting away from LOS, primary elements of this section:

- Reiterate that a project's adverse effect on automobile delay shall not constitute a significant environmental impact;

- Create a rebuttable presumption of no significant transportation impacts for (a) land use projects within 0.5-mile of either an existing major transit stop or a stop along an existing high-quality transit corridor, (b) land use projects that reduce VMT below existing conditions, and (c) transportation projects that reduce or have no impact on VMT;
- Allow a lead agency to qualitatively evaluate VMT if existing models are not available; and
- Give lead agencies discretion to select a methodology to evaluate a project's VMT but requires disclosure of that methodology in the CEQA documentation. Lead agencies are required to comply the with CEQA Guideline revisions no later than July 1, 2020. To assist lead agencies in this endeavor, the State Office of Planning and Research (OPR) has also published a *Technical Advisory on Evaluating Transportation Impacts in CEQ*A (December 2018), which provides guidance in the calculation and application of VMT analyses within CEQA documents.

Local

VMT Analysis

The County of Imperial has not yet formally developed draft guidelines or adopted significance criteria and technical methodologies for VMT analysis. Therefore, guidance provided in the Governor's OPR SB 743 *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018, and Institute of Transportation Engineers (ITE's) *Guidelines for Transportation Impact Studies in the San Diego Region*, May, 2019 was utilized by Linscott Law and Greenspan (LLG) in the preparation of the *Traffic Impact Study* (LLG, 2022: Appendix M). These guidance documents are consistent with Caltrans' *Vehicle Miles Traveled-Focused Transportation Impact Study Guide,* May 20, 2020 (Caltrans, 2020, page 5).

General Plan Consistency

The Imperial County General Plan Circulation and Scenic Highways Element is intended to provide a plan to accommodate a pattern of concentrated and coordinated growth, providing both, regional and local linkage systems between unique communities, and its neighboring metropolitan regions while protecting and enhancing scenic resources within both rural and urban scenic highway corridors. The Imperial County General Plan Circulation and Scenic Highways Element policies related to the proposed Specific Plan are outlined below. Table 5.14-1 summarizes the proposed Specific Plan's consistency with the applicable General Plan policies.

While this Draft Environmental Impact Report (EIR) analyzes the proposed Specific Plan's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Planning Commissioners and Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 5.14-1. CONSISTENCY WITH GENERAL PLAN TRANSPORTATION GOALS AND OBJECTIVES

General Plan Policies and Objectives	Consistency	Analysis
Circulation and Scenic Highways Element (CSHE)		
CSHE Goal 1: The County will provide and require an integrated transportation system for the safe and efficient movement of people and goods within and through the County of Imperial with minimum disruption to the environment. **Objective 1.2** Require a traffic analysis for any new development which may have a significant impact on County roads. A traffic analysis may not be necessary in every situation, such as when the size or location of the project will not have a significant impact upon and generate only a small amount of traffic. Also, certain types of projects, due to the trip generation characteristics, may add virtually no traffic during peak periods. These types of projects may be exempt from the traffic analysis requirements. Whether a particular project qualifies for any exemption will be determined by the Department of Public Works Road Commissioner. **Objective 1.12** Review new development proposals to ensure that the proposed development provides adequate parking and would not increase traffic on existing roadways and intersection to a level of service (LOS) worse than "C" without providing appropriate mitigations to existing infrastructure. This can include fair share contributions on the part of developers to mitigate traffic impacts caused by such proposed developments.	Yes	The proposed Specific Plan contains a Conceptual Circulation Plan that describes how motor vehicles, off highway vehicle's (OHVs) and pedestrians would access the Glamis Specific Plan Area (GSPA). The proposed Specific Plan demonstrates how development of the GSPA would not interfere vehicular transportation along State Route 78 (SR-78) and other area roadways, and would accommodate the County's goal of providing a safe and efficient transportation system with minimal disruption to the environment for incoming visitors to the GSPA. In addition, a traffic study was prepared for the project. The project would not increase traffic on existing roadways and intersections to a LOS worse than C.
Multiple Modes of Transportation Goal 2: Consider all modes of transportation including motor vehicle, rail, transit, air transportation and non-motorized transportation.	Yes	The proposed Specific Plan considers all modes of transportation including motor vehicle, rail, transit, air transportation and non-motorized transportation regarding access to the GSPA. Due to the GSPA being a remote recreational enclave, the only feasible forms of transportation to/from the GSPA and surrounding BLM lands is via car/truck, OHV, and pedestrian access. The GSPA is not located within an urban area where public transit is proximately available.

TABLE 5.14-1. CONSISTENCY WITH GENERAL PLAN TRANSPORTATION GOALS AND OBJECTIVES

General Plan Policies and Objectives	Consistency	Analysis
Regional Transportation System Goal 5: Participate in and assist with coordinating regional efforts which integrate the County Transportation System with the Regional Transportation System.	Yes	During the development of the GSPA, stakeholder meetings were held with Caltrans District 11, and the Imperial County Transportation Commission (ICTC) to obtain their input into the development of the proposed Specific Plan, and to accommodate the County's goal of participating and coordinating with regional efforts to integrate the County Transportation System with the Regional Transportation System. Therefore, the proposed Specific Plan is consistent with this goal.

Source: County of Imperial Circulation and Scenic Highway Element, 2008.

5.14.3 Analysis of Project Effects and Significance Determination

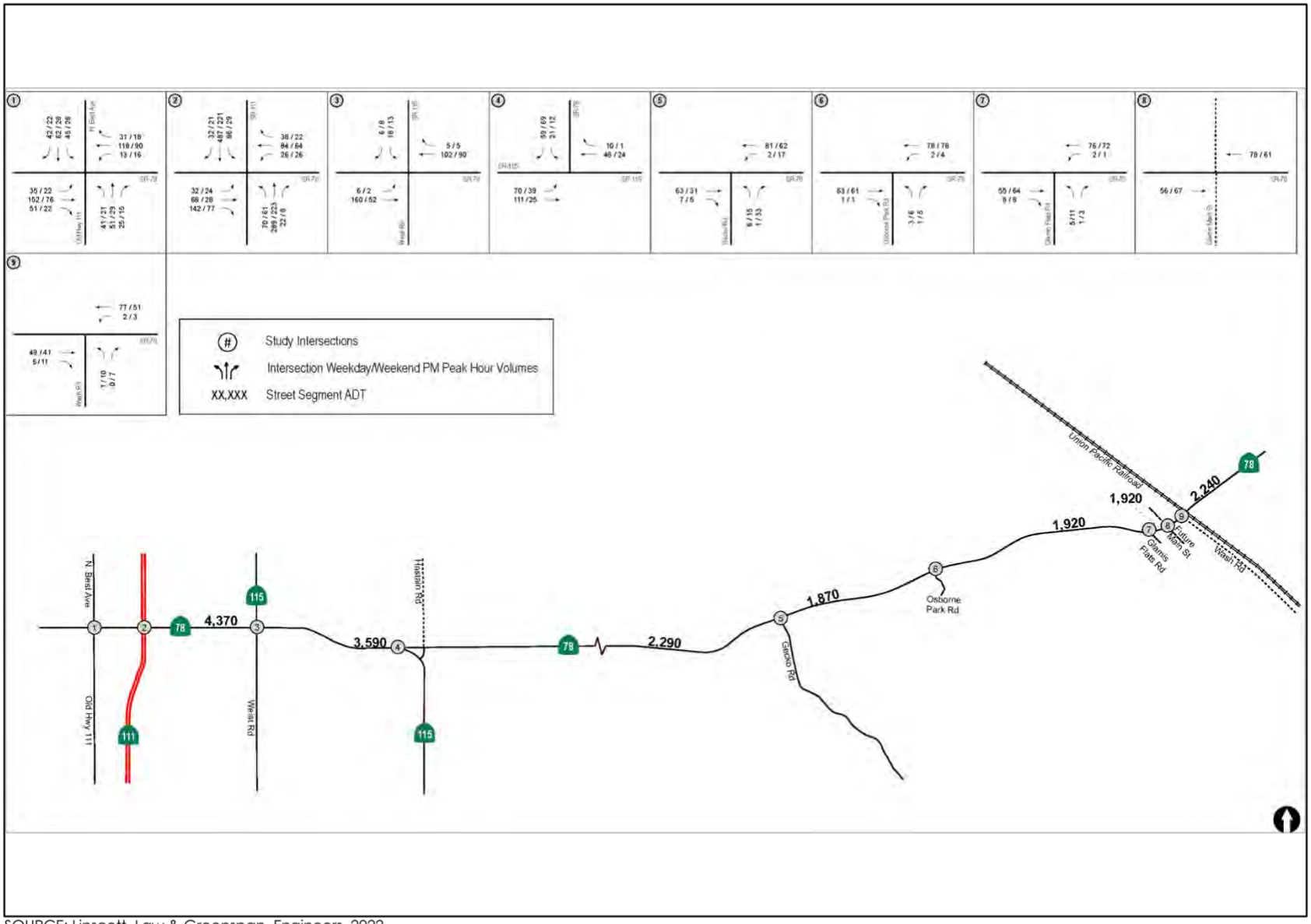
This section presents the significance criteria used for considering project impacts related to transportation and traffic, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Project Study Area

The following intersections and segments were analyzed in this study and were chosen since they will carry the majority of Project traffic.

Intersections:

1. SR-78 / Old Highway 111/ Best Avenue
2. SR-78 / SR-111
3. SR- 78 / SR-115 (west)
4. SR-78 / SR-115 (east)
5. SR-78 / Gecko Road
6. SR-78 / Osborne Park Road
7. SR-78 / Glamis Flats Road
8. SR-78 / Glamis Mainstreet (future access)
9. SR-78 / Wash Road



SOURCE: Linscott, Law & Greenspan, Engineers, 2022.

Existing Traffic Volumes
Glamis Specific Plan
Figure 5.14-2

Segments:

SR-78:

- Old Highway 111/ Best Avenue to SR-115 (west)
- SR-115 (west) to SR-115 (east)
- SR-115 (east) to Gecko Road
- Gecko Road to Osborne Park Road
- Osborne Park Road to Glamis Flats Road
- Glamis Flats Road to Glamis Mainstreet (future access)
- Glamis Mainstreet (future access) to Wash Road
- East of Wash Road

Methodology

The analysis prepared in this section is based on a *Traffic Impact Study* prepared by LLG (LLG, 2022: Appendix L).

The operations of the GSPA intersections and segments are characterized using the concept of LOS. LOS is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A through F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments.

Table 5.14-2 summarizes the description for each LOS. Table 5.14-3 depicts the criteria, which are based on the average control delay for any particular minor movement (signalized and unsignalized intersections).

TABLE 5.14-2 STATE HIGHWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

LOS	Volume to Capacity (V/C)	Congestion/ Delay	Traffic Description
"A"	< 0.41	None	Free flow.
"B"	0.42-0.62	None	Free to stable flow, light to moderate volumes.
"C"	0.63-0.80	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	0.81-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.

TABLE 5.14-2 STATE HIGHWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

LOS	Volume to Capacity (V/C)	Congestion/ Delay	Traffic Description
"E"	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
"F"	< 1.00	Considerable	Forced or breakdown flow. Delay measured in average travel speed (MPH). Signalized segments experience delays >60.0 seconds/vehicle.

Source: Linscott, Law & Greenspan, 2022.

TABLE 5.14-3 LEVEL OF SERVICE CRITERIA - UNSIGNALIZED INTERSECTIONS

LOS	Average Control Delay (Signalized) (sec/veh)	Average Control Delay (Unsignalized) (sec/veh)
A	≤10.0	≤10
B	10.0 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥80.1	≥50.0

Source: Linscott, Law & Greenspan, 2022.

The County of Imperial does not have published LOS standards. However, the County General Plan does state that the LOS goal for intersections and roadway segments is to operate at LOS C or better. Therefore, if an intersection or segment degrades from LOS C or better to LOS D or worse with the addition of project traffic, the effect is considered substantial. If the location operates at LOS D or worse with and without project traffic, the effect is considered substantial if the project causes the intersection delta to increase by more than two (2) seconds, or the Volume to Capacity (V/C) ratio to increase by more than 0.02. These thresholds are summarized below in Table 5.14-4 and are consistent with those used in the City of El Centro and the County of Imperial in numerous traffic studies (LLG, 2022: Appendix L).

TABLE 5.14-4 TRAFFIC EFFECT THRESHOLDS

LOS with Project [a]	Allowable Increase Due to Project Effect [b]					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
D, E & F (*or ramp meter delays above 15 minutes*)	0.01	1	0.02	1	2	2c

Notes:

a. All level of service measurements are based upon Highway Capacity Manual (HCM) procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume. The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

If a proposed project's traffic causes the values shown in the table to be exceeded, the effects are deemed to be substantial. These changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible improvements that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note a above), or if the project adds a significant amount of peak hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for improving substantial effect changes.

b. The allowable increase in delay at a ramp meter with more than 15 minutes of delay and freeway LOS E is 2 minutes and at LOS F is 1 minute.

General Notes:

V/C = Volume to Capacity Ratio

Speed = Arterial speed measured in miles per hour

Delay = Average stopped delay per vehicle measured in seconds for intersections, or minutes for ramp meters.

LOS = Level of Service

Source: Linscott, Law & Greenspan, 2022: Appendix L.

Heavy Vehicle Rate

SR-78 is a goods movement route connecting California with Arizona and Nevada. As such, a greater than average percentage of the vehicles traveling on SR-78 are multi-axle and considered to be "heavy vehicles". A 30.8% heavy-vehicle rate was recorded on SR-78 per the *2018 Truck Traffic: Annual Average Daily Truck Traffic* published on the Caltrans Traffic Census Program website. This rate was used in the Synchro traffic analysis for the proposed Specific Plan instead of the default two percent.

Signalized Intersections

For signalized intersections, LOS criteria is stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Unsignalized Intersections

For unsignalized intersections, LOS is determined by the computed or measured control delay and is defined for each minor movement. LOS is not defined for the intersection as a whole.

Street Segments

Street segments were analyzed based upon the comparison of ADT to the County of Imperial Roadway Classifications, LOS and ADT table (see Table 5.14-5 below). Table 5.14-5 provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The segment capacities were originally developed based on observations of weekday traffic volumes, and therefore, only an analysis of weekday conditions was conducted. Segment analysis is a comparison of ADT volumes and an approximate daily capacity on the subject roadway.

TABLE 5.14-5 IMPERIAL COUNTY STANDARD STREET CLASSIFICATION AVERAGE DAILY VEHICLE TRIPS

Road		Level of Service and ADT*				
Class	X-Section (feet)	A	B	C	D	E
Expressway	128/210	30,000	42,000	60,000	70,000	80,000
Prime Arterial	106/136	22,200	37,000	44,600	50,000	57,000
Minor Arterial	82/102	14,800	24,700	29,600	33,400	37,000
Major Collector (Collector)	64/84	13,700	22,800	27,400	30,800	34,200
Minor Collector (Local Collector)	40/70	1,900	4,100	7,100	10,900	16,200
Residential Street	40/60	*	*	< 1,500	*	*
Residential Cul-de-Sac / Loop Street	40/60	**	*	< 1,500	*	*
Industrial Collector	76/96	5,000	10,000	14,000	17,000	20,000
Industrial Local Street	44/64	2,500	5,000	7,000	8,500	10,000

* LOS are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. LOS normally apply to roads carrying through traffic between major trip generators and attractors.

Linscott, Law & Greenspan, 2022

Peak Hour Intersection Levels of Service

Table 5.14-6 summarizes the existing intersection operations. As seen in Table 5.14-6, all GSPA intersections are calculated to currently operate at LOS C or better, with most locations operating at LOS A.

TABLE 5.14-6 EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay [a]	LOS [b]
1. SR 78 / Old Highway 111 / Best Avenue	Signal	Wkday	15.5	B
		Wkend	15.3	B
2. SR 78 / SR 111	Signal	Wkday	24.8	C
		Wkend	21.2	C
3. SR 78 / SR 115 (west)	MSSC[c]	Wkday	11.8	B

TABLE 5.14-6 EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay [a]	LOS [b]
		Wkend	10.0	A
4. SR 78 / SR 115 (east)	MSSC	Wkday	10.6	B
		Wkend	9.3	A
5. SR 78 / Gecko Road	MSSC	Wkday	10.0	A
		Wkend	9.4	A
6. SR 78 / Osborne Flats Road	MSSC	Wkday	9.8	A
		Wkend	9.4	A
7. SR 78 / Glamis Flats Road	MSSC	Wkday	9.8	A
		Wkend	9.7	A
8. SR 78 / Glamis Mainstreet (future access)	-[d]	Wkday	-	-
		Wkend	-	-
9. SR 78 / Wash Road	Yield	Wkday	9.9	A
		Wkend	9.4	A

Notes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. MSSC = Minor Street Stop-Controlled intersection. Worst-case delay reported.
d. Intersection does not exist under existing conditions.
General Notes:
Wkday= Weekday PM Peak Hour (5:00-7:00 PM)
Wkend= Weekend PM Peak Hour (5:00-7:00 PM
Linscott, Law & Greenspan 2022

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

Daily Street Segment Levels of Service

Table 5.14-7 summarizes the existing segment operations. As seen in Table 5.14-7, all GSPA segments currently operate at LOS C or better.

TABLE 5.14-7 EXISTING STREET SEGMENT OPERATIONS

Street Segment	LOS E [a] Capacity	ADT [b]	LOS [c]	V/C [d]
SR 78				
Old Highway 111 / Best Avenue to SR 115 (west)	16,200	4,370	C	0.270
SR 115 (west) to SR 115 (east)	16,200	3,590	B	0.222
SR 115 (east) to Gecko Road	16,200	2,290	B	0.141
Gecko Road to Osborne Park Road	16,200	1,870	A	0.115
Osborne Park Road to Glamis Flats Road	16,200	1,920	B	0.119
Glamis Flats Road to Glamis Mainstreet (future access)	16,200	1,920	B	0.119
Glamis Mainstreet (future access) to Wash Road	16,200	1,920	B	0.119
East of Wash Road	16,200	2,240	B	0.138

Notes: a. The capacity of the roadway at Level of Service E; b. Average Daily Traffic; c. Level of Service; d. The Volume to Capacity ratio.
Source: Linscott, Law & Greenspan, 2022

5.14.4 Trip Generation/Distribution/Assignment

Project Generated Traffic

Construction Phase

Short-term construction traffic would be generated with construction of the proposed Project. This would include traffic from construction workers and truck traffic for material removal (i.e. grading export and demolition debris) and material delivery (i.e. building materials, water, etc.), anticipated to be spread throughout the day. The contribution of construction trips to the surrounding street segments and intersections was not modeled because anticipated trip volumes would be temporary and would not generate more than 50 peak hour trips, which is the threshold for modeling.

Traffic generated by construction activities would be temporary and would not result in direct impacts on key street segments and intersections in the study area. Traffic impacts related to construction activities would be less than significant and no mitigation would be required.

Operational Phase

The primary objective of the proposed Specific Plan is to formalize the site and provide services and amenities. The proposed Specific Plan's proposed land uses are intended to serve the existing patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat.

However, as shown on Table 5.14-8, to provide comprehensive assessment of the proposed Specific Plan's effects to the surrounding system, the following specific components of the proposed Specific Plan were analyzed, which are anticipated to be developed within the first ten years:

- Restaurant Expansion: 4,000 square feet (SF)
- Retail Expansion: 2,000 SF
- Service Center: Four (4) Service Bays
- Research & Development Facility: 5,000 SF
- Hotel / Motel: 20 Rooms
- Multi-Family Residential / Staff Housing: 14 Units
- RV Park: 30 Sites
- Vendor Row Expansion

Trip generation rates for the proposed Specific Plan were based on ITE's Trip Generation Manual (10th Edition). Table 5.14-8 tabulates the total proposed Specific Plan traffic generation. The proposed Specific Plan is calculated to generate a total of approximately 1,245 ADT with 90 trips (49 inbound / 41 outbound) during the Weekday PM peak hour and 106 trips (56 inbound / 50 outbound) during the Weekend PM peak hour. No trip generation credits were taken to account for

existing visitors to the dunes. The analysis assumes that 100% of the trips to the GSPA will be new trips, not trips by existing patrons of the dunes.

Trip Distribution/Assignment

The trip distribution percentages were estimated based on the existing traffic flow patterns observed at Gecko Road, Osborne Park Road, Glamis Flats Road, and Wash Road, and the proposed Specific Plan's proximity to regional highways / freeways in the vicinity.

Figure 5.14-3 depicts the trip distribution. Figure 5.14-4 depicts the assignment of project traffic and Figure 5.14-5 depicts the Existing + Project traffic volumes.

TABLE 5.14-8 PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate a	Volume	Rate	In: Out Split	Volume In	Volume Out	Rate	In: Out Split	Volume In	Volume Out
Restaurant Expansion	4,000 SF	112.18/ 1,000 SF	449	9.94	55:45	22	18	9.77	62:38	24	15
Retail Expansion	2,000 SF	37.75/ 1,000 SF	76	0.94	50:50	1	1	3.81	48:52	4	4
Service Center [b]	4 Bays	12.48/ Bay	50	1.52	68:32	4	2	2.17	32:68	3	6
R&D Facility [c]	4,000 SF	16.19/ 1,000 SF	81	1.92	83:17	8	2	2.45	32:68	4	8
Hotel / Motel	20 Rooms	8.36/ Room	167	0.47	59:41	6	3	0.60	51:49	6	6
Multi-Family Residential / Staff Housing	14 DU	7.32/ DU	102	0.46	23:77	1	5	0.56	63:37	5	3
RV Park [d]	30 Sites	4.00/Site	120	0.21	36:64	2	4	0.27	65:35	5	3
Vendors [e]	-	-	200			5	5			5	5
Total Trips			**1,245**			**49**	**41**			**56**	**50**

Notes:

a. Trip generation rates are based on the 10th edition of the Trip Generation Manual, Institute of Transportation Engineers (ITE).

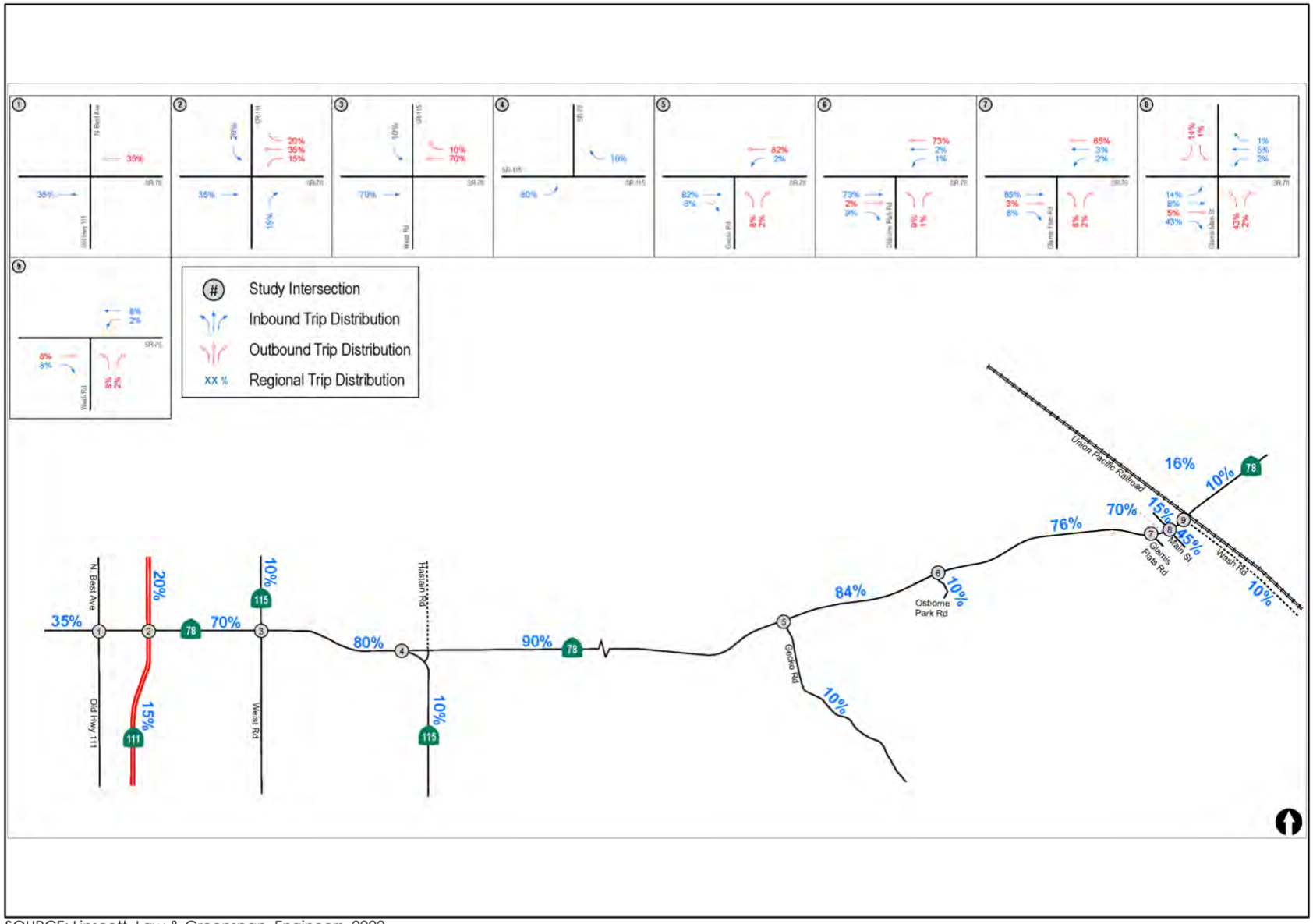
b. Weekday ADT rate not provided by ITE. Therefore, the Saturday ADT rate of 12.48 trips per service bay was used.

c. "Small Office Building" Rate assumed.

d. Weekday ADT rate not provided by ITE. Therefore, the SANDAG ADT rate of 4 trips per site was used.

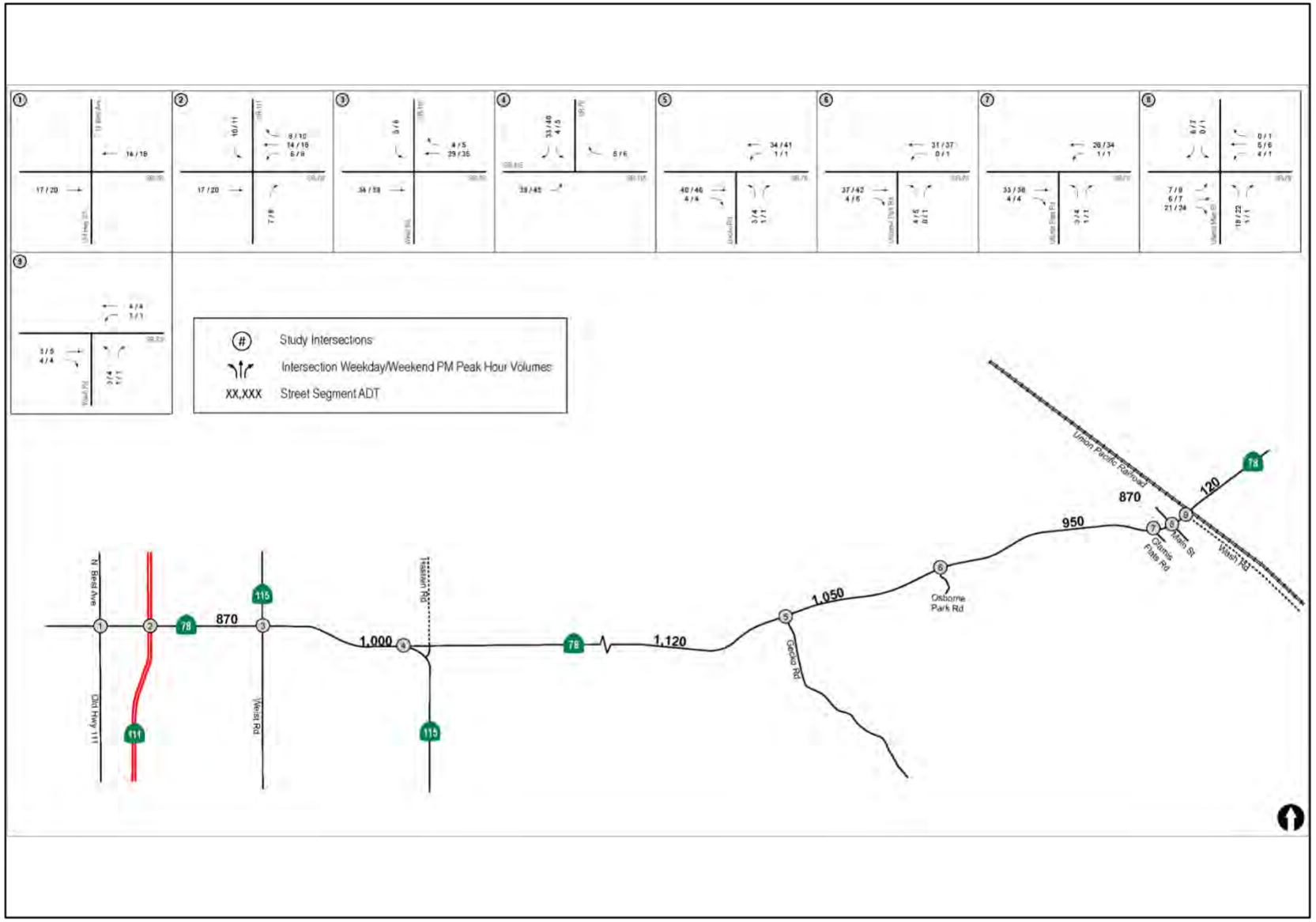
e. No additional vendors are expected as a part of the Project. However, in order to provide a conservative trip generation calculation, an additional 200 ADT was assumed.

Source: Linscott, Law & Greenspan 2022 (Appendix L).



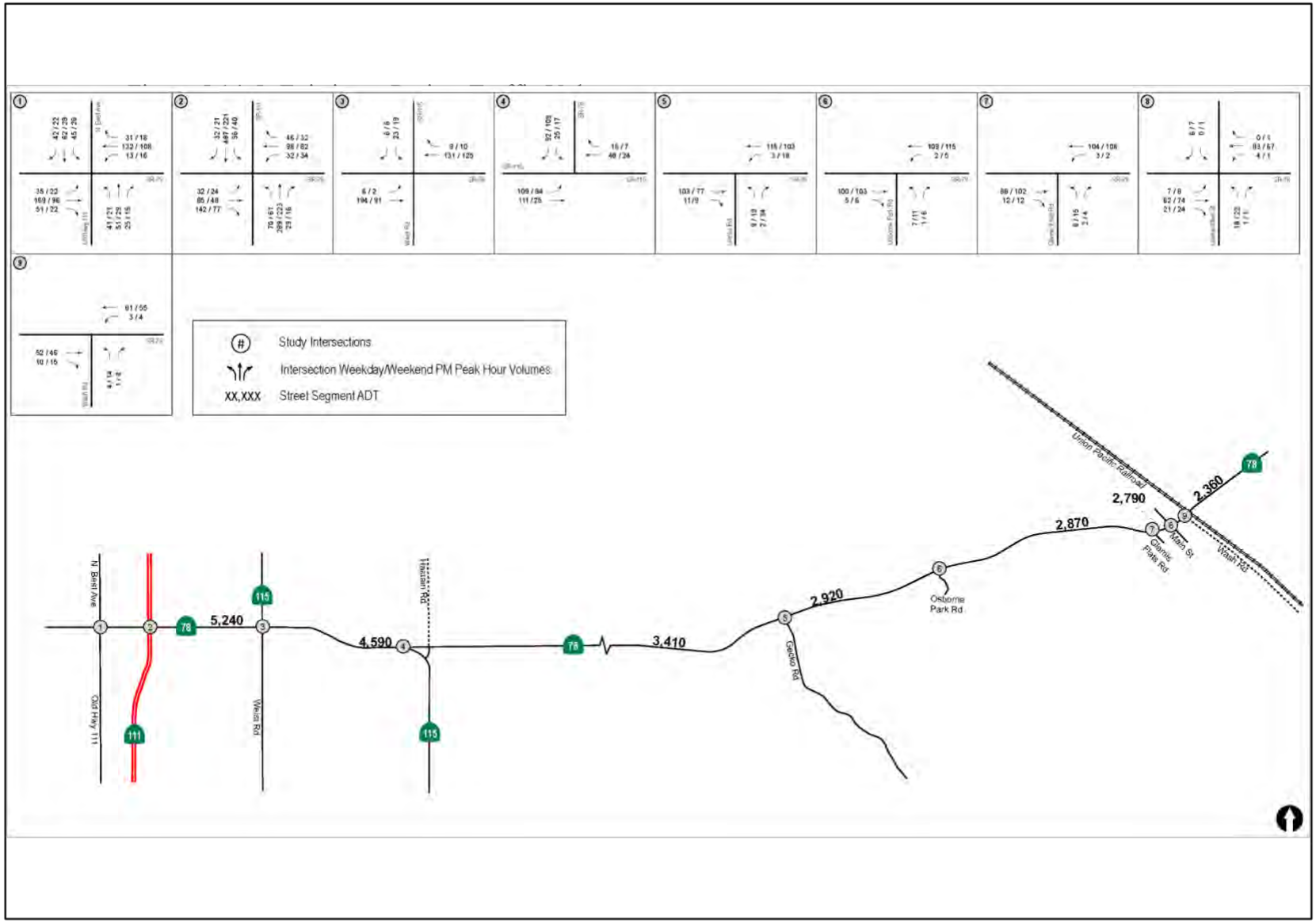
SOURCE: Linscott, Law & Greenspan, Engineers, 2022.

Project Traffic Distribution
Glamis Specific Plan
Figure 5.14-3



SOURCE: Linscott, Law & Greenspan, Engineers, 2022.

Project Traffic Volumes
Glamis Specific Plan
Figure 5.14-4



SOURCE: Linscott, Law & Greenspan, Engineers, 2022.

Existing + Project Traffic Volumes
Glamis Specific Plan
Figure 5.14-5

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
4. Result in inadequate emergency access?

Impact 5.10-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

ANALYSIS OF NEAR-TERM SCENARIOS

Existing + Project

Intersection Analysis

Table 5.14-9 summarizes the Existing + Project intersection operations. As seen in Table 5.14-9, with the addition of proposed Specific Plan traffic, all GSPA intersections are calculated to continue to operate at LOS C or better. No significant impacts are identified.

Segment Operations

Table 5.14-10 summarizes the Existing + Project segment operations. As seen in Table 5.14-10, with the addition of proposed Specific Plan traffic, the GSPA segments are calculated to continue to operate at LOS C or better. No significant impacts are identified.

ANALYSIS OF LONG-TERM SCENARIOS

Year 2050 Traffic Volumes

Based on previous traffic studies conducted in the area and discussions with Caltrans, long-term volumes were estimated by applying a growth rate of 1.0% per year for 31 years (2019 through 2050) to the existing volumes.

Figure 5.14–6 depicts the long-term Year 2050 Traffic Volumes, and Figure 5.14–7 depicts the Year 2050 + Project Traffic Volumes.

TABLE 5.14-9 NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Existing + Project + Cumulative Projects		Net Change [c]	Effect Type
			Delay [a]	LOS [b]	Delay	LOS	Delay	LOS		
1. SR 78 / Old Highway 111 / Best Avenue	Signal	Wkday	15.5	B	15.6	B	16.1	B	0.6	None
		Wkend	15.3	B	15.3	B	15.3	B	0.0	None
2. SR 78 / SR 111	Signal	Wkday	24.8	C	27.9	C	30.4	C	5.6	None
		Wkend	21.2	C	21.7	C	22.2	C	1.0	None
3. SR 78 / SR 115 (west)	MSSC [d]	Wkday	11.8	B	12.8	B	13.5	B	1.7	None
		Wkend	10.0	A	10.7	B	10.9	B	0.9	None
4. SR 78 / SR 115 (east)	MSSC	Wkday	10.6	B	11.4	B	11.9	B	1.3	None
		Wkend	9.3	A	9.7	A	9.8	A	0.5	None
5. SR 78 / Gecko Road	MSSC	Wkday	10.0	A	10.8	B	11.1	B	1.1	None
		Wkend	9.4	A	10.1	B	10.2	B	0.8	None
6. SR 78 / Osborne Park Road	MSSC	Wkday	9.8	A	10.6	B	10.8	B	1.0	None
		Wkend	9.4	A	10.0	A	10.1	B	0.7	None
7. SR 78 / Glamis Flats Road	MSSC	Wkday	9.8	A	10.4	B	10.6	B	0.8	None
		Wkend	9.7	A	10.3	B	10.5	B	0.8	None
8. SR 78 / Glamis Mainstreet (future access)	MSSC	Wkday	-[e]	-	10.2	B	10.4	B	-	None
		Wkend	-	-	10.2	B	10.4	B	-	None
9. SR 78 / Wash Road	MSSC	Wkday	9.9	A	9.9	A	10.0	A	0.1	None
		Wkend	9.4	A	9.5	A	9.6	A	0.2	None

Notes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Change in delay due to project.
d. MSSC = Minor Street Stop-Controlled intersection. Worst-case delay reported.
e. Intersection does not exist under existing conditions.
Wkday= Weekday PM Peak Hour (5:00-7:00 PM)
Wkend= Weekend PM Peak Hour (5:00-7:00 PM)
Source: Linscott, Law & Greenspan 2022 (Appendix L).

SIGNALIZED	
Delay	LOS
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F

UNSIGNALIZED	
Delay	LOS
0.0 ≤ 10.0	A
10.1 to 15.0	B
15.1 to 25.0	C
25.1 to 35.0	D
35.1 to 50.0	E
≥ 50.1	F

TABLE 5.14-10 NEAR-TERM STREET SEGMENT OPERATIONS

Street Segment	Existing Capacity (LOS E)[a]	Existing			Existing + Project			Existing + Project + Cumulative Projects			Net Change [e]	Effect Type
		ADT	LOS	V/C	ADT	LOS	V/C	ADT	LOS	V/C		
SR 78												
Old Highway 111 / Best Avenue to SR 115 (west)	16,200	4,370	C	0.270	5,240	C	0.323	5,760	C	0.356	0.086	None
SR 115 (west) to SR 115 (east)	16,200	3,590	B	0.222	4,590	C	0.283	5,020	C	0.310	0.088	None
SR 115 (east) to Gecko Road	16,200	2,290	B	0.141	3,410	B	0.210	3,680	B	0.227	0.086	None
Gecko Road to Osborne Park Road	16,200	1,870	A	0.115	2,920	B	0.180	3,140	B	0.194	0.078	None
Osborne Park Road to Glamis Flats Road	16,200	1,920	B	0.119	2,870	B	0.177	3,100	B	0.191	0.073	None
Glamis Flats Road to Glamis Mainstreet (future access)	16,200	1,920	B	0.119	2,790	B	0.172	3,020	B	0.186	0.068	None
Glamis Mainstreet (future access) to Wash Road	16,200	1,920	B	0.119	2,120	B	0.131	2,350	B	0.145	0.027	None
East of Wash Road	16,200	2,240	B	0.138	2,360	B	0.146	2,630	B	0.162	0.024	None

Notes:

a. The capacity of the roadway at Level of Service E.

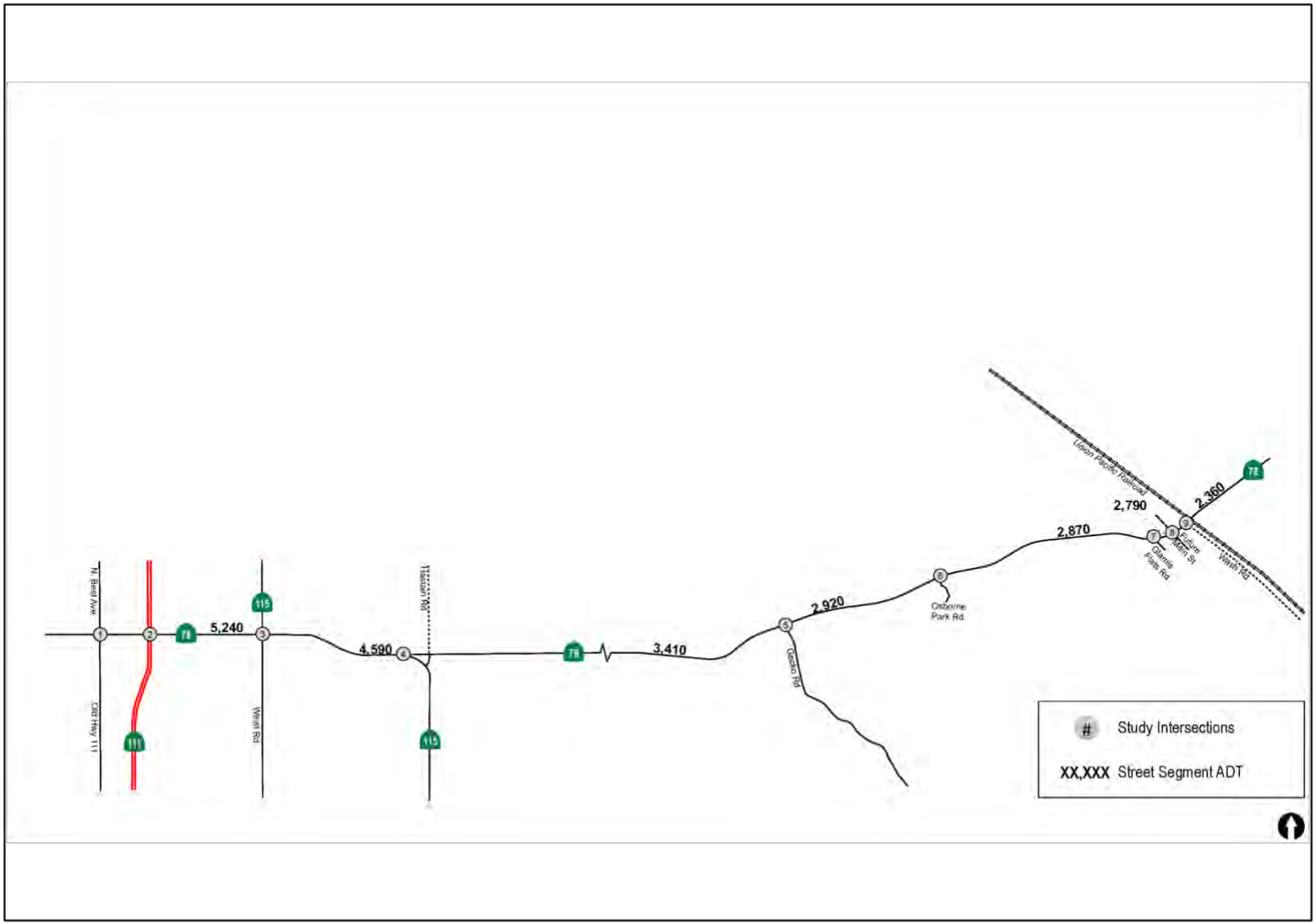
b. Increase in V/C ratio due to the addition of project traffic.

ADT = Average Daily Traffic

LOS = Level of Service

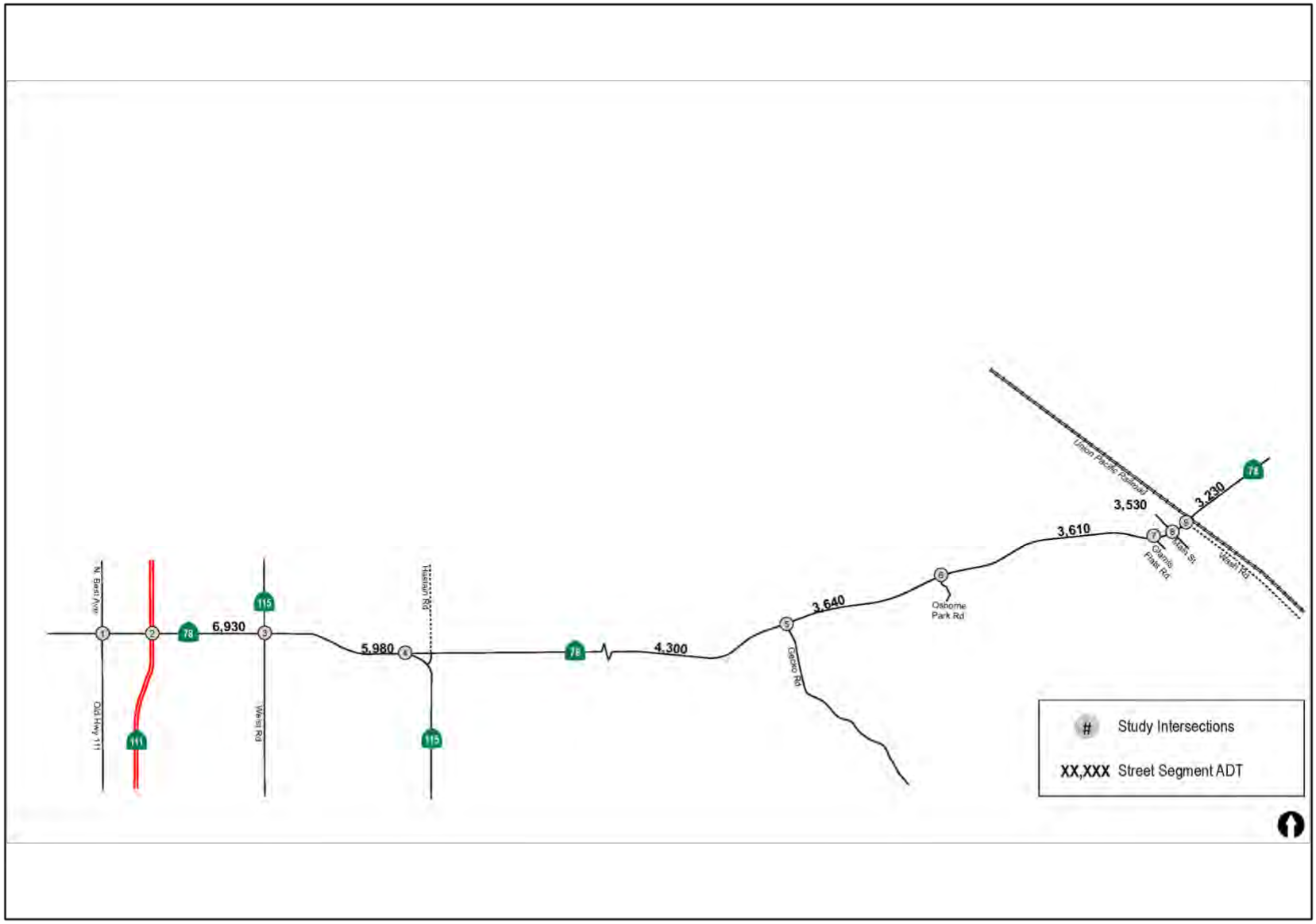
V/C = Volume to Capacity ratio.

Source: Linscott, Law & Greenspan 2022 (Appendix L).



SOURCE: Linscott, Law & Greenspan, Engineers, 2022.

Year 2050 Traffic Volumes
Glamis Specific Plan
Figure 5.14-6



SOURCE: Linscott, Law & Greenspan, Engineers, 2022.

Year 2050 + Project Traffic Volumes
Glamis Specific Plan
Figure 5.14-7

Year 2050 Segment Operations

Table 5.14-11 summarizes the Year 2050 segment operations. As seen in Table 5.14-11, all GSPA segments are calculated operate at LOS C or better.

Year 2050 + Project Segment Operations

Table 5.14-11 summarizes the Year 2050 + Project segment operations. As seen in Table 5.14-11, with the addition of proposed Specific Plan traffic, all GSPA segments are calculated to continue to operate at LOS C or better.

TABLE 5.14-11 YEAR 2050 STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS E)[a]	Year 2050			Year 2050 + Project			Impact Type
		ADT [b]	LOS [c]	V/C [d]	ADT	LOS	V/C	
SR 78								
Old Highway 111 / Best Avenue to SR 115 (west)	16,200	5,720	C	0.353	6,950	C	0.429	None
SR 115 (west) to SR 115 (east)	16,200	4,700	C	0.290	6,100	C	0.377	None
SR 115 (east) to Gecko Road	16,200	3,000	B	0.185	4,580	C	0.283	None
Gecko Road to Osborne Park Road	16,200	2,450	B	0.151	3,400	B	0.210	None
Osborne Park Road to Glamis Flats Road	16,200	2,520	B	0.156	3,360	B	0.207	None
Glamis Flats Road to Wash Road	16,200	2,520	B	0.156	2,990	B	0.185	None
East of Wash Road	16,200	2,930	B	0.181	3,110	B	0.192	None

Notes:
a. The capacity of the roadway at Level of Service E; b. Average Daily Traffic; c. Level of Service; d. The Volume to Capacity ratio.
Linscott, Law & Greenspan 2022

Implementation of the proposed Specific Plan would add traffic to roadway segments and intersections along SR-78 during construction and operation. However, the additional traffic would not result in an exceedance of LOS C. Additionally, the proposed Specific Plan would not affect bicycle facilities, pedestrian facilities or public transit. Therefore, conflicts with the Imperial County General Plan Circulation and Scenic Highways Element are considered *less than significant.*

Impact 5.10-2: Conflict(s) or inconsistency with CEQA Guidelines Section 15064.3, subdivision (b) relative to Vehicle Miles Traveled?

According to the ITE guidelines, it is recommended that local-serving retail projects be presumed to have less than significant VMT impacts and regional-serving retail projects be presumed to have significant VMT impacts if they increase VMT above the level that would occur for conditions

without the proposed Specific Plan. As noted in OPR's technical advisory, "by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact."

While the GSPA is not located in an urban area, the primary objective of the proposed Specific Plan is to formalize the site and provide services and amenities that patrons of the dunes would otherwise have to drive long distances to access. This includes food services, repair services, and retail services. The proposed Specific Plan's proposed land uses are intended to serve patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat.

Therefore, the OPR guidance pertaining to locally serving retail projects is applicable to the proposed Specific Plan. The proposed Specific Plan land uses will improve service-destination proximity, shorten trips, and reduce VMT. As such, the Project is presumed to have a *less-than-significant* transportation impact and does not require a detailed VMT analysis (LLG, 2022: Appendix L).

Impact 5.10-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Primary circulation flow will be provided via the proposed "Glamis Mainstreet", to be located between Glamis Flats Road and Wash Road, just southwest of the Glamis Beach Store, which will interconnect by crossing SR-78. Fencing along SR-78 to assist in prohibiting access to the site other than at establishes intersections is recommended commensurate with the development of Glamis Mainstreet. An OHV tunnel running under SR-78 connecting the northern and southern portions of the GSPA is recommended to be constructed at the time the Planning Areas north of SR-78 are developed.

As noted previously, the primary objective of the proposed Specific Plan is to formalize the site and provide services and amenities to serve the existing patrons of the dunes. It is not expected that the proposed Specific Plan will draw a significant number of new users to the dunes. To provide a conservative analysis, it was assumed that the proposed Specific Plan will increase existing dune related trips to the area by 30%. These new trips were assigned to Gecko Road, Osborne Park Road, Glamis Flats Road, and Wash Road, which provide direct access to the campgrounds for the majority of the visitors to the northern dunes.

However, since future proposed Specific Plan amenities accessible via the proposed "Glamis Mainstreet" are expected to draw a portion of the existing and Project trips, an analysis of the future SR-78 / Glamis Mainstreet intersection has been conducted. Since the specific land-uses to be developed have not yet been determined, the analysis has been conducted assuming a very conservative estimate of 100 weekday and 160 weekend peak hour trips to / from Glamis Mainstreet north of SR-78, and 150 weekday and 230 weekend peak hour trips to / from Glamis Mainstreet

south of SR-78, based on expected use. Construction of the Glamis Mainstreet has the potential to interrupt traffic on SR-78, Development and implementation of a Traffic Control Plan in conjunction with Caltrans would minimize these interruptions and any effect they have on traffic would be less than significant.

Figure 5.14-8 depicts the assumed geometric lane configuration as well as the estimated Project Buildout trips at the future SR-78 / Glamis Mainstreet intersection.

Table 5.14-12 summarizes the Project Buildout operations at the future SR-78 / Glamis Mainstreet intersection. As seen in Table 5.14-8, the intersection is calculated to operate acceptably at LOS C or better under Weekday and Weekend PM peak hour conditions.

TABLE 5.14-12 SR-78/GLAMIS MAINSTREET INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay [a]	LOS [b]
SR 78 / Glamis Mainstreet	MSSC	Wkday	10.4	B
		Wkend	10.4	B

Linscott, Law & Greenspan 2022

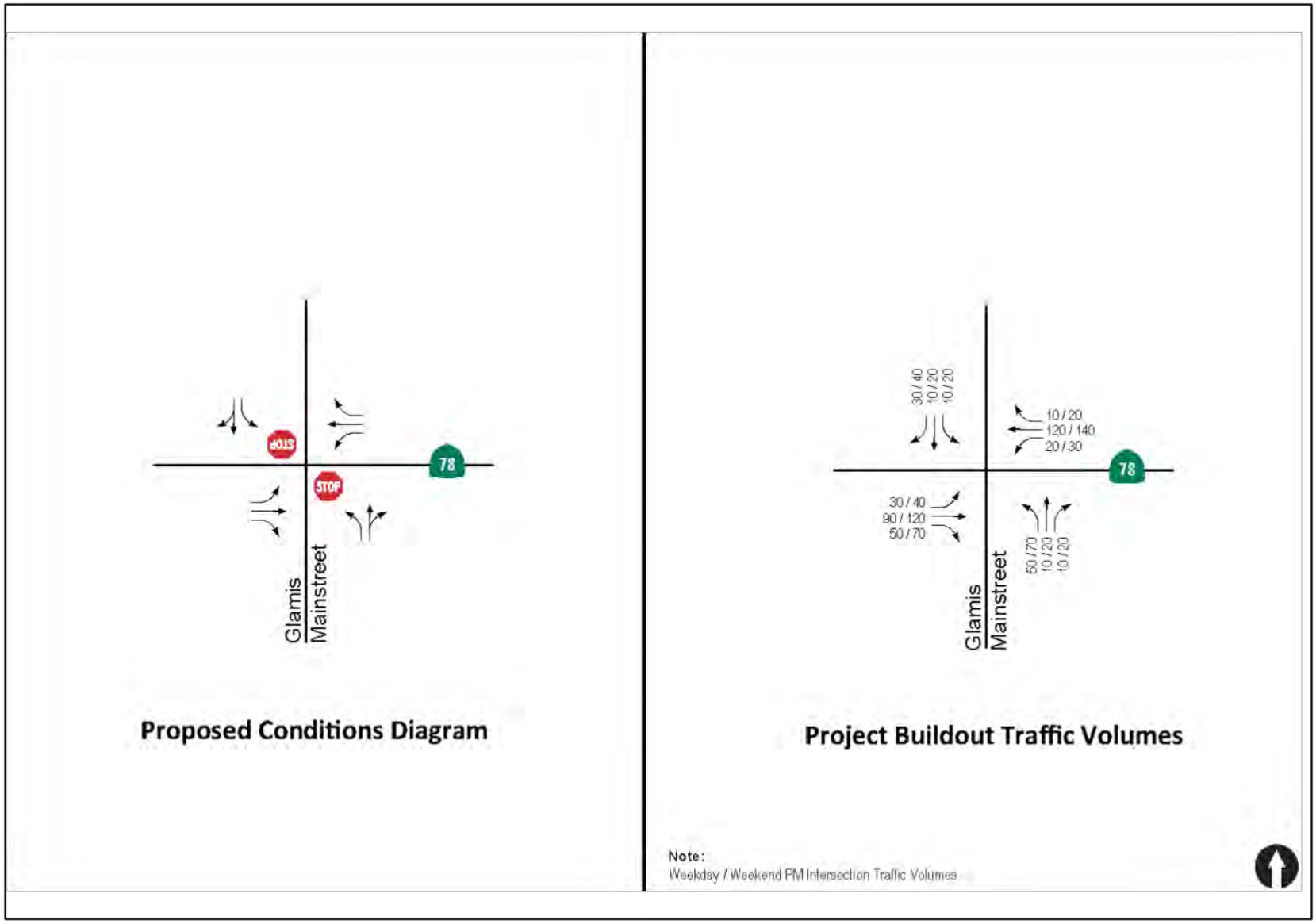
Additional Access Points

Access to Planning Areas 5 and 6, just east of the Union Pacific Railroad (UPRR), via SR-78 is proposed. Given the very low expected traffic volumes, signalization of the intersection is likely not needed, however, dedicated left-turn lanes on SR-78 are recommended. In addition, a secondary and emergency only access point to/from the Project site to SR-78 should be provided on the west side of the GSPA, immediately south of SR-78.

The proposed Specific Plan would have no hazardous design features, such as sharp curves or dangerous intersections, that would create a traffic hazard. Implementation of the mitigation measures described below would reduce the impacts to below a level of significance.

Impact 5.10-4: Inadequate emergency access?

The proposed Specific Plan would not block any major thoroughfares; however, it would lead to an increase in traffic and add an intersection to SR-78 which could slow emergency response times. However, implementation of the mitigation measures described below would reduce the impacts to below a level of significance.



SOURCE: Linscott, Law & Greenspan, Engineers, 2022.

Glamis Mainstreet Conditions
Glamis Specific Plan
Figure 5.14-8

5.14.5 Mitigation Measures

The following Mitigation Measures would reduce impacts to below a level of significance.

MM T-1: Traffic-related improvements:

- Construct the future intersection of SR-78 / Glamis Mainstreet per the sketch provided in Appendix F in the applicant prepared traffic study.
- Conduct an annual signal warrant assessment at the future intersection of SR-78 / Glamis Mainstreet to determine when / if signalization should be implemented.
- Install fencing along SR-78 to limit vehicle access to the Specific Plan areas to established intersections.
- An OHV tunnel running under SR-78 connecting the northern and southern portions of the GSPA is recommended to be constructed at the time the Planning Areas north of SR-78 are developed.
- Access to Planning Areas 5 and 6, just east of the UPRR, via SR-78 will be required. Given the very low expected traffic volumes, signalization of the intersection is likely not needed, however, dedicated left- turn lanes on SR-78 are recommended.
- A secondary emergency only access point to/from the GSPA to SR-78 shall be provided on the west side of the GSPA.

Level of Significance After Mitigation

As a result, impacts related to the increase of traffic hazards as a result of the GSPA would be less than significant.

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5.15 Utilities and Service Systems

This section describes the existing utility and service systems in the vicinity of the Glamis Specific Plan Area (GSPA) and identifies the potential physical environmental impacts that would result from provision of services to the proposed Specific Plan.

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments related to utilities and service systems were received.

Issues Scoped Out

The Imperial County Planning and Development Services Department determined in the Initial Study (IS), located in Appendix A-2, that the following environmental issue areas resulted in no impact and was scoped out of requiring further review in this Draft EIR. Please refer to Appendix A-2 of this Draft EIR for a copy of the IS and additional information regarding this issue.

- Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? The Applicant will comply with federal, state and local statutes related to solid waste. No impacts would occur.

5.15.1 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

State

Senate Bill 610 and 221

Senate Bill (SB) 610 (Chapter 643, Statutes of 2001) and SB 221 (Chapter 642, Statutes of 2001) amended State of California law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures that seek to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to city and county decision-makers prior to approval of specified large development projects. Both statutes also require this detailed information to be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Both measures recognize local control and decision making regarding the availability of water for projects and the approval of projects.

Water Code Sections 10910–10915 require lead agencies to identify the public water system that may supply water for a proposed development project and to request from that public water system a water supply assessment (WSA) for the proposed Projects. The purpose of the WSA is to demonstrate that the public water system has sufficient water supplies to meet the water demands associated with the proposed Projects in addition to meeting the existing and planned future water demands projected for the next 20 years. A WSA is required for:

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40-acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use development that includes one or more of the uses described above.
- A development that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling-unit project.
- For lead agencies with fewer than 5,000 water service connections, any new development that would increase the number of water service connections in the service area by 10 percent or more.

Local

Imperial Integrated Regional Water Management Plan

The Imperial Integrated Regional Water Management Plan (IRWMP) serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options, demand management and determination and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board of Directors approved it in December 2012. Through the IRWMP process, IID presented various options to the region's stakeholders that would be implemented in the event long-term water supply augmentation is needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water.

Groundwater Management Ordinance

In 1998, the County adopted, and in 2015 amended, a comprehensive Groundwater Management Ordinance to preserve and manage groundwater resources within the County. The Groundwater Ordinance, codified as Division 22 of Title 9 of the Imperial County Code, is implemented by the Planning Commission acting upon the direction of the Board of Supervisors. The Groundwater Ordinance provides the County with various regulatory tools that are designed to avoid or minimize the impact of existing and proposed groundwater extraction activities on groundwater resources and other users, such as overdraft or excessive drawdown. The Groundwater Ordinance requires that existing extraction facilities be permitted and registered with the County. The existing groundwater wells in the GSPA are permitted and regulated by an attachment to CUPs 13-0060 and 13-0059, respectively, which sets site-specific conditions for the onsite wells.

County of Imperial General Plan

The Imperial County General Plan provides goals, objectives, policies, and programs regarding the preservation and use of water. Table 5.15-1 provides a consistency analysis of the applicable Imperial County General Plan goals and objectives as they relate to the proposed project. While the EIR analyzes the project's consistency with the General Plan pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 5.15-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN UTILITY GOALS AND POLICIES

General Plan Policies	Consistency	Analysis
Agricultural Element		
Goal 4: Water Availability and Conservation: • Maximize the inherent productivity of Imperial County's agricultural resources by ensuring future availability of adequate and affordable irrigation water and by managing water such that it is used effectively and not wasted.:	Yes	The proposed Specific Plan proposes to utilize water from an existing well and a proposed new well within the Glamis Specific Plan Area (GSPA) to provide water for the proposed uses. The proposed Specific Plan does not rely on any irrigation water nor water that would be suitable for agricultural purposes, and therefore, would not affect the availability of irrigation water for agricultural use. The proposed Specific Plan implements water efficient appliances and other water conservation measures (e.g., xeriscape landscaping) that would reduce water use to the maximum extent possible.

TABLE 5.15-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN UTILITY GOALS AND POLICIES

General Plan Policies	Consistency	Analysis
Conservation and Open Space Element (COSE)		
COSE Goals 6: The County will conserve, protect, and enhance water resources in the County. • COSE Objective 6.1: Ensure the use and protection of all the rivers, waterways, and groundwater sources in the County for use by future generations. • COSE Objective 6.4: Eliminate potential surface and groundwater pollution through regulations as well as educational programs.	Yes	The proposed Specific Plan conserves, protects and enhances water resources in the County through implementation of water efficient appliances and other water conservation measures (e.g., xeriscape landscaping) that would reduce water use to the maximum extent possible.
Water Element (WE)		
Adequate Domestic Water Supply WE Goal 1: The County will secure the provision of safe and healthful sources and supplies of domestic water adequate to assure the implementation of the County General Plan and the long-term continued availability of this essential resource. • WE COSE Objective 1.1 The efficient and cost-effective utilization of local and imported water resources through the development and implementation of urban use patterns.	Yes	The water supply assessment (WSA) determined that there would be sufficient water available to meet the proposed Specific Plan's demand. The permitting of a public water treatment system which would treat ground water that is extracted from existing and proposed onsite wells is currently in progress. The water treatment plant will comply with California standards for drinking water and is being constructed to meet the needs of the current uses and with room for expansion.
Adequate Domestic Water Supply Policy 1: The efficient regulation of land uses that economizes on water consumption, enhances equivalent dwelling unit demand for domestic water resources, and that makes available affordable resources for continued urban growth and development.	Yes	The permitting of a water treatment system which would treat ground water that is extracted from existing and proposed onsite wells is currently in progress. The water treatment plant complies with California standards and is being constructed to meet the needs of the current uses and with room for expansion. Therefore, the proposed Specific Plan is consistent with and results in the implementation of this policy of the General Plan.
Coordinated Water Management Goal 5: Water Resources shall be managed effectively and efficiently through inter-agency and inter-jurisdictional coordination and cooperation.	Yes	The proposed Specific Plan sets forth continued cooperation and coordination between Imperial County and other Local, State and Federal agencies, water resources can be conserved and managed effectively and efficiently for all approved beneficial purposes. Therefore, the proposed Specific Plan is consistent with and results in the implementation of this policy of the General Plan.

TABLE 5.15-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN UTILITY GOALS AND POLICIES

General Plan Policies	Consistency	Analysis
Coordinated Water Management Policy 1: Encourage and provide inter-agency and interjurisdictional coordination and cooperation for the management and wise use of water resources for contact and non-contact recreation, groundwater recharge, hydroelectric energy production, and wildlife habitat as well as for domestic and irrigation use.	Yes	The proposed Specific Plan sets forth continued cooperation and coordination between Imperial County and other Local, State and Federal agencies involved in water resources conservation. Water resources are conserved and managed effectively and efficiently for all approved beneficial purposes. Therefore, the proposed Specific Plan is consistent with and results in the implementation of this policy of the General Plan.

Source: Imperial County, 1997, 2015, 2016.

5.15.2 Existing Conditions

Environmental Setting

The Imperial Valley area is located within the south-central part of Imperial County and is bound by Mexico on the south, the Algodones Sand Hills on the east, the Salton Sea on the north and San Diego County on the northwest, and the alluvial fans bordering the Coyote Mountains and the Yuha Desert to the southwest. While the Imperial Irrigation District (IID) supplies water and electrical power to most users in the Imperial Valley, the GSPA is outside IID's water service area. Operations are divided between a water division responsible for distribution and collection of water, and a power division responsible for generation and distribution of electrical power. Natural gas service in the area is provided by the Southern California Gas Company.

Water supplies for existing uses within the GSPA are currently provided by an existing on site well (CUP #13-0059). This well is designed specifically for domestic water use to serve a residence and its ancillary buildings. This well was constructed to domestic water well standards and cannot be used as a potable water source for the larger project area. It is currently authorized to pump 1.5 acre-feet (AF) per year. There is one permitted public water system well (CUP #13-0060) that supplies water to the yet to be permitted Glamis Beach Store public water system, System No. 1300684. It also is currently authorized to pump 1.5 AF per year. Average annual water use within the GSPA has ranged from 0 to 1.5 AFY.

Groundwater Basin

The GSPA is located within the Amos Valley Groundwater Basin which is part of the East Mesa Groundwater Management Planning Area. The Amos Valley Groundwater Basin underlies a southeast trending valley in southeastern Imperial County. Elevation of the valley floor ranges from about 250 to 800 feet above mean sea level (amsl). The basin is bounded by non-water bearing rocks of the Chocolate Mountains on the north and northeast and by the San Andreas fault zone on the south and southeast. Low-lying alluvial drainage divides define the eastern and western boundaries.

Elevations in the Chocolate Mountains average about 2,700 feet. Much of the northern portion of the basin lies within the Chocolate Mountains Aerial Gunnery Range (CMAGR) (California Dept. of Water Resources, 2004).

Water Supplies

The groundwater aquifer in the GSPA is estimated to have a capacity of approximately 1 to 1.5 million acre feet (MAF) per year. Water supplies for existing uses within the GSPA are currently provided by an existing on site well (CUP #13-0059). This well is designed specifically for domestic water use to serve a residence and its ancillary buildings. This well was constructed to domestic water well standards and cannot be used as a potable water source for the larger project area. It is currently authorized to pump 1.5 acre-feet (AF) per year. There is one permitted public water system well (CUP #13-0060) that supplies water to the yet to be permitted Glamis Beach Store public water system, System No. 1300684. It also is currently authorized to pump 1.5 AF per year. Additional water is trucked in during periods of high visitation such as Camp RZR and other special events. Current water service is provided by an existing water treatment system to service existing uses of the GSPA. The existing water treatment system has been upgraded and a water treatment plant complying with California standards is being permitted to meet the needs of the current uses and with room for expansion. A public water system permit is expected to be issued in the Spring of 2023 by the Imperial County Public Health Department Division of Environmental Health.

Wastewater Treatment

Wastewater generated by the Glamis Beach Store, restaurant and bar is currently being discharged into an existing septic tank located near those buildings. When the septic tanks are nearing capacity, wastewater is transported off-site.

Electricity

Uses in the GSPA currently rely on diesel generators for all of their electrical power needs.

5.15.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

The proposed Specific Plan would be considered to have a significant impact if it would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

3. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Analysis

Impact 5.15-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water Treatment Facilities

Water supplies for existing uses within the GSPA are currently provided by an existing on site well (CUP #13-0059). This well is designed specifically for domestic water use to serve a residence and its ancillary buildings. This well was constructed to domestic water well standards and cannot be used as a potable water source for the larger project area. It is currently authorized to pump 1.5 acre-feet (AF) per year. There is one permitted public water system well (CUP #13-0060) that supplies water to the yet to be permitted Glamis Beach Store public water system, System No. 1300684. It also is currently authorized to pump 1.5 AF per year. An as yet unpermitted Reverse Osmosis Water Treatment Plant is currently located onsite and groundwater is treated to potable water standards to service existing uses within the GSPA. The water treatment plant has a production capacity of 15 gallons per minute, which amounts to 0.0216 million gallons per day (mgd) or 24.12 acre-feet per year. Residual material from this facility is mostly liquids with solids and is discharged to a holding tank. The residual liquid would be mixed with water from domestic water well and would be used for dust suppression. A public water system permit is expected to be issued in the Spring of 2023 by the Imperial County Public Health Department Division of Environmental Health. Ultimately this system will be re-permitted as a community water system once development reaches a certain point. An NPDES permit is currently not required but may be as the volume of water produced increases.

Wastewater Treatment Facilities

Wastewater generated by the Glamis Beach Store, restaurant and bar is currently being discharged into an existing septic tank located near to those buildings.

Stormwater Drainage Facilities

The existing topography and drainage of the project site generally drains from the northeast to the southwest via existing earthen channels and berms. The northeast portion of the project site (Planning Areas 5 & 6) are openly affected by offsite flows and are directed towards three existing concrete culverts that pass under the UPRR. The drainage flows from these three concrete culverts

underneath the UPRR, flow through and/or around portions of the existing project site (Planning Areas 1, 2, 3, 4, 7 and 8) towards the southwest, which are located north and south of SR-78. All planning areas southwest of the UPRR, where future land uses are proposed, are protected by earthen channels and berms. The remaining open areas, throughout the entire site, have areas that are protected by existing earthen channels and berms.

The conceptual grading plan would provide flood protection for future land uses within the entire project site and release the drainage to the southwest in an overall equivalent historical pattern of natural drainage courses consistent with California drainage law. The on-site design northeast of the UPRR will provide flood protection (Planning Areas 5 and 6) by continuing the off-site flows with modifications to each of the earthen drainage berms and channels. These modifications would re-direct the drainage around each of the planning areas to the southwest towards the three existing concrete culverts that pass under the UPRR. The modified existing earthen berm north of Planning Area 5 will continue to redirect flows north and west as will a new earthen berm to the southeast for Planning Area 6, to the south and west. The remainder of the drainage will be directed into the modified existing earthen channels along each side of SR 78. Each of these earthen channels and berms will be constructed on-site and will re-direct the existing flows in a manner consistent with the surrounding drainage patterns and practices. The manner and release of the drainage flows will be equivalent to the existing capture, conveyance and release to the Southwest under the UPRR, via existing concrete culverts.

Impact 5.15-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Non-potable water for the existing RV Park and Glamis Beach Store is provided via two existing on-site water wells which have a collective allocation of 3 AF. A new well would be developed as part of the Specific Plan' implementation to increase the allocation to 25 AF. According to the WSA (Appendix L) prepared in support of this Draft EIR, water demand for Phase One is estimated to be 10.66 AF per year. This assumes the demand would be year-round, however, the Project would only require this amount on a seasonal basis so the anticipated demand would be less than half this amount. Special events would bring in water from outside the Project site and would not utilize groundwater from wells. Development of Phases Two through Four would only result in minor increases in the overall annual use. Overall annual use would be less than the 25 AF the Applicant is asking for in their revised CUP. Given the basin's recharge is 200 AF per year impacts would be less than significant.

Impact 5.15-3: Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Wastewater treatment for the existing GSPA is provided by an on-site septic system and leach field. Implementation of the proposed Specific Plan would result in the need for expanded wastewater

treatment options. As new development is implemented, this wastewater plant will be expanded as determined by the regulatory agencies. Future wastewater treatment needed (i.e., secondary and tertiary treatment) will be determined by the amount of wastewater forecasted to be generated by each phase of structural improvement. According to the Water Supply Assessment (WSA) (Appendix K) prepared for the project operational water use would be 3,011,440.5 gallons per year, Assuming an average water use of 82 gallons per person per day (USEPA 2022) this equates to 36,724 people. Assuming a wastewater generation of 40 gallons per person per day, this would result in a wastewater generation of 1,468,995 gallons of wastewater per day which would be generated predominantly in the winter season. The proposed Specific Plan development activities will include water efficient appliances (i.e., sinks, toilets, showers, wash-down areas, etc.) that will minimize potential water waste and conserve water to the maximum extent possible.

No development or expansion of an existing use shall be allowed until provisions have or will be made to provide for the treatment of all wastewater, meeting applicable regulatory requirements. If allowed by regulations, septic systems may be considered, however if a central treatment system is constructed, all new development shall connect to this system. Any application for development shall include evidence that such system has the adequate capacity. Impacts would be less than significant.

Impact 5.15-4: Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Implementation of the proposed Specific Plan would result in an increase in solid waste generation during construction and operation. Solid waste would be disposed of using a locally-licensed waste hauling service. It is anticipated that solid waste would continue to be hauled to the landfill nearest the GSPA. The Salton City Solid Waste Site (13-AA-0011) is located at 935 W. Highway 86 Salton City, CA 92275. As of September 2018, this landfill had approximately 1,264,170 cubic yards of remaining capacity and was estimated to remain in operation through 2038 (CalRecycle, 2019b).

5.15.4 Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant.

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5.16 Tribal Cultural Resources

This section addresses potential direct and indirect environmental impacts to tribal cultural resources that would result from implementation of the proposed Specific Plan. The following discussion addresses the existing conditions in the Glamis Specific Plan Area (GSPA), identifies applicable regulations, analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Specific Plan, as applicable.

The analysis in this section is based on the *Class III Cultural Resources Inventory Report* prepared by ASM Affiliates which is included as Appendix F-1 (ASM Affiliates, 2019: Appendix F-1).

Scoping Issues Addressed

During the scoping period for the proposed Specific Plan, a scoping meeting was conducted, and written comments were received from agencies and the public. The following issues related to Cultural Resources and Native American Tribal Consultations were raised by the Native American Heritage Commission (NAHC) and are addressed in this section:

- Assembly Bill (AB) 52 applies to any project for which a Notice of Preparation (NOP), a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.
- NAHC recommends that lead agencies consult with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the Project.
- Both Senate Bill (SB) 18 and AB 52 have tribal consultation requirements.
- NAHC provided recommendations for Cultural Resource Assessments.

5.16.1 Environmental Setting

Refer to Section 5.4 *Cultural Resources* of this Draft EIR for the history and background of the Project site. The GSPA was utilized prehistorically by a variety of Native American groups, including the Desert Cahuilla, the Quechan and the Halchidhoma, and the Kamia. Six successive periods, each with distinctive cultural patterns, may be defined for the Colorado Desert, extending back in time over a period of more than 12,000 years. They include: (1) Early Man (Malpais); (2) Paleoindian (San Dieguito); (3) Archaic (Pinto and Amargosa); (4) Late Prehistoric (Patayan); (5) Ethnohistoric Native American occupation; and (6) Historic Euro-American occupation.

5.16.2 Regulatory Setting

Federal

Native American Graves Protection and Repatriation Act (United States Code, Title 25, Sections 3001 et seq.)

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants and culturally affiliated Indian tribes.

State

Assembly Bill 52

California Assembly Bill 52 of 2014 (AB 52) was enacted on July 1, 2015 and expands the California Environmental Quality Act (CEQA) by defining a new resource category, "tribal cultural resources." AB 52 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code [PRC] Section 21084.2). It further states that the lead agency avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources:

1. "Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe" and meets either of the following criteria: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or
2. A cultural resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires that lead agencies "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the formal consultation process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

Senate Bill 18

SB 18 of 2004 (California Government Code §65352.3) requires local governments to contact, refer plans to and consult with tribal organizations prior to making a decision to adopt or amend a general or specific plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction and are identified, upon request, by the NAHC. As noted in the California Office of Planning and Research's (OPR's) Tribal Consultation Guidelines (2005), "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

Native American Historic Resource Protection Act

PRC Sections 5097 et seq. codify the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal public lands. Section 5097.9 states that no public agency or private party on public property shall "interfere with the free expression or exercise of Native American Religion." The code further states that:

"No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine… except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, expect for parklands larger than 100 acres."

California Health and Safety Code

California Health and Safety Code, Section 7050.5 requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

Local

County of Imperial General Plan

The County of Imperial General Plan (General Plan) provides goals, objectives, and policies for the identification and protection of significant cultural resources. Specifically, the Conservation and Open Space Element of the General Plan calls for the protection of cultural resources and scientific sites and contains requirements for cultural resources that involve the identification and documentation of significant historic and prehistoric resources and the preservation of

representative and worthy examples. The Conservation and Open Space Element also recognizes the value of historic and prehistoric resources and the need to assess current and proposed land uses for impacts upon these resources.

TABLE 5.11-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN TRIBAL CULTURAL RESOURCES GOALS AND POLICIES

General Plan Policies	Consistency	Analysis
Conservation and Open Space Element (COSE)		
Conservation of Environmental Resources for Future Generations, COSE Goal 1: - Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value	Yes, with mitigation	Cultural resources investigations have been conducted for the proposed Specific Plan and potential impacts have been minimized. The Project is in compliance with this goal through incorporation of mitigation measures (MM) CR-1 through MM CR-4.
Preservation of Cultural Resources, COSE Goal 3: - Objective 3.1: Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Yes, with mitigation	Cultural resources investigations have been conducted for the proposed Specific Plan. The proposed Specific Plan is in compliance with this goal through incorporation of MMs CR-1 through MM CR-4.
Preservation of Cultural Resources, COSE Goal 3: - Objective 3.3: Engage all local Native American Tribes in the protection of tribal cultural resources, including prehistoric trails and burial sites.	Yes	Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) letters were distributed to 18 Native American tribes to engage and offer them of an opportunity to consult with the County on the proposed Specific Plan's potential to impact Tribal Cultural Resources, to determine whether or not Tribal Cultural Resources are present within the project area, and if so, to determine the most appropriate way to avoid or mitigate impacts. Copies of the letters are included in Appendices F-2 and F-3 of the EIR.

Source: County of Imperial, 2016.

The GSPA is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR-78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the GSPA is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County. The GSPA contains the only private commercial land uses within the project vicinity and is surrounded by open desert land that is managed by the Bureau of Land Management (BLM). The GSPA is adjacent to the Imperial Sand Dunes Recreation Area (ISDRA), the largest sand dunes area in the State of California.

5.16.3 Analysis of Project Effects and Significance Determination

This section presents the significance criteria used for considering project impacts related to tribal cultural resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    a) listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in PRC section 5020.1(k); or
    b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.

Impact 5.16-1: Cause a substantial adverse change in the significance of a Tribal Cultural Resource?

Pursuant to (PRC Section 21080.3.1, upon determining that an Initial Study (IS) would be prepared for the proposed Project, the County initiated a plan to conduct consultation with California Native American Tribes traditionally and culturally affiliated with the project area. In addition to the Native American contact program conducted for the cultural resources investigation, and in conformance with rules enacted under AB 52 and SB 18, the County, as CEQA lead agency for the proposed Project, initiated consultation with local Native American representatives to identify tribal cultural resources that may be affected by the proposed Specific Plan.

On February 7, 2020, the County sent notification letters to one (1) California Native American Tribe and/or their representatives initiating the 30-day period to request consultation required by AB 52. Similarly, on February 11, 2020 the County sent notification letters to twenty (20) federally-recognized California Native American Tribes and/or their representatives initiating a 90-day period to request consultation required under SB 18. Copies of the AB 52 and SB 18 notification letters are provided in Appendix F-2 and F-3, respectively.

As of the date of publication of the Draft EIR, no responses have been received and formal consultation has been closed.

However, based on knowledge of areas used by their ancestors and the stated potential to encounter resources during project excavation, the County agreed to retain the services of a full-time Native American monitor during the initial grubbing and all ground disturbing activities, as included in Mitigation Measure (MM) CR-1. With implementation of MMs CR-1 through CR-4, the proposed Specific Plan's impact on tribal cultural resources would be less than significant.

As a result of the consultation efforts, no known tribal cultural resources have been identified within the GSPA. Therefore, the implementation of the proposed Specific Plan would not result in a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k), since no tribal cultural resources were identified within or immediately adjacent to the GSPA. No impacts to known tribal cultural resources would occur.

Impact 5.16-2: Substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe determined to be significant the County of Imperial?

Based on coordination to date, Native American representatives have not provided information indicating there are resources that are significant to a California Native American tribe or otherwise qualify as Tribal Cultural Resources, as defined in Public Resources Code Section 5024.1. Nevertheless, the GSPA is considered sensitive for potential buried cultural resources and/or subsurface deposits. Therefore, there is the potential for inadvertent discovery of a resource that could be impacted by project implementation. Impacts would be considered potentially significant. With implementation of Mitigation Measures **MM CR-1** through **MM CR-4**, potential impacts to buried cultural resources and/or subsurface deposits would be less than significant.

5.16.4 Mitigation Measures

Implementation of MMs CR-1 through MM CR-4 would reduce potentially significant impacts to tribal cultural resources to below a level of significance because these measures require the performance of professionally accepted and legally compliant procedures for the discovery of previously undocumented significant archaeological resources and human remains.

Level of Significance After Mitigation

Less than significant.

6.0 ANALYSIS OF LONG-TERM EFFECTS

This section of the Draft Environmental Impact Report (EIR) discusses additional topics statutorily required under the California Environmental Quality Act (CEQA): significant and unavoidable environmental impacts and growth-inducing impacts.

6.1. Growth-Inducing Impacts

CEQA Guidelines, Section 15126.2[d], requires that an EIR evaluate a proposed action's potential to cause growth-inducing impacts. The growth-inducing impacts discussion should include direct and indirect ways the Project could foster economic or population growth, the construction of additional housing, or remove obstacles to population growth. CEQA Guidelines define a "growth-inducing impact" as follows:

> *. . . the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth . . . It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.*

Direct growth-inducing impacts typically include the provision of public services, utilities, and roads to a previously undeveloped area. The introduction of infrastructure and services can result in growth inducing impacts by reducing development constraints for nearby areas, thereby inducting other landowners in the area to convert their properties to other uses. Direct growth inducing impacts can also result from growth in the surrounding population that taxes existing public services, or a particular development that increases the pace or density of surrounding developments.

CEQA Guidelines also specify that the environmental effects of induced growth are considered indirect impacts of the proposed action. The additional demand for housing, commodities and services that new development causes or attracts by increasing population in the area are examples of indirect growth-inducing impacts or secondary effects of growth.

If the growth is not consistent with or accommodated by local land use plans and growth management plans and policies for the area affected, then the growth inducement may constitute an adverse impact. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services. A project that would conflict with the local land use plans (i.e., "disorderly" growth) could indirectly cause additional adverse environmental impacts and other public services impacts. To assess whether a growth-inducing project would result in adverse secondary effects, the growth accommodated by a project must be assessed to determine if it would or would not be consistent with applicable land use plans.

The proposed specific Plan would involve the development of the Glamis Specific Plan Area (GSPA) (see Chapter 4, Project Description). The proposed Specific Plan would result in construction of some condominiums and hotel units, as well as employee housing and development of an recreational vehicle (RV) park. However, these would only be occupied seasonally. The proposed Specific Plan would result in an increase in seasonal employment from October through April.

While the proposed Specific Plan would require an amendment to Imperial County's General Plan Land Use Element to change the land use designations from the County's existing C-2 and S-1 designations to new land use designations of Commercial Recreation (CR) 1, 2 and 3 as well as the County's S-1 designation and the approval of a Conditional Use Permit (CUP) for a new well, to the proposed Specific Plan would be consistent with the General Plan since the General Plan has already designated this as a Specific Plan area.

The proposed Specific Plan would utilize existing infrastructure, such as roadways. However, it would not support the development of adjacent properties by extending infrastructure to areas not previously served. Therefore, the proposed Specific Plan would have no indirect growth inducing effects.

6.2. Mandatory Findings Of Significance

CEQA Guidelines, Section 15065, identify four mandatory findings of significance that have to be considered as part of the environmental review process. These findings are identified below with an analysis of the proposed Specific Plan's relationship to these findings.

1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Section 5.3, Biological Resources, and Section 5.4, Cultural Resources, of this Draft EIR, evaluate the proposed Specific Plan's impacts on biological resources and cultural resources. Mitigation measures (MM) in Section 5.2 and Section 5.3 are identified to reduce impacts to biological resources as well as cultural and paleontological resources. When the MMs identified in these sections are implemented, impacts to the quality of the environment, habitat of fish and wildlife species, fish and wildlife species populations, plant and animal communities, the number and range of protected species, and cultural resources would be less than significant.

2. Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?

The proposed Specific Plan would not result in the achievement of short-term environmental goals to the disadvantage of long-term environmental goals. This Draft EIR includes analysis of the potential short-term (construction phase) and long-term (operation phase) impacts that could occur as a result of implementation of the proposed Specific Plan. The analysis contained in Sections 5.1 through 5.12 is based on existing environmental setting conditions, policy and regulatory conditions, proposed Specific Plans characteristics, and, where applicable, proposed Specific Plan -specific technical studies detailing both long- and short-term potential impacts. The proposed Specific Plan would:

- be required to implement mitigation measures to reduce impacts to less than significant levels;
- be required to comply with all applicable regulatory requirements; and
- would require a CUP and other entitlements for approval.

Implementation of the proposed Specific Plan would not preclude the state from meeting its long-term environmental goals. Rather, since the proposed Specific Plan could result in the development of solar or wind energy generation facilities, it would assist the state in meeting its long-term environmental goals for achieving greenhouse gas reductions in compliance with Assembly Bill (AB) 32. It would also support California's renewable performance standard (RPS) goal of 33 percent renewable energy delivery by 2020, 60 percent by 2030 and 100 percent by 2040.

3. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future project.

Chapter 7 of this Draft EIR evaluates the proposed Specific Plan's potential cumulative impacts. Cumulative impacts related to each technical discussion area are evaluated. No cumulatively considerable impacts were identified.

4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potential human-related impacts are discussed and evaluated in Section 5.14 Transportation/Traffic. This section identifies mitigation measures, where needed, to reduce significant impacts associated with these resource areas. Direct and indirect project impacts to human beings are anticipated to be less than significant upon implementation of the mitigation measures identified in these sections. The proposed Specific Plan would comply with all required regulatory/legal requirements and mitigation measures.

6.3. Significant Irreversible Environmental Changes

CEQA Guidelines, Section 15126(c), requires an EIR to discuss any irreversible changes to the environment possibly resulting from the implementation of the proposed Specific Plan. Irreversible commitments of several limited resources would result from the proposed Specific Plan. Such resources include, but are not limited to: lumber, sand, gravel, concrete, asphalt, petrochemical construction materials, steel, copper, lead and other metals, and water consumption during construction and operation of the proposed Specific Plan.

During project operations, oil, gas, and other nonrenewable resources would be consumed. Therefore, an irreversible commitment of some nonrenewable resources would occur as a result of long-term project operations. However, the proposed Specific Plan would support the continued operation of renewable energy resources (wind and solar energy) in the County. The proposed Specific Plan facilities the continued implementation of state goals and policies directed at moving away from reliance upon fossil fuels, and encouraging renewable energy. With implementation of MMs identified in in Section 5.0 of this Draft EIR, no significant irreversible environmental changes would result.

6.4. Significant and Unavoidable Environmental Effects

CEQA Guidelines, Section 15126.2(b), requires an EIR to address any unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. Section 15093(a) of CEQA Guidelines allows the decision-making agency to determine if the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. A Statement of Overriding Considerations can be prepared by the County of Imperial to approve a project with unavoidable adverse impacts if it sets forth the specific reasons for making such a judgment.

The impact analysis, as detailed in Section 5.0 of this Draft EIR, concludes that no unavoidable significant impacts were identified. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant. Thus, the proposed Specific Plan would not result in any significant and unavoidable adverse impacts.

7.0. Cumulative Impacts

The California Environmental Quality Act (CEQA) Guidelines (Section 15355) define a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The CEQA Guidelines [Section 15130(a)(1)] further states that "an EIR should not discuss impacts which do not result in part from the project."

Section 15130(a) of the CEQA Guidelines provides that "[A]n EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable..." Cumulatively considerable, as defined in Section 15065(a)(3), "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

An adequate discussion of significant cumulative impacts requires either: (1) "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or (2) "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact."

The CEQA Guidelines recognize that cumulative impacts may require mitigation, such as new rules and regulations that go beyond project-by-project measures. An environmental impact report (EIR) may also determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The Lead Agency must identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable (CEQA Guidelines Section 15130(a)(3)).

This Draft EIR evaluates the cumulative impacts of the project for each resource area, using the following steps:

(1) Define the geographic and temporal scope of cumulative impact analysis for each cumulative effects issue, based on the project's reasonably foreseeable direct and indirect effects.

(2) Evaluate the cumulative effects of the project in combination with past and present (existing) and reasonably foreseeable future projects and, in the larger context of the Imperial Valley.

(3) Evaluate the project's incremental contribution to the cumulative effects on each resource

considered in Chapter 4, Environmental Analysis. When the project's incremental contribution to a significant cumulative impact is considerable, mitigation measures to reduce the project's "fair share" contribution to the cumulative effect are discussed, where required.

7.1. Geographic Scope and Timeframe of the Cumulative Effects Analysis

The geographic area of cumulative effects varies by each resource area considered in Chapter 4. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. Similarly, impacts on the habitats of special-status wildlife species need to be considered within its range of movement and associated habitat needs. The analysis of cumulative effects in this Draft EIR considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project sites and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects of a project, but not beyond the scope of the direct and indirect effects of that project.

The cumulative development scenario includes projects that extend through year (2030), which is the planning horizon of the County of Imperial General Plan. Because of uncertain development patterns that are far in the future, it is too speculative to accurately determine the type and quantity of cumulative projects beyond the planning horizon of the County's adopted County General Plan.

The geographic area that could be affected by development of the Glamis Specific Plan Area varies depending on the type of environmental resource being considered. The general geographic area associated with various environmental effects of construction and operation of the proposed Project defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. Table 7-1 presents the general geographic areas associated with the different resources addressed in this EIR and evaluated in those sections of this cumulative analysis.

TABLE 7-1. GEOGRAPHIC SCOPE OF CUMULATIVE IMPACTS

Resource Issue	Geographic Area
Aesthetics	• Local (immediate project vicinity—effects are highly localized)
Air Quality	• Regional (Salton Sea Air Basin for pollutant emissions that have regional effects • Local (immediate project vicinity—pollutant emissions that are highly localized)
Biological Resources	• Regional (Imperial County)
Cultural Resources	• Regional (Imperial County)
Energy	• Regional (Imperial County)
Geology & Soils	• Local (immediate project vicinity)
Greenhouse Gas Emissions	• Global

TABLE 7-1. GEOGRAPHIC SCOPE OF CUMULATIVE IMPACTS

Resource Issue	Geographic Area
Hazards and Hazardous Materials	• Local (immediate project vicinity)
Hydrology and Water Quality Local	• Local (immediate project vicinity—local watershed)
Land Use and Planning	• Local (immediate project vicinity) and Regional (Imperial County)
Noise	• Local (immediate project vicinity—effects are highly localized)
Population and Housing	• Local (immediate project vicinity) and Regional (Imperial County)
Public Services	• Regional (regional service areas)
Transportation/Traffic	• Regional and local (discussed in Section 5.14, "Transportation/Traffic")
Tribal Cultural Resources	• Regional (Imperial County)
Utilities/Service Systems	• Regional (regional service areas)

Source: McIntyre Environmental, LLC, 2021.

7.2. Projects Contributing to Potential Cumulative Impacts

The CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the projects are to be considered: the use of a list of past, present, and probable future projects (the "list approach") or the use of adopted projections from a general plan, other regional planning document, or certified EIR for such a planning document (the "plan approach").

For this Draft EIR, the list approach has been utilized to generate the most reliable future projections of possible cumulative impacts. When the impacts of the project are considered in combination with other past, present, and future projects to identify cumulative impacts, the other projects considered may also vary depending on the type of environmental impacts being assessed. As described above, the general geographic area associated with different environmental impacts of the project defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. Figure 7-1 provides the general location for each of these projects in relation to the Planning area.

7.3. Cumulative Impact Analysis

This cumulative impact analysis utilizes an expanded list method (as defined under CEQA) and considers environmental effects associated with those projects identified in Table 7-2 in conjunction with the impacts identified for the project in Chapter 4 of this Draft EIR. Table 7-2 includes projects known at the time of release of the Notice of Preparation (NOP) of the Draft EIR, as well as additional projects that have been proposed since the NOP date. Figure 7-1 provides the general geographic location for each of these projects.

7.3.1. Aesthetics

The Cumulative Effects Study Area (CESA) for the analysis of cumulative impacts related to aesthetics is generally limited to the Glamis Specific Plan Area (GSPA) and the surrounding viewshed. This extent is appropriate because visual impacts are generally localized.

With the exception of the State Route 78 (SR-78) off highway vehicle (OHV) overpass, there are no other potential cumulative projects within the viewshed of the GSPA. The development of the GSPA would not result in significant changes to the existing visual quality or character of the site.

The only foreseeable project near enough to the GSPA to be included in the cumulative analysis is the SR-78 OHV overpass (i.e., in the vicinity of the GSPA). Given the nature of this foreseeable project, visual effects from this cumulative project and proposed Specific Plan would not likely combine to a significant visual impact. Thus, the noise levels in the area would be less than cumulatively considerable.

7.3.2. Air Quality

The CESA for comprehensive air quality analysis includes the entire Imperial Valley under the jurisdiction of the Imperial County Air Pollution Control District (ICAPCD). Although a single project would rarely cause a violation of a federal or state criteria pollutant standard, a new source of pollution may contribute to violations of criteria pollutant standards due to existing background sources or foreseeable future projects.

The proposed Specific Plan's contribution to cumulative air quality impacts would be different during construction and operations. Development within the GSPA is intended to occur over a span of approximately 20 to 50 years and will depend on market conditions, availability of supporting infrastructure, and other factors. Four (4) phases of development are proposed which provide a summarized development scheme and offer a general guideline on construction sequencing. Construction emissions over the duration of the life of the proposed Specific Plan are assumed to be higher immediately after Plan adoption because regulatory requirements on construction equipment is continuously evolving to require the use of cleaner technologies. Given this, a worst-case construction scenario of three (3) years was assumed. All existing and foreseeable projects in Table 7-2 may contribute to cumulative effects for air quality.

The Imperial Valley portion of the Salton Sea air basin is currently designated as being in nonattainment for Ozone (O_3) and particulate matter (PM_{10}) under both the National and California Ambient Air Quality Standards. During both construction and operations, the proposed Project would emit PM_{10} and Nitrous Oxide (NO_x) (an ozone precursor).

As discussed in Section 5.2 of the Draft EIR (Air Quality Impact 5.2-1) implementation of the proposed Specific Plan would temporarily increase air pollutant emissions during construction of the individual implementation activities. However, the proposed Specific Plan is consistent with

ICAPCD plans and would not exceed pollutant thresholds during operation. The proposed Specific Plan's potential to result in a cumulatively considerable net increase of any criteria pollutant is considered less than significant with mitigation incorporated. With implementation of Mitigation Measures (MMs) AQ-1 and AQ-2 impacts would be less than significant. Impacts from the proposed Specific Plan would be reduced through the implementation of mitigation measures consisting of standard construction and operation measures required by the ICAPCD; therefore, the proposed Specific Plan would not make a cumulatively considerable incremental contribution to an existing significant cumulative air quality impact.

7.3.3. Biological Resources

Generally, the CESA for biological resources includes the entirety of the Imperial Valley. This extent (the entire Imperial Valley region) makes it possible to account for impacts to biological resources that may have restricted migration to and from adjacent physiographic regions due to habitat changes from region to region. The duration of time that the projects would contribute to cumulative effects would be approximately 20 to 50 years, which reflects the projected development within the GSPA.

All existing and foreseeable future projects in Table 7-2 may contribute to cumulative effects for biological and natural resources.

In conjunction with other development projects in the project vicinity (Table 7-2), implementation of the proposed Specific Plan would not have a cumulative considerable impact on biological resources. With the implementation of mitigation measures, the proposed Specific Plan would be consistent with applicable policies of the Flat-tail horned lizard Management Strategy. In addition, impacts to the unvegetated, non-wetland, ephemeral waters (on-site) and would be fully mitigated and no-net-loss of wetlands would occur. Lastly, potential impacts to burrowing owl, Colorado fringe toed lizard, Gila woodpecker, Le Conte's thrasher and loggerhead shrike would be avoided with implementation of MM BIO-1 through MM BIO-5. For above reasons, the proposed Specific Plan's impacts on biological resources would be reduced to less than cumulatively considerable with mitigation.

7.3.4. Cultural and Tribal Resources

The CESA for cultural and paleontological resources consists of the Imperial Valley, including the southern portion of Riverside County. This geographic scope is appropriate because it is likely that cultural resources similar to those in the project area are present throughout the Imperial Valley, and that ground disturbance required for existing, approved, and reasonably foreseeable projects would likely have impacted or would impact similar resources. The occurrence of the impact would be primarily during construction of the proposed Specific Plan or any of the foreseeable projects, but impacts would be permanent. All foreseeable projects on Table 7-2 may contribute

to cumulative effects for cultural and tribal resources, because all are likely to involve ground-disturbing activities to some extent during construction.

The proposed Specific Plan, in combination with existing, approved, proposed, and other reasonably foreseeable projects in the CESA, could result in impacts to prehistoric resources, historic resources, paleontological resources, and human remains.

Construction of multiple projects in the region could result in the loss and/or degradation of cultural or tribal cultural resources regionally and could also result in the disturbance of human remains. Without proper mitigation, the cumulative effects of these types of large-scale development projects on cultural resources could be significant.

While the historical resources that meet the criteria for listing on the California Register of Historic Resources (CRHR) identified in the GSPA vicinity would be avoided by the proposed Specific Plan, it is possible that subsurface resources are present that have not yet been identified. Although unlikely, ground-disturbing activities related to the proposed Specific Plan could uncover previously unknown prehistoric, historic, as well as paleontological resources within GSPA boundaries. Therefore, the proposed Specific Plan have the potential to incrementally contribute to the disturbance of previously unknown cultural and paleontological resources.

The proposed Specific Plan will be required to implement mitigation measures MM CUL-1.1 through MM CUL 1.4; MM CUL-3.1; and MM CUL-4.1 to reduce potential impacts to archaeological, historical and paleontological resources during construction of the proposed Specific Plan to below a level of significance. Existing, approved, proposed, and other reasonably foreseeable projects with potentially significant impacts to archaeological, historical and tribal cultural resources would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources through implementation of similar mitigation measures during construction. Therefore, with implementation of regulatory requirements and standard conditions of approval, and MMs CUL-1. through MM CUL 4; (Section 5.4), the proposed Specific Plan's contribution to impacts to cultural and tribal cultural resources would not be cumulatively considerable.

7.3.5. Energy

The CESA for energy is the service area for both the Imperial Irrigation District (IID), which supplies water and power to most users in the Imperial Valley, and Southern California Gas Company, which provides natural gas service to the area.

There are sixteen solar projects and one transmission line project that occur within the CESA. All of these projects would have a beneficial impact to energy resources in that they would result in the generation and transmission of energy for the region's power grid. The proposed Specific Plan would result in the phase out of existing diesel generators once the project has been connected to

a constant electricity source. Upgrades to the electrical system could include construction and installation of a power line (transmission line and/or distribution line) by Imperial Irrigation District (IID) to extend power from the nearest substation (approximately 7.2 miles to the northeast). A second and potentially more viable option would be to develop a small commercial solar photovoltaic (PV) system, with a backup battery storage component or another green power system. Retirement of the diesel generators and the use of renewable energy resources would have beneficial impacts. No wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation would occur. Thus, the proposed Specific Plan, when considered in combination with other past, present, and reasonably foreseeable projects within the vicinity, would result in significant beneficial cumulative impacts.

7.3.6. Geology and Soils

The CESA for geology, soils, is confined to the GSPA. This is because geologic materials, and soils occur at specific locales and are generally unaffected by activities not acting on them directly or immediately adjacent to them, and any impacts of the proposed Specific Plan would be site-specific. The time component of potential impacts would be the 20 to 50 years within which projected development would occur within the GSPA.

The SR-78 OHV overpass would be the only other project that could contribute to cumulative impacts on this resource at this location.

The proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to geology and soils.

Soils associated with the GSPA are similar to other soils in the area. Site-specific conditions result in impacts associated with fault rupture and strong seismic ground shaking, seismic-related ground failure, including liquefaction and unstable soils, landslides, and shallow groundwater. These inherent conditions are the result of natural historical events that occur through vast periods of geologic time and are not based on cumulative development.

The proposed Specific Plan will require grading of portions of the GSPA to allow for development of the different phases. It is expected that the proposed Specific Plan and other area development will comply with the International Building Code (IBC) and the California Building Code (CBC). Thus, the proposed Specific Plan, when considered in combination with other past, present, and reasonably foreseeable projects within the vicinity, would not result in significant cumulative impacts. Accordingly, the proposed Specific Plan's contribution to a significant cumulative geology and soils impact is less than cumulatively considerable.

7.3.7. Greenhouse Gas Emissions

In considering greenhouse gas impacts, it is necessary to consider both anthropogenic and natural sources. For the proposed Specific Plan the CESA is the Imperial County portion of the Salton Sea

Air Basin (SSAB). In confining the analysis to this extent, it is possible to accurately calculate cumulative emissions and track the region's contribution to climate change. The duration of impacts would be the lifetime of the project, but there would be different potential impacts during construction and operations.

All existing and foreseeable projects listed in Table 7-2 may have a cumulative effect on climate change. The climate change analysis conducted in the Greenhouse Gas (GHG) Emission section is equivalent to a cumulative analysis. Please see Section 5.7 of this Draft EIR.

7.3.8. Hazards and Hazardous Materials

For the purposes of this cumulative analysis, risk from the transport, use, and disposal of hazardous materials during construction would be limited to areas where concurrent construction or operations are occurring in very close proximity to each other. Therefore, the only project that may contribute to cumulative hazards and effects on public safety as a result of the transport, use, and disposal of hazardous materials are those that would occupy the same site which is the SR-78 OHV overpass.

Existing, approved, proposed and reasonably foreseeable projects in the CESA would not create a significantly cumulative hazard to the public through the routine transport, use, or disposal of hazardous materials.

A significant cumulative hazardous materials impact occurs if there is simultaneous uncontrolled release of hazardous materials from multiple locations in a form (gas or liquid) that could cause a significant impact where the release of one hazardous material alone would not cause a significant impact. For a significant impact of this nature to occur, the releases have to occur in a centralized location.

It is unlikely for an event such as this to occur during construction of the proposed specific Plan because spills and releases tend be localized and would be smaller than one that could occur during operations because they would only the volume of a container used at any one time. In addition, they would be addressed immediately per a storm water pollution prevention plan (SWPPP) or Hazardous Material Business Plan.

During operations, a potential cumulative significant event could occur if an upset event at a nearby development had a cascading effect that caused an upset at the GSPA. While this is theoretically possible, it is not very probable. The proposed Specific Plan will have its own fire suppression systems and Hazardous Materials Business Plan.

Other projects listed in Table 7-2 would be or have been subject to similar project-specific or legally required control and mitigation measures and therefore there is no substantial evidence of a significant cumulative effect relating to hazards and public safety from the transport, use, and disposal of hazardous materials.

Existing, approved, proposed and reasonably foreseeable projects in the CESA would not result in a significant cumulative impact associated with interference with an Emergency Response Plan. Cumulative impacts that would cause an interference with Emergency Response Plans would include infrastructure additions, such as adding a new railway crossing, road closures, road segment removal, or other such modifications. There is no substantial evidence indicating there is significant cumulative impact relating to the hindrance of emergency responses. Moreover, the proposed Project does not include any improvements that would physically interfere with an adopted emergency response plan or emergency evacuation plan.

7.3.9. Hydrology and Water Quality

The CESA for hydrology and water quality is the Amos Valley Groundwater Basin (Basin Number 7-34), as defined by the California's Groundwater, Bulletin 118 – Update 2003, Ocotillo-Clark Valley Groundwater Basin (2004). The basin is bounded by nonwater-bearing rocks of the Chocolate Mountains on the north and northeast and by the San Andreas fault zone on the south and southeast. Low-lying alluvial drainage divides define the eastern and western boundaries. Projects that may contribute to cumulative effects for hydrology and water quality include the SR-78 OHV Highway Overpass.

The proposed Specific Plan would not make a cumulatively considerable contribution to a significant cumulative impact to hydrology and water quality.

Existing, approved and reasonably foreseeable projects would have to comply with SWPPPs during construction to ensure they would not violate any water quality standards or waste discharge requirements. Such projects would also have to comply with their respective National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permits, which require that water quality control measures be incorporated into project design to reduce discharges of site runoff over the life of the project. Large scale foreseeable projects would also have to include stormwater retention basins. During operations, the proposed Specific Plan will comply with and obtain coverage under the General Industrial Stormwater Permit which will require preparation of an Industrial SWPPP (I-SWPPP). The I-SWPPP will identify appropriate best management practices (BMPs) to prevent erosion and the mobilization of pollutants in stormwater runoff, define primary and alternative sampling locations, and describe monitoring and maintenance that will be implemented over the life of the proposed Specific Plan. As a result, the proposed Specific Plan's contribution to water quality impacts would not be cumulatively considerable.

7.3.10. Land Use and Planning

The CESA for the analysis of cumulative impacts related to land use compatibility is the rural agricultural areas on the west side of the Salton Sea within the County of Imperial's jurisdiction. Cumulative impacts could result from the physical division of an established community or from conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding

or mitigating environmental impacts. As there would be no communities divided by the proposed Specific Plan, nor would there be a conflict with a land use plan, policy, or regulation, there is no cumulative impact.

7.3.11. Noise

The CESA for the analysis of cumulative impacts related to noise is generally limited to areas within approximately one mile of the GSPA. This extent is appropriate because noise impacts are generally localized; however, it is possible that noise from different sources could combine to create a significant impact to receptors at any point between the projects, as well as along the common roadways utilized by the projects. At distances greater than one mile, impulse noise may be briefly audible and steady construction and/or operational noise would generally dissipate such that the level of noise would reduce to below County of Imperial noise limits and blend in with background noise levels.

With the exception of the SR-78 OHV overpass, there are no potential cumulative projects within one-mile of the GSPA. The development of the proposed Specific Plan would increase ambient noise or ground-borne vibration.

Cumulatively considerable noise impacts would occur during construction or operations if noise levels at sensitive receptors exceed 70 dBa at a receptor boundary. Noise effects are not additive because noise attenuates over distance, as does ground-borne vibration; therefore, only noise or vibration generated in close proximity could contribute to the noise heard or vibration felt at a receptor.

The only foreseeable project near enough to the GSPA to be included in the cumulative analysis is the SR-78 OHV overpass (i.e., at the proposed GSPA). There is potential for noise to be cumulatively considerable from Glamis and SR-78 if the construction period for the two projects overlaps. However, impacts from construction noise would be temporary. Given the existing noise level from OHVs already in the area, the nature of this foreseeable project, its distance from the NADW, and the County's noise restrictions, noise from this cumulative project and proposed Specific Plan would not likely combine to create noise levels above 70 dBA or perceptible ground-borne vibration during construction or operations at these receptors. Thus, the noise levels in the CESA would be less than cumulatively considerable.

7.3.12. Transportation

The CESA for cumulative effects on transportation and circulation includes the local roadway network considered for analysis of the proposed Specific Plan's direct impacts including SR-78, Ted Kipf Road and Wash Road.

The proposed Specific Plan would not make a cumulatively considerable contribution to a significant cumulative traffic impact on future (2040) operations.

During construction and operations, the proposed Specific Plan would add 54 and 150 daily trips to the regional transportation system, respectively. According to the traffic impact study developed by LLG, all affected road segments, key intersections, and affected highways would operate at acceptable levels of service during construction and operation of the proposed Specific Plan. The proposed Specific Plan would not contribute to a cumulatively significant impact during construction.

7.3.13. Utilities and Service Systems

Impacts to utilities and service systems can occur if new facilities need water or power or generate wastewater requiring treatment that exceeds the existing or planned capacity of the local service providers. Service providers serving the GSPA are located in Imperial County; therefore, the CESA for cumulative impacts to utilities and services is limited to Imperial County. The duration of impacts would be the lifetime of the projects, but there would be different potential impacts during construction and operations.

All existing and foreseeable projects in Table 7-1 may contribute to cumulative effects for electricity, but only those projects that require water from Amos Valley groundwater basin would contribute cumulative impacts to water supplies.

The proposed Specific Plan would not make a cumulatively considerable contribution to a significant cumulative impact to utilities and services.

Development of the GSPA would not require the construction or expansion of municipal water, wastewater treatment, or stormwater drainage facilities. The proposed Specific Plan would not exceed capacity of local landfills.

Development of the GSPA would require up to 22.59 AF of water during construction for dust control and up to 12.07 AFY during operations, which would be obtained via groundwater from the Colorado River groundwater basin. Concurrent construction/operation of the other foreseeable projects within the basin and outside of IID’s water service area may also meet their water requirements with groundwater.

The water supply assessment (WSA) prepared for the proposed Specific Plan took these projects into consideration when it determined that there is sufficient water available during both normal and single dry years.

Because there are sufficient existing supplies to serve the anticipated need of projects within the groundwater basin into the future, the proposed Specific Plan’s incremental demand for water would not be cumulatively considerable.

TABLE 7-2. POTENTIAL CUMULATIVE PROJECTS – GLAMIS SPECIFIC PLAN

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Specific Plan Area
EXISTING PROJECTS					
1.	Calexico I-A [(d) (u)]	8 Minute Energy	100 MW PV solar facility and supporting structures on approximately 666 acres.	Under Construction	38.0 miles southwest
2.	Calexico I-B [(d) (u)]	8 Minute Energy	100 MW PV solar facility and supporting structures on approximately 666 acres.	Under Construction	39.5 miles southwest
3.	Cluster I Solar (Calipatria, Wilkinson, Lindsey, Midway I, Midway II, Midway III, Midway IV) [(k) (u)]	8 Minute Energy	Three (3) PV solar farms generating up to 255 MW on approximately 1,731 acres.	Portions are Operational, Portions are Approved – Not Built, and Portions are Under Construction	28.3 miles northwest
4.	Campo Verde Solar Project and Battery Storage System[(c) (j) (u)]	Southern Power Company	The solar component consists of a 140 MW PV solar facility and supporting structures on approximately 1,990 acres. The Battery Storage component consists of a utility-scale battery energy storage facility capable of storing up to 105 MWH of energy within the footprint of the existing solar Project.	Operational	39.7 miles southwest
5.	Centinela Solar [(b) (u)]	Centinela Solar Energy, LLC	A 275 MW PV solar facility and supporting structures on approximately 2,067 acres.	Portions are Operational, Portion Approved – Not Built	38.6 miles southwest
6.	Citizens Imperial Solar Project [(m)(u)]	Citizens Imperial Solar, LLC	A 30 MW PV solar facility and supporting structures on approximately 223 acres.	Operational	24.3 miles northwest
7.	Iris Cluster Solar Farm (Ferrel, Rockwood, Iris and Lyons) [(g) (u)]	8 Minute Energy	Four (4) separate solar farms and supporting structures on 1,400 acres.	Portions are Under Construction Portions Approved – Not Built	36.0 miles southwest

TABLE 7-2. POTENTIAL CUMULATIVE PROJECTS – GLAMIS SPECIFIC PLAN

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Specific Plan Area
8.	Wistaria Ranch Solar Project (f) (u)	Wistaria Ranch Solar, LLC	A 250 MW PV or CPV solar facility and supporting structures on approximately 2,793 acres.	Portions Are Under Construction Portions are Approved – Not Built	36.3 miles southwest
9.	Seville Solar Farm Complex (I, II, III, 4 and 5) (e) (u)	Imp. Solar Holding, LLC	Five (5) PV solar projects generating 135 MW on approximately 1,238 acres.	Portions Are Operational, Portions Are Approved – Not Built	53.9 miles northwest
10.	Valencia Solar Project 2 (h) (u)	IGS, LLC	3MW PV solar facility and associated structures on a portion of a 17-acre property.	Under Construction	25.8 miles southwest
11.	Valencia Solar Project 3 (i) (u)	IGS, LLC	3MW PV generation facility on a portion of a of a 40-acre property.	Under Construction	27.9 miles southwest
PROBABLE FUTURE PROJECTS					
12.	Desert Valley Company Monofill - Cell 3 Closure (uu)	CalEnergy	Installation of Cell 3 Final Cover; continued leachate monitoring and collection; continued sampling of groundwater monitoring wells; installation and monitoring of vents for radon gas as mandated by ICAPCD; inspections of the final cover, dikes, drainage systems, leachate system, leak detection, access road, landfill structures and site security; and implementation of corrective actions, as necessary.	Anticipated to Commence 2025	43.4 miles northwest
13.	Desert Valley Company Monofill Expansion Project (Cell 4) (v)	CalEnergy	Expansion of the existing DVC Monofill with the addition of waste storage Cell 4 and a new leachate pond, addition and extension of storm-water diversion dikes, minor extension/modification to internal roads, installation of a new water well and additional air quality particulate sampling stations and groundwater monitoring wells.	EIR in Progress	43.7 miles northwest

TABLE 7-2. POTENTIAL CUMULATIVE PROJECTS – GLAMIS SPECIFIC PLAN

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Specific Plan Area
14.	Chocolate Mountain Solar Farm [u]	8 Minute Energy	50 MW PV solar facility and supporting structures on approximately 320 acres.	Approved	36.1 miles northwest
15.	Drew Solar, LLC [s][u]	Drew Solar, LLC	100 MW PV solar facility and supporting structures on approximately 808 acres.	Approved	40.0 miles southwest
16.	Laurel Cluster (Formerly Big Rock Cluster) [n] [u]	8 Minute Energy	325 MW PV solar facility and supporting structures on approximately 1,380 acres.	Approved	41.1 miles southwest
17.	Le Conte Energy Storage System [t][u]	Centinela Solar Energy, LLC	Battery energy storage system with up to 125 MW of electric storage capacity.	Approved – Pending Litigation	40.4 miles southwest
18.	Nider Solar Project [u]	8 Minute Energy	100 MW PV solar facility and supporting structures on approximately 320 acres	Pending Entitlement (on hold)	25.0 miles northwest
19.	Vega SES Solar Project [r][u]	Vega SES, LLC	100 MW PV solar energy facility, supporting structures, and 100 MW battery storage system on approximately 574 acres.	Pending Entitlement	39.5 miles southwest
20.	Titan Solar II/ Seville 4 [o]	Titan Solar II, LLC	A 20 MW PV solar facility on approximately 175 acres.	Under Construction	52.4 miles northwest
21.	Ormat Wister Solar [w]	Orni 22 LLC/Ormat	A 20 MW PV solar facility on 100 acres.	Approved Not Constructed	30.5 miles northwest
22.	CED Westside Canal Battery Storage [qq]	CED Westside Canal, LLC	Battery energy storage system with up to 2,025 MW of electric storage capacity.	Pending Entitlement	41.3 miles southwest
23.	Coyne Ranch Specific Plan [pp]	Marty Coyne	A residential project with up to 546 residential units.	In process	37.5 miles southwest
24.	Desert Highway Farms [p]	Solana Energy Farms 1, LLC	Cannabis cultivation on approximately 320 acres.	Approved, Not Constructed	54.6 miles northwest
25.	Hell's Kitchen Geothermal Exploration Project [l]	Controlled Thermal Resources	Construction, operations and testing of geothermal exploration wells.	Approved, Pending Entitlements	34.3 miles northwest
26.	SR 78 / Glamis Multiuse Grade Separated Crossing Feasibility Study [mm]	Imperial County Transportation Commission (ICTC)	Feasibility study to analyze and develop feasible alternatives for providing a safe Multiuse Grade Separated Crossing for off-highway vehicle users across the Union	Final Feasibility Study Published January 2021	Adjacent to Specific Plan Area

TABLE 7-2. POTENTIAL CUMULATIVE PROJECTS – GLAMIS SPECIFIC PLAN

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Specific Plan Area
			Pacific Railroad (UPRR) rail line at the Imperial Sand Dunes Recreation Area.		
27.	El Toro Cattle [(kk)]	ETX, LLC	An expansion of the Cattle Feed Yard Operation at the existing Heber facility and requested a modification to the existing "Agreement for Zone Change #06-0011" in order to increase the feeding capacity (approximately 17,000 head of cattle) of the existing pens on two assessor parcel numbers.	In Progress	31.9 miles southwest
28.	Lack Road Bridge Replacement [(ff)]	Imperial County Public Works Dept.	Replacement of Lack Road Bridge with new precast concrete bridge.	In Progress	33.4 miles northwest
29.	Heber 2 Geothermal [(dd)]	Second Imperial Geothermal	Install two new water-cooled ORMAT Energy Converters to replace six old units; install three 10,000-gallon isopentane above ground storage tanks; and, additional pipes to connect the proposed facilities with the existing Heber 2 Geothermal Energy Complex.	In Progress	32.9 miles southwest
30.	Parcel Map #02484 [(gg)]	Susan K. Casey	Subdivide an approximately 80-acre parcel into two lots, one being 2.87 acres and the other being 77.13 acres approximately, to separate the existing houses from farmland.	In Progress	16.3 miles northwest
31.	English Road Bridge Pipe Crossing Replacement Project [(x)]	Imperial County Public Works	Improvements to the existing bridge located at English Road and Pound Road, which is located between two parcels.	In Progress	31.0 miles northwest
32.	Valencia Solar Project #3 Conditional Use Permit [(ll)]	Valencia 3 Solar	A Conditional Use Permit (CUP) amending the previously approved CUP for the Valencia 3 Solar Project and proposing to construct a gen-tie transmission line west along the south side of Harris Road for approximately 1 mile and interconnect to an IID 12.5kV line.	In Progress	27.9 miles southwest

TABLE 7-2. POTENTIAL CUMULATIVE PROJECTS – GLAMIS SPECIFIC PLAN

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Specific Plan Area
33.	Conditional Use Permit #20-0002 (cc)	Fondomonte California, LLC	Replacement of existing CUP #16-0017 to increase the number of employees to 100, and the total trucks hauling hay in to 100 trucks/day and away to the rail with 60 trucks/day. The total tonnage stored on site is proposed to increase annually to 110,000 tons.	In Progress	25.4 miles northwest
34.	Conditional Use Permit #20-0011 (zz)	Ian Dibelka	The project applicant is requesting CUP #19-0033 for residential water well at 132 West Highway 98, Ocotillo, CA	In Progress	56.9 miles southwest
35.	Mitchell's Camp Family Association - Water Well (aa)	Mitchell's Camp Family Association	New water well for Mitchell's Camp for 14 acre-feet of water annually allotted by the City of Needles.	In Progress	29.4 miles northeast
36.	Conditional Use Permit #20-0001 (y)	Agess, Inc.	Development of a three (3) phased new cannabis Industrial Facility for on-site cultivation, harvesting, curing, packaging and sale.	In Progress	55.6 miles northwest
37.	General Plan Amendment #19-0002, Zone Change #19-0003 and Conditional Use Permit #19-0013 for West Wind Parking Storage, Inc. (ii)	West Wind Parking Storage, Inc.	A General Plan Amendment to allow for the expansion of the Heber Specific Plan Area on the General Plan Land Use Map to incorporate the existing industrial uses east of Hwy 111 and south of Heber Road as well as the proposed parcel abutting the existing industrial use fronting Heber Road. A Zone Change and a zone map correction. The zone change is to convert the existing A-2 parcel to an M-1 zone to allow for the expansion of the existing truck parking facility and the zone correction would be to take the existing two established industrial areas and convert to an M-1 zone. A Conditional Use Permit is proposed for the expansion of the existing industrial use.	In Progress	30.4 miles southwest

TABLE 7-2. POTENTIAL CUMULATIVE PROJECTS – GLAMIS SPECIFIC PLAN

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Specific Plan Area
38.	Conditional Use Permit #19-0024 (jj)	Winterhaven Drive, LLC	Medicinal and recreational cannabis dispensary with delivery services.	In Progress	31.3 miles southeast
39.	Parcel Map #02486 and Variance V#20-0001 (hh)	Tyler and Jennifer Sutter	Parcel Map g to re-subdivide nine parcels into two parcels. No physical development is being proposed.	In Progress	42.5 miles southwest
40.	Title 9 Land Use Ordinance Revisions to Division 4, 5, 8, 10, 12, 14 and 16 (ee)	Imperial County Planning and Development Services Department	ICPDS updated Title 9 Land Use Ordinance Divisions 4, 5, 8, 10, 12, 14 & 16, in a continuing effort to be consistent with recent changes in State Law. Most changes involved modifications to building requirements to lessen burdens for obtaining building permits and making minor modifications on said Divisions to make them internally consistent.	Board Approved December 15, 2020	County-wide No specific location
41.	Conditional Use Permit #20-0009, 20-00010, 20-0011, and 20-0012 (bb)	Gordons Well II, LLC	Conditional Use Permit to increase in the current permitted water allocation and approval for a new well for a total allocation of 1,000 acre feet of water yearly.	In Progress	20.3 miles southeast
42.	County of Imperial Housing Element Update (2021-2029)	Imperial County Planning & Development Services Department	The County proposes to update its existing Housing Element of the General Plan to reflect current conditions, County policies and methods to meeting housing requirements mandated by the State.	In Progress. State Certification anticipated October 2021	NA Applicable Countywide.
43.	VEGA SES 2, 3, & 5 Solar Energy Project (CUP 20-0021, -0022, -0023) (vv)	Apex Energy Solutions, LLC	Apex Energy Solutions, LLC, proposes to construct and operate a 350 MW PV solar energy facility with an integrated 350 MW battery storage system and infrastructure on 1,963 acres of privately-owned land in the unincorporated area of Imperial County, CA.	In Progress	23.0 miles northwest
44.	VEGA SES 4 Solar Energy Project (CUP 20-0020) (ww)	Apex Energy Solutions, LLC	Apex Energy Solutions, LLC, proposes to construct and operate a 100 MW PV solar energy facility with an integrated 100 MW battery storage system and infrastructure on	In Progress	24.2 miles southwest

TABLE 7-2. POTENTIAL CUMULATIVE PROJECTS – GLAMIS SPECIFIC PLAN

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Specific Plan Area
			531 acres of privately-owned land in the unincorporated area of Imperial County, CA.		
IMPERIAL IRRIGATION DISTRICT					
45.	Strategic Transmission Expansion Plan [(nn)]	Imperial Irrigation District	A multiregional strategic transmission expansion Plan which includes: • A new double circuit 230 kV collector system, connecting six substations; • Two (2) new substations; • A new 1 500-kV AC line to connect Arizona Public Service's North Gila substation to IID's Highline substation; and, • A new 500 kV DC transmission line from the Salton Sea area to the San Onofre Nuclear Generating Station substation.	Plan Approved	Nearest segment of transmission alignment 12.8 miles southwest Nearest substation 19.3 miles southwest
46.	Red Hill Bay Wetland Restoration Project [(oo)]	IID and USFWS Sonny Bono Salton Sea National Wildlife Refuge	Construction of 621 acres of shallow saline ponds for shallow shorebird and wading bird habitat.	Approved. Notice of Determination filed February 2018	33.4 miles northwest
BUREAU OF LAND MANAGEMENT					
47.	Truckhaven Exploratory Well Drilling [(a)] [(rr)]	Orni 5, LLC	Drilling of four geothermal exploratory wells within the Truckhaven Geothermal Leasing Area.	Approved	53.6 miles northwest
48.	Truckhaven Seismic Exploration [(a)] [(ss)]	Orni 5, LLC	Conduct a 23.5-square mile three dimensional (3D) seismic survey to evaluate the geology of the Truckhaven Geothermal Leasing area.	Approved	54.4 miles northwest

TABLE 7-2. POTENTIAL CUMULATIVE PROJECTS – GLAMIS SPECIFIC PLAN

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Specific Plan Area
49.	US Gypsum Company Expansion/ Modernization Project [(q)(tt)]	United States Gypsum Company (USG)	Proposed Action includes expanding existing gypsum quarry, replacing the existing plant water supply pipeline, and constructing a new water supply pipeline for the Quarry. Proposal also includes mitigation measures to reduce groundwater impacts to individual wells in the Ocotillo-Coyote Wells Groundwater Basin.	Record of Decision published Jan. 2020 Addendum #2 to Final EIS/EIR	48.1 miles southwest

Notes: ICAPCD = Imperial County Air Pollution Control District. IID = Imperial Irrigation District kV = kilovolt
MW = megawatt MWH = megawatt hour NEPA = National Environmental Policy Act.
PV = photovoltaic USFWS = United States Fish and Wildlife Service IS = Initial Study

Sources:

(a) Bureau of Land Management ePlanning Project Search. https://eplanning.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do. Accessed on February 4, 2020.

Sources (Continued):

(b) County of Imperial, 2011. Final EIR for the Centinela Solar Energy Project. December 2011.
(c) County of Imperial, 2012a. Final EIR for Campo Verde Solar Project. July 2012.
(d) County of Imperial, 2012b. Final EIR for the Mount Signal and Calexico Solar Farm Projects Imperial County, California. March 2012.
(e) County of Imperial, 2014a. Final EIR for Seville Solar Farm Complex. October 2014.
(f) County of Imperial, 2014b. Final EIR for Wistaria Ranch Solar Energy Center Project. December 2014.
(g) County of Imperial, 2015a. Final EIR for Iris Cluster Solar Farm Project. January 2015.
(h) County of Imperial, 2015b. MND for Valencia 2 Solar Project. August 2015.
(i) County of Imperial, 2015c. MND for Valencia 3 Solar Project. August 2015.
(j) County of Imperial, 2016. Final Supplemental EIR for the Campo Verde Battery Energy Storage System. December 2016.
(k) County of Imperial, 2017a. IS for Midway Solar Farm III (CUP #17-0013). August 30, 2017.
(l) County of Imperial, 2017b IS for Hell's Kitchen Exploratory Wells Project. April 2017
(m) County of Imperial, 2018a. Final EIR for the Citizens Imperial Solar, LLC Project. October 2018.
(n) County of Imperial, 2018b. Final EIR for Laurel Cluster Solar Farms Project. August 2018.
(o) County of Imperial, 2018c. Final EIR for Seville 4 Solar. October 2018.
(p) County of Imperial, 2018d. IS for Desert Highway Farms, LLC Project. November 2018.
(q) County of Imperial, 2019a. IS for U.S. Gypsum Company Expansion/Modernization Project Addendum #2., February 2019.
(r) County of Imperial, 2019b. Final EIRVEGA SES Solar Energy Project. January 2019.
(s) County of Imperial, 2019c. Final EIR for the Drew Solar Project. November 2019.
(t) County of Imperial, 2019d. Final Supplemental EIR for Le Conte Battery Energy Storage System. October 2019.
(u) County of Imperial, 2019e. Imperial County Planning & Development Service's Renewable Energy GIS Mapping Application. Accessed on February 6, 2019.

TABLE 7-2. POTENTIAL CUMULATIVE PROJECTS – GLAMIS SPECIFIC PLAN

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Specific Plan Area

(v) County of Imperial, 2019f. IS for Desert Valley Company Monofill Expansion Project. December 2019.
(w) County of Imperial, 2019g. Initial Study and NOP Wister Solar Energy Facility Project. November 2019.
(x) County of Imperial, 2020a. Initial Study, Environmental Checklist Form & Mitigated Negative Declaration for IS#19-0021. June 2020.
(y) County of Imperial, 2020b. Initial Study, Environmental Checklist Form & Negative Declaration for Agess, Inc., CUP 20-0001. August 2020.
(z) County of Imperial, 2020c. Initial Study, Environmental Checklist Form & Negative Declaration for CUP19-0033. June 2020.
(aa) County of Imperial, 2020d. Initial Study, Environmental Checklist Form & Negative Declaration for CUP #20-0003-MCFA. July 2020.
(bb) County of Imperial, 2020e. Initial Study, Environmental Checklist Form & Negative Declaration for CUP #20-0009 et al. October 2020.
(cc) County of Imperial, 2020f. Initial Study, Environmental Checklist Form & Negative Declaration for Fondomonte California LLC. June 2020.
(dd) County of Imperial, 2020g. Initial Study, Environmental Checklist Form & Negative Declaration for Heber 2 Geothermal Repower Project. May 2020.
(ee) County of Imperial, 2020h. Initial Study, Environmental Checklist Form & Negative Declaration for IS20-0020 Title 9 Revisions to Division 4, 5, 8, 10, 12, 14 & 16. October 2020.
(ff) County of Imperial, 2020i. Initial Study, Environmental Checklist Form & Negative Declaration for Lack Road Bridge Replacement Project and County Project No. 6421. February 2020.
(gg) County of Imperial, 2020j. Initial Study, Environmental Checklist Form & Negative Declaration for Susan K. Casey, Parcel Map 02484. May 2020.
(hh) County of Imperial, 2020k. Initial Study, Environmental Checklist Form & Negative Declaration for T. & J. Sutter. October 2020.
(ii) County of Imperial, 2020l. Initial Study, Environmental Checklist Form & Negative Declaration for West Wind Parking Storage Inc. August 2020.
(jj) County of Imperial, 2020m. Initial Study, Environmental Checklist Form & Negative Declaration for Winterhaven Drive LLC. October 2020.
(kk) County of Imperial, 2020n. Initial Study, Environmental Checklist Form & Negative Declaration for ZC18-0006. February 2020.
(ll) County of Imperial, 2020o. Initial Study, Environmental Checklist Form for Valencia 3 Solar Project. June 2020.
(mm) ICTC, 2020. Imperial County Transportation Commission Website (http://www.imperialctc.org/sr-78-glamis-crossing). Accessed September 24, 2020.
(nn) IID, 2014. Strategic Transmission Expansion Plan Fact Sheet, February 2014. Available at: https://www.iid.com/home/showdocument?id=8596. Accessed on February 4, 2020.
(oo) IID, 2017. Red Hill Bay Wetlands Restoration Project Draft Initial Study, November 2017.

Sources (Continued):

(pp) Richard Pata Engineering, Inc. 2017. Coyne Ranch Specific Plan. Revised August 1, 2017.
(qq) Stantec Consulting Services, 2020. Westside Canal Battery Storage Project Initial Study. April 9, 2020.
(rr) U.S. Dept. of the Interior BLM, 2019. Truckhaven Geothermal Exploration Well Project Final Environmental Assessment and FONSI (DOI-BLM-CA-D070-2019-0016-EA). October 2019.
(ss) U.S. Dept. of the Interior BLM, 2019. Truckhaven Seismic Exploration Categorical Exclusion (DOI-BLM-CA-D070-2019-0005-CX). 2019.
(tt) U.S. Dept. of the Interior BLM, 2019. US Gypsum Company Expansion/Modernization Project Final Supplemental EIS (DOI-BLM-CA-D070-2018-0049-EIS. 2019.
(uu) Veizades & Associates, 2015. Preliminary Closure/Post Closure Maintenance Plan for the Desert Valley Company Phase III (Cell 3). November 2015.
(vv) County of Imperial, 2021. Initial Study, Environmental Checklist Form for VEGA 2, 3 & 5 Solar Project. May 2021.
(ww) County of Imperial, 2021. Initial Study and NOP for VEGA 4 Solar Project. April 2021.

SOURCE: Basemap-ESRI; ICPDS NOTE: Please reference Potential Cumulative Projects Table for additional project details. Potential Cumulative Project 40 is not mapped.

N
0 3.5 7 Miles

Location of Potential Cumulative Projects
Glamis Specific Plan
Figure 7-1

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8.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires an environmental impact report (EIR) to contain a brief statement indicating the reasons that various possible significant effects of a project were determined not to be significant and therefore not discussed in detail in the EIR. The proposed Specific Plan would not have the potential to cause significant impacts to the resources discussed below.

8.1 Agriculture and Forestry Resources

The proposed Specific Plan would be considered to have a significant impact if it would:

1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

4) Result in the loss of forest land or conversion of forest land to non-forest use?

5) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Analysis

The Glamis Specific Plan Area (GSPA) is desert with some development and has not been used for farming. The land has been privately owned for many years and is not included in the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP) database. No impacts to agricultural resources would occur.

Impact 8.1-1:	**Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

According to the 2018FMMP Map for Imperial County, the GSPA does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance (California DOC, 2018). No impacts related to the conversion of FMMP farmlands to non-agricultural use would occur.

Impact 8.1-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The existing General Plan land use designation is " Glamis Specific Plan Area" and the existing zoning is Open Space/Preservation (S-2) and Medium Commercial (C-2). Agricultural uses are not allowed in the C-2 zone. While the storage of agricultural products and other agricultural activities are an allowable use within the S-2 Zone, there are no agricultural activities ongoing within the GSPA. Additionally, the GSPA is not covered under a Williamson Act contract (California DOC, 2016). For these reasons, the proposed Specific Plan would not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impacts are identified for this issue area.

Impact 8.1-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Neither the GSPA nor surrounding areas are used for timber production or are defined as forest lands. The proposed Specific Plan would not conflict with any zoning designations designed to preserve timber or agricultural resources. No impact would occur under this threshold.

Impact 8.1-4: Result in the loss of forest land or conversion of forest land to non-forest use?

There are no existing forest lands either on-site or in the immediate vicinity of the GSPA. The proposed Specific Plan would not result in the loss of forest land or conversion of forest land to non-forest use; therefore, no impacts would occur.

Impact 8.1-5: Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

The proposed Specific Plan does not include changes in the existing environment which, due to their location or nature would result in the conversion of neighboring farmland to non-agricultural use. The GSPA is surrounded by open desert and the nearest agricultural lands occur approximately 13 miles to the west. The proposed Specific Plan would not result in the conversion of farmlands off-site to non-agricultural uses and no impact would occur.

8.2 Mineral Resources

The proposed Specific Plan would generally be considered to have a significant effect if it would:

1) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

2) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Analysis

Impact 8.2-1	**Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

A number of mineral resources are currently being extracted in Imperial County including gold, gypsum, sand, gravel, lime, clay, stone, kyanite, limestone, sericite, mica, tuff, salt, potash, and manganese. According to the Existing Mineral Resources Map (Figure 8) in the Conservation and Open Space Element of the County of Imperial General Plan (2016), no known mineral resources occur within the vicinity of the GSPA nor are there any mapped mineral resources within the GSPA itself (County of Imperial, 2016). Thus, no impacts related to the loss of availability of a known mineral resource would occur.

Impact 8.2-2	**Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

Same as Impact 8.2-1. As previously discussed, no known mineral resources occur within or near the GSPA. Thus, no impacts related to the loss of the availability of a known mineral resource would occur.

8.3 Recreation

The proposed Specific Plan would generally be considered to have a significant effect if it would:

1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

2) Include recreational facilities or require the construction or expansion of recreational facilities, which have an adverse physical effect on the environment?

Analysis

Impact 8.3-1:	**Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

There are no existing neighborhood parks, regional parks, or other recreational facilities within the GSPA. The Imperial Sand Dunes Recreation Area (ISDRA) is located south of the GSPA. Adoption of the proposed Specific Plan would create a distinctive master-plan for recreation-serving land uses which are consistent with the historical use of the Glamis area and the ISDRA. However, implementation of the proposed Specific Plan would not increase visitation to the ISDRA. Therefore, implementation of the proposed Specific Plan would increase the use of existing neighborhood and regional parks or other recreational facilities.

Impact 8.3-2: Include recreational facilities or require the construction or expansion of recreational facilities, which have an adverse physical effect on the environment?

The proposed Specific Plan would provide an opportunity for a variety of recreational activities to complement the established "Glamis" sand dunes experience of the surrounding ISDRA. These include an Adventure Center (offering activities such as off highway vehicle [OHV] training, OHV rentals, etc.), amusement facilities, Desert Tours (off road experience), racetrack, park/playground/picnic area, and other recreational-based activities. With the implementation of aesthetics, air quality, biological and cultural/tribal resources, geology, paleontology and hydrology/water quality mitigation measures (MM) impacts associated with the construction of these facilities would be reduced to below a level of significance.

8.4 Wildfires

The proposed Specific Plan would generally be considered to have a significant effect if the GSPA is located in or near state responsibility areas or lands classified as very high fire hazard severity zones and would:

1) Substantially impair an adopted emergency response plan or emergency evacuation plan?

2) Exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors?

3) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

4) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Analysis

Impact 8.4-1: Substantially impair an adopted emergency response plan or emergency evacuation plan?

According to the California Department of Forest and Protection's *Draft Fire Hazard Severity Zone Map for Imperial County*, the GSPA is not located within or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection, 2007). Similarly, the GSPA is not located in or near a state responsibility area and is not classified as a very high severity zone in the Draft Local Responsibility Area for Imperial County. As noted in Section 5.8 Hazards and Hazardous Materials, the implementation of the proposed Specific Plan would not substantially impair an adopted emergency response plan or emergency evacuation plan. No impact would occur.

Impact 8.4-2: Exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors?

The GSPA is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection, 2007). Therefore, the proposed Specific Plan would not exacerbate wildfire risks. No impact would occur.

Impact 8.4-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The GSPA is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection, 2007). The proposed Specific Plan would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. No impact would occur.

Impact 8.4-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The GSPA is not located in or near a state responsibility area or within lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection, 2007). The proposed Specific Plan would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur.

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9.0 ALTERNATIVES

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant effects of the project and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6). This chapter identifies potential alternatives to the proposed Specific Plan and evaluates them, as required by CEQA.

9.1. Introduction

Key provisions of the CEQA Guidelines on alternatives are summarized below to explain the foundation and legal requirements for the alternative analysis in the Draft EIR (Sections 15126.6(a) through (f)).

- "The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly." (Section 15126.6(b))
- "The specific alternative of 'No Project' shall also be evaluated along with its impact." (Section 15126.6(e)(1))
- "The No Project analysis shall discuss the existing conditions at the time the NOP is published, and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." (Section 15126.6(e)(2))
- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." (Section 15126.6(f))
- "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)." (Section 15126.6(f)(1))
- "For alternative locations, "only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." (Section 15126.6(f)(2)(A))

- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (Section 15126.6(f)(3))

9.2. Alternatives Analysis Format and Methodology

CEQA Guidelines Section 15126.6(d) provides that the degree of analysis required for each alternative need not be exhaustive, but rather should be at a level of detail that is reasonably feasible and shall include "sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed Project." Under CEQA Guidelines Section 15151, the EIR must contain "a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." Hence, the analysis of environmental effects of the Project alternatives need not be as thorough or detailed as the analysis of the Project itself.

The level of analysis in the following sections is sufficient to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the proposed Project. In addition, each alternative is evaluated to determine whether the Project objectives, identified in Section 6.2, would be substantially attained by the alternative.

The evaluation of each alternative also considers the anticipated net environmental impacts after implementation of feasible Mitigation Measures (MM). The net impacts of the alternatives for each environmental issue area are classified as either having no impact, a less-than-significant impact, or a significant and unavoidable impact. These impacts are then compared to the corresponding impact for the Project in each environmental issue area. To facilitate the comparison, the analysis identifies whether the net incremental impact would clearly be less, similar, or greater than that identified for the Project. Finally, the evaluation provides a comparative analysis of the alternative and its ability to attain the basic Project objectives.

9.3. Alternatives Development and Screening

This section outlines the process used by the Imperial County Planning and Development Services Department to develop the alternatives to be analyzed in this Draft EIR. Alternatives considered by the Applicant and the Imperial County Planning and Development Services Department were evaluated using the CEQA criteria and requirements listed below. No project alternatives were suggested during the public scoping process.

- Does the alternative feasibly accomplish most of the basic goals and objectives of the proposed Specific Plan?
- Does the alternative substantially lessen one or more of the significant environmental effects of the proposed Specific Plan, or, conversely, would the alternative create adverse effects potentially greater than those of the proposed Specific Plan?

- Is the alternative technically and/or economically feasible to construct and operate?

Alternatives that met most or all of the criteria listed above were carried forward for analysis and are detailed in Section 9.5. Those that did not meet the above criteria or were eliminated from further analysis.

9.4. Summary of Potentially Significant Impacts of the Proposed Specific Plan

A primary consideration in defining project alternatives is their potential to reduce or eliminate significant impacts and to meet most of the objectives of the proposed Specific Plan. Pursuant to CEQA Guidelines Section 15126.6[b], alternatives to the proposed Specific Plan include those that are capable of avoiding or substantially lessen any significant effects of the proposed Specific Plan, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.

The proposed Specific Plan has the potential to have significant adverse impacts on air quality, biological resources; cultural and tribal cultural resources; geology and soils and paleontological resources; hydrology/water quality, public services, transportation, and utilities within the County. However, mitigation measures (MM) described in Chapter 5 of this Draft EIR would reduce impacts for these resource areas to less than significant. Therefore, per the CEQA Guidelines, this alternatives analysis focuses on alternatives that are capable of avoiding or substantially lessening project effects listed above.

Section 9.5, below, restates the applicants' project objectives. Section 6.2 summarizes the proposed Project. Section 9.6, 9.7 and 9.8 present alternatives fully analyzed in this Draft EIR and provide a comparison of alternatives. Section 9.9 makes a determination about the environmentally superior alternative.

9.5. Project Objectives

As described in **Chapter 4.0**, *Project Description*, the following objectives have been established for the proposed Specific Plan and will aid decision makers in the review of the Plan and associated environmental impacts:

- Create a man-made environment that is compatible with the natural environment, surrounding land uses, and the desert climate.
- Ensure that development within the planning area is consistent with the County's General Plan and will protect public health, safety and general welfare, while complementing surrounding land uses and zoning.

- Provide design criteria that will guide developer(s) and the County in the development of proposed land uses by including descriptive text and illustrative exhibits setting forth the foundation of the overall development of the Glamis Specific Plan Area (GSPA).
- Enable Special Events through implementation of a Special Events Management Plan (SEMP).
- Adhere to the Zoning Ordinance for the proposed Specific Plan in Section 3, Zoning Ordinance.
- Provide recreational and ancillary facilities that serve the needs of the Glamis community and recreational visitors.

9.6. No Project/Existing Adopted Plan Alternative (Alternative 1)

Alternative 1 is the No Project / Existing Adopted Plan Alternative. Consideration of the No Project Alternative is required by Section 15126.6(e) of the CEQA Guidelines. The analysis of the No Project / No Build Alternative must discuss the existing conditions at the time the Notice of Preparation (NOP) was published (October 15, 2020), as well as: "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" [CEQA Guidelines Section 15126.6 (e) (2)]. The requirements also specify that: "If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed" [CEQA Guidelines Section 15126.6 (e) (3) (B)].

The purpose of describing and analyzing a No Project / No Build Alternative is to allow decision-makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed Project. The No Project / No Build Alternative analysis is not the baseline for determining whether the environmental impacts of a proposed project may be significant, unless the analysis is identical to the environmental setting analysis that does establish that baseline.

The No Project / No Build Alternative for a development Project on an identifiable property consists of the circumstance under which the Project does not proceed. Section 15126.6(e)(3)(B) of the CEQA Guidelines states that, "in certain instances, the No Project/No Build Alternative means 'no build' wherein the existing environmental setting is maintained." Accordingly, for purposes of this analysis, the No Project / No Build Alternative (Alternative 1) assumes that no new development proposed by the Specific Plan would occur within the GSPA. Thus, the future development of commercial recreation uses would not occur. Under the No Project / No Build Alternative, the GSPA would remain undeveloped and vacant. Special events would continue to operate under their existing Conditional Use Permits (CUPs). The existing zoning within the GSPA of S-2 Open Space / Preservation and C-2 Commercial General would remain. Thus, environmental effects under this Alternative would be similar to existing site conditions, as described in the existing setting sections of each analysis in Chapter 5 of this Draft EIR. However, impacts of this Alternative relative to each issue area are discussed below.

Impacts Compared to Project Impacts

The following compares environmental impacts associated with the No Project Alternative as compared to the impacts of the proposed Specific Plan.

Under the No Project/No Development Alternative, the proposed Specific Plan would not be pursued and the GSPA would remain in its existing condition and continue to support off highway vehicle (OHV) recreation related activities for the foreseeable future. As an area that is desert and generally undeveloped, the GSPA would remain in unincorporated Imperial County and there would be no changes to the existing Imperial County General Plan designations of the area as a Specific Plan or the zoning of the Glamis Beach Store as C-2 (Medium Commercial) while the remainder of the GSPA would remain zoned as S-2 (Open Space/Preservation).

The purpose of this alternative is to evaluate what would occur if the proposed Specific Plan does not advance and the GSPA remains in its existing condition for the foreseeable future. The No Project / No Development Alternative evaluates the scenario in which the existing Specific Plan is pursued.

Impact Analysis

The proposed Specific Plan would result in potentially significant impacts on air quality, biological resources; cultural and tribal cultural resources; geology and soils and paleontological resources; hydrology/water quality, public services, transportation, and utilities, all of which can be mitigated to below a level of less than significant. None of these potentially significant impacts would occur under the No Project Alternative.

Conclusion

The No Project/No Development Alternative would avoid the proposed Specific Plan's potentially significant impacts and would have less impact on all environmental topical areas. However, this alternative would not advance any of the project objectives, including those related to positively contributing to the local economy; facilitating the development of the land to its highest and best use; clustering development to avoid impacting sensitive areas; and providing a variety of recreational and business amenities.

9.7. Modified Footprint (Alternative A)

An alternative site plan (Alternative A) for the proposed Specific plan was developed that avoids all development of the existing RV storage facility which is located in Areas 2 and 3 and are proposed for a change in zoning to Commercial Recreation (C-3). This alternative is being considered due to the length of the current lease, 30 years, for the existing recreational vehicle (RV) storage facility. This alternative is being considered to evaluate the feasibility of developing the proposed Specific Plan.

The Project consists of the development of a Specific Plan for the GSPA. A Specific Plan is a regulatory tool for the thoughtful and systematic implementation of a General Plan for a defined area. The proposed Specific Plan is intended to meet the Specific Plan requirements as set forth in California State Law (California Government Code [CGC] Section [§] 65450) through which the State authorizes cities and counties to adopt Specific Plans as appropriate tools in implementing their General Plans. Under the provision of this Statute the County has the authority to include detailed regulations, conditions, programs and all proposed legislation within the Specific Plan that are necessary for the systematic implementation of the General Plan. Currently, an RV storage facility is located on 50 acres of the site on the north side of State Route 78 (SR-78). It is under a 30-year lease and was initially approved under a CUP in 2007 by the County. Due to the length of this lease this area would not be available for development until 2037 at the earliest.

Figure 9-1 presents the site plan for Alternative A, with the existing RV storage facility not being included within the GSPA. Alternative A would still allow the development of Areas 2 and 3 of the GSPA and would not preclude development of any of the other areas. Alternative A would accomplish the project objectives, it would not prevent development of any of the other areas. For these reasons, the Alternative A was not eliminated from further consideration in the Draft EIR.

Impacts Compared to Project Impacts

The following compares environmental impacts associated with the Alternative A as compared to the impacts of the proposed Project.

Aesthetics

Under Alternative A, the existing RV park would not be developed. No significant visual aesthetic impact associated with the proposed Specific Plan has been identified as the project facilities would not impact scenic resources, result in the substantial degradation of the existing visual character of the GSPA, or result in light/glare impacts. In this context, Alternative A would not reduce or avoid an impact related to aesthetics and visual resources, and would result in less than significant impacts similar to the proposed Specific Plan.

Air Quality

Under Alternative A, air emissions during construction would be less than the proposed Specific Plan because of the reduced site development. As discussed in Section 4.3, Air Quality, the proposed Specific Plan would not exceed the Imperial County Air Pollution Control District's (ICAPCD's) significance thresholds for reactive organic gases (ROG), carbon monoxide (CO), oxides of nitrogen (NO_x), and particulate matter (PM_{10}) during construction and operation. Although no significant air quality impacts would occur, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. The same mitigation measures would be required for this alternative

SOURCE: The Altum Group, 2020.

Modified Footprint (Alternative A)
Glamis Specific Plan
Figure 9-1

as with the proposed Specific Plan. This alternative would be consistent with existing air quality attainment plans and would not result in the creation of objectionable odors.

Biological Resources

Due to the developed nature of the existing RV park, there are no biological resources present within its footprint. Implementation of Alternative A would have the same environmental impact on biological resources as the proposed Specific Plan.

Cultural Resources

The existing RV park is not eligible for listing on the National Register of Historic Places (NRHP) or the California Register of Historic Places (CRHR). However, ground disturbing activities associated with the proposed Specific Plan during construction would have the potential to cause substantial adverse changes to resources that escaped detection on the survey and/or buried prehistoric and historic resources due to the moderately high potential of the GSPA. If such resources are encountered during construction and those resources meet the eligibility criteria of the CRHR, the impact would cause a substantial adverse change in the significance of a historical or archaeological resource. This would be a potentially significant impact to cultural resources. Similar to the Proposed Action, this alternative would require the incorporation of MM identified for the proposed Specific Plan to minimize these impacts to a less than significant level. Overall, since there would be less ground disturbance the potential for impact to undiscovered cultural resources would be reduced.

Geology and Soils and Paleontological Resources

Under Alternative 2, while the overall project footprint would be reduced, grading and construction of new facilities would still occur. Therefore, this alternative would still be subject to potential impacts related to ground shaking. Similar to the proposed Specific Plan, this alternative would require the incorporation of mitigation measures identified for the proposed Specific Plan to minimize these impacts to a less than significant level. Compared to the proposed Project, this alternative would result in similar geological and soil impacts.

Greenhouse Gases

Under Alternative A, greenhouse gas emissions (GHG) emissions during construction would be less than the proposed Specific Plan because of the reduced site development. This alternative would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Similar to the proposed Specific Plan, this alternative would not exceed SCAQMD's threshold of 3,000 metric tons carbon dioxide equivalent ($MTCO_2e$). Compared to the proposed Specific Plan, this alternative would contribute to similar and desirable reductions in GHG emissions and associated contribution to global climate change through the production of renewable energy,

although to a lesser degree. Because no significant GHG impact has been identified associated with the proposed Specific Plan, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed Specific Plan.

Hazards and Hazardous Materials

Similar to the proposed Specific Plan, no potential exposure to hazardous materials would occur under this alternative. Impacts would be similar to that described for the proposed Specific Plan. Compared to the proposed Specific Plan, this alternative would result in similar hazards and hazardous materials impacts.

Hydrology and Water Quality

Alternative A would result in modifications to the existing drainage patterns and the volume of storm water runoff, as this alternative would keep the existing RV park, which is an impervious area, on site. This Alternative would result in an increase in impervious area compared to the proposed Specific Plan. Thus, this alternative would realize a minor increase in the corresponding impacts on hydrology and on-site drainage; however, the same mitigation measures would be applicable to this alternative. Similar to the proposed Specific Plan, no impacts would result from flooding and facilities will not be placed within floodplains. This alternative would result in a slightly increased impact related to hydrology/water quality as compared to the proposed Specific Plan.

Land Use and Planning

Similar to the proposed Specific Plan, Alternative A would not divide an established community. Similar to the proposed Specific Plan, Alternative A would require an amendment to Imperial County's General Plan Land Use Element to change the land use designation on the general area of the Glamis Beach Store from C-2 (Medium Commercial) and remainder of the GSPA which is zoned as S-2 to Commercial Recreation I, II, and III and a small portion to S-1 (Open Space/Recreation (Figure 4-1). As with the proposed Specific Plan, this alternative would not conflict with any applicable Habitat Conservation Plan (HCP) or Natural Communities Conservation Plan (NCCP). Land use and planning impacts resulting from this alternative would be similar to those identified for the proposed Specific Plan. Because no significant Land Use/Planning impact has been identified associated with the proposed Specific Plan, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed Specific Plan.

Noise

As with the proposed Specific Plan, Alternative 2 would not result in significant noise impacts associated with construction activities. As with the proposed Specific Plan, operational impacts associated with this alternative would not expose persons or generate noise levels in excess of applicable noise standards, exposure persons to, or generate excessive ground-borne vibration, or expose persons to excessive aircraft noise. Because no significant noise impact has been identified

associated with the proposed Specific Plan, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed Specific Plan.

Population and Housing

Similar to the proposed Specific Plan, Alternative A would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Similar to the proposed Specific Plan, Alternative A could result in a seasonal population growth (October through May) through the expansion of commercial and recreational activities within the GSPA. These activities would result in the development of new businesses and would require employee housing to be constructed. The proposed Specific Plan allows for some limited permanent residential land uses within the GSPA, which consist mostly of employee housing. The proposed zoning changes allow for the development of condominiums. Thus, the proposed Specific Plan could induce unplanned population growth through the development of new businesses, however, this population growth would be seasonal (October through May) and small. Population and housing impacts resulting from this alternative would be similar to those identified for the proposed Specific Plan. Because no significant Population and Housing impact has been identified associated with the proposed Specific Plan, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed Specific Plan.

Public Services

Alternative A would require the same public services as the proposed Specific Plan. While the overall project footprint would be slightly smaller, the impacts of this alternative to public services and associated service ratios would be similar. Like the proposed Specific Plan, this alternative would be conditioned to provide law enforcement and fire service development impact fees. Therefore, this alternative would result in a similar impact related to public services as the proposed Specific Plan.

Transportation

This alternative would result in a lower level of vehicle and truck trips within the GSPA as compared to the proposed Specific Plan. The increase in vehicular traffic was identified as a less than significant impact for the proposed Project. In this context, Alternative A would not reduce or avoid an impact related to transportation/traffic, and would result in less than significant impacts similar to the proposed Specific Plan. As with the proposed Specific Plan, this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, conflict with an applicable congestion management program, change air traffic patterns, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. Compared to the proposed Specific Plan, this alternative would result in a similar impact related to transportation/traffic.

Utilities

Similar to the proposed Specific Plan, Alternative A would require water service and energy for the operation of the solar facility. This alternative would enable the existing RV park to continue to operate which would utilize less water than the proposed Specific Plan. As a consequence, this alternative would result in slightly decreased water demands when compared to the proposed Specific Plan.

Conclusion

Alternative A would result in reduced impacts for the following environmental issues areas as compared to the proposed Specific Plan: air quality and GHG and a slight increase in impacts related to hydrology/water quality and utilities when compared to the proposed Specific Plan.

Alternative A would meet most of the basic objectives of the proposed Specific Plan and should remain under consideration.

9.8. Modified Footprint (Alternative B)

An alternative site plan (Alternative B) for the proposed Specific Plan was developed that avoids all development of the area along SR-78 immediately in front of the Glamis Beach Store in Planning Area 1 which is proposed for a change in zoning to Commercial Recreation 3 (C-3) and south of SR-78 in Area 6 which is proposed for a change in zoning to Commercial Recreation 1 (C-1). This alternative is being considered due to the potential development of a new overhead structure in the current location of SR-78 that would carry both SR-78 and a new protected OHV trail lane over the rail line. This alternative is being considered to evaluate the feasibility of developing the proposed Specific Plan.

The overhead structure would follow the existing SR-78 alignment. The trail portion of the structure would be located on the south side of the highway. Beginning on the west end near the Glamis Beach Store, the approach would rise steeply to make the required clearance over the rail line and then descend less steeply on the eastern side. To connect with many of the existing designated routes terminating at Ted Kipf Road, a modification to Ted Kipf Road or a parallel trail would be needed.

Once OHVs enter the wall-supported approach at either end of the SR-78 alternative, the only exit would be to the opposite side of the rail line. A barrier would separate the OHVs from traffic and cut off any access across SR-78. Bicycle traffic along SR-78 would continue to use the shoulder bike lanes. The raised alignment of SR-78 would cut off the current access points for Wash Road and the continuation of Ted Kipf Road west of the existing rail crossing. This would require a significant relocation and reconstruction of these roads including placing Wash Road further into the dune area and through a separate part of the private property. **Figure 9-2** presents the site plan for the Modified footprint, with the area that would be affected by the SR-78 overpass not being

SOURCE: The Altum Group, 2020.

Modified Footprint (Alternative B)
Glamis Specific Plan
Figure 9-2

included within the GSPA. The Modified Footprint Alternative would still allow the development of Planning Area 1 of the GSPA and would not preclude development of any of the other areas. The Modified Footprint Alternative would accomplish the project objectives, it would not prevent development of any of the other areas. For these reasons, the Modified Footprint Alternative was not eliminated from further consideration in the EIR.

The following compares environmental impacts associated with the Alternative A as compared to the impacts of the proposed Project.

Aesthetics

Under Alternative B, the area along SR-78 immediately in front of the Glamis Beach Store in Planning Area 1 and south of SR-78 in Area 6 would not be developed. No significant visual aesthetic impact associated with the proposed Specific Plan has been identified as the project facilities would not impact scenic resources, result in the substantial degradation of the existing visual character of the GSPA, or result in light/glare impacts. In this context, Alternative B would not reduce or avoid an impact related to aesthetics and visual resources and would result in less than significant impacts similar to the proposed Specific Plan.

Air Quality

Under Alternative B, air emissions during construction would be less than the proposed Specific Plan because of the reduced site development. As discussed in Section 5.2, Air Quality, the proposed Project would not exceed the ICAPCD's significance thresholds for ROG, CO, NO_x, and PM_{10} during construction and operation. Although no significant air quality impacts would occur, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. The same mitigation measures would be required for this alternative as with the proposed Specific Plan. This alternative would be consistent with existing air quality attainment plans and would not result in the creation of objectionable odors.

Biological Resources

Under Alternative B, the area along SR-78 immediately in front of the Glamis Beach Store in Planning Area 1 and south of SR-78 in Area 6 would not be developed. As discussed in Section 5.3, avian nests and small burros were identified in Planning Area 6. Under Alternative B Planning Area 6 would not be developed and these impacts would be avoided. Although this alternative would reduce the impacts to avian species and small mammals that could potentially be directly and indirectly impacted with implementation of the project, this alternative still has the potential to impact biological resources on the other portions of the Project site. Mitigation would still be required for impacts to biological resources; however, the overall number of nesting locations potentially impacted would be less. Other impacts would be similar to that described for the project.

Compared to the proposed Project, this alternative would result in a reduction in impacts on biological resources but would still require mitigation. Overall, the impact on biological resources would be less as compared to the proposed Project.

Cultural Resources

The existing RV park is not eligible for listing on the NRHP or the CRHR. However, ground disturbing activities associated with the proposed Project during construction would have the potential to cause substantial adverse changes to resources that escaped detection on the survey and/or buried prehistoric and historic resources due to the moderately high potential of the GSPA. If such resources are encountered during construction and those resources meet the eligibility criteria of the CRHR, the impact would cause a substantial adverse change in the significance of a historical or archaeological resource. This would be a potentially significant impact to cultural resources. Similar to the project, this alternative would require the incorporation of mitigation measures identified for the proposed Specific Plan to minimize these impacts to a less than significant level. Overall, since there would be less ground disturbance the potential for impact to undiscovered cultural resources would be reduced.

Geology and Soils and Paleontological Resources

Under Alternative 2, while the overall project footprint would be reduced, grading and construction of new facilities would still occur. Therefore, this alternative would still be subject to potential impacts related to ground shaking. Similar to the project, this alternative would require the incorporation of mitigation measures identified for the proposed Specific Plan to minimize these impacts to a less than significant level. Compared to the proposed Specific Plan, this alternative would result in similar geological and soil impacts.

Greenhouse Gases

Under Alternative A, GHG emissions during construction would be less than the proposed Specific Plan because of the reduced site development. This alternative would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Similar to the proposed Specific Plan, this alternative would not exceed SCAQMD's threshold of 3,000 MTCO2e. Compared to the proposed Specific Plan, this alternative would contribute to similar and desirable reductions in GHG emissions and associated contribution to global climate change through the production of renewable energy, although to a lesser degree. Because no significant GHG impact has been identified associated with the proposed Specific Plan, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed Project.

Hazards and Hazardous Materials

Similar to the proposed Specific Plan, no potential exposure to hazardous materials would occur under this alternative. Impacts would be similar to that described for the proposed Specific Plan. Compared to the proposed Specific Plan, this alternative would result in similar hazards and hazardous materials impacts.

Hydrology and Water Quality

Alternative B would result in modifications to the existing drainage patterns and the volume of storm water runoff on site. This Alternative would result in the creation of the same amount of impervious area compared to the proposed Specific Plan. Thus, this alternative would realize a similar impacts on hydrology and on-site drainage. Similar to the proposed Specific Plan, no impacts would result from flooding and facilities will not be placed within floodplains. This alternative would have similar impacts related to hydrology/water quality as compared to the proposed Specific Plan.

Land Use and Planning

Similar to the proposed Specific Plan, Alternative B would not divide an established community. Similar to the proposed Specific Plan, Alternative B would require an amendment to Imperial County's General Plan Land Use Element to change the land use designation on the general area of the Glamis Beach Store from C-2 (Medium Commercial) and remainder of the GSPA which is zoned as S-2 to Commercial Recreation I, II, and III and a small portion to S-1 (Open Space/Recreation (Figure 4-1). As with the proposed Specific Plan, this alternative would not conflict with any applicable HCP or NCCP. Land use and planning impacts resulting from this alternative would be similar to those identified for the proposed Specific Plan. Because no significant Land Use/Planning impact has been identified associated with the proposed Project, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed Project.

Noise

As with the proposed Specific Plan, Alternative B would not result in significant noise impacts associated with construction activities. As with the proposed Project, operational impacts associated with this alternative would not expose persons or generate noise levels in excess of applicable noise standards, exposure persons to, or generate excessive groundborne vibration, or expose persons to excessive aircraft noise. Because no significant noise impact has been identified associated with the proposed Specific Plan, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed Specific Plan.

Population and Housing

Similar to the proposed Project, Alternative B would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Similar to the proposed Specific Plan, Alternative B could result in a seasonal population growth (October through May) through the expansion of commercial and recreational activities within the GSPA. These activities would result in the development of new businesses and would require employee housing to be constructed. The proposed Specific Plan allows for some limited permanent residential land uses within the GSPA, which consist mostly of employee housing. The proposed zoning changes allow for the development of condominiums. Thus, the proposed Specific Plan could induce unplanned population growth through the development of new businesses, however, this population growth would be seasonal (October through May) and small. Population and housing impacts resulting from this alternative would be similar to those identified for the proposed Specific Plan. Because no significant Population and Housing impact has been identified associated with the proposed Specific Plan, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed Specific Plan.

Public Services

Alternative B would require the same public services as the proposed Specific Plan. While the overall project footprint would be slightly smaller, the impacts of this alternative to public services and associated service ratios would be similar. Like the proposed Specific Plan, this alternative would be conditioned to provide law enforcement and fire service development impact fees. Therefore, this alternative would result in a similar impact related to public services as the proposed Specific Plan.

Transportation

This alternative would result in a lower level of vehicle and truck trips within the GSPA as compared to the proposed Specific Plan. The increase in vehicular traffic was identified as a less than significant impact for the proposed Specific Plan. In this context, Alternative B would not reduce or avoid an impact related to transportation/traffic, and would result in less than significant impacts similar to the proposed Specific Plan. As with the proposed Specific Plan, this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, conflict with an applicable congestion management program, change air traffic patterns, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. Compared to the proposed Specific Plan, this alternative would result in a similar impact related to transportation/traffic.

Utilities

Similar to the proposed Specific Plan, Alternative B would require water service and energy for the operation of the solar facility. This alternative would the existing RV park to continue to operate

which would utilize less water than the proposed Specific Plan. As a consequence, this alternative would result in slightly decreased water demands when compared to the proposed Specific Plan.

Conclusion

Alternative B would result in reduced impacts for the following environmental issues areas as compared to the proposed Specific Plan: air quality and GHG and biological resources when compared to the proposed Specific Plan.

Alternative B would meet most of the basic objectives of the proposed Specific Plan and should remain under consideration.

9.9. Environmentally Superior Alternative

As required by CEQA Guidelines, Section 15126.6, an EIR must identify an "environmentally superior alternative," which is the alternative that has the least impact on the environment or would be capable of avoiding or substantially lessening any significant impacts of the project. Table 9-1, Summary of Alternatives Compared to the Proposed Project, shows each alternative's environmental impacts compared to the impacts of the proposed Project.

The alternative that results in the least environmental impact, considering both the frequency and magnitude of the impact, is the environmentally superior alternative. In cases where the No Project Alternative is environmentally superior, the EIR is required to identify the next environmentally superior alternative among the others evaluated. Alternative A (No Project/No Development) is the alternative that results in the least environmental impact.

As shown in Table 9-1, Alternative 1 (No Project/No Expansion Alternative), would be environmentally superior to the proposed Project for the resource areas analyzed in the EIR. As required by CEQA, the next environmentally superior alternative is Alternative B (Reduced Footprint) Alternative. Therefore, Alternative B would be environmentally superior to the proposed Project under two resource areas and environmentally similar to the Project under the remaining resource areas. However, Alternative B would not substantially lessen the significant resource effects of the Project; therefore, decision-makers are not obliged by CEQA to select this alternative.

TABLE 9-1. SUMMARY OF ALTERNATIVES COMPARED TO THE PROPOSED PROJECT

Environmental Resource	Proposed Project	No Project/ No Expansion (Alternative 1)	Modified Project Footprint (Alternative A)	Modified Project Footprint (Alternative B)
1. Aesthetics	LTS	NI	LTS	LTS
2. Air Quality	LTS-MM	NI / -	LTS-MM / =	LTS-MM / -
3. Biological Resources	LTS-MM	NI / +	LTS-MM /+	LTS-MM / -
4. Cultural Resources	LTS-MM	NI / +	LTS-MM / =	LTS-MM / -
5. Energy	LTS	NI	LTS	LTS
6. Geology and Soils	LTS-MM	NI / +	LTS-MM / =	LTS-MM / -
7. Greenhouse Gas Emissions	LTS	NI / -	LTS / =	LTS / -
8. Hazards and Hazardous Materials	LTS	NI / +	LTS / =	LTS / =
9. Hydrology and Water Quality	LTS-MM	NI / +	LTS-MM / =	LTS-MM / =
10. Land Use and Planning	LTS	NI / +	LTS / =	LTS / =
11. Noise	LTS	NI / +	LTS / =	LTS / =
12. Population and Housing	LTS	NI / +	LTS / =	LTS / =
13. Public Services	LTS	NI / +	LTS / =	LTS / =
14. Transportation and Traffic	LTS	SU / -	LTS / =	LTS / =
15. Utilities and Service Systems	LTS	NI / +	LTS /	LTS / =
16. Tribal Cultural Resources	LTS-MM	NI / +	LTS-MM / =	LTS-MM / -
		+ 7 - 3 = 0	+ 2 - 0 = 8	+ 0 - 6 = 4
Meets Most of the Basic Project Objectives?	Yes	No	Yes	Yes

Notes:

NI Finding of no environmental impact

LTS Finding of less than significant environmental impact

LTS-MM Finding of less than significant environmental impact with mitigation measure

SU Finding of significant and unmitigable impact

\+ Alternative is superior (reduced impacts compared) to the proposed Project

\- Alternative is inferior (greater impacts compared) to the proposed Project

= Alternative is environmentally similar to the proposed Project or there is not enough information to make a superior or inferior determination.

10.0 PREPARERS

This Environmental Impact Report was prepared for the County of Imperial by McIntyre Environmental, LLC, 1900 West Desert Highlands Drive, Oro Valley Arizona, 85737. The following professionals participated in its preparation:

Imperial County Planning & Development Services

Jim Minnick ..... Director
Michael Abraham..... Assistant Director
Patricia Valenzuela ..... Planner IV
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McIntyre Environmental

David McIntyre ..... Principal Environmental Scientist

BRG Consulting, Inc. (Consultant to County)

Christina J. Willis ..... Project Manager, Principal In Charge
Rachel Rowe ..... Environmental Planner/GIS Specialist
John Addenbrooke ..... Document Production/GIS Specialist

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11.0 REFERENCES

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None.

2.0 Introduction

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3.0 Project Background

None.

4.0 Project Description

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6.0 Analysis of Long-Term Effects

None

7.0 Cumulative Impacts

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9.0 Alternatives

None.

10.0 Preparers

None.

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DRAFT

ENVIRONMENTAL IMPACT REPORT

VOLUME 2: TECHNICAL APPENDICES

GLAMIS SPECIFIC PLAN

SCH NO: 2020100348

Glamis Specific Plan (SP 19-0001)
Zone Change (19-0006)

January 2023

Prepared for:
Imperial County
Planning & Development Services

Prepared by:
McIntyre Environmental

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ENVIRONMENTAL IMPACT REPORT

VOL. 2: Technical Appendices

GLAMIS SPECIFIC PLAN

SCH No. 2020100348

Glamis Specific Plan (SP 19-0001)
Zone Change (19-0006)

Prepared for
IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES
801 MAIN STREET
EL CENTRO, CALIFORNIA 92243

Prepared by
McIntyre Environmental, LLC
1900 West Desert Highlands Drive
Oro Valley AZ 85737
Telephone: (520) 775 1490

January 2023

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VOLUME 2: APPENDICES TO THE ENVIRONMENTAL IMPACT REPORT

Appendix A **Notice of Preparation and Public Scoping**

- **A-1 Notice of Preparation / Public Comments Received**
- **A-2 Environmental Initial Study**
  Prepared by County of Imperial, October 2020

Appendix B **Public Scoping Meeting Materials/Comments**
Prepared by McIntyre Environmental, October 29, 2020

Appendix C **Air Quality and Greenhouse Gas Analysis**

- **C-1 Air Quality Study**
  Prepared by Ldn Consulting, November 16, 2020
- **C-2 Greenhouse Gas Screening Letter**
  Prepared by Ldn Consulting, November 16, 2020

Appendix D **Visual Impact Assessment**
Prepared by The Altum Group, March 26, 2020

Appendix E **Biological Resources Assessment**
Prepared by Barrett's Biological Surveys, November 2020

Appendix F **Cultural Resources**

- **F-1 Class III Cultural Resource Report**
  Prepared by ASM Affiliates, July 2019
- **F-2 AB-52 Consultation Letters and Responses**
- **F-3 SB-18 Consultation Letters and Responses**

Appendix G **Geotechnical Engineering Feasibility Report**
Prepared by Earth Systems, August 29, 2019

Appendix H **Paleontological Report**
Prepared by PaleoServices, June 21, 2019

Appendix I **Hazardous Materials Technical Study**
Prepared by Ninyo & Moore, October 14, 2020

Appendix J **Noise Study**
Prepared by Ldn Consulting, March 1, 2020

Appendix K **Water Supply Assessment**
Prepared by Dubose Design Group, September 2021.

VOLUME 2: APPENDICES TO THE ENVIRONMENTAL IMPACT REPORT (CONTINUED)

Appendix L **Traffic and Parking**

L-1 Traffic Report
Prepared by Linscott, Law & Greenspan, Engineers, February 7, 2022

L-2 Traffic Report Appendices

Appendix M **Glamis Specific Plan and Zoning Ordinance**

M-1 Glamis Specific Plan
Prepared by The Altum Group, October 2022

M-2 Zoning Ordinance

Appendix N **Conditional Use Permit Application – Water Well Modification**
To Be Provided

A-1 Notice of Preparation / Public Comments Received

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Imperial County
Planning & Development Services Department
NOTICE OF PREPARATION OF DRAFT EIR FOR THE
GLAMIS SPECIFIC PLAN PROJECT
NOTICE OF PUBLIC SCOPING MEETING

The Imperial County Planning & Development Services Department intends to prepare an Environmental Impact Report (EIR) for the proposed Glamis Specific Plan Area Project (Project), as described below. A public scoping meeting for the proposed EIR will be held by the Imperial County Planning & Development Services Department at 6:00 PM on October 29, 2020. The scoping meeting will be held at the Board of Supervisors Chambers, 2nd Floor, County Administration Center located at 940 Main Street, El Centro, CA 92243. Comments regarding the scope of the EIR will be accepted at this meeting. Additionally, comments may be sent to the Planning & Development Services Department, 801 Main Street, El Centro, California 92243, attention Jim Minnick, Director.

SUBJECT: Glamis Specific Plan Area Project

BOARD OF SUPERVISORS CONSIDERATION: Fall 2021.

PROJECT LOCATION: The Project Area is located in the unincorporated community of Glamis, a remote area in the central portion of Imperial County. The project site is located approximately 27 miles east of the City of Brawley; approximately 32 miles northeast of the City of El Centro; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea. The Project site is located in Section 33, Range 18 East, Township 13 South within the U.S. Geological Survey (USGS) Glamis, California 7.5-minute topographic quadrangle (assessor parcel numbers [APN] 039-310-017, 039- 310-022, 039-310-023, 039-310-026, 039-310-027, 039-310-029, and 039-310-030).

PROJECT DESCRIPTION: The Project Area is contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development of a Specific Plan in accordance with design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. Polaris Inc. (the Applicant) is proposing a Specific Plan for the development of the GSPA. The GSPA allows for the development of a Specific Plan in accordance with the design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. The proposed Glamis Specific Plan (GSP) would implement the County's objectives for the development of this area which is to accommodate recreation supporting land uses including retail and service commercial, motel accommodations, recreational vehicles and mobile home parks, and community facilities (Imperial County General Plan Land Use Element).

The GSP would create a distinctive master-plan for recreation-serving land uses which are consistent with the historical use of the Glamis area. It provides for a great deal of flexibility as to the development of potential land uses within the GSP to promote the concept of an open desert playground that derives from the "Camp RZR" event, historically held in October of each year at the GSP area, and the surrounding ISDRA. This area attracts hundreds of thousands of OHV enthusiasts every Halloween, Thanksgiving, Christmas, New Years, and President's Day weekend.

The GSP would consist of eight proposed Planning Areas. Planning Areas 1, 2, 3, and 4 are proposed for designation as Commercial-Recreation 3 (CR-3). Planning Areas 5 and 6 are proposed for designation as Commercial-Recreation 1 (CR-1). Planning Area 7 is proposed for designation as Commercial-Recreation 2 (CR-2). Planning Area 8 would be re-zoned to the County's existing S-1 (Open Space/Recreation) designation.

As envisioned, the GSP will facilitate an entertainment enclave among the iconic dunes. This enclave will enhance the historic experiences that OHV riders and visitors expect when they visit the dunes.

DESIGNATED AREA PLAN: The general area of the Glamis Beach Store is zoned as C-2, while the remainder of the Project Area is zoned as S-2.

BOARD OF SUPERVISORS DISTRICT: District 5, Supervisor, Raymond Castillo.

ANTICIPATED SIGNIFICANT EFFECTS: The EIR will analyze potential impacts associated with the following: Air Quality, Biological Resources, Cultural Resources, Geology/Soils, Greenhouse Gas Emissions, Hazards/Hazardous Materials, Hydrology/Water Quality, Transportation/Traffic, Tribal Cultural Resources and Utilities and Service Systems.

COMMENTS REQUESTED: The Imperial County Planning & Development Services Department would like to know your ideas about the effects this project might have on the environment and your suggestions as to alternatives, mitigation or ways the project may be revised to reduce or avoid any significant environmental impacts. Your comments will guide the scope and content of environmental issues to be examined in the EIR. Your comments may be submitted in writing to: Jim Minnick, Director, Imperial County Planning & Development Services Department, 801 Main Street, El Centro, CA 92243. Available project information may be reviewed at ICPDS.com. Due to the limits mandated by State law, your response must be sent at the earliest possible date but no later than 35 days after receipt of this notice.

NOTICE OF PREPARATION REVIEW PERIOD: October 20, 2020 through November 24, 2020.

DEPARTMENT OF TRANSPORTATION
DISTRICT 11
4050 TAYLOR STREET, MS-240
SAN DIEGO, CA 92110
PHONE (619) 688-6075
FAX (619) 688-4299
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

Governor's Office of Planning & Research

Nov 24 2020

STATE CLEARINGHOUSE

November 24, 2020

11-IMP-78
PM 41.06
Polaris Glamis Specific Plan
NOP/DEIR/SCH# 2020100348

Ms. Patricia Valenzuela
Planner IV
County of Imperial
Community Development Department
Planning and Zoning Division
1275 West Main Street
El Centro, CA 92243

Dear Ms. Valenzuela:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review of the Polaris Glamis Specific Plan Notice of Preparation (NOP) Draft Environmental Impact Report (DEIR) (SCH# 2020100348) and for the Draft Initial Study & Environmental Analysis on this project located in Glamis near State Route 78 (SR-78) in Imperial County. The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development-Intergovernmental Review (LD-IGR) Program reviews land use projects and plans to ensure consistency with Caltrans' mission and state planning priorities.

Caltrans has the following comments:

Environmental

Caltrans appreciates the opportunity to comment on this NOP for the Polaris Glamis Specific Plan DEIR. The analysis presented may impact on Caltrans Right-of-Way (R/W) in the future. Future projects should be based upon the changes enacted from the Program EIR have elements and/or mitigation measures change to effect Caltrans R/W, Caltrans would welcome the

opportunity to be a Responsible Agency under the California Environmental Quality Act (CEQA) and to the continued coordination of our efforts.

Traffic Engineering and Analysis

- In accordance with Senate Bill (SB) 743 public agencies are required to use Vehicle Miles Traveled (VMT) to evaluate transportation impacts associated with development. Please provide a traffic impact study using the Caltrans-Vehicles Miles Traveled-Focused-Transportation Impact Study Guide -May 20, 2020. Provide a Vehicle Miles Traveled (VMT) analysis for the Polaris Glamis Specific Plan Traffic Study. Caltrans guidance on VMT studies for local development has been released for use (Transportation Impact Study Guide, TISG). The TISG details how the Caltrans Local Development-Intergovernmental Review (LD-IGR) program reviews a land-use project's vehicle miles traveled. See https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf

- For additional guidance, Caltrans references the Governor's Office of Planning and Research (OPR) Senate Bill 743 based *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) for guidance on the development of VMT based Transportation Impact Studies. Caltrans recommends use of OPR's significance thresholds for determination of transportation impacts from land use projects. OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA* is available online at http://opr.ca.gov/ceqa/updates/sb-743/.

- Any proposed intersection expansion or modification will require an Intersection Control Evaluation (ICE) report as required by the Caltrans Traffic Operations Policy Directive #13-02. Submit an ICE report for the proposed intersection at Glamis Main Street on Figure 8 of the Draft Study & Environmental Analysis of the Glamis Specific Plan dated October 2020.

Comments for the Glamis Specific Plan – Draft Initial Study & Environmental Analysis

Page 7 - Description of Project – There is a brief description of the proposed land uses listed. The report does not account for other land uses that are mentioned in the project trip generation. Please revise the project trip generation "Table A" (provided by Polaris' Consultant) to include the below development which is mentioned and listed on page 7:

a) Fuel station, rental facilities, entertainment and hospitality uses, sporting goods stores, adventure center, amusement facilities, movie theater, obstacle courses, fireworks and light display area and racetrack.

Page 43 - Section XVII Transportation/Traffic – Caltrans does not concur that the impacts from the Polaris development will result in Less Than Significant impacts. The full environmental process and determination of impacts under CEQA will describe the project impacts and mitigations.

Page 44 - Discussion c) Less than Significant Impact. Add sentences to mention the Intersection Control Evaluation (ICE) requirements in addition to the proposal of a signal at the intersection.

Comments for the Glamis Specific Plan – First Screen Check Draft EIR

Page 3-1 - Sections 1.0 and 2.0 appear to be missing.

Page 4-2 - Section 4.2 - Proposed Project Section – Paragraph 2 - "This designation is intended to accommodate a large variety of commercial uses that are generally supportive of OHV activities and provide for large scale events to be held both on private property as well as adjoining federal lands." Does Bureau of Land Management (BLM) support large variety of commercial uses adjoining Federal lands?

Page 4-4 - Hospitality – "With an average annual attendance of 200,000 visitors to the Glamis area." According to the Visitation Data provided by LLG Engineers, the annual attendance for 2019 was over 600,000 for this area.

Page 4-7 – Section 4.3 - Project Components – "In compliance with CEQA, only those components of the proposed Glamis Specific Plan that would have the

potential to result in potential environmental effects are addressed in this EIR." Impacts to the transportation network need to be addressed as well.

Page 4-8 - Section 4.3.3- Circulation Plan - Paragraph 1 stated "There are a total of 6 proximate vehicular access points to the project vicinity with a gateway feature on SR-78 (Figure 4-3)". The entire stretch for vehicular access west of the proposed signalized intersection will be required to have a fence installed along SR-78. Justify the need to have additional accesses if the proposed signalized Glamis Mainstreet intersection is not enough for Area 1. Each of these requested accesses will need to be evaluated as they could potentially create illegal crossings of SR-78.

Page 4-8 - Section 4.3.3- Circulation Plan - Paragraph 1 - "There are a total of 6 proximate vehicular access point to the project vicinity with a gateway feature on SR-78 (Figure 4-3)." Clarify the type of gateway and the installation location. Non-essential highway appurtenances like a gateway will need to be 52 feet from the edge of travel way.

Page 4-8 - Section 4.3.3- Circulation Plan - Paragraph 2 - "…To accommodate the anticipated vehicular traffic flow, the applicant has proposed a conceptual intersection plan with proposed cross-sections subject to final design and approval from Caltrans (Figure 4-4)." Any proposed intersection expansion or modification will require an Intersection Control Evaluation (ICE) report as required by the Caltrans Traffic Operations Policy Directive #13-02. Submit an ICE report for the proposed intersection at this intersection for review. Operations Policy Directive #13-02 can be provided upon request.

"The Glamis Specific Plan proposes a transportation concept showing the portion of SR-78 traversing through the project vicinity being expanded from two thru lanes with an ultimate R/W width of 40 feet to a total of five (5) lanes with an ultimate R/W width of 72 feet. The segment of SR-78, west of the proposed intersection would have three easterly lanes - one thru lane, one left turn lane and one right turn lane - and two westerly lanes with one thru lane and an acceleration lane terminating approximately 1,000 feet from the intersection. The segment of SR-78 east of the intersection is of a similar configuration of the western segment with the number of lanes in each direction reversed and the acceleration lane terminating approximately 600 feet from the intersection." This concept proposes a significant level of

expansion of the State Highway System, and close coordination with Caltrans will be required. Caltrans has made no determination on the proposed concepts.

Page 4-8 - Section 4.3.3- Circulation Plan - Paragraph 3 - All proposed accesses along SR-78 for the proposed development Area 1-8 will need to be improved to meet Caltrans latest driveway standards with acceleration and deceleration lane based on the proposed development phasing (safety).

Page 4-11 Circulation Plan - "The project vicinity includes the Sand Highway that runs parallel to SR-78 along the northwestern edge of Planning Area 1." Is there a plan for separating the "Sand Highway" from SR-78 using physical barriers such as K-rail, fencing, or other means?

Please specify location of signs and under whose authority signs will be posted.

Page 4-26 - Table 4-2 "Anticipated Land Use Changes Through 2051/2071. Please include the growth rate used for the proposed traffic ADT in the report. Also, include this future growth volume in the future project traffic trips scenario in the Traffic Impact Analysis (TIA).

Page 4-27 – Section 4.4 Project Phasing - "… the earliest construction beginning in late 2021. No uses would be opened prior to 2022 (opening year). The build-out year would be 2051 /2071." What are the phases of the project to be constructed between 2021 and 2051?

Design

1. The Project Development Procedures Manual (PDPM) Chapter 29 must be consulted regarding the requirements for Gateway Monuments.
2. In addition, above ground gateway monuments are considered fixed objects and must comply with the Highway Design Manual (HDM) standard for Index 309.1(2)(b) Clear Recovery Zone for Discretionary Fixed Objects and/or HDM Index 309.1(3) Minimum Horizontal Clearances.
3. The HDM should be consulted for the design of any proposed grade-separated structures and at-grade intersections.
4. Proposed utility lines (new or relocated) within the R/W should comply with the policies in the PDPM Chapter 17.

5. If a frontage road along SR-78 is to be included, consult the HDM for design standards, including barrier separation.
6. New access points along the right of way may need to be evaluated based on access controlled guidance.
7. If an access opening on SR-78 is being requested, Caltrans Design will need to evaluate the geometric proposal once the specific roadway access plans has been submitted. The Caltrans Design Branch will need to review and comment on the roadway access opening per the HDM.

Hydraulics

1) Provide a letter from the Floodplain Administrator stating that this project has no rise or a letter showing coordination with the Floodplain Administrator.

2) Per the draft IS/EA, Page 19, Figure 9 is insufficient:

   a) Provide existing topographic information with labels (typically 0.1' contours in the desert areas).
   b) Provide proposed topographic information with labels (typically 0.1' contours in the desert areas).
   c) Both maps/exhibits must clearly show the drainage patterns along SR-78, which in the current figure is not visible at all.

3) Coordinate with Caltrans' Survey Branch to obtain Caltrans R/W and SR-78 stationing, centerline, and alignment name to be shown and labeled on all plans and maps containing SR-78.

4) Provide information on the maps/exhibits to show how the conceptual offsite drainage will cross the Ted Kipf Road along Sr-78. This is vital as additional runoff discharge coming from the culvert at northeast side of the site will have potential impact to the existing Caltrans drainage inlet located at the southwestern side of the project.

5) Hydrology and Hydraulics Study may be required to determine the effect of the proposed project to the existing drainage system in the area.

Active Transportation

- US Bicycle Route System (USBRS) designates SR-78 as part of the "Southern Tier Route" in this area. Cyclists are present and use this road for regional and cross-country trips.
- As the Glamis Specific Plan develops and is implemented, consider how cyclists and off-highway vehicles may interact. Namely when off-highway vehicles take the shoulder of SR-78, where cyclists may be present.
- The document mentions "Urban hardscape (i.e., paved roads, curb and gutter, etc.) will be built in tandem with all proposed permanent structures." Please specify the locations of sidewalks and bike lanes, and other complete streets elements.

If you have any questions, please contact Mark McCumsey, of the Caltrans LD-IGR Branch, at (619) 985-4957 or by e-mail sent to mark.mccumsey@dot.ca.gov.

Sincerely,

electronically signed by

MAURICE EATON, Branch Chief
Local Development and Intergovernmental Review Branch

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

Governor's Office of Planning & Research

Nov 20 2020

STATE CLEARINGHOUSE

November 20, 2020
Sent via email

Maria Scoville
Imperial County Planning and Development Services
801 Main Street
El Centro, CA 92243
mariascoville@co.imperial.ca.us

Subject: Notice of Preparation of a Draft Environmental Impact Report
Glamis Specific Plan Project
State Clearinghouse No. 2020100348

Dear Ms. Scoville:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from Imperial County (County) for the Glamis Specific Plan Project (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

CDFW is also submitting comments as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

The Project Area is located in the unincorporated community of Glamis, a remote area in the central portion of Imperial County. The Project site consists of approximately 143 acres, and is located approximately 27 miles east of the City of Brawley; approximately 32 miles northeast of the City of El Centro; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea.

The Project Area is contained within the County's designated Glamis Specific Plan Area (GSPA), which allows for the development of a Specific Plan in accordance with design criteria, objectives, and policies that are consistent with the County's General Plan Land Use Element. The proposed Glamis Specific Plan (GSP) would implement the County's objectives for the development of this area which is to accommodate recreation supporting land uses including commercial and retail development, motel accommodations, recreational vehicles and mobile home parks, and community facilities.

The GSP would consist of eight proposed Planning Areas. Planning Areas 1, 2, 3, and 4 are proposed for designation as Commercial-Recreation 3 (CR-3), intended to accommodate a large variety of commercial uses that are generally supportive of OHV activities and provide for large scale events to be held both on private property as well as adjoining federal lands. Planning Areas 5 and 6 are proposed for designation as Commercial-Recreation 1 (CR-1), intended to allow small scale, low density development of projects such as employee housing, research and development facilities, or RV park. Planning Area 7 is proposed for designation as Commercial-Recreation 2 (CR-2), intended to accommodate recreation-related commercial opportunities and projects that will support the OHV and recreational uses of the area at a higher density and allowable uses than CR-1 but still be limited to specific uses that are less intense and more occasional than those allowed in CR-3. This could include small repair shops, limited housing, or RV park. Planning Area 8 would be rezoned to the County's existing Open Space/Recreation (S-1) designation, which is primarily characterized by low intensity human utilization and small-scale recreation related uses.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

CDFW recommends that the forthcoming DEIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the project, the DEIR should include a complete assessment of the flora and fauna within and adjacent to the Project footprint, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats.

CDFW recommends that the DEIR specifically include:

1. An assessment of the various habitat types located within the project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following *The Manual of California Vegetation*, second edition (Sawyer et al. 2009[2]). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the project. CDFW's California Natural Diversity Database (CNDDB) in Sacramento should be contacted at (916) 322-2493 or CNDDB@wildlife.ca.gov to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the proposed Project.

   Please note that CDFW's CNDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point

[2] Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California. http://vegetation.cnps.org/

in gathering information about the *potential presence* of species within the general area of the project site.

3. A complete, *recent* inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish & G. Code, § 3511). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the Project area and should not be limited to resident species. Focused species-specific surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Note that CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.

4. A thorough, recent, floristic-based assessment of special status plants and natural communities, following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018[3]).

5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]).

6. A full accounting of all open space and mitigation/conservation lands within and adjacent to the Project.

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the Project. To ensure that Project impacts to biological resources are fully analyzed, the following information should be included in the DEIR:

[3] California Department of Fish and Wildlife (CDFW). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plan Populations and Sensitive Natural Communities. State of California, Natural Resources Agency. Available for download at: https://wildlife.ca.gov/Conservation/Plants

1. A discussion of potential impacts from lighting, noise, human activity (e.g., recreation), defensible space, and wildlife-human interactions created by zoning of development projects or other project activities adjacent to natural areas, exotic and/or invasive species, and drainage. The latter subject should address Project-related changes on drainage patterns and water quality within, upstream, and downstream of the Project site, including: volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site.

2. A discussion of potential indirect Project impacts on biological resources, including resources in areas adjacent to the project footprint, such as nearby public lands (e.g. National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Natural Community Conservation Plan, or other conserved lands).

3. An evaluation of impacts to adjacent open space lands from both the construction of the Project and any long-term operational and maintenance needs.

4. A cumulative effects analysis developed as described under CEQA Guidelines section 15130. Please include all potential direct and indirect Project related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

Alternatives Analysis

CDFW recommends the DEIR describe and analyze a range of reasonable alternatives to the Project that are potentially feasible, would "feasibly attain most of the basic objectives of the Project," and would avoid or substantially lessen any of the Project's significant effects (CEQA Guidelines § 15126.6[a]). The alternatives analysis should also evaluate a "no project" alternative (CEQA Guidelines § 15126.6[e]).

Mitigation Measures for Project Impacts to Biological Resources

The DEIR should identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, to the extent feasible. The County should assess all direct, indirect, and cumulative impacts that are expected to occur as a result of the implementation of the Project and its long-term operation and maintenance. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

1. *Fully Protected Species*: Fully protected species may not be taken or possessed at any time. Project activities described in the DEIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the Project area. CDFW also recommends that the DEIR fully analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends that the Lead Agency include in the analysis how appropriate avoidance, minimization, and mitigation measures will reduce indirect impacts to fully protected species.

2. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in *The Manual of California Vegetation* (Sawyer et al. 2009). The DEIR should include measures to fully avoid and otherwise protect sensitive plant communities from project-related direct and indirect impacts.

3. *California Species of Special Concern* (CSSC): CSSC status applies to animals generally not listed under the federal Endangered Species Act or the CESA, but which nonetheless are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CSSCs should be considered during the environmental review process. CSSC that have the potential or have been documented to occur within or adjacent to the project area, including, but not limited to: flat-tailed horned lizard and burrowing owl.

4. *Mitigation*: CDFW considers adverse project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the DEIR should include mitigation measures for adverse project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of project impacts. For unavoidable impacts, onsite habitat restoration and/or enhancement, and preservation should be evaluated and discussed in detail.

   The DEIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

   If sensitive species and/or their habitat may be impacted from the Project, CDFW recommends the inclusion of specific mitigation in the DEIR. CEQA Guidelines section 15126.4, subdivision (a)(1)(8) states that formulation of feasible mitigation measures should not be deferred until some future date. The Court of Appeal in *San*

Joaquin Raptor Rescue Center v. *County* of *Merced* (2007) 149 Cal.App.4th 645 struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after Project approval. Courts have also repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, are incomplete *(Sundstrom* v. *County* of *Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry* v. *City* of *Murrieta (1995)* 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc.* v. *County* of *Orange* (2005) 131 Cal. App. 4th 777).

CDFW recommends that the DEIR specify mitigation that is roughly proportional to the level of impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). The mitigation should provide long-term conservation value for the suite of species and habitat being impacted by the Project. Furthermore, in order for mitigation measures to be effective, they need to be specific, enforceable, and feasible actions that will improve environmental conditions.

5. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

   CDFW recommends that local onsite propagules from the Project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be initiated in order to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various project components as appropriate.

   Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project.

6. *Nesting Birds and Migratory Bird Treaty Act:* Please note that it is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Fish and Game Code sections 3503, 3503.5, and 3513 afford protective measures as follows: Fish and Game Code section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

   CDFW recommends that the DEIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: project phasing and timing, monitoring of project-related noise (where applicable), sound walls, and buffers, where appropriate. The DEIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the project site. If pre-construction surveys are proposed in the DEIR, the CDFW recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

7. *Moving out of Harm's Way:* To avoid direct mortality, CDFW recommends that the lead agency condition the DEIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety (i.e., CDFW does not recommend relocation to other areas). Furthermore, it should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for the purposes of offsetting project impacts associated with habitat loss.

8. *Translocation of Species*: CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful.

California Endangered Species Act

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to CESA. CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" (Fish & G. Code, § 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the project. CESA ITPs are issued to conserve, protect, enhance, and restore State-listed CESA species and their habitats.

CDFW encourages early consultation, as significant modification to the proposed Project and avoidance, minimization, and mitigation measures may be necessary to obtain a CESA ITP. The California Fish and Game Code requires that CDFW comply with CEQA for issuance of a CESA ITP. CDFW therefore recommends that the DEIR addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of CESA.

Lake and Streambed Alteration Program

Based on review of material submitted with the NOP and review of aerial photography, the Project may be subject to Notification to CDFW pursuant to Fish and Game Code section 1602. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: Substantially divert or obstruct the natural flow of any river, stream or lake; Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or Deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify your Project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code § 21065). To facilitate issuance of an LSA Agreement, if necessary, the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the

proposed Project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to https://www.wildlife.ca.gov/Conservation/LSA/Forms.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). Information can be submitted online or via completion of the CNDDB field survey form at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.).

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP of a DEIR for the Glamis Specific Plan Project (SCH No. 2020100348) and recommends that Imperial County address the CDFW's comments and concerns in the forthcoming DEIR. If you should have any questions pertaining to the comments provided in this letter, please contact Rose Banks, Environmental Scientist, at Rose.Banks@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Scott Wilson
8091B1A9242F49C...

Scott Wilson
Environmental Program Manager

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NATIVE AMERICAN HERITAGE COMMISSION

11/24/2020

Governor's Office of Planning & Research

Oct 23 2020

STATE CLEARINGHOUSE

October 21, 2020

Patricia Valenzuela
Imperial County Planning & Development Services Department
801 Main Street
El Centro, CA 92243

Re: 2020100348, Glamis Specific Plan Project, Imperial County

Dear Ms. Valenzuela:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

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AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).

2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.

3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).

4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:

- **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
- **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:

- **a.** If part or all of the APE has been previously surveyed for cultural resources.
- **b.** If any known cultural resources have already been recorded on or adjacent to the APE.
- **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
- **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
- **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

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A-2 Environmental Initial Study

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DRAFT
Initial Study & Environmental Analysis

For:

Glamis Specific Plan (SP 19-0001)
Zone Change (19-0006)
Conditional Use Permit (#19-0027)
Initial Study (IS) #19-0030)

Prepared By:

COUNTY OF IMPERIAL

Planning & Development Services Department
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October 2020

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SECTION I. INTRODUCTION

A. PURPOSE

This document is a ☒ policy-level; ☐ project level Initial Study for evaluation of potential environmental impacts resulting with the proposed Glamis Specific Plan Project.

B. CEQA REQUIREMENTS AND THE IMPERIAL COUNTY "GUIDELINES AND REGULATIONS TO IMPLEMENT CEQA AS AMENDED"

As defined by Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines and Section 7 of the County's "Guidelines for the Implementation of CEQA as Amended", an Initial Study is prepared primarily to provide the Lead Agency with information to use as the basis for determining whether an Environmental Impact Report (EIR), Mitigated Negative Declaration, Negative Declaration, or other environmental document, would be appropriate for providing the necessary environmental documentation and clearance for any proposed project.

☒ According to Section 15065, an EIR is deemed appropriate for a particular proposal if the following conditions occur:

- The proposal has the potential to substantially degrade quality of the environment.
- The proposal has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- The proposal has possible environmental effects that are individually limited but cumulatively considerable.
- The proposal could cause direct or indirect adverse effects on human beings.

☐ According to Section 15070(a), a Negative Declaration is deemed appropriate if the proposal would not result in any significant effect on the environment.

☐ According to Section 15070(b), a Mitigated Negative Declaration is deemed appropriate if it is determined that though a proposal could result in a significant effect, mitigation measures are available to reduce these significant effects to insignificant levels.

This Initial Study is prepared in conformance with the California Environmental Quality Act of 1970, as amended (Public Resources Code, Section 21000 et. seq.); Section 15070 of the State & County of Imperial's Guidelines for Implementation of the California Environmental Quality Act of 1970, as amended (California Code of Regulations, Title 14, Chapter 3, Section 15000, et. seq.); applicable requirements of the County of Imperial; and the regulations, requirements, and procedures of any other responsible public agency or an agency with jurisdiction by law.

Pursuant to the County of Imperial Guidelines for Implementing CEQA, depending on the project scope, the County of Imperial Board of Supervisors, Planning Commission and/or Planning Director is designated the Lead Agency, in accordance with Section 15050 of the CEQA Guidelines. The Lead Agency is the public agency which has the principal responsibility for approving the necessary environmental clearances and analyses for any project in the County.

C. INTENDED USES OF INITIAL STUDY

This Initial Study is an informational document which is intended to inform County of Imperial decision-makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed applications. The environmental review process has been established to enable public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any potentially adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the Lead Agency and other responsible public agencies must balance adverse environmental effects against other public objectives, including economic and social goals.

The Initial Study prepared for the project will be circulated for a period of 35 days for public and agency review and comments. At the conclusion, if comments are received, the County Planning & Development Services Department will prepare a document entitled "Responses to Comments" which will be forwarded to any commenting entity and be made part of the record within 10-days of any project consideration.

D. CONTENTS OF INITIAL STUDY

This Initial Study is organized as described below to facilitate a basic understanding of the existing setting and environmental implications of the proposed applications.

SECTION 1

I. INTRODUCTION presents an introduction to the entire report. This section discusses the environmental process, scope of environmental review, and incorporation by reference documents.

SECTION 2

II. ENVIRONMENTAL CHECKLIST FORM contains the County's Environmental Checklist Form. The checklist form presents results of the environmental evaluation for the proposed applications and those issue areas that would have either a significant impact, potentially significant impact, or no impact.

PROJECT SUMMARY, LOCATION AND ENVIRONMENTAL SETTINGS describes the proposed project entitlements and required applications. A description of discretionary approvals and permits required for project implementation is also included. It also identifies the location of the project and a general description of the surrounding environmental settings.

ENVIRONMENTAL ANALYSIS evaluates each response provided in the environmental checklist form. Each response checked in the checklist form is discussed and supported with sufficient data and analysis as necessary. As appropriate, each response discussion describes and identifies specific impacts anticipated with project implementation.

SECTION 3

III. MANDATORY FINDINGS presents Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

IV. PERSONS AND ORGANIZATION CONSULTED identifies those persons consulted and involved in preparation of this Initial Study.

V. REFERENCES lists bibliographical materials use in the preparation of this document.

VI. FINDINGS

SECTION 4

VIII. RESPONSE TO COMMENTS (IF ANY)

IX. MITIGATION MONITORING AND REPORTING PROGRAM (IF ANY)

E. SCOPE OF ENVIRONMENTAL ANALYSIS

For evaluation of environmental impacts, each question from the Environmental Checklist Form is summarized and responses are provided according to the analysis undertaken as part of the Initial Study. Impacts and effects will be evaluated and quantified, when appropriate. To each question, there are four possible responses, including:

1. **No Impact**: A "No Impact" response is adequately supported if the impact simply does not apply to the proposed applications.
2. **Less Than Significant Impact**: The proposed applications will have the potential to impact the environment. These impacts, however, will be less than significant; no additional analysis is required.
3. **Potentially Significant Unless Mitigation Incorporated**: This applies where incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact."
4. **Potentially Significant Impact**: The proposed applications could have impacts that are considered significant. Additional analyses and possibly an EIR could be required to identify mitigation measures that could reduce these impacts to less than significant levels.

F. POLICY-LEVEL or PROJECT LEVEL ENVIRONMENTAL ANALYSIS

This Initial Study will be conducted under a ☒ policy-level, ☐ project level analysis. Regarding mitigation measures, it is not the intent of this document to "overlap" or restate conditions of approval that are commonly established for future known projects or the proposed applications. Additionally, those other standard requirements and regulations that any development must comply with, that are outside the County's jurisdiction, are also not considered mitigation measures and therefore, will not be identified in this document.

G. TIERED DOCUMENTS AND INCORPORATION BY REFERENCE

Information, findings, and conclusions contained in this document are based on incorporation by reference of tiered documentation, which are discussed in the following section.

1. Tiered Documents

As permitted in Section 15152(a) of the CEQA Guidelines, information and discussions from other documents can be included into this document. Tiering is defined as follows:

"Tiering refers to using the analysis of general matters contained in a broader EIR (such as the one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project."

Tiering also allows this document to comply with Section 15152(b) of the CEQA Guidelines, which discourages redundant analyses, as follows:

"Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects including the general plans, zoning changes, and development projects. This approach can eliminate repetitive discussion of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration."

Further, Section 15152(d) of the CEQA Guidelines states:

"Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program, plan, policy, or ordinance should limit the EIR or negative declaration on the later project to effects which:

(1) Were not examined as significant effects on the environment in the prior EIR; or

(2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means."

2. Incorporation By Reference

Incorporation by reference is a procedure for reducing the size of EIRs/MND and is most appropriate for including long, descriptive, or technical materials that provide general background information, but do not contribute directly to the specific analysis of the project itself. This procedure is particularly useful when an EIR or Negative Declaration relies on a broadly drafted EIR for its evaluation of cumulative impacts of related projects (Las Virgenes Homeowners Federation v. County of Los Angeles [1986, 177 Ca.3d 300]). If an EIR or Negative Declaration relies on information from a supporting study that is available to the public, the EIR or Negative Declaration cannot be deemed unsupported by evidence or analysis (San Francisco Ecology Center v. City and County of San Francisco [1975, 48 Ca.3d 584, 595]).

When an EIR or Negative Declaration incorporates a document by reference, the incorporation must comply with Section 15150 of the CEQA Guidelines as follows:

- The incorporated document must be available to the public or be a matter of public record (CEQA Guidelines, Section 15150[a]). The General Plan EIR is available, along with this document, at the County of Imperial Planning & Development Services Department, 801 Main Street, El Centro, CA 92243, phone (442) 265-1736.
- This document must be available for inspection by the public at an office of the lead agency (CEQA Guidelines Section 15150[b]). These documents are available at the County of Imperial Planning & Development Services Department, 801 Main Street, El Centro, CA 92243; phone (442) 265-1736.
- These documents must summarize the portion of the document being incorporated by reference or briefly describe information that cannot be summarized. Furthermore, these documents must describe the relationship between the incorporated information and the analysis in the tiered documents (CEQA Guidelines Section 15150[c]). As discussed above, the tiered EIRs address the entire project site and provide background and inventory information and data which apply to the project site. Incorporated information and/or data will be cited in the appropriate sections.
- These documents must include the State identification number of the incorporated documents (CEQA Guidelines Section 15150[d]). The State Clearinghouse Number for the 1993 County of Imperial General Plan Final EIR is SCH #93011023.
- The material to be incorporated in this document will include general background information (CEQA Guidelines Section 15150[f]).

SECTION II. ENVIRONMENTAL CHECKLIST

1.	**Project Title:**	Glamis Specific Plan
2.	**Lead Agency Name and Address:**	Imperial County Planning & Development Services Department
3.	**Contact Person and Phone Number:**	Patricia Valenzuela, Planner IV, 442-265-1749
4.	**Address:**	801 Main Street, El Centro CA, 92243
5.	**E-mail:**	PatriciaValenzuela@co.imperial.ca.us

6. Project Location: The proposed Specific Plan Area is located in the unincorporated community of Glamis, a remote area in the eastern portion of Imperial County. The Specific Plan Area is located approximately 27 miles east of the City of Brawley; approximately 32 miles northeast of the City of El Centro; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea (**Figures 1 and 2**). The Specific Plan Area consists of approximately 143 acres located within Section 33, Range 18 East, Township 13 South within the U.S. Geological Survey (USGS) Glamis, California 7.5-minute topographic quadrangle (Assessor Parcel Numbers [APNs] 039-310-017, 039- 310-022, 039-310-023, 039-310-026, 039-310-027, 039-310-029, and 039-310-030).

7.	**Project Sponsor's Name and Address:**	Polaris Industries Inc.
8.	**General Plan Designation:**	Glamis Specific Plan Area (GSPA)
9.	**Zoning:**	The existing zoning designations within the Specific Plan Area are Open Space/Preservation (S-2) and General Commercial (C-2) **(Figure 3).**

10. Description of Project:

The GSP creates a distinctive master-plan for recreation-serving land uses which are consistent with the historical use of the Glamis area. It provides for a great deal of flexibility as to the development of potential land uses within the GSP to promote the concept of an open desert playground that derives from the "Camp RZR" event, historically held in October of each year at the GSP area, and the surrounding Imperial Sand Dunes Recreation Area (ISDRA). This area attracts hundreds of thousands of OHV enthusiasts every Halloween, Thanksgiving, Christmas, New Years, and President's Day weekend.

The GSP consists of eight (8) Planning Areas, depicted on **Figure 4**. Planning Areas 1, 2, 3, and 4 are proposed for designation as Commercial-Recreation 3 (CR-3). This designation is intended to accommodate a large variety of commercial uses that are generally supportive of OHV activities and provide for large scale events to be held both on private property as well as adjoining federal lands.

Planning Areas 5 and 6 are designated Commercial-Recreation 1 (CR-1). This designation is intended to allow small scale, low density development of projects. These projects will be designed to deter the use of OHVs on

public highways or roads. These projects could include employee housing, research and development (R & D) facilities, RV park with restrictions and the like.

Planning Area 7 is designated Commercial-Recreation 2 (CR-2). This designation is intended to accommodate recreational related commercial opportunities and projects that will support the OHV and recreational uses of the area at a higher density and allowable uses than CR-1 but still be limited to specific uses that are less intense and more occasional than those allowed in CR-3. This could include small repair shops, limited housing, RV park with restrictions and the like.

Planning Area 8 would be re-zoned to the County's existing S-1 (Open Space/Recreation) designation. S-1 is used to recognize areas that embody the unique Open Space and Recreational character of Imperial County including the deserts, mountains and water front areas. The S-1 designation is primarily characterized by low intensity human utilization and small-scale recreation related uses.

As envisioned, the GSP will facilitate an entertainment enclave among the iconic dunes. This enclave will enhance the historic experiences that OHV riders and visitors expect when they visit the dunes.

The following is a brief description of the proposed land uses within the GSP (**Figure 5**).

Recreational - The GSP provides an opportunity for a variety of recreational activities to complement the established "Glamis" sand dunes experience of the surrounding ISDRA. These include an Adventure Center (offering activities such as OHV training, OHV rentals, etc.), amusement facilities, Desert Tours (off road experience), racetrack, shooting range, park/playground/picnic area, and other recreational-based activities.

Commercial/Retail - The GSP will allow for a wide range of commercial and retail development, which include fuel stations, rental facilities, entertainment and hospitality uses, and sporting goods stores to accommodate the needs of visitors to the Glamis area. It may also provide for RV Park(s) to accommodate a small number of users that desire to have conveniences not found in open dry camping.

Storage - OHV and RV storage is an existing land use within the Specific Plan Area. The GSP will provide for storage for OHVs and RVs to allow visitors to store their vehicles at Glamis year around.

Entertainment - The Glamis area has long been known as the premier destination for OHV enthusiasts to enjoy their recreational activities within the world-renowned ISDRA. The GSP will allow for a range of entertainment land uses whose purpose is to enhance the visitors experience to the Glamis Area. Entertainment uses could include an adventure center, amusement facilities, movie theater, obstacle courses, a fireworks and light display area, and racetrack.

Hospitality - With an average annual attendance of 200,000 visitors to the Glamis area, the GSP will provide for the development of various hospitality services to provide visitors with the accommodations they need to fully enjoy all that the Glamis area has to offer. Hospitality land uses may include medical services facility, mobile food trucks, tourist information center, public showers, public restrooms, and hotel/motel facilities.

Residential - The GSP will allow for limited residential development to accommodate those who require temporary housing in Glamis. Housing will be developed in the form of guest, employee housing, seasonal private residences and temporary use of RVs on Owner's property.

Renewable Energy - Due to the remote location of the GSP, renewable energy facilities will be developed to provide electricity to the Specific Plan Area. The GSP will allow for the development of a solar and wind energy generation facilities (including battery storage) located throughout the GSP, shown on **Figure 5.**

Infrastructure Improvements - In order to properly accommodate the large volume of visitors to the Specific Plan Area, existing water and wastewater facilities will need to be improved along with the development of additional infrastructure. The GSP will allow for the development of utility buildings, utility substation(s), renewable energy generating facilities and battery storage facilities, as well as water/wastewater treatment facilities and pipelines. Water needs for the Specific Plan and local fire safety requirements would be supplied from an existing well that would be modified as part of the Project. This water is unsuitable for consumption without treatment. Therefore, the Applicant proposes to install a water treatment (e.g. reverse osmosis system) to so that it would be potable for use.

Research & Development Facility - The GSP provides for a R&D facility that will take advantage of the close proximity of the ISDRA. This R&D facility will allow Polaris to test their equipment in a natural and private setting.

11. Surrounding Land Uses and Setting:

The Specific Plan Area is surrounded by open desert land that is managed almost entirely by the BLM. Directly northwest of the Specific Plan Area, is the North Algodones Dunes Wilderness (NADW); which consists of approximately 26,000 acres of land managed by the BLM as part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use, however, camping is allowed. The Specific Plan Area is directly adjacent to the ISDRA to the southwest, south and southeast. The ISDRA is the largest mass of sand dunes in the State of California. North of the NADW is the Chocolate Mountain Aerial Gunnery Range (CMAGR) which is a live-fire training range used for developing and training Marine Corps and Navy aviators. The area to the north east of the Specific Plan Area is BLM land but is not part of the ISDRA. **Figure 11, Surrounding Land Use**, shows the relationship between the Specific Plan Area and surrounding vicinity with the ISDRA located immediately to the southwest, the NADW immediately to the northwest, and the Chocolate Mountains and the CMAGR located to the north.

The Specific Plan Area is located on private land that is directly between the ISDRA and the North Algodones Dunes Wilderness in an unincorporated area of Imperial County. The Specific Plan Area contains the small unincorporated community of Glamis which is centered around the Glamis Beach Store. The Specific Plan Area includes seven project parcels. The Specific Plan Area is regionally accessible via SR-78 (a.k.a. Ben Hulse Highway), which serves as the primary form of access for motorists. Ted Kipf Road, a County-maintained dirt road, serves as a secondary form of access extending northwesterly for approximately 17 miles to Niland-Glamis Road from SR-78. The Specific Plan Area is also crossed by the Union Pacific Railroad (UPRR) which runs north and south through the eastern half of the Specific Plan Area and Wash Road which parallels the UPRR south of SR-78.

The Specific Plan Area can be characterized as an area of open desert with several adjoined one- and two-story metal building structures representing the Glamis Beach Store, and metal corrugated water tanks situated directly behind the store. Additionally, there is a separate seasonal OHV repair business connected to the Glamis Beach Store. A wood fence for delineated parking/vendor areas is located directly west of the store. A communications facility tower is located at the southeast portion of the Specific Plan Area. Due south is a single-family residence,

large RV storage garage, and other related equipment storage buildings. Additionally, a pre-fabricated residential structure is located on the southeast corner of the Specific Plan Area. To the west, across SR-78 and opposite the Glamis Beach Store, there is an existing RV storage area as well as vacant desert land. There is also an existing 20-acre paved RV storage area for Glamis Dunes Storage and Luv 2 Camp RV Trailer Rentals, and the existing historical cemetery located at the southwest corner of SR-78 and Ted Kipf Road. Last, on the northeast side of the Specific Plan Area, crossing the UPRR, there are two triangular parcels that are currently vacant. The topography of the Specific Plan Area can be characterized as relatively flat. The only minor changes in topography are found along the northeast portion of the property (northeast side of the UPRR), which can be attributed to existing elevated flood control earthen dikes and a slight, gradual southwest to northeast trending slope contour. Overall, the elevation of the Specific Plan Area ranges from 325 feet above mean sea level (msl) at the southwest corner to 344 feet above msl at the northeast corner. Areas of wind-blown sand dunes with sporadic native vegetation are found situated and encroaching upon the southeast corner of the Specific Plan Area.

Special events, such as Camp RZR, are permitted within the Specific Plan Area through the issuance of discretionary temporary event permits and Conditional Use Permits (CUPs) by the County. Currently, special and temporary events are permitted under CUP #08-0025. Events such as Camp RZR are required to undergo review and approval of event operations and protocols with the County and key stakeholder agencies.

12. Other Public Agencies Whose Approval is Required (e.g., permits, financing approval, or participation agreement):

To approve a Specific Plan and a Zone Change. Other agency permits and approvals are listed below:

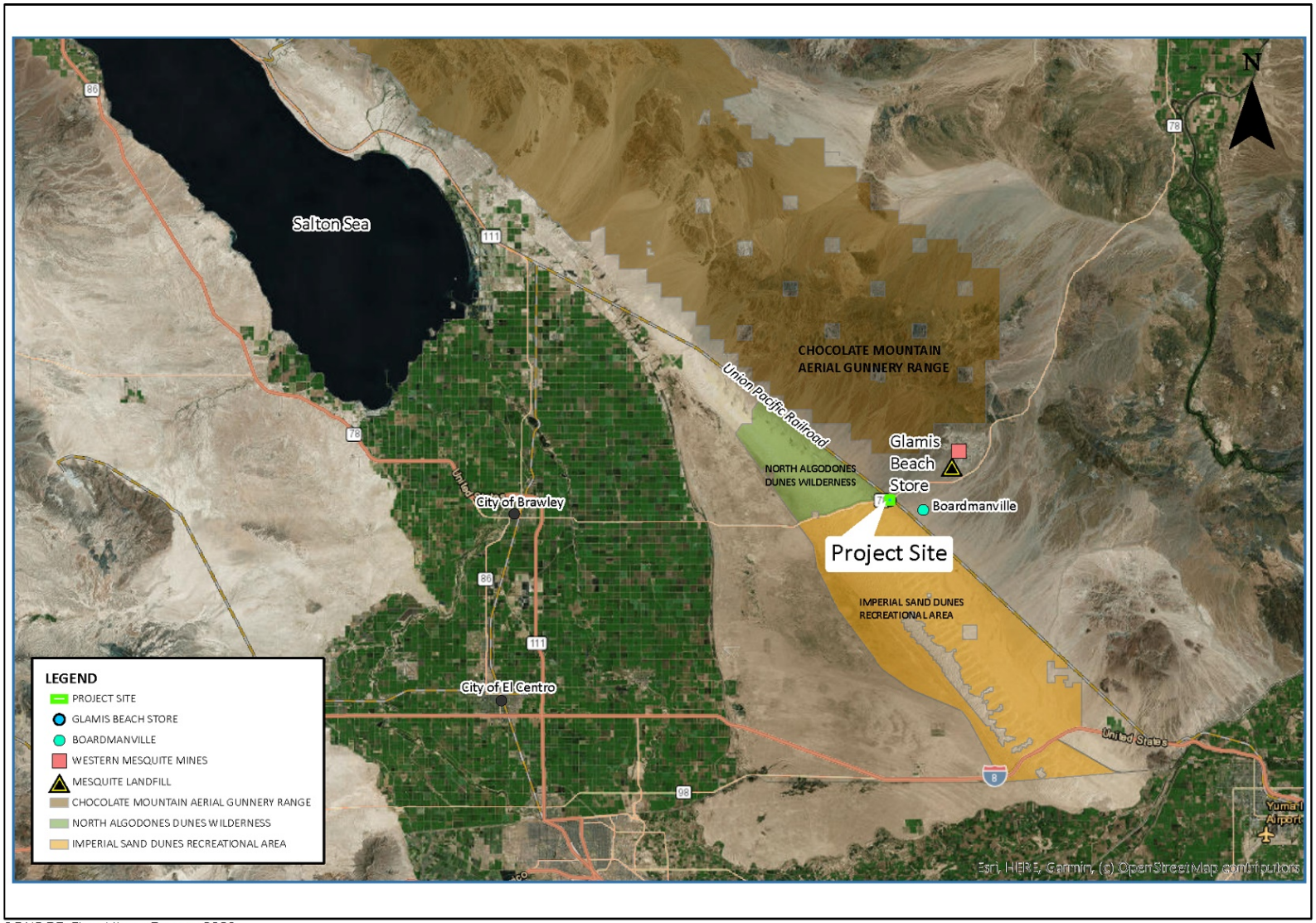
- Approval of the General Plan Amendment: A General Plan Amendment would be necessary to change the entire Specific Plan area from the current General Plan land use designation on the City's General Plan Land Use Map.
- Approval of the Specific Plan: The Glamis Specific Plan has been prepared to realize the objectives of the Project as defined in the Specific Plan. The Specific Plan would be adopted by resolution by the County of Imperial Board of Supervisors, with the Development Standards chapter adopted by ordinance.
- Approval of a Zone Change: A zone change would be necessary to change the zoning within the Specific Plan area from the current "Open Space (S-2) and “C-2” to "Glamis Specific Plan" on the County's zoning map.
- Section 404 Permit: United States Army Corps of Engineers, Clean Water Act (CWA) Section 404 Permit may be required, as necessary. Section 401 Permit: Santa Ana Regional Water Quality Control Board CWA Section 401 Permit may be required, as necessary.
- Streambed Alteration Agreement: California Department of Fish and Wildlife Streambed Alteration Agreement under Section 1602 of the California Fish and Game Act may be required, as necessary.
- Encroachment Permit: Caltrans Encroachment permit.
- Imperial County Air Pollution Control District: Authority to Construct and Permit to Operate.
- State Water Resources Control Board: National Pollutant Discharge Elimination System General Permit.
- Regional Water Quality Control Board (Region 8): Waste Discharge Requirements.

13. Native American Consultation: Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1?

In compliance with Senate Bill 18 (SB 18; Government Code Section 65352.3), the Imperial County Planning & Development Services Department (ICPDSD) sent letters to 14 federally recognized California Native American Tribes and 6 tribal representatives on February 11, 2020, providing notification of the Project and an invitation to participate in consultation. By law, tribes have 90 days from the date of receipt of the notice to request consultation (Government Code 65352.3(a)(2)).

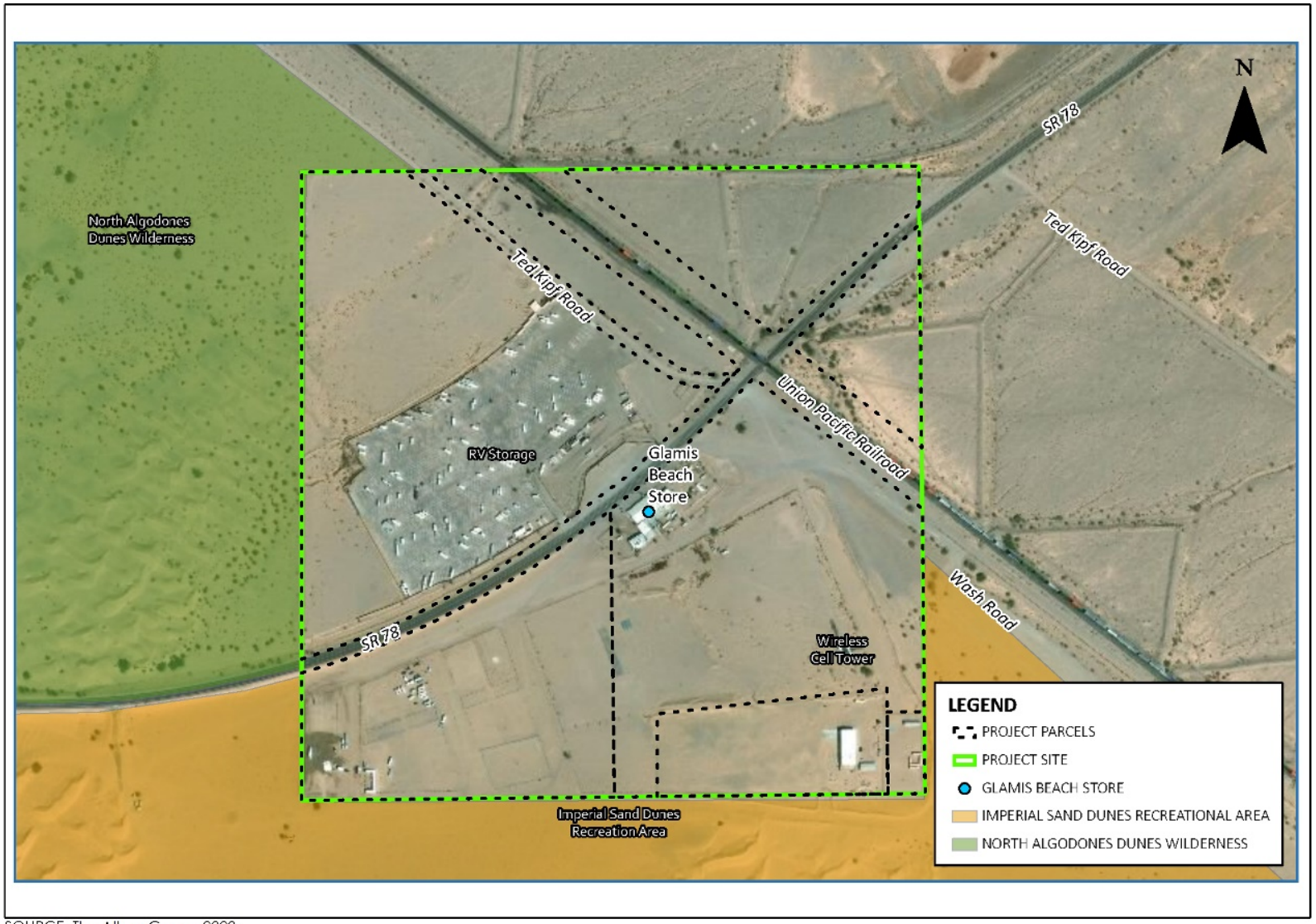
In compliance with Assembly Bill 52 (Chapter 532, Statutes 2014), the ICPDSD sent letters to one (1) California Native American Tribe on February 7, 2020, providing notification of the Project and an invitation to participate in consultation. Under AB-52, California Native American Tribes have 30 days from the date of receipt of the notice to request consultation.

As of the date of this Initial Study, no consultation requests have been received.



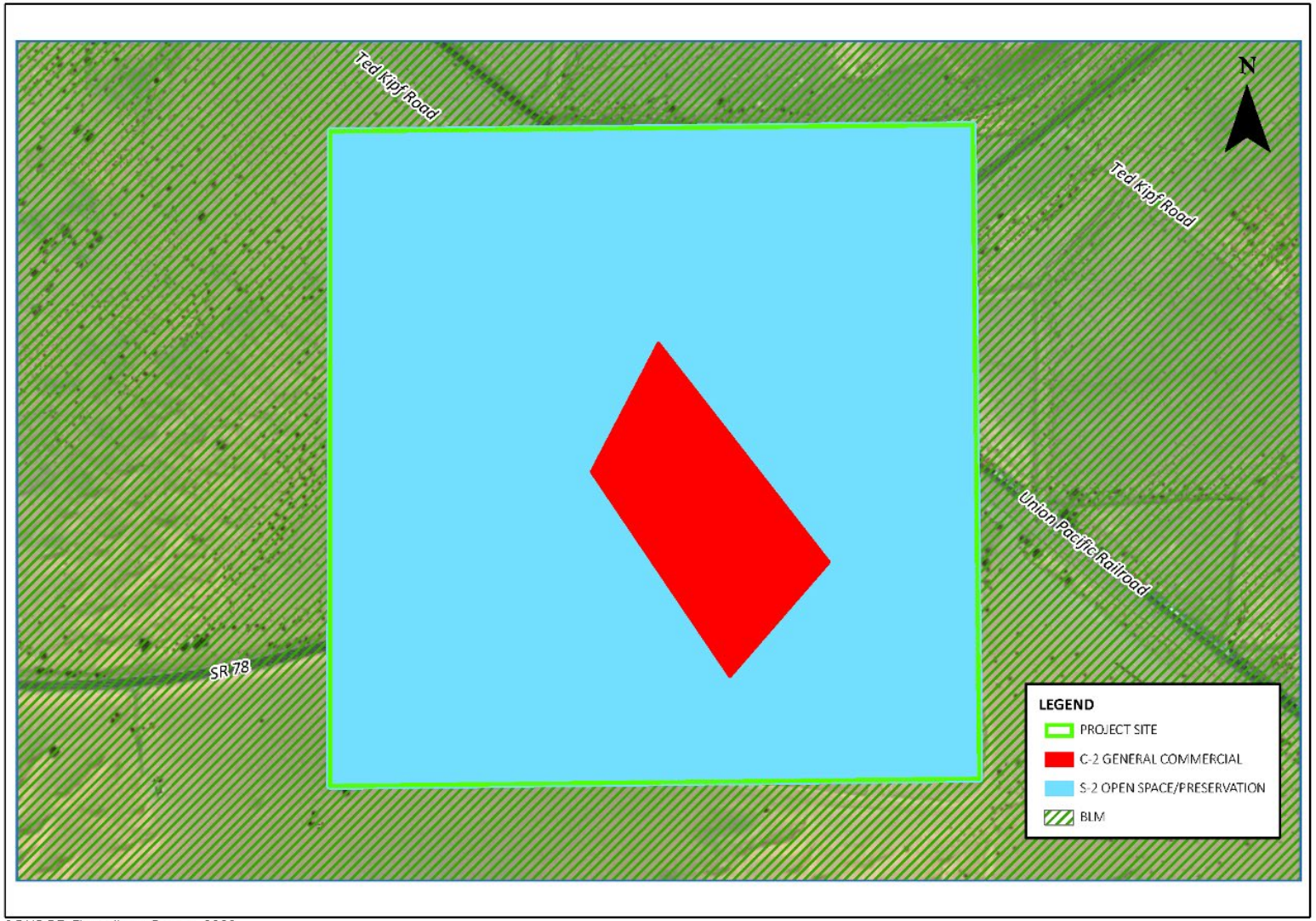
SOURCE: The Altum Group, 2020

Regional Location
Glamis Specific Plan
Figure 1



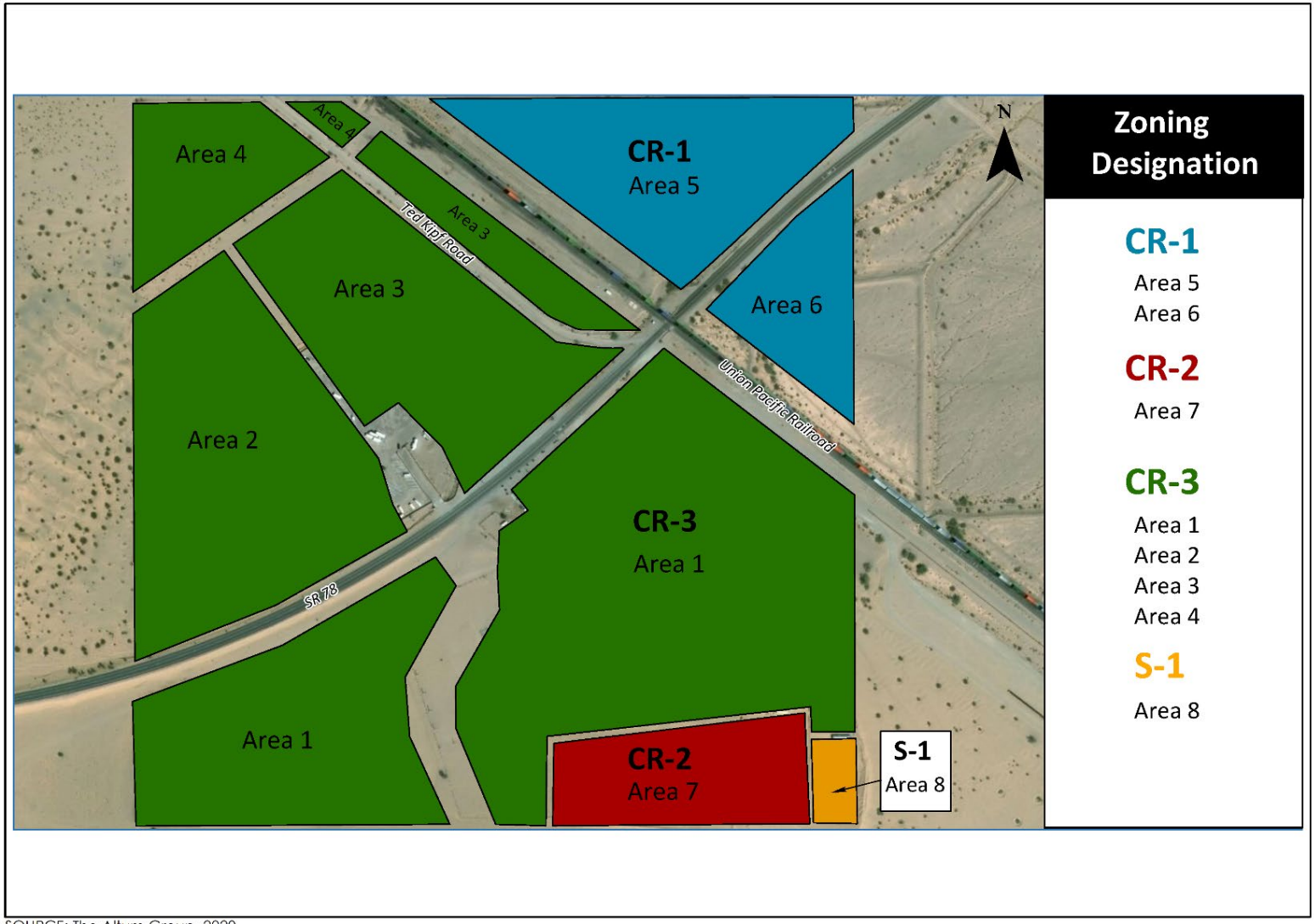
SOURCE: The Altum Group, 2020

Project Location
Glamis Specific Plan
Figure 2



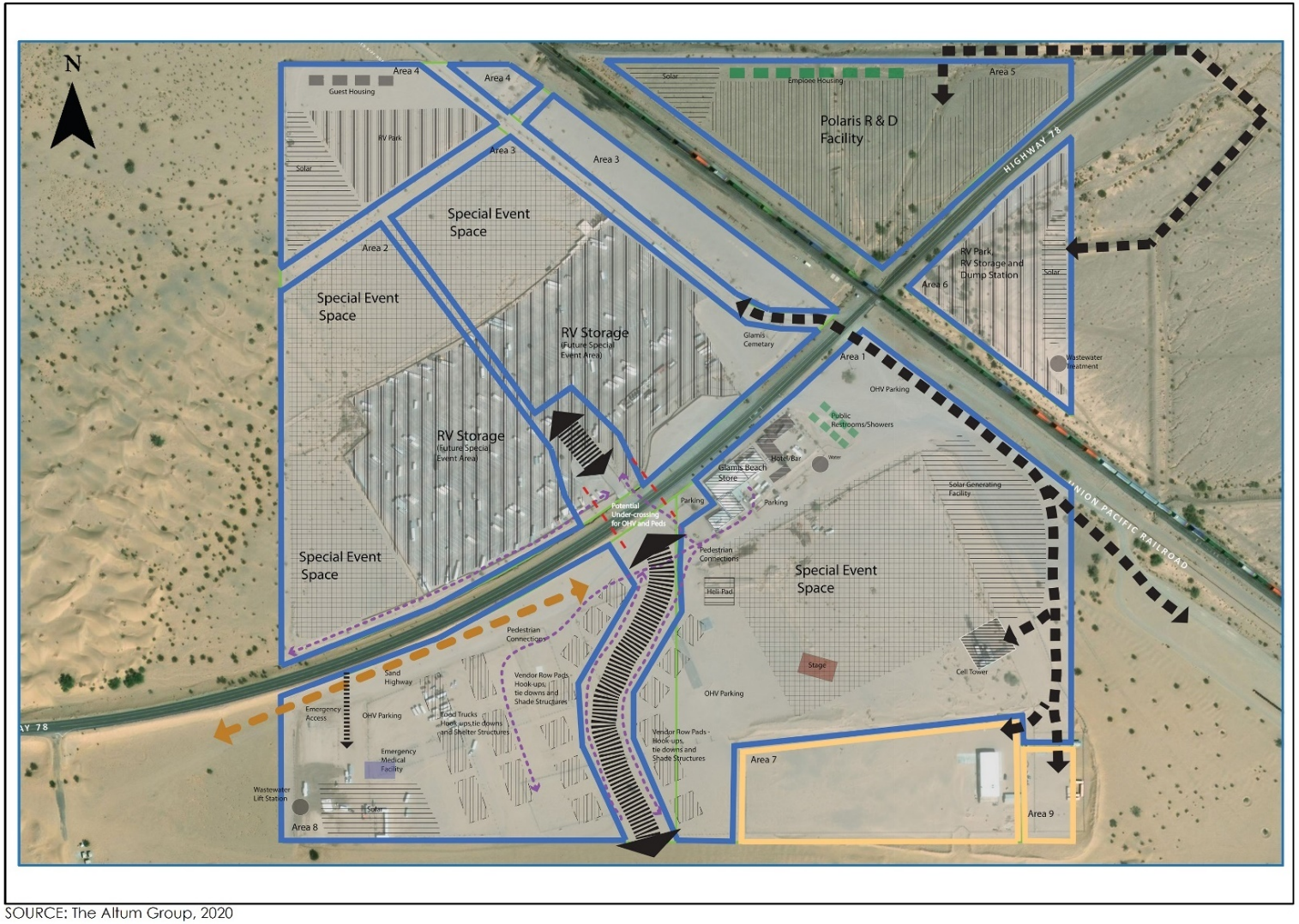
SOURCE: The Altum Group, 2020

Existing Zoning
Glamis Specific Plan
Figure 3



SOURCE: The Altum Group, 2020

Proposed Planning Areas and Zoning Designations
Glamis Specific Plan
Figure 4

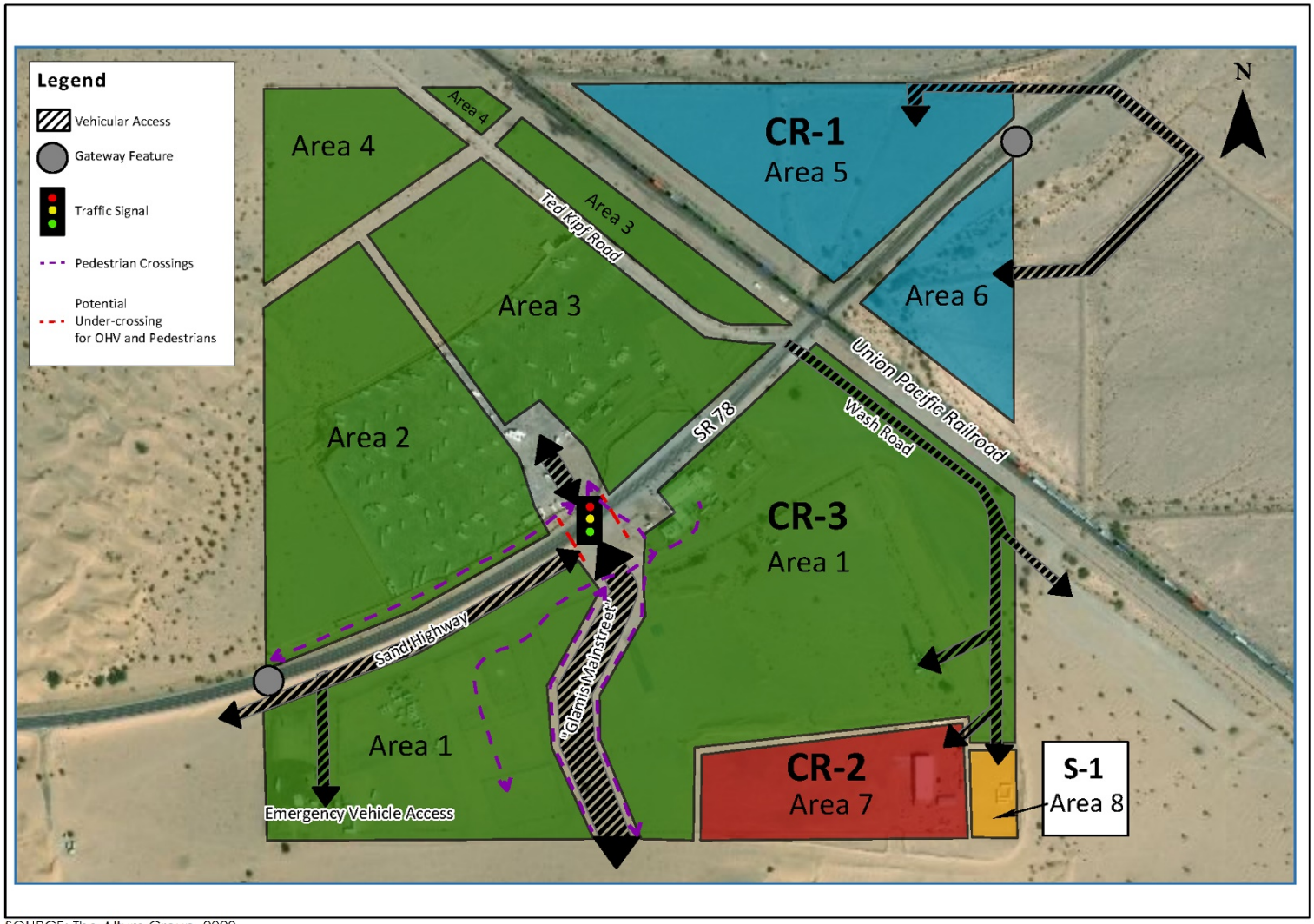


SOURCE: The Altum Group, 2020

Conceptual Site Plan
Glamis Specific Plan
Figure 5

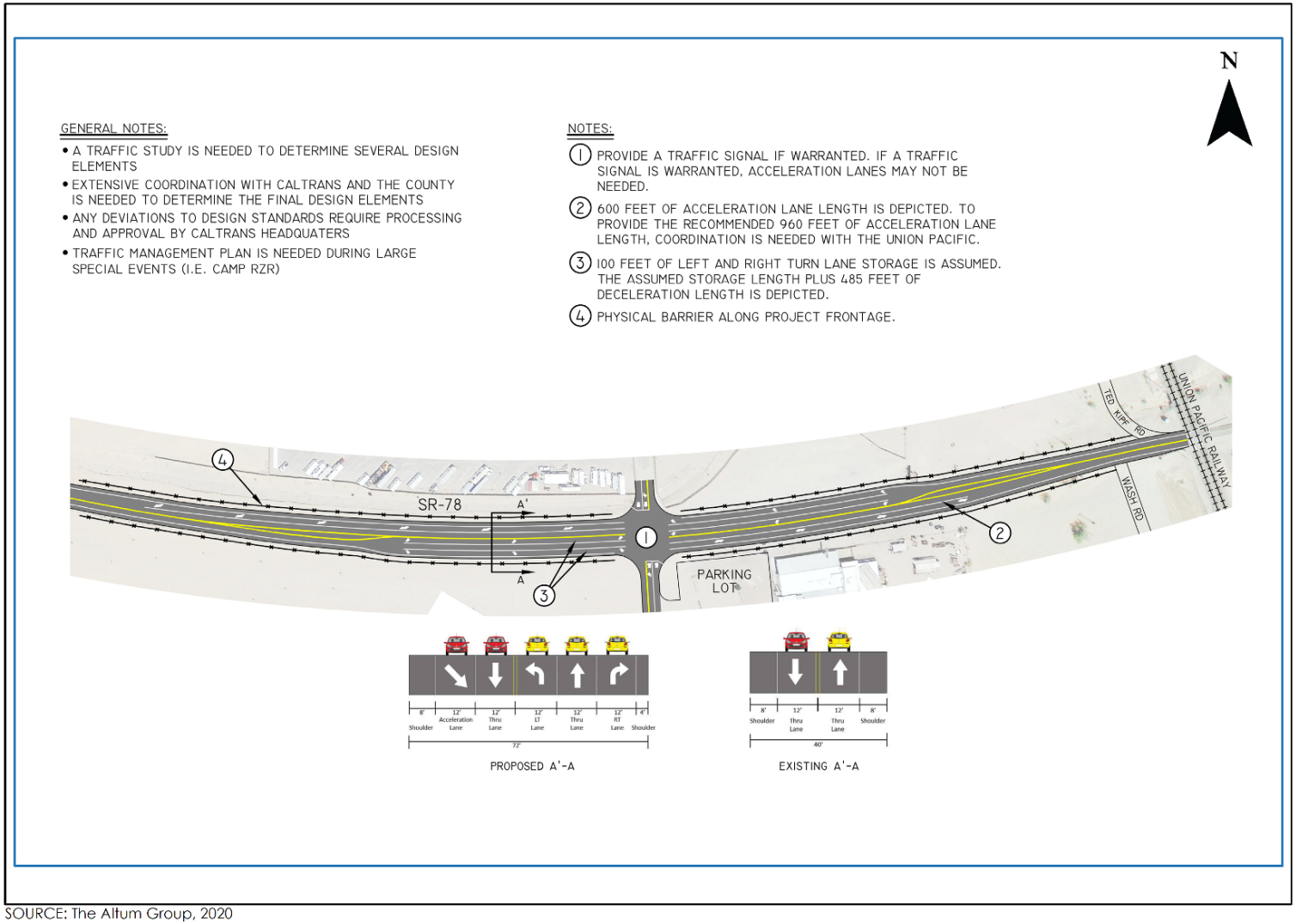
SOURCE: The Altum Group, 2020

Proposed Phasing Plan
Glamis Specific Plan
Figure 6



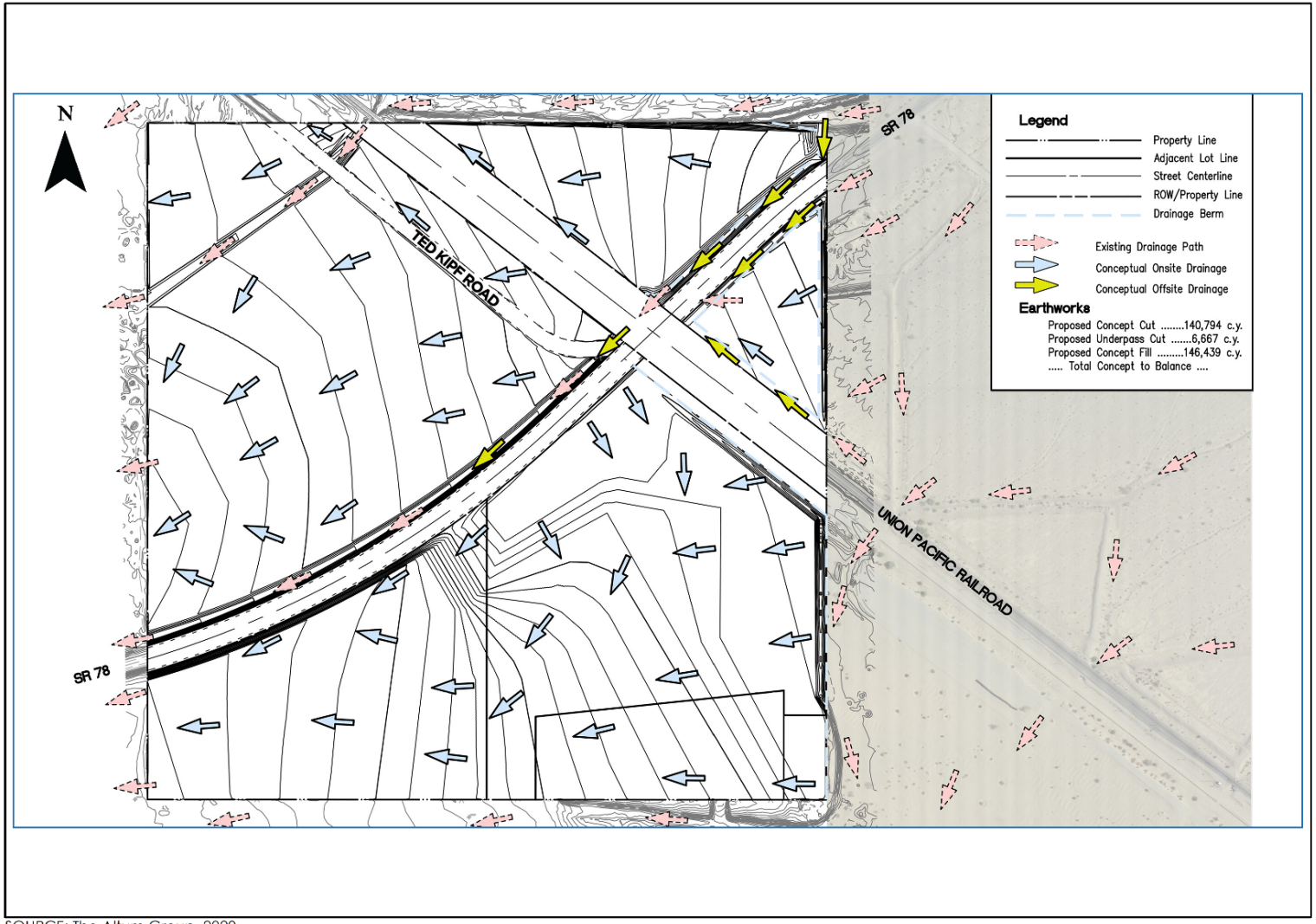
SOURCE: The Altum Group, 2020

Conceptual Circulation Plan
Glamis Specific Plan
Figure 7



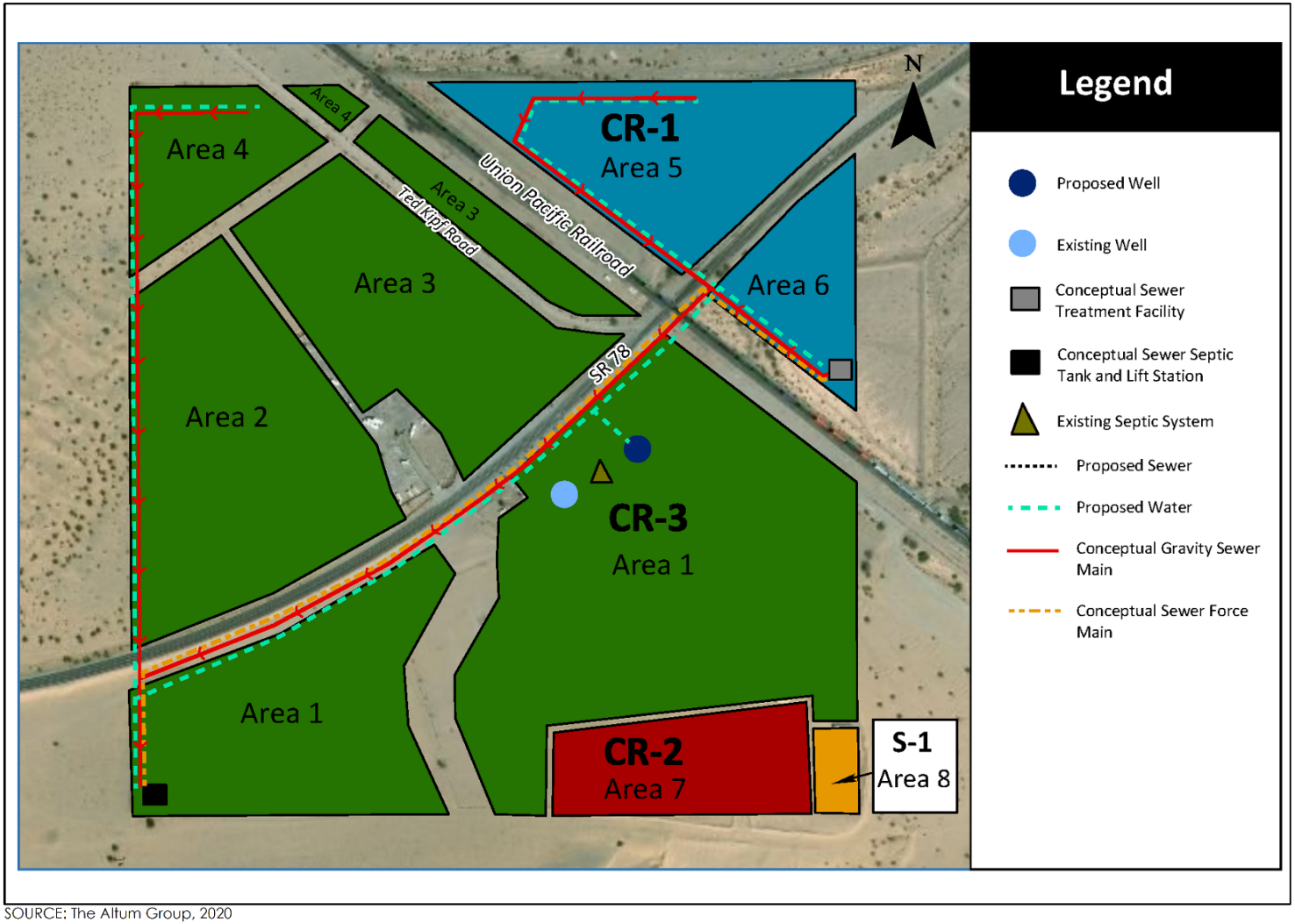
SOURCE: The Altum Group, 2020

Conceptual Intersection Plan
Glamis Specific Plan
Figure 8



SOURCE: The Altum Group, 2020

Conceptual Grading and Drainage
Glamis Specific Plan
Figure 9



SOURCE: The Altum Group, 2020

Conceptual Water and Sewer Plan
Glamis Specific Plan
Figure 10

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology /Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology / Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☒ Population / Housing	☐ Public Services
☐ Recreation	☒ Transportation/Traffic	☒ Tribal Cultural Resources
☒ Utilities / Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

ENVIRONMENTAL EVALUATION COMMITTEE (EEC) DETERMINATION

After Review of the Initial Study, the Environmental Evaluation Committee has:

☐ Found that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ Found that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ Found that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ Found that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ Found that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier Final EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier Final EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE DE MINIMIS IMPACT FINDING: ☐ Yes ☐ No

EEC VOTES	YES	NO	ABSENT
PUBLIC WORKS	☐	☐	☐
ENVIRONMENTAL HEALTH SVCS	☐	☐	☐
OFFICE EMERGENCY SERVICES	☐	☐	☐
APCD	☐	☐	☐
AG	☐	☐	☐
SHERIFF DEPARTMENT	☐	☐	☐
ICPDS	☐	☐	☐

Jim Minnick, Director of Planning/EEC Chairman

Date:

PROJECT SUMMARY

Project Location

The Specific Plan Area is located in the unincorporated community of Glamis, a remote area in the central portion of Imperial County. The project site is located approximately 27 miles east of the City of Brawley; approximately 27 miles east of the City of Brawley; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea (**Figures 1 and 2**). The Project site is located in Section 33, Range 18 East, Township 13 South within the U.S. Geological Survey (USGS) Glamis, California 7.5-minute topographic quadrangle (Assessor Parcel Numbers [APNs] 039-310-017, 039- 310-022, 039-310-027, 039-310-023, 039-310-029, 039-310-026, and 039-310-030).

Project Summary

The Specific Plan Area is contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development of a Specific Plan in accordance with design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. Polaris Inc. (the Applicant) is proposing a Specific Plan for the development of the GSPA. The GSPA allows for the development of a Specific Plan in accordance with the design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. The proposed Glamis Specific Plan (GSP) would implement the County's objectives for the development of this area which is to accommodate recreation supporting land uses including retail and service commercial, motel accommodations, recreational vehicle and mobile home parks, and community facilities (Imperial County General Plan Land Use Element 2015).

Environmental Setting

The Planning Area is located on private land that is directly adjacent to the ISDRA and the NADW in an unincorporated area of Imperial County. The Planning Area contains the small unincorporated community of Glamis which is centered around the Glamis Beach Store (**Figure 6, Project Site**). The Planning Area includes seven project parcels. The Specific Plan Area is regionally accessible via SR-78 (a.k.a. Ben Hulse Highway), which serves as the primary form of access for motorists and bisects the area in a general east-west direction. Ted Kipf Road, a County-maintained dirt road serves as a secondary form of vehicular access extending northwesterly for approximately 17 miles to Niland-Glamis Road from SR-78. The Planning Area is also traversed by the Union Pacific Railroad (UPRR) which runs north and south through the eastern half of the Specific Plan Area and Wash Road which parallels the UPRR south of SR-78.

General Plan Consistency

The Project is located within the unincorporated area of Imperial County. The existing General Plan land use designation is " Glamis Specific Plan Area." The existing zoning for the majority of the Planning Area is Open Space/Preservation (S-2) and a very small area is designated General Commercial (C-2). The GSP would consist of eight proposed Planning Areas. Planning Areas 1, 2, 3, and 4 are proposed for designation as Commercial-Recreation 3 (CR-3). Planning Areas 5 and 6 are proposed for designation as Commercial-Recreation 1 (CR-1). Planning Area 7 is proposed for designation as Commercial-Recreation 2 (CR-2). Planning Area 8 would be re-zoned to the County's existing S-1 (Open Space/Recreation) designation.

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EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a) Earlier Analysis Used. Identify and state where they are available for review.

    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

    a) The significance criteria or threshold, if any, used to evaluate each question; and

    b) The mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**
I. AESTHETICS.				
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion:

a) Less than Significant. Visual Impact Assessment (VIA) was prepared for the Specific Plan in March 2020 (Altum Group, 2020). The VIA found that no designated scenic vistas as identified by the County are located within visible distance of the Specific Plan Area. Per the List of Officially Designated County Scenic Highways from Caltrans, the Specific Plan Area is not located along a County designated scenic route. The Specific Plan Area is located in a relatively flat area and does not have any rock outcroppings and contains very few trees. The Specific Plan Area, as viewed from multiple vantage points, is already developed with commercial and infrastructure uses. The southwest portion of the Specific Plan Area contains an existing RV Storage facility, directly northwest of the Glamis Beach Store. The SR-78 and the UPRR bisect each other, running northeast and northwest respectively. The Specific Plan Area is bordered by the ISDRA to the south, the NADW to the west, and BLM land to the north and east. Immediate surrounding views from the project site consist of the NADW to the northwest, and the Chocolate Mountains Aerial Gunnery Range to the north and east. The NADW is managed by the Bureau of Land Management (BLM) as Visual Resource Management (VRM) Class I. VRM Class I objectives are to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. None of the activities associated with implementation of the specific plan would occur on the NADW or on BLM lands, thus, the proposed project would not result in a substantial adverse effect on a scenic vista and a less than significant impact would occur. While impacts to scenic vistas are anticipated to be less than significance, this impact will be analyzed in the EIR.

b) Less than Significant. According to the California Scenic Highway Mapping System (Caltrans, 2020), within Imperial County a portion of SR -78, between the Anza Borrego State Park Road and SR-86 near Salton City, is eligible for designation as a state scenic highway. However, that portion of SR-78 within the Specific Plan Area

and its immediate vicinity is not designated as a state scenic highway nor is it eligible for designation. The Specific Area is not located along a County designated scenic route. The Specific Plan Area does not contain any rock outcroppings and has very few trees. According to the Class III Cultural Resources Inventory Report prepared for the Specific Plan, the Glamis Beach Store is not considered a historical resource (ASM Affiliates, 2019). As such, implementation of the Specific Plan is not anticipated to substantially damage scenic resources. Impacts would be less than significant and this issue will be discussed in the EIR.

c) Less than Significant. The Specific Plan Area is rural in character with a few visual encroachments, including existing commercial and residential structures, a wireless communications tower, and railroad infrastructure. It is located in an area that has been extensively used by OHVs due to the recreational nature of the NADW and ISDRA that surrounds it. The Specific Plan's Conceptual Open Space and Recreational Plan provides for the inclusion of open space within Planning Areas 1, 2 and 3 to preserve their existing open space character. The Specific Plan also recommends that new structures be sited to provide public views from SR-78, Ted Kipf Road and other publicly accessible vantage points. Implementation of the Specific Plan is not anticipated to substantially degrade the existing visual character or quality of public views of the Specific Plan Area or its surroundings. Using BLM Visual Resources Inventory (VRI) classes system, the EIR will evaluate changes to visual character or quality of public views from implementation of the Specific Plan.

d) Less than Significant. Implementation of the Specific Plan is not expected to create a substantial new source of nighttime lighting or day-time glare and would provide external safety lighting for both normal and emergency conditions at the primary access points. Lighting will be designed to provide the minimum illumination needed to achieve safety and security in the and will be downward facing and shielded in order to focus the illumination in the immediate area. Additionally, Specific Plan implementation activities would be required to comply with Imperial County Ordinance 90301 which regulates glare, outdoor lighting, and night sky protection. All lighting associated with implementation of the Specific Plan will be subject to County approval and compliance with Imperial County Requirements (Altum Group 2020). Therefore, implementation of the Specific Plan is anticipated to result in less than significant lighting impacts and this issue will be addressed in the EIR.

The Specific Plan includes the development of solar arrays and solar generating facilities as a permitted use to provide onsite power to the Glamis area. Although there would be some level of potential reflectivity from the operation of solar panels, upon final design, solar panels would be selected that would help minimize reflectivity and would be oriented in a manner that would minimize reflectivity towards high use recreational areas on surrounding BLM lands. Solar arrays would be designed to not orient the panels towards any known air travel routs for private, commercial, or military airplanes. A full glint/glare analysis will be completed and potential impacts will be analyzed in the EIR.

II. AGRICULTURAL AND FOREST RESOURCES.

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**
Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Discussion:

a) No Impact. According to the 2016 Farmland Mapping and Monitoring Program Map for Imperial County, the Project site does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance(California Department of Conservations 2016a)). No impacts related to the conversion of FMMP farmlands to non-agricultural use would occur. This environmental parameter is not proposed for further analysis in the EIR.

b) No Impact. The existing General Plan land use designation is " Glamis Specific Plan Area" and the existing zoning is Open Space/Preservation (S-2) and Medium Commercial (C-2). Agricultural uses are not allowed in the C-2 zone. While the storage of agricultural products and other agricultural activities are an allowable use within the S-2 Zone, there are no agricultural activities ongoing with the Specific Plan Area. Additionally, the Specific Plan Area is not covered under a Williamson Act contract (California Dept. of Conservation, 2016b). For these reasons, the proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impacts are identified for this issue area. This environmental parameter is not proposed for further analysis in the EIR.

c) No Impact. Neither the Specific Plan Area nor surrounding areas are used for timber production or are defined as forest lands. The proposed project would not conflict with any zoning designations designed to preserve timber

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**

or agricultural resources. No impacts are identified for this issue area. This environmental parameter is not proposed for further analysis in the EIR.

d) No Impact. There are no existing forest lands either on-site or in the immediate vicinity of the Project Area. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact would occur under this threshold. This environmental parameter is not proposed for further analysis in the EIR.

e) No Impact. The proposed project does not include changes in the existing environment which, due to their location or nature, would result in the conversion of neighboring farmland to non-agricultural use. The Specific Plan Area is surrounded by open desert and the nearest agricultural lands occur approximately one mile to the north, across State Route 86/Highway 86. The proposed project would not result in the conversion of farmlands off-site to non-agricultural uses. No impacts are identified for this issue area. This environmental parameter is not proposed for further analysis in the EIR.

III. AIR QUALITY.

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

a)	Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☒	☐	☐	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐

Discussion:

a) Potentially Significant Impact. The Specific Plan Area is located within the jurisdiction of the Imperial County Air Pollution Control District, in the Salton Sea Air Basin (SSAB). The SSAB is classified by the State as a nonattainment area for ozone (O3) as well as a nonattainment area for the State standards pertaining to particulate matter less than 10 microns (PM10). In addition, the SSAB is classified as a serious nonattainment area for the PM10 standard.

Project construction activities would generate ozone precursor (i.e., oxides of nitrogen [NOX] and reactive organic gases [ROG]) emissions as well as CO, PM2.5, and PM10 emissions that could result in significant impacts on regional air quality. Emissions sources would include heavy equipment used for excavation and grading, cranes, tractors, loaders, backhoes, pavers and on-road motor vehicles for equipment and material deliveries as well as construction workers' vehicles. Specific Plan implementation activities (Camp RZR, etc.) are other emissions

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sources. Grading and activities on unpaved roads would contribute to fugitive PM10 and PM2.5 emissions. These impacts could be potentially significant. Further analysis of air quality impacts is warranted to determine whether the project would conflict with or obstruct implementation of the applicable plans for attainment and, if so, the reasonable and feasible mitigation measures that could be adopted to reduce such impacts. These issues will be evaluated in the EIR.

b) Potentially Significant. SSAB is classified by the State as a nonattainment area for ozone (O3) as well as a nonattainment area for the State standards pertaining to particulate matter less than 10 microns (PM10). In addition, the SSAB is classified as a serious nonattainment area for the PM10 standard.

ICAPCD rules and regulations would apply to all cumulative project activities within the SSAB. Construction emissions will be analyzed in the EIR as well as short- and long-term emissions from implementation of the Specific Plan. Cumulative contributions of emissions to the SSAB would be considered potentially significant and will be evaluated further in the EIR.

c and d) Potentially Significant. At present, the Specific Plan Area does not contain a substantial number of persons or sensitive receptors. Construction and operational activities would result in fugitive dust and diesel exhaust and emissions that could adversely affect air quality and/or be a source of odors. Mitigation measures recommended by the ICAPCD for diesel equipment and dust control will be evaluated as part of the EIR to avoid or reduce impacts; however, these impacts are considered potentially significant and will be evaluated in the EIR.

IV. BIOLOGICAL RESOURCES.

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion:

a) Potentially Significant Unless Mitigation Incorporated. The Project has the potential to adversely affect candidate, sensitive, or special status species including flat-tailed horned lizard (FTHL) (Barrett Biological 2019). FTHL could potentially occur within the softer sands (within and around the washes, and along the roadsides) in the creosote bush scrub on-site. There is an abundance of prey (ants) that could support FTHL presence. There is potential that there would be direct and/or indirect impacts to this species if construction occurs during the active period of mid-February to mid-November. Ground disturbance from heavy equipment, which may potentially impact the FTHL, would be considered significant and would require mitigation.

b) No Impact. There is no riparian habitat found on site, therefore this project will not have a substantial adverse effect on any riparian habitat.

c) No Impact. A stormwater channel runs through a small portion of the northeast which is channeled under the railroad track. On the southeast portion, a wash is piped under SR-78. Several established washes and ephemeral washes were observed on site. It is recommended that the ACOE and CDFW be consulted to determine permitting requirements (Barrett Biological 2019). There are no wetlands found on site; therefore this project will have no impact on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Less Than Significant Impact. This project is in a predominately developed and fenced community. The Site is bisected on by SR-78, Ted Kipf Road and Union Pacific railroad and as a result of these existing barriers, the projects will not interfere substantially with the currently restricted movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Thus, the impact would be less than significant.

e) Potentially Significant Unless Mitigation Incorporated. The Imperial County General Plan Open Space and Conservation Element (County of Imperial 2016) contains an Open Space Conservation Policy that requires detailed investigations to be conducted to determine the significance, location, extent, and condition of natural

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**

resources in the County, and to notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat. As noted above, implementation of the Specific Plan has the potential to result in significant impacts to candidate, sensitive, or special status species, and washes and ephemeral streams. Such impacts could conflict with Open Space and Conservation Element and are considered potentially significant.

f) No Impact. The Specific Plan is not located within an area that is subject to a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur.

V. CULTURAL RESOURCES.

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines § 15064.5?	☒	☐	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐	☐	☐

Discussion:

a, b, and c) Potentially Significant Impact. A Phase III Cultural Resources Inventory Report was prepared for the Specific Plan by ASM Affiliates in July 2019(ASM Affiliates, 2019). A total of approximately 141 acres was subject to 100 percent intensive Class III pedestrian survey. Prior to the survey, a cultural resources records search was completed at the South Coastal Information Center (SCIC) of the project area of potential effect (APE). Seven cultural resources were identified within the APE. Three of these were discovered during survey while the remaining four were previously recorded. A single isolated prehistoric artifact was identified within a disturbed context, while historic cultural resources include refuse deposits, roads, a railroad, and a cemetery.

Project-related ground disturbing activities could cause a substantial adverse change in a historical or archaeological resource. Although unlikely, there is a potential for unknown human remains to be unearthed during earthwork activities. Therefore, a potentially significant impact is identified for these resources. The findings of the cultural resources report will be included in the EIR analysis.

VI. ENERGY.

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Discussion:

a) Less Than Significant. The existing use requires diesel generators to supply power. These generators would be phased out once the project has been connected to a constant electricity source. Upgrades to the electrical system could include construction and installation of a power line (transmission line and/or distribution line) by Imperial Irrigation District (IID) to extend power from the nearest substation (approximately 7.2 miles to the northeast). A second and potentially more viable option would be to develop a small commercial solar photovoltaic (PV) system, with a backup battery storage component or another green power system. A third option may be wind generation. No wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation would occur. This is considered a less than significant impact and will be further evaluated in the EIR.

b) No Impact. Implementation of the Specific Plan would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and no impacts would occur under this criteria.

VII. GEOLOGY AND SOILS.

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☒	☐
2) Strong seismic ground shaking?	☐	☐	☒	☐
3) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
4) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994),	☐	☐	☒	☐

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**
creating substantial direct or indirect risks to life or property?				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Discussion:

a.1) Less Than Significant Impact. The Specific Plan is located in southern California, an area known to be geologically active and which is subject to seismic events. The project site does not lie within a currently delineated State of California, Alquist-Priolo Earthquake Fault Zone. Well-delineated fault lines cross through this region as shown on California Geological Survey [CGS] maps; however, no active faults are mapped in the immediate vicinity of the site. Therefore, active fault rupture is unlikely to occur at the project site. While fault rupture would most likely occur along previously established fault traces, future fault rupture could occur at other locations. Aerial photographs from 1961 to 2016 were reviewed and no naturally occurring lineaments were observed within or adjacent to the site. Anthropic lineal features associated with drainage control are common in the site vicinity (Earth Systems Pacific 2019). Thus, there would be a less than significant impact from rupture of a known earthquake fault.

a.2) Less Than Significant Impact Approximately 15 active faults or seismic zones lie within 70 miles of the Specific Plan area. The primary seismic hazard to the site is strong ground shaking from earthquakes along regional faults including the Brawley and Imperial faults. The Brawley segment of the San Andreas fault is located approximately 24 miles west of the site. The Imperial segment of the San Andreas fault is located approximately 27 miles west of the site. The site is located within a very active seismic area in southern California where large numbers of earthquakes are recorded each year. Approximately 31 magnitude 5.5 or greater earthquakes have occurred within 60 miles of the site since 1852. Significant local Imperial Valley earthquakes have included the 1940 Imperial Valley (6.9), 1942 Fish Creek Mountains (6.6), 1968 Borrego Mountain (6.6), 1979 Imperial (6.4), 1987 Elmore Ranch and Superstition Hills (6.6), and 2010 Baja (7.2) earthquakes (Earth Systems Pacific 2019).

Most of the historic earthquakes have occurred along segments of the San Jacinto fault or Brawley seismic zone which produces very regular ground shaking of low (magnitude 1) to higher magnitude as described above. Ground shaking which may be tolerable from a structural design perspective, can have psychological effects that need to be understood by buyers and users of the site (Earth Systems Pacific 2019).

While accurate earthquake predictions are not possible, various agencies have conducted statistical risk analyses. In 2013, the CGS and the United States Geological Survey [USGS] presented new earthquake forecasts for California (USGS UCERF3). The recent Working Group of California Earthquake Probabilities estimated a 35 to 41 percent conditional probability that a magnitude 6.7 to 7.0 or greater earthquake may occur in 30 years (2014 as base year) along the nearby Coachella segment of the San Andreas fault, 37 to 45 percent for the Brawley

seismic zone, 30 to 41 percent for the Imperial fault, and about 5 to 7 percent for the San Jacinto (Superstition Hills section) fault. The revised estimate for an 8+ magnitude earthquake along the local San Andreas fault is about 7%. The primary seismic risk at the site is a potential earthquake along the Brawley seismic zone and San Andreas, San Jacinto, and Imperial faults that are northwest and west of Glamis. Geologists believe that the San Andreas fault has characteristic earthquakes that result from rupture of each fault segment. The estimated characteristic earthquake is magnitude 8.1 for a multi-segment San Andreas rupture event. The San Jacinto fault is historically be one of the most active faults in southern California, especially in the southern Imperial Valley and San Jacinto Valley. Multi-segment magnitudes for a San Jacinto fault rupture is approximately 7.9. A geotechnical report was prepared for the Project (Earth Systems Pacific 2019) and will be discussed in the EIR.

a.3 and a.4) Less Than Significant. Liquefaction is the loss of soil strength from sudden shock (usually earthquake shaking), causing the soil to become a fluid mass. Liquefaction describes a phenomenon in which saturated soil loses shear strength and deforms as a result of increased pore water pressure induced by strong ground shaking during an earthquake. Dissipation of the excess pore pressures will produce volume changes within the liquefied soil layer, which can cause settlement. Shear strength reduction combined with inertial forces from the ground motion may also result in lateral migration (lateral spreading). Factors known to influence liquefaction include soil type, structure, grain size, relative density, confining pressure, depth to groundwater (typically occurs in the upper 50 feet), and the intensity and duration of ground shaking. Soils most susceptible to liquefaction are saturated, loose sandy soils and low plasticity clay and silt. Groundwater depth at the project site is more than 50 feet below the ground surface and therefore liquefaction potential is low. (Earth Systems Pacific 2019).Due to the flat topography of the site the potential for a landslide is very low. Thus, the impact would be less than significant.

Non-seismic hazards within the Specific Plan area will be addressed in the EIR.

b) Potentially Significant Impact. The proposed Project would result in changes to the current topography because of grading and site preparation activities. Although these changes will be designed to meet stringent regulatory requirements, there is a potential for soil erosion, loss of topsoil, and geologic instability. The EIR will evaluate these potentially significant adverse impacts.

c) Less Than Significant Impact. As discussed in c. 3 and 4, the proposed project risk for on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse are expected to be less than significant. These issues will be addressed in the EIR.

d) Less Than Significant Impact. Expansive soils are characterized by their ability to undergo significant volume change (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors, and may cause unacceptable settlement or heave of structures, concrete slabs supported-on-grade, or pavements supported over these materials. Depending on the extent and location below finished subgrade, expansive soils can have a detrimental effect on structures. Site soils were observed to be granular however clayey zones could be present. As such, the Expansion Index of the onsite soils is anticipated to be “very low” for granular soils, and if encountered, could be medium to high for clayey soils as defined by ASTM D 4829. Samples of building pad soils

should be observed or tested during grading to confirm or modify these findings (Earth Systems Pacific 2019). The EIR will evaluate the potential impacts related to expansive soils.

e) No Impact. Soils in the Specific Plan Area currently support the existing septic system and leach field that provide the small amount of wastewater needed for Glamis Beach Store employees. This same infrastructure would be used for the proposed Project. No impacts are expected.

f) Less Than Significant Impact.

Previous geologic mapping reports indicate that the study area is immediately underlain by "Pleistocene nonmarine sedimentary deposits." Although in most cases Pleistocene sedimentary deposits are typically assigned an undetermined paleontological potential, the observation of probable Holocene-age undissected alluvial deposits on-site during the paleontological field survey supports a low paleontological potential rating for the sedimentary deposits underlying the Project site. In addition, the artificial fill present in previously graded portions of the Project site has no paleontological potential. Given the no-to-low paleontological potential of the deposits present on the Project site, it is unlikely that their disturbance by earthwork related to future development within the Project site will result in negative impacts to paleontological resources (San Diego Natural History Museum 2019). Thus, potential impacts to paleontological resources would be less than significant.

VIII. GREENHOUSE GAS EMISSIONS.

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan or policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

Discussion:

a) Potentially Significant. Greenhouse gases (GHGs) emitted by human activity are implicated in global climate change or global warming. The principal GHGs are Carbon Dioxide (CO_2), Methane (CH_4), Nitrous Oxide (N_2O), and Fluorinated Gases. The transportation sector (e.g., on-road motor vehicles, off-highway vehicles, aircraft) is the single largest source of GHG emissions and accounts for one-half of GHG emissions globally. Short-term greenhouse gas emissions from construction could come from construction equipment, construction support vehicles, material truck trips, and worker vehicle trips. Long-term emissions would come from combustion of natural gas and diesel fuel (producing greenhouse gas emissions of CO2 and CH4), as well as from fugitive emissions (a component of fugitive emissions is methane). Indirect emissions associated with electrical generation and with worker and truck transportation offsite could also result. An air quality and greenhouse gas emission analysis will be prepared for the Project and potentially significant impacts related to GHG emissions will be addressed in the EIR.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**

b) Potentially Significant. The Specific Plan would be considered to have a significant impact if it would be in conflict with State plans, policies or regulations adopted for the purpose of reducing GHG emissions. GHG emissions and the Specific Plan's consistency with applicable GHG plans, policies, and regulations will be evaluated in the EIR.

IX. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Specific Plan Area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Discussion:

a) Less Than Significant. The Specific Plan Area is characterized as an area of open desert consisting of several adjoined one and two story metal building structures representing the Glamis Beach Store, and metal corrugated water tanks situated directly behind the store. Additionally, there is a separate seasonal OHV repair

business connected to the Glamis Beach Store. A wood fence for delineated parking/vendor areas is located directly west of the store. A communications facility tower is located at the southeast portion of the property. Due south is a single family residence, large recreational vehicle storage garage, and other related equipment storage buildings. Additionally, a dilapidated pre-fabricated residential structure is located on the southeast corner of the project site. To the west, on the opposite side of the Glamis Beach Store, there is an existing RV storage area as well as vacant desert land. There is also an existing 20-acre paved RV storage area for Glamis Dunes Storage and Luv 2 Camp RV Trailer Rentals, and the existing historical cemetery located at the southwest corner of SR-78 and Ted Kipf Road. Lastly, on the northeast side of the GSP, crossing the Union Pacific Railroad, there are two triangular parcels that are currently vacant. The proposed project would not require the limited transport, storage, and use of fuels, polymer-based sealants, and other fluids for the fueling/servicing of construction equipment. These practices are already in place for current operations and the Project would not substantially increase the transport or use of hazardous materials above current levels.

Transportation, storage, and disposal/recycling of such products are extensively regulated at the local, state and federal levels. Current and future construction and operations are, and will be, required to be in compliance with these regulations. The current inventory of chemicals on site are not expected to increase markedly as a result of the proposed project. Because operations would be similar to current operations, impacts would be less than significant and will be evaluated in the EIR.

b) No Impact. Based on a search of the Government Code Section 65962.5 “Cortese” list, the Glamis Beach Store is not listed as a hazardous materials site and is not listed on the Cortese Knox list. According to the State Water Resources Control Board, there are no Underground Storage Tanks in the vicinity of the landfill. This environmental parameter is not proposed for further analysis in the EIR.

c) No Impact. Implementation of the Specific Plan would not emit hazardous emissions, handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The nearest school Magnolia Union Elementary School) is located 21 miles west of the Project site. No impacts would occur, and this environmental parameter is not proposed for further analysis in the EIR.

d) No Impact. Based on a search of the Government Code Section 65962.5 “Cortese” list, the Glamis Beach Store is not listed as a hazardous materials site. No impacts would occur, and this environmental parameter is not proposed for further analysis in the EIR.

e) No Impact. The Project is not located within the Airport Land Use Compatibility Plan for Imperial County Airports (County of Imperial, 1996) or within two miles of a public airport or public use airport. The nearest public use airport, Holtville Airport, is located 14 miles southwest the project vicinity. For these reasons, the proposed project would not result in a safety hazard or expose people residing or working in the area to excessive noise levels. No impacts have been identified for this issue area and this environmental parameter is not proposed for further analysis in the EIR.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**

f) Potentially Significant Impact Unless Mitigation Incorporated. Implementation of the Specific Plan would generate construction trips and the potential for temporary roadway lane closures during construction of proposed traffic improvements, which could temporarily affect an emergency response or evacuation plan. This impact is considered potentially significant and will be addressed in the EIR.

g) Less than Significant. The Project site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan, the potential for a major fire in the unincorporated areas of the County is generally low (County of Imperial, n.d.). This is considered a less than significant impact and will be addressed in the EIR

X. HYDROLOGY AND WATER QUALITY.

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would:				
1) Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
2) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
3) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff; or	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**

Discussion:

a) Potentially Significant. A stormwater channel runs through a small portion of the northeast section of the Specific Plan which is channeled under the railroad track. On the southeast portion, a wash is piped under SR-78. Several established washes and ephemeral washes also occur within the Specific Plan Area (Barrett Biological 2019). Potential discharges could be wastewater generated by the Glamis Beach Store, restaurant and bar which is currently being discharged into an existing septic tank located near to those buildings and potential discharges related to the water and wastewater treatment systems.

Future wastewater treatment needed (i.e., secondary and tertiary treatment) will be determined by the amount of wastewater forecasted to be generated by each phase of structural improvement. Free groundwater was not encountered in borings or test pits during explorations conducted in January of 2019. Boring depths exceeded 50 feet from the ground surface. Moisture contents observations of the soils indicate the soils are dry to moist. By definition, perched ground water conditions were not observed during exploration. Observations did not indicate "wet" soils meaning free water was noted on the soil. Impermeable type soils (generally clay) were not found at depths ranging from the ground surface to 50 feet bgs. Moisture contents performed in the lab indicated values between 1 percent and 9 percent, which indicates degrees of saturation less than approximately 50 percent (Earth Systems Pacific 2019). Thus, the introduction of these materials into groundwater resources through percolation or inundation would result in less than significant water quality impacts. Impacts to water quality could also occur through sedimentation of local runoff associated with erosion, and the discharge of substances indirectly related to Project construction or operation (e.g., diesel or automobile fuels).

The potential to create substantial erosion and siltation or violate any water quality standards or waste discharge requirements is considered significant and will be discussed in the EIR.

b) Less than Significant. Non-potable water for the existing RV Park and Glamis Beach Store is provided via an existing on-site water well, which would be modified as part of the Specific Plan' implementation. A water supply assessment for the Project is being prepared and would evaluate potential impacts to water resources. Potential impacts to groundwater resources are expected to be less than significant and will be addressed in the EIR.

c.1), c.2) and c.3) Less Than Significant Impact. A stormwater channel runs through a small portion of the northeast which is channeled under the railroad track. On the southeast portion, a wash is piped under SR 78. Several established washes and ephemeral washes were observed on site (Barrett Biological 2019). According to the Conceptual Drainage and Grading Plan Element of the Specific Plan, the existing topography and drainage of the project site generally drains from the northeast to the southwest via existing earthen channels and berms. The northeast portion of the project site (Planning Areas 5 & 6) are openly affected by offsite flows and are directed towards three existing concrete culverts that pass under the UPRR. The drainage flows from these three concrete culverts underneath the UPRR, flow through and/or around portions of the existing project site (Planning Areas 1, 2, 3, 4, 7 and 8) towards the southwest, which are located north and south of SR-78. All planning areas southwest of the UPRR, where future land uses are proposed, are protected by earthen channels and berms. The remaining open areas, throughout the entire site, have areas that are protected by existing earthen channels and berms.

Grading for the proposed project would provide flood protection for future land uses within the entire project site and release the drainage to the southwest in an overall equivalent historical pattern of natural drainage courses

consistent with California drainage law. The on-site design northeast of the UPRR will provide flood protection (Planning Areas 5 and 6) by continuing the off-site flows with modifications to each of the earthen drainage berms and channels. These modifications will re-direct the drainage around each of the planning areas to the southwest towards the three existing concrete culverts that pass under the UPRR. The modified existing earthen berm north of Planning Area 5 will continue to redirect flows north and west as will a new earthen berm to the southeast for planning area 6, to the south and west. The remainder of the drainage will be directed into the modified existing earthen channels along each side of SR 78. Each of these earthen channels and berms will be constructed on-site and will re-direct the existing flows in a manner consistent with the surrounding drainage patterns and practices. The manner and release of the drainage flows will be equivalent to the existing capture, conveyance and release to the Southwest under the UPRR, via existing concrete culverts. Drainage impacts are anticipated to be less than significant and will be addressed in the EIR.

d) Less Than Significant Impact. A small water storage tank and basin are located approximately 4 miles northeast and upgradient of the project, associated with mining activities. In the event of tank rupture or basin failure due to seiching, there is a remote possibility of some flooding within the defined drainages of the alluvial fan, although it appears, that any runoff would trend southerly of the Specific Plan Area, depending on localized drainage courses and man-made modifications to drainage paths.

The Specific Plan lies within two designated FEMA Flood Zones: A and X Zone “A” is defined as “Without Base Flood Elevation” and Zone “X” is defined as “Areas of 0.2% annual chance floodplain; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas of less than 1 square mile; and areas protected by levees from 1% annual chance flood.” These zones are defined on FEMA Map Number 06025C1125C and 06025C1475C both effective 9/26/2008. The project site is in an area where sheet and concentrated flow and erosion could occur. Appropriate project design by the civil engineer, construction, and maintenance can minimize the sheet flooding potential (Earth Systems Pacific 2019).

The site is far inland, so the hazard from tsunamis is non-existent.

Potential impacts from floods and seiches would be less than significant.

e) Less than Significant. The Project site located within the Ocotillo-Clark Valley Groundwater Basin (Basin Number 7-25), as defined by the California Department of Water Resources. The Ocotillo-Clark Valley Groundwater Basin does not fall within the basin classification that requires implementation of a sustainable groundwater management plan (also known as a groundwater sustainability plan, or GSP, under the Sustainable Groundwater Management Act definitions). However, in April 2017 the County amended a comprehensive Groundwater Management Ordinance to preserve, protect and manage groundwater resources. The Groundwater Ordinance, codified as Division 22 of Title 9 of the Imperial County Code, aims to avoid or minimize impacts on existing and proposed groundwater extraction activities and groundwater resources. The Groundwater Ordinance requires that existing extraction facilities be permitted and registered with the County. New extraction facilities must also obtain a permit from the County. The Project would apply for an extraction permit for the new well, in compliance with the Groundwater Ordinance, and less than significant impacts are expected. These issues will be evaluated in the EIR.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**
XI. LAND USE AND PLANNING.				
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Discussion:

a) No Impact. Implementation of Specific Plan would not divide an established community. No impact would occur.

b) No Impact. The Specific Plan Area is contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development of a Specific Plan in accordance with design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. Polaris Inc. (the Applicant) is proposing a Specific Plan for the development of the GSPA. The proposed Glamis Specific Plan (GSP) would implement the County's objectives for the development of this area which is to accommodate recreation supporting land uses including retail and service commercial, motel accommodations, recreational vehicle and mobile home parks, and community facilities (Imperial County General Plan Land Use Element). Thus, the proposed project would be consistent with the County's General Plan Land Use Element and there would be no impact.

XII. MINERAL RESOURCES.				
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion:

a, b) No Impact. A number of mineral resources are currently being extracted in Imperial County including gold, gypsum, sand, gravel, lime, clay, stone, kyanite, limestone, sericite, mica, tuff, salt, potash, and manganese. According to the Existing Mineral Resources Map (Figure 8) in the Conservation and Open Space Element of the County of Imperial General Plan (2016), no known mineral resources occur within the Project vicinity nor are there any mapped mineral resources within the boundary of the Project site (County of Imperial, 2016). Thus, no impacts related to the loss of availability of a known mineral resource would occur.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**
XIII.NOISE.				
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion:

a and b) Potentially Significant. Construction activities for Specific Plan activities could result in temporary or periodic increases in noise and groundborne vibration. Construction activities include site preparation and soil compaction; roadway improvements/paving, pipeline trenching, etc. Operation activities could result in short- and long-term increases in noise vibration. Although implementation of the Specific Plan t is not expected to expose people to excessive noise or vibration levels, further analysis is warranted, and impacts are considered potentially significant. A noise report will be prepared for the Project and included in the EIR.

c) No Impact. The proposed project is not located within the vicinity of a private airstrip and the nearest privately-owned/public use airport, Salton Sea Airport, is located 13 miles northwest the Project Site. Additionally, the Project is not located within the Imperial County Airport Land Use Compatibility Plan (County of Imperial, 1996). For these reasons, the Project would not expose people residing or working in the area to excessive noise levels; therefore, no impact would occur.

XIV. POPULATION AND HOUSING.				
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?	☐	☒	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**

Discussion:

a) Potentially Significant Unless Mitigation Incorporated. The proposed project could result in a seasonal population growth (October through May) through the expansion of commercial and recreational activities within the Specific Plan Area. These activities would result in the development of new businesses and would require employee housing to be constructed. The proposed project allows for some limited permanent residential land uses within the project site, which consist mostly of employee housing. The proposed zoning changes allow for the development of condominiums. Thus, the proposed project could result in significant impacts from unplanned population growth, however, this population growth would be seasonal (October through May).

b) No Impact. There are no year-round residents within the Specific Plan Area. The proposed project would not result in the demolition of existing housing or result in the displacement of any residents.

XV. PUBLIC SERVICES.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any public services:

Fire protection?	☐	☒	☐	☐
Police protection?	☐	☒	☐	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Discussion:

Fire and Police) Potentially Significant Impact Unless Mitigation Incorporated. Fire protection services are provided to the Specific Plan Area by the County of Imperial Fire Department through the Brawley Fire Department Station, located in the City of Brawley approximately 25 miles to the east. There are existing fire hydrant connections within the "Vendor Row" area. Additional connections would be installed, as necessary to meet the needs of the GSP. During Special Events, onsite fire protection would be provided with applicable fire protection services and apparatus.

The County of Imperial Sheriff's Department provides law enforcement to the GSP planning area. Sheriff's officers that patrol the area are based at the Brawley Police Department in the City of Brawley located approximately 27 miles east of the GSP planning area. During Special Events, on-site law enforcement will be provided with applicable services and apparatus.

The County of Imperial has a Development Impact Fee (DIF) which is authorized by County of Imperial Ordinance No. 4.32. This fee is applied to all development projects in incorporated and unincorporated County of Imperial land. Payment of the DIF is required of developers to fund public facilities such as fire protection facilities and sheriff facilities. As the GSP is developed, DIF fees will be required to ensure that resources will be available for capital improvements to implement the County's capital and operational funding of future facilities. Potential impacts on fire and police services could be potentially significant and will be evaluated in the EIR.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**

Schools, Parks, and Other Public Facilities) No Impact. Implementation of the Specific Plan would not include the provision of, or the need for, new schools, parks or other public facilities. The proposed project would not result in new long-term housing. Any new housing would be for employees of the new businesses and would be seasonal only. There would not be a permanent increase in the population. Because the Project would not result in a substantial increase in population, it does not require additional schools, parks, or other public facilities beyond that which already exists. No physical impacts related to the provision of schools, parks, or other facilities would occur.

XVI. RECREATION.

Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion:

a, and b) No Impact. There are no existing neighborhood or regional parks within the Specific Plan Area. The ISDRA is located south of the Specific Plan Area. The proposed project would create a distinctive master-plan for recreation-serving land uses which are consistent with the historical use of the Glamis area and the ISDRA. However, it would not serve to increase visitation to the ISDRA. Thus, there would be no impact on existing neighborhood and regional parks or other recreational facilities. The proposed project would provide an opportunity for a variety of recreational activities to complement the established "Glamis" sand dunes experience of the surrounding ISDRA. These include an Adventure Center (offering activities such as OHV training, OHV rentals, etc.), amusement facilities, Desert Tours (off road experience), racetrack, park/playground/picnic area, and other recreational-based activities. However, construction of these facilities would be within the footprint of the Specific Plan Area and no adverse impacts to the environment would occur.

XVII. TRANSPORTATION / TRAFFIC.

Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous	☐	☐	☒	☐

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**
intersections) or incompatible uses (e.g., farm equipment)?				
d) Result in inadequate emergency access?	☒	☐	☐	☐

Discussion:

a) Less than Significant. Implementation of the Specific Plan is anticipated to be consistent with the County of Imperial General Plan and is not anticipated to conflict with a program, plan, ordinance or policy addressing roadway, transit, bicycle or pedestrian facilities. Implementation of the Specific Plan would increase the number of vehicle trips in the area and the number of on-site personnel. However these increases are not expected to be substantial Project conflicts with applicable programs, plans, ordinance or policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities will also be addressed in the EIR.

b) Less Than Significant. A transportation impact analysis (TIA) will be prepared for the Glamis Specific Plan to determine and evaluate traffic impacts on the local circulation system due to implementation of the Specific Plan. In compliance with Senate Bill 743 (SB 743) and CEQA Section 15064.3b, the TIA will also include an assessment of project-related changes in vehicle miles traveled compared to existing conditions and the findings presented in the EIR.

c) Less Than Significant Impact. The Specific Plan contains a Conceptual Circulation Plan that identifies vehicle and pedestrian access points and proposed roadway improvements including installation of a new crossing of SR-78 and installation of a traffic signal (See Figure 7, Conceptual Circulation Plan). The proposed intersection may be signalized and will provide access to the Planning Areas north and south of SR-78 (See Figure 8, Conceptual Intersection Plan). A potential OHV and pedestrian undercrossing or overcrossing is also identified for SR-78. The planned improvements will be designed to be consistent with the Imperial County Circulation Element. Design features that would result in transportation-related hazards or safety concerns are not anticipated. However, impacts related to increased hazards could be potentially significant and will be addressed in the EIR. A traffic study is being prepared and will be used to analyze potential impacts in the EIR.

d) Potentially Significant. Implementation of the Specific Plan would generate construction trips and the potential for temporary roadway lane closures exists. It is anticipated that emergency access would be maintained at all times, and appropriate detours would be provided, as necessary. Nonetheless, impacts related to emergency access are considered potentially significant and will be addressed in the EIR.

XVIII. TRIBAL CULTURAL RESOURCES.

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☒	☐	☐	☐

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐

Discussion:

a) and b) Potentially Significant. As required by SB 18 and AB 52, the Imperial County Planning and Development Services Department sent consultation notices to Native American tribal representatives regarding the proposed Project. Specifically, AB-52 Consultation notices were sent to the Quechan and Torres-Martinez Desert Cahuilla Indian Tribes. SB-18 Consultation Letters were sent to the tribes/tribal representatives listed below:

- Augustine Band of Cahuilla Mission Indians
- Campo Band of Mission Indians
- Chemehuevi Reservation
- Cocopah Indian Tribe
- Colorado River Indian Tribe
- Ewiiaapaayp Tribal Office
- Fort Yuma-Quechan Indian Tribe
- Internal Tribal Cultural Resource Protection Council
- Kumeyaay Cultural Repatriation Committee
- La Posta Band of Mission Indians
- Manzanita Band of Kumeyaay Nation
- Torres-Martinez Desert Cahuilla Indians,
- Native American Heritage Commission,
- Kwaaymii Laguna Band of Mission Indians

As of the date of this Initial Study, no Tribes have requested consultation. Results of any Native American consultation will be included in the EIR. As discussed under Response to Item V. Cultural Resources, implementation of the Specific Plan could have potentially significant impacts to archaeological resources, which could be considered a significant resource to a California Native American tribe.

XIX. UTILITIES AND SERVICE SYSTEMS.

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future	☐	☒	☐	☐

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**
development during normal, dry and multiple dry years?				
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☒	☐	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Discussion:

a) Potentially Significant Impact. The Specific Plan would include the expansion of existing water and wastewater facilities along with the development of additional infrastructure to properly accommodate the large volume of visitors to the Specific Plan Area. The GSP will allow for the development of utility buildings, utility substation(s), and water/wastewater treatment facilities. The proposed project would also allow for the development of a solar energy generation facilities (including battery storage) located throughout the Specific Plan Area as well as the addition of a 7.2 mile long electrical transmission / distribution line to bring power to the Specific Plan Area. The Conceptual Drainage and Grading plan would provide flood protection for future land uses within the entire Specific Plan Area and release the drainage to the southwest. Construction of the infrastructure improvements could cause significant environmental effects which will be addressed in the EIR.

b) Potentially Significant Impact Unless Mitigation Incorporated. Currently two wells provide water to the Specific Plan Area and additional water is trucked in during periods of high visitation such as Camp RZR. The proposed project would include a CUP for modification of the existing well. An SB-610 Water Supply Assessment will be prepared to assess the impact to water supplies in the Specific Plan Area. This issue will be addressed in the EIR.

c) Potentially Significant Impact. Wastewater treatment for the existing Specific Plan Area is provided by an on-site septic system and leach field. Implementation of the Specific Plan would result in the need for expanded wastewater treatment options. This issue will be addressed in the EIR.

d) Less than Significant Impact. Implementation of the Specific Plan would result in an increase in solid waste generation during construction and operation. Solid waste would be disposed of using a locally-licensed waste hauling service. It is anticipated that solid waste would continue to be hauled to the landfill nearest the Planning Area. The Salton City Solid Waste Site (13-AA-0011) is located at 935 W. Highway 86 Salton City, CA 92275. As of September 2018, this landfill had approximately 1,264,170 cubic yards of remaining capacity and was

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	***No Impact*** **(NI)**

estimated to remain in operation through 2038 (CalRecycle, 2019b). Solid waste generation associated with implementation of the Specific Plan will be addressed in the EIR.

e) No Impact. The Applicant will comply with federal, state and local statutes related to solid waste. No impacts would occur.

XX. WILDFIRE.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Discussion:

a) No Impact. According to the Draft Fire Hazard Severity Zone Map for Imperial County prepared by the California Department of Forestry and Fire Protection, the Specific Plan Area is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). As noted under Hazards and Hazardous Materials (Response IX. f) the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. No impact is identified for this issue area and this environmental parameter is not proposed for further analysis in the EIR.

b) No Impact. The Specific Plan Area is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). Therefore, the proposed project would not exacerbate wildfire risks. No impact is identified for this issue area and this environmental parameter is not proposed for further analysis in the EIR.

c) No Impact. The project site is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). The proposed project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that would

result in temporary or ongoing impacts to the environment. No impact is identified for this issue area and this environmental parameter is not proposed for further analysis in the EIR.

d) Less than Significant. The project site is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact is identified for this issue area and this environmental parameter is not proposed for further analysis in the EIR.

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; Sundstrom v. County of Mendocino, (1988) 202 Cal.App.3d 296; Leonoff v. Monterey Board of Supervisors, (1990) 222 Cal.App.3d 1337; Eureka Citizens for Responsible Govt. v. City of Eureka (2007) 147 Cal.App.4th 357; Protect the Historic Amador Waterways v. Amador Water Agency (2004) 116 Cal.App.4th at 1109; San Franciscans Upholding the Downtown Plan v. City and County of San Francisco (2002) 102 Cal.App.4th 656.

Revised 2009- CEQA
Revised 2011- ICPDS
Revised 2016 – ICPDS
Revised 2017 – ICPDS
Revised 2019 – CEQA

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	*No Impact* (NI)

SECTION III. MANDATORY FINDINGS OF SIGNIFICANCE

The following are Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects.)	☒	☐	☐	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Discussion:

a) Potentially Significant Impact. The EIR's biological resources section will discuss direct and indirect impacts on plants, fish and wildlife species. The EIR will also evaluate direct and indirect impacts on cultural and tribal cultural resources. Finally, the EIR will evaluate the Specific Plan's contribution to cumulative impacts, identify whether the contribution is cumulatively considerable, and propose feasible mitigation, as appropriate, to reduce such impacts to less-than-significant levels.

b) Potentially Significant Impact. The Project has the potential to contribute to cumulative impacts related to air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, noise, transportation and traffic, tribal cultural resources, and utilities and service systems. The EIR will evaluate the project's contribution to cumulative impacts in these areas as well as other areas as further impacts are identified.

c) Potentially Significant Impact. The Project could potentially result in environmental effects that have adverse impacts on human beings, either directly or indirectly. These impacts will be fully addressed in the EIR.

SECTION IV. PERSONS & ORGANIZATIONS CONSULTED/ REFERENCES

A. COUNTY OF IMPERIAL

- Jim Minnick, Director of Planning & Development Services
- Michael Abraham, AICP, Asst. Director of Planning & Development Services
- Patricia Valenzuela, Planner IV
- Imperial County Air Pollution Control District
- Department of Public Works
- Fire Department
- Agricultural Commissioner
- Environmental Health Services
- Sheriff's Office

B. OTHER AGENCIES/ORGANIZATIONS

- CDFW
- USFWS
- Caltrans

C. REFERENCES

Altum Group, 2020. Visual Impact Analysis, Glamis Specific Plan. March 26.

ASM Affiliates, 2019. Draft Class III Cultural Resources Inventory Report for the Glamis Specific Plan Project, Glamis, Imperial County, California. July.

Barrett Biological Consulting, 2019. Glamis Property Specific Plan, Biological Resources Assessment Technical Report Glamis, California. July.

California Dept. of Conservation, 2016a. Imperial County Farmland and Monitoring Program (FMMP) Imperial County Important Farmland 2016. Available at: (https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed September 24, 2020.

_____, 2016b. Imperial County Williamson Act Map, FY 2016/2017. Available at: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Imperial_16_17_WA.pdf. Accessed October 8, 2019.

California Department of Forestry and Fire Protection, 2007. Fire Hazards and Severity Zones Map, Imperial County.

County of Imperial, 2016. Final Conservation and Open Space Element of the Imperial County General Plan. Adopted by the Imperial County Board of Supervisors, March 8, 2016. Available at:

http://www.icpds.com/CMS/Media/Conservation-&-Open-Space-Element-2016.pdf. Accessed September 24, 2020.

_____, 2015. Final Land Use Element. Adopted by the Imperial County Board of Supervisors, October 6, 2015. Available at: http://www.icpds.com/CMS/Media/Land-Use-Element-(2015).pdf. Accessed September 24, 2020.

Earth Systems Pacific, 2019. Geotechnical Engineering Feasibility Report Proposed Glamis Specific Plan Project State Highway 78 and the Union Pacific Railroad Glamis, Imperial County, California. August 29.

LdN Consulting, 2020a. Air Quality Assessment, Glamis Specific Plan, County of Imperial. March 1.

LdN Consulting, 2020b. Greenhouse Gas Screening Letter, Glamis Specific Plan, County of Imperial. March 1.

LdN Consulting, 2020c. Noise Assessment, Glamis Specific Plan, County of Imperial. March 1.

San Diego Natural History Museum, 2019. Paleontological Resources Assessment. January.

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Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Glamis Specific Plan Project

Lead Agency: Imperial County Planning & Development Services Department | Contact Person: Patricia Valenzuela

Mailing Address: 801 Main Street | Phone: (442) 265-1736

City: El Centro | Zip: 92243 | County: Imperial

Project Location: County: Imperial | City/Nearest Community: Glamis

Cross Streets: SR 78/Ted Kipf Road | Zip Code: 92227

Longitude/Latitude (degrees, minutes and seconds): 32 ° 59 ′ 51 ″ N / 115 ° 4 ′ 19 ″ W Total Acres: 141

Assessor's Parcel No.: 039-310-017, -022, -027, -023, -029, -026, -030 Section: 33 Twp.: 13S Range: 18E Base: Mount Diablo

Within 2 Miles: State Hwy #: 78 Waterways: N/A

Airports: N/A Railways: Union Pacific Railroad Schools: N/A

Document Type:

CEQA: ☒ NOP ☐ Draft EIR NEPA: ☐ NOI Other: ☐ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR ☐ EA ☐ Final Document
☐ Neg Dec (Prior SCH No.) ☐ Draft EIS ☐ Other:
☐ Mit Neg Dec Other: ☐ FONSI

Local Action Type:

☐ General Plan Update ☒ Specific Plan ☒ Rezone ☐ Annexation
☒ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☒ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other: Well CUP

Development Type:

☒ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☒ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational: _____
☒ Recreational: _____
☒ Water Facilities: Type Reverse Osmosis MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☒ Power: Type Solar PV MW _____
☒ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☒ Other: Entertainment

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☐ Fiscal ☒ Recreation/Parks ☒ Vegetation
☐ Agricultural Land ☒ Flood Plain/Flooding ☐ Schools/Universities ☒ Water Quality
☒ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☒ Archeological/Historical ☒ Geologic/Seismic ☐ Sewer Capacity ☐ Wetland/Riparian
☒ Biological Resources ☐ Minerals ☒ Soil Erosion/Compaction/Grading ☒ Growth Inducement
☐ Coastal Zone ☒ Noise ☐ Solid Waste ☒ Land Use
☒ Drainage/Absorption ☒ Population/Housing Balance ☒ Toxic/Hazardous ☒ Cumulative Effects
☐ Economic/Jobs ☒ Public Services/Facilities ☒ Traffic/Circulation ☐ Other: Land Use and Planning

Present Land Use/Zoning/General Plan Designation:

Land Use - OHV related uses; Zoning- Open Space/Preservation (S-2) and General Commercial (C-2); Glamis Specific Plan Area

Project Description: *(please use a separate page if necessary)*

The proposed project consists of the Glamis Specific Plan (GSP) to guide development within the unincorporated community of Glamis, California in the eastern portion of Imperial County. Centered around the Glamis Beach Store, 143 acre Specific Plan Area is generally bounded by the Imperial Sand Dunes Recreation Area (ISDRA) on the south and by the North Algodones Dunes Wilderness(NADW) on the north. The Specific Plan area is approximately 27 miles east of the City of Brawley and 20 miles north of I-8. The GSP is intended to enhance the experience of existing recreational users of the adjacent areas and implement the County's objectives for the area by facilitating development of recreation-serving land uses and required infrastructure. Permitted uses within the GSP include recreational, commercial/retail, OHV and RV storage, entertainment and hospitality uses, seasonal guest and employee housing, renewable energy, infrastructure, and a research and development facility for Polaris (Project Applicant).

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

X	Air Resources Board	X	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency		Parks & Recreation, Department of
	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District # 11		Public Utilities Commission
	Caltrans Division of Aeronautics	X	Regional WQCB # 8
	Caltrans Planning		Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of		State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of	X	SWRCB: Water Quality
	Energy Commission		SWRCB: Water Rights
X	Fish & Game Region # 6		Tahoe Regional Planning Agency
	Food & Agriculture, Department of		Toxic Substances Control, Department of
	Forestry and Fire Protection, Department of	X	Water Resources, Department of
	General Services, Department of		
	Health Services, Department of	X	Other: Imperial County Air Pollution Control District
	Housing & Community Development	X	Other: US Army Corps of Engineers
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date October 20, 2020 Ending Date November 24, 2020

Lead Agency (Complete if applicable):

Consulting Firm: McIntyre Environmental, LLC
Address: 1900 West Desert Highlands Drive
City/State/Zip: Tucson, Arizona 85737
Contact: David McIntyre
Phone: (520) 775-1490

Applicant: Polaris Industries Inc.
Address: 2100 Highway 55
City/State/Zip: Medina, MN 55340
Phone:

Signature of Lead Agency Representative: _____ **Date:** _____

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Print From

Summary Form for Electronic Document Submittal

Form F

Lead agencies may include 15 hardcopies of this document when submitting electronic copies of Environmental Impact Reports, Negative Declarations, Mitigated Negative Declarations, or Notices of Preparation to the State Clearinghouse (SCH). The SCH also accepts other summaries, such as EIR Executive Summaries prepared pursuant to CEQA Guidelines Section 15123. Please include one copy of the Notice of Completion Form (NOC) with your submission and attach the summary to each electronic copy of the document.

SCH #: _____

Project Title: Glamis Specific Plan Project

Lead Agency: Imperial County Planning & Development Services Department

Contact Name: Patricia Valenzuela

Email: patriciavalenzuela@co.imperial.ca.us Phone Number: (442) 265-1736

Project Location: Glamis *City* Imperial *County*

Project Description (Proposed actions, location, and/or consequences).

The proposed project consists of the Glamis Specific Plan (GSP) to guide development within the unincorporated community of Glamis, California in the eastern portion of Imperial County. Centered around the Glamis Beach Store, 143 acre Specific Plan Area is generally bounded by the Imperial Sand Dunes Recreation Area (ISDRA) on the south and by the North Algodones Dunes Wilderness(NADW) on the north. The Specific Plan area is approximately 27 miles east of the City of Brawley and 20 miles north of I-8. The GSP is intended to enhance the experience of existing recreational users of the adjacent areas and implement the County's objectives for the area by facilitating development of recreation-serving land uses and required infrastructure. Permitted uses within the GSP include recreational, commercial/retail, OHV and RV storage, entertainment and hospitality uses, seasonal guest and employee housing, renewable energy, infrastructure, and a research and development facility for Polaris (Project Applicant).

Identify the project's significant or potentially significant effects and briefly describe any proposed mitigation measures that would reduce or avoid that effect.

Potential impacts to: Aesthetics/Visual Resources; Air Quality and Greenhouse Gas Emissions, Biological Resources; Cultural Resources, Geology /Soils (including Paleontological Resources); Hazards and Hazardous Materials, Land Use and Planning, Noise, Population/Housing, Public Services and Facilities; Recreation; Transportation/Traffic; and Tribal Cultural Resources.

If applicable, describe any of the project's areas of controversy known to the Lead Agency, including issues raised by agencies and the public.

Potential vehicle trips that would be generated by the permitted uses and project-related changes in vehicle miles traveled.

Provide a list of the responsible or trustee agencies for the project.

U.S. Army Corps of Engineers
California Department of Transportation (Encroachment Permit)
California Dept. of Fish & Wildlife (CDFW)
State Water Resources Control Board
Regional Water Quality Control Board (Region 8)
Imperial County Air Pollution Control District
Imperial County Division of Environmental Health (Domestic Water Supply Permit for the Public Water System)

B

Public Scoping Meeting Materials/ Comments

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Public Scoping Meeting for the Glamis Specific Plan Area Project

Specific Plan (SP 19-0001) Zone Change (19-0006)

Conditional Use Permit (#19-0027)

County of Imperial

October 29, 2020, 6:00 PM

McINTYRE ENVIRONMENTAL

1

Scoping Meeting Overview

- Introductions
- Purpose of Public Scoping Meeting
- Roles and Responsibilities
- Project Overview
- CEQA Purpose, Process, Schedule
- Topics to be Addressed in Draft EIR
- Contact Information
- Public Comments
- Adjourn

McINTYRE ENVIRONMENTAL

2

Introductions

- County of Imperial – CEQA Lead Agency
- CEQA Consultants
- Project Applicant
  - Polaris Inc.
  - Consultant Team

3

Purpose of Scoping Meeting

- Inform public of proposed Project and the County's intent to prepare an Environmental Impact Report (EIR)
- Present an overview of the CEQA process
- Review topics to be addressed in the Draft EIR
- Solicit comments and receive input on:
  - Scope and content of the environmental analysis (direct, indirect, cumulative, unavoidable)
  - Potential measures to reduce adverse environmental impacts
  - Potential Alternatives to avoid or reduce environmental impacts

4

Roles and Responsibilities

- Imperial County is the "Lead Agency" responsible for Project's CEQA documentation
- County is responsible for:
  - Adequacy/accuracy/objectivity of Project's CEQA document
  - Considering Project's CEQA document prior to acting upon/approving Project
- County has retained McIntyre Environmental, Inc. to prepare the Environmental Impact Report (EIR)

5

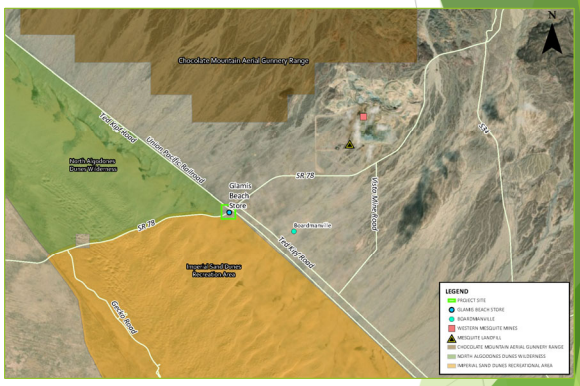
Project Overview

- The Project Area is contained within the County's designated Glamis Specific Plan Area (GSPA).
- The GSPA allows for the development of a Specific Plan in accordance with design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element.
- Polaris Inc. (the Applicant) is proposing a Specific Plan for the development of the GSPA..
- The proposed Glamis Specific Plan (GSP) would implement the County's objectives for the development of this area which is to accommodate recreation supporting land uses including retail and service commercial, motel accommodations, recreational vehicles and mobile home parks, and community facilities.

6

Project Location

- The Project site is located in Section 33, Range 18 East, Township 13 South within the U.S. Geological Survey (USGS) Glamis, California 7.5-minute topographic quadrangle in an unincorporated area of the County of Imperial.
- Assessor Parcel Numbers (APN) 039-310-017, 039- 310-022, 039-310-023, 039-310-026, 039-310-027, 039-310-029, and 039-310-030)



7

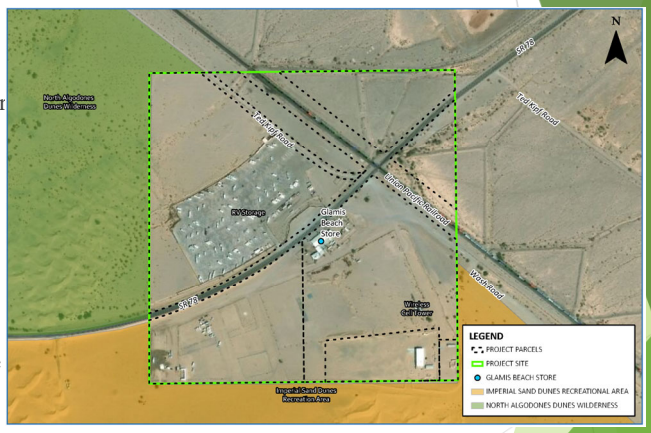
Project Background

- Glamis and the Imperial Sand Dunes Recreation Area (ISDRA) have been utilized for off-highway vehicle (OHV) recreational activities since the 1960s.
- Enthusiasm for dune buggies and other sand vehicles brought 30,000 people to Glamis during the 1979 Thanksgiving weekend.
- By the 2010s, tens of thousands of OHV enthusiasts were visiting the ISDRA during the holidays in autumn, winter and early spring months, many of them camping in Recreational Vehicles (RVs) near Glamis.
- Glamis became known as the Sand Toy Capital of the World. As a result, events and activities such as "Camp RZR" started to occur within Glamis that attracted as many as 20,000 visitors each year.

8

Existing Characteristics

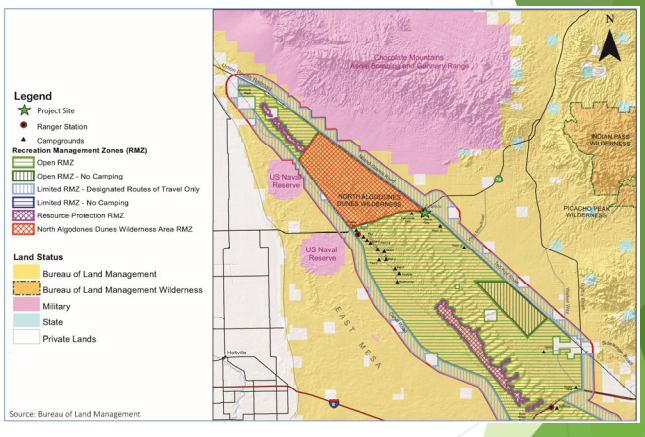
- The project vicinity is regionally accessible via State Route 78 (SR-78) (a.k.a. Ben Hulse Highway), which serves as the primary form of access for motorists.
- Ted Kipf Road, a County-maintained dirt road serves as a secondary form of access extending northwesterly for approximately 17 miles to Niland-Glamis Road from SR-78.
- The project vicinity is also crossed by the Union Pacific Railroad (UPRR) which runs north and south through the eastern half of the project vicinity and Wash Road which parallels the UPRR south of SR-78.



9

Surrounding Land Use

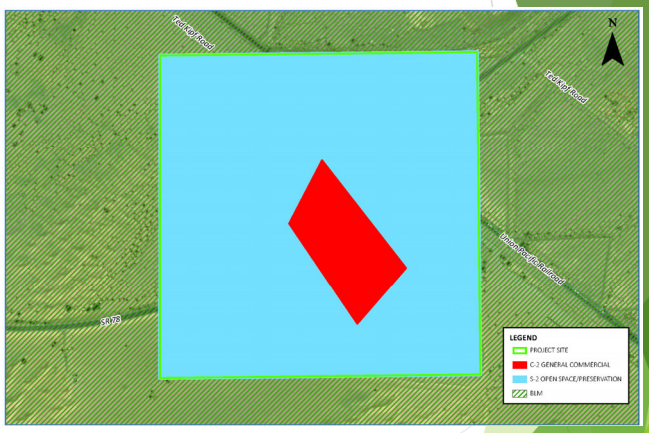
- Directly northwest of the project vicinity, is the North Algodones Dunes Wilderness (NADW); managed by the BLM as part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use, however, camping is allowed.
- The project vicinity is directly adjacent to the ISDRA to the southwest, south and southeast.
- North of the NADW is the Chocolate Mountain Aerial Gunnery Range (CMAGR) which is a live-fire training range used for developing and training Marine Corps and Navy aviators.
- The area to the north east of the project vicinity is BLM land but is not part of the ISDRA.



10

General Plan and Zoning Designation

- The project vicinity is designated on the adopted Land Use Element of the County of Imperial's General Plan as the GSPA.
- The GSPA allows for the development of a Specific Plan in accordance with design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. Approval of a specific plan by the County Board of Supervisors is required prior to any significant new use or development in this area, except agricultural use.
- The general area of the Glamis Beach Store is currently zoned as C-2 (Medium Commercial), while the remainder of the GSPA is zoned as S-2



11

Specific Plan Process

- A specific plan is a regulatory tool for the thoughtful and systematic implementation of a General Plan for a defined area.
- The GSP is intended to meet the Specific Plan requirements as set forth in California State Law (California Government Code [CGC] Section [§] 65450) through which the State authorizes cities and counties to adopt Specific Plans as appropriate tools in implementing their General Plans.
- Under the provision of this Statute the County has the authority to include detailed regulations, conditions, programs and all proposed legislation within the Specific Plan that are necessary for the systematic implementation of the General Plan.
- The County's Zoning Ordinance establishes regulations to protect the public health, safety and welfare, to provide for orderly development, classify, regulate and where applicable segregate land uses and building uses; to regulate the height and size of buildings; to regulate the area of yards and other open spaces around buildings; to regulate the density of population, and to provide the economic and social advantages resulting from orderly planned land uses and resources.

12

Specific Plan Process (cont.)

- During the preparation of the GSP, stakeholder meetings were held (in June through August 2019) with Caltrans District 11, the Imperial County Transportation Commission, the County of Imperial - Public Works Department, the BLM – El Centro Field Office, and other local governmental agencies, to get input into the overall development and implementation of the GSP as well as to make sure the proposed circulation plan for the project vicinity would be consistent with their requirements and general direction, and that the GSP would be properly integrated with the County's Transportation System with the Regional Transportation System.

McINTYRE ENVIRONMENTAL

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Proposed Project

- The GSP creates a distinctive masterplan for recreation-serving land uses which are consistent with the historical use of the Glamis area.
- It provides for a great deal of flexibility as to the development of potential land uses within the GSP to promote the concept of an open desert playground that derives from the "Camp RZR" event, historically held in October of each year at the GSP area, and the surrounding ISDRA.
- This area attracts hundreds of thousands of OHV enthusiasts every Halloween, Thanksgiving, Christmas, New Years, and President's Day weekend.

McINTYRE ENVIRONMENTAL

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Proposed Project (cont.)

- The GSPA consists of eight proposed Planning Areas. Planning Areas 1, 2, 3, and 4 are proposed for designation as Commercial-Recreation 3 (CR-3) (Figure 4-1). This designation is intended to accommodate a large variety of commercial uses that are generally supportive of OHV activities and provide for large scale events to be held both on private property as well as adjoining federal lands.

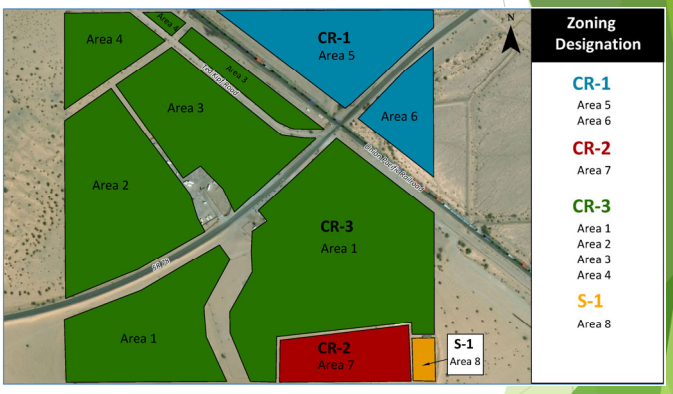
- Planning Areas 5 and 6 are designated Commercial-Recreation 1 (CR-1). This designation is intended to allow small scale, low density development of projects that will not enhance or contribute to the use of off-road vehicles on public highways or roads. This could include employee housing, research and development (R & D) facilities, RV park with restrictions and the like.

15

Proposed Project (cont.)

- Planning Area 7 is designated Commercial-Recreation 2 (CR-2). This designation is intended to accommodate recreational related commercial opportunities and projects that will support the OHV and recreational uses of the area at a higher density and allowable uses than CR-1 but still be limited to specific uses that are less intense and more occasional than those allowed in CR-3. This could include small repair shops, limited housing, RV park with restrictions and the like.

- Planning Area 8 would be re-zoned to the County's existing S-1 (Open Space/Recreation) designation. S-1 is used to recognize areas that embody the unique Open Space and Recreational character of Imperial County including the deserts, mountains and water-front areas. The S-1 designation is primarily characterized by low intensity human utilization and small-scale recreation related uses.



16

Proposed Land Uses

- Recreational
- Commercial/Retail
- Storage
- Entertainment
- Infrastructure Improvements
- Hospitality
- Residential
- Renewable Energy
- Research & Development Facility

17

Required Project Approvals/Actions

County of Imperial

- Glamis Specific Plan (SP 19-0001)
- Conditional Use Permit (#19-0027)
- Zone Change (19-0006))
- Air Pollution Control District – Authority to Construct and Permit to Operate

Other Approvals

- State Water Resources Control Board – National Pollutant Discharge Elimination System General Permit
- Regional Water Quality Control Board (Region 8) – Waste Discharge Requirements
- U.S. Army Corps of Engineers – Section 404 of the Clean Water Act Permit
- California Dept. of Fish & Wildlife – 1602 Lake and Streambed Alteration Agreement

18

Environmental Determination

- An environmental initial study has been prepared to determine if the project may have a significant effect on the environment
- Evaluated all environmental issues
- Determined that the proposed project may have a significant effect on the environment
- An Environmental Impact Report will be required

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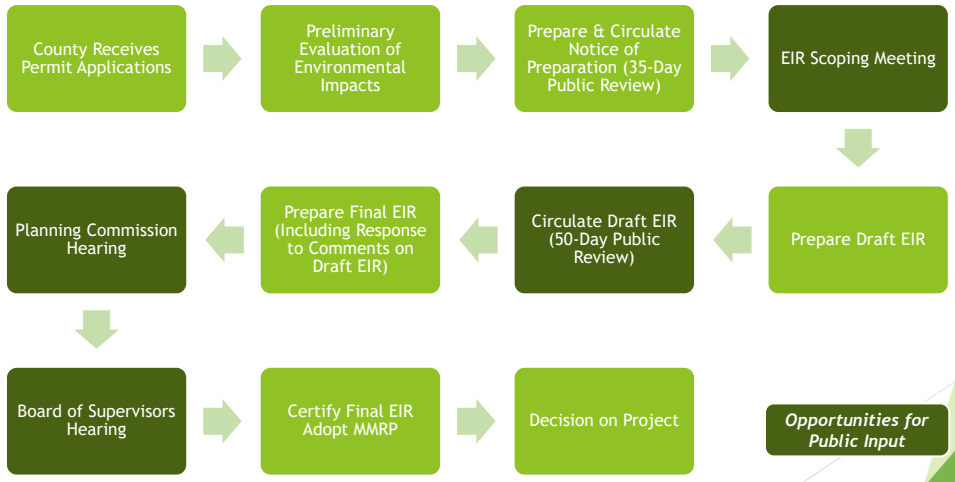
Draft EIR will:

- **Analyze Project's Environmental Impacts**
  - Short-Term Construction
  - Long-Term Operational
  - Direct and Indirect
  - Cumulative
  - Growth Inducing
  - Unavoidable
- **Identify feasible mitigation measures to avoid/reduce Project's significant impacts**
- **Evaluate feasible Alternatives to the Proposed Project**
- **Undergo 50-day public review period**

20

CEQA EIR Process



21

Topics to be Analyzed in Draft EIR

- Air Quality
- Biological Resources
- Aesthetics
- Energy
- Geology & Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology & Water Quality
- Land Use and Planning
- Noise
- Transportation/Traffic
- Tribal / Cultural Resources
- Utilities & Service Systems
- Cumulative Impacts
- Project Alternatives

22

Tentative EIR Schedule

Tentative Schedule	
35-Day NOP Scoping Period	October 20, 2020 – Nov 24, 2020
Public Scoping Meeting	October 29, 2020
Draft EIR Preparation	Fall 2020
50-Day Draft EIR Public Review	Spring 2021
Final EIR Preparation	Summer 2021
Public Hearings	Fall 2021

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Public Comments

- Please fill out a speaker slip and hand it in.
- When your name is called, please walk up to the microphone, state your name and what agency/organization you represent (if any).
- Each speaker will be given 3 minutes to speak.
- In addition, you can fill out a Comment Form and hand it in before you leave or send it to the address provided on the form.

24

Public Comments

- Your comments may be submitted in writing to:

  Jim Minnick, Director,
  Imperial County
  Planning & Development Services Department,
  801 Main Street,
  El Centro, CA 92243

- You can email comments to PatriciaValenzuela@co.imperial.ca.us.
- Available project information may be reviewed at this location, www.icpds.com.
- Due to the limits mandated by State law, your response must be sent at the earliest possible date but no later than November 24, 2020.

25

Adjournment

26

Imperial County
Glamis Specific Plan
Project EIR
Public Scoping Meeting
October 29, 2020, 6:00 pm

Request to Speak

Name:_____

Affiliation:_____

_____

Address:_____

_____

Phone:_____

Email:_____

Imperial County
Glamis Specific Plan
Project EIR
Public Scoping Meeting
October 29, 2020, 6:00 pm

Request to Speak

Name:_____

Affiliation:_____

_____

Address:_____

_____

Phone:_____

Email:_____

Comment Form

Imperial County
Glamis Specific Plan Project
Environmental Impact Report

PUBLIC SCOPING MEETING
October 29, 2020, 6:00 pm

Please list the environmental issues or concerns you feel need to be addressed in the Environmental Impact Report (EIR) for the Glamis Specific Plan Project. Please be as specific and detailed as possible so that the EIR may address all of your concerns or issues. If necessary, please attach additional pages. Once completed, please submit your written comments to: Ms. Patricia Valenzuela, Planner III, Imperial County Department of Planning and Development Services, 801 Main Street El Centro, CA 92243. Phone (442-265-1749). Email (PatriciaValenzuela@co.imperial.ca.us. Your comments must be postmarked by November 24, 2020. (please print legibly)

Submitted by (please print legibly):

Name:	Affiliation:
Address:	Phone number:
City/state/zip:	Date:

C-1 Air Quality Study

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AIR QUALITY ASSESSMENT

Glamis Specific Plan
County of Imperial

Prepared for:

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November 16, 2020

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EXECUTIVE SUMMARY

This air quality analysis has been completed to determine impacts, which may be associated with the construction or operation of the proposed Glamis Specific Plan (GSP) project located on a 142-acre project site located within the designated Glamis Specific Plan Area (GSPA).

During construction, the proposed Project would not be expected to produce significant air quality impacts under the California Environmental Quality Act or exceed thresholds of significance established by the Imperial County Air Pollution Control District (ICAPCD).

The proposed Project would not generate significant operational impacts offsite either during construction or during post construction operations.

Finally, the project would not be expected to generate offensive objective odors during either the construction or operation of the project.

Per the requirements of ICAPCD, the project would be required to implement standard design measures for both construction and operations and are identified below:

Standard Construction Site Design Measures:

1. Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
2. Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
3. Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use.
4. Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

Standard Operations Site Design Measures:

1. Provide on-site bicycle lockers and/or racks.
2. Provide on-site eating, refrigeration and food vending facilities to reduce lunchtime trips.

3. Provide shower and locker facilities to encourage employees to bike and/or walk to work.
4. Provide for paving a minimum of 100 feet from the property line for commercial driveways that access County paved roads as per County Standard Commercial Driveway Detail 410B (formerly SW-131A).
5. Measures which meet mandatory, prescriptive and/or performance measures as required by Title 24.

1.0 INTRODUCTION

The purpose of this Air Quality study is to determine whether potential air quality impacts are significant under the California Environmental Quality Act (CEQA) and Imperial County Air Pollution Control District (ICAPCD), if any, that may be created during the construction or operation of the Glamis Specific Plan (GSP) project.

1.1 Project Location

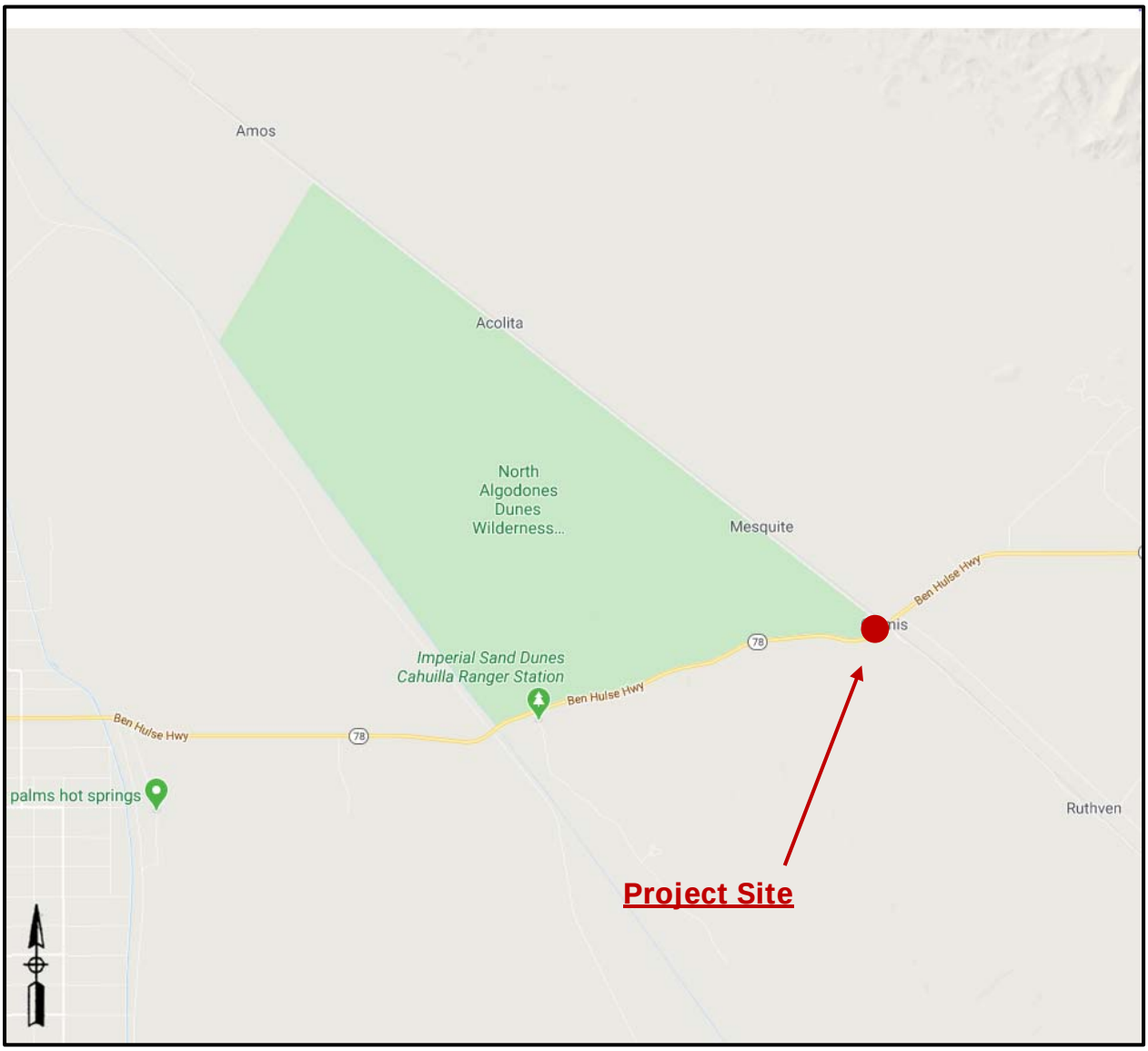
The GSP area is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR 78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the project site is located within the lower Colorado River Sonoran Desert Region of the United States in the east central portion of Imperial County (County) within the Salton Sea Air Basin (SSAB). A Project vicinity map and aerial image of the existing site is provided in Figures 1-A of this report.

1.2 Project Description

The approximately 142-acre GSP is located and contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development and creation of a Specific Plan in accordance with GSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. The existing zoning designation for the project site is Open Space/Preservation (S-2) and a very small area that is General Commercial (C-2). The general area of the Glamis Beach Store (within APN 039-310-029) is zoned as C-2, while the remainder of the project site is zoned as S-2. The project site is surrounded by the Bureau of Land Management (BLM) land uses on all sides.

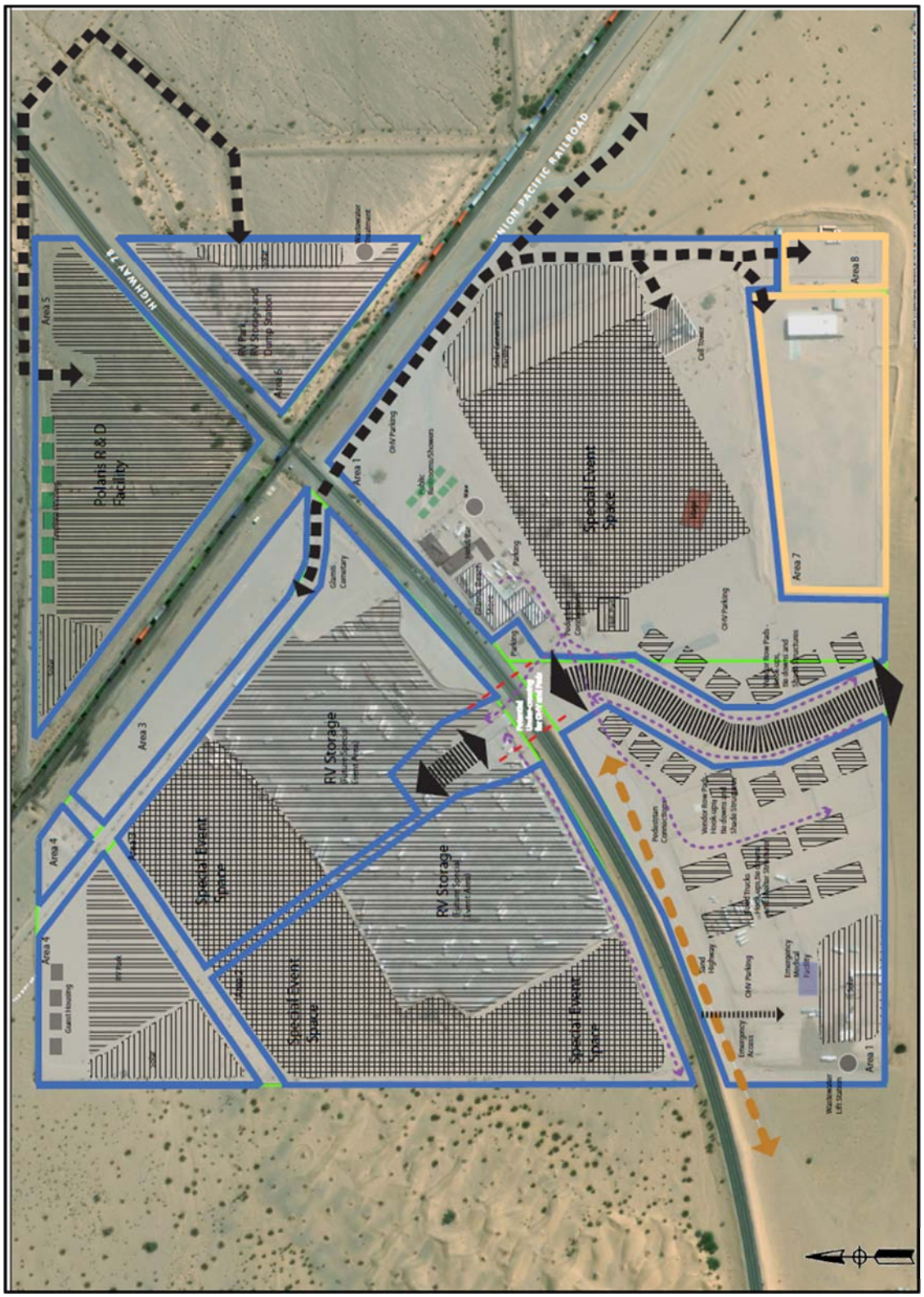
The proposed GSP includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning based upon different levels of allowable land use intensity. Also, the GSP proposes a Change of Zone from S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1- acre parcel on the southeast side of the project site. The phasing plan component of the GSP would phase the development so that more intense land uses are developed incrementally over time within the various proposed zones. Figure 1-B depicts the Conceptual Site Plan.

Figure 1-A: Project Vicinity Map and Project Footprint



Source: Google Maps, 2020

Figure 1-B: Project Area Overview Map



Source: (The Altum Group, 2019)

Project Phasing

Development within the GSP is intended to occur over a span of approximately 20 to 50 years and will depend on market conditions, availability of supporting infrastructure, and other factors. Four (4) phases of development are proposed though do not specifically call for any detailed development scheme but offer a general guideline on construction precedence. Given this, the primary purpose of the GSP is to modify the allowable land uses on the site, not to establish a detailed parcel by parcel development scheme. The general phasing is shown below.

Phase One

Phase One would permit uses which could include restaurant(s), bar(s), repair shop(s), a vendor row area and event area. Additionally, the site could be developed with a possible research and development (R&D) facility an RV park and some employee housing. Phase One would also include the construction of water infrastructure to include both potable water treatment to treat ground water as well as a wastewater treatment facility and upgrades to the electrical system which would include connection to power lines located 7.2 miles to the northeast of the project site and some additional renewable energy to reduce GHG emissions or construction of a fully islanded 100% renewable energy microgrid (wind or PV including battery backup). The existing site uses diesel generators which would be phased out once electrical services are updated.

Phase Two

Phase Two would most likely be within Land Use Area 1, immediately west of Phase One. Phase Two development would serve as an extension to development occurring within Phase One by incorporating land uses permitted under the CR Zone similar to those permitted in Phase One. Phase Two would incorporate the Glamis Mainstreet to serve as a circulation corridor for Off- Highway Vehicle (OHV) traffic to and from the dunes and to Phase Four (Areas 2, 3, and 4) located directly north of SR 78.

Phase Three

Phase Three, located on the northeast side of the UPRR and bisected by SR 78, would be located within Land Use Area 5 and Land Use Area 6. No major public use facilities

would be considered for development within these two APNs to discourage OHV traffic from crossing the UPPR to access these areas. Phase Three however, would serve for the development of uses relevant to employee housing, RV park, and/or an R&D facility and possible PV Solar array system.

Phase Four

Phase Four, located on the north side of SR 78, would be located within Land Use Areas 2, 3 and 4. The Glamis Mainstreet corridor is proposed to provide an optional circulation interconnection between Phase One and Phase Four. All Phasing as proposed will be impacted by possible requirements that Caltrans may impose along SR 78 and for crossing the UPRR. The Imperial County Transportation Commission (ICTC) is currently conducting a feasibility study for a safe crossing over UPRR for off road vehicles either at SR 78 or Wash 10 or some other location, and additional information will be provided once the feasibility study is complete. Overall, the primary objective of the GSP is to formalize the site and provide services and amenities.

Special Events

The GSP area and greater Imperial Sand Dunes area has been historically utilized for OHV recreational events and activities. The applicant has been operating a special recreational event named "Camp RZR" since 2007 that attracts as many as 20,000 visitors each year. This event usually occurs during the weekend before Halloween. In 2008, the County of Imperial issued a Conditional Use Permit (CUP) to the applicant to operate a "seasonal event area" for special events such as Camp RZR on their private property within the ISDRA. Since 2008, the applicant has coordinated with the County, BLM, Imperial County Fire Department, Imperial County Sherriff's Office, California Highway Patrol and other affected public agencies to ensure that proper special event protocols and procedures are enforced to address key issues such as traffic, safety, emergency procedures, restrooms, and other related special event factors.

The GSP will include provisions for additional special events to be held in addition to the longstanding Camp RZR. In concert with the existing operational protocols, procedures and guidelines for special events, the GSP will provide performance standards that will meet the guidelines/requirements of the affected public agencies (i.e., Imperial County Fire Department and Sheriff's Office) to address and ensure

compliance with key special event-related issues. Furthermore, the GSP's performance standards will incorporate the BLM's Special Recreation Permit Event Operations Plan Checklist to ensure that operations of the proposed special annual events comply with the special event guidelines of the BLM. Special events that may be held at this site can be sponsored by the owner or by other entities provided they are first approved by the owner. Events can vary and be combined with off-site activities where portions of the event are on site while the remainder is on adjacent BLM lands. These events may include concerts, races, social gatherings, sporting activities, educational activities, training activities, and may include pyrotechnics and other entertainment venues.

Construction

Construction activities for Phase 1 through Phase 4 would occur within a timeframe of 20 to 50 years. Construction emissions over this duration would generally be higher at the start of construction given the regulatory requirements on construction equipment is continuously evolving using cleaner technologies. Given this, for purposes of this Air Quality analysis, a worst case construction scenario of 3 years was assumed. The project description calls for the construction of a solar or wind farm development with a battery backup system for power reliability and an option to receive power from as far as 7.2 miles away. For power stability the connection the the utility provider would be the most reliable. For purposes of this analysis, it's assumed that the project would both construct renewables and connect to utility power 7.2 miles away.

Operations

Full buildout operations of the GSP is intended to occur over a span of approximately 20 to 50 years. However, in order to provide a conservative assessment, the entire Project was assumed and added to baseline conditions and was assumed to be built out by 2024. This assumption would be conservative as operations into the future would be reduced as regulatory requirements and technologies to reduce vehicular emissions would improve over time.

The project would maintain similar operations to that of the existing operations though would expand services to the existing seasonal influx of patrons recreating at the Glamis Dunes off-highway vehicle (OHV) areas surrounding the project. For this

reason, OHVs are not specifically analyzed. The project traffic study indicated that the buildout condition would generate roughly 1,750 ADT (LLG Engineers, 2019) over existing operations from this seasonal community. Also, it should be noted that the due to the historic travel patterns, the bulk of the traffic would be Friday through Monday

The existing use requires diesel generators to supply power and would be phased out once the project has been connected to a constant electricity source. As noted above, it's assumed that the project would both construct renewables to offset all power usage and connect to utility power 7.2 miles away for power stability. The project could however install batteries which would be a less intense construction alternative.

The Project's proposed land uses are intended to serve the existing patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat. Operations are expected during the months of October through May or roughly 67% of the year.

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The project site can be characterized as an area of open, sandy, disturbed desert land with all existing development occurring in close proximity (within approximately 0.25 mile) to the intersection of SR 78 and the UPRR. The project site consists of several adjoining parcels. On one parcel (APN 039-310-029) there is a one- and two-story metal building structure with water tanks, a wireless communications facility, a private residence/storage building and an unmaintained storage shed and shipping containers which together comprise what is commonly referred to as the "Glamis Beach Store." Also, there is a separate seasonal off-highway vehicle (OHV) repair business (and two related RV trailers) connected to the Glamis Beach Store.

Immediately south of the APN 039-310-029 parcel, is the 8-acre parcel (APN 039-310-030), which includes a single-family residence, large recreational vehicle storage garages, and other related equipment storage buildings. On the southeast corner of the project site is a 1-acre parcel (APN 039-310-017) which currently includes a rather dilapidated/abandoned pre-fab residential structure. On the parcel (APN 039-310-026) directly opposite of the Glamis Beach Store (to the north of SR 78 from the Glamis Beach Store) is an existing RV storage area, and other vacant desert land. On the parcel on the southwest side of the project site (APN 039-310-027) there are wood posts to form a sectioned-off parking/vendor area. On the northeast side of the GSP, there are two triangular parcels (on the northeast side of the UPRR, APN 039-310-022 and APN 039-310-023), which are currently vacant. The existing residential uses would remain and would exist to support the project.

The project site is relatively flat with a southwest-to-northeast trending grade of less than one percent or an approximate difference in elevation of 23 feet above mean sea level (AMSL) between the southwest corner of the site (approximate elevation of 324 feet AMSL) and the northeast corner of the site (approximately 347 feet AMSL). Areas of wind-blown sand dunes with sporadic native vegetation are found situated and encroaching upon the southeast corner of the project site.

The GSP contains the only private commercial land uses within the project vicinity and is surrounded by open desert land that is managed by the Bureau of Land

Management (BLM). Also, the Chocolate Mountain Aerial Gunnery Range (CMAGR) is located approximately 3 miles to the north of the GSP. The GSP is within and surrounded by the ISDRA and is bordered by the NADW to the northwest. Within all of the various BLM lands surrounding the GSP, the BLM has designated Recreation Management Zones (RMZs) which dictate the allowable recreation activities within those areas and provide for BLM's management objectives within those areas.

2.2 Climate and Meteorology

Climate within the SSAB experiences mild and dry winters with daytime temperatures ranging from 65 to 75 ºF, extremely hot summers with daytime temperatures ranging from 104 to 115 ºF, and very little rain. Imperial County usually receives approximately three inches of rain per year mostly occurring in late summer or midwinter. Summer weather patterns are dominated by intense heat induction low-pressure areas over the interior desert. The flat terrain of the Imperial Valley and the strong temperature differentials created by intense solar heating produce moderate winds and deep thermal convection.

The general wind speeds in the area are less than 10 mph, but occasionally experience winds speeds of greater than 30 mph during the months of April and May. Statistics reveal that prevailing winds blow from the northwest-northeast; a secondary trend of wind direction from the southeast is also evident.

2.3 Regulatory Standards

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits for the intention of protecting public health, which includes sensitive populations such as asthmatics, children and elderly. ***Secondary Standards*** set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. ***Carbon Monoxide (CO):*** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.*
2. ***Lead (Pb):*** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. ***Nitrogen Dioxide (NO_2):*** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO_2 is usually visible as a reddish-brown air layer over urban areas. NO_2 along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. ***Particulate Matter (PM_{10} or $PM_{2.5}$):*** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM_{10} particles are 10 microns (µm) or less and $PM_{2.5}$ particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*
5. ***Ozone (O_3)****: is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*
6. ***Sulfur Dioxide (SO_2)****: is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued*

exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

2.3.2 State Standards and Definitions

The State of California Air Resources Board (CARB) sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive then the NAAQS with the exception of the 1-hr NO_2 standards which are stricter under the NAAQS. The CAAQS also restricts four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. ***Visibility Reducing Particles****: Particles in the Air that obstruct the visibility.*
2. ***Sulfates****: are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. ***Hydrogen Sulfide (H_2S)****: is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 Parts per Million (ppm)) can cause a loss of consciousness and possibly death.*
4. ***Vinyl Chloride****: also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the $PM_{2.5}$ standard and many areas are in non-attainment for PM_{10} as well. California therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal Standards[2]**		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.070 ppm (137 µg/m3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		-		
Fine Particulate Matter (PM2.5)[9]	24 Hour	No Separate State Standard		35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	12.0 µg/m3	15 µg/m3	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m3)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)		-	-	-
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m3)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m3)		0.100 ppm[8] (188/ µg/m3)	-	
Sulfur Dioxide (SO_2)[11]	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm[10] (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry (Pararoosaniline Method)[9]
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm[10] (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m3)	
	1 Hour	0.25 ppm (655 µg/m3)		75 ppb (196 µg/m3)	-	
Lead[12,13]	30 Day Average	1.5 µg/m3	Atomic Absorption	-		-
	Calendar Quarter	-		1.5 µg/m3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m3		
Visibility Reducing Particles	8 Hour	See footnote 14				
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3 , as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: (California Air Resources Board, 5/4/2016)

The Imperial County Air Pollution Control District (ICAPCD) is the government agency which regulates stationary sources of air pollution within Imperial County and the SSAB. Currently, the SSAB is in "non-attainment" status for O_3 and serious non-attainment of PM10. Therefore, the ICAPCD developed an Ambient Air Quality Plan (AAQP) to provide control measures to try to achieve attainment status. The AAQP was adopted in 1991. A new NAAQS for ozone was adopted by EPA in 1997 and required modified strategies to decrease higher ozone concentrations.

In order to guide non-attainment areas closer to NAAQS requirements an 8-hr Ozone Air Quality Management Plan (AQMP) was approved by ICAPCD in 2009 and was accepted by the EPA in 2010. Similarly, in 2009 the County revised their SIP to address the serious non-attainment status of PM_{10} and again revised the plan in 2013, 2017 and 2018 (ICAPCD, 2018). The latest 2018 revisions was approved in 2020 and it was found The EPA is also approving the State of California's request to redesignate the Imperial Valley Planning Area from nonattainment to attainment for the PM10 national ambient air quality standards (US EPA, 2020). The criteria pollutant standards are generally attained when each monitor within the region that has had no exceedances during the previous three calendar years. Attainment status within the County of Imperial as of the date of this report is shown below in Table 2.2.

Table 2.2: Imperial County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone	Marginal Nonattainment	Nonattainment
Carbon Monoxide	Unclassified/ Attainment	Attainment
PM10	Attainment	Nonattainment
PM2.5	Moderate Nonattainment – partial*	Attainment
Nitrogen Dioxide	Unclassified/ Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Unclassified/ Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA Guidelines. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

A: Conflict with or obstruct implementation of the applicable air quality plan?
B: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
C: Expose sensitive receptors to substantial pollutant concentrations?
D: Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

2.5 ICAPCD Air Quality Impact Assessment Screening Thresholds (CEQA)

The ICAPCD has established significance thresholds in the 2017 ICAPCD CEQA Handbook for the preparation of Air Quality Impact Assessments (AQIA) (ICAPCD, 2017). The screening criteria within this handbook can be used to determine whether a project's total emissions would result in a significant impact as defined by CEQA. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3.

The CEQA handbook further states that any proposed project with a potential to emit less than the Tier I thresholds during operations may potentially still have adverse impacts on the local air quality and would be required to develop an Initial Study to help the Lead Agency determine whether the project would have a less than significant impact. On the other hand, if the proposed project's operational development fits within the Tier II classification, it is considered to have a significant impact on regional and local air quality. Therefore, Tier II projects are required to implement all standard design measures as well as all feasible discretionary design measures.

Table 2.3: Screening Threshold for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)	
Construction Emissions		
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	150	
Nitrogen Oxide (NO_x)	100	
Carbon Monoxide (CO)	550	
Reactive Organic Gases (ROG)	75	
Operational Emissions		
Pollutant	Tier I (Pounds per Day)	Tier II (Pounds per Day)
PM_{10} and Sulfur Oxide (SO_x)	< 150	150 or greater
NO_x and ROG	< 137	137 or greater
CO	< 550	550 or greater
Level of Significance:	Less Than Significant	Significant Impact
Level of Analysis:	Initial Study	Comprehensive Air Quality Analysis Report
Environmental Document:	Negative Declaration	Mitigated ND or EIR
Source: (ICAPCD, 2017)		

Additionally, ICAPCD defined standard design measures for construction equipment and fugitive PM_{10} must be implemented at all construction sites. The implementation of design measures, as listed in the ICAPCD CEQA handbook, apply to those construction sites which are 5 acres or more for non-residential developments such as the proposed Project. Additionally, in an effort to reduce PM_{10} or Fugitive Dust from ambient air, the Project would be required to develop a dust management plan consistent with Regulation VIII of ICAPCD's Rules and Regulations. Additionally, the project shall not exceed the 20 percent opacity threshold under Rule 801.

Standard Construction Site Design Measures:

1. Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
2. Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
3. Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use.
4. Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

Should the project be sufficiently large enough that operational design measures simply cannot reduce pollutant levels below thresholds of significance, pollutant levels the ICAPCD has adopted the Operation Development Fee as was adopted under Rule 310 which provides the ICAPCD with a sound method for mitigating the emissions produced from the operation of new commercial and residential development projects. Projects unmitigable through standard procedures are assessed a one-time fee for either Ozone Precursors or PM_{10} impacts, which is based upon either the square footage of the commercial development or the number of residential units. Impacts of this sort are calculated based on the assumption that the worst-case daily emissions are allowed for an entire year and then converted to an annual emission equivalent. Emissions exceeding annual thresholds would pay a fair share sum to reduce impacts to below significance.

Similar to construction, the project would be required to implement standard design measures for operations. According to Table 2.3, Tier I, projects generating less than 137 lbs/day of NOx or ROG; less than 150 lbs/day of PM10 or SOX; or less than 550 lbs/day of CO or PM2.5, the Project is required to implement all the Standard Operational design Measures in order to help mitigate or reduce the air quality impacts to a level of insignificance. Theses design measures are identified below:

Standard Operations Site Design Measures:

1. Provide on-site bicycle lockers and/or racks.
2. Provide on-site eating, refrigeration and food vending facilities to reduce lunchtime trips.
3. Provide shower and locker facilities to encourage employees to bike and/or walk to work.
4. Provide for paving a minimum of 100 feet from the property line for commercial driveways that access County paved roads as per County Standard Commercial Driveway Detail 410B (formerly SW-131A).
5. Measures which meet mandatory, prescriptive and/or performance measures as required by Title 24.

Furthermore, to be consistent with the California Air Resource Board, ICAPCD requires PM_{10} emitted by diesel powered construction equipment (DPM) to be analyzed. DPM can potentially increase the cancer risk for nearby residential receptors if any. Generally, sites increasing the cancer risk between one and ten in one million need to

implement toxics best available control technology or impose effective emission limitations, emission control devices or control techniques to reduce the cancer risk. Finally, at no time shall the project increase the cancer risk to over 10 in one million.

2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the County of Imperial and the data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The ICAPCD is responsible for monitoring four sites which collect meteorological and criteria pollutant data used by the district to assist with pollutant forecasting, data analysis and characterization of air pollutant transport. Also, a fifth monitoring locations is located in the City of Calexico which is monitored by CARB.

The monitoring station that is closest to the proposed Project is the 9th Street monitoring station in El Centro, which is approximately 31 miles west of the project site. Table 2.4 on the following page provides the criteria pollutant levels monitored at these two stations for 2016-2018, which is the most current data at this time. The criteria pollutants monitored closest to the Project [Ambient data was obtained from the California Environmental Protection Agency's Air Resources Board Website (ARB, 2020).

Based on review of the ambient data, Both Ozone and PM emissions exceed AAQS and therefore are in non-attainment status. The 8 hour Ozone non-Attainment is considered moderate Non-Attainment while the 24-Hour PM10 is considered "Serious" Non-Attainment. Therefore, to comply with the ICAPCDs SIP and AAQP, the project must implement Best Available Control Measure (BACM) and BACT as outlined in the standard design measures that all project must implement in Section 2.5 of this report above.

Table 2.4: Latest Three-Year Ambient Air Quality data near Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2016	2017	2018
O3 (ppm)	El Centro – 9th Street	1 Hour	0.09 ppm	No Standard	0.108	0.110	0.102
		8 Hour	0.070 ppm	0.070 ppm	0.082	0.092	0.090
PM10 (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	284.9	268.5	253.0
		Annual Arithmetic Mean	20 µg/m3	No Standard	45.0	41.3	46.9
PM2.5 (µg/m3)		24 Hour	No standard -	35 µg/m3	31.3	23.2	22.4
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	9.4	8.4	8.6
NO2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.005	No Data	No Data
		1 Hour	0.18 ppm	0.100 ppm	0.042	0.040	0.032

ppm=Parts per Million
N/A=Not Available for give year

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2016.3.2 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2017. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the Project and uses methodologies presented in the US EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in ***Attachment A*** to this report.

The project site is not located near any offsite sensitive receptors. Based on a cursory review, no homes exist within at least 2 miles from the project site. Therefore, since no sensitive uses are near the project site, a less than significant health risk impact would be expected at all offsite residential unit from the proposed Project. This is consistent with general risk guidelines by the California Air Resources Board for setting new developments within existing sources with the tightest restrictions on the placement of schools. Schools are suggested to be no less than 1,000 feet from diesel sources such as transportation refrigeration units (TRU) (CARB, 2005). The proposed project does not propose schools or sources which include TRUs though for purposes of discussion we want to focus on the setback recommendation of 1,000 feet. The 1,000-foot setback is the most restrictive. Since the nearest receptors are greater than 2 miles from the site impacts would not be expected. Based on this, specific construction related health risks at offsite units are not quantified within this analysis.

3.2 Construction Assumptions

Construction activities for Phase 1 through Phase 4 would occur within a timeframe of 20 to 50 years. Construction emissions over this duration would generally be higher at the start of construction given the regulatory requirements on construction equipment is continuously evolving and using cleaner technologies as time moves forward. Given this, for purposes of this Air Quality analysis, a worst case construction scenario of 3 years was assumed. The construction scenario includes construction of a conceptual scenario which includes multiple uses to include a water/wastewater infrastructure, power lines up to 7.2 miles away, a hotel use, retail uses, additional employee residential uses, research and development uses, renewables such as

photovoltaics or wind turbines to offset electrical usage and additional recreational vehicle parking.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Finish	Quantity
Site Preparation	01/01/2022	02/11/2022	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	02/12/2022	07/29/2022	
Excavators			2
Graders			1
Rubber Tired Dozers			1
Scrapers			2
Tractors/Loaders/Backhoes			2
Paving	07/30/2022	10/07/2022	
Pavers			2
Paving Equipment			2
Rollers			2
Building Construction onsite and offsite utility connection	10/08/2022	02/09/2024	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coatings	12/01/2022	02/09/2024	
Air Compressors			1
This equipment list is based upon equipment inventory within CALLEEMOD 2016.3.2. The quantity and types are based upon discussions with the project applicant.			

3.3 Operational Impacts

Full buildout operations of the GSP is intended to occur over a span of approximately 20 to 50 years. However, in order to provide a conservative assessment, the entire Project was assumed and added to baseline conditions and was assumed to be built out by 2024. This assumption would be conservative as operations beyond 2024 would likely introduce further regulatory requirements by the state and perhaps local

authorities to reduce air quality emissions. Also, technologies to reduce vehicular emissions would likely improve over time as well.

The project would maintain similar operations to that of existing operations though would expand services to existing seasonal patrons recreating at the Glamis Dunes off-highway vehicle (OHV) areas surrounding the project. The project traffic study indicated that the buildout condition would generate roughly 1,750 ADT (LLG Engineers, 2019) over existing operations from this seasonal community and would primarily be Friday through Monday which are the busiest times at Glamis.

The existing use requires diesel generators to supply power and would be phased out once the project has been connected to a constant electricity source. For this analysis, connection to a utility grid as well as renewable offsets are assumed. Also, the project would not utilize natural gas given the resource is not available at the site location.

The Project's proposed land uses are intended to serve the existing patrons of the dunes and will likely operate October through May. The site would be closed the remainder of the year due to the fact that patrons would not likely utilize the facilities due to the long distance from population bases and the extreme heat in the summer.

In order to quantify air quality emissions, a scenario which would both generate 1,750 ADT within the GSP and fit within the conceptual plan of the GSP could include a 50 year buildout as shown in Table 3.2. The areas identified as solar within the GSP would be built out to provide 100 percent renewable operations and would either utilize the grid to provide power stability or would install a battery backup system to accomplish this goal. An air quality model utilizing the CalEEMod 2016.3.2 model was prepared for these trip quantities and scenario and is also shown as ***Attachment A***.

Table 3.2: Operational Use Scenario

Land Use Type	Land Use Sub Type	Land Use Unit Amount
Commercial	Research & Development	10,000 SF
Industrial	Water/Wastewater Plants	1 Unit
Parking	Other Non-Asphalt Surfaces	25 acres
Recreational	Hotel	150 Rooms
Residential	Employee Housing	5 Units
Retail	Shopping or amenities	10,000 SF

4.0 FINDINGS

4.1 Construction Findings

The Project construction dates were estimated based on a worst case construction kickoff starting in 2022 with construction ending sometime in 2024. In all reality construction would occur over a 20 to 50 year period which would less intense. CalEEMod 2016.3.2 was utilized for all construction calculations. A summary of the construction emissions is shown below in Table 4.1. Given these findings, no fugitive dust impacts are expected during construction. Also, it should be noted that all ICAPCD standard design measures will be required as they are required for all construction projects within the County. Based on this, the air quality emissions would be reduced from those presented in Table 4.1.

Table 4.1: Expected Construction Emissions Summary (Pounds per Day)

Year	ROG	NO_x	CO	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2022 (lb/day)	20.05	43.19	61.68	18.21	1.64	19.82	9.97	1.51	11.45
2023 (lb/day)	19.42	35.24	57.78	7.61	0.83	8.44	2.07	0.78	2.85
2024 (lb/day)	19.01	33.82	55.39	7.61	0.73	8.34	2.07	0.69	2.76
Significance Threshold (lb/day)	75	100	550	-	-	150	-	-	150
ICAPCD Impact?	No	No	No	-	-	No	-	-	No

4.2 Operational Findings

Project Buildout is expected within 20 to 50 years however the site was modeled to include buildout in 2024. CalEEMod was also updated to reflect the project traffic projections of 1,750 trips per day (LLG Engineers, 2019). These trips would be expected to be heaviest Friday through Monday and would be operational October through May and the site was modeled assuming GSP scenario shown in Table 3.2 above. Also, it should be noted that daily trips are generated from existing patrons within the Glamis area.

The daily operational pollutants calculated within CalEEMod for both Summer and Winter scenarios as is typical of the model. These emissions are presented in Tables 4.2 and 4.3. Based upon these calculations, the proposed project would not exceed ICAPCD operational air quality significance thresholds and would not be required to implement design measures to comply with CEQA and ICAPCD thresholds. Given this, a less than significant impact is expected. It should be noted that the project would not be operational in the summer months

though CalEEMod software provides these estimates. Since the data is provided, shows that if the project did operate in the summer the emissions would be also less than significant.

Table 4.2: Expected Daily Pollutant Generation (Summer)

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source Emission Estimates (Lb/Day)	6.67	0.05	0.45	0.00	0.01	0.01
Energy Source Emissions (Lb/Day)	0.00	0.00	0.00	0.00	0.00	0.00
Operational Vehicle Emissions (Lb/Day)	4.59	25.89	40.49	0.11	5.48	1.50
Total (Lb/Day)	**11.26**	**25.94**	**40.94**	**0.11**	**5.49**	**1.51**
ICAPCD Thresholds	55	55	550	150	150	150
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod 2016.3.2						

Table 4.3: Expected Daily Pollutant Generation (Winter

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source Emission Estimates (Lb/Day)	6.67	0.05	0.45	0.00	0.01	0.01
Energy Source Emissions (Lb/Day)	0.00	0.00	0.00	0.00	0.00	0.00
Operational Vehicle Emissions (Lb/Day)	3.43	25.53	34.60	0.10	5.48	1.50
Total (Lb/Day)	**10.11**	**25.57**	**35.05**	**0.10**	**5.49**	**1.51**
ICAPCD Thresholds	55	55	550	150	150	150
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod 2016.3.2						

4.3 Odor Impact Findings

The proposed project is not located around sensitive offsite residential receptors. Given this, no sensitive receptors would be exposed to odors either short or long term from the proposed project. Therefore, a less than significant odor impact is expected. It should be noted that the project would create onsite employee housing. These homes are accessory items to the project site. These units may be exposed to short term odors from construction activities though because they are short term, a less than significant odor impact would be expected.

4.4 Cumulative Impact Findings

Cumulative impacts would exist when either there are direct air quality impacts or when multiple construction projects occur within the same area simultaneously. To illustrate this, if a project was to produce air quality emissions simultaneous to a nearby construction project the addition of both project emissions to the environment could exceed significance thresholds. For this project, the construction emissions were found to be less than significant as shown in Table 4.1 above. If a nearby project was to be under construction at the same time, that project would need to produce an additive amount of emissions close to the project site such that emissions would exceed thresholds.

Based on review of the surrounding area, no significant cumulative construction projects have been identified. Given this, no significant cumulative construction impact is expected.

The Project GSP seeks to was found to generate less than significant operational air quality impacts. Also, the GSP is located and contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development and creation of a Specific Plan in accordance with GSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. The existing zoning designation for the project site is Open Space/Preservation (S-2) and a very small area that is General Commercial (C-2). The general area of the Glamis Beach Store (within APN 039-310-029) is zoned as C-2, while the remainder of the project site is zoned as S-2.

The proposed GSP includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning based upon different levels of allowable land use intensity. Also, the GSP proposes a Change of Zone from S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1- acre parcel on the southeast side of the project site.

For purposes of analyzing consistency with the AQMP/SIP, it may be assumed that if a proposed project would have vehicle trip generation substantially greater than anticipated in the General Plan, then the proposed project would conflict with the AQMP/SIP.

The GSP has been designed and would be developed in accordance with GSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. Given this, since the proposed project would not have any significant direct impacts and would not have any significant cumulative impacts, the project would not conflict with either the County's AQMP or SIP.

4.5 Conclusion of Findings

Based on this analysis, no construction or operational impacts are expected and no mitigation is required.

5.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the air quality environment and impacts within and surrounding the GSP Project. The information contained in this report was based on the best available data at the time of preparation.

DRAFT

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Date November 16, 2020

ATTACHMENT A

CalEEMod Construction and Operational Air Quality Emissions

Glamis GSP

Imperial County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	10.00	1000sqft	72.00	10,000.00	0
User Defined Industrial	1.00	User Defined Unit	10.00	1,000.00	0
Other Non-Asphalt Surfaces	25.00	Acre	25.00	1,089,000.00	0
Hotel	150.00	Room	10.00	217,800.00	0
Apartments Low Rise	5.00	Dwelling Unit	10.00	5,000.00	16
Strip Mall	10.00	1000sqft	15.00	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	1270.9	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - estimated GSP

Construction Phase - cs

Off-road Equipment -

On-road Fugitive Dust - Roadways to and from the site from workers are all paved.

Grading -

Vehicle Trips - traffic 1750 ADT on weekends and Monday and Friday and 50% During Tues, Wed, Thur

Road Dust - Access to project via paved roads

Woodstoves -

Energy Use - Natural Gas will not be provided or used onsite

Water And Wastewater -

Energy Mitigation - Project would provide 100% renewable energy between California's Renewable Portfolio (RPS) requirments and onsite renwable energy production

Trips and VMT - Rural Assumption used for construction trip length

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	120.00	30.00
tblConstructionPhase	NumDays	310.00	120.00
tblConstructionPhase	NumDays	220.00	50.00
tblConstructionPhase	NumDays	3,100.00	350.00
tblConstructionPhase	NumDays	220.00	312.00
tblEnergyUse	NT24NG	6,030.00	0.00
tblEnergyUse	NT24NG	4.86	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	NT24NG	0.30	0.00
tblEnergyUse	T24NG	9,544.50	0.00

tblEnergyUse	T24NG	55.15	0.00
tblEnergyUse	T24NG	15.36	0.00
tblEnergyUse	T24NG	1.92	0.00
tblLandUse	LandUseSquareFeet	0.00	1,000.00
tblLandUse	LotAcreage	0.23	72.00
tblLandUse	LotAcreage	0.00	10.00
tblLandUse	LotAcreage	5.00	10.00
tblLandUse	LotAcreage	0.31	10.00
tblLandUse	LotAcreage	0.23	15.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblRoadDust	RoadPercentPave	50	100
tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	VendorTripLength	8.90	11.90

tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	4.00
tblVehicleTrips	ST_TR	8.19	8.00
tblVehicleTrips	ST_TR	1.90	8.00
tblVehicleTrips	ST_TR	42.04	45.00
tblVehicleTrips	SU_TR	6.07	4.00
tblVehicleTrips	SU_TR	5.95	8.00
tblVehicleTrips	SU_TR	1.11	8.00
tblVehicleTrips	SU_TR	20.43	45.00
tblVehicleTrips	WD_TR	6.59	2.80
tblVehicleTrips	WD_TR	8.17	2.80
tblVehicleTrips	WD_TR	8.11	2.80
tblVehicleTrips	WD_TR	44.32	31.50

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	20.0532	43.1897	61.6800	0.1662	18.2059	1.6358	19.8193	9.9677	1.5050	11.4521	0.0000	16,804.4335	16,804.4335	1.9550	0.0000	16,838.0984
2023	19.4195	35.2358	57.7751	0.1625	7.6120	0.8253	8.4373	2.0734	0.7806	2.8539	0.0000	16,433.1741	16,433.1741	1.2185	0.0000	16,463.6355
2024	19.0091	33.8224	55.3860	0.1607	7.6120	0.7281	8.3401	2.0734	0.6883	2.7617	0.0000	16,258.5530	16,258.5530	1.1897	0.0000	16,288.2964
Maximum	**20.0532**	**43.1897**	**61.6800**	**0.1662**	**18.2059**	**1.6358**	**19.8193**	**9.9677**	**1.5050**	**11.4521**	**0.0000**	**16,804.4335**	**16,804.4335**	**1.9550**	**0.0000**	**16,838.0984**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	20.0532	43.1897	61.6800	0.1662	18.2059	1.6358	19.8193	9.9677	1.5050	11.4521	0.0000	16,804.4335	16,804.4335	1.9550	0.0000	16,838.0984
2023	19.4195	35.2358	57.7751	0.1625	7.6120	0.8253	8.4373	2.0734	0.7806	2.8539	0.0000	16,433.1741	16,433.1741	1.2185	0.0000	16,463.6355
2024	19.0091	33.8224	55.3860	0.1607	7.6120	0.7281	8.3401	2.0734	0.6883	2.7617	0.0000	16,258.5530	16,258.5530	1.1897	0.0000	16,288.2964
Maximum	**20.0532**	**43.1897**	**61.6800**	**0.1662**	**18.2059**	**1.6358**	**19.8193**	**9.9677**	**1.5050**	**11.4521**	**0.0000**	**16,804.4335**	**16,804.4335**	**1.9550**	**0.0000**	**16,838.0984**

Glamis GSP - Imperial County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.6736	0.0474	0.4504	2.9000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	54.9445	54.9445	1.8600e-003	9.9000e-004	55.2869
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.5850	25.8923	40.4880	0.1067	5.4352	0.0454	5.4806	1.4574	0.0424	1.4998		10,923.4977	10,923.4977	0.7861		10,943.1491
Total	**11.2586**	**25.9397**	**40.9384**	**0.1070**	**5.4352**	**0.0512**	**5.4864**	**1.4574**	**0.0482**	**1.5056**	**0.0000**	**10,978.4422**	**10,978.4422**	**0.7879**	**9.9000e-004**	**10,998.4360**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.6736	0.0474	0.4504	2.9000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	54.9445	54.9445	1.8600e-003	9.9000e-004	55.2869
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.5850	25.8923	40.4880	0.1067	5.4352	0.0454	5.4806	1.4574	0.0424	1.4998		10,923.4977	10,923.4977	0.7861		10,943.1491
Total	**11.2586**	**25.9397**	**40.9384**	**0.1070**	**5.4352**	**0.0512**	**5.4864**	**1.4574**	**0.0482**	**1.5056**	**0.0000**	**10,978.4422**	**10,978.4422**	**0.7879**	**9.9000e-004**	**10,998.4360**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2022	2/11/2022	5	30	
2	Grading	Grading	2/12/2022	7/29/2022	5	120	
3	Paving	Paving	7/30/2022	10/7/2022	5	50	
4	Building Construction including overhead power lines	Building Construction	10/8/2022	2/9/2024	5	350	
5	Architectural Coating	Architectural Coating	12/1/2022	2/9/2024	5	312	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 300

Acres of Paving: 25

Residential Indoor: 10,125; Residential Outdoor: 3,375; Non-Residential Indoor: 358,200; Non-Residential Outdoor: 119,400; Striped Parking Area: 65,340 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction including overhead power lines	Cranes	1	7.00	231	0.29
Building Construction including overhead power lines	Forklifts	3	8.00	89	0.20
Building Construction including overhead power lines	Generator Sets	1	8.00	84	0.74
Building Construction including overhead power lines	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction including overhead power lines	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction including overhead po	9	559.00	218.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	112.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1323	0.0865	1.0031	1.3200e-003	0.1397	8.3000e-004	0.1405	0.0371	7.6000e-004	0.0378		130.9536	130.9536	9.7300e-003		131.1967
Total	**0.1323**	**0.0865**	**1.0031**	**1.3200e-003**	**0.1397**	**8.3000e-004**	**0.1405**	**0.0371**	**7.6000e-004**	**0.0378**		**130.9536**	**130.9536**	**9.7300e-003**		**131.1967**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1323	0.0865	1.0031	1.3200e-003	0.1397	8.3000e-004	0.1405	0.0371	7.6000e-004	0.0378		130.9536	130.9536	9.7300e-003		131.1967
Total	**0.1323**	**0.0865**	**1.0031**	**1.3200e-003**	**0.1397**	**8.3000e-004**	**0.1405**	**0.0371**	**7.6000e-004**	**0.0378**		**130.9536**	**130.9536**	**9.7300e-003**		**131.1967**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1470	0.0962	1.1146	1.4700e-003	0.1552	9.2000e-004	0.1561	0.0412	8.5000e-004	0.0420		145.5040	145.5040	0.0108		145.7741
Total	**0.1470**	**0.0962**	**1.1146**	**1.4700e-003**	**0.1552**	**9.2000e-004**	**0.1561**	**0.0412**	**8.5000e-004**	**0.0420**		**145.5040**	**145.5040**	**0.0108**		**145.7741**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1470	0.0962	1.1146	1.4700e-003	0.1552	9.2000e-004	0.1561	0.0412	8.5000e-004	0.0420		145.5040	145.5040	0.0108		145.7741
Total	**0.1470**	**0.0962**	**1.1146**	**1.4700e-003**	**0.1552**	**9.2000e-004**	**0.1561**	**0.0412**	**8.5000e-004**	**0.0420**		**145.5040**	**145.5040**	**0.0108**		**145.7741**

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.4 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1103	0.0721	0.8359	1.1000e-003	0.1164	6.9000e-004	0.1171	0.0309	6.4000e-004	0.0315		109.1280	109.1280	8.1000e-003		109.3306
Total	**0.1103**	**0.0721**	**0.8359**	**1.1000e-003**	**0.1164**	**6.9000e-004**	**0.1171**	**0.0309**	**6.4000e-004**	**0.0315**		**109.1280**	**109.1280**	**8.1000e-003**		**109.3306**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.4 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1103	0.0721	0.8359	1.1000e-003	0.1164	6.9000e-004	0.1171	0.0309	6.4000e-004	0.0315		109.1280	109.1280	8.1000e-003		109.3306
Total	**0.1103**	**0.0721**	**0.8359**	**1.1000e-003**	**0.1164**	**6.9000e-004**	**0.1171**	**0.0309**	**6.4000e-004**	**0.0315**		**109.1280**	**109.1280**	**8.1000e-003**		**109.3306**

3.5 Building Construction including overhead power lines - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction including overhead power lines - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9100	22.9395	6.1094	0.0869	2.4058	0.0627	2.4684	0.6924	0.0599	0.7523		9,086.9935	9,086.9935	0.3538		9,095.8380
Worker	4.1097	2.6876	31.1520	0.0411	4.3372	0.0258	4.3630	1.1505	0.0237	1.1742		4,066.8361	4,066.8361	0.3020		4,074.3869
Total	**5.0198**	**25.6271**	**37.2615**	**0.1280**	**6.7430**	**0.0884**	**6.8314**	**1.8429**	**0.0836**	**1.9265**		**13,153.8296**	**13,153.8296**	**0.6558**		**13,170.2249**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction including overhead power lines - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9100	22.9395	6.1094	0.0869	2.4058	0.0627	2.4684	0.6924	0.0599	0.7523		9,086.9935	9,086.9935	0.3538		9,095.8380
Worker	4.1097	2.6876	31.1520	0.0411	4.3372	0.0258	4.3630	1.1505	0.0237	1.1742		4,066.8361	4,066.8361	0.3020		4,074.3869
Total	**5.0198**	**25.6271**	**37.2615**	**0.1280**	**6.7430**	**0.0884**	**6.8314**	**1.8429**	**0.0836**	**1.9265**		**13,153.8296**	**13,153.8296**	**0.6558**		**13,170.2249**

3.5 Building Construction including overhead power lines - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction including overhead power lines - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7379	16.5733	5.3353	0.0851	2.4058	0.0251	2.4309	0.6924	0.0240	0.7164		8,900.0989	8,900.0989	0.2617		8,906.6405
Worker	3.8471	2.4781	28.6454	0.0395	4.3372	0.0247	4.3620	1.1505	0.0228	1.1733		3,912.5145	3,912.5145	0.2767		3,919.4314
Total	**4.5850**	**19.0514**	**33.9806**	**0.1247**	**6.7430**	**0.0498**	**6.7928**	**1.8429**	**0.0467**	**1.8896**		**12,812.6134**	**12,812.6134**	**0.5383**		**12,826.0718**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction including overhead power lines - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7379	16.5733	5.3353	0.0851	2.4058	0.0251	2.4309	0.6924	0.0240	0.7164		8,900.0989	8,900.0989	0.2617		8,906.6405
Worker	3.8471	2.4781	28.6454	0.0395	4.3372	0.0247	4.3620	1.1505	0.0228	1.1733		3,912.5145	3,912.5145	0.2767		3,919.4314
Total	**4.5850**	**19.0514**	**33.9806**	**0.1247**	**6.7430**	**0.0498**	**6.7928**	**1.8429**	**0.0467**	**1.8896**		**12,812.6134**	**12,812.6134**	**0.5383**		**12,826.0718**

3.5 Building Construction including overhead power lines - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction including overhead power lines - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7101	16.3796	4.9883	0.0848	2.4058	0.0247	2.4305	0.6924	0.0237	0.7161		8,870.7953	8,870.7953	0.2570		8,877.2212
Worker	3.6218	2.3162	27.0093	0.0383	4.3372	0.0242	4.3615	1.1505	0.0223	1.1728		3,791.0454	3,791.0454	0.2603		3,797.5539
Total	**4.3319**	**18.6958**	**31.9976**	**0.1231**	**6.7430**	**0.0490**	**6.7920**	**1.8429**	**0.0460**	**1.8889**		**12,661.8406**	**12,661.8406**	**0.5174**		**12,674.7751**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction including overhead power lines - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7101	16.3796	4.9883	0.0848	2.4058	0.0247	2.4305	0.6924	0.0237	0.7161		8,870.7953	8,870.7953	0.2570		8,877.2212
Worker	3.6218	2.3162	27.0093	0.0383	4.3372	0.0242	4.3615	1.1505	0.0223	1.1728		3,791.0454	3,791.0454	0.2603		3,797.5539
Total	**4.3319**	**18.6958**	**31.9976**	**0.1231**	**6.7430**	**0.0490**	**6.7920**	**1.8429**	**0.0460**	**1.8889**		**12,661.8406**	**12,661.8406**	**0.5174**		**12,674.7751**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**12.5038**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.8234	0.5385	6.2416	8.2400e-003	0.8690	5.1600e-003	0.8742	0.2305	4.7500e-003	0.2353		814.8223	814.8223	0.0605		816.3351
Total	**0.8234**	**0.5385**	**6.2416**	**8.2400e-003**	**0.8690**	**5.1600e-003**	**0.8742**	**0.2305**	**4.7500e-003**	**0.2353**		**814.8223**	**814.8223**	**0.0605**		**816.3351**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**12.5038**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.8234	0.5385	6.2416	8.2400e-003	0.8690	5.1600e-003	0.8742	0.2305	4.7500e-003	0.2353		814.8223	814.8223	0.0605		816.3351
Total	**0.8234**	**0.5385**	**6.2416**	**8.2400e-003**	**0.8690**	**5.1600e-003**	**0.8742**	**0.2305**	**4.7500e-003**	**0.2353**		**814.8223**	**814.8223**	**0.0605**		**816.3351**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**12.4909**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7708	0.4965	5.7393	7.9200e-003	0.8690	4.9600e-003	0.8740	0.2305	4.5600e-003	0.2351		783.9027	783.9027	0.0554		785.2886
Total	**0.7708**	**0.4965**	**5.7393**	**7.9200e-003**	**0.8690**	**4.9600e-003**	**0.8740**	**0.2305**	**4.5600e-003**	**0.2351**		**783.9027**	**783.9027**	**0.0554**		**785.2886**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**12.4909**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7708	0.4965	5.7393	7.9200e-003	0.8690	4.9600e-003	0.8740	0.2305	4.5600e-003	0.2351		783.9027	783.9027	0.0554		785.2886
Total	**0.7708**	**0.4965**	**5.7393**	**7.9200e-003**	**0.8690**	**4.9600e-003**	**0.8740**	**0.2305**	**4.5600e-003**	**0.2351**		**783.9027**	**783.9027**	**0.0554**		**785.2886**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**12.4800**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7257	0.4641	5.4115	7.6700e-003	0.8690	4.8600e-003	0.8739	0.2305	4.4700e-003	0.2350		759.5654	759.5654	0.0522		760.8695
Total	**0.7257**	**0.4641**	**5.4115**	**7.6700e-003**	**0.8690**	**4.8600e-003**	**0.8739**	**0.2305**	**4.4700e-003**	**0.2350**		**759.5654**	**759.5654**	**0.0522**		**760.8695**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**12.4800**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7257	0.4641	5.4115	7.6700e-003	0.8690	4.8600e-003	0.8739	0.2305	4.4700e-003	0.2350		759.5654	759.5654	0.0522		760.8695
Total	**0.7257**	**0.4641**	**5.4115**	**7.6700e-003**	**0.8690**	**4.8600e-003**	**0.8739**	**0.2305**	**4.4700e-003**	**0.2350**		**759.5654**	**759.5654**	**0.0522**		**760.8695**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.5850	25.8923	40.4880	0.1067	5.4352	0.0454	5.4806	1.4574	0.0424	1.4998		10,923.4977	10,923.4977	0.7861		10,943.1491
Unmitigated	4.5850	25.8923	40.4880	0.1067	5.4352	0.0454	5.4806	1.4574	0.0424	1.4998		10,923.4977	10,923.4977	0.7861		10,943.1491

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	14.00	20.00	20.00	26,303	26,303
Hotel	420.00	1,200.00	1200.00	959,819	959,819
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Research & Development	28.00	80.00	80.00	84,349	84,349
Strip Mall	315.00	450.00	450.00	428,283	428,283
User Defined Industrial	0.00	0.00	0.00		
Total	777.00	1,750.00	1,750.00	1,498,754	1,498,754

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	7.30	3.90	3.70	40.00	19.00	41.00	86	11	3
Hotel	6.70	5.00	8.90	19.40	61.60	19.00	58	38	4
Other Non-Asphalt Surfaces	6.70	5.00	8.90	0.00	0.00	0.00	0	0	0
Research & Development	6.70	5.00	8.90	33.00	48.00	19.00	82	15	3
Strip Mall	6.70	5.00	8.90	16.60	64.40	19.00	45	40	15
User Defined Industrial	6.70	5.00	8.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Hotel	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Other Non-Asphalt Surfaces	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Research & Development	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Strip Mall	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
User Defined Industrial	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Glamis GSP - Imperial County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.6736	0.0474	0.4504	2.9000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	54.9445	54.9445	1.8600e-003	9.9000e-004	55.2869
Unmitigated	6.6736	0.0474	0.4504	2.9000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	54.9445	54.9445	1.8600e-003	9.9000e-004	55.2869

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0513					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.9600e-003	0.0424	0.0181	2.7000e-004		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	54.1588	54.1588	1.0400e-003	9.9000e-004	54.4807
Landscaping	0.0142	4.9300e-003	0.4323	2.0000e-005		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003		0.7857	0.7857	8.2000e-004		0.8063
Total	**6.6736**	**0.0474**	**0.4504**	**2.9000e-004**		**5.7900e-003**	**5.7900e-003**		**5.7900e-003**	**5.7900e-003**	**0.0000**	**54.9445**	**54.9445**	**1.8600e-003**	**9.9000e-004**	**55.2869**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0513					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.9600e-003	0.0424	0.0181	2.7000e-004		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	54.1588	54.1588	1.0400e-003	9.9000e-004	54.4807
Landscaping	0.0142	4.9300e-003	0.4323	2.0000e-005		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003		0.7857	0.7857	8.2000e-004		0.8063
Total	**6.6736**	**0.0474**	**0.4504**	**2.9000e-004**		**5.7900e-003**	**5.7900e-003**		**5.7900e-003**	**5.7900e-003**	**0.0000**	**54.9445**	**54.9445**	**1.8600e-003**	**9.9000e-004**	**55.2869**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Glamis GSP

Imperial County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	10.00	1000sqft	72.00	10,000.00	0
User Defined Industrial	1.00	User Defined Unit	10.00	1,000.00	0
Other Non-Asphalt Surfaces	25.00	Acre	25.00	1,089,000.00	0
Hotel	150.00	Room	10.00	217,800.00	0
Apartments Low Rise	5.00	Dwelling Unit	10.00	5,000.00	16
Strip Mall	10.00	1000sqft	15.00	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	1270.9	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - estimated GSP

Construction Phase - cs

Off-road Equipment -

On-road Fugitive Dust - Roadways to and from the site from workers are all paved.

Grading -

Vehicle Trips - traffic 1750 ADT on weekends and Monday and Friday and 50% During Tues, Wed, Thur

Road Dust - Access to project via paved roads

Woodstoves -

Energy Use - Natural Gas will not be provided or used onsite

Water And Wastewater -

Energy Mitigation - Project would provide 100% renewable energy between California's Renewable Portfolio (RPS) requirments and onsite renwable energy production

Trips and VMT - Rural Assumption used for construction trip length

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	120.00	30.00
tblConstructionPhase	NumDays	310.00	120.00
tblConstructionPhase	NumDays	220.00	50.00
tblConstructionPhase	NumDays	3,100.00	350.00
tblConstructionPhase	NumDays	220.00	312.00
tblEnergyUse	NT24NG	6,030.00	0.00
tblEnergyUse	NT24NG	4.86	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	NT24NG	0.30	0.00
tblEnergyUse	T24NG	9,544.50	0.00

tblEnergyUse	T24NG	55.15	0.00
tblEnergyUse	T24NG	15.36	0.00
tblEnergyUse	T24NG	1.92	0.00
tblLandUse	LandUseSquareFeet	0.00	1,000.00
tblLandUse	LotAcreage	0.23	72.00
tblLandUse	LotAcreage	0.00	10.00
tblLandUse	LotAcreage	5.00	10.00
tblLandUse	LotAcreage	0.31	10.00
tblLandUse	LotAcreage	0.23	15.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblRoadDust	RoadPercentPave	50	100
tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	VendorTripLength	8.90	11.90

tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	4.00
tblVehicleTrips	ST_TR	8.19	8.00
tblVehicleTrips	ST_TR	1.90	8.00
tblVehicleTrips	ST_TR	42.04	45.00
tblVehicleTrips	SU_TR	6.07	4.00
tblVehicleTrips	SU_TR	5.95	8.00
tblVehicleTrips	SU_TR	1.11	8.00
tblVehicleTrips	SU_TR	20.43	45.00
tblVehicleTrips	WD_TR	6.59	2.80
tblVehicleTrips	WD_TR	8.17	2.80
tblVehicleTrips	WD_TR	8.11	2.80
tblVehicleTrips	WD_TR	44.32	31.50

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	19.3075	43.7594	52.3254	0.1556	18.2059	1.6358	19.8193	9.9677	1.5050	11.4521	0.0000	15,745.9032	15,745.9032	1.9528	0.0000	15,778.7451
2023	18.7303	35.4593	49.0108	0.1523	7.6120	0.8260	8.4380	2.0734	0.7812	2.8545	0.0000	15,412.0673	15,412.0673	1.1812	0.0000	15,441.5971
2024	18.3768	34.0111	47.0768	0.1508	7.6120	0.7286	8.3407	2.0734	0.6888	2.7622	0.0000	15,263.2578	15,263.2578	1.1572	0.0000	15,292.1871
Maximum	**19.3075**	**43.7594**	**52.3254**	**0.1556**	**18.2059**	**1.6358**	**19.8193**	**9.9677**	**1.5050**	**11.4521**	**0.0000**	**15,745.9032**	**15,745.9032**	**1.9528**	**0.0000**	**15,778.7451**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	19.3075	43.7594	52.3254	0.1556	18.2059	1.6358	19.8193	9.9677	1.5050	11.4521	0.0000	15,745.9032	15,745.9032	1.9528	0.0000	15,778.7451
2023	18.7303	35.4593	49.0108	0.1523	7.6120	0.8260	8.4380	2.0734	0.7812	2.8545	0.0000	15,412.0673	15,412.0673	1.1812	0.0000	15,441.5971
2024	18.3768	34.0111	47.0768	0.1508	7.6120	0.7286	8.3407	2.0734	0.6888	2.7622	0.0000	15,263.2578	15,263.2578	1.1572	0.0000	15,292.1871
Maximum	**19.3075**	**43.7594**	**52.3254**	**0.1556**	**18.2059**	**1.6358**	**19.8193**	**9.9677**	**1.5050**	**11.4521**	**0.0000**	**15,745.9032**	**15,745.9032**	**1.9528**	**0.0000**	**15,778.7451**

Glamis GSP - Imperial County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.6736	0.0474	0.4504	2.9000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	54.9445	54.9445	1.8600e-003	9.9000e-004	55.2869
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	3.4337	25.5250	34.5998	0.0955	5.4352	0.0465	5.4817	1.4574	0.0435	1.5008		9,786.7305	9,786.7305	0.7967		9,806.6479
Total	**10.1073**	**25.5723**	**35.0502**	**0.0958**	**5.4352**	**0.0523**	**5.4875**	**1.4574**	**0.0493**	**1.5066**	**0.0000**	**9,841.6750**	**9,841.6750**	**0.7986**	**9.9000e-004**	**9,861.9348**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.6736	0.0474	0.4504	2.9000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	54.9445	54.9445	1.8600e-003	9.9000e-004	55.2869
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	3.4337	25.5250	34.5998	0.0955	5.4352	0.0465	5.4817	1.4574	0.0435	1.5008		9,786.7305	9,786.7305	0.7967		9,806.6479
Total	**10.1073**	**25.5723**	**35.0502**	**0.0958**	**5.4352**	**0.0523**	**5.4875**	**1.4574**	**0.0493**	**1.5066**	**0.0000**	**9,841.6750**	**9,841.6750**	**0.7986**	**9.9000e-004**	**9,861.9348**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2022	2/11/2022	5	30	
2	Grading	Grading	2/12/2022	7/29/2022	5	120	
3	Paving	Paving	7/30/2022	10/7/2022	5	50	
4	Building Construction including overhead power lines	Building Construction	10/8/2022	2/9/2024	5	350	
5	Architectural Coating	Architectural Coating	12/1/2022	2/9/2024	5	312	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 300

Acres of Paving: 25

Residential Indoor: 10,125; Residential Outdoor: 3,375; Non-Residential Indoor: 358,200; Non-Residential Outdoor: 119,400; Striped Parking Area: 65,340 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction including overhead power lines	Cranes	1	7.00	231	0.29
Building Construction including overhead power lines	Forklifts	3	8.00	89	0.20
Building Construction including overhead power lines	Generator Sets	1	8.00	84	0.74
Building Construction including overhead power lines	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction including overhead power lines	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction including overhead po	9	559.00	218.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	112.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1115	0.0907	0.7296	1.1100e-003	0.1397	8.3000e-004	0.1405	0.0371	7.6000e-004	0.0378		109.6630	109.6630	7.7400e-003		109.8566
Total	**0.1115**	**0.0907**	**0.7296**	**1.1100e-003**	**0.1397**	**8.3000e-004**	**0.1405**	**0.0371**	**7.6000e-004**	**0.0378**		**109.6630**	**109.6630**	**7.7400e-003**		**109.8566**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1115	0.0907	0.7296	1.1100e-003	0.1397	8.3000e-004	0.1405	0.0371	7.6000e-004	0.0378		109.6630	109.6630	7.7400e-003		109.8566
Total	**0.1115**	**0.0907**	**0.7296**	**1.1100e-003**	**0.1397**	**8.3000e-004**	**0.1405**	**0.0371**	**7.6000e-004**	**0.0378**		**109.6630**	**109.6630**	**7.7400e-003**		**109.8566**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1238	0.1008	0.8107	1.2300e-003	0.1552	9.2000e-004	0.1561	0.0412	8.5000e-004	0.0420		121.8478	121.8478	8.6000e-003		122.0628
Total	**0.1238**	**0.1008**	**0.8107**	**1.2300e-003**	**0.1552**	**9.2000e-004**	**0.1561**	**0.0412**	**8.5000e-004**	**0.0420**		**121.8478**	**121.8478**	**8.6000e-003**		**122.0628**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1238	0.1008	0.8107	1.2300e-003	0.1552	9.2000e-004	0.1561	0.0412	8.5000e-004	0.0420		121.8478	121.8478	8.6000e-003		122.0628
Total	**0.1238**	**0.1008**	**0.8107**	**1.2300e-003**	**0.1552**	**9.2000e-004**	**0.1561**	**0.0412**	**8.5000e-004**	**0.0420**		**121.8478**	**121.8478**	**8.6000e-003**		**122.0628**

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.4 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0929	0.0756	0.6080	9.2000e-004	0.1164	6.9000e-004	0.1171	0.0309	6.4000e-004	0.0315		91.3858	91.3858	6.4500e-003		91.5471
Total	**0.0929**	**0.0756**	**0.6080**	**9.2000e-004**	**0.1164**	**6.9000e-004**	**0.1171**	**0.0309**	**6.4000e-004**	**0.0315**		**91.3858**	**91.3858**	**6.4500e-003**		**91.5471**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.4 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0929	0.0756	0.6080	9.2000e-004	0.1164	6.9000e-004	0.1171	0.0309	6.4000e-004	0.0315		91.3858	91.3858	6.4500e-003		91.5471
Total	**0.0929**	**0.0756**	**0.6080**	**9.2000e-004**	**0.1164**	**6.9000e-004**	**0.1171**	**0.0309**	**6.4000e-004**	**0.0315**		**91.3858**	**91.3858**	**6.4500e-003**		**91.5471**

3.5 Building Construction including overhead power lines - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction including overhead power lines - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9429	23.3538	6.9489	0.0844	2.4058	0.0644	2.4702	0.6924	0.0616	0.7540		8,822.1295	8,822.1295	0.3948		8,831.9988
Worker	3.4611	2.8170	22.6595	0.0344	4.3372	0.0258	4.3630	1.1505	0.0237	1.1742		3,405.6447	3,405.6447	0.2405		3,411.6561
Total	**4.4040**	**26.1708**	**29.6084**	**0.1188**	**6.7430**	**0.0902**	**6.8332**	**1.8429**	**0.0853**	**1.9282**		**12,227.7742**	**12,227.7742**	**0.6352**		**12,243.6549**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction including overhead power lines - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9429	23.3538	6.9489	0.0844	2.4058	0.0644	2.4702	0.6924	0.0616	0.7540		8,822.1295	8,822.1295	0.3948		8,831.9988
Worker	3.4611	2.8170	22.6595	0.0344	4.3372	0.0258	4.3630	1.1505	0.0237	1.1742		3,405.6447	3,405.6447	0.2405		3,411.6561
Total	**4.4040**	**26.1708**	**29.6084**	**0.1188**	**6.7430**	**0.0902**	**6.8332**	**1.8429**	**0.0853**	**1.9282**		**12,227.7742**	**12,227.7742**	**0.6352**		**12,243.6549**

3.5 Building Construction including overhead power lines - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction including overhead power lines - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7618	16.6588	5.9793	0.0827	2.4058	0.0257	2.4315	0.6924	0.0246	0.7170		8,642.4564	8,642.4564	0.2909		8,649.7279
Worker	3.2531	2.5931	20.8075	0.0331	4.3372	0.0247	4.3620	1.1505	0.0228	1.1733		3,276.4838	3,276.4838	0.2213		3,282.0165
Total	**4.0149**	**19.2519**	**26.7867**	**0.1157**	**6.7430**	**0.0504**	**6.7935**	**1.8429**	**0.0473**	**1.8902**		**11,918.9403**	**11,918.9403**	**0.5122**		**11,931.7445**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction including overhead power lines - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7618	16.6588	5.9793	0.0827	2.4058	0.0257	2.4315	0.6924	0.0246	0.7170		8,642.4564	8,642.4564	0.2909		8,649.7279
Worker	3.2531	2.5931	20.8075	0.0331	4.3372	0.0247	4.3620	1.1505	0.0228	1.1733		3,276.4838	3,276.4838	0.2213		3,282.0165
Total	**4.0149**	**19.2519**	**26.7867**	**0.1157**	**6.7430**	**0.0504**	**6.7935**	**1.8429**	**0.0473**	**1.8902**		**11,918.9403**	**11,918.9403**	**0.5122**		**11,931.7445**

3.5 Building Construction including overhead power lines - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction including overhead power lines - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7343	16.4437	5.6174	0.0824	2.4058	0.0253	2.4311	0.6924	0.0242	0.7166		8,615.6196	8,615.6196	0.2863		8,622.7770
Worker	3.0749	2.4199	19.5629	0.0320	4.3372	0.0242	4.3615	1.1505	0.0223	1.1728		3,174.4629	3,174.4629	0.2088		3,179.6838
Total	**3.8092**	**18.8636**	**25.1803**	**0.1144**	**6.7430**	**0.0496**	**6.7926**	**1.8429**	**0.0465**	**1.8894**		**11,790.0825**	**11,790.0825**	**0.4951**		**11,802.4608**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction including overhead power lines - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7343	16.4437	5.6174	0.0824	2.4058	0.0253	2.4311	0.6924	0.0242	0.7166		8,615.6196	8,615.6196	0.2863		8,622.7770
Worker	3.0749	2.4199	19.5629	0.0320	4.3372	0.0242	4.3615	1.1505	0.0223	1.1728		3,174.4629	3,174.4629	0.2088		3,179.6838
Total	**3.8092**	**18.8636**	**25.1803**	**0.1144**	**6.7430**	**0.0496**	**6.7926**	**1.8429**	**0.0465**	**1.8894**		**11,790.0825**	**11,790.0825**	**0.4951**		**11,802.4608**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**12.5038**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6935	0.5644	4.5400	6.8900e-003	0.8690	5.1600e-003	0.8742	0.2305	4.7500e-003	0.2353		682.3474	682.3474	0.0482		683.5519
Total	**0.6935**	**0.5644**	**4.5400**	**6.8900e-003**	**0.8690**	**5.1600e-003**	**0.8742**	**0.2305**	**4.7500e-003**	**0.2353**		**682.3474**	**682.3474**	**0.0482**		**683.5519**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**12.5038**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6935	0.5644	4.5400	6.8900e-003	0.8690	5.1600e-003	0.8742	0.2305	4.7500e-003	0.2353		682.3474	682.3474	0.0482		683.5519
Total	**0.6935**	**0.5644**	**4.5400**	**6.8900e-003**	**0.8690**	**5.1600e-003**	**0.8742**	**0.2305**	**4.7500e-003**	**0.2353**		**682.3474**	**682.3474**	**0.0482**		**683.5519**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**12.4909**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6518	0.5196	4.1689	6.6200e-003	0.8690	4.9600e-003	0.8740	0.2305	4.5600e-003	0.2351		656.4690	656.4690	0.0443		657.5776
Total	**0.6518**	**0.5196**	**4.1689**	**6.6200e-003**	**0.8690**	**4.9600e-003**	**0.8740**	**0.2305**	**4.5600e-003**	**0.2351**		**656.4690**	**656.4690**	**0.0443**		**657.5776**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**12.4909**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6518	0.5196	4.1689	6.6200e-003	0.8690	4.9600e-003	0.8740	0.2305	4.5600e-003	0.2351		656.4690	656.4690	0.0443		657.5776
Total	**0.6518**	**0.5196**	**4.1689**	**6.6200e-003**	**0.8690**	**4.9600e-003**	**0.8740**	**0.2305**	**4.5600e-003**	**0.2351**		**656.4690**	**656.4690**	**0.0443**		**657.5776**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**12.4800**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6161	0.4849	3.9196	6.4200e-003	0.8690	4.8600e-003	0.8739	0.2305	4.4700e-003	0.2350		636.0284	636.0284	0.0418		637.0744
Total	**0.6161**	**0.4849**	**3.9196**	**6.4200e-003**	**0.8690**	**4.8600e-003**	**0.8739**	**0.2305**	**4.4700e-003**	**0.2350**		**636.0284**	**636.0284**	**0.0418**		**637.0744**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**12.4800**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6161	0.4849	3.9196	6.4200e-003	0.8690	4.8600e-003	0.8739	0.2305	4.4700e-003	0.2350		636.0284	636.0284	0.0418		637.0744
Total	**0.6161**	**0.4849**	**3.9196**	**6.4200e-003**	**0.8690**	**4.8600e-003**	**0.8739**	**0.2305**	**4.4700e-003**	**0.2350**		**636.0284**	**636.0284**	**0.0418**		**637.0744**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4337	25.5250	34.5998	0.0955	5.4352	0.0465	5.4817	1.4574	0.0435	1.5008		9,786.7305	9,786.7305	0.7967		9,806.6479
Unmitigated	3.4337	25.5250	34.5998	0.0955	5.4352	0.0465	5.4817	1.4574	0.0435	1.5008		9,786.7305	9,786.7305	0.7967		9,806.6479

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	14.00	20.00	20.00	26,303	26,303
Hotel	420.00	1,200.00	1200.00	959,819	959,819
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Research & Development	28.00	80.00	80.00	84,349	84,349
Strip Mall	315.00	450.00	450.00	428,283	428,283
User Defined Industrial	0.00	0.00	0.00		
Total	777.00	1,750.00	1,750.00	1,498,754	1,498,754

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	7.30	3.90	3.70	40.00	19.00	41.00	86	11	3
Hotel	6.70	5.00	8.90	19.40	61.60	19.00	58	38	4
Other Non-Asphalt Surfaces	6.70	5.00	8.90	0.00	0.00	0.00	0	0	0
Research & Development	6.70	5.00	8.90	33.00	48.00	19.00	82	15	3
Strip Mall	6.70	5.00	8.90	16.60	64.40	19.00	45	40	15
User Defined Industrial	6.70	5.00	8.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Hotel	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Other Non-Asphalt Surfaces	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Research & Development	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Strip Mall	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
User Defined Industrial	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Glamis GSP - Imperial County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.6736	0.0474	0.4504	2.9000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	54.9445	54.9445	1.8600e-003	9.9000e-004	55.2869
Unmitigated	6.6736	0.0474	0.4504	2.9000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	54.9445	54.9445	1.8600e-003	9.9000e-004	55.2869

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0513					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.9600e-003	0.0424	0.0181	2.7000e-004		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	54.1588	54.1588	1.0400e-003	9.9000e-004	54.4807
Landscaping	0.0142	4.9300e-003	0.4323	2.0000e-005		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003		0.7857	0.7857	8.2000e-004		0.8063
Total	**6.6736**	**0.0474**	**0.4504**	**2.9000e-004**		**5.7900e-003**	**5.7900e-003**		**5.7900e-003**	**5.7900e-003**	**0.0000**	**54.9445**	**54.9445**	**1.8600e-003**	**9.9000e-004**	**55.2869**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0513					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.9600e-003	0.0424	0.0181	2.7000e-004		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	54.1588	54.1588	1.0400e-003	9.9000e-004	54.4807
Landscaping	0.0142	4.9300e-003	0.4323	2.0000e-005		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003		0.7857	0.7857	8.2000e-004		0.8063
Total	**6.6736**	**0.0474**	**0.4504**	**2.9000e-004**		**5.7900e-003**	**5.7900e-003**		**5.7900e-003**	**5.7900e-003**	**0.0000**	**54.9445**	**54.9445**	**1.8600e-003**	**9.9000e-004**	**55.2869**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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C-2 Greenhouse Gas Screening Letter

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November 16, 2020

Chris Moore
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RE: Glamis Specific Plan Greenhouse Gas (GHG) Screening Letter

The purpose of this GHG screening letter is to identify potential GHG impacts which may be created from the construction and operation of the proposed Glamis Specific Plan (GSP) project located on approximately 142-acre project site located within the designated Glamis Specific Plan Area (GSPA). The GSP is located and contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development and creation of a Specific Plan in accordance with GSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. The existing zoning designation for the project site is Open Space/Preservation (S-2) and a small area that is General Commercial (C-2). The general area of the Glamis Beach Store (within APN 039-310-029) is zoned as C-2, while the remainder of the project site is zoned as S-2. The project site is surrounded by the Bureau of Land Management (BLM) land uses on all sides. The site configuration is provided in Figure 1.

The proposed GSP includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning based upon different levels of allowable land use intensity. Also, the GSP proposes a Change of Zone from S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1- acre parcel on the southeast side of the project site. The phasing plan component of the GSP would phase the development so that land uses are developed incrementally over time within the various proposed zones.

Phase One

Phase One would permit uses which could include restaurant(s), bar(s), repair shop(s), a vendor row area and event area. Additionally, the site could be developed with a possible research and development (R&D) facility an RV park and some employee housing. Phase One would also include the construction of water infrastructure to include both potable water treatment to treat ground water as well as a wastewater treatment facility and upgrades to the electrical system which would include connection to power lines located 7.2 miles from the project site and some additional renewable energy to reduce GHG emissions or construction of a 100% renewable energy microgrid (wind or PV including battery backup).

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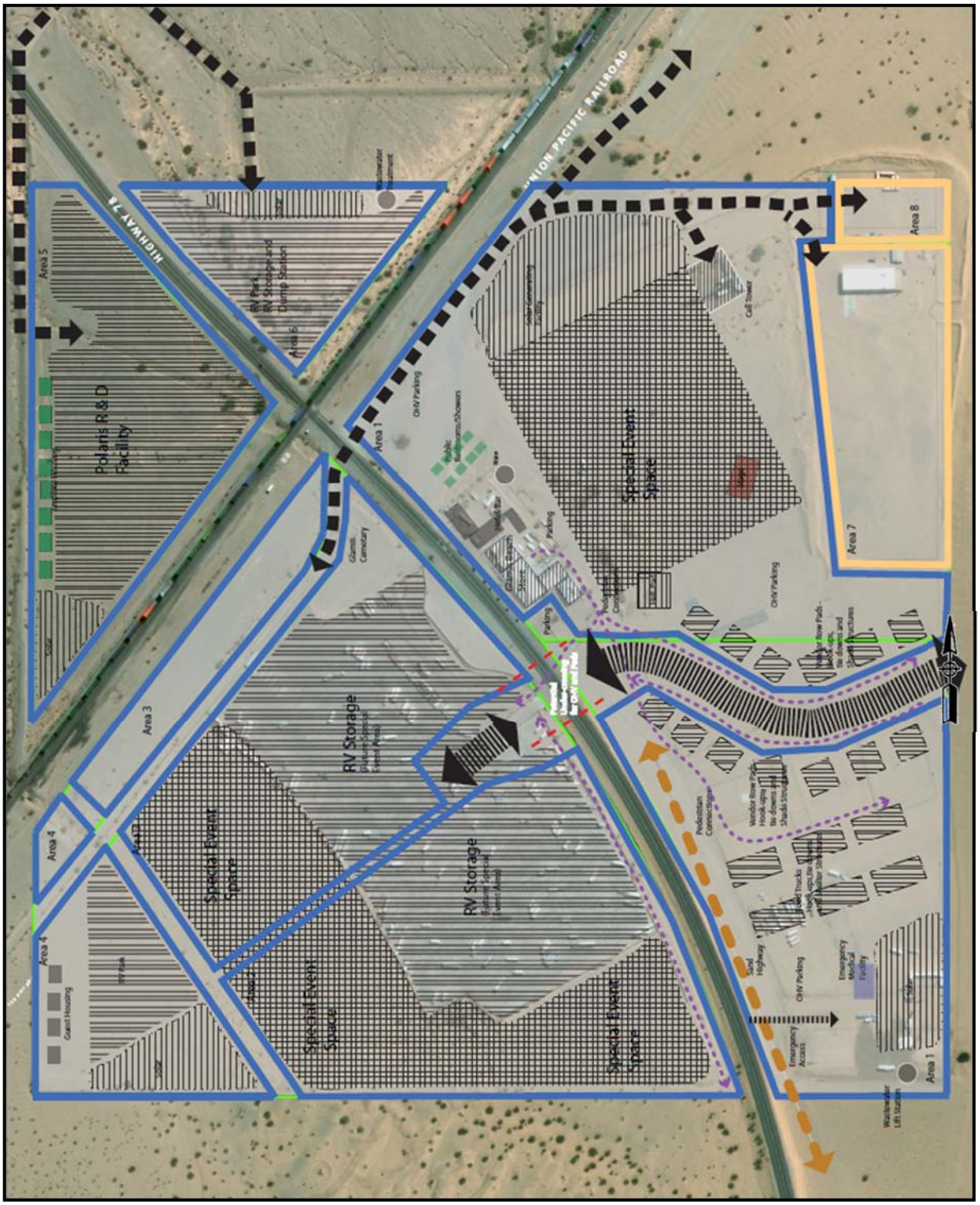
Figure 1: Project Area Overview Map



Source: (The Altum Group, 2019)

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Phase Two

Phase Two would most likely be within Land Use Area 1, immediately west of Phase One. Phase Two development would serve as an extension to development occurring within Phase One by incorporating land uses permitted under the CR Zone similar to those permitted in Phase One. Phase Two would incorporate the Glamis Mainstreet to serve as a circulation corridor for Off-Highway Vehicle (OHV) traffic to and from the dunes and to Phase Four (Areas 2, 3, and 4) located directly north of SR 78.

Phase Three

Phase Three, located on the northeast side of the UPRR and bisected by SR 78, would be located within Land Use Area 5 and Land Use Area 6. No major public use facilities would be considered for development within these two APNs to discourage OHV traffic from crossing the UPPR to access these areas. Phase Three however, would serve for the development of uses relevant to employee housing, RV park, and/or an R&D facility and possible PV Solar array system.

Phase Four

Phase Four, located on the north side of SR 78, would be located within Land Use Areas 2, 3 and 4. The Glamis Mainstreet corridor is proposed to provide an optional circulation interconnection between Phase One and Phase Four. All Phasing as proposed will be impacted by possible requirements that Caltrans may impose along SR 78 and for crossing the UPRR. The Imperial County Transportation Commission (ICTC) is currently conducting a feasibility study for a safe crossing over UPRR for off road vehicles either at SR 78, Wash 10 or some other location, and additional information will be provided once the feasibility study is complete. Overall, the primary objective of the GSP is to formalize the site and provide services and amenities.

Special Events

The GSP area and greater Imperial Sand Dunes area has been historically utilized for OHV recreational events and activities. The applicant has been operating a special recreational event named “Camp RZR” since 2007 that attracts as many as 20,000 visitors each year. This event usually occurs during the weekend before Halloween. In 2008, the County of Imperial issued a Conditional Use Permit (CUP) to the applicant to operate a “seasonal event area” for special events such as Camp RZR on their private property within the ISDRA. Since 2008, the applicant has coordinated with the County, BLM, Imperial County Fire Department, Imperial County Sherriff’s Office, California Highway Patrol and other affected public agencies to ensure that proper special event protocols and procedures are enforced to address key issues such as traffic, safety, emergency procedures, restrooms, and other related special event factors.

The GSP will include provisions for additional special events to be held in addition to the longstanding Camp RZR. In concert with the existing operational protocols, procedures and

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guidelines for special events, the GSP will provide performance standards that will meet the guidelines/requirements of the affected public agencies (i.e., Imperial County Fire Department and Sheriff's Office) to address and ensure compliance with key special event-related issues. Furthermore, the GSP's performance standards will incorporate the BLM's Special Recreation Permit Event Operations Plan Checklist to ensure that operations of the proposed special annual events comply with the special event guidelines of the BLM. Special events that may be held at this site can be sponsored by the owner or by other entities provided they are first approved by the owner. Events can vary and be combined with off-site activities where portions of the event are on site while the remainder is on adjacent BLM lands. These events may include concerts, races, social gatherings, sporting activities, educational activities, training activities, and may include pyrotechnics and other entertainment venues.

GHG Regulations

The State of California Greenhouse Gas laws are based on the "the California Global Warming Solutions Act of 2006" (AB32), requires the California Air Resources Board (CARB) to adopt rules and regulations that would reduce GHG emissions to 1990 levels by 2020 and is outlined by the California Air Resource Board (ARB) (California Air Resource Board, 2014). As part of AB32 (Section 38562-A), the state board shall adopt greenhouse gas emission limits and emission reduction measures before 2011 and enforce these measures starting in 2012.

Currently, greenhouse gas emission limits for projects such as the proposed project, have not been adopted by the State or Imperial County. In the absence of GHG significance thresholds, it's acceptable to utilize thresholds from South Coast Air Quality Management District (SCAQMD) as these thresholds have been utilized throughout imperial county (SCAQMD, 2008). These thresholds state that screening thresholds for industrial should be 10,000 MT/year CO_2e, 3,500 MT/year CO_2e for residential projects and 3,000 MT/year CO_2e for mixed use projects. Given this, using a 3,000 MT/year CO_2e threshold would be recommended.

Greenhouse Gasses contributed from the proposed project are Carbon Dioxide (CO_2), Methane (CH_4), and Nitrous Oxide (N_2O). For purposes of analysis, both CH_4 and N_2O can be converted to an equivalent amount of CO_2 (CO_2e) by multiplying the calculated levels of CH_4 and N_2O by a Global Warming Potential (GWP). The U.S. Environmental Protection Agency publishes GWPs for various GHGs and reports that the GWP for CH_4 and N_2O is 21 and 310, respectively. These are automatically calculated within the GHG estimation model discussed later in this report.

Construction

Construction activities for Phase 1 through Phase 4 would occur within a timeframe of 20 to 50 years. Construction emissions over this duration would generally be higher at the start of construction given the regulatory requirements on construction equipment is continuously evolving using cleaner technologies. Given this, for purposes of this GHG analysis, a worst case construction scenario of 3 years was assumed. The project description calls for the construction

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of a solar or wind farm development with a battery backup system for power reliability and an option to receive power from as far as 7.2 miles away. For power stability, the utility provider would be the most reliable. For purposes of this analysis, it is assumed that the project would both construct renewables to offset all power usage and connect to utility power 7.2 miles away for power stability. The worst case construction schedule is shown in Table 1.

GHG impacts related to construction and daily operations were calculated using the latest CalEEMod 2016.3.2 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2017. The project construction model is provided as **Attachment A**.

Table 1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Finish	Quantity
Site Preparation	01/01/2022	02/11/2022	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	02/12/2022	07/29/2022	
Excavators			2
Graders			1
Rubber Tired Dozers			1
Scrapers			2
Tractors/Loaders/Backhoes			2
Paving	07/30/2022	10/07/2022	
Pavers			2
Paving Equipment			2
Rollers			2
Building Construction onsite and offsite utility	10/08/2022	02/09/2024	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coatings	12/01/2022	02/09/2024	
Air Compressors			1
This equipment list is based upon equipment inventory within CALLEEMOD 2016.3.2. The quantity and types are based upon discussions with the project applicant.			

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Operations

Full buildout operations of the GSP is intended to occur over a span of approximately 20 to 50 years. However, in order to provide a conservative assessment, the entire Project was assumed and added to baseline conditions and was assumed to be built out by 2024. This assumption would be conservative as operations into the future would be reduced as regulatory requirements and technologies to reduce vehicular emissions would improve over time.

The project would maintain similar operations to that of the existing operations though would expand services to the existing seasonal influx of patrons recreating at the Glamis Dunes off-highway vehicle (OHV) areas surrounding the project. For this reason, OHVs are not specifically analyzed. The project traffic study indicated that the buildout condition would generate roughly 1,750 ADT (LLG Engineers, 2019) over existing operations from this seasonal community. Also, it should be noted that the due to the historic travel patterns, the bulk of the traffic would be Friday through Monday.

The existing use requires diesel generators to supply power and would be phased out once the project has been connected to a constant electricity source. As noted above, it is assumed that the project would both construct renewables to offset all power usage and/or connect to utility power 7.2 miles away for power stability. The project could however install batteries which would be a less intense construction alternative. Also, the project would not utilize natural gas given the resource is not available at the site location.

The Project's proposed land uses as shown in Table 2 are intended to serve the existing patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat. Operations are expected during the months of October through May or roughly 67% of the year.

Table 2: Operational Use Scenario

Land Use Type	Land Use Sub Type	Land Use Unit Amount
Commercial	Research & Development	10,000 SF
Industrial	Water/Wastewater Plants	1 Unit
Parking	Other Non-Asphalt Surfaces	25 acres
Recreational	Hotel	150 Rooms
Residential	Employee Housing	5 Units
Retail	Shopping or amenities	10,000 SF

In order to quantify GHG emissions, a scenario which would both generate 1,750 ADT within the GSP and fit within the conceptual plan of the GSP could include a 50 year buildout. The

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areas identified as solar within the GSP would be built out to provide 100 percent renewable operations and would either utilize the grid to provide power stability or would install a battery backup system to accomplish this goal. A GHG operational model utilizing the CalEEMod 2016.3.2 model was prepared for these trip quantities and scenario and is also shown as **Attachment A**.

Project Related Construction Emissions

Construction activities for Phase 1 through Phase 4 would occur within a timeframe of 20 to 50 years. Utilizing the CalEEMod inputs for the model as discussed above, grading and construction of the Project will produce approximately 2,956.83 MT of CO_2e over a three year buildout. Based on SQAQMD methodology, it is recommended to average the construction emissions over the Project life, which is assumed to be 30 years (SCAQMD, 2008). Given this, the annual construction emission for the proposed Project is 98.56 MT of CO_2e per year and is shown in Table 3.

Table 3: Proposed Project Construction CO_2e Emissions Summary MT/Year

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
2021	0.00	862.49	862.49	0.17	0.00	866.83
2022	0.00	1872.25	1872.25	0.14	0.00	1875.75
2023	0.00	213.85	213.85	0.02	0.00	214.25
					Total	**2,956.83**
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						**98.56**

Project Related Operational Emissions

Based on the CalEEMod analysis, the proposed Project buildout would generate 872.85 MT CO2e annually, which is shown in Table 4. These emissions include the design as identified within this report and assume all electrical emissions are offset with renewable sources. The site would be operational roughly 67% of the time. During the season when the facilities are not operational, some energy use is expected though would be minimal. Solar however will produce power year-round. Based on this GHG emissions from energy sources are anticipated to be zero. It should be noted: if the solar offset only 15 percent of the electrical use the project emissions would still be under the 3,000 MT/year CO_2e threshold.

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Table 4: Operational GHG Emissions (MT/Year) – October Through May

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	0.11	0.11	0.00	0.00	0.11
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	678.19	678.19	0.05	0.00	679.46
Waste	12.95	0.00	12.95	0.77	0.00	32.10
Water	2.07	53.63	55.70	0.21	0.01	62.62
Construction Emissions						98.56
Project Total GHG Emissions						**872.85**

Data is presented in decimal format and may have rounding errors.
Data is reduced 67% due to operational year (October to May)

Based upon the findings for the proposed project, neither construction activities nor operational activities would generate yearly GHG emissions in excess of the 3,000 MT/year CO_2e threshold. Therefore, no impacts would be expected. If you have any questions, please do not hesitate to contact me directly at (760) 473-1253.

Sincerely,
Ldn Consulting, Inc.

DRAFT

Jeremy Louden

Attachment A: CalEEMod Model Results

References:

California Air Resource Board. (2014, August 5). *Assembly Bill 32 Overview*. Retrieved 2016, from http://www.arb.ca.gov/: http://www.arb.ca.gov/cc/ab32/ab32.htm

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SCAQMD. (2008). *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans.* SCAQMD. Retrieved from http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf

The Altum Group. (2019). *Glamis Specific Plan Conceptual Site Plan.*

Glamis GSP

Imperial County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	10.00	1000sqft	72.00	10,000.00	0
User Defined Industrial	1.00	User Defined Unit	10.00	1,000.00	0
Other Non-Asphalt Surfaces	25.00	Acre	25.00	1,089,000.00	0
Hotel	150.00	Room	10.00	217,800.00	0
Apartments Low Rise	5.00	Dwelling Unit	10.00	5,000.00	16
Strip Mall	10.00	1000sqft	15.00	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	1270.9	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - estimated GSP

Construction Phase - cs

Off-road Equipment -

On-road Fugitive Dust - Roadways to and from the site from workers are all paved.

Grading -

Vehicle Trips - traffic 1750 ADT on weekends and Monday and Friday and 50% During Tues, Wed, Thur

Road Dust - Access to project via paved roads

Woodstoves -

Energy Use - Natural Gas will not be provided or used onsite

Water And Wastewater -

Energy Mitigation - Project would provide 100% renewable energy between California's Renewable Portfolio (RPS) requirments and onsite renwable energy production

Trips and VMT - Rural Assumption used for construction trip length

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	120.00	30.00
tblConstructionPhase	NumDays	310.00	120.00
tblConstructionPhase	NumDays	220.00	50.00
tblConstructionPhase	NumDays	3,100.00	350.00
tblConstructionPhase	NumDays	220.00	312.00
tblEnergyUse	NT24NG	6,030.00	0.00
tblEnergyUse	NT24NG	4.86	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	NT24NG	0.30	0.00
tblEnergyUse	T24NG	9,544.50	0.00

tblEnergyUse	T24NG	55.15	0.00
tblEnergyUse	T24NG	15.36	0.00
tblEnergyUse	T24NG	1.92	0.00
tblLandUse	LandUseSquareFeet	0.00	1,000.00
tblLandUse	LotAcreage	0.23	72.00
tblLandUse	LotAcreage	0.00	10.00
tblLandUse	LotAcreage	5.00	10.00
tblLandUse	LotAcreage	0.31	10.00
tblLandUse	LotAcreage	0.23	15.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblRoadDust	RoadPercentPave	50	100
tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	VendorTripLength	8.90	11.90

tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	VendorTripLength	8.90	11.90
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblTripsAndVMT	WorkerTripLength	7.30	10.20
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	4.00
tblVehicleTrips	ST_TR	8.19	8.00
tblVehicleTrips	ST_TR	1.90	8.00
tblVehicleTrips	ST_TR	42.04	45.00
tblVehicleTrips	SU_TR	6.07	4.00
tblVehicleTrips	SU_TR	5.95	8.00
tblVehicleTrips	SU_TR	1.11	8.00
tblVehicleTrips	SU_TR	20.43	45.00
tblVehicleTrips	WD_TR	6.59	2.80
tblVehicleTrips	WD_TR	8.17	2.80
tblVehicleTrips	WD_TR	8.11	2.80
tblVehicleTrips	WD_TR	44.32	31.50

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.6333	4.3940	3.9975	9.6000e-003	1.0160	0.1645	1.1805	0.4260	0.1520	0.5780	0.0000	862.4910	862.4910	0.1736	0.0000	866.8307
2023	2.4379	4.6245	6.6747	0.0204	0.9829	0.1073	1.0902	0.2679	0.1015	0.3694	0.0000	1,872.2516	1,872.2516	0.1400	0.0000	1,875.7514
2024	0.2759	0.5120	0.7397	2.3300e-003	0.1134	0.0109	0.1243	0.0309	0.0103	0.0412	0.0000	213.8542	213.8542	0.0158	0.0000	214.2494
Maximum	**2.4379**	**4.6245**	**6.6747**	**0.0204**	**1.0160**	**0.1645**	**1.1805**	**0.4260**	**0.1520**	**0.5780**	**0.0000**	**1,872.2516**	**1,872.2516**	**0.1736**	**0.0000**	**1,875.7514**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.6333	4.3940	3.9975	9.6000e-003	1.0160	0.1645	1.1805	0.4260	0.1520	0.5780	0.0000	862.4904	862.4904	0.1736	0.0000	866.8301
2023	2.4379	4.6245	6.6747	0.0204	0.9829	0.1073	1.0902	0.2679	0.1015	0.3694	0.0000	1,872.2512	1,872.2512	0.1400	0.0000	1,875.7510
2024	0.2759	0.5120	0.7397	2.3300e-003	0.1134	0.0109	0.1243	0.0309	0.0103	0.0412	0.0000	213.8542	213.8542	0.0158	0.0000	214.2494
Maximum	**2.4379**	**4.6245**	**6.6747**	**0.0204**	**1.0160**	**0.1645**	**1.1805**	**0.4260**	**0.1520**	**0.5780**	**0.0000**	**1,872.2512**	**1,872.2512**	**0.1736**	**0.0000**	**1,875.7510**

Glamis GSP - Imperial County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
8	**11-27-2021**	**2-26-2022**	0.7755	0.7755
9	**2-27-2022**	**5-26-2022**	1.3574	1.3574
10	**5-27-2022**	**8-26-2022**	1.1004	1.1004
11	**8-27-2022**	**11-26-2022**	1.0414	1.0414
12	**11-27-2022**	**2-26-2023**	1.8698	1.8698
13	**2-27-2023**	**5-26-2023**	1.7318	1.7318
14	**5-27-2023**	**8-26-2023**	1.7958	1.7958
15	**8-27-2023**	**11-26-2023**	1.7863	1.7863
16	**11-27-2023**	**2-26-2024**	1.4258	1.4258
		Highest	1.8698	1.8698

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2157	5.4000e-004	0.0390	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1698	0.1698	7.0000e-005	0.0000	0.1721
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2,422.9018	2,422.9018	0.0553	0.0114	2,427.6927
Mobile	0.4115	2.8258	3.8069	0.0109	0.5825	4.9600e-003	0.5874	0.1563	4.6400e-003	0.1609	0.0000	1,016.7657	1,016.7657	0.0767	0.0000	1,018.6829
Waste						0.0000	0.0000		0.0000	0.0000	19.4242	0.0000	19.4242	1.1479	0.0000	48.1227
Water						0.0000	0.0000		0.0000	0.0000	3.1054	80.4050	83.5104	0.3208	7.9100e-003	93.8877
Total	**1.6273**	**2.8264**	**3.8459**	**0.0109**	**0.5825**	**5.1800e-003**	**0.5877**	**0.1563**	**4.8600e-003**	**0.1611**	**22.5296**	**3,520.2423**	**3,542.7719**	**1.6008**	**0.0194**	**3,588.5581**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2157	5.4000e-004	0.0390	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1698	0.1698	7.0000e-005	0.0000	0.1721
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.4115	2.8258	3.8069	0.0109	0.5825	4.9600e-003	0.5874	0.1563	4.6400e-003	0.1609	0.0000	1,016.7657	1,016.7657	0.0767	0.0000	1,018.6829
Waste						0.0000	0.0000		0.0000	0.0000	19.4242	0.0000	19.4242	1.1479	0.0000	48.1227
Water						0.0000	0.0000		0.0000	0.0000	3.1054	80.4050	83.5104	0.3208	7.9100e-003	93.8877
Total	**1.6273**	**2.8264**	**3.8459**	**0.0109**	**0.5825**	**5.1800e-003**	**0.5877**	**0.1563**	**4.8600e-003**	**0.1611**	**22.5296**	**1,097.3405**	**1,119.8701**	**1.5455**	**7.9100e-003**	**1,160.8653**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**68.83**	**68.39**	**3.45**	**59.12**	**67.65**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2022	2/11/2022	5	30	
2	Grading	Grading	2/12/2022	7/29/2022	5	120	
3	Paving	Paving	7/30/2022	10/7/2022	5	50	
4	Building Construction including overhead power lines	Building Construction	10/8/2022	2/9/2024	5	350	
5	Architectural Coating	Architectural Coating	12/1/2022	2/9/2024	5	312	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 300

Acres of Paving: 25

Residential Indoor: 10,125; Residential Outdoor: 3,375; Non-Residential Indoor: 358,200; Non-Residential Outdoor: 119,400; Striped Parking Area: 65,340 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction including overhead power lines	Cranes	1	7.00	231	0.29
Building Construction including overhead power lines	Forklifts	3	8.00	89	0.20
Building Construction including overhead power lines	Generator Sets	1	8.00	84	0.74
Building Construction including overhead power lines	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction including overhead power lines	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction including overhead po	9	559.00	218.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	112.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0476	0.4963	0.2955	5.7000e-004		0.0242	0.0242		0.0223	0.0223	0.0000	50.1591	50.1591	0.0162	0.0000	50.5647
Total	**0.0476**	**0.4963**	**0.2955**	**5.7000e-004**	**0.2710**	**0.0242**	**0.2952**	**0.1490**	**0.0223**	**0.1712**	**0.0000**	**50.1591**	**50.1591**	**0.0162**	**0.0000**	**50.5647**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-003	1.3400e-003	0.0121	2.0000e-005	2.0800e-003	1.0000e-005	2.0900e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.6114	1.6114	1.1000e-004	0.0000	1.6143
Total	**1.7000e-003**	**1.3400e-003**	**0.0121**	**2.0000e-005**	**2.0800e-003**	**1.0000e-005**	**2.0900e-003**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**1.6114**	**1.6114**	**1.1000e-004**	**0.0000**	**1.6143**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0476	0.4963	0.2955	5.7000e-004		0.0242	0.0242		0.0223	0.0223	0.0000	50.1590	50.1590	0.0162	0.0000	50.5646
Total	**0.0476**	**0.4963**	**0.2955**	**5.7000e-004**	**0.2710**	**0.0242**	**0.2952**	**0.1490**	**0.0223**	**0.1712**	**0.0000**	**50.1590**	**50.1590**	**0.0162**	**0.0000**	**50.5646**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-003	1.3400e-003	0.0121	2.0000e-005	2.0800e-003	1.0000e-005	2.0900e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.6114	1.6114	1.1000e-004	0.0000	1.6143
Total	**1.7000e-003**	**1.3400e-003**	**0.0121**	**2.0000e-005**	**2.0800e-003**	**1.0000e-005**	**2.0900e-003**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**1.6114**	**1.6114**	**1.1000e-004**	**0.0000**	**1.6143**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5204	0.0000	0.5204	0.2158	0.0000	0.2158	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2175	2.3306	1.7425	3.7200e-003		0.0981	0.0981		0.0903	0.0903	0.0000	327.2076	327.2076	0.1058	0.0000	329.8532
Total	**0.2175**	**2.3306**	**1.7425**	**3.7200e-003**	**0.5204**	**0.0981**	**0.6185**	**0.2158**	**0.0903**	**0.3060**	**0.0000**	**327.2076**	**327.2076**	**0.1058**	**0.0000**	**329.8532**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5400e-003	5.9700e-003	0.0539	8.0000e-005	9.2400e-003	6.0000e-005	9.3000e-003	2.4500e-003	5.0000e-005	2.5000e-003	0.0000	7.1617	7.1617	5.1000e-004	0.0000	7.1745
Total	**7.5400e-003**	**5.9700e-003**	**0.0539**	**8.0000e-005**	**9.2400e-003**	**6.0000e-005**	**9.3000e-003**	**2.4500e-003**	**5.0000e-005**	**2.5000e-003**	**0.0000**	**7.1617**	**7.1617**	**5.1000e-004**	**0.0000**	**7.1745**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5204	0.0000	0.5204	0.2158	0.0000	0.2158	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2175	2.3306	1.7425	3.7200e-003		0.0981	0.0981		0.0903	0.0903	0.0000	327.2072	327.2072	0.1058	0.0000	329.8528
Total	**0.2175**	**2.3306**	**1.7425**	**3.7200e-003**	**0.5204**	**0.0981**	**0.6185**	**0.2158**	**0.0903**	**0.3060**	**0.0000**	**327.2072**	**327.2072**	**0.1058**	**0.0000**	**329.8528**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5400e-003	5.9700e-003	0.0539	8.0000e-005	9.2400e-003	6.0000e-005	9.3000e-003	2.4500e-003	5.0000e-005	2.5000e-003	0.0000	7.1617	7.1617	5.1000e-004	0.0000	7.1745
Total	**7.5400e-003**	**5.9700e-003**	**0.0539**	**8.0000e-005**	**9.2400e-003**	**6.0000e-005**	**9.3000e-003**	**2.4500e-003**	**5.0000e-005**	**2.5000e-003**	**0.0000**	**7.1617**	**7.1617**	**5.1000e-004**	**0.0000**	**7.1745**

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0276	0.2781	0.3645	5.7000e-004		0.0142	0.0142		0.0131	0.0131	0.0000	50.0689	50.0689	0.0162	0.0000	50.4737
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0276**	**0.2781**	**0.3645**	**5.7000e-004**		**0.0142**	**0.0142**		**0.0131**	**0.0131**	**0.0000**	**50.0689**	**50.0689**	**0.0162**	**0.0000**	**50.4737**

3.4 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3600e-003	1.8600e-003	0.0168	2.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.8000e-004	0.0000	2.2380	2.2380	1.6000e-004	0.0000	2.2420
Total	**2.3600e-003**	**1.8600e-003**	**0.0168**	**2.0000e-005**	**2.8900e-003**	**2.0000e-005**	**2.9100e-003**	**7.7000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.2380**	**2.2380**	**1.6000e-004**	**0.0000**	**2.2420**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0276	0.2781	0.3645	5.7000e-004		0.0142	0.0142		0.0131	0.0131	0.0000	50.0688	50.0688	0.0162	0.0000	50.4737
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0276**	**0.2781**	**0.3645**	**5.7000e-004**		**0.0142**	**0.0142**		**0.0131**	**0.0131**	**0.0000**	**50.0688**	**50.0688**	**0.0162**	**0.0000**	**50.4737**

3.4 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3600e-003	1.8600e-003	0.0168	2.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.8000e-004	0.0000	2.2380	2.2380	1.6000e-004	0.0000	2.2420
Total	**2.3600e-003**	**1.8600e-003**	**0.0168**	**2.0000e-005**	**2.8900e-003**	**2.0000e-005**	**2.9100e-003**	**7.7000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.2380**	**2.2380**	**1.6000e-004**	**0.0000**	**2.2420**

3.5 Building Construction including overhead power lines - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0512	0.4685	0.4909	8.1000e-004		0.0243	0.0243		0.0228	0.0228	0.0000	69.5176	69.5176	0.0167	0.0000	69.9339
Total	**0.0512**	**0.4685**	**0.4909**	**8.1000e-004**		**0.0243**	**0.0243**		**0.0228**	**0.0228**	**0.0000**	**69.5176**	**69.5176**	**0.0167**	**0.0000**	**69.9339**

3.5 Building Construction including overhead power lines - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0273	0.7063	0.1929	2.5800e-003	0.0718	1.9000e-003	0.0737	0.0207	1.8200e-003	0.0225	0.0000	244.2800	244.2800	0.0101	0.0000	244.5321
Worker	0.1054	0.0834	0.7531	1.1100e-003	0.1292	7.7000e-004	0.1300	0.0343	7.1000e-004	0.0350	0.0000	100.0854	100.0854	7.1200e-003	0.0000	100.2633
Total	**0.1326**	**0.7897**	**0.9460**	**3.6900e-003**	**0.2009**	**2.6700e-003**	**0.2036**	**0.0550**	**2.5300e-003**	**0.0575**	**0.0000**	**344.3653**	**344.3653**	**0.0172**	**0.0000**	**344.7954**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0512	0.4685	0.4909	8.1000e-004		0.0243	0.0243		0.0228	0.0228	0.0000	69.5175	69.5175	0.0167	0.0000	69.9339
Total	**0.0512**	**0.4685**	**0.4909**	**8.1000e-004**		**0.0243**	**0.0243**		**0.0228**	**0.0228**	**0.0000**	**69.5175**	**69.5175**	**0.0167**	**0.0000**	**69.9339**

3.5 Building Construction including overhead power lines - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0273	0.7063	0.1929	2.5800e-003	0.0718	1.9000e-003	0.0737	0.0207	1.8200e-003	0.0225	0.0000	244.2800	244.2800	0.0101	0.0000	244.5321
Worker	0.1054	0.0834	0.7531	1.1100e-003	0.1292	7.7000e-004	0.1300	0.0343	7.1000e-004	0.0350	0.0000	100.0854	100.0854	7.1200e-003	0.0000	100.2633
Total	**0.1326**	**0.7897**	**0.9460**	**3.6900e-003**	**0.2009**	**2.6700e-003**	**0.2036**	**0.0550**	**2.5300e-003**	**0.0575**	**0.0000**	**344.3653**	**344.3653**	**0.0172**	**0.0000**	**344.7954**

3.5 Building Construction including overhead power lines - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

3.5 Building Construction including overhead power lines - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0954	2.1855	0.7247	0.0109	0.3109	3.2900e-003	0.3142	0.0896	3.1500e-003	0.0927	0.0000	1,036.8630	1,036.8630	0.0323	0.0000	1,037.6694
Worker	0.4284	0.3329	3.0015	4.6400e-003	0.5598	3.2200e-003	0.5630	0.1486	2.9600e-003	0.1515	0.0000	417.2507	417.2507	0.0284	0.0000	417.9602
Total	**0.5238**	**2.5184**	**3.7262**	**0.0156**	**0.8707**	**6.5100e-003**	**0.8772**	**0.2381**	**6.1100e-003**	**0.2442**	**0.0000**	**1,454.1137**	**1,454.1137**	**0.0606**	**0.0000**	**1,455.6296**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

3.5 Building Construction including overhead power lines - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0954	2.1855	0.7247	0.0109	0.3109	3.2900e-003	0.3142	0.0896	3.1500e-003	0.0927	0.0000	1,036.8630	1,036.8630	0.0323	0.0000	1,037.6694
Worker	0.4284	0.3329	3.0015	4.6400e-003	0.5598	3.2200e-003	0.5630	0.1486	2.9600e-003	0.1515	0.0000	417.2507	417.2507	0.0284	0.0000	417.9602
Total	**0.5238**	**2.5184**	**3.7262**	**0.0156**	**0.8707**	**6.5100e-003**	**0.8772**	**0.2381**	**6.1100e-003**	**0.2442**	**0.0000**	**1,454.1137**	**1,454.1137**	**0.0606**	**0.0000**	**1,455.6296**

3.5 Building Construction including overhead power lines - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2017	0.2425	4.0000e-004		9.2000e-003	9.2000e-003		8.6500e-003	8.6500e-003	0.0000	34.7774	34.7774	8.2200e-003	0.0000	34.9830
Total	**0.0221**	**0.2017**	**0.2425**	**4.0000e-004**		**9.2000e-003**	**9.2000e-003**		**8.6500e-003**	**8.6500e-003**	**0.0000**	**34.7774**	**34.7774**	**8.2200e-003**	**0.0000**	**34.9830**

3.5 Building Construction including overhead power lines - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0106	0.2490	0.0784	1.2600e-003	0.0359	3.7000e-004	0.0363	0.0103	3.6000e-004	0.0107	0.0000	119.2534	119.2534	3.6600e-003	0.0000	119.3449
Worker	0.0467	0.0359	0.3263	5.2000e-004	0.0646	3.6000e-004	0.0650	0.0171	3.3000e-004	0.0175	0.0000	46.6474	46.6474	3.0900e-003	0.0000	46.7247
Total	**0.0573**	**0.2849**	**0.4047**	**1.7800e-003**	**0.1005**	**7.3000e-004**	**0.1012**	**0.0275**	**6.9000e-004**	**0.0282**	**0.0000**	**165.9008**	**165.9008**	**6.7500e-003**	**0.0000**	**166.0696**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2017	0.2425	4.0000e-004		9.2000e-003	9.2000e-003		8.6500e-003	8.6500e-003	0.0000	34.7773	34.7773	8.2200e-003	0.0000	34.9829
Total	**0.0221**	**0.2017**	**0.2425**	**4.0000e-004**		**9.2000e-003**	**9.2000e-003**		**8.6500e-003**	**8.6500e-003**	**0.0000**	**34.7773**	**34.7773**	**8.2200e-003**	**0.0000**	**34.9829**

3.5 Building Construction including overhead power lines - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0106	0.2490	0.0784	1.2600e-003	0.0359	3.7000e-004	0.0363	0.0103	3.6000e-004	0.0107	0.0000	119.2534	119.2534	3.6600e-003	0.0000	119.3449
Worker	0.0467	0.0359	0.3263	5.2000e-004	0.0646	3.6000e-004	0.0650	0.0171	3.3000e-004	0.0175	0.0000	46.6474	46.6474	3.0900e-003	0.0000	46.7247
Total	**0.0573**	**0.2849**	**0.4047**	**1.7800e-003**	**0.1005**	**7.3000e-004**	**0.1012**	**0.0275**	**6.9000e-004**	**0.0282**	**0.0000**	**165.9008**	**165.9008**	**6.7500e-003**	**0.0000**	**166.0696**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1353					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2500e-003	0.0155	0.0200	3.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	2.8086	2.8086	1.8000e-004	0.0000	2.8132
Total	**0.1375**	**0.0155**	**0.0200**	**3.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**2.8086**	**2.8086**	**1.8000e-004**	**0.0000**	**2.8132**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7400e-003	6.1300e-003	0.0553	8.0000e-005	9.4900e-003	6.0000e-005	9.5500e-003	2.5200e-003	5.0000e-005	2.5700e-003	0.0000	7.3527	7.3527	5.2000e-004	0.0000	7.3658
Total	**7.7400e-003**	**6.1300e-003**	**0.0553**	**8.0000e-005**	**9.4900e-003**	**6.0000e-005**	**9.5500e-003**	**2.5200e-003**	**5.0000e-005**	**2.5700e-003**	**0.0000**	**7.3527**	**7.3527**	**5.2000e-004**	**0.0000**	**7.3658**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1353					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2500e-003	0.0155	0.0200	3.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	2.8086	2.8086	1.8000e-004	0.0000	2.8132
Total	**0.1375**	**0.0155**	**0.0200**	**3.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**2.8086**	**2.8086**	**1.8000e-004**	**0.0000**	**2.8132**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7400e-003	6.1300e-003	0.0553	8.0000e-005	9.4900e-003	6.0000e-005	9.5500e-003	2.5200e-003	5.0000e-005	2.5700e-003	0.0000	7.3527	7.3527	5.2000e-004	0.0000	7.3658
Total	**7.7400e-003**	**6.1300e-003**	**0.0553**	**8.0000e-005**	**9.4900e-003**	**6.0000e-005**	**9.5500e-003**	**2.5200e-003**	**5.0000e-005**	**2.5700e-003**	**0.0000**	**7.3527**	**7.3527**	**5.2000e-004**	**0.0000**	**7.3658**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.1694	0.2355	3.9000e-004		9.2100e-003	9.2100e-003		9.2100e-003	9.2100e-003	0.0000	33.1923	33.1923	1.9900e-003	0.0000	33.2419
Total	**1.6238**	**0.1694**	**0.2355**	**3.9000e-004**		**9.2100e-003**	**9.2100e-003**		**9.2100e-003**	**9.2100e-003**	**0.0000**	**33.1923**	**33.1923**	**1.9900e-003**	**0.0000**	**33.2419**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0858	0.0667	0.6014	9.3000e-004	0.1122	6.4000e-004	0.1128	0.0298	5.9000e-004	0.0304	0.0000	83.5994	83.5994	5.6900e-003	0.0000	83.7416
Total	**0.0858**	**0.0667**	**0.6014**	**9.3000e-004**	**0.1122**	**6.4000e-004**	**0.1128**	**0.0298**	**5.9000e-004**	**0.0304**	**0.0000**	**83.5994**	**83.5994**	**5.6900e-003**	**0.0000**	**83.7416**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.1694	0.2354	3.9000e-004		9.2100e-003	9.2100e-003		9.2100e-003	9.2100e-003	0.0000	33.1923	33.1923	1.9900e-003	0.0000	33.2419
Total	**1.6238**	**0.1694**	**0.2354**	**3.9000e-004**		**9.2100e-003**	**9.2100e-003**		**9.2100e-003**	**9.2100e-003**	**0.0000**	**33.1923**	**33.1923**	**1.9900e-003**	**0.0000**	**33.2419**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0858	0.0667	0.6014	9.3000e-004	0.1122	6.4000e-004	0.1128	0.0298	5.9000e-004	0.0304	0.0000	83.5994	83.5994	5.6900e-003	0.0000	83.7416
Total	**0.0858**	**0.0667**	**0.6014**	**9.3000e-004**	**0.1122**	**6.4000e-004**	**0.1128**	**0.0298**	**5.9000e-004**	**0.0304**	**0.0000**	**83.5994**	**83.5994**	**5.6900e-003**	**0.0000**	**83.7416**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1845					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7100e-003	0.0183	0.0272	4.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	3.8299	3.8299	2.2000e-004	0.0000	3.8353
Total	**0.1872**	**0.0183**	**0.0272**	**4.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**3.8299**	**3.8299**	**2.2000e-004**	**0.0000**	**3.8353**

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3500e-003	7.1900e-003	0.0654	1.0000e-004	0.0129	7.0000e-005	0.0130	3.4300e-003	7.0000e-005	3.5000e-003	0.0000	9.3462	9.3462	6.2000e-004	0.0000	9.3617
Total	**9.3500e-003**	**7.1900e-003**	**0.0654**	**1.0000e-004**	**0.0129**	**7.0000e-005**	**0.0130**	**3.4300e-003**	**7.0000e-005**	**3.5000e-003**	**0.0000**	**9.3462**	**9.3462**	**6.2000e-004**	**0.0000**	**9.3617**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1845					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7100e-003	0.0183	0.0272	4.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	3.8299	3.8299	2.2000e-004	0.0000	3.8353
Total	**0.1872**	**0.0183**	**0.0272**	**4.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**3.8299**	**3.8299**	**2.2000e-004**	**0.0000**	**3.8353**

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3500e-003	7.1900e-003	0.0654	1.0000e-004	0.0129	7.0000e-005	0.0130	3.4300e-003	7.0000e-005	3.5000e-003	0.0000	9.3462	9.3462	6.2000e-004	0.0000	9.3617
Total	**9.3500e-003**	**7.1900e-003**	**0.0654**	**1.0000e-004**	**0.0129**	**7.0000e-005**	**0.0130**	**3.4300e-003**	**7.0000e-005**	**3.5000e-003**	**0.0000**	**9.3462**	**9.3462**	**6.2000e-004**	**0.0000**	**9.3617**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4115	2.8258	3.8069	0.0109	0.5825	4.9600e-003	0.5874	0.1563	4.6400e-003	0.1609	0.0000	1,016.7657	1,016.7657	0.0767	0.0000	1,018.6829
Unmitigated	0.4115	2.8258	3.8069	0.0109	0.5825	4.9600e-003	0.5874	0.1563	4.6400e-003	0.1609	0.0000	1,016.7657	1,016.7657	0.0767	0.0000	1,018.6829

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	14.00	20.00	20.00	26,303	26,303
Hotel	420.00	1,200.00	1200.00	959,819	959,819
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Research & Development	28.00	80.00	80.00	84,349	84,349
Strip Mall	315.00	450.00	450.00	428,283	428,283
User Defined Industrial	0.00	0.00	0.00		
Total	777.00	1,750.00	1,750.00	1,498,754	1,498,754

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	7.30	3.90	3.70	40.00	19.00	41.00	86	11	3
Hotel	6.70	5.00	8.90	19.40	61.60	19.00	58	38	4
Other Non-Asphalt Surfaces	6.70	5.00	8.90	0.00	0.00	0.00	0	0	0
Research & Development	6.70	5.00	8.90	33.00	48.00	19.00	82	15	3
Strip Mall	6.70	5.00	8.90	16.60	64.40	19.00	45	40	15
User Defined Industrial	6.70	5.00	8.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Hotel	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Other Non-Asphalt Surfaces	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Research & Development	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
Strip Mall	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600
User Defined Industrial	0.524989	0.030717	0.161165	0.112416	0.014580	0.004690	0.018794	0.121206	0.003615	0.001256	0.005248	0.000725	0.000600

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Glamis GSP - Imperial County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,422.9018	2,422.9018	0.0553	0.0114	2,427.6927
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	24301.3	14.0090	3.2000e-004	7.0000e-005	14.0367
Hotel	3.95089e+006	2,277.5729	0.0520	0.0108	2,282.0764
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	101500	58.5118	1.3400e-003	2.8000e-004	58.6275
Strip Mall	126300	72.8082	1.6600e-003	3.4000e-004	72.9522
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**2,422.9018**	**0.0553**	**0.0114**	**2,427.6927**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2157	5.4000e-004	0.0390	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1698	0.1698	7.0000e-005	0.0000	0.1721
Unmitigated	1.2157	5.4000e-004	0.0390	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1698	0.1698	7.0000e-005	0.0000	0.1721

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1919					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-005	9.0000e-005	4.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1056	0.1056	0.0000	0.0000	0.1063
Landscaping	1.2800e-003	4.4000e-004	0.0389	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.0642	0.0642	7.0000e-005	0.0000	0.0658
Total	**1.2157**	**5.3000e-004**	**0.0390**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.1698**	**0.1698**	**7.0000e-005**	**0.0000**	**0.1721**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1919					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-005	9.0000e-005	4.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1056	0.1056	0.0000	0.0000	0.1063
Landscaping	1.2800e-003	4.4000e-004	0.0389	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.0642	0.0642	7.0000e-005	0.0000	0.0658
Total	**1.2157**	**5.3000e-004**	**0.0390**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.1698**	**0.1698**	**7.0000e-005**	**0.0000**	**0.1721**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	83.5104	0.3208	7.9100e-003	93.8877
Unmitigated	83.5104	0.3208	7.9100e-003	93.8877

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.32577 / 0.205377	3.8640	0.0107	2.7000e-004	4.2115
Hotel	3.80502 / 0.422779	32.4762	0.1247	3.0800e-003	36.5101
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	4.91694 / 0	38.4676	0.1611	3.9600e-003	43.6734
Strip Mall	0.740725 / 0.453993	8.7027	0.0243	6.1000e-004	9.4927
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**83.5104**	**0.3208**	**7.9200e-003**	**93.8877**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.32577 / 0.205377	3.8640	0.0107	2.7000e-004	4.2115
Hotel	3.80502 / 0.422779	32.4762	0.1247	3.0800e-003	36.5101
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	4.91694 / 0	38.4676	0.1611	3.9600e-003	43.6734
Strip Mall	0.740725 / 0.453993	8.7027	0.0243	6.1000e-004	9.4927
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**83.5104**	**0.3208**	**7.9200e-003**	**93.8877**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.4242	1.1479	0.0000	48.1227
Unmitigated	19.4242	1.1479	0.0000	48.1227

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2.3	0.4669	0.0276	0.0000	1.1567
Hotel	82.13	16.6717	0.9853	0.0000	41.3033
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	0.76	0.1543	9.1200e-003	0.0000	0.3822
Strip Mall	10.5	2.1314	0.1260	0.0000	5.2805
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**19.4242**	**1.1479**	**0.0000**	**48.1227**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2.3	0.4669	0.0276	0.0000	1.1567
Hotel	82.13	16.6717	0.9853	0.0000	41.3033
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	0.76	0.1543	9.1200e-003	0.0000	0.3822
Strip Mall	10.5	2.1314	0.1260	0.0000	5.2805
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**19.4242**	**1.1479**	**0.0000**	**48.1227**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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D Visual Impact Assessment

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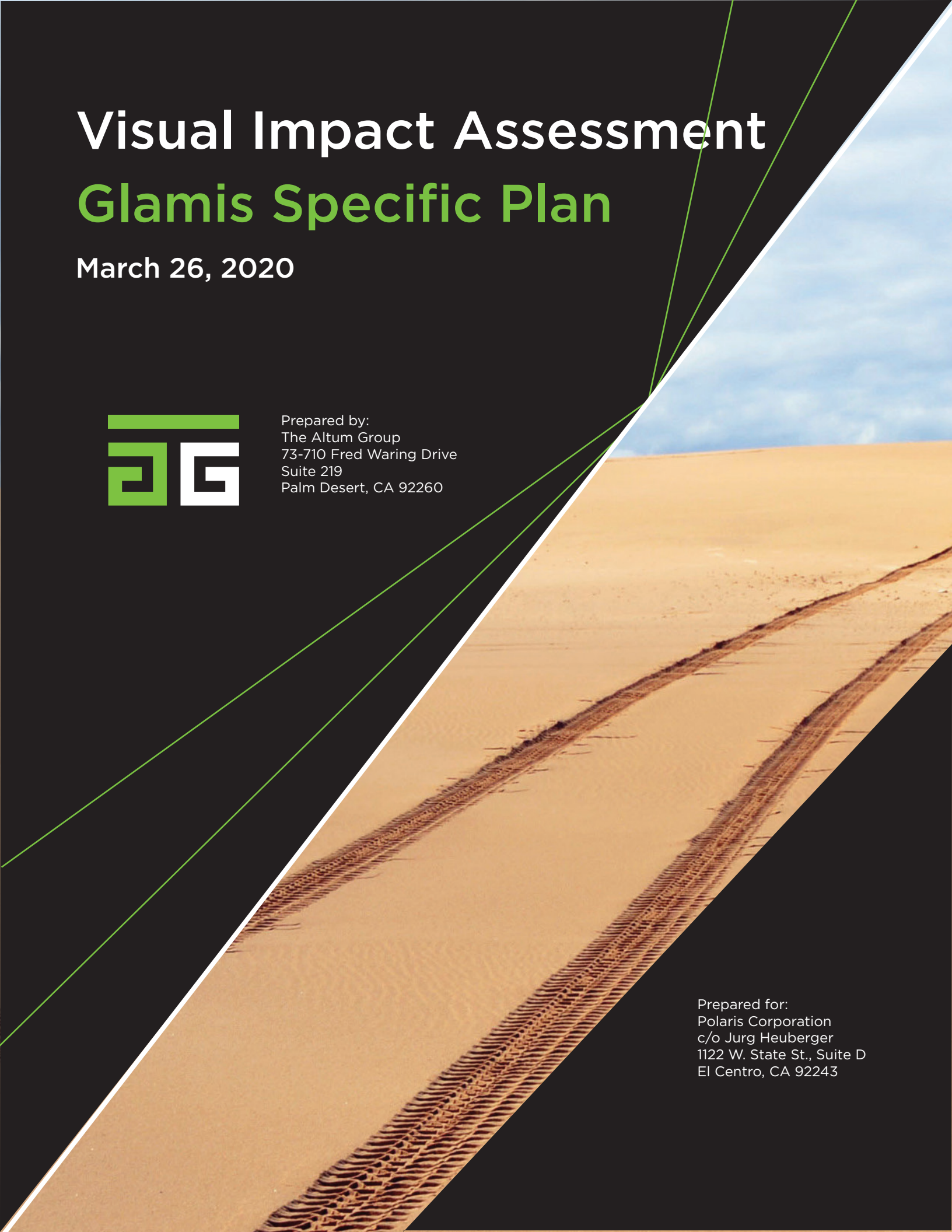
Visual Impact Assessment

Glamis Specific Plan

March 26, 2020

Prepared by:
The Altum Group
73-710 Fred Waring Drive
Suite 219
Palm Desert, CA 92260



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Visual Impact Assessment
Glamis Specific Plan

March 26, 2020

Prepared by:

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APPENDIX

A – Exhibits
B – Contrast Rating Worksheets

1 EXECUTIVE SUMMARY

This Visual Impact Assessment (VIA) has been prepared to provide support for a California Environmental Quality Act (CEQA) Environmental Impact Report (EIR) that is being prepared for the Glamis Specific Plan (Project). This VIA provides the technical documentation to support the analysis of aesthetics for the EIR and utilizes the visual resource contrast rating system from the Bureau of Land Management (BLM).

The visual resource contrast rating system is used by the BLM to analyze potential visual impacts of proposed projects and activities. The degree to which a project or activity affects the visual quality of a landscape depends on the visual contrast created between a project and the existing landscape. The contrast can be measured by comparing the project features with the major features in the existing landscape. The basic design elements of form, line, color, and texture are used to make this comparison and to describe the visual contrast created by the project. This assessment process provides a means for determining visual impacts and for identifying measures to mitigate impacts. The key observation points (KOPs) were used as locations where proposed land uses would be highly visible. Exhibit 1, *Key Observation Points*, shows the project site as well as the location of each KOP (discussed in Section 2.2.4 below).

2 ENVIRONMENTAL SETTING

2.1 Regional Character

The Glamis Specific Plan (GSP) area (or project site) is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR-78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the project site is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County.

The GSP area contains the only private commercial land uses within the project vicinity and is surrounded by open desert land that is managed by the Bureau of Land Management (BLM). The project site is adjacent to the Imperial Sand Dunes Recreation Area (ISDRA), the largest sand dunes area in the State of California. Directly northwest of the project site is the North Algodones Dunes Wilderness (NADW); which consists of approximately 26,000 acres of land managed by the BLM as part of the National Wilderness Preservation System. Additionally, the Chocolate Mountain Aerial Gunnery Range (CMAGR) is located approximately 3 miles to the north of the GSP. Within all of the various BLM lands surrounding the GSP, the BLM has designated Recreation Management Zones (RMZs) which dictate the allowable recreation activities within those areas and provide for BLM's management objectives within those areas. The ISDRA, NADW, and RMZs are briefly discussed below:

Imperial Sand Dunes Recreation Area (ISDRA)

The ISDRA is the largest mass of sand dunes in the State of California, extending for more than 40 miles in length (from north to south), and averaging approximately 5 miles wide (from east to west). Dunes within the ISDRA can reach heights of 300 feet above the desert floor, providing OHV recreationists an ideal location for their activities. The ISDRA, which is managed by the BLM, includes a variety of camping areas, ranger stations, restrooms, and other facilities to support OHV recreationists who visit the area primarily between October and April each year. The BLM allows special events with a permit within the ISDRA.

North Algodones Dunes Wilderness (NADW)

The NADW covers more than 26,000 acres and is managed by the BLM as a part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use. Camping is allowed throughout the area, however there is no water and no facilities for visitors within the NADW.

BLM Recreation Management Zones

The BLM has designated RMZs on BLM lands located throughout the area surrounding the GSP. The RMZs provide an activity-level planning framework for BLM's recreation management. The RMZs have been allocated throughout the planning area to represent permitted recreation niches (activities, experiences and benefits). The GSP is bordered by three RMZs: Open RMZ to the south, Limited RMZ to the northeast, and the North Algodones Dunes Wilderness RMZ to the northwest. The Open RMZ allows for unrestricted OHV recreation, camping, commercial vending, hiking and wildlife viewing. The Limited RMZ allows for limited use OHV recreation (travel limited to designated routes of travel or areas with seasonal restrictions under specific conditions), camping, and environmental education and tourism opportunities. The North Algodones Dunes Wilderness RMZ prohibits any motorized recreation opportunities and allows for non-motorized recreation opportunities and allows for non-motorized recreation, such as camping, hiking and educational opportunities.

2.2 Existing Visual Character

The project site is mostly comprised of open, sandy, disturbed desert and is intersected by SR-78 and the UPRR. Per the *List of Officially Designated County Scenic Highways* from Caltrans, SR-78 is not a County designated scenic route. All existing development occurs within approximately 0.25 miles of the intersection of SR-78 and the UPRR and consists of several adjoined one- and two-story metal building structures with water tanks which comprise the Glamis Beach Store, a historic building (ASM Affiliates, 2019). The project site also contains an existing paved RV storage lot immediately north of SR-78, wood posting for sectioned-off parking/vendor areas within the southwest portion of the project site, a wireless communications facility located within the southeast portion of the project site, a private residence/storage building next to an unmaintained storage shed with shipping containers at the southeastern corner of the project site, and an existing historical cemetery immediately south of Ted Kipf Road. There are no rock outcroppings and very few trees present within the project site. Currently, the only existing light sources within or nearby to the project site come from the Glamis Beach Store. Existing on site features are illustrated in Exhibit 2, *Existing Land Use*.

The project site is relatively flat with a southwest-to-northeast trending grade of less than one percent or an approximate difference in elevation of 23 feet above mean sea level (amsl) between the southwest corner of the site (approximate elevation of 324 feet amsl) and the northeast corner of the site (approximately 347 feet amsl). Areas of wind-blown sand dunes with sporadic native vegetation are found situated and encroaching upon the southeast corner of the project site. Public views of the project site would be primarily seen by viewers who are traveling east or west along SR-78. In addition, the project site would be visible from adjoining BLM land such as the NADW.

2.2.1 Scenic Highways

There are no highways within the project site and vicinity that have been designated by the California Department of Transportation (Caltrans) as a scenic highway. As described above in Section 2.2, *Existing Visual Character*, the *Cultural Resource Inventory* conducted in 2019 by ASM Affiliates found the Glamis

Beach Store to be a historic building. There are no rock outcroppings and very few trees present on the project site.

2.2.3 Vista Points

According to the Caltrans GIS data (accessed on November 12, 2019), the nearest vista point, Inspiration Point, is approximately 103 miles west of the project site. There are no Caltrans designated vista points in the vicinity of the project site.

2.2.4 Wilderness Areas

Wilderness Areas are managed under the Wilderness Act and generally do not allow motorized equipment, motor vehicles, mechanical transport, temporary roads, or permanent structures or installations. The NADW covers more than 26,000 acres and is managed by the BLM as a part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use. Camping is allowed throughout the area, however there is no water and no facilities for visitors within the NADW.

2.3 Project Description

The approximately 142-acre project site is located and contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development and creation of a Specific Plan in accordance with GSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. As shown in Exhibit 3, *Current Imperial County Zoning - Project Site*, the existing zoning designation for the project site is Open Space/Preservation (S-2) and a very small area that is designated General Commercial (C-2). The general area of the Glamis Beach Store is zoned as C-2, while the remainder of the project site is zoned as S-2.

The proposed project includes the development of the GSP, which provides for a flexible commercial-recreational master plan with a broad range of land uses ranging from recreational, commercial/retail, storage, entertainment, hospitality, residential, renewable energy, utility facilities, among other primary and complimentary land uses. The proposed project also includes the establishment of Commercial/Recreational (CR) designated zoning which includes different levels of allowable land use intensity. In addition, the proposed project includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes a Change of Zone from S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1- acre parcel on the southeast side of the project site.

As illustrated in Exhibit 4, *Zoning Designations and Planning Areas*, the GSP consists of eight (8) planning areas: Planning Areas 1, 2, 3, and 4 are designated Commercial-Recreation 3 (CR-3) Zone where the maximum range of recreational, commercial, resort, retail, medical, entertainment, and utility infrastructure land uses are allowed; Planning Areas 5 and 6 that are designated CR-1 Zone, which provides the most restrictive range of commercial/recreational land uses; Planning Area 7 is designated CR-2 Zone, which provides for a moderate-level of commercial/recreational land uses, and Planning Area 8 would be re-zoned to the County's S-1 (Open Space/Recreation) Zoning District. The S-1 zone designates areas that recognize the unique Open Space and Recreational character of Imperial County including the deserts, mountains and waterfront areas. The S-1 Zone is primarily characterized by low intensity human utilization and small-scale recreation related uses. Exhibit 5, *Conceptual Site Plan,* illustrates the potential build-out of the project site.

3 METHODOLOGY

3.1 BLM Visual Resource Inventory and Management Guidance

The County of Imperial (County) does not have adopted guidelines for conducting visual resource impact assessments. BLM uses a Visual Resources Inventory (VRI) classes system as a baseline description of the existing scenic values in the environment that does not provide objectives as to how the land should be used or managed. Given that the project site is surrounded by BLM land, it was determined that the BLM VRI class system was an appropriate methodology to utilize for purposes of assessing baseline scenic values in the project area. All VRI descriptions used for this analysis are based on the BLM's VRI Inventory Classes identified in the Desert Renewable Energy Conservation Plan (Bureau of Land Management, 2016).

The VRI, developed by BLM, identifies the visual resources of a given area and, based upon specific standards, assigns an inventory class to each area. This process, further described in detail in BLM Manual H-8410-1 (Bureau of Land Management, 1986), involves rating the resource's visual qualities, measuring public concern, and determining the extent to which an area is visible from travel routes and other observation points. Those three factors then determine which of the four VRI classes are assigned to each area of BLM-administered lands based on visual sensitivity (high, medium, and low), scenic quality (A to C), and distance. According to the BLM:

> These four VRI classes represent the relative values of the existing visual resources. VRI Classes I and II represent the highest visual value, Class III represents moderate value, and Class IV represents relatively low visual value. The four VRI classes are the foundation upon which BLM considers visual values in its management planning process.

As shown in Exhibit 6, *Project VRI Classifications*, land within the NADW are identified as VRI Class 1. South of the project site lands are classified as VRI Class IV and transition to VRI Class II. Land along SR-78 are classified as VRI Class IV. To the north and west of the Project site land is classified as VRI Class III. The GSP area does not have a VRI classification, since it is not located within BLM land.

Specific terminology used in describing the existing visual environment is provided below.

- Contrast – Opposition or unlikeness of different forms, lines, colors, or textures in a landscape. Contrast rating: a method of analyzing the potential visual impacts of proposed activities.
- Form – The mass or shape of an object or objects that appears unified, such as a vegetative opening in a forest, a cliff or mountain formation, a water tank, or a highway overpass.
- Key Observation Point (KOP) – One or a series of points on a travel route or at a use area or potential use area, where the view of a management activity would be most revealing.
- Scenic quality is a measure of the visual appeal of a tract of land. In the visual resources inventory process, public lands are given an A, B, or C rating based on the apparent scenic quality that is determined using seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications.
- Sensitivity level. Sensitivity levels are a measure of public concern for scenic quality. Public lands are assigned high, medium, or low sensitivity levels by analyzing the various indicators of public concern.
- Simulation – A realistic visual portrayal that demonstrates the perceivable changes in landscape features caused by a proposed management activity.

- Texture – The visual manifestations of the interplay of light and shadow created by the variations in the surface of an object or landscape.
- Viewshed – A landscape unit seen from a key observation point.
- Visual quality – The relative worth of a landscape from a visual perception point of view.
- Visual resource – The visible physical features on a landscape (for example, land, water vegetation, animals, structures, and other features).
- Visual Resource Inventory – The visual resource inventory process provides BLM managers with a means for determining visual values.

3.2 Field Acquisition and Methods

This VIA uses terminology and follows guidance as recommended by Bureau of Land Management (BLM) Manual 8431 (1986). In following that methodology as guidance, key observation points (KOPs) were selected for further evaluation. To establish the KOP locations, 35 locations were documented around the project site for viewsheds into the surrounding BLM VRI classification as described above. KOPs were then selected that provide a representative vantage of the surrounding viewshed that have the potential to view the Project and may be sensitive to changes in the visual landscape.

The visual changes to the existing environment are described according to the terminology used in describing the existing visual environment and then assessed in the context of viewer sensitivity. In evaluating the project's impact on the existing visual environment, the analysis considers the relationship between the magnitude of change to specific visual characteristics, the location of the visual change relative to sensitive land uses, and the length of time these visual changes are visible.

As an example, the permanent removal and conversion of an undisturbed, natural area to an urban land use (i.e., commercial) or the modification of an existing historically significant structure within the foreground view of a state-designated scenic highway could have a significant visual impact pursuant to CEQA. In contrast, the conversion of previously disturbed areas, including agricultural lands to urban land use, may not be significant pursuant to CEQA, especially if adjacent areas already included these types of landscape alterations. The contrast rating worksheets completed in support for this assessment are included in Appendix B.

Photographs were taken with an IPhone 8 camera during good weather conditions on August 26, 2019. Each photo-documented location was recorded using the ArcCollector field survey application from the Environmental Systems Research Institute (Esri) set to NAD 83, UTM Zone 10N.

3.3 Landscape Visibility

Perception of details (e.g., form, line, color, and texture) diminishes with increasing distance. The distance zone is dependent on the location of the observer relative to the project. These distance zones are (Bureau of Land Management,1986):

- Foreground and middle ground: 0 to 5 miles from point of interest
- Background: remaining area up to 15 miles away from the point of interest
- Seldom seen: over 15 miles from the point of interest

In addition, the inventory evaluated if views were open, partially screened (filtered), or screened (e.g., presence of hillside terrain, vegetation, and/or buildings)

3.4 Key Observation Points

Five (5) KOPs were selected to assess the level of visual change resulting from the project on the existing environment. The locations of the five (5) KOPs are presented in Exhibit 1, *Key Observation Points*. The KOPs were selected to capture representative vantages from SR-78. Photos from each KOP are presented in Exhibits 4 through 8.

Key Observation Point 1

KOP 1 is located on the northwest parcel of the Project directly above Ted Kipf Road. This KOP displays views oriented south toward the ISDRA (see Exhibit 7, KOP 1) with the project site contained in the middleground. The foreground in KOP 1 contains visual encroachments such as fencing. The middleground in KOP 1 contains a combination of open disturbed desert and the RV storage area. The spanning background provides views of the Imperial Sand Dunes. The scenic attractiveness of KOP 1 is typically based on its common scenic quality and the commercial uses in the middle, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features.

The scenic quality of KOP 1 is moderate (Class III) since the existing visual encroachment appear subordinate to the overall landscape. This KOP provides a typical view for a pedestrian, car, OHV or truck traveling on Ted Kipf Road, likely traveling at a low to medium speed based on the posted speed limit. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the project site is more or less unobstructed from view.

Key Observation Point 2

KOP 2 is located on the westbound side of SR-78 on the right corner of the northeast parcel of the project. This KOP displays views from the highway, oriented southeast (see Exhibit 8, KOP 2) with the project site in the middleground. The foreground and middleground in KOP 2, contains visual encroachments such as fencing, wireless communications facility, transmission lines, and Glamis Beach Store. The scenic attractiveness of KOP 2 is typical based on its common scenic quality and few visual encroachments, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features.

The scenic quality of KOP 2 is moderate (Class III) since the existing visual encroachment including, fencing, wireless communications facility, transmissions lines, and Glamis Beach Store appear subordinate to the overall landscape. This KOP provides a typical view for a motorist traveling east on SR-78, likely traveling at a high rate of speed based on the posted speed limit. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the project site is more or less unobstructed from view.

Key Observation Point 3

KOP 3 is located on the eastbound side of Highway 78 just east of the project site. This KOP displays views from the highway, oriented west (see Exhibit 9, KOP 3) with the project site contained in the middleground. The foreground in KOP 3 contains visual encroachments such as fencing and highway signage. The middleground in KOP 3 contains a combination of open, disturbed desert, transmissions line, and the RV storage area. The scenic attractiveness of KOP 3 is typically based on its common scenic quality and the commercial uses in the middle, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features.

The scenic quality of KOP 3 is moderate (Class III) since the existing visual encroachment including signage, utility distribution lines, commercial facilities, and the Union Pacific Railroad appear subordinate to the overall landscape. This KOP provides a typical view for a motorist traveling west on Highway 78, likely traveling at a high rate of speed based on the posted speed limit. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the Project site is more or less unobstructed from view.

Key Observation Point 4

KOP 4 is located on the southeast corner of the project site and depicts views from the ISDRA oriented northwest (see Exhibit 10, KOP 4) with the project site contained in the middleground. The foreground in KOP 4 contains visual encroachments such as fencing and a private residence/storage building. The middleground in KOP 4 contains a combination of open, disturbed desert and the metal building structures representing the Glamis Beach Store. The ridgelines of the Chocolate Mountains are visible in the background to the north. The scenic attractiveness of KOP 4 is typical based on its common scenic quality and the commercial uses in the middle, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features. The scenic quality of KOP 4 is moderate (Class III) since the existing visual encroachment including fencing and commercial uses appear subordinate to the overall landscape. This KOP provides a typical view for a pedestrian walking on or OHV traveling along the southern border of the project site. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the project site is more or less unobstructed from view.

Key Observation Point 5

KOP 5 is located on the eastbound side of SR-78; just east of the project site and depicts views from the highway, oriented southwest (see Exhibit 11, KOP 5). The foreground in KOP 5 contains visual encroachments such as wood posting for sectioned-off parking and vendor areas. The middleground in KOP 5 is mostly comprised of open, disturbed desert and a wireless communications tower. The Chocolate Mountains ridgeline is visible in the background to the north. The scenic attractiveness of KOP 5 is typical based on its common scenic quality and wood posting, which lacks contrast. This landscape view is common in the area, without distinctive features, such as unusual landforms or other features.

The scenic quality of KOP 5 is moderate (Class III) since the existing visual encroachment including the wood posting and wireless communications tower. This KOP provides a typical view for a motorist traveling westbound on SR-78, likely traveling at a moderate to high rate of speed based on the posted speed limit. Considering the short duration of viewing, viewers would have a moderate level of viewer sensitivity to the visual changes in the area, since the project site is more or less unobstructed from view.

4 REGULATORY SETTING

The following section outlines any federal, state, and local laws, policies, and regulations, which apply to the Project area and were considered in the development of this visual resource assessment.

4.1 Federal

Although the project site occurs entirely on private land, this VIA utilizes BLM methodology described in Section 3.1, *BLM Visual Resource Inventory and Management Guidance,* to assess potential visual impacts from the proposed project. Since BLM land surrounds the project site, the use of BLM methodology is encouraged by the BLM although not a requirement.

4.2 State

In order to analyze aesthetic impacts from the proposed project, the significance criteria outlined in Appendix G of the CEQA Guidelines are applied to determine the proposed project's impact to existing visual resources. The CEQA-defined aesthetic issues of concern are listed below in Section 5, *Thresholds of Significance/Criteria*.

4.3 Local

The project site is under the County of Imperial jurisdiction and subject to the County Development code and General Plan guidelines. Section 92407.01 of the Development Code includes development criteria for facilities located within one-half-mile of a designated scenic highway, however there are no designated scenic highways within one-half-mile of the project site. The County General Plan does not specifically contain a visual element; however, it addresses related topics in the following General Plan Sections: Section 1 – Land Use Element; Section 2 – Circulation & Scenic Highways Element, and Section 5 – Renewable Energy & Transmission Element. The Renewable Energy and Conservation Element (revised on October 6, 2015) includes specific goals, policies and standards for renewable energy and specifically solar projects. As stated in Section 2.2, SR-78 is not a County designated scenic route.

5 THRESHOLDS OF SIGNIFICANCE/CRITERIA

The County of Imperial does not have adopted guidelines for conducting visual resource impact assessments. For this analysis, the significance criteria outlined in the Appendix G of the CEQA Guidelines are applied to determine the project's impact to existing visual resources. The CEQA-defined aesthetic issues of concern are:

- Would the proposed project cause substantial, adverse effects on a scenic vista?
- Would the proposed project cause substantial damage to scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- Would the proposed project cause a substantial degradation of existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- Would the proposed project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

6 IMPACT ANALYSIS

6.1 Would the Project have a substantial adverse effect on a scenic vista?

No designated scenic vistas as identified by Caltrans are located within visible distance of the project site. Per the *List of Officially Designated County Scenic Highways* from Caltrans, the project site is not located within a County designated scenic route. The project site is located in a relatively flat area and does not have any rock outcroppings and contains very few trees.

The project site, as viewed from multiple vantage points, is already developed with commercial and infrastructure uses. The southwest portion of the project site contains an existing RV Storage facility, directly northwest of the Glamis Beach Store. The SR-78 and the UPRR bisect each other, running northeast and northwest respectively. As described in Section 2, *Regional Character,* the project site bordered by the ISDRA to the south, the NADW to the west, and BLM land to the north and east. Immediate surrounding views from the project site consist of the NADW to the northwest, and the Chocolate Mountains Range to the north and east.

KOP 1 provides a representative north-south view of the project site along Ted Kipf Road. As shown on Exhibit 5, *Conceptual Site Plan*, the potential land uses visible from KOP 1 would include guest housing, solar array, RV Park, and RV Storage. The largest contrast would appear in the addition of buildings to the vacant desert landscape and reduction of desert vegetation. Although the RV Park and RV Storage would be visible from KOP 4, they would not substantially degrade the view shed or obstruct views of the Imperial Sand Dunes. Per the Land Use Element of the Imperial County General Plan and Zoning Ordinance 93304.06, buildings would be sited to allow through views from SR-78 to open space beyond and the height of any structure will not exceed 80 feet. Given the typical attractiveness, moderate scenic quality (Class III) based on existing visual encroachments, and moderate viewer sensitivity level, no significant landscape change is identified for KOP 1.

KOP 2 provides a representative east-west view of the project site above SR-78. As shown on Exhibit 5, *Conceptual Site Plan*, the potential land uses visible from KOP 2 would include the proposed Polaris Research & Development Facility, RV Park & Storage, dump station, solar array and solar generating facility. The largest contrast would appear in the addition of buildings to the desert landscape and reduction of desert vegetation. Although the proposed Polaris Research & Development Facility, RV Park & Storage, and dump station would be visible from KOP 2, all buildings would be sited to allow through views from SR-78 and the height of any structure will not exceed 80 feet. Given the typical attractiveness, moderate scenic quality (Class III) based on existing visual encroachments, and moderate viewer sensitivity level, no significant landscape change is identified for KOP 2.

KOP 3 provides a representative east-west view of the project site along SR-78. As shown on Exhibit 5, *Conceptual Site Plan,* the potential land uses visible from KOP 3 would include the special event space, RV park, solar array and guest housing. The largest contrast would appear in the addition of buildings to the desert landscape on the northwest corner of KOP 3, however would not substantially degrade the viewshed or obstruct views of the NADW as all building would be sited to allow through views from SR-78 and the height of any structure would not exceed 80 feet. The special event space would not add buildings to the area, thus would not impact the scenic vista of the NADW. Given the typical attractiveness, moderate scenic quality (Class III) based on existing visual encroachments, and moderate viewer sensitivity level, no significant landscape change is identified for KOP 3.

KOP 4 provides a representative south-north view of the project site south of the existing residential building on the southeast parcel of the proposed project. As shown on Exhibit 5, *Conceptual Site Plan*, the potential land uses visible from KOP 4 would primarily be utilized as a special event space and would not add buildings to the area, thus would not impact views for travelers along SR-78. Given the typical attractiveness, moderate scenic quality (Class III) based on existing visual encroachments, and moderate viewer sensitivity level, no significant landscape change is identified for KOP 4.

KOP 5 provides a representative south-east view of the project site just above the southwest parcel of the proposed project. As shown on Exhibit 5, *Conceptual Site Plan*, the potential land uses visible from KOP 5 would include a solar array and wastewater lift station. All buildings would be sited to allow through views from SR-78 and the height of any structure would not exceed 80 feet. Given the typical attractiveness, moderate scenic quality (Class III) based on existing visual encroachments, and moderate viewer sensitivity level, no significant landscape change is identified for KOP 5.

Based on these considerations, including various existing visual encroachments on-site and the placement of proposed buildings to allow through views from SR-78, the proposed project would not result in a substantial adverse effect on a scenic vista and a less than significant impact would occur. No mitigation is required.

6.2 Would the Project substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

Based on a review of the Caltrans California Scenic Highway Mapping program, SR-78 is considered a state scenic highway from SR-79 at Santa Ysabel to SR 86 near Salton City, in addition to the Anza-Borrego Desert State Park Road. However, the portion of SR-78 within the project site and its immediate vicinity is not considered a state scenic highway. As described above in Section 6.2, the project site is not located within a County designated scenic route. The project site does not contain any rock outcroppings and has very few trees present on-site. The Glamis Beach Store is considered a historical resource per the *Cultural Resource Inventory*. However, the proposed project would not substantially alter or change the character of the Glamis Beach Store and would preserve the historical significance it provides to the project site. As such, the proposed project would not substantially damage scenic resources and impacts would be less than significant. No mitigation is required.

6.3 Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?

The project site is rural in character with a few visual encroachments, including existing commercial and residential structures, a wireless communications tower, and railroad infrastructure. The project site is located in an area that has been traveled over extensively by OHVs due to the recreational nature of the NADW and BLM land that surrounds the project site. As analyzed above in Section 6.1, given the typical attractiveness, moderate scenic quality (Class III) based on existing visual encroachments, moderate viewer sensitivity level of KOPs 1 through 5, and the placement of proposed buildings allowing through views from SR-78, no significant landscape changes would occur from the proposed project. Therefore, the project would not substantially degrade the existing visual character or quality of the project site and its surroundings and impacts would be less than significant. No mitigation is required.

6.4 Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

The project is not expected to create a substantial new source of nighttime lighting or day-time glare and will provide external safety lighting for both normal and emergency conditions at the primary access points. Lighting will be designed to provide the minimum illumination needed to achieve safety and security in the project area and will be downward facing and shielded in order to focus the illumination in the immediate area. Additionally, the proposed project will comply with Imperial County Ordinance 90301 which regulates glare, outdoor lighting, and night sky protection. All lighting associated with the proposed project will be subject to County approval and compliance with Imperial County Requirements. Therefore, the proposed project would have a less than significant impact associated with nighttime lighting, and no mitigation is required.

The proposed project has the potential to develop solar arrays and solar generating facilities to provide on-site power to the area. Although there would be some level of potential reflectivity from the operation of solar panels, upon final design, solar panels would be selected that would help minimize reflectivity and would be oriented in a manner that would minimize reflectivity towards high use recreational areas on surrounding BLM lands. Solar arrays would be designed to not orient the panels towards any known air travel routs for private, commercial, or military airplanes. A full glint/glare analysis is beyond the scope of this VIA and will need to be completed prior to the construction and operation of any solar arrays and facilities.

7 REFERENCES

ASM Affiliates. 2019. Cultural Resource Inventory. *Draft Class III Cultural Resources Inventory Report for the Glamis Specific Plan Project, Glamis, Imperial County, California.*

Bureau of Land Management (BLM). 1986. Visual Resource Inventory. *BLM Manual Handbook H-8410-1.*

BLM 2016. Desert Renewable Energy Conservation Plan, Proposed Land Use Plan Amendment and Final Environmental Impact Statement.

Caltrans (California Department of Transportation). 2015. *Caltrans GIS Data: California Vista Points.* https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

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2015, *List of Officially Designated County Scenic Highways* https://dot.ca.gov/-/media/dot-media/programs/design/documents/od-county-scenic-hwys-2015-a11y.pdf

Appendix A

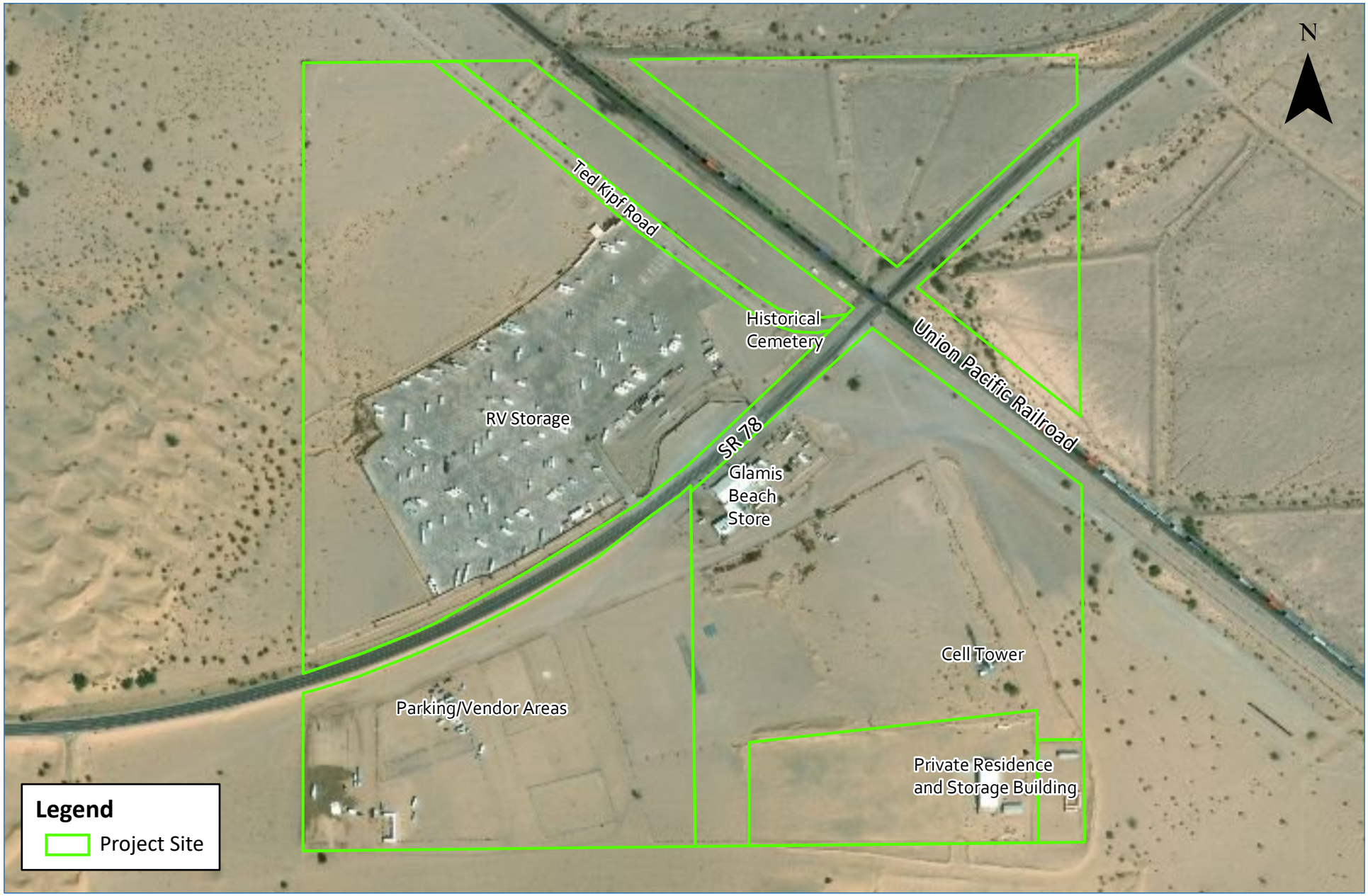
Exhibits

1 IN = 550 FT

Key Observation Points (KOPs)

Exhibit 1

Glamis Specific Plan - Visual Impact Assessment

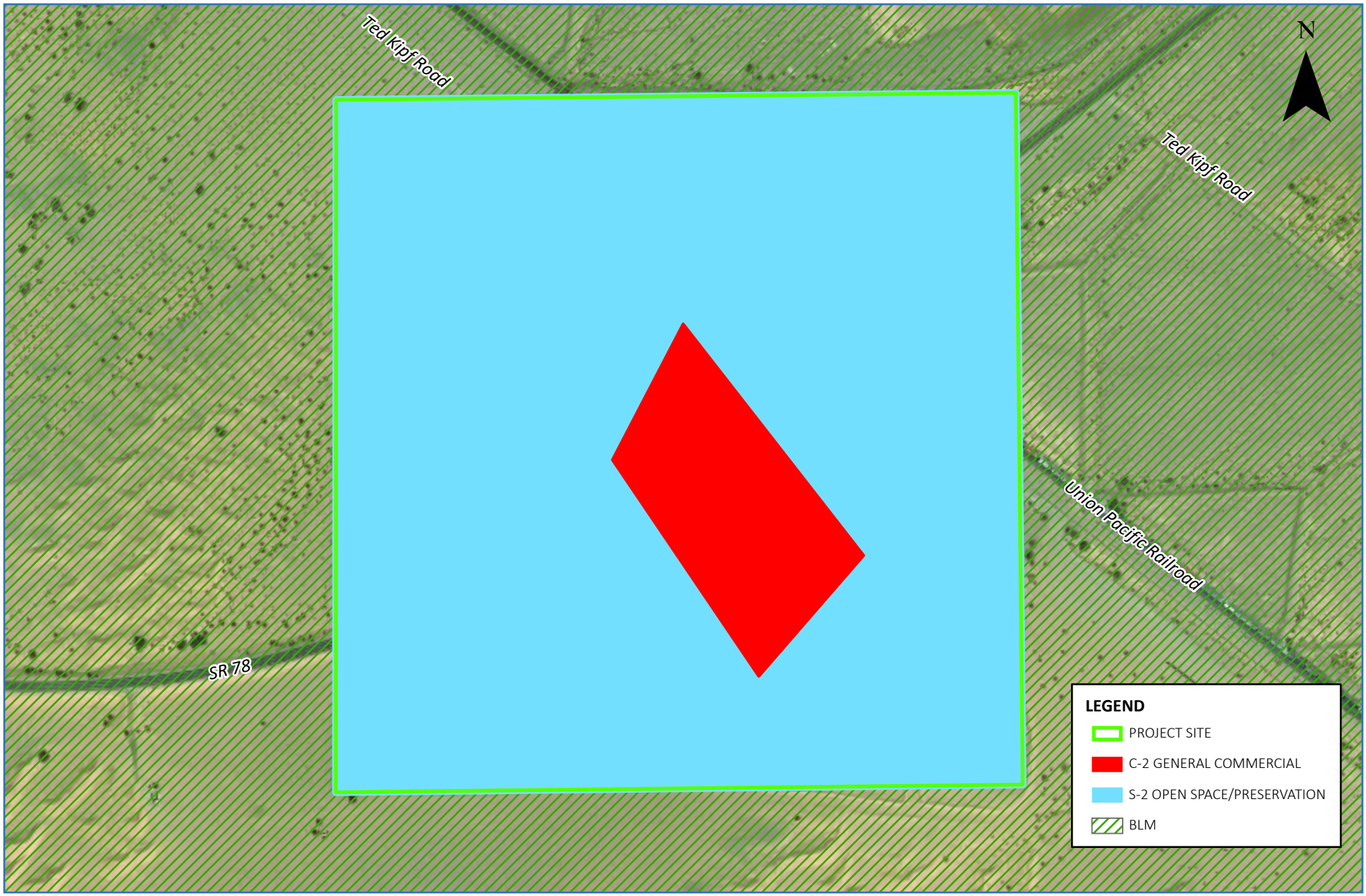


1 IN = 550 FT

Existing Land Use

Exhibit 2

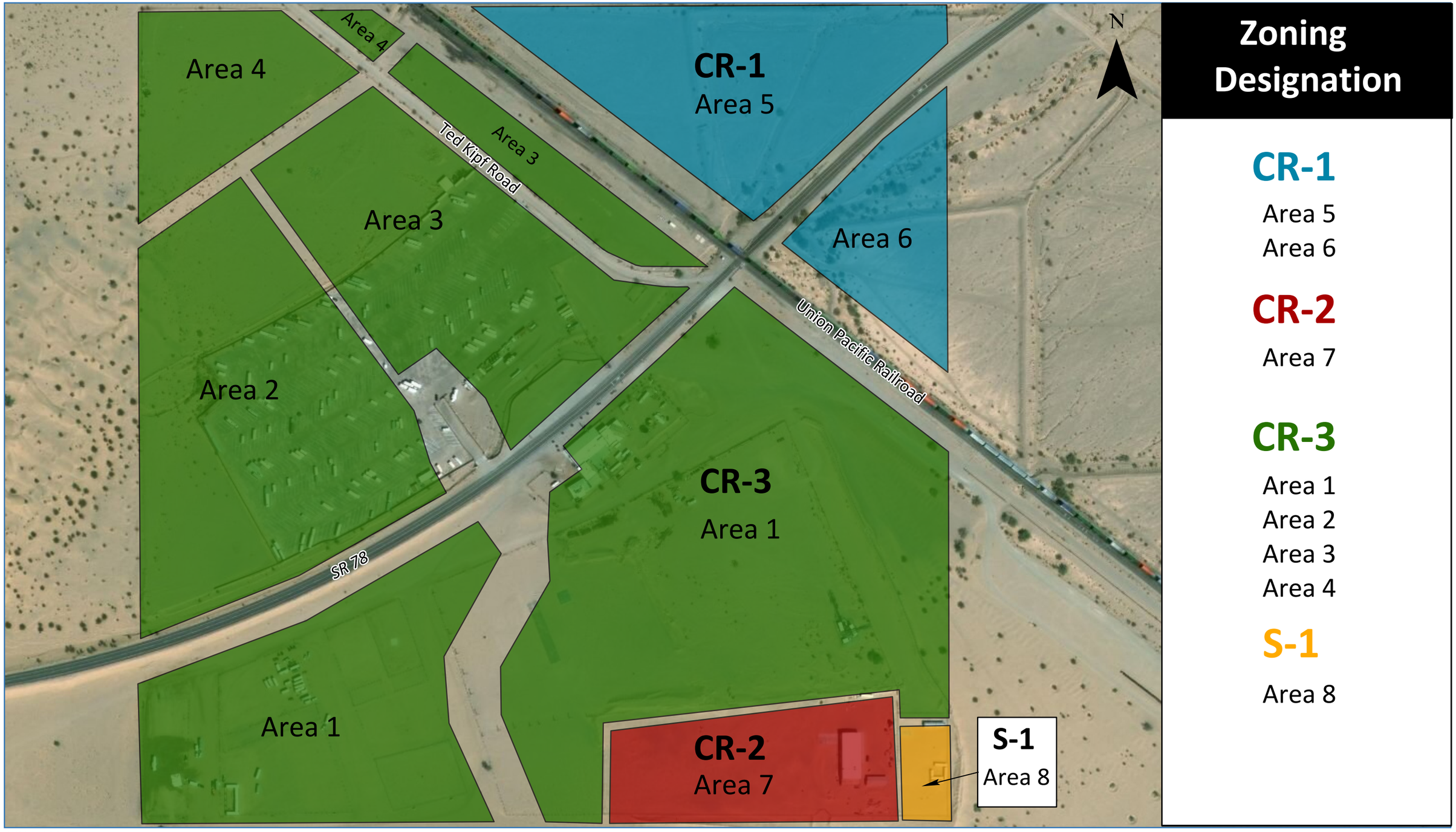
Glamis Specific Plan - Visual Impact Assessment



1 IN = 625 FT

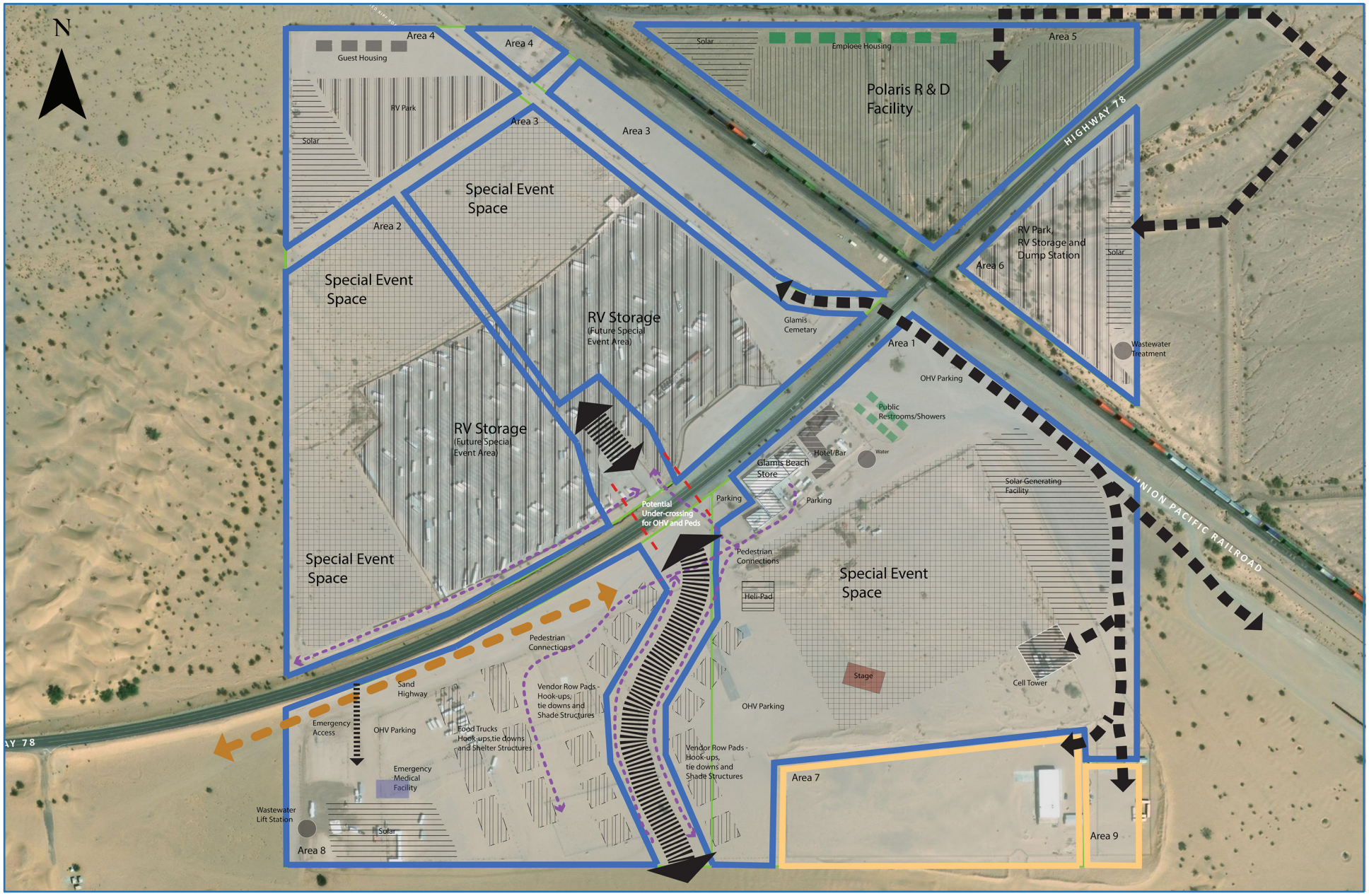
Current Imperial County Zoning - Project Site

Exhibit 3



1 IN = 400 FT

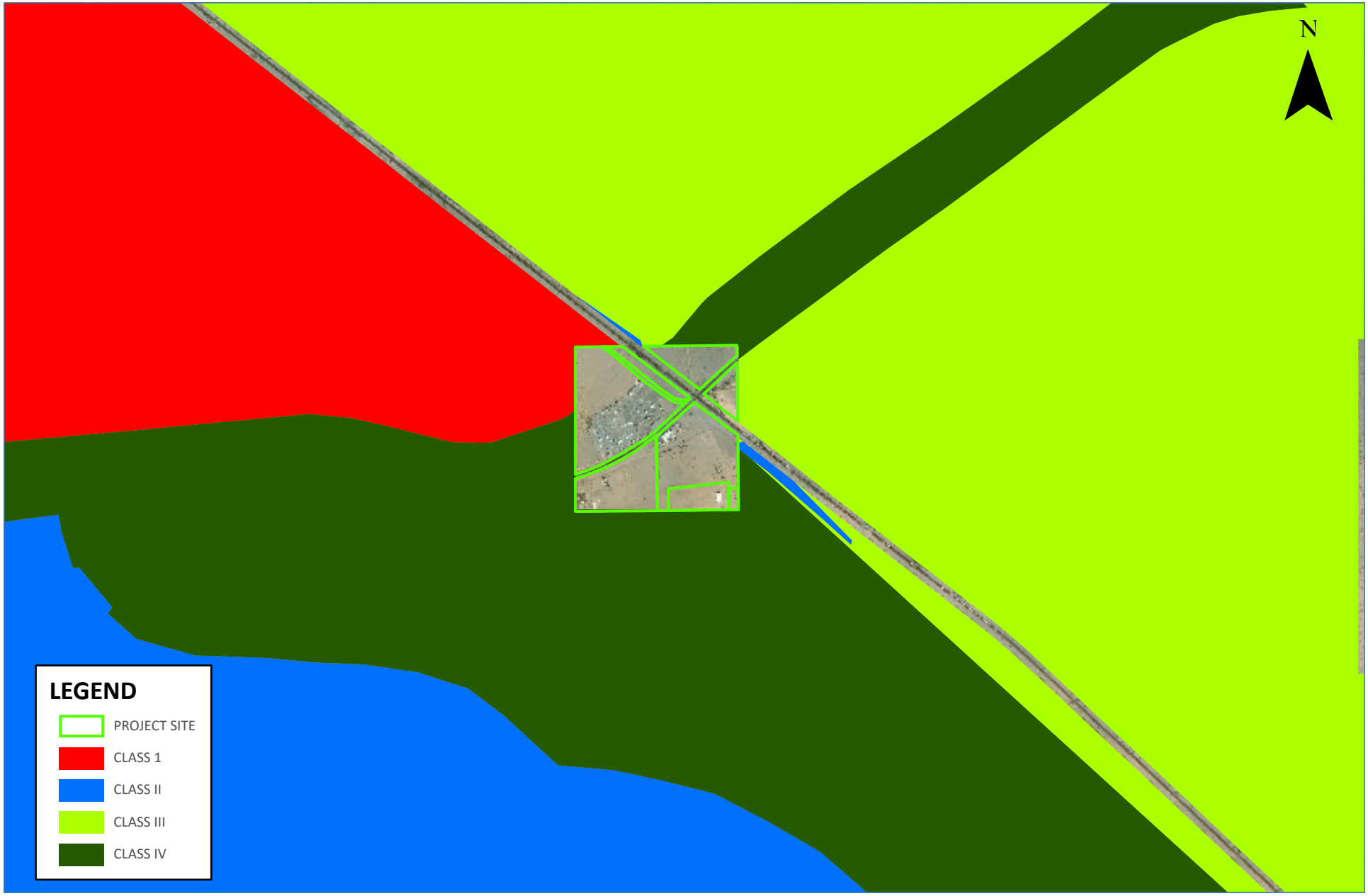
Zoning Designations and Planning Areas



Conceptual Site Plan

Exhibit 5

Glamis Specific Plan - Visual Impact Assesment



1 IN = 0.5 MI

Project VRI Classifications

Exhibit 6

KOP 1 Facing South

Exhibit 7

KOP 2 Facing Southeast

Exhibit 8

Glamis Specific Plan - Visual impact Assesment

KOP 3 Facing West

Exhibit 9

Glamis Specific Plan - Visual impact Assesment

KOP 4 Facing Northwest

Exhibit 10

Glamis Specific Plan - Visual impact Assesment

KOP 5 Facing Southwest

Exhibit 11

Glamis Specific Plan - Visual impact Assesment

Appendix B

Contrast Rating Worksheets

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 9/9/2019

District Unincorporated Imperial County

Resource Area

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name: Glamis Specific Plan

2. Key Observation Point: #1

3. VRM Class: VRI Class IV

4. Location
Township 13S
Range 18E
Section 33

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat to rolling terrain	regular and small	weak and few
LINE	Simple, parallel, straight	regular and simple	Straight, broken
COLOR	light brown to light tan	light brown/green	grey and white
TEXTURE	Discontinuous,smooth,fine	Patchy, dotted	Medium,continuous

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat to rolling terrain	regular and small	weak and few
LINE	Simple, parallel, straight	regular and simple	Straight, broken
COLOR	light brown to light tan	light brown/green	grey and white
TEXTURE	Discontinuous,smooth,fine	Patchy, dotted	Medium,continuous

SECTION D. CONTRAST RATING ☐ SHORT TERM ☑ LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1) Strong	Moderate	Weak	None	VEGETATION (2) Strong	Moderate	Weak	None	STRUCTURES (3) Strong	Moderate	Weak	None
Form			✓				✓				✓	
Line			✓				✓				✓	
Color			✓					✓			✓	
Texture			✓					✓			✓	

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names: Max Antono, Chris Moore

Date: 03/25/2020

Rel. 8-30
1/17/86

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 9/9/2019

District Unincorporated Imperial County

Resource Area

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name: Glamis Specific Plan

2. Key Observation Point: #2

3. VRM Class: VRI Class IV

4. Location
Township 13S
Range 18E
Section 34

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat to rolling terrain	regular and small	weak and few
LINE	Simple and smooth	regular and simple	straight
COLOR	light brown to light tan	light brown/green	grey and white
TEX-TURE	Smooth and fine	Clumped and patchy	Continuous

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat to rolling terrain	regular and small	weak and few
LINE	Simple and smooth	regular and simple	straight
COLOR	light brown to light tan	light brown/green	grey and white
TEX-TURE	Smooth and fine	Clumped and patchy	Continuous

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1) Strong	Moderate	Weak	None	VEGETATION (2) Strong	Moderate	Weak	None	STRUCTURES (3) Strong	Moderate	Weak	None
Form			✓				✓				✓	
Line			✓				✓				✓	
Color			✓					✓			✓	
Texture			✓					✓			✓	

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names: Max Antono, Chris Moore

Date: 03/25/2020

Rel. 8-30
1/17/86

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 9/9/2019

District Unincorporated Imperial County

Resource Area

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name: Glamis Specific Plan

2. Key Observation Point: #3

3. VRM Class: VRI Class I

4. Location
Township 13S
Range 18E
Section 34

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat to rolling terrain	regular and few	weak and few
LINE	Simple and smooth	regular and simple	straight
COLOR	light brown to light tan	Dark green/brown	grey and white
TEX-TURE	Smooth and fine	Sparse	Clumped

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat to rolling terrain	regular and few	weak and few
LINE	Simple and smooth	regular and simple	straight
COLOR	light brown to light tan	Dark green/brown	grey and white
TEX-TURE	Smooth and fine	Sparse	Clumped

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form			✓				✓				✓	
Line			✓				✓				✓	
Color			✓					✓			✓	
Texture			✓					✓			✓	

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names: Max Antono, Chris Moore

Date: 03/25/2020

Rel. 8-30
1/17/86

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 9/9/2019

District Unincorporated Imperial County

Resource Area

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name: Glamis Specific Plan

2. Key Observation Point: #4

3. VRM Class: VRI Class I/Unclassified

4. Location
Township 13S
Range 18E
Section 33

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat terrain	Few and regular	weak and few
LINE	Simple and smooth	regular and simple	straight
COLOR	light tan	dark green	grey and white
TEXTURE	Smooth and fine	Straight and continuous	Dotted

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat terrain	Few and regular	weak and few
LINE	Simple and smooth	regular and simple	straight
COLOR	light tan	dark green	grey and white
TEXTURE	Smooth and fine	Straight and continuous	Dotted

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1) Strong	Moderate	Weak	None	VEGETATION (2) Strong	Moderate	Weak	None	STRUCTURES (3) Strong	Moderate	Weak	None
Form			✓				✓				✓	
Line			✓				✓				✓	
Color			✓					✓			✓	
Texture			✓					✓			✓	

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names: Max Antono, Chris Moore

Date: 03/25/2020

Rel. 8-30
1/17/86

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 9/9/2019

District Unincorporated Imperial County

Resource Area

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name: Glamis Specific Plan

2. Key Observation Point: #5

3. VRM Class: VRI Class II and IV

4. Location
Township 13S
Range 18E
Section 33

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat and irregular terrain	regular and small	weak and few
LINE	Simple and jagged	regular and simple	straight
COLOR	light brown to light tan	light brown/green	grey
TEXTURE	Smooth and fine	sparse	Random

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat and irregular terrain	regular and small	weak and few
LINE	Simple and jagged	regular and simple	straight
COLOR	light brown to light tan	light brown/green	grey
TEXTURE	Smooth and fine	sparse	Random

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form			✓				✓				✓	
Line			✓				✓				✓	
Color			✓					✓			✓	
Texture			✓					✓			✓	

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names: Max Antono, Chris Moore

Date: 03/25/2020

Rel. 8-30
1/17/86

E Biological Resources Assessment

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GLAMIS SPECIFIC PLAN
NO. SP19-0001
BIOLOGICAL RESOURCES
ASSESSMENT REPORT
GLAMIS, CALIFORNIA

July 2019

Revised November 2020

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APPENDICES

Appendix A Sensitive Botanical and Zoological Species (CNDDB/CNPS)

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Appendix C Species Found Onsite and Vicinity

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FIGURES

Figure 1 Regional Location Map

Figure 2 Project Location Maps

Figure 3 Biological Resources Map

EXECUTIVE SUMMARY

General biological surveys were conducted on June 28, 2019 within the proposed site. The approximately 141 acres of the project site is located within Imperial County, CA.

No federal or state botanical endangered or threatened species were found within the project site areas or buffer survey zone during this survey. A floristic botanical survey is recommended after a germinating rainfall.

Burrowing owls, a California Species of Special Concern, were not found on project site and would not be expected. Migratory Bird Treaty Act bird nests were found on site. Flat-tailed horned lizard were not observed but could be present.

Invasive species were found in several areas.

1.0 INTRODUCTION

1.1 LOCATION

The Glamis Specific Plan is located in the remote community of Glamis, an unincorporated area in the central portion of Imperial County. The project site is located approximately 27 miles east of the City of Brawley; approximately 32 miles northeast of the City of El Centro; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea. Project Vicinity Exhibit, shows the relationship between the GSP area and surrounding vicinity with the Imperial Sand Dunes Recreation Area (ISDRA) located immediately to the southwest, the North Algodones Dunes Wilderness (NADW) immediately to the northwest, and the Chocolate Mountains and Chocolate Mountain Aerial Gunnery Range (CMAGR) located to the northeast. The Plan consists of the following APNs: 039-310-022, 039-310-023, 039-310-026, 039-310-027, 039-310-029, 039-310-030

1.2 PROJECT DESCRIPTION

This biological survey was done to inventory existing environmental status on the project site. This information will guide plans related to the preparation of a Specific Plan for an area known as “Glamis” in Imperial County.

The Glamis Specific Plan No. SP19-0001 provides for a flexible recreational master plan with a broad range of land uses ranging from recreational, commercial/retail, storage, entertainment, hospitality, residential, renewable energy, utility facilities, among other primary and complimentary land uses. Associated standards and protocols have been incorporated into the Glamis Specific Plan (GSP) to complement the broad range of land uses in order to safely enrich the activities that will enhance the Glamis experience.

With a total planning area of approximately 141 acres, the Glamis Specific Plan is designed to integrate seamlessly into the natural sand dunes environment and will have uniquely designated phased land use areas.

The project site’s central location within Imperial County together with State Route 78 (SR-78) bisecting the project site, the close proximity to Interstate 8 and the State of Arizona due east, makes it a desirable location for recreational visitors to travel efficiently east or west. The GSP attempts to build off the historical Glamis-going experience by providing expanded recreational, commercial, entertainment, and hospitality experiences, yet meet County Planning goals, while addressing environmental, engineering, commercial, public safety, and aesthetic needs that have been identified during the planning process. Finally, the GSP will eliminate the need for special event-related annual Conditional Use Permits (CUPs) and/or discretionary temporary event permits through implementation of a Special Event Management Plan that will include standards and protocols in accordance with regulatory requirements of the County and key stakeholder agencies for regulation of special events.

Historically, the GSP area and the ISDRA has been utilized for off-highway vehicle (OHV) recreational activities since the 1960s. Enthusiasm for dune buggies and other sand vehicles brought 30,000 people to Glamis area during the 1979 Thanksgiving weekend. By the 2010s, tens of thousands of off-road enthusiasts were visiting the Imperial Sand Dunes during the holidays in autumn, winter, and early spring months, many of them camping in Recreational Vehicles (RVs) near Glamis. Glamis became known as the Sand Toy Capital of the World. As a result, events and activities such as "Camp RZR" started to occur within the GSP area that attracted as many as 20,000 visitors each year during Halloween weekend or the weekend before Halloween. With the advent of special events within the Glamis area discretionary temporary event permits and CUPs required by the County of Imperial were deemed necessary to allow for the continued provision of such events. Currently, special and temporary events are permitted under Conditional Use Permit #08-0025. Events such as "Camp RZR" are required to undergo review and approval of event operations and protocols with the County and key stakeholder agencies.

The following is a brief description of the land uses within the GSP:

a. Recreational - The GSP provides an opportunity for a variety of recreational activities to complement the established "Glamis" sand dunes experience of the surrounding ISDRA. These include an Adventure Center (offers activities such as OHV training, OHV rentals, etc.), amusement facilities, Desert Tours (off road experience), racetrack, shooting range, park/playground/picnic area, and other recreational-based activities.
b. Commercial/Retail - The GSP will allow for a wide range of commercial and retail development, which include fuel stations, rental facilities, and sporting goods stores to accommodate the needs of visitors to the Glamis area. It may also provide for RV Park(s) to accommodate a small number of users that desire to have conveniences not found in open dry camping.
c. Storage - OHV and RV storage is an existing land use within the project site. The GSP will provide for storage for OHVs and RVs to allow visitors to store their vehicles at Glamis year around.
d. Entertainment - The Glamis area has long been known as the premier destination for OHV enthusiasts to enjoy their recreational activities within the world-renowned Imperial Sand Dunes. The GSP will allow for a range of entertainment land uses whose purpose is to enhance the visitors experience to the Glamis Area. Entertainment land uses could include an adventure center, amusement facilities, movie theater, obstacle courses, shooting range, fireworks display area, and racetrack.
e. Hospitality - With an average annual attendance of 200,000 visitors to the Glamis area, the GSP will provide for the development of various hospitality services to provide visitors with the accommodations they need to fully enjoy all that the Glamis area has to offer. Hospitality land uses may include medical services facility, mobile food trucks, tourist information center, public showers, public restrooms, and hotel/motel facilities.
f. Residential - The GSP will allow for limited residential development to accommodate those who require temporary housing in Glamis. Housing will be developed in the form

of guest, employee housing, seasonal private residences and temporary use of RV's on Owner's property.

g. Renewable Energy - Due to the remote location of the GSP, renewable energy facilities will be developed in order to provide electricity to the Glamis area. The GSP will allow for the development of a solar and wind energy generation facilities (including battery storage) located throughout the GSP
h. Infrastructure Improvements - In order to properly accommodate the large volume of visitors to the Glamis Project area, existing water and wastewater facilities will need to be improved along with the development of additional infrastructure. The GSP will allow for the development of utility buildings, utility substation(s), and water/wastewater treatment facilities.
i. Research & Development Facility - The GSP provides for a research & development (R&D) facility that will take advantage of the close proximity of the ISDRA. This R&D facility will allow Polaris to test their equipment in a natural and private setting.

1.3 POSSIBLE APPLICABLE ENVIRONMENTAL REGULATIONS

1.3.1 STATE OF CALIFORNIA

California Environmental Quality Act (CEQA) Title 14 CA Code of Regulations 15380 requires that endangered, rare or threatened species or subspecies of animals or plants be identified within the influence of the project. If any such species are found, appropriate measures should be identified to avoid, minimize or mitigate to the extent possible the effects of the project.

Native Plant Protection Act CDFG Code Section 1900-1913 prohibits the taking, possessing, or sale within the stare of any plant listed by CDFG as rare, threatened, or endangered. Landowners may be allowed to take these species if CDFG is notified at least 10 days prior to plant removal or if these plants are found within public right of ways.

CA Fish and Game Codes 3503, 3503.5. 3513 protect migratory birds, bird nests and eggs including raptors (birds of prey) and raptor nests from take unless authorized by CDFW.

CA Fish and Game Code Section **1600, as amended** regulates activities that substantially diverts or obstructs the natural flow of any river, stream or lake or uses materials from a streambed. This can include riparian habitat associated with watercourses.

State of CA Fully Protected Species identifies and provides additional protection to species that are rare or face possible extinction. These species may not be taken or possessed at any time except for scientific research or relocation for protection of livestock.

California Endangered Species Act (CESA) protects all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved.

Porter-Cologne Water Quality Control Act, as amended is administered by the State Water Resource Control Board (SWRCB) to protect water quality and is an avenue to implement CA responsibilities under the federal Clean Water Act. This act regulates discharge of waste into a water resource.

1.3.2 FEDERAL

National Environmental Policy Act (NEPA: 42 United States Code (U.S.C.) 4321 et seq) established national environmental policy and goals for the protection, maintenance and enhancement of the environment. A process is available for implementation goals within federal agencies. NEPA requires federal agencies to consider the environment in processing proposed actions.

Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531-1544) protects federal listed threatened and endangered species from unlawful take (harass, harm, pursue, hunt, shoot, kill ,wound, collect, capture, trap or attempt to do so) or significantly modify habitat. If a proposed project would jeopardize a threatened or endangered species, then a Section 7 consultation with a federal agency could be required.

Migratory Bird Treaty Act (50 Code Federal Regulations (CFR) 10.13)is a federal statute with several foreign countries to protect species that migrate between countries. Over 850 species are listed and may not be disrupted during nesting activities. It is illegal to collect any part (nest, feather, eggs, etc.) of a listed species, disturb species while nesting or offer for trade or barter any listed species or parts thereof.

Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) protects bald and golden eagles from take (harass, harm, pursue, hunt, shoot, kill ,wound, collect, capture, trap or attempt to do so) or interference with breeding, feeding or sheltering activities.

Clean Water Act, 1972 (CWA 33 U.S.C. 1251 et seq.) regulates discharges into waters of the U.S. EPA is given the responsibility to implement programs to prevent pollution.

2.0 BIOLOGICAL SURVEY METHODOLOGIES

The purpose of the survey was to determine the inventory of biological resources at the time of the survey; the possibility of the existence of endangered, threatened, sensitive or species of concern within project area: map habitats, and ascertain the probability of the presence of sensitive species on site.

2.1 FIELD SURVEYS

2.1.1 GENERAL BIOLOGICAL SURVEY

The survey of the Specific Plan was intended to assess presence or the potential for species to occur based on habitat suitability within the Plan.

California Natural Diversity Database (CNDDB), California Native Plant Society database (CNPS), United States Fish and Wildlife Service (USFWS)/Carlsbad office Sensitive Species list, field guides, personal contacts and other methods were utilized to ascertain potential for sensitive species on the site.

Pedestrian biological surveys of the approximately 141-acre project area and buffer zones, where possible, to document vegetation and animals were conducted by biologists Marie Barrett, Glenna Barrett, Shawna Bishop and Dani Figueroa as indicated in Table 1: Field Survey Schedule. The surveys were conducted to develop an inventory of species (plant and animal) present at the time of the surveys, map vegetative communities, if present and ascertain the potential for occurrence of sensitive, endangered or threatened species within the project area and vicinity.

TABLE 1: FIELD SURVEY SCHEDULE

Date/Conditions	Surveyors	Survey Time
6/28/19 80-90ºF clear, 0-3 mph	Marie Barrett/Glenna Barrett/Shawna Bishop, Dani Figueroa	0600-0830
Total all surveyors		10 hrs.

Garmin GPS, binoculars, thermometer, anemometer and digital cameras were used.

2.1.2 JURISDICTIONAL DELINEATION

Several washes and ephemeral washes were observed on site. A formal jurisdictional delineation may be necessary to determine areas of waters of the United States.

2.2 LITERATURE REVIEW

Potential occurrence for endangered, threatened, sensitive, species of concern and noxious weeds was determined by perusal of appropriate data bases which included:

- CA Natural Diversity Database (CNDDB)
- CA Native Plant Society (CNPS) Rare Plant Program
- USFWS Bird Species of Conservation Concern
- UFWS Critical Habitat for Threatened & Endangered Species Website
- CA Food and Agriculture Department Noxious Weed Information Project

3.0 EXISTING CONDITIONS

3.1 TOPOGRAPHY AND SOILS

Glamis is located in Imperial County and is found in the eastern part of the county. Landforms are alluvial fans derived from igneous rock and are typically sand to fine sand. Drainage is excellent and depth to water table is typically greater than 80 inches.

The elevation on this site varies from approximately 324 feet to 345 feet (above mean sea level).

3.2 VEGETATION

3.2.1 VEGETATION COMMUNITY

Vegetation has been divided into communities that are groups of plants that usually coexist within the same area. This area is considered the Colorado Desert and native vegetation would be creosote bush-brittle bush scrub (*Larrea tridentate-Encelia farinosa* Shrubland Alliance). (*A Manual of California Vegetation*, 2009, Sawyer/Wolf).

TABLE 2: VEGETATIVE COMMUNITIES

Parcels	Acreage	Description	Vegetative Communities
039-310-022 039-310-027 039-310-023 039-310-029 039-310-026 039-310-029	141	Developed lots highly disturbed. These areas include a trailer storage lot; RV site, store, vendor lot, race track and a cell phone tower. Areas show concentration of heavy ATV/UTV and dune buggy usage	Sparse native and ruderal vegetation Smoke tree, *Dalea spinosa*, were observed but not in numbers to demonstrate riparian habitat

3.2.2 AGRICULTURE

Site did not show signs of agricultural cultivation.

3.2.3 VEGETATION

The sparse vegetation found on site was a combination of native and ruderal (listed with scientific names in Appendix C). No annuals were found on site; sparse vegetation which included typical creosote bush-brittle bush scrub species (listed in Appendix C).

3.3 WILDLIFE

3.3.1 INVERTEBRATES

This project site consists of developed lots. Ants and grasshoppers were observed; identified in Appendix C.

3.3.2 AMPHIBIANS

Reliable moisture is a requirement for a portion of amphibian life cycle. The project site consists of developed lots. No amphibians were observed on site. Due to the lack of available water, none would be expected.

3.3.3 REPTILES

The project site consists of developed lots. Reptiles utilize habitat dependent upon their dietary requirements. Some species diet includes vegetation while others consume insects. All require vegetation for shelter. Sparse vegetation is available on site. Lizard tracks were observed.

3.3.4 BIRDS

Bird species diversity varies with seasons, variety and quality of vegetative communities.

Birds and bird nests were observed in the vicinity. List of species observed is found in Appendix C.

3.3.5 MAMMALS

Signs of mammals were observed on sites but were assumed to be coyotes, rabbits and kangaroo rats. Bats are not expected; roosting sites are not available. The mammals that were found are identified in Appendix C.

3.3.6 FISH

The project site consists of developed lots with sparse vegetation. There are no permanent water sources observed on site; no fish would be expected.

3.4 SENSITIVE BIOLOGICAL RESOURCES

3.4.1 SPECIAL STATUS SPECIES

TABLE 3. SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR ON PROJECT SITE

Special-Status Species	Legal Status	Found	Potential for Occurrence
Flat-tailed horned lizard (FTHL) *Phrynosoma mcallii*	Federal: None State: Protected, Species of Special Concern	No	Medium on site – Highly disturbed acreage. Loose soils occur on site. Ants were observed onsite. No FTHL, scat or tracks were identified in the general biological survey. This area is not within a FTHL Management Area. 2 occurence records were found on CNDDB; one 3.8 miles (1969); the other 5.78 miles (2002) from project site. Records attached.
Colorado fringe toed lizard *Uma notata*	Federal: Threatened State: Endangered	No	Very low on site – Primarily found in wind-blown sand areas. Highly degraded acreage with no windblown sand areas. Habitat is present to the west.
Burrowing owl *Athene cunicularia*	Federal: None State: CSC	No	Very low on site – Highly disturbed acreage with sparse available burrow opportunities; limited prey observed.
Gila Woodpecker *Melanerpes uropygialis*	CDFW: Endangered	No	Very low on site – Highly disturbed acreage with sparse available nesting opportunities; no palm trees.
Le Conte's thrasher *Toxostoma lecontei*	CDFW: Species of Concern	No	Very low on site – Highly disturbed acreage with sparse available nesting opportunities; medium offsite.
Loggerhead shrike *Lanius ludovicianus*	CDFW: Species of Concern	No	Very low on site – Highly disturbed acreage with sparse available nesting opportunities. Lizards which are prey were seen so loggerhead shrikes could use area; medium offsite.

3.4.2 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITIES

Based upon the level of disturbance or habitat conversion within adjacent areas, vegetative communities are considered rare or sensitive. Rare vegetation types that are converted and degraded can disrupt the integrity of the ecological functions of natural environments. This can lead to the loss of sensitive plant species and a resulting decrease in biodiversity. Wetland or riparian habitat communities are considered sensitive by CDFW.

3.4.3 Jurisdictional Waters

Wetlands and other "waters of the United States" that are subject to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act are under the jurisdiction of the U.S. Army Corp of Engineers (ACOE).

3.4.4 Habitat Connectivity and Wildlife Corridors

The ability for wildlife to freely move about an area and not become isolated is considered connectivity and is important to allow dispersal of a species to maintain exchange genetic characteristics; forage (food and water) and escape from predation.

3.4.5 California Desert Conservation Area (CDCA)

This project is not within or immediately adjacent to an Area of Critical Environmental Concern (ACEC) of the CDCA.

4.0 PROPOSED PROJECT IMPACT

The proposed impacts are summarized in this section.

4.1 IMPACT TO SPECIAL STATUS SPECIES

If this project has a substantial adverse effect, either directly or through habitat modification or elimination, on any plant or animal species that is considered endangered, threatened, candidate for listing or special status species either through federal or state regulations, this project would be considered to have a significant impact.

4.1.1 BIOLOGICAL RESOURCES

No special status and priority plants or animals were observed. The approximately 141 acres are highly disturbed and no adverse impact is expected either directly or through habitat modification on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service when avoidance, minimization and mitigation recommendations are followed.

Biological resources found are listed in Table 4 and Figure 4 Biological Resources Map.

TABLE 4 BIOLOGICAL RESOURCES

Location	Description	Recommendations
1. 32°59'55.7"/115°4'14.4"	Small burrows with tracks	Observe prior to construction activities to see if active
2. 32°59'53.4"/115°4'10.4"	2 avian nests	Observe prior to construction activities to see if active

	Location	Description	Recommendations
3.	32°59'53.5"/115°4'10.2"	1 avian nest	Observe prior to construction activities to see if active
4.	32°59'53.2"/115°4'10.5"	Small burrows with tracks	Observe prior to construction activities to see if active
5.	32°59'33.7"/115°4'6.4"	Small burrows with tracks	Observe prior to construction activities to see if active

4.1.2 SENSITIVE WILDLIFE

4.1.2.1 FLAT-TAILED HORNED LIZARD

Construction Impact.

Prior to construction, a protocol FTHL survey should be performed by qualified biologists.

The proposed project may cause small mammals and reptiles with low mobility to be inadvertently killed during grading of the site.

FTHL could potentially occur within the softer sands (within and around the washes, and along the roadsides) in the creosote bush scrub on-site. There is an abundance of prey (ants) that could support FTHL presence. There is potential that there would be direct and/or indirect impacts to this species if construction occurs during the active period of mid-February to mid-November. Ground disturbance from heavy equipment, which may potentially impact the FTHL, would be considered significant and would require mitigation. Impacts to this species would be considered significant, if present.

Section 5 discusses avoidance, minimization and mitigation requirements for burrowing owls found on site or in vicinity during construction.

4.1.2.2 MBTA NESTING

Construction Impact

There are small trees on site that encourage bird nesting. Nests were observed in the palo verde (Cercidium microphyllum) and mesquite (Prosopis spp) on site. Ground nesting species, such as lesser nighthawk, could use the area.

If construction is planned to begin during nesting season (generally February 1 through August 31), the project area and a 500-foot buffer area should be surveyed to determine presence/absence of nesting. if nests are found, an appropriate buffer zone for the species should be maintained during construction until juveniles have fledged.

There will be no impacts to nesting raptors due to the absence of suitable large trees for nesting.

Operations and Maintenance Indirect Impact

ELECTROCUTION

A small solar/wind facility could be built. These facilities would consist of roof top panels and small wind towers with minimal electrical components which would not be considered an avian hazard. Typical community electrical components currently exist and could be expanded within the project but would not be expected to impact avian populations.

4.2 IMPACT TO RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITIES

The distribution of riparian plant species is largely driven by hydrological and soil variables and riparian plant communities frequently occur in relatively distinct zone along streamside elevational and soil textural gradients.

There is sparse riparian vegetation found on site, therefore this project should not have a substantial adverse effect on any riparian habitat.

4.3 IMPACT TO JURISDICTIONAL WATERS

There are no wetlands found on site; therefore this project will have no impact on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

A stormwater channel runs through a small portion of the northeast which is channeled under the railroad track. On the southeast portion, a wash is piped under SR 78.

Several established washes and ephemeral washes were observed on site. It is recommended that the ACOE and CDFW be consulted to determine permitting requirements.

4.4 IMPACT TO WILDLIFE MOVEMENT AND NURSERY SITES

This project is in a predominately developed and fenced community. Site is bisected on by SR 78, Ted Kipf Road and Union Pacific railroad and as a result of these existing barriers, the project will not interfere substantially with the currently restricted movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

4.5 IMPACT TO AIRPORTS

This project has no components that will attract avian populations that would impact airports. It is approximately 28 miles from Brawley Airport, CA, which is the closest airport. No impact upon airports is expected.

4.6 CEQA IMPACTS

Possible CEQA significant impacts that could include the following within the parameters of this project:

TABLE 5: EXPECTED IMPACTS

Area	Endangered/threatened/ Species of Concern Habitat	Riparian Habitat	Wetlands	Wildlife Corridors	Local Ordinances	Waters of the U.S.
141 acres	None with avoidance/ minimization/ mitigation measures listed	No	No	No	No	Possibility; consult agencies

5.0 RECOMMENDED AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES

5.1 SENSITIVE WILDLIFE

5.1.1 FLAT-TAILED HORNED LIZARD

Avoidance Measures

A preconstruction survey should be performed prior to initiating ground disturbance. Report should be submitted to the appropriate agency.

Since FTHL have been located within the vicinity, it is recommended that construction foremen and workers and onsite employees be given worker training by a qualified biologist regarding FTHL that would include the following:

- Description of FTHL
- Biology
- Regulations (CDFW/USFWS)
- Wallet card with picture/guidelines for protecting FTHL,birds and wildlife

- Notification procedures if FTHL (dead, alive, injured) is found on or near site

A sign in should be obtained and the training materials and sign in sheet should be submitted to appropriate agency.

Minimization Measures

To avoid direct or indirect impacts to FTHL, protocol surveys for this species should be conducted to determine if this species is present within the survey area. If FTHL is present, mitigation will be required. Per the Management Strategy, survey protocol for FTHL for a project site between 51-100 hectares (141 acres = 57 hectares) requires eight one-hour presence/absence surveys by qualified FTHL surveyors. All roads within and near the survey area shall be driven twice to allow for detection of lizards. However, a project proponent can forego these surveys by assuming the species is present and applying appropriate mitigation and compensation (Flat-tailed Horned Lizard Interagency Coordinating Committee [FHLICC] 2003).

Construction should occur as much as possible during the FTHL's dormant period, November 15 to February 15, and employ all mitigation measures recommended by the management strategy. Construction is to be completed in as short a time as possible to minimize the length of time that habitat will be disturbed by activity.

This project site is historically highly disturbed and will not remove favorable FTHL habitat.

Mitigation measures for these impacts are detailed in the FTHL Rangewide Management Strategy (FHLICC 2003) and these measures are summarized below. The mitigation measures shall be overseen by an agency approved project biologist who is familiar with the entire text and requirements of the mitigation measures outlined in the Management Strategy. If FTHL is not found to be present after protocol surveys, then no mitigation for this species is required. If FTHL presence is found, the following mitigations should be followed.

Mitigation Measures

1. A Field Contact Representative (FCR) shall be designated prior to the start of construction. The FCR will be responsible to ensure compliance with protective measures for the FTHL and other sensitive biological resources and will act as the primary resource agency contact. The FCR shall have the authority to halt activities that are in violation of these terms and conditions.
2. All work areas will be clearly flagged or otherwise marked, and all work will be restricted to these areas. All construction workers shall restrict their activities and vehicles to areas that have been flagged or to clearly recognizable areas such as access roads that have been identified as "safe" areas by the FCR.
3. A biological monitor shall be present in each area of active construction throughout the workday from initial clearing through habitat restoration (or completion of project), except where the project is completely fenced and cleared of FTHLs by a biologist (see Measure 8 below and suggested alternate option). The biologist must have sufficient education and field training with the FTHL. This biologist will ensure that the project

complies with these mitigation measures and will have the authority to halt activities if they are not in compliance. The biologist will inspect the construction areas periodically for the presence of FTHLs and will inspect any open trenches or pits prior to backfilling. The biologist will also work with the construction supervisor to take steps to avoid disturbance to the lizards and their habitat. If a lizard is discovered within an affected area, the lizard will be captured and relocated. The monitor will also excavate all potential FTHL burrows within the construction areas and relocate any FTHLs encountered.

4. Only biologists authorized by CDFW may handle FTHLs. Any workers who discover FTHLs shall avoid disturbing the animals and shall immediately notify their construction supervisor and the biological monitor.
5. The area of vegetation and soil disturbance shall be restricted to the smallest extent possible. When possible, equipment and vehicles should use existing surfaces or previously disturbed areas. When excavation or grading is necessary, the topsoil should be stockpiled and restored following completion of the work.
6. Existing roads shall be used to the greatest extent possible for travel and staging areas.
7. Sites of permanent or long-term (greater than one year) projects in Management Areas where continuing activities are planned and where FTHL mortality could occur, may be enclosed with FTHL barrier fencing to prevent lizards from wandering onto the project site where they may be subject to collection, death, or injury. Barrier fencing should be in accordance with the standards outlined in Appendix 7 of the Management Strategy. After clearing the area of FTHLs (also see Appendix 7), no on-site monitor is required (see Measure 4).
8. Where feasible and desirable, in the judgment of the lead agency, newly created access routes shall be restricted by constructing barricades, erecting fences with locked gates at road intersections, and/or by posting signs. In these cases, the project proponent shall maintain, including monitoring, all control structures, and facilities for the life of the project and until habitat restoration is completed.
9. The FCR shall keep a record of the extent of all areas permanently and temporarily disturbed by construction. This record shall be the basis for determining a monetary compensation to be paid by the proponent as required by Appendix 4 (Compensation Formula) of the Management Strategy. The BLM may require, prior to the beginning of construction, a reasonable deposit based on the extent of anticipated disturbance, with the final compensation to be determined according to the FCR's final record and the Compensation Formula in the Management Strategy.

Mitigation will also include contribution to a compensation fund that will be used to acquire lands and enhance habitat within FTHL management areas (FHLICC 2003). Compensation for habitat lost from impacts resulting from the project, which is outside of an FTHL management area, will be charged at a 1:1 ratio, as stated in the Rangewide Management Strategy (FHLICC 2003).

5.1.2 MIGRATORY BIRDS AND NON-MIGRATORY BIRD SPECIES

If construction is scheduled to begin during nesting season (February-August), a survey for nesting birds should be performed within 3-7 days of groundbreaking activities on project site. Dependent upon species found, appropriate buffer zones will be established by a

qualified biologist. If construction is delayed or halted for over 2 weeks during nesting season, a nesting bird survey should be conducted within 3-7 days prior to resumption of construction.

It is recommended that construction foremen and workers and onsite employees be given worker training by a qualified biologist regarding nesting birds that would include the following:

- Description of birds covered under MBTA and likely to be found on project
- Biology
- Regulations (CDFW/USFWS)
- Notification procedures if bird (dead, alive, injured) is found on or near site

A sign in should be obtained and the training materials and sign in sheet should be submitted to appropriate agency.

A biologist should be consulted immediately if a dead or injured bird is found on site.

5.1.3 INVASIVE PLANTS

Any mustards, saltcedar or russian thistle found on site should be removed in a manner that will not distribute plant seeds or plant material as overseen by project biologist prior to construction. Use of covered trailers to remove invasive species to an approved landfill is recommended.

Equipment brought onsite should be clean to prevent importing invasive species to site.

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APPENDIX A
SENSITIVE BOTANICAL AND ZOOLOGICAL SPECIES (CNDDB/CNPS) SPECIES

APPENDIX A
SENSITIVE BOTANICAL AND ZOOLOGICAL SPECIES (CNDDB/CNPS)
Glamis Quadrangle (9 Quads)
June 2019

BOTANICAL SPECIES	STATUS[1]	DESCRIPTION OF SPECIES	HABITAT	OBSERVATION/SITE POTENTIAL
Algodones Dunes sunflower *Helianthus niveus ssp. tephrodes*	CNPS List 1B.2 State: Endangered	Stem: soft-white-, +- appressed-hairy. Leaf: most alternate; petiole 1.5--3.5 cm; blade generally 3--7 cm, triangular-ovate, base wedge-shaped, tip obtuse to acute, faces densely white-hairy, abaxially gland-dotted. Annual or perennial herb, +- subshrub, <= 15 dm, from taproot	Dunes habitat	L No deep loose sand available; none observed
Darlington's blazing star *Mentzelia puberula*	CNPS List 2B.2	Stem: erect, hairy. Leaf: 2--6.5 cm, 10--40 mm wide, lower widely obovate to elliptic or widely elliptic, toothed, upper sessile, ovate to broadly elliptic, base not clasping.	Sandy crevices in cliffs or rocky slopes; Elevation: 90--1280 m.	L No cliffs habitat available; none observed
Munz's cholla *Cylindropuntia munzii*	CNPS: 1B.3	Plant < 2.4 m. Stem: trunk 1; branches several, spreading to curving upwards; terminal segments generally < 10 cm, 3--5 cm diam, generally easily detached; tubercles 10--16 mm, 3--8 mm high. Spines: 9--16, < 4 cm, light yellow to pale red-brown, sheath yellow-brown.	Gravelly or sandy soils of washes, canyon walls; Elevation: 150--600 m. Bioregional Distribution: DSon (Chocolate, Chuckwalla mtns, Imperial, Riverside cos.);	L No habitat None observed
Peirson's milk-vetch *Astragalus magdalenae var. peirsonii*	State: Threatened Federal: Endangered CNPS: 1B.2	is a member of the legume family (Fabaceae) and is an erect to spreading, herbaceous, short-lived perennial. It is covered with fine silky hairs and produces purple flowers, often with white tips, which generally appear from December through April.	Algodones Dunes in Imperial County, California and the Gran Desierto of northwestern Sonora, Mexico.	L No deep loose sand available habitat; none observed
Pink Fairy Duster *Calliandra eriophylla*	CNDDB Ranks G5, S2S3; CNPS: 2.3	Fairy Duster is a low, densely branched shrub 8 to 48 inches high. The leaves are formed by 2-to-4 pairs of 1/4-inch, oblong leaflets. It is a member of the Pea Family (Fabaceae) which includes acacias and mimosas.	Open hillsides, sandy desert washes and slopes below 5,000 feet.	L No habitat; none observed
roughstalk witch grass *Panicum hirticaule ssp. hirticaule*	CNPS: 2B.1	Annual. Stem: 1--8 dm. Leaf: sheath 2--6 cm, axis glabrous to short-hairy; ligule membrane 0.5--2 mm, ciliate; blade 7--20 cm, 3--15 mm	Sandy soils, open sites, creosote-bush scrub; Elevation: < 1400 m. Bioregional Distribution: D; Distribution Outside California: to Texas, South	L None observed; habitat heavily disturbed

		wide, upper surface generally sparsely short-hairy.	America. Flowering Time: Aug--Dec	
BOTANICAL SPECIES	STATUS[1]	DESCRIPTION OF SPECIES	HABITAT	OBSERVATION/SITE POTENTIAL
Sand Food *Pholisma sonorae*	State: S1.2 (threatened); CNPS list:1B.2	Parasite on species such as *Erigonus, /tiquilia, ambrosia, pluchea.* White to brown color. Corolla pink to purple.	Sonoran Desert Dunes; loose deep sand	L No deep loose sand available habitat; none observed
sand evening-primrose *Chylismia arenaria*	CNPS: 2B.2	Annual or bushy perennial herb, erect; hairs spreading, in inflorescence a few glandular. Stem: < 180 cm. Leaf: petiole < 60 mm; blade < 60 mm, cordate-deltate, teeth coarse or larger and smaller.	Sandy washes, rocky slopes, desert scrub; Elevation: < 430 m. Bioregional Distribution: DSon; Distribution Outside California: southwestern Arizona, northern Mexico (Sonora).	L Habitat not favorable; heavily disturbed
slender cottonheads *Nemacaulis denudata var. gracilis*	CNPS: 2B.2	Plant 0.4--2.5(4) dm, 0.4--2 dm diam. Leaf: blades 1--7 cm, 0.1--0.6 cm wide. Inflorescence: branches light brown; involucre bracts 2--4 mm, 0.5--1 mm wide. Flower: 0.5--1.2 mm, generally obscured by hairs.	Deserts; Elevation: 10--500 m. Bioregional Distribution: SW, DSon; Distribution Outside California: Arizona, northwestern Mexico.	L Habitat not favorable; heavily disturbed
Wiggins' croton *Croton wigginsi*	State: Rare	Shrub/subscrub; Petiole is 1-4 cm with a blade of 2-8.5 cm. and is elliptic (narrowly)to linear-oblong. Tip is rounded to obtuse. Flowers have 10-15 stamens – filiments are hairy; no petals	Desert Dunes	L No desert dune habitat; none observed
Giant Spanish-needle *Palafoxia arida var gigantea*	CNPS: 1B.3	Stems generally 9-20 mm in diameter and glabulous; leaves 6-12 mm	Sonoran Desert Shrub	L Highly disturbed area; none seen
ZOOLOGICAL SPECIES	**STATUS[1]**	**DESCRIPTION OF SPECIES**	**HABITAT**	**OBSERVATION/ SITE POTENTIAL**
Burrowing Owl *Athene cunicularia*	CDFW: SC Species of Concern	Small raptors that nest in burrows that have been borrowed from other species in open grassland areas. Have adapted well in Imperial County using canals/drains/ditches to establish burrows and foraging for insects in agricultural fields	Open, dry annual or perennial grasslands; deserts & scrublands	L No owls or active burrows found; no suitable habitat. Survey results included in this report
Couch's spadefoot *Scaphiopus couchii*	CDFW: Species of Concern	A small stout-bodied toad with short legs and warty skin. The eyes are wide-set with no boss in between. Pupils are vertical. A hard black sharp-edged spade shaped like a	Desert and arid regions of grassland, prairie, mesquite, creosote bush, thorn forest, sandy washes.	L No areas of water ponds on site observed to catch summer rains

		sickle is found on each hind foot. Parotoid glands are not present.		
ZOOLOGICAL SPECIES	**STATUS[1]**	**DESCRIPTION OF SPECIES**	**HABITAT**	**OBSERVATION/ SITE POTENTIAL**
desert bighorn sheep *Ovis canadensis nelsoni*	CDFW: FP	Desert bighorn sheep are stocky, heavy-bodied sheep, similar in size to mule deer. Weights of mature rams range from 115 to 280 pounds (52 to 127 kg), while ewes are somewhat smaller. Due to their unique concave elastic hooves,[3] bighorn are able to climb the steep, rocky terrain of the desert mountains with speed and agility.	native to the deserts of the USA's intermountain west and southwestern regions, as well as northwestern Mexico.	L No habitat; no food source
desert tortoise *Gopherus agassizii*	State: Threatened Federal: Threatened	The head of a desert tortoise is scaly, and the body has thick skin. Desert tortoises also have extremely long nails, which are used in digging through the desert sand to find shelter. The upper shell of a desert tortoise ranges in length from 15 to 36 centimeters, and its color varies from dull brown to a dull yellow.	Desert tortoises are found in the southwestern United States and northwestern Mexico. They range from northern Sinaloa up through Sonora and western Arizona to southeastern California, southern Nevada, and the southwestern tip of Utah. (Van Devender, 2002)	L Found to the east near Mesquite mine but no signs of old tortoise presence or burrows observed
flat-tailed horned lizard *Phrynosoma mcallii*	CDFW: Species of Concern	A medium-sized flat-bodied lizard with a wide oval-shaped body and scattered enlarged pointed scales on the upper body and tail. The back skin is smooth with small spines. 8 horns extend from the back of the head. The two central horns are long, slender and sharp.	it is endemic to the Sonoran desert of the southwestern United States and northwestern Mexico.	M Habitat is present off site to the north; no scat or lizards were observed during general survey. Not within a FTHL Management Area
Gila Woodpecker *Melanerpes uropygialis*	CDFW: Endangered	Bill black to grayish black with dark red to reddish hazel eyes. About 9.3 inches long with brownish green or bluish legs and feet. Black and white barring on back male has red cap on head. Buff-brown face, neck and breast with barred rump and central tail feathers.	Found in desert; likes to nest in large cacti or trees suitable for nesting such as cottonwoods, palm trees.	L No suitable palm trees; none observed or heard.
American Badger *Taxidea taxus*	CDFW: Species of Concern	Burrowing animals that feed on ground squirrels, rabbits, gophers and other small animals. Prefer grasslands, agricultural	Found in drier open areas with friable soils	L None seen; no burrows observed

		areas.		
Le Conte's thrasher *Toxostoma lecontei*	CDFW: Species of Concern	LeConte's thrasher weighs from 55 to 75 g (1.9 to 2.6 oz) and are 24.5–29 cm (9.6–11.4 in), and there is no sexual dimorphism within the species. Their wings are typical of birds that are sedentary, as they are short and rounded. There are noted differences among the subspecies. The crown, back, shoulders, and rump of T.c. lecontei possess a sandy pale-gray color.	resident of the deserts of the American Southwest and northwestern Mexico	M Could be found foraging or nesting in area
ZOOLOGICAL SPECIES	**STATUS[1]**	**DESCRIPTION OF SPECIES**	**HABITAT**	**OBSERVATION/ SITE POTENTIAL**
Loggerhead shrike *Lanius ludovicianus*	CDFW: Species of Concern	This shrike is a medium-sized passerine. As with many song birds, the Loggerhead Shrike has several different colors whose arrangement is considered important in attracting a mate (along with displayed hunting prowess). The shrike's greyish back and black wings are evident against its white breast and other body areas.	Prominent in many parts of central Canada, border states of Canada, and in the Greater Midwest of the United States. During its spring / summer migration, however, it can sometimes be seen as far south and west as California though in ever decreasing numbers.	M Could be found foraging in area
pallid bat *Antrozous pallidus*	CDFW: Species of Concern	Adults range from 60 to 85 mm long from head to tail. The tail can be 35 to 57 mm alone. Forearm length is 45 to 60 mm long and body weight ranges from 17 to 28 grams. Their fur has a woolly feel with a cream-yellow to light brown color on the dorsum and very pale to white color on the venter. This species has a U-shaped ridge on the top of the muzzle with the nostrils located underneath the ridge on the front of its muzzle. The face has small wart-like pararhinal glands that produce a skunk-like odor, which is thought to be used as defense mechanism.	They occur from the Okanagan valley in British Columbia, south through eastern Washington, Oregon, and California to Baja California Sur, Sonora, Sinaloa, Nayarit, Jalisco, Queretaro, and Nuevo Leon in Mexico. They are found as far east as western Texas, Oklahoma, southern Kansas, southern Wyoming, and southern Idaho. There is a disjunct population on the island of Cuba. (Nowak, 1999; Verts and Carraway, 1998) Inhabit rocky, outcrop areas where they commonly roost in rock crevices, caves, and mine tunnels	L No roosting habitat
Western Yellow bat *Lasiurus xanthinus*	CDFW: Species of Concern	Consumes small to medium-sized, night flying insects. Yellow color/short ears.	Roosts in leafy vegetation in the deserts of the southwestern United States. Roosts among the dead fronds of palm trees and cottonwoods	L No palm trees for roosting; not expected

Pocketed free-tailed bat *Nyctinomops femorosaccus*	CDFW: SC	Bat has a free-tail which extends beyond the edge of the interfemoral membrane. With a forearm of 45-49 mm, it is smaller than all other North American molossid species except *Tadarida brasiliensis*. It is slightly larger than *T. brasiliensis* and has its ears joined at the midline. The body length measures 3 7/8 to 4 5/8", with a wingspan of 14". The fur is dark gray or brown above and below and nearly white at base. Ears are joined at base. Possesses a wrinkly upper lip; about half of the tail extends past edge of tail membrane	Lives in rocky areas of desert scrub or coniferous forests. During day roosts in crevices on cliff faces.	L Not expected; no cliff crevice habitat.
ZOOLOGICAL SPECIES	**STATUS[1]**	**DESCRIPTION OF SPECIES**	**HABITAT**	**OBSERVATION/ SITE POTENTIAL**
Western mastiff bat *Eumops perotis californicus*	CDFW: Species of Concern	Biggest North American bat, with a body length of 5 1/2 to 7 1/2"; wingspan of over 22". Fur is thin, dark brown, hairs white at base. Huge ears joined at base and extending out over forehead like a bonnet. Eats moths, insects. Forms small colonies of up to about 100 bats. Very vocal bat, emits many loud cheeping sounds while flying, audible to the human ear. Sometimes forages by crawling on the ground, with tail held up in the air. Bears single young each year, in the early summer.	Southern California and Arizona, extending down to Mexico. Lives in rocky areas and cliff faces. Roosts in cliff crevices and buildings**.**	L No cliff crevice habitat.
Colorado Desert fringe-toed lizard *Uma notata*	CDFW: Species of Concern	Color is white, with a contrasting pattern of broken black lengthwise lines and round, eye-like spots. The color and pattern create a successful camouflage which allows a lizard to blend into its sandy habitat.	Sparsely-vegetated arid areas with fine wind-blown sand, including dunes, flats with sandy hummocks formed around the bases of vegetation, washes, and the banks of rivers. Needs fine, loose sand for burrowing.	L Habitat not suitable; no fine loose sand for burrowing
California leaf-nosed bat *Macrotus* californicus	CDFW: Species of Concern	The Macrotus californicus has short broad wings and huge ears and eyes (Tuttle 1998). It's skull has no post orbital processes and a complete premaxillae. endothermic bilateral symmetry	The California leaf-nosed bat, the most northern member of the Phyllostomidae, lives in southern Arizona, southern California and southern Nevada (Constantine 1998). inhabit rocky, outcrop areas where they commonly roost in rock crevices, caves, and mine tunnels	L No roosting habitat

Special Status Species that Occur in Imperial County (USFWS)

Common Name *Scientific Name*	Status[1] Federal/CDFW / CNPS	DESCRIPTION OF SPECIES	Habitat	Suitability Of Habitat In Survey Area
Plants				
Peirson's milk-vetch *Astragalus magdalenae* var. *peirsonii*	T/E/1B	Silvery, short-lived perennial plant that is somewhat broom like in appearance. A member of the pea and bean family, it can grow to 2.5 feet tall and is notable among milkvetches for its greatly reduced leaves. Peirson´s milkvetch produces attractive, small purple flowers , generally in March or April, with 10 to 17 flowers per stalk. It yields inflated fruit similar to yellow-green pea pods with triangular beaks.	Desert dune habitats. In California, known from sand dunes in the Algodones Dunes system of Imperial County. Was known historically from Borrego Valley in San Diego County and at a site southwest of the Salton Sea in Imperial County	L None observed. No dune habitat
Birds				
California brown pelican *Pelecanus occidentalis* No longer endangered	E/E/-	Large size and brown color. Adults weigh approximately 9 pounds, and have a wingspan of over 6 feet. They have long, dark bills with big pouches for catching and holding fish. Pelicans breed in nesting colonies on islands without mammal predators. Roosting and loafing sites provide important resting	Open water, estuaries, beaches; roosts on various structures, such as pilings, boat docks, breakwaters, and mudflats	L No habitat

Common Name *Scientific Name*	Status[1] Federal/CDFW / CNPS	DESCRIPTION OF SPECIES	Habitat	Suitability Of Habitat In Survey Area
		habitat for breeding and non-breeding birds.		
Southwestern willow flycatcher *Empidonax traillii extimus*	E/-/-	Small; usually a little less than 6 inches in length, including tail. Conspicuous light-colored wingbars. Lacks the conspicuous pale eye-ring of many similar *Empidonax* species. Overall, body brownish-olive to gray-green above. Throat whitish, breast pale olive, and belly yellowish. Bill relatively large; lower mandible completely pale. The breeding range of extimus includes Arizona and adjacent states.	At low elevations, breeds principally in dense willow, cottonwood, and tamarisk thickets and in woodlands, along streams and rivers. Migrants may occur more widely. Prefers riparian willow/cottonwood but will use salt cedar thickets	L No habitat
Yuma clapper rail (Ridgeway Rail) *Rallus longirostris yumanensis*	E/T/-	A chickenlike marsh bird with a long, slightly drooping bill and an often upturned tail. Light brownish with dark streaks above. Rust-colored breast; bold, vertical gray and white bars on the flanks; white undertail coverts. Very shy.	Lives in freshwater and brackish marshes. Prefers dense cattails, bulrushes, and other aquatic vegetation. Nests in riverine wetlands near upland, in shallow sites dominated by mature vegetation, often in the base of a shrub. Prefers denser cover in	L No water source

Common Name ***Scientific Name***	**Status[1] Federal/CDFW / CNPS**	**DESCRIPTION OF SPECIES**	**Habitat**	**Suitability Of Habitat In Survey Area**
			winter than in summer..	
Yellow-billed cuckoo *Coccyzus americanus*	C/E/-	Medium-sized cuckoo with gray-brown upperparts and white underparts. Eye-rings are pale yellow. Bill is mostly yellow. Wings are gray-brown with rufous primaries. Tail is long and has white-spotted black edges. Sexes are similar.	Found in forest and open woodlands, especially in areas with dense undergrowth, such as parks, riparian woodlands, and thickets	L No habitat
Bald eagle *Haliaeetus leucocephalus*	T, PD/E/-	The distinctive white head and tail feathers Beak and eyes yellow. Bald Eagles are about 29 to 42 inches long, can weigh 7 to 15 pounds, and have a wing span of 6 to 8 feet.	Found on shores, lake margins, and near large rivers. Nests in large trees. Winters at lakes, reservoirs, river systems, and some rangelands and coastal wetlands (breeding range is mainly in mountainous habitats near reservoirs, lakes and rivers, mainly in the northern two-thirds of California)	L No habitat.
Least tern *Sterna antillarum*	E/E/-	Small tern. During breeding, black cap ending at white forehead. Short white eyestripe. Bill yellow with black tip. Back light gray.	Shallow areas of estuaries, lagoons, and at the joining points between rivers and estuaries	L No habitat

Common Name *Scientific Name*	Status[1] Federal/CDFW / CNPS	DESCRIPTION OF SPECIES	Habitat	Suitability Of Habitat In Survey Area
		Underside white. Black leading edge to wing. In nonbreeding plumage has black eyestripe extending to back of head, white top of head, and black bill. Size: 21-23 cm (8-9 in) Wingspan: 48-53 cm (19-21 in) Weight: 30-45 g (1.06-1.59 ounces)		
Least Bell's Vireo *Vireo bellii pusillus*	E/E/-	Drab gray to green above and white to yellow below. It has a faint white eyering and two pale wingbars; has pale whitish cheeks and forehead and greenish wings and tail. longer tail and subtle wingbars. The song is a varied sequence of sharp, slurred phrases that typically end with an ascending or descending note.	Formerly a common and widespread summer resident below about 2,000 feet in western Sierra Nevada. Also was common in coastal southern California, from Santa Barbara County south, below about 4,000 feet east of the Sierra Nevada. Prefers thickets of willow, and other low shrubs afford nesting and roosting cover	L None observed; no habitat on site.
Mountain plover *Charadrius montanus*	FPT/SC/-	Medium-sized plover with pale brown upperparts, white underparts, and brown sides. Head has brown cap, white	Avoids high and dense cover. Uses open grass plains, plowed fields with little	L No habitat onsite.

Common Name *Scientific Name*	Status[1] Federal/CDFW / CNPS	DESCRIPTION OF SPECIES	Habitat	Suitability Of Habitat In Survey Area
		face, and dark eyestripe. Upperwings are brown with black edges and white bars; underwings are white. Tail is brown-black with white edges. Sexes are similar.	vegetation, and open sagebrush areas. Likes to follow livestock grazing or burned off fields.	
Black rail *Laterallus jamaicensis coturniculus*	-/T/-	The smallest of all rails, the black rail is slate-colored, with a black bill, red eyes and a white-speckled back. The legs are moderately long and the toes are unwebbed. The sexes are similar.	Most commonly occurs in tidal emergent wetlands dominated by pickleweed or in brackish marshes with bulrushes in association with pickleweed. In freshwater, usually found in bulrushes, cattails, and saltgrass and in immediate vicinity of tidal sloughs. Typically occurs in the high wetland zones near upper limit of tidal flooding, not in low wetland areas with considerable annual or daily fluctuations in water levels. Nests are concealed in dense vegetation, often pickleweed, near upper limits of tidal flooding	L No habitat

Common Name *Scientific Name*	Status[1] Federal/CDFW / CNPS	DESCRIPTION OF SPECIES	Habitat	Suitability Of Habitat In Survey Area
Raptors				
Peregrine Falcon *Falco peregrinus*	D/E/-	Large, powerful falcon; pointed winged falcon silhouette. Strong shallow wingbeats may dive at speeds up to 100 mph. Dark with dark hooded effect. Blue gray below with narrow bars	Most often found along coastlines or marshy habitats. Nest in cliffs and have been known to nest in tall buildings	L None observed; rare visitors to area outside of the Salton Sea. No waterfowl for prey or cliffs/tall buildings for nesting
Northern Harrier *Circus cyaneus*	-/SC/-	Long-winged, long tailed hawk. Habitually flys low over open fields and marshes watching and listening for prey such as rodents and birds. (I observed Harrier with a white faced ibis as prey). Perches low or on ground. Low slow flight. Nests in reeds. Grey with black wingtips.	Marshes, open fields. Nests in reeds	L Low rodent, rabbit populations. Not observed on site. No nesting sites.
Sharp-shinned Hawk *Accipiter striatus*	-/SC/-	Blue gray above pale reddish below; small size. Tip of tail squared off. Nesting occurs in dense	Sharp-shinned hawks may appear in woodland habitats	L Low rodent, rabbit populations. Not observed

Common Name *Scientific Name*	Status[1] Federal/CDFW / CNPS	DESCRIPTION OF SPECIES	Habitat	Suitability Of Habitat In Survey Area
		tree stands which are cool, moist, well shaded and usually near water. Hunt in openings at the edges of woodlands and also brushy pastures.	during winter and migration periods and are often common in southern California in the coastal lowlands and desert areas; winters in woodlands and other habitats except alpine, open prairie and bare desert	
White tailed Kite *Elanus leucurus*	/E/	Gray and white with black on lshoulders and under bend of wing. Graceful flyer. Adults have bright red eyes. Medium size hawk; aboaut 15 inches long and about 12 ounces.	Found in open country; like to perch on treetop. May be seen hovering prior to attack of a rodent.	L Low rodent, rabbit populations; None observed
Ferruginous hawk *Buteo regalis*	/SC/	Males pale with with rufous shoulders and thigh feathers. White tail washed with rufous. Wide head wings in shallow v when soaring.	Found in arid to semiarid regions, as well as grasslands and agricultural areas in southwestern Canada, western United States, and northern Mexico.	L Low rodent, rabbit populations; None observed

Common Name ***Scientific Name***	**Status[1] Federal/CDFW / CNPS**	**DESCRIPTION OF SPECIES**	**Habitat**	**Suitability Of Habitat In Survey Area**
Mammals				
Bighorn sheep *Ovis canadensis*	E/E/-	Sheep have short hair which is light gray to grayish brown, except around their stomachs and rump, where it is creamy white. Their tails are about four inches long. Full-grown rams weigh between 180 and 240 pounds,	Desert Bighorn sheep occupy a variety of plant communities, ranging from mixed-grass hillsides, shrubs. Avoids dense vegetation	L No habitat
Jaguar *Panthera onca*	-/-/-	Typically yellow-brown with black spots, called rosettes, but they can also be black with black spots. They are nocturnal and have a keen sense of smell and hearing. Excellent swimmers, tree climbers, and move easily on the ground.	Occurs in tropical rainforests, arid scrub, and wet grasslands. Prefers dense forests or swamps with a ready supply of water	L No habitat
Reptiles and Amphibians				
Desert tortoise *Gopherus agassizii*	T/T/-	A herbivore that may attain a length of 9 to 15 inches in upper shell (carapace) length. The tortoise is able to live where ground temperature may exceed 140 degrees F because of its ability to dig underground burrows and escape the heat. At least 95% of its life is spent in burrows.	Dry, flat, and gravelly or sandy ground in desert shrub communities where annual and perennial grasses are abundant. Frequent habitats with a mix of shrubs, forbs, and grasses	L Found to the east near Mesquite mine but no signs of old tortoise presence or burrows observed

Common Name ***Scientific Name***	**Status[1] Federal/CDFW / CNPS**	**DESCRIPTION OF SPECIES**	**Habitat**	**Suitability Of Habitat In Survey Area**
		Their shells are high-domed, and greenish-tan to dark brown in color. Desert tortoises can grow from 4–6"in height and weigh 8–15 lb (4–7 kg) when fully grown. The front limbs have heavy, claw-like scales and are flattened for digging. Back legs are more stumpy and elephantine		
Flat-tailed horn lizard *Phrynosoma mcallii*	PT/-/-	Closely related to Desert horned lizard (scat indistinquishable); only found in Imperial, Riverside County,Ca and Yuma area, Az. Small round lizard with distinquishing round spots on back. Diet of ants; needs sandy soil, shade bushes to survive.	Desert washes/sandy areas with vegetative cover. Diet of ants	M Habitat is present off site to the north; no scat or lizards were observed during general survey. Not within a FTHL Management Area
Fish				
Desert pupfish *Cyprinodon macularius*	E/E/-	Small, silvery-colored fish with 6 to 9 dark bands on its sides. Grows to a full average length of only 2.5 inches; develop quickly, sometimes reaching full maturity within 2	Springs, seeps, and slow-moving streams in Salton Sink basin and backwaters and sloughs of the Colorado River	L No habitat

Common Name *Scientific Name*	Status[1] Federal/CDFW / CNPS	DESCRIPTION OF SPECIES	Habitat	Suitability Of Habitat In Survey Area
		to 3 months. Although their average life span is 6 to 9 months, some survive more than one year. Pupfish have a short, scaled head with an upturned mouth. The anal and dorsal fins are rounded with the dorsal sometimes exhibiting a dark blotch. The caudal fin is convex at the rear.		
Razorback Sucker *Xyrauchen texanus*	Fed/CA: Endangered	One of the largest suckers in North America, can grow to up to 13 pounds and lengths exceeding 3 feet. The razorback is brownish-green with a yellow to white-colored belly and has an abrupt, bony hump on its back shaped like an upside-down boat keel	Colorado River	L No habitat

Sources: CDFW/CNDDB June,2019, California Wildlife 2016; CNPS 2019; USFWS, 2008

[1]Status: Federal:

E = Listed as an endangered species

T = Listed as a threatened species

C = Candidate for listing

D = Delisted

PD = Proposed for delisting/PT = Proposed for threatened status

SC = species of special concern (designation intended for use as a management tool and for information; species of special concern have no legal status (www.dfg.ca.gov/wildlife/species/ssc/birds.html))

State/CDFG:

E = Listed as an endangered species; or previously known as "rare, fully protected"

T = Listed as a threatened species

CNPS (California Native Plant Society):

1 = Rare, threatened, or endangered in California or elsewhere

2= Plants rare, threatened, or endangered in Ca, but more common elsewhere

3=Plants about which more information is needed

0.1 Seriously threatened in Ca (high degree/immediacy of threat)

0.2 Fairly threatened in Ca (moderate degree/immediacy of threat)

0.3 Not very threatened in Ca (low degree/immediacy of threats or no current threats known

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Common Name	Species Name	Region 8 Imperial County	National Rating	Habitat	Potential Onsite
Bald Eagle	*Haliaeetus leucocephalus*	X	X	Nests on tall trees or on cliffs in forested areas near large bodies of water. Winters in coastal areas, along large rivers, and large unfrozen lakes.	Low Not expected. No tall trees; not observed in area
Swainson's Hawk	*Buteo swainsoni*		X	Breeds in open country such as grassland, shrubland, and agricultural areas. Usually migrates in large flocks often with Broad-winged Hawks. Winters in open grasslands and agricultural areas of Southern America.	Low Not expected on site; no agriculture. May migrate through. Not observed in area
Peregrine Falcon	*Falco peregrinus*	X	X	Inhabits open wetlands near cliffs for nesting. Also uses large cities and nests on buildings.	Low No open wetlands or nesting area.
Black Rail	*Laterallus jamaicensis*	X	X	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	Low No salt or freshwater marshes; no or sparse vegetation

Common Name	Species Name	Region 8 Imperial County	National Rating	Habitat	Potential Onsite
Snowy Plover	*Chardrius alexandrinus*	X	X	Barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, river bars, along alkaline or sailne lakes, reservoirs, and ponds.	Low No habitat
Mountain Plover	*Charadrius montanus*	X	X	Breeds on open plains at moderate elevations. Winters in short-grass plains and fields, plowed fields, and sandy deserts.	Low No habitat
Black Oystercatcher	*Haematopus bachmani*	X	X	Rocky seacoasts and islands, less commonly sandy beaches.	Low No habitat
Solitary Sandpiper	*Tringa solitaria*		X	Breeds in taiga, nesting in trees in deserted songbird nests. In migration and winter found along freshwater ponds, stream edges, temporary ponds, flooded ditches and fields, more commonly in wooded regions, less frequently on mudflats and open marshes.	Low No habitat
Lesser Yellowlegs	*Tringa flavipes*		X	Breeds in open boreal forest with scattered shallow wetlands. Winters in wide variety of shallow	Low No habitat

				fresh and saltwater habitats.	
Common Name	**Species Name**	**Region 8 Imperial County**	**National Rating**	**Habitat**	**Potential Onsite**
Upland Sandpiper	*Bartramia longicauda*		X	Native prairie and other dry grasslands, including airports and some croplands.	Low No habitat
Whimbrel	*Numenius phaeopus*	X	X	Breeds in various tundra habitat, from wet lowlands to dry heath. In migration, frequents various coastal and inland habitats, including fields and beaches. Winters in tidal flats and shorelines, occasionally visiting inland habitats.	Low No habitat
Long-billed Curlew	*Numenius americanus*	X	X	Nests in wet and dry uplands. In migration and winter found on wetlands, grain fields, lake and river shores, marshes, and beaches.	Low on site No habitat
Short-billed Dowitcher	*Limnodromus griseus*	X	X	Breeds in muskegs of taiga to timberline, and barely into subarctic tundra. Winters on coastal mud flats and brackish lagoons. In migration prefers saltwater tidal flats, beaches, and salt marshes. Also found in freshwater mud flats and flooded	Low No habitat.

				agricultural fields.	
Common Name	**Species Name**	**Region 8 Imperial County**	**National Rating**	**Habitat**	**Potential Onsite**
Aleutian Tern	*Sterna aleutica*		X	Nest on flat vegetated islands on or near the coast. Vegetation includes dwarf-shrub tundra, grass and sedgemeadows, and coastal marsh. Migration and winter habitat not known, probably pelagic.	Low No habitat
Least Tern	*Sterna antillarum*		X	Seacoasts, beaches, bays, estuaries, lagoons, lakes and rivers, breeding on sandy or gravelly beaches and banks of rivers or lakes, rarely on flat rooftops of buildings.	Low No habitat
Gull-billed Turn	*Sterna nilotica*		X	Breeds on gravelly or sandy beaches. Inters in salt marshes, estuaries, lagoons and plowed fields, along rivers, around lakes and in freshwater marshes.	Low No habitat
Black Skimmer	*Rynchops niger*	X	X	Breeds in large colonies on sandbars and beaches. Forages in shallow bays, inlets, and estuaries.	Low No habitat
Yellow-billed Cuckoo	*Coccyzus americanus*	X	X	Open woodlands with clearings, orchards, dense scrubby vegetation, mainly cottonwood, willow, and adler, often along water.	Low No habitat

Common Name	Species Name	Region 8 Imperial County	National Rating	Habitat	Potential Onsite
Black Swift	*Cypseloides niger*	X	X	Nests on steep ledges on cliffs or canyons. Migrates and winters over coastal lowlands.	Low No habitat
Costa's Hummingbird	*Calypte costae*	X	X	Primarily low deserts and arid brushy foothills, but also chaparral and coastal sage scrub closer to the coast. Often visits ornamental plantings and feeders in desert communities. In migration and winter frequents a wider variety of habitats, occasionally ranging into pine-oak woodlands in adjacent mountains.	Low No habitat
Calliope Hummingbird	*Stellula calliope*	X	X	Open montane forest, mountain meadows, and thickets of willow and alder. In migration and winter also in chaparral, oak and pine-oak woodlands, deserts, and gardens.	Low No habitat

Common Name	Species Name	Region 8 Imperial County	National Rating	Habitat	Potential Onsite
Rufous Hummingbird	*Selasphorus rufus*		X	Breeds in a variety of forested habitats where flowers are found. Frequents montane meadows and just about anywhere else with flowers or feeders during migration. Winters primarily in pine and pine-oak forests in Mexico, but most birds wintering farther north are attracted either to flowers or feeders in gardens.	Low No habitat
Allen's Hummingbird	*Selasphorus sasin*	X	X	Breeds in coastal sage scrub, chaparral, and riparian corridors within coastal forests. In Mexico winters in forest edge and scrub clearings with flowers. The resident population on the mainland of southern California is largely restricted to suburban neighborhoods where feeders and flowers are plentiful.	Low No habitat
Lewis's Woodpecker	*Melanerpes lewis*	X	X	Breeds in open arid conifer, oak, and riparian woodlands: rare in coastal areas. Winters in breeding	Low No habitat

				habitat, and oak savannas, orchards, and even in towns.	
Common Name	**Species Name**	**Region 8 Imperial County**	**National Rating**	**Habitat**	**Potential Onsite**
Olive-sided Flycatcher	*Contopus cooperi*	X	X	Montane and northern coniferous forests, at forest edges and openings such as meadows, and at ponds and bags. Winters at forest edges and clearings where tall trees or snags are present.	Low No habitat
Willow Flycatcher	*Empidonax trailii*	X	X	Breeds in moist, shrubby areas, often with standing or running water. Winters in shrubby clearings and early successional growth.	Low No habitat
Loggerhead Shrike	*Lanius ludovicianus*	X	X	Open or brushy areas.	Low No habitat
Bell's Vireo	*Vireo bellii*	X	X	Dense, low, shrubby vegetation generally early successional stages in riparian areas, brushy fields, young second-growth forest or woodland, scrub oak, coastal chaparral, and mesquite brushlands, often near water in arid regions.	Low No habitat

Common Name	Species Name	Region 8 Imperial County	National Rating	Habitat	Potential Onsite
Gray Vireo	*Vireo vicinior*	X	X	Found in desert scrub, mixed oak-juniper and pinyon-juniper woodlands, dry chaparral, and thorn scrub in hot, arid mountains and high-plains.	Low No habitat
Horned Lark	*Eremophila alpestris*		X	Open, barren country including dirt fields, gravel ridges, and shores. Prefers bare ground to short grasses.	Low No habitat
LeConte's Thrasher	*Toxostoma lecontei*	X	X	Desert scrub, mesquite, tall riparian brush and, locally, chaparral.	M Could be found foraging or nesting in area
Yellow Warbler	*Dendroica petechia*	X		Breeds in wet, decidious thickets, especially in willows and adler. Also in shrubby areas, old fields, gardens and orchards. In southern Florida and farther south, found in mangroves.	Low No habitat
Common Yellowthroat	*Geothlypis trichas*	X		Thick vegetation from wetlands to prairies to pine forests. Frequently near water.	Low No habitat
Rufous-winged Sparrow	*Aimophila carpalis*		X	Found in flat areas of tall desert grass mixed with brush and cactus, and thorn scrub.	Low No habitat

Common Name	Species Name	Region 8 Imperial County	National Rating	Habitat	Potential Onsite
Brewer's Sparrow	*Euphagus cyanocephalus*	X	X	Found in a variety of habitats, but prefers open, human-modified areas, such as farmland, fields, residential lawns, and urban parks.	Low No habitat
Black-chinned Sparrow	*Spizella atrogularis*	X	X	Arid brushland, commonly in tall and fairly dense sagebrush, and dry chaparral. Often in rocky, rugged country from sea level to around 8,900 ft (2700m).	Low No habitat
Tricolored Blackbird	*Agelaius tricolor*	X	X	Breeds in marsh vegetation, particulalry cattails, near grain fields, riparian scrubland, and forests, but always near water. Dairies and feedlots also commonly used for foraging. Urban and suburban areas occasionally utilized, particularly park lawns. Cultivated lands also suitable for foraging. Large night-time roosts form during nonbreeding season in cattail marshes near foraging grounds.	Low No habitat

Common Name	Species Name	Region 8 Imperial County	National Rating	Habitat	Potential Onsite
Lawrence's Goldfinch	*Carduelis lawrencei*	X	X	Prefers dry interior foothills, mountain valleys, open woodlands, chaparral, and weedy fields. Often found near isolated water sources such as springs and cattle troughs.	Low No habitat

APPENDIX B
PHOTOGRAPHS

PHOTOGRAPHS

1. Looking south from intersection of the railroad and SR 78; cell phone tower

2. Fenced vendors area

3. Creosote area along railroad tacks

4. Southwest corner facing north; disturbed area

5 Fenced area north of RV park in northwest section of property.

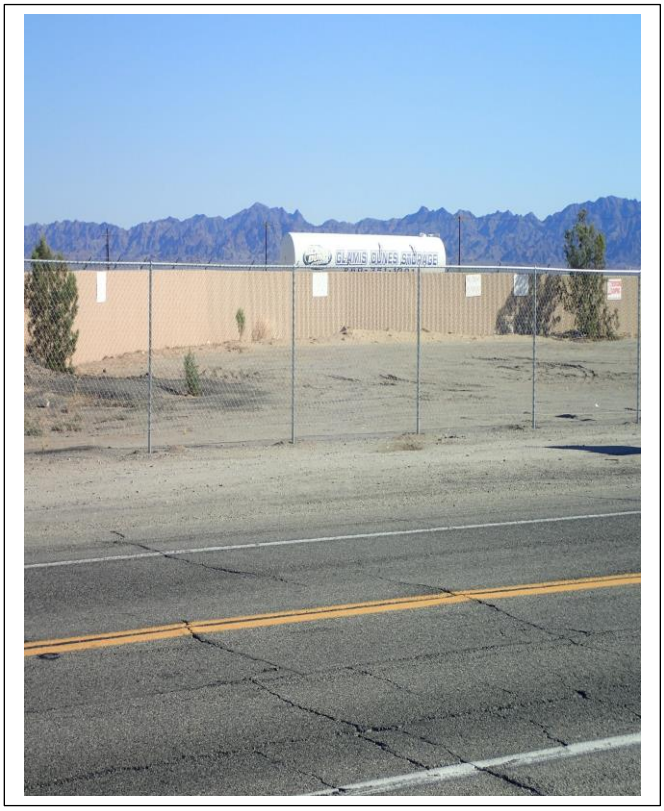
6. Fenced area northwest of railroad crossing and SR 78

7. From eastern boundary northwest to intersection SR 78 and railroad crossing

8. From northeast boundary looking south

9. Fenced area northwest of railroad crossing with SR 78

10. Railroad storage area west of railroad tracks north of SR 78

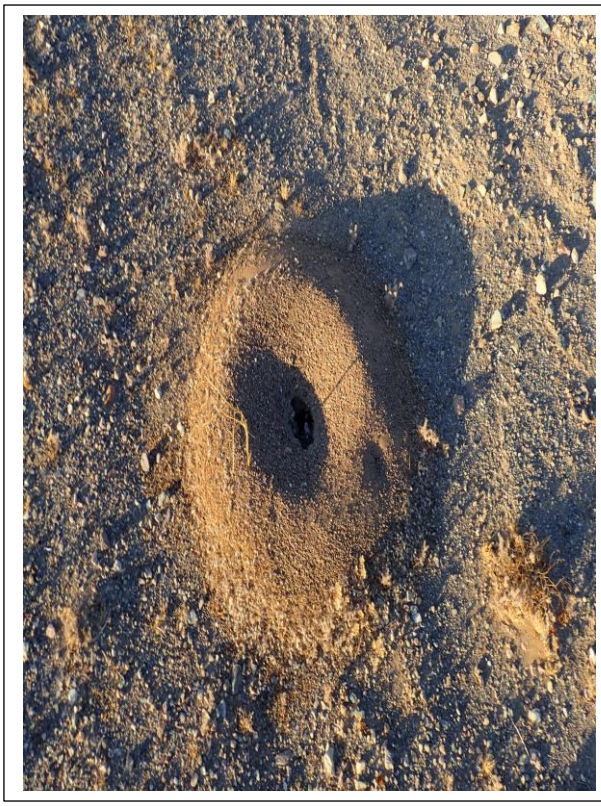


11. RV Storage on north side of SR 78

12. RV parking area on northeast portion of site

PHOTOGRAPHS

13. Burrow found on site; possibly used by rabbit; no burrowing owl signs

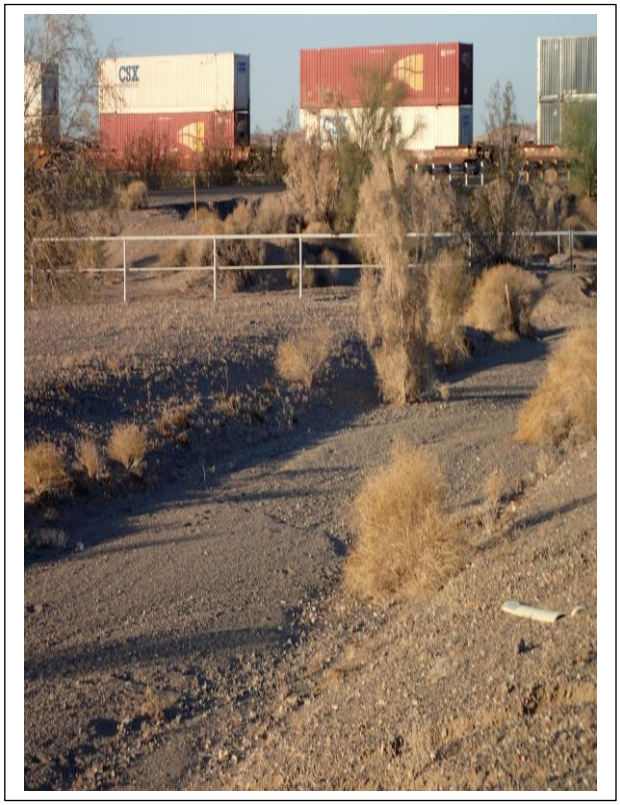


14. Ant mound found on site; small harvester ants

15. Inactive avian nest found in paloverde tree on southeast portion of site

16. Inactive avian nest found in paloverde tree on southeast portion of site

17. Pipe from wash to north side of SR 78 on southeast portion of site



18. Wash on northeastern portion of site; culvert under railroad tracks.

19. Disturbed area; northeastern potion of site; old RV park

20. BLM signage north of site; Ted Kipf Road to right

21. Coldena on site *Tiquila plicata*

22. Smoketree on site *Dalea spinosa*

23. Creosote *Larrea tridentate* along site fence

24. Disturbed on northeastern portion of site; BLM area to right

APPENDIX C
SPECIES FOUND ONSITE AND VICINITY

VEGETATION OBSERVED ON THE PROJECT SITE:

Common name	Scientific name	Cal-IPC Rating*
White bursage	*Ambrosia dumosa*	None
Smoketree	*Dalea spinosa*	None
Palo verde	*Parkinsonia floridum*	None
Brittlebush	*Encelia farinosa*	None
Creosote	*Larrea tridentata*	None
Fanleaf crinklemat	*Tiquilia plicata*	None
Acacia	*Senegalia greggii*	None
Sahara mustard	*Brassica tournefortii*	Ca Noxious Weed Cal-IPC rating: High *
Saltcedar	*Tamarix sp.*	Ca Noxious Weed Cal-IPC rating: High *
Russian thistle	*Salsola tragus*	Ca Noxious Weed Cal-IPC rating: Limited*

*High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
Limited – These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

ANIMALS/INVERTEBRATES OBSERVED ON SITE

Common name	Scientific name
Quail	*Callipepla gambelii*
Mourning dove	*Zenaida macroura*
Ants	*various*
Grasshoppers	*various*
Lizard tracks	*various*
Kangaroo rat tracks	*Various*
Canine tracks	*various*
Jackrabbit	*Lepus californicus*

APPENDIX D
QUALIFICATIONS

GLENNA MARIE BARRETT

PO Box 636 Imperial, California 92251 (760) 425-0688
glennabarrett@outlook.com

PROFILE

Organized and focused individual, adept at implementing multifaceted projects while working alone or as an integral part of a team .Skilled in client/employee communications ,report preparation ,program analyses and development. Cost conscious ,safety oriented and empathetic .A strong communicator with excellent interpersonal skills ,which allows development of rapport with individuals on all levels .A sound professional attitude ,strong work ethic and pride in personal performance.

WORK EXPERIENCE

Senior Biologist/Partner, Barrett's Biological Surveys, GP. Imperial County, CA April 2016-currently. Principal Biological Consultant, Barrett Enterprises. Imperial, CA December 2001 - currently. Compile information and complete local, state, and federal government forms; such as conditional use permits, reclamation plan applications, Financial Assurance Cost Estimates, zone changes, CEQA, Environmental Evaluation Committee responses, and 501 (c)(3) tax exemption applications. Act as liaison between local businesses and local, state, and federal government agencies. Certified to survey for Flat-Tailed Horned Lizards in California and Arizona. Certified to survey the Desert Tortoise.

Kruger- Environmental Compliance Coordinator (ECC) for Seville Solar Complex for a 626-acre solar farm in Imperial County, CA. Compiled and submitted data and reports for APCD such as equipment lists and man hours, water hours for dust suppression; Planning reports such as weekly monitoring reports and scheduling with the third party monitor for work on BLM land; Assisted in writing the Emergency Response Action Plan; CDFW quarterly reports for the Incidental Take Permit for the Flat Tail Horned Lizard (FTHL), CNDDB reports, FTHL Observation Data Sheets, site tours and any other information required by CDFW; Agriculture Commissioner's Office quarterly reports; provided the hazardous reporting information for the CERS online reporting system; assisted writing the FTHL ITP; trained new hires; contacted various local businesses for different on-call services; also provided any updates for plans and schedules necessary throughout the life of the project; etc. (January 2015- March 2016).

Grant writing experience: Awarded two grants for BUOW educational programs for $15,000 each from Imperial Valley Community Foundation. Awarded $35,700 for a total of $75,000 with matching funds to establish the Imperial Valley Small Business Development Center with the Imperial Reginal Alliance. Awarded $450,000 from the California Public Utilities Commission for a broadband connectivity initiative in Imperial County with Imperial Reginal Alliance and Imperial Valley Economic Development Corporation (IVEDC). Awarded $450,000 in grant funding from USDA for the RMAP program with IVEDC being the recipient of the funds. Assisted in writing two grants and obtaining grants with the Imperial County Film Commission (ICFC).

FIELD EXPERIENCE

Ms. Barrett has done the field work and contributed to the required reports for the following projects:

•**8ME-Burrowing Owl Monitoring and training for the Mount Signal Solar Three Project** in Calexico, CA (April 2016-currently)

NAF-EC – FTHL monitoring for Holtville Airstrip project with USMC personnel to widen a six-mile BLM road and re-strip an airfield. Monitored and consulted with above-mentioned agencies for FTHL. (October 2014)

•**Sol Orchard** - El Centro, CA: Successfully completed BUOW relocation and artificial burrow installation for six burrows.

•**Burrtec- FTHL Surveys** in Salton City, CA: Team leader for eight people to complete a pre-construction site sweep for 320 acres in Imperial County.

•**Applied Biological Consulting- Approved Biological Monitor on DPV2**: The 500kV transmission line traverses approximately 153 mi from Bythe, CA to Menifee in Riverside County, CA. Crossing private, state and Federal lands, such as the Bureau of Land Management [BLM], U.S. Forest Service [USFS]. (November 2011 to May 31, 2013)

- **Chandi Group,** Conduct Habitat Assessment Survey (as outlined in Western Riverside Multispecies Habitat Conservation Plan: Burrowing Owl/Narrow Endemic Species) within the City of Jurupa Valley, Riverside County, 2015

EDUCATION AND TRAINING

Received Bachelor of Science in Business Administration with a focus on Management, along with Economics and Leadership minors, December 2000. Humboldt State University, Arcata, CA.

Special Status/listed species observed/ identified, surveyed, monitored and/or relocated: Mohave desert tortoise, Coachella valley milkvetch, Desert kit fox, Mountain lion, Coachella valley fringe toed lizard, Mohave fringe toed lizard, Stephen's kangaroo rat, Mohave ground squirrel, Coast horned lizard, Flat-Tail Horned lizard, Burrowing Owl.

Extensive knowledge in southwestern United States, non-migratory and migratory avian biology and ecology. Strong knowledge of common Flora and Fauna communities associated with Southern California and surrounding environs. CEQA, NEPA, California Endangered Species Act (CESA) and Federal Endangered Species Act (ESA) knowledge gained through work experience. I have excellent analytical skills, multi-tasking and writing abilities. My past work experience has provided me with many years of hands on experience working with and managing others to find practical solutions to solve problems and achieve common goals.

CERTIFICATIONS/ WORKSHOPS

•FTHL Workshop, 2008 El Centro BLM office.

•USFW Desert Tortoise Egg Handling Desert Tortoise Council Survey Techniques Workshop Certificate, 2008 and 2010.

•Anza Borrego State Park Wildflower Identification Workshop, 2010.

•Southwest Willow Flycatcher Workshop Kernville, CA, 2010.

•SCE TRTP Construction Monitoring Training Class and WEAP Redlands, CA 2011.

•DPV2 Construction Monitoring Training Class and WEAP Santa Ana, CA 2011.

•Helicopter flight trained on DPV2, 2012.

•Certified to handle/ move venomous snakes on DPV2, 2012.

•Bat monitoring with Ms. Pat Brown BLM El Centro, CA Office, 2010.

•Salton Sea International Bird Festival 2007 Coordinator

•Mountain Plover/ Long-billed Curlew surveys, L.A. Museum of Natural History.

•Current First Aid certification to 2016.

•Presented at the Fourth Annual BUOW Symposium in Pasco, Washington, 2014.

•Board Member- Colorado River Citizens Forum, 2014-2016.

•BUOW Educational outreach grantee from IVCF, interacting with IID, IVROP, ICFB, Ag Commissioner's Office, 2015.

•Friends of the Sonny Bono National Wildlife Refuge, Member 2015

MARIE S. BARRETT 2035 Forrester Road, El Centro, CA 92243 (760) 352 4159 mariebarrett@roadrunner.com

LICENSES/CERTIFICATES

Flat Tailed Horn Lizard Surveyor CDFG/BLM
Burrowing Owl Surveyor (CDFG/USFWS)
USFW Desert Tortoise Egg Handling Desert Tortoise Council Survey Techniques Workshop Certificate
BCI Bat Conservation and Management Workshop (Acoustic) Certificate
Southwestern Willow Flycatcher Workshop Kernville, CA 2010
California Pest Control Advisor #70373 California Pest Control Operator #103123
CA Scientific Collection Permit 126/USFWS Salvage Permit MB52633B-1

CAREER HISTORY

Barrett's Biological Surveys, El Centro, California ***BIOLOGIST*** **3/95 -present**

Helped established protocol and perform Vegetative Baseline Studies and Biological Surveys for Mining Reclamation Plans in Imperial County. Have performed numerous (over 20,000 acres) surveys involving varied wildlife including burrowing owl, nesting birds and plant species and writing reports and biological assessments. Certified to perform Flat Tailed Horned Lizard Surveys; completed Desert Tortoise workshops; approved to handle desert tortoise (American Girl Mine/BLM project, 1/2013). Work closely with governmental agencies such as such as Bureau of Land Management, State Office of Mining Reclamation, California Department of Fish and Game. Written over ten Environmental Assessments for BLM, El Centro office. Over 150 days spent in field monitoring/surveying for FTHL; 98 days in field monitoring/surveying for desert tortoise and 32,000 acres surveyed for burrowing owl and nesting birds; 2 IID Burrowing owl surveys with AECOM (2011/12- 226 hrs). Wrote Imperial Irrigation District Artificial Burrow Installation Manual (2009). Over 25 active burrowing owl burrows passively relocated and 50 artificial burrows installed. Volunteered for desert tortoise work (20 hrs) with Dr. Jeff Lovich. Coachella Valley Projects: Torres-Martinez (Desert Cahuilla Composting Facility Biological Resource Technical Report/Surveys 60 acres, SR 86/Ave 84, 2013; Augustine Tribe (Solar Farm Biological Resource Technical Report/Surveys 10 acres, La Quinta,CA, 2010); Benitez Family Trust Therapeutic Community, Dillon and Cabazon Roads, 10 acres,2008); Chandri Group (Dairy Queen Chill/Grill Project, 1.5 acres, Date Palm Drive/I-10, La Quinta, CA, 2014). Blythe 8Minutenergy Mt. Signal Solar 5000 acres Preconstruction surveys/construction monitoring and BUOW Post construction monitoring; Biological report. 2010-2017
Black Mt. MetTower Installation: desert tortoise survey and monitoring approved by BLM, El Centro office
Salton City Burrtec Landfill FTHL monitoring/clearance 2010-2014 (42.5 hrs); Superior Redi Mix: FTHL surveys, Oat Pit Environmental Assessment for BLM, El Centro, 2009-14. (20 hours) SDG&E La Rosite Pole Replacement FTHL Monitoring 2012-2013(410 hrs); Imperial County Department of Public Works, FTHL surveys for Coyote Mine Environmental Assessment, BLM, El Centro, 2008. (10 hours) All American Aggregates, FTHL surveys, Boyd Road Mine Environmental Assessment, BLM El Centro, 2007. (9.5 hours) All American Aggregates, FTHL surveys, Wheeler Road Mine Environmental Assessment, BLM, El Centro, 2006. (8.5 hours); ValRock, FTHL surveys, Ocotillo ByPass Road Environmental Assessment, County of Imperial/BLM, El Centro, 2004. (7 hours). USFWS Authorized desert tortoise biologist: American Girl Mine and Mesquite Mine.

Citizens' Congressional Task Force on the New River, Brawley, Ca ***PROGRAM COORDINATOR*** **1/98 - present**

Assisted with design, construction, planting and monitoring of four constructed wetlands in Imperial County. Responsible for coordinating activities relating to student and public outreach education to promote the water quality opportunities of wetlands ponding systems on the New River.

Imperial Valley College, Imperial, California ***ENVIRONMENTAL MANAGEMENT PROJECT COORDINATOR*** **9/95-12/99**

Responsible for establishing an Environmental Technology curriculum, presenting public forums, short courses and certificate courses in hazardous materials and safety areas. In conjunction with Division Chairman, established a budget for 96-98 program and obtained funding of $131,000 based on 95-96 program performance. Established short courses that trained over 700 people in hazardous materials safety programs. Compiled a survey of employers, which provided direction for the program.

VOLUNTEER ORGANIZATIONS

CALIFORNIA NATIVE PLANT SOCIETY: Imperial Valley Coordinator, 2006-2016.
SALTON SEA INTERNATIONAL BIRD FESTIVAL: Coordinator: 2001-2010. Organize bird festival in the Imperial Valley that attracts over 300 birders.
COLORDO RIVER WATER QUALITY CONTROL BOARD: Board member Dec 05-Sept 06.
FRIENDS OF SONNY BONO NATIONAL WILDLIFE REFUGE: Board Chairman, May 2015- 16

EDUCATION

University of Arizona, Tucson, Arizona
Masters of Science Degree – AGRICULTURAL EDUCATION
Thesis: Survey and training protocol for documenting burrowing owls and habitat in Imperial County, California
California State Polytechnic College, Kellogg-Voorhis Campus, Pomona, California
Bachelor of Science Degree.- AGRICULTURAL BIOLOGY
Imperial Valley College, Imperial, California *Associate of Science Degree. AGRICULTURE*

Experience

Bishop Enterprises – El Centro, CA **2010 - Current**
Biological surveys of over 18,000 acres for varied wildlife and plant species identification, with special focus on burrowing owls. Surveys /monitoring in association with Barrett's Biological Surveys.

Burrowing Owl Specific Experience:
- Imperial Irrigation District Burrowing Owl Population Surveys with AECOM, 2011-2012
- Imperial Irrigation District Burrowing Owl Mitigation Program Pilot Study, March 2015

Burrowing Owl/Migratory Bird Treaty Act Construction Related Experience:
- Mt. Signal Solar I– Pre-Construction Surveys, Monitoring, Post-Construction Surveys, 2010 - current
- Mt. Signal Solar II – Pre-Construction Surveys, 2015 - current
- Mt. Signal Solar III – Pre-Construction and Construction Monitoring, 2010 - current
- Midway II – Mortality Study, October 2017 - current
- Various other construction related surveys for solar development

Project Monitoring Approved by BLM:
- Union Pacific Glamis Train Derailment- Desert tortoise construction monitoring, July 2012
- SDG&E/La Rosita: Mexico to IV Substation Transmission Line Installation- FTHL/MBTA monitoring, Nov. 2012 – March 2013
- Burrtec Landfill- FTHL clearance, July 2013
- IID Energy Emergency Sand Removal- FTHL and Peirson's Milkvetch (*BLM Sensitive Specie*) monitoring, August 2013 & June 2014
- CalTans Berm repair- FTHL monitoring, June 2014
- Western Mesquite Mine- Desert tortoise clearance, October 2014

Bishop Ranches, Inc. – El Centro, CA **1982 - Current**
- Management of an agricultural production operation with responsibilities in field production, irrigation, plant protection, hazardous materials, regulations, policy and plans- including PMT and water quality (TMDL), personnel, accounting and communications

Helena Chemical Company - Brawley, CA **3/2006 - 9/2009**
- Field Scout in citrus and other crops identifying and quantifying insect pests, diseases and beneficial predators, taking petiole and soil samples, utilized mapping techniques with pheromone trapping and monitoring in outlying areas

Education

California Polytechnic State University, San Luis Obispo, California
Bachelor of Science Degree – Ornamental Horticulture (Environmental Horticultural Science)
Bachelor of Science Degree – Crop Science
Curriculum included: botany, taxonomy, plant pathology, plant materials, plant protection, soils, native plants, game bird management, and natural resource management

Certifications & Conferences

- Desert Tortoise Council's Handling Workshop and Exam: November 2010
- CDFW Flat-Tailed Horned Lizard Training and Authorization Letter: June 2011
- 4th International Burrowing Owl Symposium, Attendee and Presentation Collaborator: February 2014
- Raptors of the Northwest Symposium and The Wildlife Society, Washington Chapter Joint Mtg, Feb. 2014
- Southwestern Willow Flycatcher (USFWS approved) training by So. Sierra Research Station: May 2015

Danielle Figueroa

1023 Palmview Avenue El Centro, CA 92243
danifig2012@outlook.com (760) 791-4706

SUMMARY OF QUALIFICATIONS:

Ability to work well with others with a variety of different personalities. Compassionate and dedicated to helping others. Dependable and reliable.

SKILLS AND ABILITIES:

Over seven years of experience in biological surveying and construction monitoring for Burrowing Owls, Flat tail horned lizard, MBTA species, flora and general biological surveys. Adept at using GPS, binoculars, Trimble's, and other survey techniques.

EXPERIENCE

- Midway 2 mortality surveys in Calipatria, CA. October 2017 to currently.
- Mount Signal Solar 3 BUOW surveys and monitoring in Calexico, CA. October 2017 to currently.
- Mount Signal Solar 1 BUOW Surveys. Identify previous and new BUOW burrows for five years for a solar farm in Calexico, CA. August 2015- currently.
- Midway 2 Solar Farm BUOW Surveys in Calipatria, CA. July 2015 to currently.
- Brown Field Airport BUOW survey in San Diego, CA. March 2018
- Monitored a movie shoot in Imperial County for Sidewinders off Wheeler Road. June 2015
- Sun Edison BUOW Surveys. Completed multiple buow clearance surveys. December 2014 to May 2015
- Burrtec FTHL Clearance Survey. Completed a FTHL clearance survey of 320 acres in Imperial County.
- Worthington Road Bridge MBTA Construction Monitoring- Monitored construction activities to protect swallows in Imperial County. June-2013.
- Carter Road MBTA Construction Monitoring- Monitored construction activities to protect swallows in Imperial County. May- 2013.
- 8Minute Energy Iris Cluster- Biological technical survey to identify zoological and botanical species. April-July 2013
- 8Minute Energy Mount Signal/ Calexico Solar Farm Cluster- Field assistant for surveys for BUOW and MBTA species. Dec 2010- Jan 2011

EDUCATION

- Imperial Valley College – El Centro, CA 8/2012 – 3/2013
- California Nurses Educational Institute – Palm Springs, CA Certified Nursing Assistant 4/2012 – 7/2012
- Riverside Community College- Moreno Valley, CA 8/2008-1/2009

APPENDIX E
CDFW CNDDB FTHL Occurence Report Records

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Species IS (Phrynosoma mcallii)
 AND Quad IS (Glamis (3211581))

Map Index Number: 06471
EO Index: 27918
Key Quad: East of Acolita (3311511)
Element Code: ARACF12040
Occurrence Number: 57
Occurrence Last Updated: 2016-07-21

Scientific Name: *Phrynosoma mcallii*
Common Name: flat-tailed horned lizard

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G3
State: S2

General Habitat:

RESTRICTED TO DESERT WASHES AND DESERT FLATS IN CENTRAL RIVERSIDE, EASTERN SAN DIEGO, AND IMPERIAL COUNTIES.

Micro Habitat:

CRITICAL HABITAT ELEMENT IS FINE SAND, INTO WHICH LIZARDS BURROW TO AVOID TEMPERATURE EXTREMES; REQUIRES VEGETATIVE COVER AND ANTS.

Last Date Observed: 1969-05-06
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1969-05-06
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

GLAMIS, ALGODONES DUNES.

Detailed Location:

LOCATIONS STATED AS "1 MI N GLAMIS, ALGODONES DUNES" (LACM) AND "GLAMIS, ALGODONES DUNES AREA" (MVZ).

Ecological:

Threats:

General:

MUSEUM SPECIMENS (LACM) #74206, 74261. MVZ #'S 85232, 85233, 85234, 85235 - 3 MALES AND 1 FEMALE COLLECTED BY ROBERT STEBBINS ON 6 MAY 1969.

PLSS: T13S, R18E, Sec. 27 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3653503 E680295
Latitude/Longitude: 33.00507 / -115.07001
Elevation (feet): 360

County Summary:

Imperial

Quad Summary:

Glamis (3211581), East of Acolita (3311511)

Sources:

HON65S0001	HONOROF, R. - LACM #74206 COLLECTED AT ALGODONES DUNES, 1 MI. N GLAMIS 1965-04-24
KUS65S0001	KUSTER, N. - LACM #74261 COLLECTED AT ALGODONES DUNE, 1 MI N GLAMIS 1965-04-25
STE69S0014	STEBBINS, R. - MVZ #85232 COLLECTED FROM GLAMIS, ALGODONES DUNES AREA 1969-05-06
STE69S0015	STEBBINS, R. - MVZ #85233 COLLECTED FROM GLAMIS, ALGODONES DUNES AREA 1969-05-06
STE69S0016	STEBBINS, R. - MVZ #85234 COLLECTED FROM GLAMIS, ALGODONES DUNES AREA 1969-05-06
STE69S0017	STEBBINS, R. - MVZ #85235 COLLECTED FROM GLAMIS, ALGODONES DUNES AREA 1969-05-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 48648
EO Index: 48648
Key Quad: Glamis (3211581)
Element Code: ARACF12040
Occurrence Number: 86
Occurrence Last Updated: 2002-08-22

Scientific Name: *Phrynosoma mcallii*
Common Name: flat-tailed horned lizard

Listing Status: **Federal:** None
State: None
Rare Plant Rank:

CNDDB Element Ranks: **Global:** G3
State: S2
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

General Habitat:

RESTRICTED TO DESERT WASHES AND DESERT FLATS IN CENTRAL RIVERSIDE, EASTERN SAN DIEGO, AND IMPERIAL COUNTIES.

Micro Habitat:

CRITICAL HABITAT ELEMENT IS FINE SAND, INTO WHICH LIZARDS BURROW TO AVOID TEMPERATURE EXTREMES; REQUIRES VEGETATIVE COVER AND ANTS.

Last Date Observed: 2002-07-14
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2002-07-14
Occurrence Rank: Poor
Owner/Manager: BLM
Trend: Unknown
Presence: Presumed Extant

Location:

WEST SIDE OF THE ALGODONES DUNES, 6.4 MILES SSW OF GLAMIS.

Detailed Location:

72 BELT TRANSECTS, EACH 0.5-MILE LONG; 1 FLAT TAILED HORNED LIZARD AND 5-6 PIECES OF HORNED LIZARD SCAT DETECTED.

Ecological:

HABITAT CONSISTS OF DESERT DUNES INTERSPERSED WITH EPHEDRA SP.

Threats:

THREATENED BY HEAVY ORV USE.

General:

1 JUVENILE OBSERVED ON 14 JUL 2002.

PLSS: T14S, R18E, Sec. 28, NE (S)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N3642979 E676568
Latitude/Longitude: 32.91080 / -115.11190
Elevation (feet): 265

County Summary:

Imperial

Quad Summary:

Glamis (3211581)

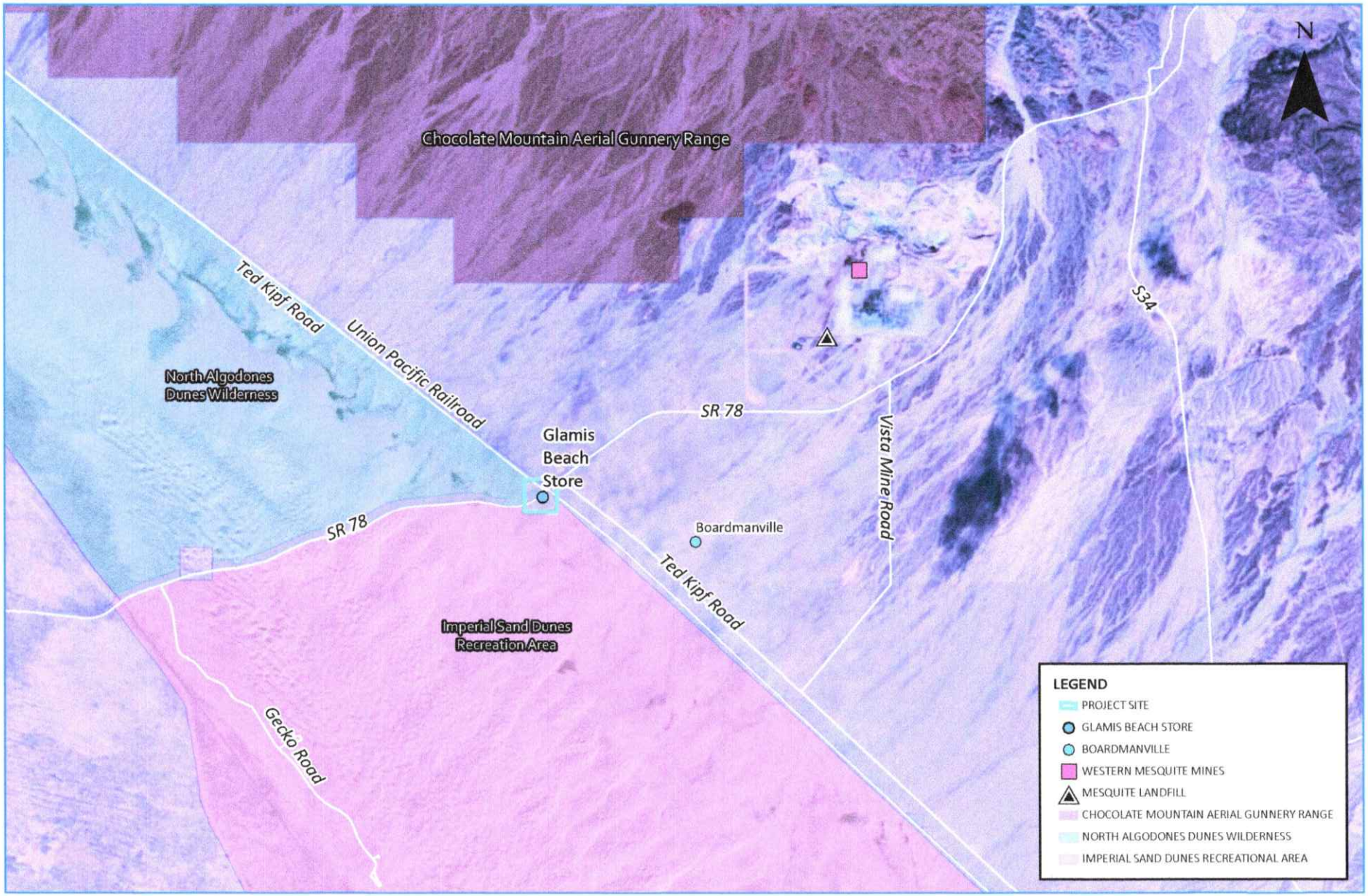
Sources:

REI02F0001 REILEY, B. (FOSTER WHEELER ENVIRONMENTAL) - FIELD SURVEY FORM FOR PHRYNOSOMA MCALLII 2002-07-14

FIGURE 1
REGIONAL LOCATION MAP

REGIONAL MAP

FIGURE 2
PROJECT LOCATION MAPS

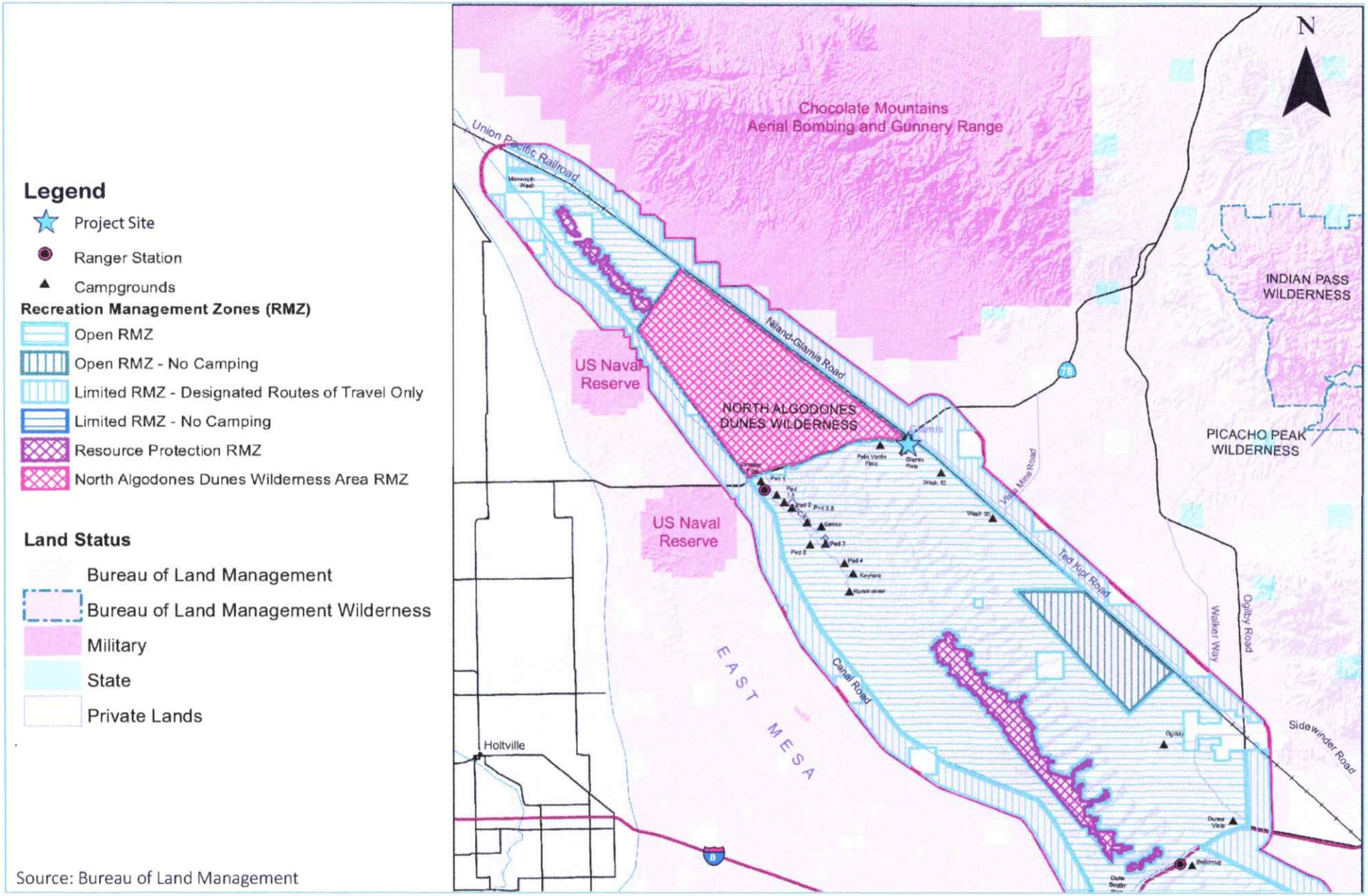


1 IN = 2.5 MI

Project Vicinity

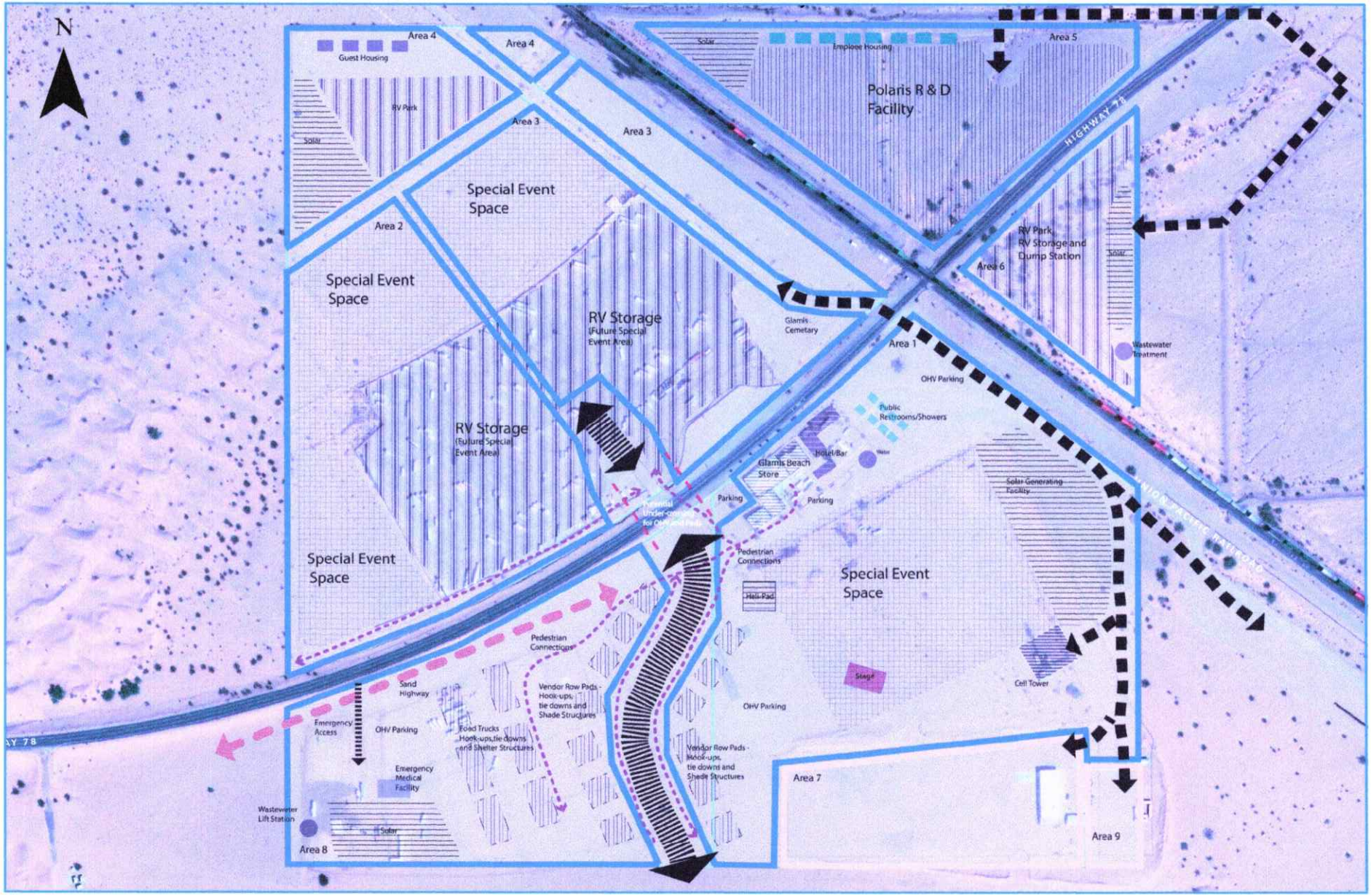
Exhibit I-2

Glamis Specific Plan



BLM Recreation Management Zones

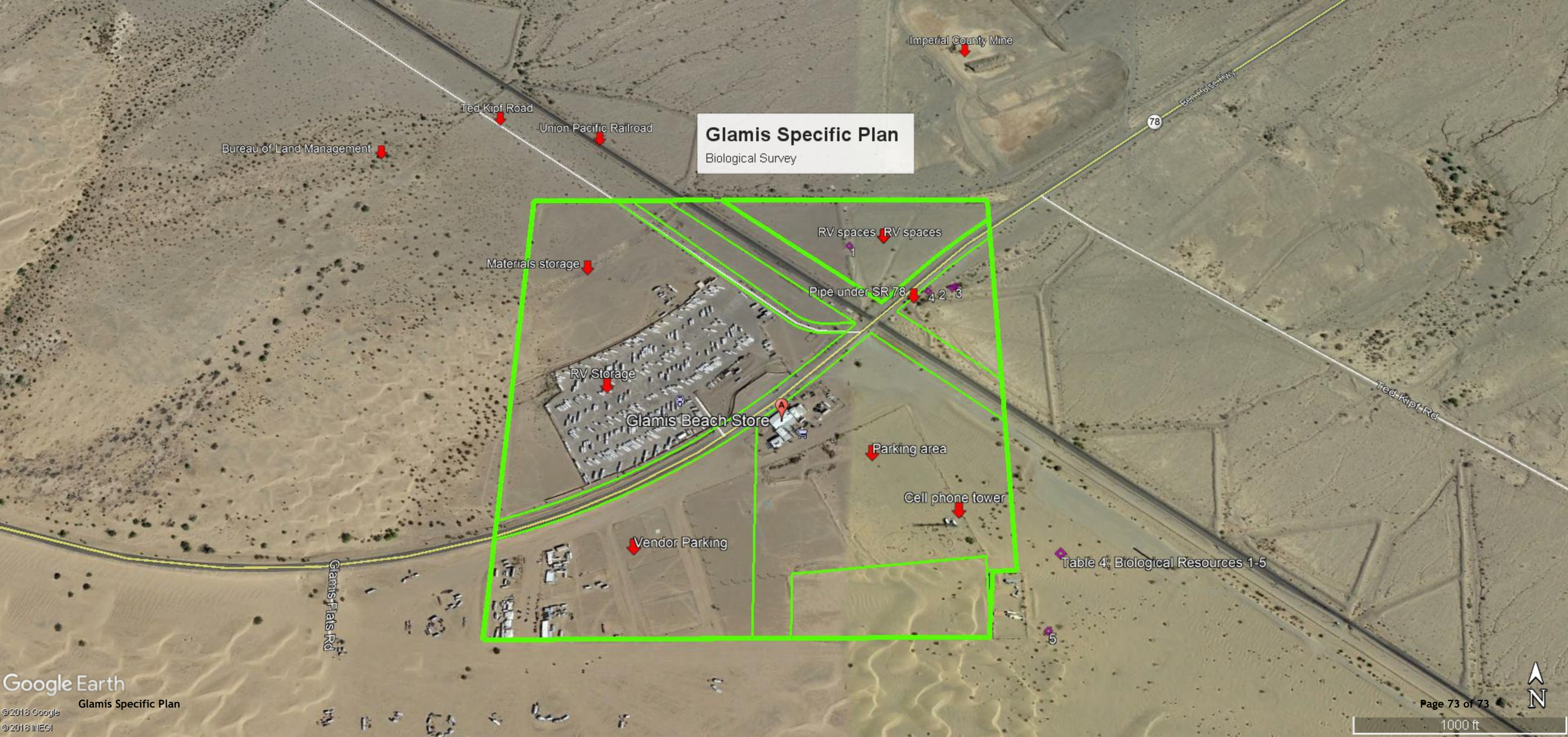
Exhibit I-4



Conceptual Site Plan

Exhibit I-8

FIGURE 3
BIOLOGICAL RESOURCES MAP


Glamis Specific Plan
Biological Survey
Imperial County Mine
Ted Kipf Road
Union Pacific Railroad
Bureau of Land Management
Materials storage
RV spaces
RV spaces
1
Pipe under SR 78
4 2 3
RV Storage
Glamis Beach Store
Parking area
Cell phone tower
Vendor Parking
Table 4: Biological Resources 1-5
5
Ted Kipf Rd
Glamis Flats Rd
78
Google Earth
©2018 Google
©2018 INEGI
N
1000 ft

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F-1 Class III Cultural Resources Inventory Report

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DRAFT
CLASS III CULTURAL RESOURCES INVENTORY REPORT
for the
GLAMIS SPECIFIC PLAN PROJECT, GLAMIS, IMPERIAL COUNTY, CALIFORNIA

TheAltumGroup

Prepared for:
Doug Franklin, P.E.
Vice President
The Altum Group

Prepared by:
Brian Williams, M.M.A., RPA
Principal Investigator
Kent Manchen, M.A., RPA
Senior Archaeologist
Laura Voisin George, M.A., RPA
Architectural Historian

ASM affiliates
Archaeology • History • Ethnography • Architectural History

ASM Affiliates, Inc.
2034 Corte Del Nogal
Carlsbad, California 92011

July 2019
PN 32690

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DRAFT
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MANAGEMENT SUMMARY

Altum Group (Altum) plans to develop a specific plan for development in Glamis, Imperial County, California. ASM Affiliates, Inc. (ASM) was contracted by Altum to complete the cultural resources inventory for the proposed project. Since this project encompasses privately owned parcels, the Imperial Valley Planning and Development Services Department is the lead agency providing oversight of the regulatory process.

ASM conducted a Class III cultural resources inventory for the Glamis Specific Plan Project area of potential effects (APE). This inventory was completed to satisfy requirements of the California Environmental Quality Act (CEQA), that require an inventory of cultural resources on lands planned for development.

A total of approximately 141 acres was subject to 100 percent intensive Class III survey. Prior to survey, a cultural resources records search was completed at the South Coastal Information Center (SCIC) of the project APE. In all, ASM identified seven cultural resources within the project APE. Three of these were discovered during survey while the remaining four were previously recorded. A single isolated prehistoric artifact was identified within a disturbed context, while historic cultural resources include refuse deposits, roads, a railroad, and a cemetery. Additional resources may be identified during survey of potential project realignments.

This inventory was not designed or intended to provide formal recommendations of eligibility for sites to be listed on the California Register of Historic Resources (CRHR). However, all resources were assessed for their potential for CRHR listing based on surface inventory data. ASM assessed two cultural resources as potentially eligible for the CRHR, based on surface inventory data alone. These eligibility assessments will help guide Altum in project redesign to achieve avoidance of impacts, or to minimize impacts where avoidance is not feasible.

1. INTRODUCTION

This report documents the results of a Class III cultural resources and historic built environment inventory and evaluation completed by ASM Affiliates, Inc. (ASM) for the Glamis Specific Plan Project in Glamis, California (Figure 1). The project area consists of six discontiguous parcels, totaling approximately 141 acres (Figure 2). All six parcels are located in Section 37 of the Glamis, California USGS topographic quadrangle map, approximately 27 miles east of the City of Brawley. The project area is located adjacent to land managed by the Bureau of Land Management (BLM). The six project parcels within the project area are privately owned and under County of Imperial jurisdiction. The Imperial County Planning and Development Services Department is the lead agency for this project.

This inventory was conducted in support of a specific plan that intends to expand and improve current recreation-supporting land use that includes retail and service development, motel accommodations, recreational vehicle and mobile home parks, and community facilities. The current cultural resources and historic built environment survey included a records search and an intensive pedestrian survey of the six project parcels. Staff at the South Coastal Information Center (SCIC), San Diego State University, conducted the records search on June 18, 2019. ASM Senior Archaeologist Kent Manchen and ASM Associate Archaeologist Thomas Taylor completed the pedestrian survey on June 16, 2019. Native American monitor Larry Holleman from Torres-Martinez Desert Cahuilla accompanied the survey.

During the pedestrian survey, two new historic-era resources and one prehistoric isolated artifact were recorded. The historic-era sites are the Glamis Beach Store building and Ted Kipf Road. The isolated prehistoric artifact is a broken lithic core, likely redeposited within a highly disturbed context in more recent times.

The records search identified four previously recorded resources within the project area. These resources consist of a historic cemetery, the Union Pacific railroad, the foundation remains of the former Glamis train stop, and a historic trash deposit. The four previously recorded resources were identified during the current pedestrian survey and Department of Parks and Recreation (DPR) update forms were prepared for all but the railroad.

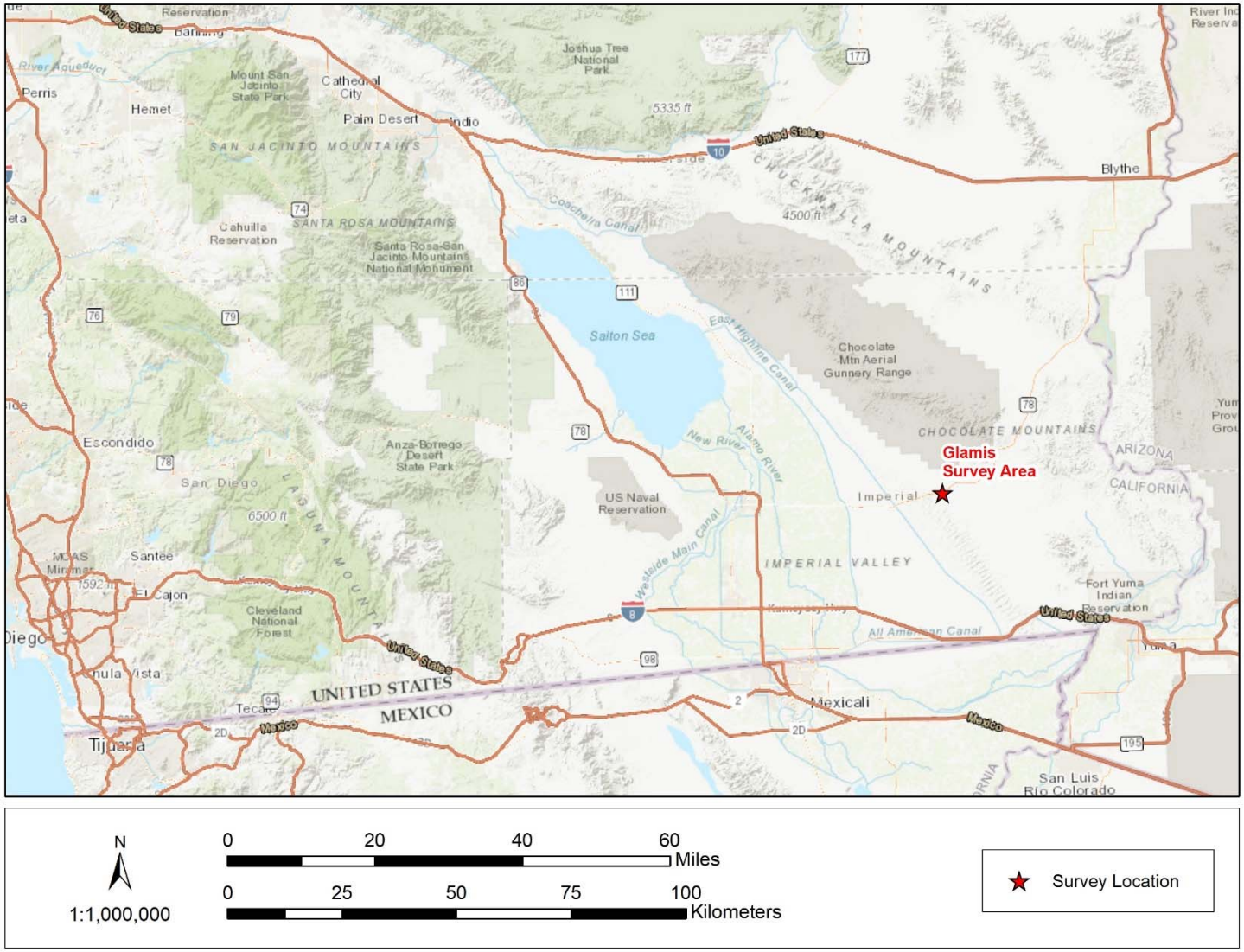

Figure 1. Vicinity map.

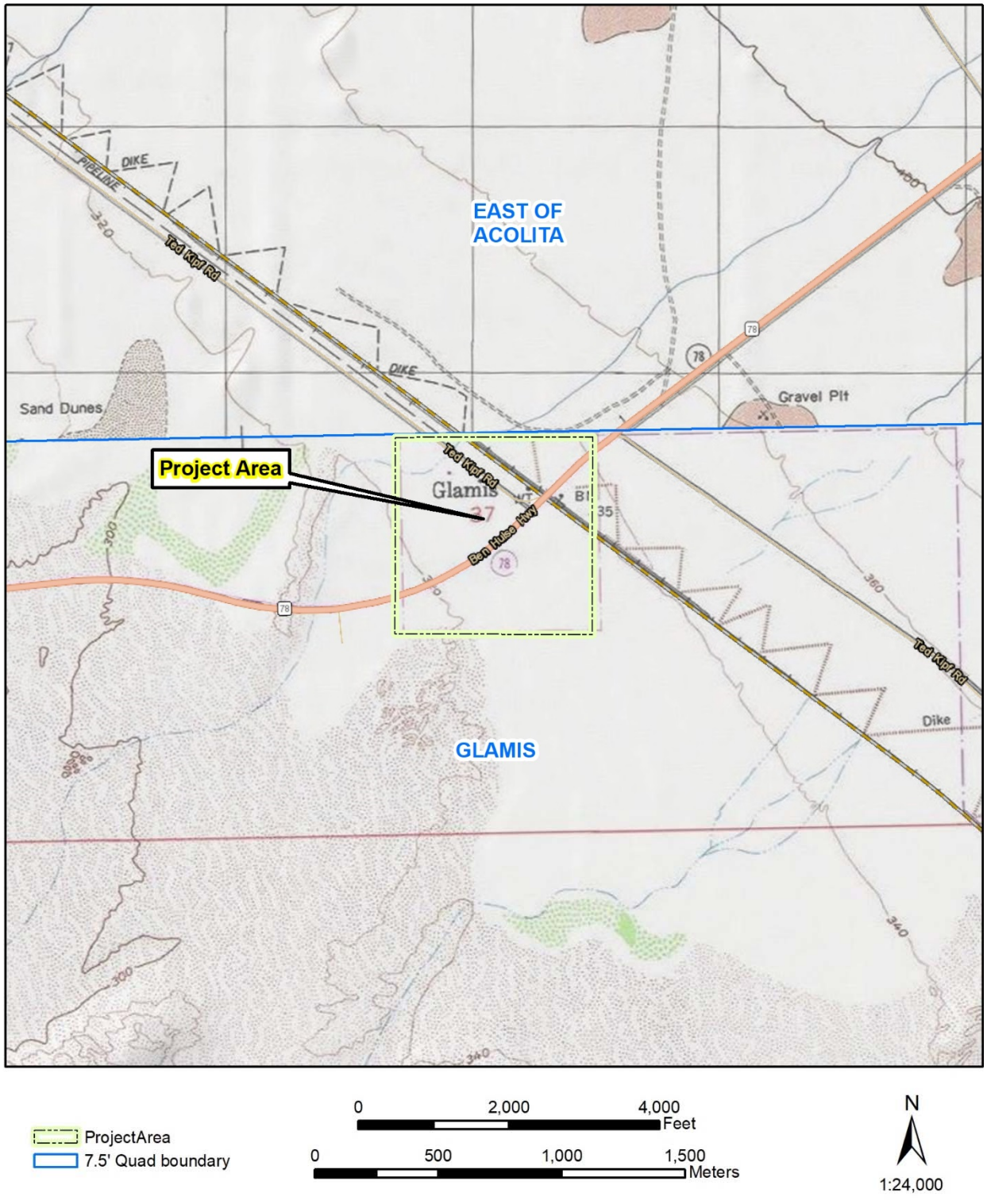

Figure 2. Project location map on the Glamis 7.5-minute USGS quadrangle.

1.1 PROJECT APE

The APE is the geographic area or areas, regardless of land ownership, within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. For the current proposed project, the APE consists of an approximate 141-acre footprint, including six privately owned parcels.

The current project APE is shown on Figure 2; the APE will act as the survey corridor requiring 100-percent survey coverage except where access in not obtained.

1.2 REGULATORY CONTEXT

The project APE encompasses private land, thus requiring compliance with regulations set forth in CEQA governing the discovery and treatment of cultural resources.

1.2.1 California Environmental Quality Act (CEQA)

CEQA requires that all private and public activities not specifically exempted be evaluated for the potential to impact the environment, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. It defines historical resources as "any object, building, structure, site, area, or place, which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Division I, Public Resources Code, Section 5021.1(b)).

Lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a proposed project's impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) can be considered to materially impair the resource's significance.

The CRHR is used in the consideration of historic resources relative to significance for purposes of CEQA. The CRHR includes resources listed in, or formally determined eligible for some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) consisting of the following:

1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or,
2) It is associated with the lives of persons important to local, California, or national history; or,
3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or,

4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

1.3 REPORT STRUCTURE

This report is organized into several sections: Section 2 provides a natural and cultural context for archaeological research in the Imperial Valley. Section 3 reviews the methods used to conduct this inventory. Section 4 summarizes the results of the records search and pedestrian survey. Section 5 is a discussion of the project results in the context of management considerations. Appendix A contains isolate artifact forms and site updates for previously recorded sites. The records search results are found in Appendix B.

2. PROJECT CONTEXT

The following discussion is excerpted from previous regional summaries prepared by ASM, including Schaefer (2007) and Laylander and Garnsey (2007).

2.1 NATURAL SETTING

Throughout the cultural history of the Colorado Desert, human activities have been closely tied to the distribution of natural resources and other aspects of the natural setting. Water, vegetation, animal habitat, and lithic raw material sources were not evenly distributed across the landscape. Consequently, archaeological evidence of hunters and gatherers is most likely to be encountered in locations where these resources are found. Short-term and long-term climatic fluctuations are also likely to have affected the intensity of land use over time. The natural topography influenced the location of trails and land use patterns. Dynamic alluvial and aeolian forces affected the integrity or preservation of archaeological sites.

The project area is located in the Colorado Desert, a northwestern subregion within the Sonoran Desert. This region is characterized by a series of northwest-southeast trending mountain ranges interspersed with broad, alluvium-filled basins. Some of these mountains form a natural barrier between the Colorado River to the east and the Salton Basin to the west.

Few areas of North America are hotter or drier than the Colorado Desert. Current climatic conditions produce dry, mild winters and dry, hot summers. Mean winter lows of 7° C and a mean summer temperature of 40° C are typical, with record highs of 49° C. Rainfall data from Indio between 1877 and 1987 record an annual average of only 14.1 cm, with annual extremes between .46 and 29.2 cm. Violent summer storms are not unusual, but most precipitation falls in midwinter. The Colorado River was the most reliable and abundant source of water in the region, with only a few widely dispersed springs found outside of the Coachella Valley. Well-watered palm oases also occur at regular intervals along the San Andreas Fault scarp on the north side of the Coachella Valley and along other secondary fault systems at the base of the Peninsular Ranges.

2.1.1 Geomorphology and Geology

The Salton Trough is a very active seismic and geothermal zone because of dynamics at the juncture of the Pacific and North American tectonic plates (Morton 1977; Redlands Institute 2002). The subduction of the ancient Farallon Plate under the North American Plate 30 million years ago raised up the Peninsular Ranges and resulted in the rain shadow effect that created the Colorado Desert. About 10 million years ago, the San Andreas Fault appeared as the Pacific Plate moved northwest, and 4 million years ago the Gulf of California, with the Salton Trough as its landward extension, began to open and spread. The San Andreas Fault and related secondary faults have blocked aquifers and produced a series of springs on the northern and eastern side of the Salton Trough. Some springs also represent locations where sandy aquifers lying between clay layers emerge from under alluvial fans, especially on the western side of the trough. Some of the aquifers are heated by magma that reaches closer to the surface in the rift zone. Springs that are located below the maximal shoreline of Lake Cahuilla (discussed below) would have been available to Native Americans after the lake's final recession or during interlacustral intervals. It should be noted that tectonic movements associated with earthquakes frequently cause old springs to dry up and new ones to emerge, and that there is consequently a high potential for fossil springs in the region.

The project area is located in the Algodones Dunes, an area approximately 45 miles long and 6 miles wide of wind-blown sand dunes. This sand is thought to have been sourced from the alluvial deposits of Lake Cahuilla and transported by wind. To the northwest of the project area lie the Chocolate Mountains, a fault-

ridden group of metamorphic, plutonic, and volcanic rocks variously of Precambrian, Mesozoic, and Tertiary age (Jennings 1967).

Also northwest of the project area is the Salton Sea, formed after October 1905 when a breach occurred in the head gate of the privately constructed Imperial Canal on the Colorado River south of the U.S.-Mexico border. By the time the Southern Pacific Railroad was able the close the breach in February 1907, the water level of the Salton Sea had risen to 60 m below mean sea level (bmsl). The lake's water level rapidly receded to 76 m bmsl by 1921, but it has subsequently risen again to 69 m bmsl because evaporation has been more than offset by agricultural and urban water discharges into the basin.

During the Quaternary, the Salton Trough has been progressively filled by immense quantities of colluvial and alluvial sediments up to 6,000 m thick (Morton 1977). The sequence of great lakes that have filled the Salton Trough, variously referred to as Blake Sea, Lake LeConte, or Lake Cahuilla, are today evidenced by extensive deposits of lacustrine sediments and long stretches of relic shoreline formations. These deposits actually constitute the northern arm of the Colorado River's delta (Sykes 1937).

As the Colorado River emptied into the Gulf of California, it released its sediments onto a vast and growing delta. This gradual accumulation of sediments raised the overall height of the delta, particularly after large flood events, when the receding waters of the Colorado River were unable to find a direct route back through the newly reworked surface of the delta. What followed during certain episodes was the diversion of the river's flow into the Salton Trough, resulting in the formation of a vast freshwater lake. The lake continued to rise until it reached the lip of the impounding delta, currently at 12 m above mean sea level (amsl), and a portion of the waters could again flow south to the Gulf. The low-gradient, deltaic conditions at the lake's input channel were then poised to produce a new shift in the river's course, this time away from the lake and directly south toward the Gulf.

Late Holocene lake stands are marked by extensive beach formations at approximately 12 m amsl, while higher beaches dating from the late Pleistocene lie above 30 m amsl (Waters 1983b). There were at least three major lake stands between A.D. 1000 and 1700, as well as one or more earlier lacustrine phases (Laylander 1997; Waters 1983a). Prehistoric archaeological sites in this area are likely to have been associated with recessional shorelines, ephemeral features produced as the isolated lake gradually evaporated, a process that would have taken a minimum of about 60 years to complete under modern climatic conditions. Evidence of human occupation along the Lake Cahuilla shoreline now extends back more than 3000 years in the upper Coachella Valley (Love and Dahdul 2002).

Due to this project's location within the Algodones Dunes and the fluid nature of the sands there, intact prehistoric archaeological deposits are unlikely to be visible on the surface.

2.1.2 Vegetation

The Sonoran creosote scrub community is mapped for the project area (Redlands Institute 2002:75). Characteristic species include creosote (*Larrea tridentata*) and white bursage or burrobush (*Ambrosia dumosa*). Well-drained alluvial slopes also support encelia (*Encelia farinosa*) and desert trumpet (*Eriogonum inflatum*). Annual grasses that occur throughout this floral community would have been primary food resources for Native Americans.

2.1.3 Vertebrate Fauna

Mammals with the greatest economic importance to aboriginal Colorado Desert peoples included desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), several rodent species, mule deer (*Odocoileus hemionus*), and Nelson's bighorn sheep (*Ovis canadensis nelsonii*). Predators known to occur in the area include mountain lion (*Felis concolor*), badger (*Taxidea taxus*), kit fox (*Vulpes macrotis*),

and bobcat (*Felis rufus*). Desert cottontail is most abundant in sand dune areas. Black-tailed jackrabbits have a wider distribution on desert floors, floodplains, washes, and rocky slopes. Mule deer were most likely to be encountered in desert washes, while bighorn sheep, the most elusive of prey, could be ambushed at desert tanks or oases when they came down from the mountain slopes for water (Jaeger 1965; Ryan 1968).

A wide variety of fish, reptiles, birds, and mammals are found along the Colorado River and its adjacent deserts, many of which had economic importance to the Colorado River peoples (Castetter and Bell 1951). Fish were the most important source of animal protein and included razorback sucker (*Xyrauchen texanus*), bonytail chub (*Gila elegans*), striped mullet (*Mugil cephalus*), various minnows (*Cyprinidae*), and machete (*Elops affinis*). When the river fed into the Salton Basin, these species also lived in Lake Cahuilla. Many of the species are now extinct on the lower Colorado River, having been replaced by introduced species such as catfish (Gobalet 1994; McGinnis 1984).

Many species of raptors, wading birds, songbirds, and migratory waterfowl inhabited the riparian margins of the Colorado River. Raptors had ceremonial uses for the native peoples, while migratory birds and their eggs were exploited for food. Bird species included bald eagle (*Haliaeetus leucephalus*), golden eagle (*Aquila chrysaetos*), osprey (*Pandion haliaetus*), Wilson's warbler (*Wilsonia pusillus*), American coot (*Fulica americana*), mallard (*Anas platyrhynchos*), great blue heron (*Ardea herodias*), and clapper rail (*Rallus longirostris*), to mention but a few. When Lake Cahuilla existed, these wetland species took up permanent or seasonal residence and were also exploited by the people who established fish camps along the shoreline.

2.2 PALEOENVIRONMENTS

Evidence of earlier environmental conditions is very limited. Pollen-bearing, stratified deposits from caves or lake beds are not as common in the Colorado Desert as they are in the Great Basin, where most of the reconstructions of desert paleoclimates have been made. Evidence indicates that the modern desert conditions were already in existence at the beginning of the Holocene period, at the time of the earliest well-documented cultural occupations (Thompson 1984).

Paleoclimatic reconstructions based on Neotoma sp. (pack rat) midden analysis indicate that at elevations below 300 m there was little climatic change along the Lower Colorado and Gila rivers during the last 13,000 years. The area may have indeed been a refugium for lower Sonoran creosote scrub habitat during the Pleistocene period but containing the frost-resistant Mojavean species (Cole 1986). The area would have resembled Joshua Tree National Park until 9,000-10,000 years ago. At higher elevations in the mountains to the east and north, pack rat midden analyses indicate a juniper woodland habitat in the Late Pleistocene between 22,000 and 11,000 years ago. These xeric woodlands continued through the early Holocene between 11,000 and 8,000 years ago, finally retreating to higher elevations from the Middle Holocene until present times and being replaced with the current creosote scrub and desert riparian habitat (King and Van Devender 1977; Van Devender 1990; Van Devender and Spaulding 1983). The last century has seen some of the hottest and driest conditions in at least the last 400 years (Hastings and Turner 1965:188).

Based on current information, the climatic history of the general region may be summarized as follows (Van Devender and Spaulding 1983):

Late Pleistocene (20,000 to 9000 B.C.): cooler and wetter conditions supporting pinyon-juniper woodlands, extensive deep lakes, and savannah grasslands or creosote scrub at low elevations.

Early Holocene (9000 to 6000 B.C.): gradual warming and drying conditions resulting in the shrinking of lakes and replacement of woodland by creosote scrub at lower elevations.

Middle to Late Holocene (6000 B.C. to present): warm and dry conditions continue, dominated by summer monsoons in the Desert Southwest and winter storms along the Pacific Coast. Lakes in low-lying basins completely dry up or become ephemeral. Locally specific fluctuations in temperature and aridity produce ecological variation of no greater magnitude than that known from historic records. Greater frequency and severity of drought conditions may have existed in the period between 5000 and 2500 B.C.

2.3 PREHISTORY

2.3.1 History of Research

An outline of Colorado Desert culture history has been generally accepted by the archaeological community, but with the realization that it is a superficial construct for which details are not well understood. Ironically, the uncertainties are most acute along the lower Colorado River where prehistoric and ethnohistoric occupations were most intensive. Most of the major occupation sites were on the lower terraces of the Colorado River, but none have been investigated because they are either buried beneath many meters of alluvial deposits, have been destroyed by agricultural development, or are obscured by impenetrable stands of tamarisk and reeds. The culture history is based on the pioneering work of Malcolm J. Rogers in many parts of the Colorado and Sonoran deserts, often relying on evidence from sites that were marginal to the main occupation on the Colorado River (Rogers 1939, 1945, 1966). Subsequently, several overviews and syntheses have been prepared, with each succeeding effort drawing on previous studies and adding new data and interpretations.

Rogers established the first systematic culture history and artifact typologies for the Colorado Desert during the course of more than 40 years of field investigations. Although he was not a prolific writer, his investigations of San Dieguito and Archaic flaked stone tools and settlement patterns (Rogers 1929, 1939, 1958, 1966) and of Yuman ceramics and culture history (Rogers 1936, 1945) remain the foundation of current archaeological research in the region.

Also occurring during this early period of basic archaeological research was Albert H. Schroeder's (1952, 1979) examination of lower Colorado River sites. Schroeder (1961) excavated at the Willow Beach site, one of the few known stratified Late Prehistoric sites on the Colorado River, located just below Boulder Canyon. He developed a cultural sequence that emphasized the similarities of the Colorado River assemblages with the upland areas of western and central Arizona, lumping a number of cultural patterns into the concept of the Hakataya, an expanded version of what Rogers referred to as Yuman (Schroeder 1979). Some scholars have found Schroeder's concept of the Hakataya too inclusive and have also noted conflicts with Rogers' original Yuman ceramic typology (Waters 1982a, 1982b). Schroeder (1957, 1958, 1975) also proposed correlations between ceramic types and tribal/cultural affiliations. This ceramics-equal-people approach has been challenged as underestimating the mobility of groups who may produce different ceramic types depending on the proximity of different clays to seasonal settlements.

Most research during the last 30 years has been mandated by government agencies for compliance with state and federal environmental laws. Independent research has also been conducted for doctoral dissertations and by local institutions such as the Imperial Valley College and University of California, Riverside. Of particular relevance are federal agency overviews and management plans that established cultural contexts, research domains, and management issues for most of the Colorado Desert.

Margaret L. Weide and James P. Barker prepared one of the earliest syntheses of the Yuha Desert in Imperial County for the U.S. Bureau of Land Management (BLM) during their work on the California

Desert Plan (Wilke 1976). This study contained discussions relevant to the culture history of the entire Colorado Desert, including the Colorado River Valley, and in particular addressed the question of the nature of Lake Cahuilla settlement patterns (Weide 1976). A synthesis for the entire Colorado Desert Planning Units was prepared by Elizabeth Warren and her associates (1981). This is a particularly succinct and useful review of environments, prehistory, ethnography, and history that include the Big Maria and Whipple mountains planning units as well as the cultures of the lower Colorado River Valley.

For southwestern Arizona, Randall H. McGuire and Michael B. Schiffer (1982) reviewed over 50 previous research projects and prepared cultural syntheses that are equally applicable to the southern California area. One of the most valuable contributions in that volume was Waters' (1982a, 1982b) study of Patayan ceramics, based largely on the unpublished notes, type series, and field collections of Rogers. Schaefer (1994a) updated and corrected Waters' discussion of the time range and spatial distribution of Patayan ceramic types based on a review of recent excavations in the Colorado Desert. General updates on the state of archaeological research and knowledge have also been prepared by Schaefer (1994b, 1994c) and Schaefer and Laylander (2007).

In the Coachella Valley, substantial numbers of investigations driven by federal and state mandates have been undertaken over the last 20 years as a result of phenomenal population growth and infrastructure development. No detailed synthesis of the results of this research has yet appeared. The earliest sites date to the early-to-middle Archaic period (5000-3000 B.C), as represented by the lithic complex of the Pinto Basin (Campbell and Campbell 1935) and at ephemeral pans such as are found within the Chuckwalla Valley. Absolute dates for these remains are problematical (Warren 1984). Recently, rare late Archaic sites (3000 B.C.-A.D. 1) have been discovered in earlier Lake Cahuilla contexts (Love and Dahdul 2002) and in a rockshelter at Tahquitz Canyon (Bean et al. 1995). These earlier sites are for the most part obscured by natural deposition within the Coachella Valley basin and by active erosion or debris flows in the surrounding uplands. Late prehistoric and ethnohistoric period sites abound throughout the Coachella Valley and constitute the majority of sites. The largest data recovery project to date, involving both ethnohistoric and archaeological investigations, was undertaken at RIV-45 in Tahquitz Canyon (Bean et al. 1995; Schaefer 1997). That study documented the settlement pattern and archaeological complex of a major village area that was occupied for more than 2,000 years. The most substantial remains date from approximately A.D. 1450-1820. A series of major surveys and smaller test excavations have occurred at the base of most of the canyons that empty onto the Coachella Valley from the San Jacinto Mountains, including Chino Canyon, Tahquitz Canyon, Eagle Canyon, Andreas Canyon, and Murray Canyon. One of the most recent was a data recovery at a portion of the ethnohistoric period Cahuilla village of Rincon that included examination of a rock-lined irrigation ditch (Schaefer et al. 2001).

The other concentration of archaeological studies in the Coachella Valley is along the southern end of the Whitewater River where it empties into Lake Cahuilla. A substantial complex of sites near the cities of Indio, Indian Wells, and La Quinta has been investigated, ranging from residential bases to temporary camps. Both academic studies and ones conducted for CEQA compliance were involved (Hogan et al. 1992; Jertberg and Farrel 1980; Sutton 1993, 1996; Sutton and Wilke 1988; Wilke 1978; Wilke and Lawton 1975; numerous reports on file at the Archaeological Resource Unit, University of California, Riverside).

Specific to the lower Colorado River Valley, Jeanne Swarthout (1981a-c) and Swarthout and Christopher E. Drover (1981) prepared detailed overviews that divide the river into four reaches: Lee's Ferry to Grand Wash Cliffs, the Lower Virgin River, Grand Wash Cliffs to Davis Dam, and Davis Dam to the International Border. These studies emphasized the limitations of previous work because of inconsistent site records and a lack of stratified sites. They provided a careful review of the environment and culture history and presented proposals for future research. The study of Reach 3, Davis Dam to the International Border (Swarthout and Drover 1981) is one of the best in the series. Swarthout and Drover derived two ethnographically based settlement models, one for the Mohave in Mohave Valley and one for the

Halchidhoma and Quechan on the Colorado River. Although the lack of documented sites on the valley floor makes it difficult to test their models, test implications can be developed for the temporary camps and resource extraction sites in desert areas away from the river. Schaefer (1994b) discussed additional research issues that link the treatment of archaeological sites in the desert and river valley zones. In another article, Schaefer (1994c) summarized and critiqued recent data recovery projects in the Colorado Desert with an emphasis on understanding Lake Cahuilla chronology and settlement patterns and recognizing the problems of interpreting sites on desert pavements.

A recent overview of the lower Colorado River by Connie L. Stone (1991) expanded the history of research and review of current research issues. Stone identified the major cultural resource types, from rock rings to rockshelters, and provided summary statements of their potential research values and applicable investigative procedures. She also provided valuable maps of major intaglio and rock art sites, trail systems, and generalized prehistoric land use.

2.3.2 Cultural Periods and Patterns

Six successive periods, each with distinctive cultural patterns, may be defined for the Colorado Desert, extending back in time over a period of more than 12,000 years. They include: (1) Early Man (Malpais); (2) Paleoindian (San Dieguito); (3) Archaic (Pinto and Amargosa); (4) Late Prehistoric (Patayan); (5) Ethnohistoric Native American occupation; and (6) Historic Euro-American occupation.

Early Man Period (Malpais) (prior to 10,000 B.C.)

The Malpais Pattern is represented by a complex of remains that some archaeologists hypothesize to date from 50,000 to 10,000 years B.C. (Begole 1973, 1976; Davis et al. 1980; Hayden 1976). The term was originally used by Rogers (1939, 1966) for ancient-looking cleared circles, tools, and rock alignments that he later classified as San Dieguito I. Malpais continued to be applied to heavily varnished choppers and scrapers found on desert pavements of the Colorado, Mojave, and Sonoran deserts that were thought to predate the Paleoindian period of projectile point makers. Although few archaeologists would contest that most of the artifacts were cultural products, dating methods remain extremely uncertain and have been assailed on several grounds (McGuire and Schiffer 1982:160-164). Arguments in favor of very early settlement of the Colorado Desert were further eroded by the redating of the "Yuha Man." Originally dated as more than 20,000 years old based on radiocarbon analysis of caliche deposits, more reliable dates on actual bone fragments using the accelerator mass spectrometer (AMS) method now place the burial at about 3000 years B.C. (Taylor et al. 1985).

Paleoindian Period (San Dieguito) (10,000-6000 years B.C.)

Most of the aceramic lithic assemblages, rock features, and cleared circles in the general region have been assigned to the third phase of the San Dieguito complex. Indeed, a large proportion of the sites in the Colorado Desert have been assumed to be San Dieguito. Rogers first defined the San Dieguito complex based on surface surveys in coastal San Diego County and in the Colorado and Mojave deserts, but he later refined his constructs with excavated material from the C. W. Harris site in western San Diego County (Rogers 1939, 1966). Rogers distinguished three phases of the San Dieguito complex in the Central Aspect, that is, in the Colorado and Mojave deserts. Each phase was characterized by the addition of new, more sophisticated tool types to the tool kit of the preceding phase.

According to current views, the lithic technology of the San Dieguito complex was based on percussion-flaked cores and the resulting debitage, but with little or no pressure flaking practiced during the first two phases. San Dieguito I and II tools included bifacially and unifacially reduced choppers and chopping tools, concave-edge scrapers (spokeshaves), bilaterally notched pebbles, and scraper planes. Appearing in the San Dieguito II phase were finely made blades, smaller bifacial points, and a larger variety of scraper and chopper types. It appears that the San Dieguito III phase tool kit was appreciably more diverse, with the

introduction of fine pressure flaking. Tools include pressure-flaked blades, leaf-shaped projectile points, scraper planes, plano-convex scrapers, crescentics, and elongated bifacial knives (Rogers 1939, 1958, 1966; Warren and True 1961; Warren 1967). Various attempts have also been made to seriate cleared circles into chronological phases, but no convincing chronological scheme has yet emerged (Pendleton 1984). Because of the surficial character of many desert sites and the scarcity of chronological indicators, it has been difficult to substantiate the validity of Rogers' phase designations as chronologically successive changes in the tool kit of a long-lived culture.

The San Dieguito culture, as reconstructed from known associations, was a hunter-gatherer adaptation based on small mobile bands exploiting small and large game and collecting seasonally available wild plants. An absence of milling tools has been seen as reflecting a lack of hard nuts and seeds in the diet, and as a cultural marker separating the San Dieguito culture from the subsequent Desert Archaic culture (Moratto 1984; Rogers 1966; Warren 1967). However, portable manos and metates are now being increasingly recognized at coastal sites radiocarbon dated to earlier than 8,000 B.P. Arguments have also been made for the presence of a developed grinding tool assemblage in earlier periods, based on finds from the Trans-Pecos area of western Texas (Ezell 1984). In Colorado Desert, Lorann Pendleton (1984:68-74) remarked that most ethnographically documented pounding equipment for processing hard seeds, mesquite, and screwbeans was made out of wood and would not generally have been preserved in the archaeological record. If milling and pounding tools from earlier time periods were also made from wood, they would seldom be preserved at open sites.

Site distributions also indicate some basic elements of San Dieguito settlement patterns. The sites may be located on any flat area, but the largest aggregations occur on mesas and terraces overlooking larger washes, or the margins of lakes. These are areas where a variety of plant and animal resources could be located and where water would be at least seasonally available.

Pendleton (1984) made a strong case, based on ethnographic analogy from the Colorado River cultures, that San Dieguito occupation in the eastern Colorado Desert was focused on the river floodplain. She tested her model with the large array of sites and data sets in the Picacho Basin and argued that desert areas surrounding the river valley were used only to a limited degree for special resource exploitation within a foraging radius of logistically organized collecting groups.

Archaic Period (Pinto and Amargosa) (6000 B.C.-A.D. 500)

The Pinto and Amargosa complexes are considered regional specializations within the hunting and gathering adaptations characterizing the Archaic period. These complexes are more frequently represented in the Great Basin, Mojave Desert, and Sonoran Desert east of the Colorado River. Few Pinto or Amargosa (Elko series) projectile points have been identified on the desert pavements of the Colorado Desert. It has been suggested that the environment in the California deserts was unfavorable during this time period, particularly during the so-called Altithermal period between 5000 and 2000 B.C. which forced the mobile hunter-gatherers into less inhospitable regions (Crabtree 1981; Schaefer 1994c; Weide 1976).

However, some late Archaic sites are known, indicating occupations along the boundary between the low desert and Peninsular Ranges and at more favored habitats at springs and tanks. The most substantial Colorado Desert site is Indian Hill Rockshelter in Anza-Borrego Desert State Park, where 150 cm of Archaic period deposits were excavated below a Late Prehistoric component (McDonald 1992). Most significant were 11 rock-lined cache pits and numerous hearths indicative of either a residential base or temporary camp in which food storage was integral to the hunting and gathering settlement-subsistence strategy. Also recovered were numerous Elko Eared dart points, flaked and milling stone tools, and three inhumations, one of which was radiocarbon dated to 4,070 ±100 years B.P. (ca. 2890-2350 B.C.). Two similar rock-lined pits were excavated at a small rockshelter in Tahquitz Canyon near Palm Springs (Bean et al. 1995). The small quantity of artifacts at the latter site suggested strategically stored food and seed

processing equipment that was used by small, mobile groups. More recently, a late Archaic period campsite was also identified in 8-m-deep dune deposits adjacent to the north shoreline of Lake Cahuilla (Love and Dahdul 2002). Radiocarbon dates of almost 1000 B.C. and associated bird and fish bone confirm a late Archaic period Lake Cahuilla occupational horizon. Additional Archaic sites almost certainly lie buried under alluvial fans and wash deposits, sand dunes, and Lake Cahuilla sediments, as well as under Colorado River Valley alluvium.

Late Prehistoric Period (Patayan) (A.D. 500-1850)

The Late Prehistoric period has been divided into four phases, including a pre-ceramic transitional phase from A.D. 500 to 800. The major innovations of this period were the introduction of pottery making by the paddle-and-anvil technique and bow-and-arrow technology around A.D. 800 and the introduction of floodplain agriculture at about the same time (Rogers 1945). Exact dating of early domesticates is still lacking (Schroeder 1979). Both these technological advancements were introduced either from northwestern Mexico or through the Hohokam culture of the Gila River (McGuire and Schiffer 1982; Rogers 1945; Schroeder 1975, 1979). The formation of Lake Cahuilla, referred to above, has generally been linked to the Patayan II phase, between perhaps A.D. 1000 and 1650. Previous studies had suggested that the final recession of Lake Cahuilla occurred around A.D. 1500, but recent research demonstrates that a late filling occurred between A.D. 1600 and 1700 (Laylander 1997; Schaefer 1994c).

Between A.D. 1000 and 1700, desert peoples of the eastern Colorado Desert shifted their focus somewhat from the Colorado River floodplain to a more mobile, diversified resource procurement pattern involving increased travel between the Colorado River and Lake Cahuilla (Pendleton 1984). Long-range travel to special resource collecting zones and ceremonial locales, trading expeditions, and possibly some warfare are reflected by the numerous trail systems throughout the Colorado Desert. Pot drops, trail-side shrines, and other evidence of transitory activities are associated with these trails (McCarthy 1982, 1993).

Several pottery types appeared during the same time period (Waters 1982a, 1982b). Many of the pictographs, petroglyphs, and bedrock grinding surfaces in the Colorado Desert have also been associated with the Patayan pattern, although the chronology and cultural affiliation of such features are difficult to determine. It was also in this period, and possibly in the Archaic period, that volcanic and sandstone rock outcrops along the Colorado and Gila rivers were exploited for the manufacture of stone pestles and portable milling slabs (Schneider 1993, 1994). With the final recession of Lake Cahuilla, the Patayan III phase emerged, with a renewed reliance on the Colorado River floodplain and some floodplain agriculture along the New and Alamo rivers, in a mixed horticulture/hunter-gatherer economy.

Natural and Cultural History of Lake Cahuilla

The majority of prehistory sites in the present project area evidently derive from Late Prehistoric activities associated with one or more stand of Lake Cahuilla. A detailed review of Lake Cahuilla chronology and cultural history is therefore useful for interpreting and evaluating these sites.

The archaeological sites along the relic maximal shoreline of Lake Cahuilla and its recessional shorelines provide a unique record of hunter-gatherer adaptations to an exceptionally dynamic environment. In one of the hottest and driest deserts in North America, wetland habitats emerged over the course of as little as two decades, as a consequence of the natural diversion of the Colorado River into the Salton Sink. After perhaps lasting for decades or possibly even centuries, the lake would then recede, taking a minimum of 60 years to fade away.

The first serious models of human adaptation to Lake Cahuilla were based on archaeological investigations at a small number of sites, principally along the north shore of the lake (Wilke 1978). Conclusions concerning the patterns of adaptation, seasonality, settlement size, and complexity were based almost exclusively on preserved food remains. Even the chronology of Lake Cahuilla was based on a small number

of radiocarbon dates and untested assumptions about the stability of the lake and its having remained dry after the first Europeans reached the lower Colorado River (see Laylander 1997; Schaefer 1994b, 1994c). The favored scenario was that a large lake had suddenly emerged and that groups living on the periphery of the region moved down to the shoreline to establish permanent, year-round villages of considerable size and complexity. When the lake began to recede, people followed the successive receding seasonal beach strands down to lower elevations, establishing lines of fish traps and short-term camps to extract the lake's bounty for as long as they could. Eventually they were forced to move back to the Peninsular Ranges or Colorado River, raising the population densities in those areas and causing economic and political shifts ranging from resource intensification to increasing warfare.

Subsequent archaeological research along other parts of the shoreline have challenged the initial models of Lake Cahuilla adaptation. They have shown considerable variability in the nature of shoreline habitats, settlement types, seasonal use, and subsistence emphases during high stands, and a much more complex pattern of responses to recessions of the lake. A great range of site types have been found, from fairly large and complex habitation sites to small temporary camps and specialized fish camps. The larger sites tend to be located on the west and north sides of Lake Cahuilla near sand spits, coves, embayments, and marshlands, or where major seasonal washes empty into the lake. Sites are also associated with seasonal pans and mesquite bosques. The exploitation of more diverse lacustrine microhabitats on the west shore may have resulted from the proximity of the lake to the Peninsular Ranges. On the eastern shoreline, which is distant from population centers in the resource-rich Colorado River valley, sites are smaller, less complex, and more diffuse. However, many of the patterned associations between settlement morphology and Lake Cahuilla habitat are yet to be discovered and understood.

The chronology of Lake Cahuilla's lacustrine and interlacustrine phases also continues to be refined. George M. Stanley (1962, 1965) suggested that repeated infillings included at least three major lacustral intervals in the last two millennia. Philip J. Wilke (1978) used 31 radiocarbon dates to attempt to define more precisely three major lacustral intervals during the last 2,000 years. These periods were 100 B.C.-A.D. 600, A.D. 900-1250, and A.D. 1300-1500. He realized that his sample was small and that he did not have the precision to discriminate closely dated successive infillings within the lacustral intervals.

Michael R. Waters (1983a) reconstructed a revised 1,300-year chronology based on 14 additional radiocarbon dates from natural and cultural deposits found in stratigraphic succession at three localities on the north shore, as well as stratigraphic exposures of lacustrine and non-lacustrine sediments. He used both freshwater Anodonta shells and hearth charcoal for the dates. He then critically assessed potential sampling errors in his radiocarbon dates, applied assumed sedimentation rates to the stratigraphy, and incorporated Richard Wayne Thompson's (1968) mudflat accretion dates from the Colorado River Delta to arrive at four lacustral intervals. Waters identified major infillings between A.D. 700 and 900, A.D. 940 and 1210, A.D. 1250 and 1400 (with a partial recession to sea level at A.D. 1300), and, following what may have been a partial but more substantial recession, an infilling between A.D. 1430 to 1530. Waters also accepted Wilke's conclusion that the final recession had begun by the time of the first Spanish navigation of the Colorado River by the Alarcón expedition in A.D. 1540.

Don Laylander (1997) conducted a reappraisal of 85 radiocarbon dates from archaeological investigations over the past 35 years. He organized the dates into those from maximum elevation shoreline sites and those from recessional sites, discerning a minimum of six clusters. T-tests of statistical contemporaneity indicate the probability that the clusters represent a minimum of three infilling periods and three recessional periods over the last 1,000 years. (Laylander did not address the A.D. 700-900 phase.) This conservative analytical approach provided a weighted mean estimate of each phase but did not estimate the duration of each phase or the presence of fluctuations within each phase because of the imprecision inherent in the individual radiocarbon dates. In summary, Laylander's dates indicate a full flooding in the thirteenth century, a recession in the late fourteenth or early fifteenth century, another infilling in the fifteenth century, a

recession in the late fifteenth or early sixteenth century, a final infilling in the seventeenth century, and a final recession by the end of the seventeenth century.

The seventeenth century infilling and recession had not previously been clearly recognized, but it has been confirmed by recent archeological investigations. In fact, almost half of Wilke's dates were less than 400 years B.P., for which he provided alternative explanations (Wilke 1978). They had to be reconciled with historical accounts, beginning in 1540 with Hernando de Alarcón's navigation of the lower Colorado River at least as far as Yuma. Alarcón could not have accomplished that feat if the Colorado River flowed into the Salton Basin instead of directly through the delta to the Gulf of California. From that time on, the longest gap between historical accounts of Colorado River navigations or overland visits was 95 years. Don Juan de Oñate's A.D. 1604-5 overland expedition descended the Bill Williams River and followed the Colorado River down to the delta, observing no diversion to the Salton Basin. Kino was next to reach the confluence of the Colorado and Gila rivers in 1700 and wrote of no great lake to the west. In fact, he observed the river slowing south to the Gulf of California through a telescope perched on a mountaintop. In 1701 and 1702 Kino traveled along the river south through the delta. Wilke cited these visits and inconclusive bead and ceramic assemblage data to discount a protohistoric phase for Lake Cahuilla.

Radiocarbon dates from several recessional fish camps and other habitation sites with abundant lacustrine resource remains have now been recovered that prove Lake Cahuilla existed in the seventeenth century, between the visits of Oñate and Kino (Apple et al. 1997; Laylander 1997; Schaefer 1986, 1994b-c, 2000). Comparable dates have been derived from natural peat deposits at several locations along the Lake Cahuilla shoreline (Gurrola and Rockwell 1996; Thomas and Rockwell 1996). Cahuilla and Kumeyaay stories of fishing at Lake Cahuilla may therefore have been passed down through fewer generations than previously thought (Laylander 2004a).

2.4 ETHNOGRAPHY OF THE COLORADO DESERT

2.4.1 The Desert Cahuilla

Several ethnographic and ethnohistoric studies have documented the lifeways and culture of the Cahuilla (Barrows 1900; Bean 1972, 1978; Bean and Saubel 1972; Curtis 1926; Drucker 1937; Heizer 1974; Hooper 1920; Kroeber 1908; Patencio 1943; Strong 1929).

The ancestors of the Cahuilla, Cupeño, Luiseño, Serrano, and Gabrieleño, speaking a language that belonged to the Takic branch of the Uto-Aztecan linguistic family, apparently migrated from the north into southern California, perhaps during the first millennium B.C. A subsequent expansion of ancestral Cahuilla-speaking people into the Colorado Desert may have been substantially later, during the first millennium A.D. (Golla 2007; Kroeber 1925; Laylander 1985, 2007; Moratto 1984).

Within traditional Cahuilla territory, centered on the Santa Rosa and San Jacinto mountains and the Coachella Valley, a dozen or more independent, politically autonomous land-holding clans owned territories. Ideally, each of these territories extended from the desert or valley floor to mountain areas and crossed several biotic zones. Clans included one or more lineages, each of which had an independent community area that it owned within the larger clan area. Cahuilla oral histories indicate that some clans replaced others, often by force, and that new lineages would bud off from clans to establish new territories. Cahuilla mythology and oral tradition also suggest that when Lake Cahuilla dried up, it was the mountain people who resettled the desert floor. By 1850, at least 17 Cahuilla rancherias were reported in the Coachella Valley, most associated with hand-dug wells, springs, or palm oases. Reservoirs, irrigation ditches, and agricultural fields are documented at least as far back as the early nineteenth century (Wilke and Lawton 1975:21, 30 ff).

In addition to a lineage residential area and locations within a clan territory that the lineage owned in common with other clan members, each lineage had ownership rights to various food collecting, hunting, and other areas. Individuals also owned specific areas or resources, such as food plants, hunting areas, mineral collecting places, and sacred spots used only by shamans, healers, and ritual practitioners.

Although villages were occupied year-round, many inhabitants would leave at specific times to exploit seasonally ripening foods in different environmental zones. Temporary camps would be established in these food-collecting areas, and surpluses would be transported back to the main village. Mountain Cahuilla would move to the upper desert areas and establish temporary camps to process agave in the late winter and early spring, and then move to lower desert areas to harvest mesquite beans in the late spring. Conversely, the Desert Cahuilla ascended the mountains in the fall for the pinyon and acorn harvests. Other springtime resources included yucca, wild onion, barrel cactus and other cactus fruits, goosefoot, and grass seeds. Major upper desert resources collected in summer included manzanita, wild plum, and other berries. Fall was also the occasion to gather grass seeds, chia seeds, saltbush seeds, palm tree fruit, thimbleberry, wild raspberry, juniper berry, and choke berry. Many animal resources were also hunted, with bighorn sheep and deer hunts often coinciding with the pinyon harvest. Rabbits were the most common game animal hunted throughout the year.

Cahuilla clans varied in size from 100 to several thousand people. They were arranged so that each community was placed in an area near significant water and food resources. Communities were generally spaced several kilometers apart, and within communities the houses and structures were placed at some distance from each other. Often a community would extend over a 2-3 kilometers. Each nuclear and extended family had houses and associated structures for storing food, as well as shaded work places for tool manufacturing and food processing. Each community contained a house for the lineage or clan leader, the net. That position was often hereditary within families of high social status. The paxa was another hereditary position with responsibilities for managing ritual events. Other important ceremonial positions included the shaman (pú˙l), singer (háwaynik), and diviner (tetayawiš). There was also a number of ritual practitioners who were not officials.

A ceremonial house (kišámnawet) was placed within each community. Most major religious ceremonies of the clan were held in it, and such ceremonies were held with considerable frequency. The most significant ceremonies focused upon the proper treatment of the deceased members of the linage or clan. In addition to houses and ceremonial structures, storage granaries, sweat houses, and song houses for recreational music were used.

Bean and Saubel (1972:20) estimated that no village was located more than 26 km from all food gathering areas within its territory and that 80 percent of all food resources could be found within an 8-km foraging radius of the village. Such proximity to diverse habitats was made possible by the steep gradient on the eastern side of the San Jacinto and Santa Rosa mountains. Close to each community were many food resources, building materials, minerals, and medicines. Usually an area within 1-4 km contained the bulk of materials needed for daily subsistence, although the territories of a given clan might be larger, and longer distances were traveled to get other precious or necessary resources, usually at higher elevations. While most daily secular and religious activities took place within the community, there were places at some distance from the community where people stayed for extended periods of time, such as the acorn and pinyon groves. Throughout the area there were sacred places used primarily for rituals, inter-clan meetings, caches for sacred materials, and locations for use by shamans. Generally in hilly, rocky areas, cave sites or walled cave sites were used for temporary camping, storage of foods, fasting by shamans, and as hunting blinds.

The Desert Cahuilla became familiar with Europeans as early as 1797. Often their linguistic kinsmen in western Cahuilla areas were baptized and worked among the Spanish, and runaway neophytes sought refuge

among the desert tribes. The impacts of the Spanish mission system and colonization along the coast were less intensive and slower to arise among the isolated desert and mountain groups than for coastal and western foothill groups. More direct influence was not felt until after the establishment of the San Bernardino estancia in 1819 and of a cattle ranch at San Gorgonio subsequently. When the Romero Expedition passed though the area in 1823-1824, it was clear that the Cahuilla were accustomed to seeing vaqueros employed by the rancho driving cattle through the area. Certainly by 1823 they were not only familiar with Hispanic ways but were comfortable in dealing with them, as evidenced by their reaction to the members of the Romero Expedition (Bean and Mason 1962). The expedition also reported that the Cahuilla at Toro were engaged in agricultural pursuits, growing corn and melons, and that they were already familiar with the use of horses and cattle.

Political leadership became more centralized during the Spanish and Mexican periods as high-ranking or charismatic clan leaders were recognized by Europeans as representing entire tribal areas (Strong 1929:149). Emerging as central figures were Juan Antonio among the Mountain Cahuilla and Cabazon in the desert. As early as 1844, Juan Antonio led several mountain clans to the San Gorgonio pass area to provide security for Rancho San Bernardino. His group played a significant role during the Mexican-American War, siding with the Mexicans against the Luiseño who supported the American invasion (Philips 1975).

The 1848 Treaty of Guadalupe Hidalgo obligated the United States to preserve the liberty and property of the inhabitants of California. The U.S. government in 1850 appointed three commissioners to conduct negotiations with tribal leaders throughout California to settle all land rights issues. One of the 18 treaties that were drafted covered the Cahuilla, Serrano, and Luiseño and was signed in Temecula on January 5, 1852. The tribal leaders were promised supplies, food, and technical training in return for accepting specified reservation lands. But as was so often repeated throughout the west, local Euro-Americans lobbied again the treaty and it was never ratified by the U.S. Senate. Consequently, the traditional Cahuilla territorial base continued to be reduced as Euro-Americans entered the region and claimed the best farming and grazing lands.

Introduced diseases were probably beginning to take their toll on the Cahuilla in the early 1800s, but they became particularly severe in the 1860s. The most dramatic was the great smallpox epidemic of 1863 that killed Juan Antonio as well as many bearers of traditional tribal culture. Survivors of previously autonomous clans came together into the remaining villages or founded new settlements in an accelerated pattern of population aggregation and reorganization. This process continued through the following decades.

The Cahuilla land base was substantially reduced in the 1860s and 1870s when the federal government ceded alternate sections near the new transcontinental railroad to the railroad companies. Sections 16 and 36 of every township were also removed from federal control as a tax base for schools. Any de facto Cahuilla control of more extensive areas was eliminated in 1876 when President Ulysses S. Grant issued an executive order to set aside small reservations for the native groups classified as “Mission Indians.” These reservations included the sections or parcels in which the Cahuilla had aggregated in the previous decades and in which they had made improvements for farming. The following year, another executive order by President Rutherford B. Hayes set aside even-numbered sections and certain other unsurveyed portions of townships for Indian reservations. The result was a checkerboard pattern of Indian-controlled land, amounting to 48 sections, spread across the eastern edge of the Santa Rosa and San Jacinto mountains and the Coachella Valley (Cultural Systems Research 1983). With various subsequent additions and withdrawals, this has remained the permanent home of the Desert Cahuilla down to the present.

As traditional lifeways became more difficult to pursue, the Cahuilla adapted to their new social and economic environment by taking jobs in Euro-American ranches, towns, and cities. The 1860s, 1870s, and

1880s were a time of increased acculturation as new technologies, material goods, and practices were incorporated into the traditional lifeways of the reservation. Traditional ceremonial practices remained particularly strong despite Catholic and Protestant influences on the reservations. Ceremonial houses still existed through the 1950s, 1960s, and early 1970s, and many cultural traditions survive as parts of Westernized lifestyles. The Cahuilla retain an acute interest in the cultural heritage and cultural resources of their traditional territories.

2.4.2 The Quechan and Halchidhoma

Although the project area lies outside the traditional territory of the Yuman-speaking groups of the lower Colorado River (Kroeber 1925; Ortiz 1983), they may well have occupied the eastern shore of Lake Cahuilla when the lake was present. The first historical accounts of the traditional inhabitants of the lower Colorado River were made by Spanish and, later, American explorers. Among the earliest professional anthropological accounts of the lower Colorado Yuman groups were ones prepared by Alfred L. Kroeber (1920, 1925), who conducted extensive fieldwork, particularly among the Mohave in the Needles area between 1900 and 1910. Because these groups were generally successful in keeping Spanish missionaries out of their territory, the Colorado River Yumans maintained their traditional language, religion, and cultural practices to a greater degree than most coastal California groups. Early ethnographers in the period between 1900 and 1950 were able to record a rich oral literature and reconstruct pre-contact lifeways to a considerable degree. A River Yuman emphasis on spiritual concerns over material things and a preoccupation with warfare meant that a rich oral tradition of myths, epic stories, and battle narratives was still extant at the beginning of the twentieth century and continues to the present. However, many aspects of traditional technology such as ceramics and the production of flaked and ground stone tools have been lost due to the rapid adoption of Western material culture.

The Lower Colorado River area was one of shifting tribal territory and tribal boundaries in ethnohistoric times due to inter-tribal warfare (Forbes 1965). When Alarcón sailed up the lower Colorado River in 1540 he described a situation of incessant warfare. During Juan de Oñate's 1604-1605 expedition, he found the Halchidhoma living south of the Gila River confluence, along with the Kahwan and Halyikwamai (Laylander 2004b). Oñate encountered the Ocaras (Ozares or Oseres) at the junction of the Gila River. They were described as people of a different language who made cotton mantas. These may have been a Piman-speaking group. Oñate failed to mention the Quechan, who may have been living exclusively on the west side of the river or may have been the "Bahacecha" encountered farther north on the river. North of the Bahacecha, Oñate encountered the Mohave near the juncture of the Colorado River and the Bill Williams River, in their subsequent traditional territory.

Almost a century passed before the 1700-1702 visits of the Jesuit missionary Eusebio Francisco Kino to the juncture of the Gila and Colorado rivers. The Yuma crossing area was again visited in the 1740s by another Jesuit missionary, Jacobo Sedelmayr, and in the 1770s by the Anza expeditions bringing settlers from Sonora to coastal California. During the second Anza expedition of 1775-1776, the Franciscan missionary Francisco Garcés left the expedition at Yuma and explored the Colorado River as far north and east as the Hopi mesas. Garcés was the first to be guided along the so-called Mojave trail that proceeds north from Pilot Knob on the western side of the Cargo Muchacho Mountains and the Big Maria Mountains, as well as routes along the river. His are some of the first detailed descriptions of the Halchidhoma and the Mohave.

By the time of the Anza expeditions in 1774-1776, the Halchidhoma had moved north into the area where Oñate had found the Bahacecha, between Quechan and Mohave territories, from the Palo Verde Valley to just below Parker. North of the Halchidhoma were the Mohave with their major population center in the Mohave Valley. It appears from historical accounts and Yuman oral histories that the Halchidhoma were in an almost constant state of war with the Quechan and Mohave who were united in an alliance against

them. The Halchidhoma, in turn, were allied with the Cocopa, Maricopa, and Cahuilla, among others. Eventually the Halchidhoma could no longer withstand the two-front attacks from the north and south. They gradually moved off the river to join the Maricopa on the middle Gila River. By around 1825-1830 most Halchidhoma had left the Colorado River, with the last families leaving by 1840. The Numic-speaking Chemehuevi from the southern Great Basin subsequently occupied the vacated stretch of the river.

No detailed ethnography exists for Halchidhoma lifeways as they were lived on the Colorado River, because the Halchidhoma had become largely assimilated into the Maricopa more than half a century before any detailed study could be prepared. Today the Halchidhoma are most closely associated with the Laveen community on the Salt River Reservation in Arizona, although descendants are distributed over several reservations (Harwell and Kelly 1983:74). Leslie Spier (1933) had an Halchidhoma elder as the principal informant for his landmark study of Gila River Yumans. By this time, many elements of Piman and Maricopa culture had been adopted, but some valuable information could be derived concerning oral traditions. It is likely that Halchidhoma culture was very much like the Quechan, Mohave, and other Yuman-speaking groups when they occupied the Colorado River.

Spanish-Quechan interactions increased after Kino's first visit in 1700 and the passage of the Anza expeditions in 1774-1776. Two Hispanic settlements with attached Franciscan missions were established in 1780 near the Gila River confluence. These efforts at colonizaton reflected Spanish awareness of the strategic importance of the Colorado River crossing and the need to cultivate Quechan goodwill. However, conflicts between the Quechan and the settlers over land use led to an uprising in 1781 during which both settlements were destroyed. Except for a few military and civilian interactions, direct outside influence on the Quechan ceased until the U.S. period.

Large numbers of Euro-Americans came into contact with the Yumans with the advent of the Gold Rush after 1848. Hostilities ensued, resulting in the establishment of Fort Yuma by the U.S. government in 1852. Fort Mohave was built in 1859 after an attack on the Beale's Road immigrant trail that had been established through Mohave territory two years earlier. In 1860, the much better armed U.S. Army defeated the Mohave, who had been substantially weakened by the previous defeat at the hands of the Maricopa in 1857 as well as by extended periods of famine on the river. The 1860 episode proved to be the last major conflict between Indians and Euro-Americans in the region (Sherer 1994). The Quechan were restricted to a small reservation near Yuma, and the Mohave returned to their traditional lands in the Mohave Valley. In 1865, the government established the Colorado River Indian Reservation for the Mohave, as well as the upland Yuman groups, the Yavapai and Walapai. Other Mohave were relocated to the Fort Mohave Reservation in 1870 under extremely poor conditions.

The Yumans' focus on riverine subsistence resources encouraged a mixed foraging way of life, with small-scale agricultural practices supplementing foods procured by seasonal rounds of hunting, fishing, and gathering. According to Bee (1983), the Mohave relied more heavily on agriculture than did the Quechan or the Cocopa in the delta. In their study of Yuman agricultural strategies, Edward F. Castetter and William H. Bell (1951) estimated that about half of the Mohave diet derived from farming. They estimated that the Cocopa, by contrast, derived only about 30 percent of their diet from agriculture because of greater access to a diversity of habitats; Quechan and presumably Halchidhoma diet was somewhere between these two groups.

It appears that agricultural strategies were designed to optimize use of floodwater to bring moisture to the fields, which tended to be quite small in size (1 ha). Cultivated crops included maize, beans, squash, melon, and various wild grasses. Seeds were planted in newly deposited sediments after the floodwater had receded. The River Yumans used more than 75 wild plant foods as food sources, the most important being mesquite and screwbean. The primary source of dietary protein came from fish caught in the Colorado River. Among the more important species were the razorback sucker and Colorado pike minnow. This

emphasis on fishing the same species that entered Lake Cahuilla may have pre-adapted the Colorado River peoples to the Lake Cahuilla lacustrine habitats.

Regularly hunted game included small mammals such as rabbits, squirrels, and packrats. Larger game that figured in the diet included deer and bighorn sheep, which were probably hunted with less frequency and were less abundant than small game. However, their meat was highly regarded by the River Yumans, particularly in winter, when reliable sources of dietary fat were in especially short supply.

Swarthout and Drover's (1981) Model II characterized the Quechan and Halchidhoma settlement and subsistence strategy on the Colorado River below Topock. This model presumed a lower reliance on cultigens, accounting for no more than 30 to 40 percent of the annual dietary intake (Castetter and Bell 1951:74). Residential bases were also centered on the Colorado River but conformed to a bimodal pattern. Spring and summer houses were located near each field, but on the mesas, safe from floods (Kelly n.d.:55), while open-air ramadas were constructed on the floodplains adjacent to the fields. During this time, small parties sought out wild vegetal resources along the floodplain and adjacent washes. Mesquite and screwbean were also relied upon as stored staples during the winter months, especially if domestic crop harvests were inadequate. The winter season was a time to move to residential bases on upper river terraces, lower bajadas, and lower mountain slopes. Winter homes were more substantial, earth-covered lodges (Kelly n.d.:55). The population subsisted on stored domestic and wild foods, in addition to what wild game could be had. Additional temporary camps would be established in outlying areas for extracting specific animal, vegetal, or lithic resources. The population would move back to their lower terrace residences as soon as the spring floods had subsided.

Yuman groups were organized into patrilineal, exogamous, totemic clans (referred to as sibs in the early literature). Each clan or šimul was named after a plant, animal, or natural object, and this name was borne only by female members of the clan (Gifford 1918). There were no clan leaders and the clan did not have special ceremonial or sociopolitical functions. Clans were not localized at specific rancherias, which contained members of several clans. Each rancheria or band recognized a leader (pi'pa taxa'n) who was called upon to settle disputes, be responsible for the social and economic welfare of his people, decide on seasonal moves, and determine when to move the entire rancheria if necessary. His power was quite restricted, and he had limited influence. His position was achieved through dreaming, force of character, and demonstrated ability. Each tribal group also recognized a paramount chief (kwoxot) who might rise from the ranks of the rancheria leaders. This position may have become more important in historical times as a result of contact with Euro-American political and military institutions. Prowess in warfare was not required, and indeed the chief was expected to remain in the village or refrain from battle. Special war leaders (kwanami) were recognized.

Unlike other southern California groups in which the primary political allegiance and identity was with the localized band, members of each of the tribal groups on the Colorado River (Quechan, Halchidhoma, Mohave, etc.) thought of themselves as belonging to a consolidated people who lived as a true nation. Julian H. Steward (1955:159-161) postulated that Yuman clans had evolved from localized patrilineal lineages (like those found among the Cahuilla) which became dislocated and clustered into larger settlements. This resulted from the higher population densities afforded by the introduction of horticulture. Growing population size in other areas of southern California brought about increased localization of bands, but instead of increased band size there was shrinking of band territories. This was not so on the river, where people moved freely from one settlement to another. Entire settlements also shifted within the confines of the Colorado River floodplain depending on the location of arable land after each flood season. Steward identified warfare as a factor inhibiting the localization of clans and promoting increases in band size. This afforded greater protection against raids and ensured a unified military response to enemy attacks.

The apparent emphasis on warfare in Colorado River Yuman culture has lead to considerable discussion of its causes. Chris White (1974) emphasized the ecological reasons for warfare due to environmental circumscription, high population densities, and periodic environmental perturbations. Edward W. Gifford (1931:161), Clifton B. Kroeber (1980), and Kroeber and Bernard L. Fontana (1986) stressed the deeply ingrained ideological and cultural values attached to personal battle in Yuman culture. They argued that fighting was seen by its participants as a necessary means to enhance the spiritual power of the entire tribe without regard to material benefits. In fact, probably both aspects operated to shape the Yuman warrior tradition over time. Both ecological and cultural/ideological factors are intertwined in a complex and dynamic system, much as Roy A. Rappaport (1968) demonstrated for the role of warfare among New Guinea tribes.

It is difficult to faithfully portray the complexity and esoteric nature of Yuman spirituality. It is a dynamic belief system in which dreaming, adherence to traditional learning, personal experiences, and varying patterns of acculturation affect its expression. This world view stresses the interconnection of daily life with religion, unlike Western industrial society where the sacred and secular are more clearly segregated. The spiritual world exists concurrently with the secular world for traditional River Yumans, and the spiritual world can be experienced through dreams, vision quests, song cycles, the telling of the creation narrative, and many other oral traditions (Hinton and Watahomigie 1984; Kroeber 1925, 1948). Within that world view, the River Yumans see themselves as timeless occupiers and present custodians of their traditional territories after migrations from their creation place, usually identified with Spirit Mountain (Newberry Mountain) above Needles on the Colorado River. In this respect, the metaphysical Native American interpretations of the archaeological record may be quite different from the conclusions of scientific archaeology. Both have relevance when making decisions about the treatment of archaeological sites.

2.4.3 The Kamia of Imperial Valley

The principal ethnographic source for the Kamia is Gifford (1918, 1931) but considerable additional information can be gleaned from A. L. Kroeber (1920, 1925) and C. Daryll Forde (1931), given the close association between the Kamia and Quechan, and from Spier (1923) and William D. Hohenthal (2001) with regard to the Kamia's Tipai/Kumeyaay affinities. Synthetic overviews and interpretations of merit have been prepared by Frederic N. Hicks (1963), Barker (1976), Martha Knack (1981), and John C. Russell, Clyde M. Woods, and Jackson Underwood (2002).

The Kamia, also termed the eastern or desert Kumeyaay, were directly related by language and culture to the western Ipai, Kumeyaay, and Tipai groups of the mountains and coastal areas of San Diego County and northern Baja California, and a little more remotely to the Cocopa and other delta Yumans. The Kamia occupied areas along the New and Alamo rivers, and at springs and walk-in wells in Imperial Valley. During the ethnohistoric period, they were politically and militarily associated with the Quechan-Mohave alliance in opposition to the Cocopa and Halchidhoma. They maintained particularly close relations with the Quechan at the confluence of the Colorado and Gila rivers and were permitted a farming rancheria at the large Quechan settlement of Xuksil (Quechan: "sandstone"), located a few km south of the modern Mexican town of Algodones and north of the course with the Alamo River near the southern tip of the Imperial Dunes (Russell et al. 2002:84). These people were collectively known as the Kavely cadom or "south dwellers" and were known to the early Spanish expeditions as the rancherias of San Pablo, whose leader was also named Captain Pablo. They were estimated to number 800 people when the Anza expedition passed through in 1774 (Bolton 1930:2:51; Forde 1931:101). The Sonora Franciscans established the mission of San Pedro y San Pablo de Bicuñer near this location in 1776, along with another mission at La Purisíma Concepción, later to become Fort Yuma. Both were destroyed in a Quechan uprising on July 17, 1781, six months after their founding (Forbes 1965:191-204).

Two other Kamia encampments in Quechan territory were Espayau and Michul, located 13 km south of Pilot Knob near the modern town of San Luis in Sonora. Gifford's Kamia consultants did not recognize the names of four or five other settlements that are listed in Hodge (1907:330). The Kamia also used the Quechan occupation area of Cactus Lake (E-ce-mon), located 2-3 km southwest of the Cactus railroad stop, 1.6 km east of the dunes, and some 10 km north of the All-American Canal. This was an area where seasonal runoff from Pilot Knob Mesa would accumulate to form a large pan. The USGS maps show a zone of denser vegetation indicating shallow ground water. Quechan consultants identify this area as a cremation and burial ground (Russell et al. 2002:33, 84). A Kamia hunting and gathering territory (Xakwinimis) extended to the northern portion of the Imperial San Dunes and extending south past Highway 78 and across Pilot Knob Mesa to the Chocolate Mountains. This area figures in Kamia, Quechan, Kumeyaay, and Maricopa mythology (Russell et al. 2002:32, 84).

An 1849 census counted 254 Kamia people on the New River in Imperial Valley under Chief Fernando. They included 118 men, 82 women, and 54 children (Heintzelman 1857:53). By 1860, the County of San Diego Census recorded 105 Kamia people at New River (Indian Wells or Xachupai), distributed among 11 households or rancherias and lead by a Captain Zacariah (San Diego Genealogical Society n.d.:120-122). This record is especially valuable because it lists each household member by name, sex, and age. Presumably their numbers were much greater before the advent of European diseases and probably dropped even more drastically with the rampant smallpox and measles epidemics of the 1860s. A series of prolonged droughts or floodwater failures in the nineteenth century also took their toll on the population and eventually drove most Kamia in Imperial Valley to live at the rancheria of Xatopet, possibly on an east-west portion of the Alamo River south of the Imperial Dunes near the village of Huerta, Baja California. This was an emergency planting place that the Quechan also used as when the Colorado River failed to flood in the summer of 1851 (Kroeber 1980:190). The Kamia suffered additional casualties during conflicts with the Mexican military at Huerta and ultimately fled to live primarily with the Quechan.

The Kamia were organized into 10-11 non-localized exogamous patrilineages. Many Kumeyaay living to the west were also members of these same lineages, leading Gifford (1918; 1931:301) to conclude that the Kamia were, in essence, desert Kumeyaay who had assimilated may aspects of River Yuman culture. The identification of lineages with specific locations was probably more related to the settlement preferences of individual families that moved as lineage segments, rather than of any lineage territoriality. Gifford (1931:14) does suggest that some greater degree of lineage localization may have occurred in the past but was inhibited by mobility requirements of shifting arable lands. As most of the totemic associations of the lineages are either to the Wildcat or the Coyote, the Kamia may have some elements of a moiety system like that of the Cahuilla, although the Kamia are exogamous by lineage and not by totemic association. The economic unit was the extended family household consisting of a man and his wife (or wives), children, and grandparents. The 1860 census suggests households included additional adults. Probably as a result of River Yuman contact, the Kamia maintained a greater degree of "tribal" identification than their Kumeyaay kinsmen to the west, recognizing a tribal "chief" over all the lineages, an achieved rather than ascribed status functioning in the organization of economic activities, warfare, and diplomacy. It is not clear if this position may reflect a Euro-American effort to identify a responsible "captain."

Like their Yuman neighbors, the Kamia lived in rectangular, semi-subterranean structures of post-and-beam construction, with thatch and earthen roofs. They also built ramadas, lean-tos, and conical sweat houses. They dispersed their dwellings on or adjacent to arable alluvial terraces as close as possible to running water, hand-dug walk-in wells, or sloughs. There were no permanent villages, and their moves were conditioned by the availability of floodwater farming areas and the ripening of wild plants. The Kamia would move to higher terraces if flooding occurred. Seasonal overflow from the Colorado River that fed the New and Alamo river sloughs periodically failed, and the Kamia would move to other locations, including the Colorado River, during these stressful times.

The Kamia practiced a mixed economy of horticulture and hunting and gathering. Mesquite (Prosopis juliflora) was the most important wild staple crop, as it was for other groups in the Colorado Desert. Seed pods were ready in July and were readily collected at Espayau, south of Pilot Knob, where the Kamia would make camp but where agriculture was not feasible. Acorns were either obtained directly in the Peninsular Range or through trade with the Kumeyaay in exchange for cultigens, especially watermelons. The Kamia also procured baked and dried agave cakes from the Kumeyaay but otherwise did not participate in the early spring agave harvest. Tule pollen and roots were gathered from sloughs, one favorite spot being Seven Wells on the east-west portion of the Alamo River south of the International Border. Gifford (1931:24) reports on another marsh plant called wāró. The seed capsules were pulled off by hand over a ceramic pot and the capsules were rubbed until the seeds were freed. The pods were then winnowed away with a ceramic dish. The seeds were ground on a metate and eaten dry. Either wooden mortars or stone metate were used on many wild seeds, followed by cooking. Gifford's (1931:27) consultants apparently had no knowledge of the widespread practice of parching seeds prior to grinding. Among the seeds exploited were saltbush (Atriplex sp.), yerba mansa (Anemopsis californica), and sedge (*Cyperus erythrorrhizos*).

The Imperial Dunes also provided several plant foods. These included the black stems of a short plant called yidut, which were boiled in a pot and then peeled (Gifford 1931:24). This was most likely the "sand food" (*Pholisma sonorae*) that Castetter and Bell (1951:209) note the Cocopa called oyt and which they and the Quechan were observed collecting as late as 1895. The ball-shaped root of a plant called nyus was boiled and eaten. Although not mentioned by Gifford, it is very likely that sand food, discussed above, was also dug out of the sand dunes. In fact, Gifford's list of exploited plants is very slim, and in all likelihood the Kamia gathered as diverse an array of plants as other Colorado River peoples and the Kumeyaay (Castetter and Bell 1951).

The Kamia fished for all the native species, applying the same methods as the River Yumans, except that they did not use the dip net. Also like other River Yumans, hunting was a minor activity, but prey included migratory waterfowl, squirrel, gopher, lagomorphs, deer, beaver, and bighorn sheep.

Clay for making ceramics was dug from Colorado River alluvial deposits (Gifford 1931:42). One of Clyde Wood's Quechan consultants also identified the Imperial Dunes as an area to obtain clay (Russell et al. 2002:85).

The Kamia applied the same system of floodplain agriculture as the river and delta Yumans (Castetter and Bell 1951). Their fields extended along the lower alluvial terraces of the New and Alamo rivers, their locations shifting with each seasonal flood cycle. As previously mentioned, the Quechan also afforded them arable land on the Colorado River near Algodones. Irrigation after planting was not practiced, but they did build earthen dams at Xatopet (Kamia: "dam") and elsewhere to channel water into higher terrace areas to saturate the soil before planting. The River Yumans also used brush weirs to divert floodwaters in order to soak specific terraces more thoroughly. The Kamia may have practiced actual irrigation agriculture in the Jacumba Valley, just south of the Mexican border near the crest of the Peninsular Range at the western extreme of Kamia occupation. Here several Kamia lineages shared the area with one Tipai lineage who did not venture into Imperial Valley. This is the only place that, at least during the early nineteenth century, sustained irrigation ditches from a spring were maintained to water crops, as contrasted with the soak-and-plant method of floodplain agriculture on the Colorado River and in Imperial Valley (Gifford 1931:22).

A 2 kg seed cache was found in a ceramic cooking pot in a dry cave at Jacumba that may shed some additional light on Kamia agriculture (Treganza 1947). It contained nine different species of seeds, each wrapped in a historic-period twined bicolor textile. The seeds include native maize (*Zea mays*), tepary beans (Phaseolus acutifolius), butternut squash (Cucurbita mochata), pumpkin squash (*C. pepo*), and introduced watermelon (*Citrulus vulgaris*), muskmelon (Cucumis melo), sorghum (*Sorghum vulgare*), wheat (*Triticum compactum*), and barley (*Hordium vulgare*). Two other maize cob caches were previously discovered by

Adan Treganza. Even though the textile suggests a date after 1850, the cache has been frequently cited to support arguments for prehistoric agriculture west of the Colorado River (Bean and Lawton 1973; Forbes 1963; Treganza 1947). The seed complex matches that known for the early historic period Oo'dham (Pimans) who did practice irrigation agriculture like the prehistoric Hohokam who preceded them; it also matches the River Yumans after Kino had introduced the European and Asian species in the late seventeenth century. The find may therefore suggest, as Treganza argues that Kamia agricultural practices, including irrigation, derived from Native American sources rather than the missions. However, the introduced species and the associated textiles that Treganza dates to after 1850 without confirmation from a textiles expert (and which Jack Forbes [1963:7] only assumes to date from some time after 1769) do not provide proof of prehistoric agriculture among the Kamia west of the Colorado River. Schaefer and Huckleberry (1995) and Laylander (1995) provide additional rebuttals to the arguments for prehistoric agriculture west of the Colorado River.

Lake Cahuilla (also referred to as Blake's Sea) figures notably in the Kamia's origin myth (Gifford 1931:75-83); except among the Cahuilla, this represents the only other major recorded oral tradition regarding the prehistoric lake. The Kamia trace their origins to the north at Wikami (Mohave: Avikwame) near Needles, as do most River and Delta Yuman groups, as well as the southern Kumeyaay. The Mojave were said to have settled closest to Avikwame, and all the other groups migrated south to their respective territories. As related to Gifford (1931:79-80):

The Kamia came part way with the Yuma, then left them and went to the eastern shore of the Salton Sea. The sea (probably Blake's Sea) was large then and where El Centro is now there was sea. Later they moved to Indian Wells (Xachupai) and to Saxnuwai (near Holtville). There were ten men of each tribe. The ten Kamia men were the ancestors of ten lineages. Some of the Kamia passed through Imperial Valley into the mountains of San Diego County and became the Diegueño. There they had no seeds to plant, but found wild plant foods, deer, and mountain sheep. The tribes of Mission Indians were also near the (presumably present) southern end of Salton Sea. They became afraid of the Kamia, hence the Cahuilla and other Shoshonean tribes fled north-westward.

Later there came from the mountain Wikami three persons who were to be the Kamia leaders. They were a hermaphrodite (described by the informant as half man, half woman) call Warharmi (cf. Mohave hwami) and her twin "sons" (not really her sons, Narpai said), both called Madkwahomai. These three had learned much at Wikami. They came south along the Colorado River. They found the feathers of birds which had died, as they traveled along day after day. The features were of the birds kak (crow), tokwil, and kusaul. The three travelers made headdresses of these feathers and painted their faces as for war. They brought bows, arrows, and clubs. From the Colorado River at Yuma they crossed over to Imperial Valley. Their appearance so frightened the Kamia that they fled in all directions. One Kamia woman did not flee before the three. She was married by one of the Madkwahomai twins. Then the three newcomers and the woman settled at Saxnuwai. The seeds of maize and beans had been given them by Mastamho. These the three travelers brought from Wikami and planted at Saxnuwai, thus introducing cultivation in the Imperial Valley. Those Diegueño who had gone to the mountains to live failed to receive the seeds. The three travelers brought the seeds of certain wild plants as well. At Saxnuwai, Warharmi and the twins planted, for they found wet ground there. Before their departure from Wikami Mastamho had explained how everything was to be done. He had said that Warharmi and the two Madkwahomai were to be farmers and that they should go to dwell among the Kamia, whom Mastamho had sent to live on the shores of the Salton Sea.

Gifford considers the question of the phase of Lake Cahuilla to which the Kamia tradition may have been referring. He first weighs the argument that the final recession occurred before 1540 when Alarcón and Díaz sailed up the lower Colorado River. This was the prevailing view up until the 1980s. He then suggests that there certainly was enough time between Spanish entradas into the area for an additional infilling phase. A seventeenth-century infilling has now been substantiated archaeologically, as previously discussed

above. Gifford indicated that the high degree of observed acculturation to Yuman culture does not provide a clear index to the length of time the Kamia had been in Imperial Valley and the Colorado River Valley. The acculturation could have taken place even in the nineteenth century, after a late phase of Lake Cahuilla, he suggests. The occurrence of some western Kumeyaay lineages among the Kamia might also indicate movements into Imperial Valley by people escaping the missions or their influence. However, Gifford does not rule out the possibility that the Kamia population and cultural form may have been well established for a millennium (Gifford 1931:83, 86). In that case, many different prehistoric cultural trajectories could well have arisen from the multiple infillings and recessions of Lake Cahuilla during the late Holocene.

Trade relations were an important means of getting items not found within a tribal territory and of cementing social and political ties between different groups. Lying near the ethnohistoric boundaries between different linguistic groups, the project area may have been on or near a corridor for the exchange of goods and knowledge. The Kamia were very favorably positioned to trade with the Quechan because they enjoyed a close social relationship with them and they had access to the resources in the mountains of the Peninsular Range into which their territory extended. They were closely related to the other Kumeyaay groups of the mountains and coast and could act as trading middlemen with the Quechan. Both directly and indirectly, the Cahuilla of the Coachella Valley, the Paipai in Baja California, and the O'otam in Sonora may have also participated in this network. White (1974) postulates that some of the alliance patterns were linked to east-west trade relationships, across which the greatest differential distribution of natural resources was present, as opposed to north-south relationships between groups that shared the same environmental zones.

Prior to the ethnohistoric period, trade dynamics may well have been quite different; archaeological data would be the primary source for reconstructing these earlier patterns. Ceramics may have themselves been trade items, or they may have served more often as containers for trade items. From the mountain Kumeyaay, the Kamia received wild tobacco, acorns, baked agave hearts, yucca fiber sandals, baskets, eagle feathers, and cordage carrying nets. In return the Kamia exported vegetal foods of the desert, probably mesquite cake foremost among them, and salt obtained from Imperial Valley. The Kamia also passed on tobacco, an important ritual item, as well as receiving it from the Quechan. No doubt acorns and agave hearts, restricted to upper elevations, were Kumeyaay foods that would be in demand to the lowland Colorado River Yumans. The Colorado River Yumans, in return, exchanged cultigens such as dried pumpkin and corn, as well as gourds and seeds for rattles. The Cocopa, living near the Gulf of California, traded shell beads and pendants to the Kamia (Davis 1961). Archaeological evidence indicates regular movement of obsidian for arrow points from Obsidian Butte at the southern end of the Salton Sea and soapstone arrowshaft straighteners from the Peninsular Range. Wonderstone for making flaked tools may also have had some trade value. It was obtained from the Rainbow Rock source at the southeast edge of the Santa Rosa Mountains and from Cerro Pinto, west of Mexicali and just south of the Mexican border. Not only utilitarian goods but esoteric objects, knowledge, and songs were also exchanged. Eagle feathers and even live eagles for the eagle-killing ceremony were much valued. For example, the Cahuilla received gourd rattles and red pigment from the Colorado River Yumans. As another example of cultural exchange, very late in their history (ca. 1890), the Quechan incorporated the specific style of image from the Kamia into their karúk (mourning) ceremony (Forde 1931:221).

2.5 HISTORIC-ERA EURO-AMERICAN PATTERNS

The following discussion of the last two centuries of Euro-American history in the region focuses extensively on those periods and activities for which cultural resources are represented in the vicinity of the project area. These includes mining sites, transportation routes, water systems, and World War II era military training sites.

2.5.1 Mining

The first mining efforts took place in the Cargo Muchacho Mountains (hardrock) and Potholes (placer) areas in 1780-1781, contemporaneously with the first short-lived missionary efforts at the confluence of the Gila and Colorado rivers. Extensive mineral exploration began in the early 1860s when miners sought new discoveries as the Mother Lode country in the Sierra Nevada was played out. One of the first and largest mining booms in the region occurred in the La Paz and Castle Dome districts on the Arizona side of the river opposite Blythe. Miners from California and Sonora, Mexico, poured into the area in the 1860s and 1870s. The period of greatest activity extended from the 1870s through the 1890s and was facilitated when the Southern Pacific Railroad (SPRR) reaching Yuma in 1877 and by commercial boat traffic on the Colorado River (Vredenburgh et al. 1981:8).

Construction of Laguna Dam in 1908 put an end to the steamboat connection with Yuma, but prospects and mines continued to be developed through the early twentieth century as the growing railway network and the automobile provided access to more remote areas and made for more economical transporting of supplies and partially processed ores. Large and small operations were particularly numerous during the depression years. Most gold and silver mining ceased at the end of 1942 because of the World War II ban on non-strategic mineral mining. Mines that extracted iron, zinc, manganese, and gypsum flourished during the war period. When mining of precious metals began again after the war, it was on a larger industrial scale and with the application of improved chemical extraction methods. Some of the older hardrock and dry placering operations were transformed into heavily capitalized open-pit operations with vast cyanide leaching fields. Examples can be found at Mesquite Mine, Tumco/Hedges, and the American Girl mines that replaced late nineteenth century mining towns. Major archaeological studies derived from the environmental assessments at these sites have demonstrated the historical and research values of such cultural resources (Burney and Van Wormer 1993; Hector 1988).

In the southeastern Chocolate Mountains area, placer mining of gold, silver, lead, and copper goes back to the Spanish and Mexican periods, but almost all physical traces date from the late nineteenth and twentieth centuries, when the SPRR and then the automobile improved accessibility. It was in this period that hardrock mining was initiated on a larger scale in the Cargo Muchacho and Chocolate mountains (Vredenburgh et al. 1981:12). Many of the small placer mine claims on Pilot Knob Mesa (Mesquite Mining District) were worked at the turn of the twentieth century by residents of the mining town of Hedges on the eastern side of the Cargo Muchacho Mountains. Water was piped from Glamis for wet placering. Remnants of some of these operations, dating between 1910 and 1917, were excavated by M. Steven Shackley and Steven Van Wormer (1989). Mining ceased between 1917 and 1938, after which the Desert Gold and Aluminum Company initiated large-scale placer mining using well water for gravity separation. Small-scale dry placering was also undertaken, with minimal success. Beginning in the 1980s, the Gold Field Mining Corporation started the large Mesquite Mine, a hardrock cyanide heap leach operation.

Glamis also provided supplies and a rail connection for a number of mines in the surrounding hills, including the American Girl mine in the Cargo Muchacho Mountains that was active between 1892 and 1939, and the Whedon Magnesium Mine to the north which produced magnesium during World War I (Allen 1969, 106; Miller 1969, 237). The Paymaster group of mines, located about 20 miles northeast of Glamis, produced silver in the late 1920s and early 1930s, and eventually installed a cyanide treatment plant for extraction (Allen 1969:109). The Mary Lode Mine was active in the Chocolate Mountains north of Glamis in the 1930s (Sorenson 1987). During the Great Depression in the 1930s, some individuals who had suffered financial misfortunes elsewhere sought to start anew in the desert, with some attempting to prospect in older, abandoned mines in the area. The successful extracted enough ore to purchase groceries and gasoline in Glamis, while others were “grubstaked” on the expectations of their future success. It was estimated there were about 300 people living in tents and half-heartedly prospecting for gold in the area around Glamis (Allen 1983). The Mesquite Diggins or Mesquite Mine, about 6 miles northeast of Glamis,

was active between 1957 and 1980, and was subsequently operated by Gold Fields Mining Corporation and New Gold.

2.5.2 Transportation

Two of the most important routes of travel within the study area were the Bradshaw Trail and the SPRR. They represent the nexus between transportation and the opening of the American West for capitalist ventures and settlement (Warren and Roske 1981). Some of the forty-niners followed the Southern Emigrant Trail, which paralleled the Anza expedition route, which itself followed a Native American trail. Other native trail systems and new routes were developed for Euro-American access into the Colorado Desert as the lure of mineral resources overcame general perceptions of the desert as a hostile and barren place, to be crossed but not inhabited. Many of these earliest routes were mapped by the U.S. Government Land Office surveys of townships in the most accessible areas, beginning in 1853.

A gold rush on the Colorado River caused the development of the Bradshaw Trail (Gunther 1984:70-71, 431-2; Johnston 1972, 1987). One important discovery was made by Powell Weaver on January 12, 1862, on the eastern bank of the Colorado River north of what is now Ehrenberg, Arizona. A gold rush ensued that created the boom town of La Paz (previously Potholes). No good overland route to the gold field from the Pacific Coast existed at the time, and William D. Bradshaw, another forty-niner working in San Bernardino County, took it upon himself to find a reliable route in the spring of 1862. Relying on information provided to him by the Desert Cahuilla leader Cabazon and an unnamed Maricopa Indian who had joined Cabazon, Bradshaw mapped a route that followed an ancient Indian trail across the Colorado Desert, from one water hole to the next. From San Gorgonio Pass, the route passed through Palm Springs, Cathedral City, and Indian Wells, south through Toro and Martinez, across the north side of the Salton Sink to Dos Palmas, and then through passes between the Orocopia Mountains to the north and the Chocolate Mountains to the south. Following the south side of the Little Chuckwalla Mountains, past Chuckwalla Well and Mule Spring, the route crossed through the Mule Mountains and up Palo Verde Mesa near Blythe to the Colorado River.

Bradshaw published his report in the Los Angeles Star on June 14, 1862. Late that year, Hubert Howe Bancroft published a map of the route in his *A Guide to the Colorado Mines* and dubbed the eastern half past Dos Palmas "The Bradshaw Trail." Within two weeks of Bradshaw's 1862 report, a succession of pack trains was following the trail, and regular stagecoach service was also in place that same year. Smallpox and/or measles epidemics were already claiming many Cahuilla lives by the time the Bradshaw Trail opened, but the trail may have exacerbated the problem by bringing many Euro-Americans into direct contact with the native population.

A stage line continued to operate along the Bradshaw Trail until the end of 1879, several years after service had begun on the SPRR. The Bradshaw Trail remained an important east-west route across the desert until 1908, when the road that would become Interstate 10 was constructed. It continues today as a graded road maintained by Riverside County and the BLM. The Trail is popular with campers and four-wheeler enthusiasts who are interested in desert history.

The Coachella Canal parallels the right-of-way of the SPRR line, which hugs the shore of the Salton Sea. The SPRR was part of the transcontinental railroad system. The transcendent historical significance of the railroad in western American history is recognized (Bancroft 1890 vii; Fickewirth 1992; Myrick 1992). Congress authorized the Southern Pacific to establish a western link in 1866, the same year the railroad was incorporated. Work began in 1870 within a context of scandalous political maneuvering and competition among the railroad monopolies. Beginning in the Los Angeles area and progressing through the San Gorgonio Pass, construction crews reached Whitewater on January 1, 1876. Continuing through the

Coachella Valley and skirting the western side of the Algondones Dunes, the railroad finally reached Yuma in May 1877 (Brown 1985:70).

The railroad spurred a population and land boom throughout southern California that lasted more than a decade. Locally, numerous communities sprang up along the route. Euro-American settlement soon began in what would become Palm Springs due to the reasonably short wagon ride between the railroad station and the Cahuilla village of Sec he (Agua Caliente). Lumber and mining activities in the nearby desert and mountains became much more feasible with the railroad, including the Cargo Muchacho, Southeastern Chocolate Mountains, Picacho, and Paymaster mining districts (Vredenburgh et al. 1981). Several branch lines of the SPRR serviced mining camps and agricultural communities. On a regional basis, the competing railroads offered cheap fares from the East to entice new immigrants to western cities and towns. The federal government had awarded the railroad alternate sections of land in compensation for building the lines. The railroads needed people to buy and develop these holdings. Throughout the region, the burgeoning economies created a demand for consumer goods to be shipped west on the railroads. At the same time, local agricultural produce was shipped east. The railroad has continued to have a major impact on southern California through periodic boom-and-bust cycles into the twentieth century. The Union Pacific Railroad purchased the Southern Pacific in 1996 and continues to operate on the same route. The rail line adjacent to the project area, however, has been replaced and improved over the years, and little evidence of the original ballast or construction activities remain.

2.5.3 World War II Military Activities

The southern California and western Arizona desert regions became the focus of important training exercises during World War II, leaving abundant physical remains. The Desert Training Center (DTC) was opened on April 30, 1942. The normally serene desert gave way to the rumble of tanks and staccato of machine guns over the next two years. The largest military training installation ever to have existed (approximately 46,000 km^2), the facility had George S. Patton, Jr., as its first commanding officer (Bischoff 2000; Meller 1946; Henley 1989). Patton had proclaimed the DTC to be "probably the largest and best training ground in the United States" (Meller 1946:35). It served the vital purpose of conditioning troops to desert warfare conditions and tactics in preparation for the North African campaign. The center was also used to field test numerous pieces of equipment and supplies. The original facility extended from the Colorado River on the east to a point slightly west of Desert Center on the west, and from Searchlight, Nevada, on the north to Yuma on the south. This area was ideal in that it contained a variety of terrain types and had no large population centers (Howard 1985:273-274).

The Desert Training Center was located to the east and north of the project area. However, Camp Dunlap Aerial Gunnery Range, located adjacent to Siphon 7 on the Coachella Canal, was established by 1940 to serve as a base for the Marine Corps aerial gunnery range in the Chocolate Mountains.

2.5.4 Coachella Canal

Bids for construction of the first 70 km of the Coachella Branch of the All-American Canal were opened in Yuma in 1938, and construction was completed in 1939. A year later, the contract to construct Section 2 was awarded. Bids for the third section were rejected in 1941 because they exceeded estimates due to inability to ensure that materials would be available during World War II. Bids were again opened and construction resumed in 1944 and continued until 1948. By 1946, some water was being released into the canal to test the system and to estimate the amount of seepage. Water service commenced in 1949.

The original, or "Old Coachella Canal" (OCC), began as a monumental turnout gate at Drop 1 on the All-American Canal, located 61 km downstream from Imperial Dam. It then proceeded at a rate of 2,500 $feet^2$ per second for a total distance of 199 km, beginning at 49 m amsl and terminating at about sea level. It first proceeded northwest along the base of the Imperial Sand Dunes, passing along the base of the Chocolate

and Orocopia mountains, then past the Mecca Hills to Indio where it curved south to terminate near Avenue 57 on the west side of the Coachella Valley at the artificial reservoir known as Lake Cahuilla, constructed in 1969. Through a series of six turnouts, the final flow rate at the terminal end of the OCC was 1,300 feet[2] per second. The original canal was earth-lined except for the last 60 km, which was a concrete-lined, 12-m-wide and 3.7-m-deep aqueduct. The canal transported by gravity flow approximately 315,000 acre-feet of water annually, and irrigated more than 32,000 ha (U.S. Bureau of Reclamation 1934, 1948, 1949, 1984:1). Two detention dikes and three wasteways constituted the protective flood works that protected the system. Six siphons facilitated the water's flow under larger washes. Electrical generation occurred at two drop structures along the route. Among more recent improvements are electronic telemetering control systems and 10 debris screens, half of which were installed in 1957 and 1967 (Coachella Valley Water District 1978:42-43). The Imperial Irrigation District operated and maintained the portion of the OCC between the All-American Canal and Niland where some lands at the northernmost end of Imperial Valley were irrigated with OCC water. The remainder of the OCC north of Niland was operated by Coachella Valley Water District.

The need for water conservation became clear as the other participants of the Colorado River Compact, particularly the upper basin states and Arizona, made more use of their share of the river's flow, for instance through the Central Arizona Project. An estimated 132,000 acre-feet of water was lost annually to seepage in the loose sands and silts along the Coachella Canal. A new concrete-lined canal was therefore constructed in 1980-1981, directly east of the old canal alignment for the first 77 km between the All-American Canal and Niland. A project has recently been developed to line other portions of the Coachella Canal.

2.5.5 Glamis Community Development

When the Southern Pacific Railroad line to Yuma was completed in 1877, small section towns were established every 15 to 20 miles along the railroad in remote areas to maintain the line, some with water tanks to provide steam-powered locomotives with boiler water. Niland, Amos, Glamis, and Ogilby were the locations of such facilities on this line between the Salton Sea and Yuma. At Amos, "helper" engines that had been added to trains to assist them in climbing the Iris hill grade east of Niland, were removed and routed back to Niland (Billie Allen [1969:35] notes that the station between Niland and Glamis was originally named Mammouth, with its name changed to Sterling in 1915, and to Amos in 1916). Each of these stations had a section house and bunk house for the railroad maintenance crews, and small communities developed around them. Although documentation of the earliest development of Glamis has not been identified, its cemetery was an early component, with the first grave noted to be from 1878.

The discovery of gold near Ogilby in the late 1880s spurred that town's development, and by 1895 Ogilby had a post office, express office, grocery store, school teacher's house, and a cemetery, as well as a section house, freight house, bunk house (probably for railroad maintenance workers), and a cook house. The extent of Glamis' development in the 1890s has not been determined; however, its station had an underground tank that served as the community's well, with its water supplies brought by rail from Mecca on the north side of the Salton Sea (Miller 1969:240-241). In 1909, a well was dug in Glamis (Imperial Valley Press 1909, Jan. 23). A 1920 guidebook to desert watering places noted that water was available from Glamis' railway cistern, and gasoline and meals could be obtained at a store (Brown 1920:23).

The 1862 Homestead Act had encouraged the settlement of undeveloped land across the American West. The Enlarged Homestead Act in 1909, which increased the size of homestead claims for non-irrigable land in some states, responded to a dryland farming movement in the early twentieth century, and the Homestead Act of 1912 reduced the number of years' occupancy on the land to fulfill the requirements of a homestead claim on undeveloped public land, resulting in an increase in homesteads being started in California's deserts in this period (Bradsher 2012:35; Peirson 1970:147-148). Higher-than-normal rainfall during the 1910s encouraged the use of desert land for agriculture, although a return of the drier climate led to the

subsequent abandonment of many homesteads (Ausmus 1989:121). When the Palo Verde Valley near the Colorado River was opened to homesteading in the 1910s, Glamis was the closest rail shipping location, and arriving homesteaders could find overnight accommodations there, as well as supplies and transportation to their property (Miller 1969:232). A railroad station building was constructed at Glamis after 1909 (Imperial Valley Press 1909, Jan. 23).

As noted in the Mining section above, Glamis was the center for community, supplies and a rail connection for a number of mines in the hills surrounding Glamis. During the Great Depression in the 1930s, approximately 300 people were living in tents and half-heartedly prospecting for gold in the mining areas around Glamis, and they came to town for groceries, gasoline, and to pick up mail (Allen 1983). In the early 1930s, Paul Lowe, who operated a guest ranch 25 miles north of Ogilby, sold small mine properties in the Chocolate Mountains to people who had suffered financial losses in the Depression. Lowe also built a ranch house that those who bought the properties from him could use as a community clubhouse; it was reported to have been called the Gold Diggers Club. During World War II, this clubhouse was commandeered by Army officers from the Desert Training Center who used it as an officers' club (Allen 1983).

The Algodones Dunes to the west of Glamis, the largest dune field in California, were a natural barrier to east-west transportation. Vehicles traveling to Arizona from the Imperial Valley drove north to Niland, through the Mammouth Wash, and then southeast to Yuma following the Southern Pacific rail line (Bates 1970). In preparation for the 1915 Panama-Pacific Exhibition in San Diego, a plank road for vehicular traffic was constructed across the dune field in 1912 some miles to the south of Glamis (Bates 1970; Dolan 2005:85). In 1915, due to the plank road's deterioration and the need for more turnouts, a new plank road was built, with the lumber shipped to and staged in Ogilby. In 1927 the construction of a two-lane asphalt-paved road between Holtville (25 miles southwest of Glamis) and Yuma was the beginning of Highway 80 (Bates 1970). However, as shown in a 1920 Department of the Interior map of *Routes to Desert Watering Places in the Salton Sea Region*, there was no improved road from Glamis to the Imperial Valley communities to the west; a Sand Hills Road between Glamis and Brawley is known to have existed, but its date and type of construction have not been identified (Reilly 2019). Therefore, Glamis relied on its railroad connection (Brown 1920).

In 1937, the Glamis Store was built by the former owner of a similar store in Ogilby, Al Allen. Located on the Niland-Glamis county road (present-day Ted Kipf Road) facing the rail line, it was approximately 900 feet northwest of the road's present- day intersection with Highway 78. The building had a grocery in the front and a kitchen in the back, and by 1940 it also served as the community's post office; a 1950 photo's caption indicates they were separate buildings that shared a continuous front porch (Allen 1969:118, 1983). Two gasoline pumps were located in front of the store. A 1942 photograph of a vehicle modified for driving on sand, taken at the side of the building, shows that the building had a gabled roof and a false-front main façade. The Glamis store became a community gathering place for railroad crew members, for the miners and others who came in from the surrounding area (some seeking to recover their health from respiratory diseases such as tuberculosis) to pick up their mail (Allen 1983).

A crew or gang of railroad workers based in Glamis was responsible for the section of rail line to the halfway point toward Ogilby. A group of these railroad workers' houses were sited on the west side of the rail line within the railroad right-of-way. These buildings were composed of two converted boxcars sited parallel to each other, with a covered concrete slab between them. A number of these railroad worker families were noted to be of Mexican descent (Crawford in Allen 1969:231). A school for their children was constructed from two boxcars and was noted to be opposite the Glamis Store. The teacher's quarters were also adapted from a boxcar (Allen 1983). Glamis did not have a church; however, some of its residents held prayer meetings in the residences (Crawford 1969:231).

During World War II, Glamis was at the southern end of the vast Desert Training Center. Under the War Powers Act, the military acquired titled to the northern part of the Chocolate Mountain range; the area was used by the army for artillery firing, tank training, and aerial gunnery exercises (Sorenson 1987). Glamis does not appear to have had any direct involvement in the training exercises preparing troops for combat in North Africa, but saw trains passing en route to the divisional Camp Pilot Knob, approximately 10 miles east of Ogilby in 1943 and 1944 (Desert Training Center n.d.). Some of the soldiers involved in the desert training mailed their letters from the post office at the Glamis store (History of Glamis, Allen 1983).

With the development of diesel-powered locomotives, trains no longer needed frequent stops for fuel and water, and by 1946 Southern Pacific trains no longer made scheduled stops at the section towns. The school district was suspended at Ogilby, and in 1961 Automobile Club noted that town was abandoned (Dolan 2005:87). At Amos, all of the buildings had been removed by 1969 as part of railroad modernization, leaving only the community's cemetery (Allen 1969:34). In Glamis, a 1972 aerial image shows a linear arrangement of structures on the both sides of the rail line straddling Highway 78, and a 1969 article mentions several railroad maintenance buildings were extant at that time (Showalter 1969:37). The date of these buildings' demolition has not been identified, but all of the buildings adjacent to the rail line at Glamis were removed prior to the mid-1990s.

A 1949 agreement between the U.S. Navy and the Imperial County Board of Supervisors established an aerial gunnery range in the Chocolate Mountains. The boundaries of the range necessitated the closure of a section of the Niland-Blythe county road, part of the route between Glamis and the Imperial Valley. A new road was proposed to traverse the Algodones sand dune field, linking Brawley with Glamis, and continuing north from Glamis to the Palo Verde Valley (San Bernardino County Sun, May 5, 1953). Also known as the Glamis Road and the Glamis Cutoff, the new route was promoted for routing travelers from U.S. Highways 60 and 70 at the Arizona border to the San Diego area instead of Los Angeles, as well as an artery for military travel (Chula Vista Star, May 25, 1950; Los Angeles Times, Jan. 18, 1952). The road was completed in 1958 and became part of Highway 78; it was dedicated in 1964 as the Ben Hulse Highway in honor of the state senator who championed its construction (San Bernardino County Star, Aug. 15, 1958; Henderson 1968:101). In 1966, the Imperial Sand Hills, part of the Algodones Dunes that Highway 78 crosses, were designated a National Natural Landmark (National Park Service n.d.; Bureau of Land Management n.d.). The North Algodones Dunes Wildness on the north side of the highway became part of the National Wilderness Preservation System in 1994, prohibiting the uses of motorized vehicles within its boundaries (Bureau of Land Management n.d.).

After Al Allen's death in 1958, the Glamis Store was bequeathed to his wife Carol (Allen 1983). The Glamis Store was subsequently operated by Betty Bluntach, Everette Van Derpoel, Bob Newton, Bill Smith, and Bill and Judy Boyd (Everette Van Derpoel was at one time the owner of the nearby Mary Lode Mine, Allen 1969:118). By 1969, a bar that served beer had been added to the store's food service.

A new store was built by Gene LeBlanc on the south side of Highway 78 in 1979 and named the Glamis Beach Store (Allen 1969:116, 230; Glick 1979). The store was noted to contain pool tables and pinball machines and to be recreation oriented (Allen 1983). In 1987, a classified ad described it as a general store with gas, a pizza parlor with bar, and three separate living quarters (San Francisco Examiner 1987:48). The date of the demolition of the earlier Glamis Store and other older buildings on the north side of Highway 78 has not been identified.

Although a 1958 newspaper article stated that Glamis had only 11 residents, by the beginning in the 1960s this number was swelled on weekends and holidays by four-wheel-drive and dune buggy enthusiasts (Allen 1969:116). Motorcycle racing in Southern California's deserts had been popular in the 1920s and 1930s. After World War II, a large surplus of military lightweight four-wheel-drive vehicles (e.g., Jeeps) led to their use for recreational activities including camping and back-country exploring. Civilian versions were

also manufactured and four-wheel-drive clubs were formed beginning in the late 1940s. In 1963, Bruce Meyers modified a Volkswagen chassis with a lightweight fiberglass body to produce the prototype of a dune buggy in Newport Beach, California. Kits were sold as Meyers Manx, and the vehicles won numerous desert races in the following years (Hale 2014:14). In the late 1960s, the development and production of three-wheeled all-terrain vehicles (ATV) and all-terrain cycles (ATC) expanded the range of recreational vehicles in use in dune areas.

Enthusiasm for dune buggies and other sand vehicles increased in the Algodones Dunes area, bringing 30,000 people to the Glamis area during the 1979 Thanksgiving weekend. Also in 1979, the Glamis International Sandway – a 100-yard sand racetrack, operations tower, and timing equipment were constructed approximately 500 feet south-southwest of the current Glamis Beach Store, and inaugurated with the Molly Mate Supernationals sand racing event (Glick 1979; Reilly 2019). The track was used for the 1982 Winter SandNationals, but subsequently closed (Allen 1983).

Four-wheeled ATVs were developed in the mid-1980s, joined by lightweight utility task and unlimited-terrain vehicles (UTV) beginning in the late 1980s. By the 2010s, tens of thousands of off-road enthusiasts were visiting the Imperial Sand Hills during holidays in the autumn, winter, and early spring months, many of them camping in RVs near Glamis (Smith 2016). Glamis has become known as the Sand Toy Capital of the World.

2.6 RECORDS SEARCH RESULTS

ASM completed a records search and literature review for the Glamis Specific Plan Project in June 2019. This records search, conducted at the SCIC at San Diego State University, covered 100 percent of the current project APE.

ASM's records search covered a 0.5-mile buffer around the project APE. The records search identified five previously recorded cultural resources within the 0.5-mile buffer, and four previously recorded cultural resources within the project APE. The results of ASM's records search, including a tabulation of previous cultural resource studies and previously recorded cultural resources, are provided in Appendix B.

3. SURVEY DESIGN AND METHODS

This section reviews the regulatory framework and field methods of the Class III inventory of the project footprint.

The Secretary of the Interior has issued standards and guidelines for the identification and evaluation of historic properties (*The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* [48 FR 44720–44726]), which are used to ensure that the procedures are adequate and appropriate. The identification and evaluation of historic properties are dependent upon the relationship of individual properties to other similar properties (NPS and ACHP 1998:18-20). Information about properties regarding their prehistory, history, architecture, and other aspects of culture must be collected and organized to define these relationships (NPS 2009), which is the intent of the current Class III cultural resources inventory.

The current Class III inventory is classified as intensive to ensure that cultural resources identified in the field were adequately documented to support subsequent evaluation and treatment plans. Intensive surveys entail the documentation of the types of properties that are present, the precise locations and boundaries of all identified properties, the method of survey (including the extent of survey coverage), and data on the appearance, significance, and integrity of each property (NPS 2009). For the current Class III inventories, full coverage (100 percent), systematic pedestrian surveys with 5-m transect intervals were performed.

The APE for the project has been defined as encompassing six parcels located at the intersection of State Highway 78 and the Union Pacific Railroad in Glamis. Together, the six parcels within the APE encompass 141 acres.

3.1 RESEARCH METHODS

The archival research effort for this project has centered on establishing the extent and timing of development of the community of Glamis; determining the timing of railroad use, mines and mining claims, and the history of the Imperial Sand Dunes Recreation Area. Research was also completed in an effort to provide a context for evaluating the resources for potential listing on the CRHR.

Sources reviewed include mining records; historic maps; land records; mine location records, mining deed records; various state and local government records; census records; newspapers; historic photographs; and existing histories of the region.

3.2 FIELD METHODS

For the current Class III intensive inventory, the survey crew consisted of a field director/crew chief plus one crewmember. A local Native American monitor was invited to accompany ASM personnel during the survey. Standard transect spacing was 5 m, although spacing was reduced significantly within identified archaeological sites in order to adequately define the site character. The systematic 5-m transects were interrupted to do judgmental inspections of locations such as potential artifact scatters within the APE. The survey transects generally began at the outer edge of the APE and followed its orientation, working inward, to maintain survey efficiency.

Areas with a low potential for cultural resources due to development or other disturbances were addressed by a mixed strategy survey. This focused more on areas of less ground disturbance and closer inspection of historic to modern features. Areas covered by standard systematic 20-m transects and those covered using

a mixed strategy were distinguished on project maps. The interiors of fenced, private businesses were not surveyed.

A daily survey form on the progress, condition, and findings of the survey was completed. This form included a description of vegetation cover (including contextual photos), as well as estimates of ground surface visibility, rated as poor (0-25 percent), fair (26-50 percent), good (51-75 percent), or excellent (76-100 percent).

Evidence for buried cultural deposits was opportunistically sought through inspection of natural or artificial erosion exposures and grading cuts. In the daily survey notes, the field director assessed the potential for buried sites on the basis of geomorphology. For instance, large alluvial valleys tend to have higher potential for buried sites, and areas with shallow bedrock have lower potential for buried sites.

Standard global positioning systems (GPS) aided navigation. Together with hard-copy field maps, GPS was used to keep the field crew aware at all times of the limits of the APE. GPS was also used to record the positions of archaeological resources. A GIS specialist created digital maps to accompany the site forms and report.

This was a non-collection survey. ASM archaeologists recorded artifacts in the field, using appropriate descriptions and photos, to facilitate interpretations of site character. One new prehistoric resource was recorded and three previously recorded resources within the APE were updated, confirming or correcting information on their locations, spatial extent, general characteristics, and likely eligibility status. Sites were defined as any concentration of three or more artifacts, with at least two different artifact classes represented (i.e., debitage and ground stone, or debitage and a biface), in a 25-m^2 area. Site boundaries were defined when over 50 m of space separated cultural materials. Isolated artifacts were defined as three or fewer artifacts (two artifacts if different classes were present, three artifacts of the same class—i.e., three pieces of debitage) in a 25-m^2 area. The isolated artifact was recorded and given a temporary identification until a permanent primary number is assigned by the SCIC. Site recording included definition of site boundaries, features, and formed artifacts. Detailed sketch maps demonstrated the relationship of the location of each site to topographic features and other landmarks. Digital photographs documented the environmental associations and the specific features of all sites, as well as the general character of the survey area. No resources were found to extend beyond the boundary of the APE.

3.3 SITE CLASSIFICATION

The primary objective of the survey was to provide descriptive information on the resources present, while at the same time, providing enough information to consider the potential significance of any archaeological sites in relation to one another in terms of settlement and subsistence. To this end, a basic typological framework was used to characterize sites.

Possible prehistoric site types would include:

- Habitation Sites. These are relatively substantial deposits, typically including at least three different types of cultural evidence, such as multiple bedrock milling features, flaked lithics, ground stone, ceramics, faunal remains, features, and midden. These sites are thought to represent more substantial occupations, whether resulting from serial occupation or from sedentary year-round occupation.
- Artifact Scatter. These consist of at least two different kinds of artifacts (i.e., lithics and ground stone), but tend to lack evidence of more extensive habitation, such as faunal material and substantial midden deposits. Artifact scatters typically result from

a variety of daily economic tasks performed at a single location for a limited duration. Artifact scatters can also have milling features.

- Bedrock Milling Stations. These consist primarily of bedrock milling features (mortars, basins, and/or slicks). They are interpreted as work stations used to process a variety of foods and other materials, probably in most cases plant materials (i.e., seeds, roots, nuts), but also including animals. These stationary features can be incipient and include a limited number of ephemeral milling surfaces, or they can be representative of planned reoccupation. The latter typically include mortars that are difficult and time consuming to manufacture. In an intensively occupied landscape, it is common to find solitary milling features deriving from opportunistic processing needs.
- Lithic Scatters. These consist exclusively of flaked lithic materials, such as debitage, cores, and tools. They represent areas where tools were manufactured or reworked, ranging from heavily used workshops to flaking stations where activity was more casual and transient.
- Ceramic Scatters. These consist exclusively of ceramic potsherds. They may range from pot drops, where pieces from a single vessel were discarded or found at the point of original breakage, to extensive, multiple-vessel scatters that may represent habitation, resource processing, or pottery manufacturing.
- Isolates. Occurrences of three or fewer artifacts of the same kind (i.e., three pieces of debitage), or two or fewer artifacts of different type within a 25-m^2 area will be classified as isolates.

Historic period sites are likely to be both functionally more diverse and more readily interpretable. Among the types that may occur in the study area are residential sites, commercial sites, refuse scatters, transportation routes and facilities, water facilities, and historic isolates. Remains that are not recognizably more than 45 years old will not normally be treated as cultural resources.

3.4 DOCUMENTATION

Documentation of sites complies with the reporting specifications outlined in the BLM 8100 Manual, as stipulated in the BLM Cultural Resources Use Permit and Field Authorizations for this Undertaking, and to every reasonable extent with the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44740), and the *California Office of Historic Preservation Planning Bulletin Number 4(a)*, December 1989, *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports*. All prehistoric and historic sites identified during this inventory were recorded on California Department of Parks and Recreation Form DPR 523 (Series 1/95), using the *Instructions for Recording Historical Resources* (Office of Historic Preservation 1995).

3.5 NATIVE AMERICAN PARTICIPATION

As noted, a local Native American from Torrez-Martinez Desert Cahuilla participated in the field survey. With his consent, Native American input during the survey was documented in the daily survey log. The participating Native American monitor walked along with the crew during the pedestrian survey and was requested to provide ASM with information regarding any possible Tribal Cultural Resources (TCR) or specific areas of tribal concern encountered during survey. The Native American monitor did not identify any specific information on TCRs or other areas of Native American interest within, or immediately adjacent to, the project APE.

3.6 TREATMENT OF HUMAN REMAINS

It is typically very difficult to positively identify human bone located on the ground surface since weathering and other taphonomic processes greatly reduce bone size and the chances of locating diagnostic bone elements. Nonetheless, the presence of bone was recorded, and a tentative assessment of the bone origin was made. One piece of unweathered, butchered bone with cut marks was identified and assessed to be non-human. No identifications of any possible human bone were made that would have warranted notification of the Imperial County Medical Examiner.

3.7 TRIBAL OUTREACH

The California Native American Heritage Commission (NAHC) was contacted on June 11, 2019, to conduct a search of their files for any recorded Sacred Lands or Native American heritage sites located within the project APE. The NAHC responded to ASM with a letter indicating that the results of the Sacred Lands File search was negative within the project area. Additionally, the NAHC response letter provided a listing of all Native American tribal representatives that may have further knowledge of such sites within the project area. ASM provided the Native American tribal contacts listed with a mailed consultation initiation letter. No responses have been collected to date.

4. SURVEY RESULTS: PROJECT FOOTPRINT

This chapter documents the results of the Class III cultural resources inventory of the project Area of Potential Effects (APE). The Class III inventory identified six archaeological sites and one isolate (Table 1 – [See Appendix A]).

Table 1. Cultural Resources Identified in the Class III Inventory

Site	Survey	New or Existing?	Age	Site Type	Potential Eligibility
Class 3 Eligible Sites (*n* = 2)					
IMP-3424	Class 3	Record Search	Historic	Railroad	Recommended eligible
IMP-4621	Class 3	Record Search	Historic	Cemetery	Recommended eligible
Class 3 Ineligible Sites and Sites with Uncertain Eligibility (*n* = 3)					
IMP-8214	Class 3	Record Search	Historic	Refuse Scatter	Likely ineligible
IMP-8634	Class 3	Record Search	Historic	Railroad Depot	Likely ineligible
GSP-KM-S-1	Class 3	New	Historic	Road	Likely ineligible
GSP-KM-S-2	Class 3	New	Historic	Highway	Likely ineligible
GSP-TRT-I-1	Class 3	New	Prehistoric	Artifact Isolate	Likely ineligible

Within the Class III footprint, a total of four identified sites were previously recorded while two historic sites and the isolated artifact were newly documented.

The search conducted for this project provided details on previously recorded archaeological sites within a 0.5-mile radius of the project area. All four previously recorded sites within the APE were relocated and three were updated (an update was not prepared for the Union Pacific Railroad).

The following sections describe general field conditions and survey constraints, followed by brief descriptions of each site. More detailed information on each site is available on the site forms provided in Appendix A. Cultural resources inventories are not designed to provide formal evaluations of archaeological sites. However, it is possible to estimate a site's potential eligibility for listing on the CRHR based on surface evidence. To this end, each site description includes a statement about its potential CRHR eligibility. Of the five archaeological sites and isolated finds within the Class III inventory, two have the potential to meet the criteria for CRHR eligibility—the historic-era Glamis Cemetery and Union Pacific Railroad (see Table 1).

4.1 SURVEY CONDITIONS

Due to access limitations, some areas within the APE were not surveyed. In particular, the fenced area of the Glamis Dunes Storage business and the interior, paved areas of the Glamis Beach Store property were not surveyed because crews did not have permission to access those areas.

Survey conditions often pose unique constraints on an archaeologist's ability to identify and record archaeological materials. Vegetation cover is often one of the most limiting factors on the discovery of archaeological deposits and features. Figures 4.1a and 4.1b characterize ground visibility throughout the APE. The following scale was used to rate visibility: poor (0-25 percent), fair (26-50 percent), good (51-75 percent), or excellent (76-100 percent). This scale is not absolute but is intended to adequately characterize relative ground visibility to aid management considerations for areas that are heavily vegetated and that may contain undetected archaeological deposits. Ground visibility was excellent throughout the survey area

except in areas of development and dumping. Small, dark grey crushed-stone gravel has been imported and spread over the ground surface on the north and west sides of the fenced Glamis Dunes Storage facility. On the west side of the facility, the gravel has been graded into a motorcycle track with turns and jumps. To the north of the storage facility, the gravel has been spread evenly over the ground surface although two large piles have been created close to the facility. Ground visibility east of CA-78 was virtually 100 percent except where developed. This survey area, around the Glamis Beach Store, is highly disturbed by grading, natural erosion, and decades of use by campers and off-road vehicle enthusiasts. A dirt road that runs behind the Glamis Beach Store has been graded to 18-24 inches below the ground surface, leaving a profile wall that was inspected for cultural deposits and natural stratigraphy. No cultural deposits were observed; however, a uniform mixture of sand and small-size gravel was noted to begin just below the surface. The project area is surrounded by wind-blown, shifting sand dunes. While the entire project APE is highly disturbed, the possibility of wind-blown sand being deposited over additional, unknown archaeological deposits is difficult to assess.

Figure 3. Example of ground visibility southeast of State Highway 78.

Figure 4. Example of ground visibility north of State Highway 78 and south of Glamis Dunes Storage.

4.2 SITE DESCRIPTIONS

The Class III inventory resulted in the documentation of six archaeological sites and one isolate. The six archaeological sites are historical in nature and four were recorded prior to the project. Two historical resources and one isolated prehistoric artifact were newly identified and recorded during the current survey.

Figure 5 contains confidential cultural information and is not available public review. Figure 5 is available for review by contacting the County of Imperial Planning and Development Services Department.

4.2.1 Previously Recorded Archaeological Sites

IMP-3424

This linear resource is a segment of the railroad line between Los Angeles and Yuma, with a subsequent connection to the Imperial Valley, built by the Southern Pacific Railroad in 1877. The siting of section towns along its line, including Glamis, to provide fuel and water to its steam-powered locomotives affected the settlement and development of the area between Niland and Yuma by providing transportation for settlers and homesteaders as well as for mining equipment and ore destined for processing. During World War II, the rail lines were heavily used for transporting military personnel, including those stationed in the Desert Training Center's camps, but the decrease in rail service after the war contributed to the decline of the former section towns, and the abandonment of a number of them by the 1960s. Since the merger of the Southern Pacific with the Union Pacific in 1996, this rail route has been operated by the Union Pacific Railroad (Union Pacific n.d.).

The railroad has remained in operation since its construction, with components of the rail line periodically maintained and upgraded. At this location the rail berm is approximately 30 feet wide, bearing two standard narrow-gauge tracks with updated rails, ties, and ballast. There is one mid-twentieth century crossing signal with a boom barrier on each side of the rail line's intersection with Highway 78. To the west of the rail line is Ted Kipf Road, the Glamis Cemetery, and the Glamis Dunes Storage facility. The desert area to the east of the rail line appears to be used for off-highway vehicle recreation.

Figure 6. Overview of IMP-3424 facing southeast toward State Highway 78.

IMP-4621H

The resource is the small Glamis Cemetery. The cemetery measures approximately 40 x 65 feet, and it is located approximately 110 feet northwest of Highway 78. As Ted Kipf Road approaches Highway 78 from the northwest, it splits into a Y, with the cemetery located in the triangular center section of the Y. It was sited to the rear of the railroad section house and the row of residential buildings for railroad workers and for the community's schoolteacher that were located on the west side of the Southern Pacific Railroad line through the 1960s.

The cemetery was surrounded by a wood fence when it was first documented in 1979, and 12 graves were noted (although information about the type of fence and grave markers was not recorded). When a 2005

update was conducted by ASM, a chain link fence had been installed around the cemetery, as the cemetery's wood perimeter fence had partially collapsed. Photographs show approximately half of the upright fence members of weathered wood were extent, some supporting a single rail. Within the fenced area, six graves were noted in 2005, including two marked by a covering of stones, two marked with wooden crosses, and a small grave surrounded by an interior fence of pointed wooden pickets. A similar marking of graves with a small wooden cross at the head and the outline of the grave defined with stones can be seen in desert cemeteries in Daggett, California, and Tombstone, Arizona. However, the theft of old wood cross grave markers as souvenirs and the moving or removal of stones for maintenance or visual organization has been noted at remote cemeteries. At the time of the current site visit in 2019, two sides of the interior picket fence around the small grave had collapsed, and a single wooden cross, the two graves covered with stones, and one small flat rock were visible as grave markers.

The Glamis Cemetery is in overall fair condition. In the past, cemetery security and maintenance for the area's former railroad section towns was performed by a representative of the Imperial County sheriff's office who also served as the director of the Central Valley Cemetery District (Reilly 2019). It cannot be determined whether the progressing deterioration noted at the Glamis Cemetery was caused weathering and the accumulation of desert sand, or if it was also a result of vandalism, theft, or vehicular accidents. Off-road vehicle activity on the roads surrounding the cemetery was noted in both the 1979 and 2005 recordations, as well as in 2019.

Figure 7. IMP-4621H overview facing southeast.

IMP-8214H

This resource is an historic trash scatter recorded by Smallwood in 2001. It consists of three distinct bottle dumps with tin can fragments and 100+ glass shards (amber, clear, sun-colored [amethyst], aqua, and olive) with fragments of large Bishop bottle glass, thick amber bottle, window glass, and various bottles with screw, crown, and cork tops. Few bottle bottoms had maker's marks. ASM revisited this site location during

the current survey and found that the three scatters have now been bulldozed, further fragmented, and evenly spread out over the site area. The original site recording measured the site at 110 x 56 m; however, the mapped location at the South Coastal Information Center (SCIC) was represented by a smaller circle. A DPR site record update was prepared that included a new GIS site boundary submittal to the SCIC that showed a more accurate boundary. The site is unlikely to meet the criteria for CRHR listing.

Figure 8. Example of artifacts at IMP-8214H.

IMP-8634H

This historic resource is the remains of the former Glamis train station. It was recorded by Jay Sander in 2007 and consists of several concrete foundations and a sparse scatter of historic trash (ceramics). ASM relocated the concrete foundations during the current survey and found that one foundation has been damaged and partially removed. An additional set of concrete foundations is located east of these features; however, they appear to be more recent in origin. No historic artifacts/refuse were identified. This site is recorded to cover an area measuring 1,200 x 400 feet. This site is unlikely to meet the criteria for CRHR listing.

Figure 9. IMP-8634H overview facing northwest.

4.2.2 Newly Discovered Archaeological Resources

GSP-KM-S-1: Ted Kipf Road

North of Highway 78, this unpaved road parallels the Union Pacific Railroad (UPRR) on its west side; south of Highway 78, Ted Kipf Road is on the east side of the rail line, but the east side is outside of the project area. At its intersection with Highway 78, the north segment of the road splits to form a Y, passing on either side of the Glamis Cemetery. This segment of the road shares the alignment of the circa 1910s Niland-Glamis county road, which was closed to through traffic in the 1950s when the Chocolate Mountains Aerial Gunnery Range was established. It has not been determined when it was renamed for E. Ted Kipf, who was the manager of Imperial Hardware in Brawley and head of the local Scout Council in the 1950s (Calexico Chronicle 1954).

The packed-earth road has been bladed and has some gravel paving, however its frequent use by off-road vehicles has dispersed much of the gravel beyond its intersection with Highway 78. There also appear to be some accumulations of sand from the neighboring dunes. It is in overall fair to good condition.

Figure 10. GSP-KM-S-1 overview of road from State Highway 78 facing northwest.

GSP-KM-S-2: Glamis Beach Store

The current Glamis Beach Store complex was built about 1979. At the time of this survey, it was composed of a one-story retail store with an expansive covered seating area in front, facing Highway 78. At the rear of the store, exterior stairs lead to an upper level food service or bar area. Another two-story wing extends perpendicularly to the southwest, also with exterior stairs to an upper level, and a banner reading "Pizza" on its southwest façade.

On the northeast side of the store, a two-story building located behind a privacy fence appears to be a private residence or multi-family dwelling. On the northeast side of the residential building is a tall storage building with two roll-up doors, with a sign advertising dune buggy repair and customization. Two large above-ground metal storage tanks are located in a fenced area to the east-northeast of the garage building.

The buildings are utilitarian in form and are clad with corrugated metal panels. The panels on the northwest façade of the Glamis Beach Storage are decoratively painted with faux finishes and depictions of Wild West-themed characters and businesses; this façade includes a roll-up door and a large opening that has been partially closed with wood panels around an operable personnel door. There are a variety of windows in the complex's buildings, most appearing to be metal-framed fixed and sliding units. The buildings are in overall good condition.

Figure 11. Glamis Beach Store and covered seating facing Highway 78, northwest and southwest facades, view to east.

Figure 12. Glamis Beach Store residential building, northwest façade, view to southeast.

Figure 13. Glamis Fab facility, northwest and northeast facades, view to southeast.

Figure 14. Glamis Beach Storage decorative painting at front porch, view to east.

GSP-KM-S-3 State Highway 78 (Ben Hulse Highway)

The resource is the 0.5-mile section of Highway 78 lying to the southwest of the highway's intersection with the Union Pacific Railroad line in the unincorporated community of Glamis. The area is relatively level and located at the northeastern corner of the Imperial Sand Dunes Recreation Area.

Prior to the 1958 construction of the highway from Brawley to Glamis, and its continuation to the Palo Verde Valley, the shifting dune field between Brawley and Glamis had been a natural obstacle to transportation. Innovative construction methods of filling and stabilizing the terrain were utilized in the dune field; however, the segment of the road in Glamis was built on solid ground using conventional methods of road construction. When it was dedicated in 1964, this section of Highway 78 was named the

Ben Hulse Highway in honor of the former California state senator who championed its construction (Henderson 1968:101).

In Glamis, the 20-acre paved Glamis Dunes Storage facility is sited on the north side of the highway, with the terrain sloping toward the Chocolate Mountains beyond. The Glamis Beach Store complex is located on the south side of the highway, with open space toward the dunes to the south and west. The Union Pacific Railroad line and its at-grade crossing form the eastern boundary of the project area.

In the project area the highway is a two-lane, asphalt-paved road, with lanes 12 feet in width, a paved shoulder of approximately 8 feet, and an additional unpaved shoulder area of varying widths composed of packed earth topped with loose gravel and sand beyond. Some surface cracks are visible, but the road surface is well maintained and in overall good condition; it is periodically covered with a light layer of sand blown from the neighboring dune area.

Figure 15. GSP-KM-S-3/Highway 78 at Ted Kipf Road, view to southwest.

Figure 16. GSP-KM-S-3/Highway 78 at Glamis Beach Store complex, surface cracks, view to east.

4.3 ISOLATED FINDS

4.3.1 GSP-TRT-I-1

This isolated prehistoric artifact is a single piece of red-brown chert with at least three negative flake scars. Approximately 30 percent of the surface remains cortex and it also appears to have recent breaks. This artifact was identified within a highly disturbed campground and off-road vehicle area. The general area has been graded and imported gravel has been spread over the surface. Therefore, it seems likely that this isolate was transported from elsewhere and damaged more recently by vehicles. The negative flake scars do appear intentional and have a patina that the other breaks lack, indicating a greater length of time since removal. This resource does not meet any criteria for CRHR listing.

4.4 SUMMARY

In all, the pedestrian surveys of the Class III APE resulted in the documentation of three new cultural resources and the update of four previously recorded resources. Preliminary eligibility assessments for each resource were provided in the site descriptions. Two of the resources within the project APE are likely to meet the criteria for CRHR listing.

5. SUMMARY AND CONCLUSIONS

The current Class III inventory was conducted to satisfy the requirements of CEQA. Important in such an endeavor is the development of an understanding of each identified resource in such a way that its historical significance can be assessed. CEQA mandates the consideration of the historical significance of a resource in an effort to gauge whether it has the potential to be listed on the CRHR. As discussed in section 1.4 of Chapter 1, criteria 1-4 of CEQA set standards for determining the eligibility of a resource for CRHR listing. The following sections discuss how survey-level data from the Class III inventory is integrated to develop eligibility assessments for each resource. These assessments, however, are not to be construed as formal eligibility recommendations but are provided to facilitate a project design that will eliminate or minimize impacts to the identified cultural resources.

It is the intent of the specific plan to design facilities associated with land use recreation in such a way that project construction and maintenance will have no significant impact on known cultural resources. Should complete avoidance of impacts be achieved, no formal evaluation of these properties needs to occur. In the event that project construction cannot avoid impacts to cultural resources, formal evaluation of the potentially impacted resources will have to occur to make determinations of CRHR eligibility. Eligible cultural resources will then have to be avoided or subject to data recovery/ offsite mitigation.

5.1 PRELIMINARY CRHR ELIGIBILITY ASSESSMENTS AND RESEARCH THEMES

The main goal of the current Class III inventory was to identify cultural resources located within the project APE, thereby facilitating efforts by Altum Group to achieve avoidance of impacts through project design. Efforts to avoid all impacts to cultural resources treat each cultural resource as potentially eligible for CRHR listing. However, in the event that impacts to some cultural resources cannot be avoided, ASM's survey was also designed to generate detailed information from surface deposits that could be used to provide preliminary assessments of CRHR eligibility, with the idea that impacts to potentially eligible sites would be avoided.

Preliminary eligibility assessments were based solely on Criterion 4 of CEQA, since the inventory generated data that could be used to judge whether a particular cultural resource has yielded or may be likely to yield information important in prehistory or history. To date, no information has been generated through Native American consultation that could tie any aboriginal archaeological sites, place names, or sacred sites to the APE. Thus, each cultural resource was assessed for eligibility based on the data potential of its general archaeological characteristics—i.e., assemblage integrity, size, diversity, defined chronology, and the potential for buried deposits.

The value of individual archaeological sites must be understood in a regional context wherein large numbers of small assemblages that are limited in size and diversity can inform on broad land use patterns. Some individual sites have large, diverse assemblages with buried, datable deposits and these typically hold enough data potential to be considered eligible for CRHR listing in that they can refine local and regional occupational patterns. Sites that are generally not considered eligible are those with low data potential, typically offering information that is redundant within local and regional contexts. Physical integrity of a site is a major factor in determining data potential of an archaeological deposit. Sites with compromised integrity make it difficult to draw associations between assemblage constituents and complicate the chronology of site occupation. In this sense, sites that lack strong physical integrity are typically ineligible for CRHR listing unless the cultural deposit is robust and diverse enough that salvage work would produce a particularly unique dataset.

While it is not possible to prepare formal, substantive eligibility recommendations based on surface inventory data alone, preliminary assessments from survey-level data are often effective in assessing eligibility where resources offer redundant data, have little to no potential for dating or for the presence of buried components, and have poor physical integrity. Essentially, it is often obvious from the surface if a resource is not likely to be eligible for CRHR listing. Examples of such resources include sites with a low density and/or diversity of artifacts spread over areas that lack deposition. Even when some subsurface deposits exist, it is often easy to determine whether formal evaluation would exhaust the data potential of those deposits, rendering the site ineligible.

Table 2 lists sites identified in the current Class III inventory that are considered potentially eligible for CRHR listing.

Table 2. Resources Assessed as Potentially Eligible

Site	Survey	New or Existing?	Age	Site Type	Potential Eligibility
Potentially Eligible Sites (*n* = 2)					
IMP-3424	Class III	Existing	Historic	Railroad	Recommended eligible
IMP-4621	Class III	Existing	Historic	Cemetery	Recommended eligible
Sites For Which Preliminary Eligibility Could Not Be Ascertained (*n* = 5)					
IMP-8214	Class 3	Record Search	Historic	Refuse Scatter	Likely ineligible
IMP-8634	Class 3	Record	Historic	Railroad Depot	Likely ineligible
GSP-KM-S-1	Class 3	Search	Historic	Road	Likely ineligible
GSP-KM-S-3	Class 3	New	Historic	Highway	Likely ineligible
GSP-TRT-I-1	Class 3	New	Prehistoric	Isolated artifact	Likely ineligible
		New			

The Union Pacific Railroad (IMP-3424) had previously been recommended as eligible for the National Register of Historic Places (NRHP) listing under Criterion A. The Glamis Cemetery (IMP-4621) is recommended here as eligible for CRHR listing under Criterion 1. All other sites were assessed as likely ineligible because they could not be associated with significant events or persons. Likewise, they do not embody distinctive characteristics of a period, type of engineering, method of construction, or represent the work of a master. These remaining sites lack research potential to yield further information about the region's history or prehistory.

5.2 ARCHITECTURAL EVALUATION

5.2.1 IMP-3424 Union Pacific Railroad

The resource has previously been recorded, including an update by ASM in 2005. It has been determined eligible for the NRHP under Criterion A for the theme/area of significance of Transportation. The period of significance for this segment is 1877-1946, beginning with its construction and extending through the discontinuation of stops at the section towns in 1946. The section documented appears to have some alterations of materials; however, such modifications are expected of this property type for its continued use. Under Criterion A, integrity of materials and workmanship are not as critical as the other areas of integrity. The railroad retains high integrity of location, setting, design, feeling, association; as such it retains sufficient overall integrity for eligibility.

5.2.2 IMP-4621H Glamis Cemetery

This resource has previously been recorded as an archaeological site but does not appear to have been evaluated as a built environment resource. The cemetery is in its original location, and it is noted in numerous sources to be a historic landmark with an interment dating to 1878 (Reilly 2019 [Henderson 1968:101 states the Glamis Cemetery dates to 1877]). As a result of the demolition of all of the railroad-related residences and support buildings adjacent to the rail line, as well as the earlier Glamis Store to the northwest of the cemetery, only the Glamis Cemetery and the rail line survive from the community's founding as a section town for the Southern Pacific Railroad route to Yuma built in 1877. The establishment of a cemetery was customary in frontier towns, and the Glamis Cemetery's use of natural materials and simple wood and stone monuments express the funerary traditions in contemporary small desert communities (Griffith and Sullivan 2013:4). Its rustic character is consistent with the spartan circumstances and meager livelihoods of many of the Glamis' early residents. Therefore, ASM recommends it is eligible for the CRHR under Criterion 4 at the local level.

The Glamis Cemetery does not belong to a religious institution. Its few extant grave markers were noted in 1968 to be lacking legible inscriptions; there is no church or administration center for the small community, and documentation of those interred has not been identified. In the absence of information about the interments in the cemetery, it is recommended not eligible under Criterion B or Special Requirements Criteria Consideration C. The cemetery does not embody distinctive characteristics of a period, type of engineering, or method of construction, possess high artistic values, or represent the work of a master. It is not recommended eligible for the NRHP under Criterion C. The 1877-1878 creation of a cemetery in Glamis is contemporary with the building of the Southern Pacific railroad and the section towns to support it; this was the first permanent Euro-American settlement in this area, pre-dating the development of the Imperial Valley beginning in the 1890s. As an element of this early phase of development, ASM recommends the Glamis Cemetery is also eligible for the NRHP under Criterion D at the local level.

It is further recommended that a cemetery preservation plan be developed, to include appropriate fencing to protect the grave markers from vandalism or theft; the installation of bollards to protect the cemetery from vehicular accidents (particularly in light of the increasing volume of off-highway vehicles on the adjacent roads); and signage to interpret the cemetery's expression of the community's history.

5.2.3 GSP-KM-S-1 Ted Kipf Road

This road has not previously been evaluated. Although the segment of the road in the APE is in the same location as the earlier Niland-Glamis Road, the function of the Ted Kipf Road is now as a local access road. With the 1958 opening of Highway 78 as the primary road connection to Glamis, Ted Kipf Road has not made a significant contribution to the settlement or development of the project area. ASM recommends that it is not eligible for the CRHR under Criterion 1. It is not associated with lives of persons significant in the past, and also recommended as not eligible under Criterion 2. The road does not embody distinctive characteristics of a period, type of engineering, or method of construction, or represent the work of a master. Due to wear from off-road vehicles and the deposition of sand from the dunes, its materials have been substantively changed from the earlier road's physical composition. As a result, ASM recommends this segment of Ted Kipf Road as not eligible for the CRHR under Criterion 3. It is not expected to yield important information about the area's history or prehistory, and it is also recommended as not eligible under Criterion 4.

5.2.4 GSP-KM-S-2 Glamis Beach Store

The Glamis Beach Store complex of buildings have not attained 50 years of age and have not yet reached the threshold for eligibility for the CRHR.

5.2.5 GSP-KM-S-3 State Highway 78 (Ben Hulse Highway)

This section of Highway 78 has not previously been evaluated. Built in 1958, it is part of a new transportation route between Brawley and the Palo Verde Valley that replaced an earlier road connection through Niland that was closed with the establishment of the Naval Aerial Gunnery Range in the Chocolate Mountains in the 1950s. In the following decade, neighboring towns that were established contemporary with Glamis became abandoned, and Glamis' full-time population was fewer than 20 persons. Therefore, the highway has not had a significant effect on settlement in the project area. ASM recommends that it is not eligible for the CRHR under Criterion 1. It is not associated with lives of persons significant in the past, and it is recommended as not eligible under Criterion 2. The road does not embody distinctive characteristics of a period, type of engineering, or method of construction, or represent the work of a master. As such, ASM also recommends this segment of Highway 78 as not CRHR-eligible under Criterion 3. It is not expected to yield important information about the area's history or prehistory, and it is also recommended as not eligible under Criterion 4.

5.3 ADDITIONAL MANAGEMENT CONSIDERATIONS

As previously stated, the CRHR eligibility assessments provided in this chapter are not formal eligibility recommendations. If an identified cultural resource will be impacted by project construction or maintenance activities, formal evaluation of that resource must occur. For resources with archaeological deposits, evaluation typically includes some combination of surface collection, excavation, mapping and special analyses that are designed to understand site formation and human habitation of that resource in a regional context. For historic sites that include standing structures and other evidence of a built environment, additional archival research is necessary to determine chain-of-title, a history of residents, and other such information. For this reason, if it is determined that project construction and/or maintenance will impact identified cultural resources, then each resource must be formally evaluated. If project construction will impact the margin of a known cultural resource, limited boundaries testing may be an option to determine the extent of subsurface cultural deposits, potentially reducing the overall site boundary—absent stationary surface features (i.e., rock shelters, bedrock milling stations, etc.), and allowing construction to proceed without evaluation of the entire resource. An archaeological and Native American monitor should be present during all ground-disturbing activities.

If it can be determined that project construction and maintenance will not impact identified cultural resources, it is recommended that one archaeological monitor and one Native American monitor be present for each construction crew during project construction when activities are within 50 feet of a known cultural resource and that exclusionary fencing be established, where applicable, to provide protection for unanticipated discoveries.

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APPENDICES

A Site Records and Maps

This Appendix contains confidential cultural information and is not circulated for general public review. It is available for review by qualified individuals by contacting the County of Imperial for an appointment:

David Black, Planner IV, Imperial County Planning and Development Services Department, 801 Main Street, El Centro, California 92243
davidblack@co.imperial.ca.us.

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B Record Search Confidential

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C Site Records and Maps

This Appendix contains confidential cultural information and is not circulated for general public review. It is available for review by qualified individuals by contacting the County of Imperial for an appointment:

David Black, Planner IV, Imperial County Planning and Development Services Department, 801 Main Street, El Centro, California 92243
davidblack@co.imperial.ca.us.

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D Record Search Confidential

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David Black, Planner IV, Imperial County Planning and Development Services Department, 801 Main Street, El Centro, California 92243
davidblack@co.imperial.ca.us.

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F-2

AB-52 Consultation Letters and Responses

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Imperial County Planning & Development Services
Planning / Building

February 7, 2020

Certified Mail No.
7016 2140 0000 2121 8683

Jim Minnick
DIRECTOR

Jordan D. Joaquin, President
Fort Yuma – Quechan Indian Tribe
P. O. Box 1899
Yuma AZ 85366

RE: Notice of Opportunity to Consult for the Polaris Experience, LLC Project in Imperial County APN#039-310-029-000 et all

Dear

The County of Imperial (County) has initiated environmental review under the California Environmental Quality Act (CEQA) for the Polaris Experience Project, which is proposing to develop a specific plan (SP) on approximately 142 acres of land in Imperial County. The Project is located approximately 24 miles east of Brawley, Ca. The Project the site is characterized as an open sandy, disturbed desert land. The uses proposed for the SP are predominately recreational. A project location map is enclosed for your information.

In accordance with Assembly Bill 52 (AB 52) and Section 21080.3.1(d) of the California Public Resources Code (PRC), we are responding to your request to be notified of projects in our jurisdiction that will be reviewed under CEQA. Your name was provided to us as the point of contact for your tribe. We are hereby notifying you of an opportunity to consult with the County regarding the potential for this project to impact Tribal Cultural Resources, as defined in Section 21074 of the PRC. The purposes of tribal consultation under AB 52 are to determine, as part of the CEQA review process, whether or not Tribal Cultural Resources are present within the project area, and if so, whether or not those resources will be significantly impacted by the project. If Tribal Cultural Resources may be significantly impacted, then consultation will also help to determine the most appropriate way to avoid or mitigate those impacts.

In accordance with Section 21080.3.1(d) of the PRC, you have 30 days from the receipt of this letter to either request or decline consultation in writing for this project. Please send your written response before July 5, 2018 to Patricia Valenzuela, Planner IV or by email to patriciavalenzuela@co.imperial.ca.us. If the County does not receive a response within 30 days, the County will proceed with the project. Thank you and we look forward to your response.

Sincerely,

Jim Minnick, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
Planner IV

Attachment: Location Map

Cc Jim Minnick, Director, ICPDS
Michael Abraham, AICP, Asst. Director of ICPDS
Patricia Valenzuela, Planner IV, ICPDS
Jurg Heuberger, Consultant
File 10.107, SP19-0001

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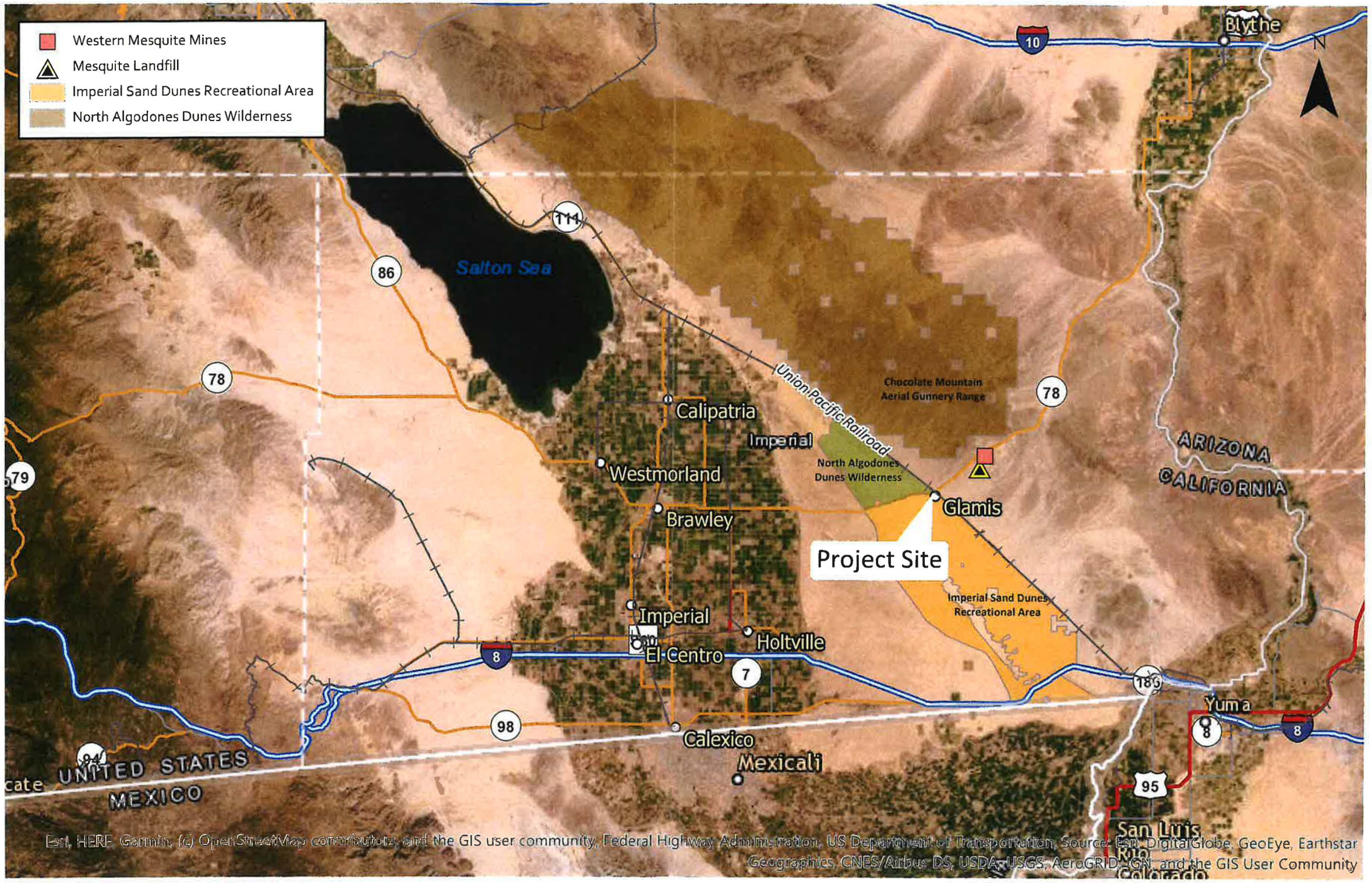
Exhibit 1 - Regional Location Map



F-3

SB-18 Consultation Letters and Responses

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Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8829

Jim Minnick
DIRECTOR

Sycuan Band of the Kumeyaay Nation
Cody Martinez
1 Kwaaypaay Court
El Cajon, CA 92019

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Cody Martinez,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the SYCUAN BAND OF THE KUMEYAAY NATION for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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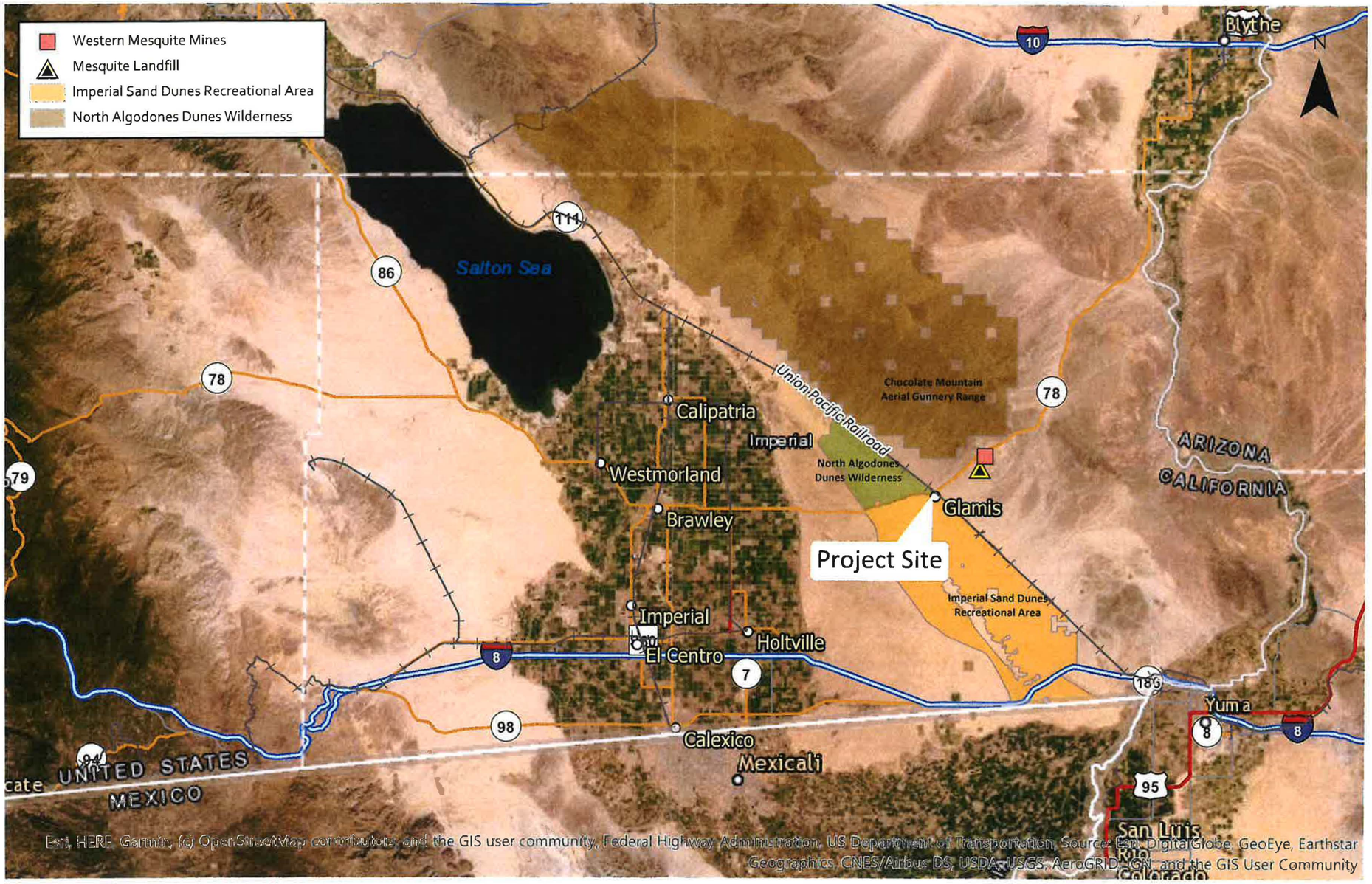

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8706

Jim Minnick
DIRECTOR

Inaja-Cosmit Band of Indians
Rebecca Osuna
2005 S. Escondido Blvd.
Escondido, CA 92025

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Rebecca Osuna,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the INAJA-COSMIT BAND OF INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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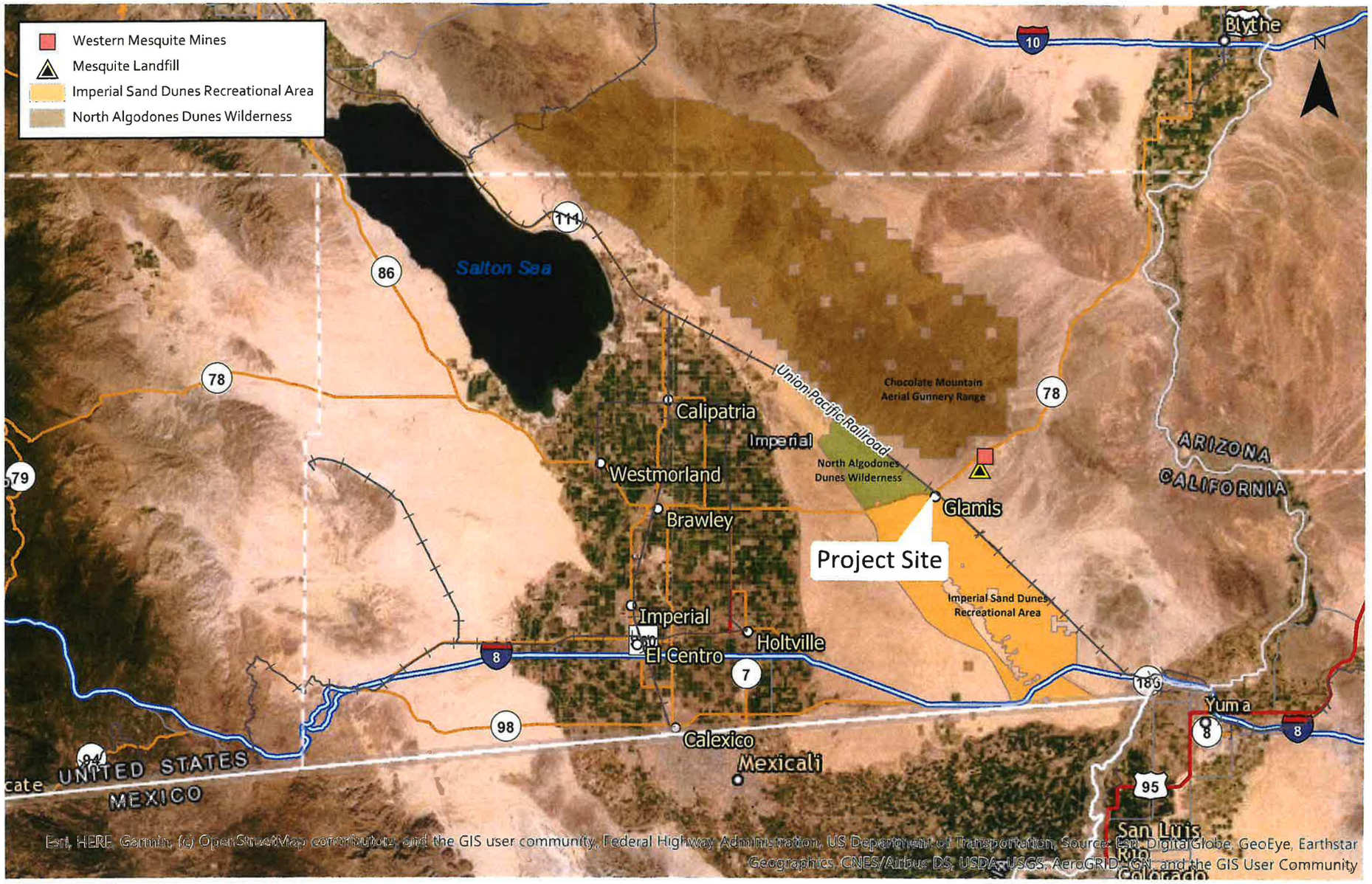

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8836

Jim Minnick
DIRECTOR

Quechan Tribe of the Fort Yuma Reservation
Michael Jackson
P.O. Box 1899
Yuma, AZ 85366

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Michael Jackson,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the QUECHAN TRIBE OF THE FORT YUMA RESERVATION for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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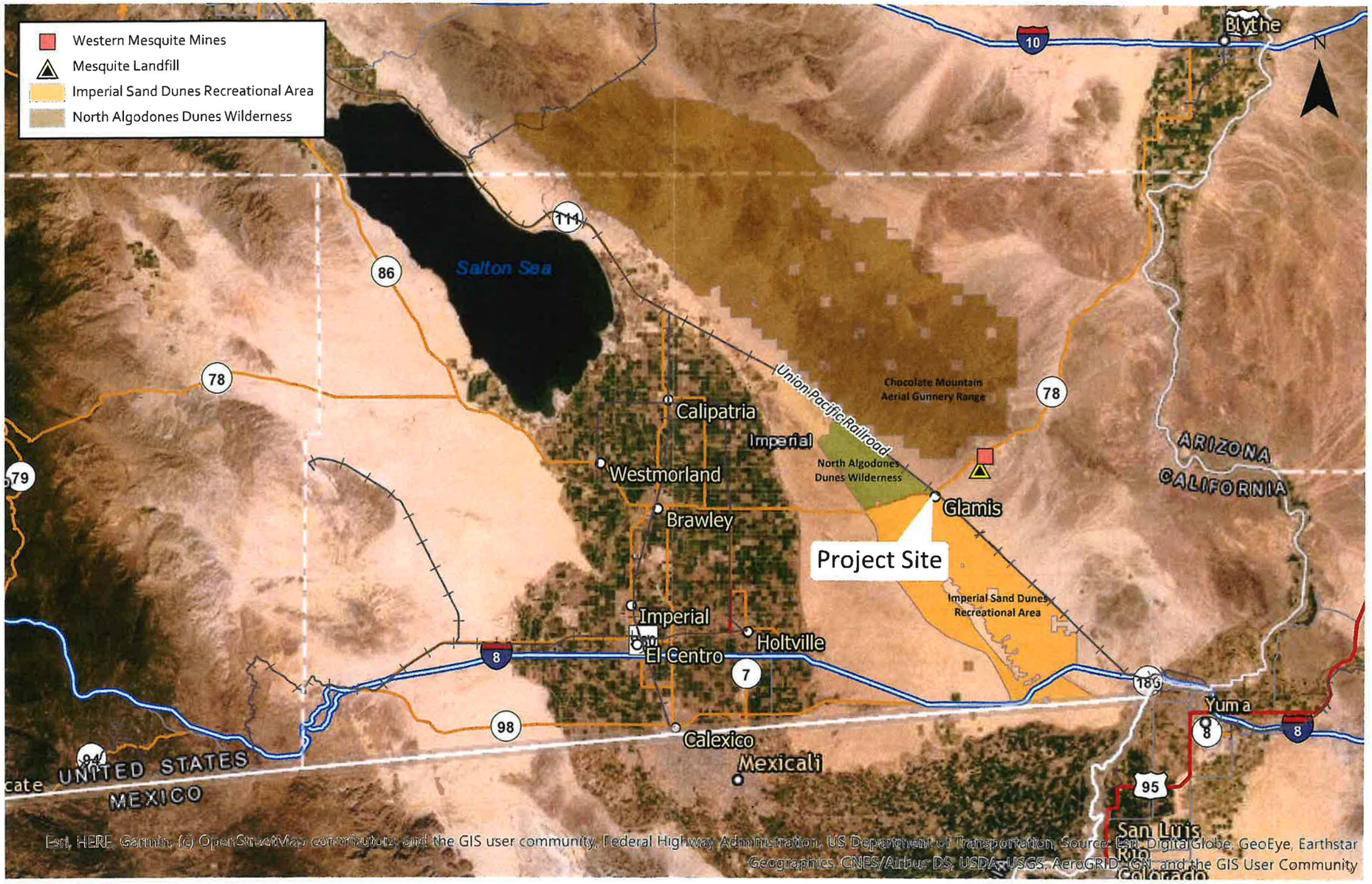

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8812

Jim Minnick
DIRECTOR

Mesa Grande Band of Diegueno Mission Indians
Michael Linton
P.O. Box 270
Santa Ysabel, CA 92070

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Michael Linton,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the MESA GRANDE BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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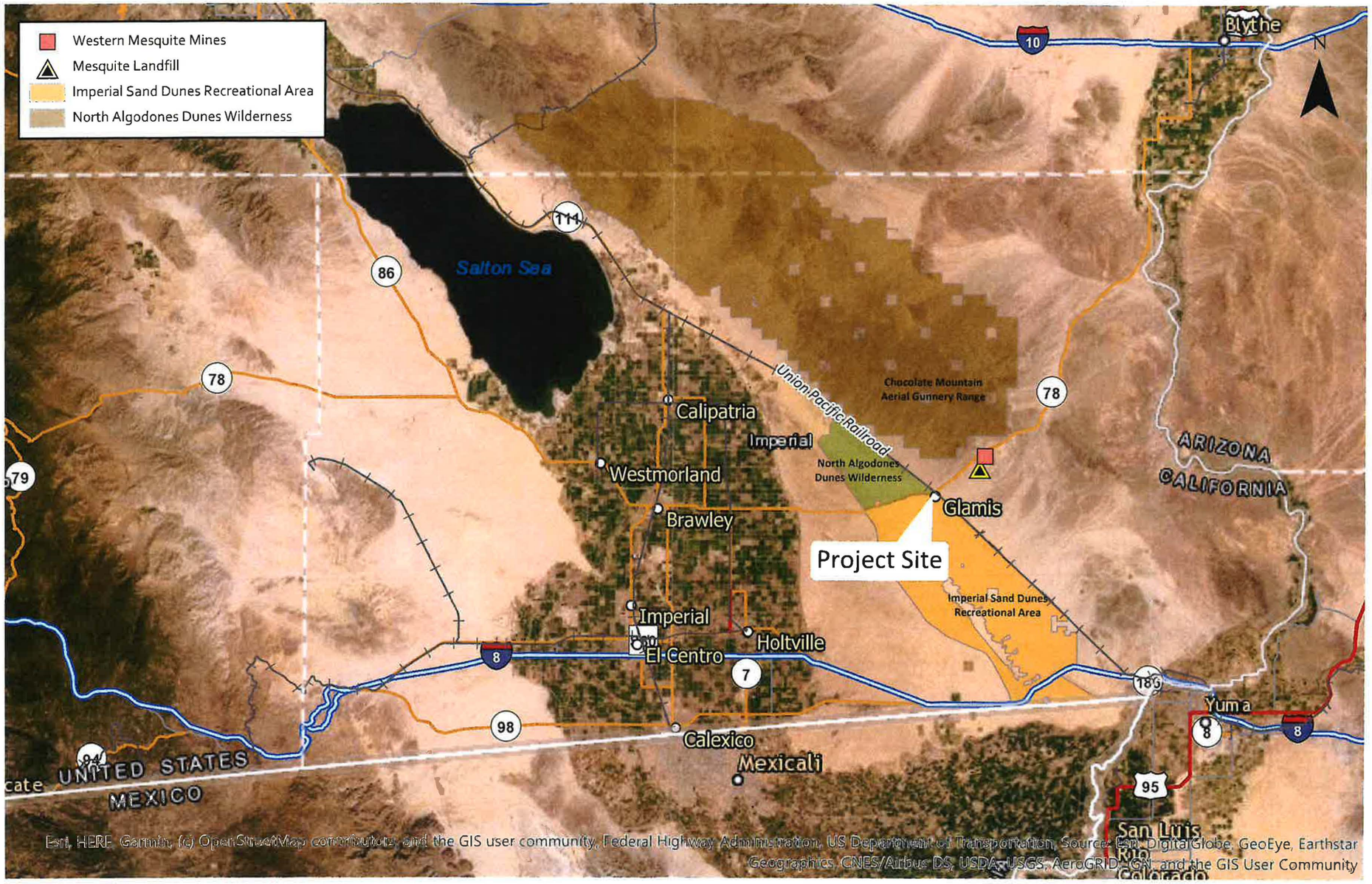

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8799

Jim Minnick
DIRECTOR

Iipay Nation of Santa Ysabel
Virgil Perez
P.O. Box 130
Santa Ysabel, CA 92070

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Virgil Perez,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the IIPAY NATION OF SANTA YSABEL for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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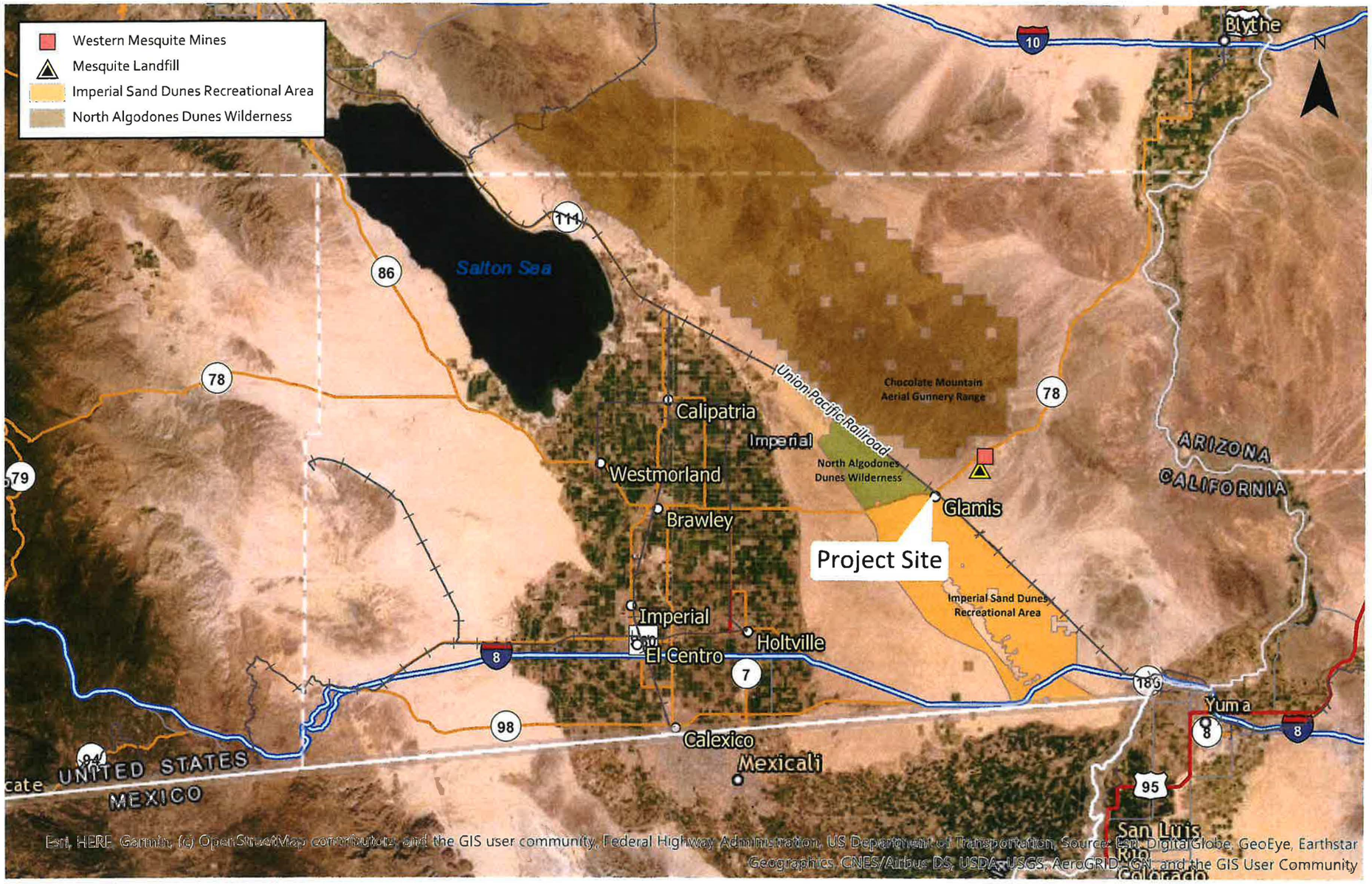
Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8805

Jim Minnick
DIRECTOR

Manazanita Band of Kumeyaay Nation
Angela Elliot Santos
P.O. Box 1302
Boulevard, CA 91905

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Angela Elliot Santos,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the MANAZANITA BAND OF KUMEYAAY NATION for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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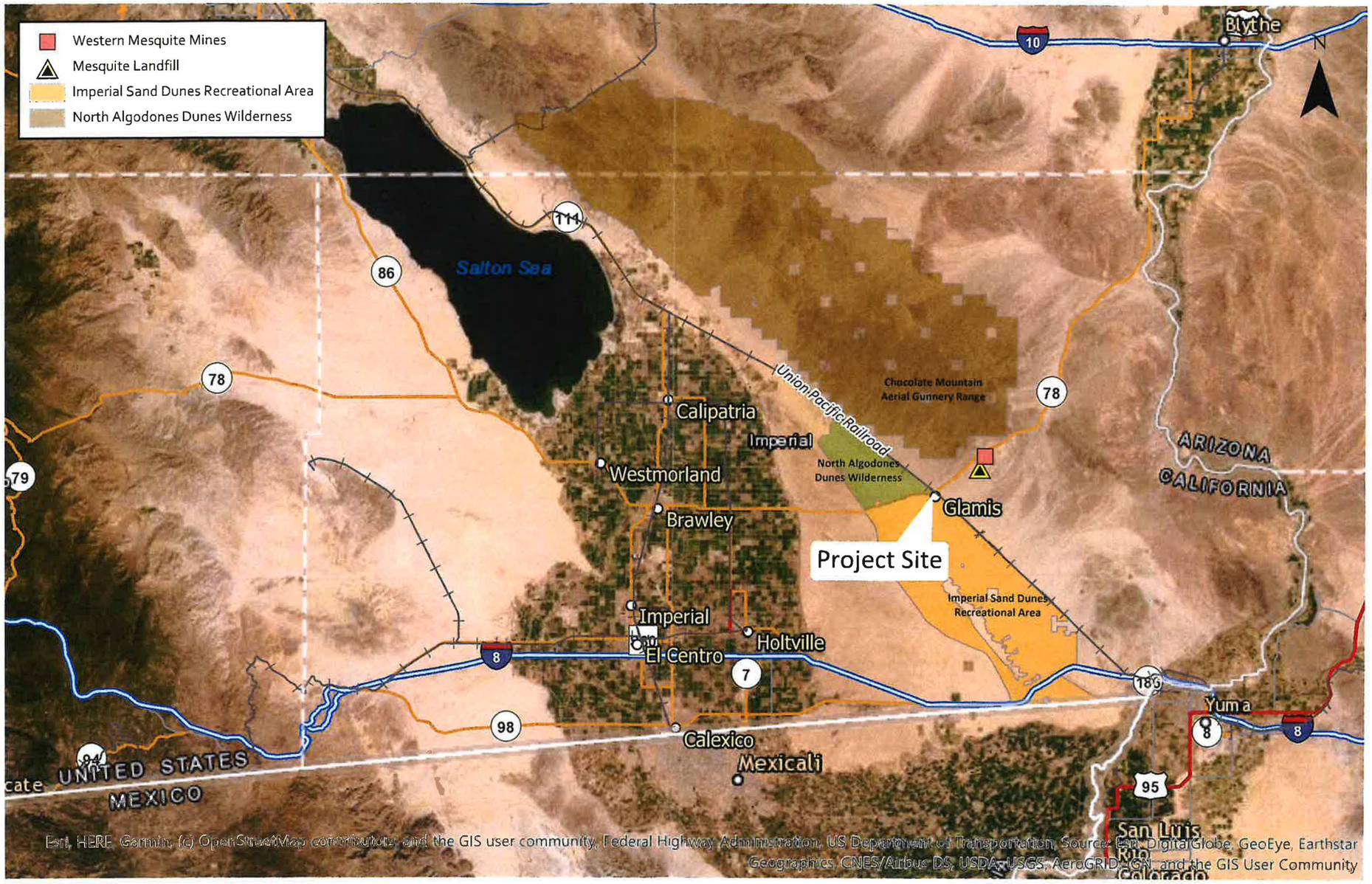
Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8782

Jim Minnick
DIRECTOR

La Posta Band of Diegueno Mission Indians
Javaughn Miller
8 Crestwood Rd.
Boulevard, CA 91905

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Javaughn Miller,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the LA POSTA BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

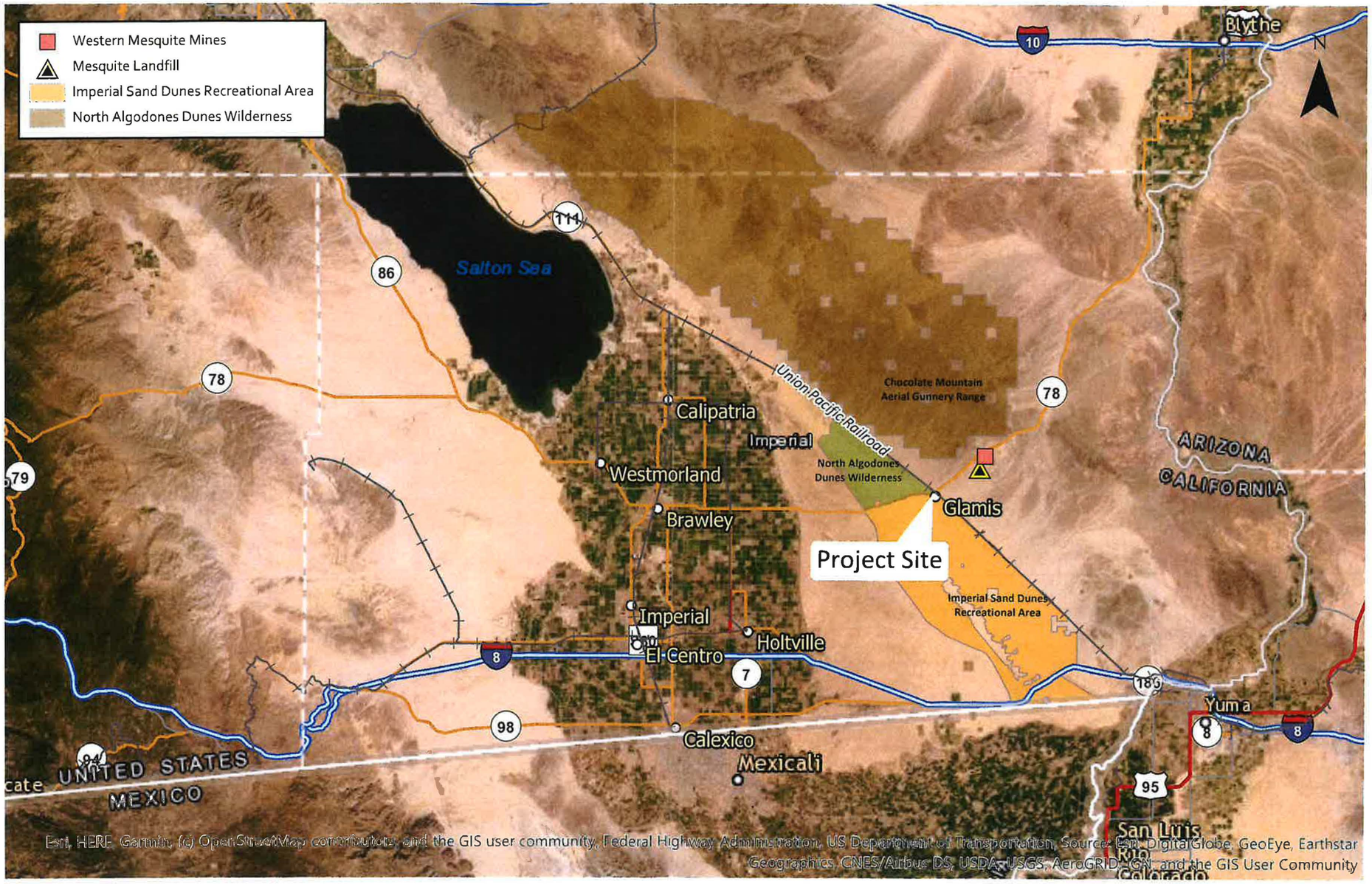
JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8775

Jim Minnick
DIRECTOR

Iipay Nation of Santa Ysabel
Clint Linton
P.O. Box 507
Santa Ysabel, CA 92070

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Clint Linton,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the IIPAY NATION OF SANTA YSABEL for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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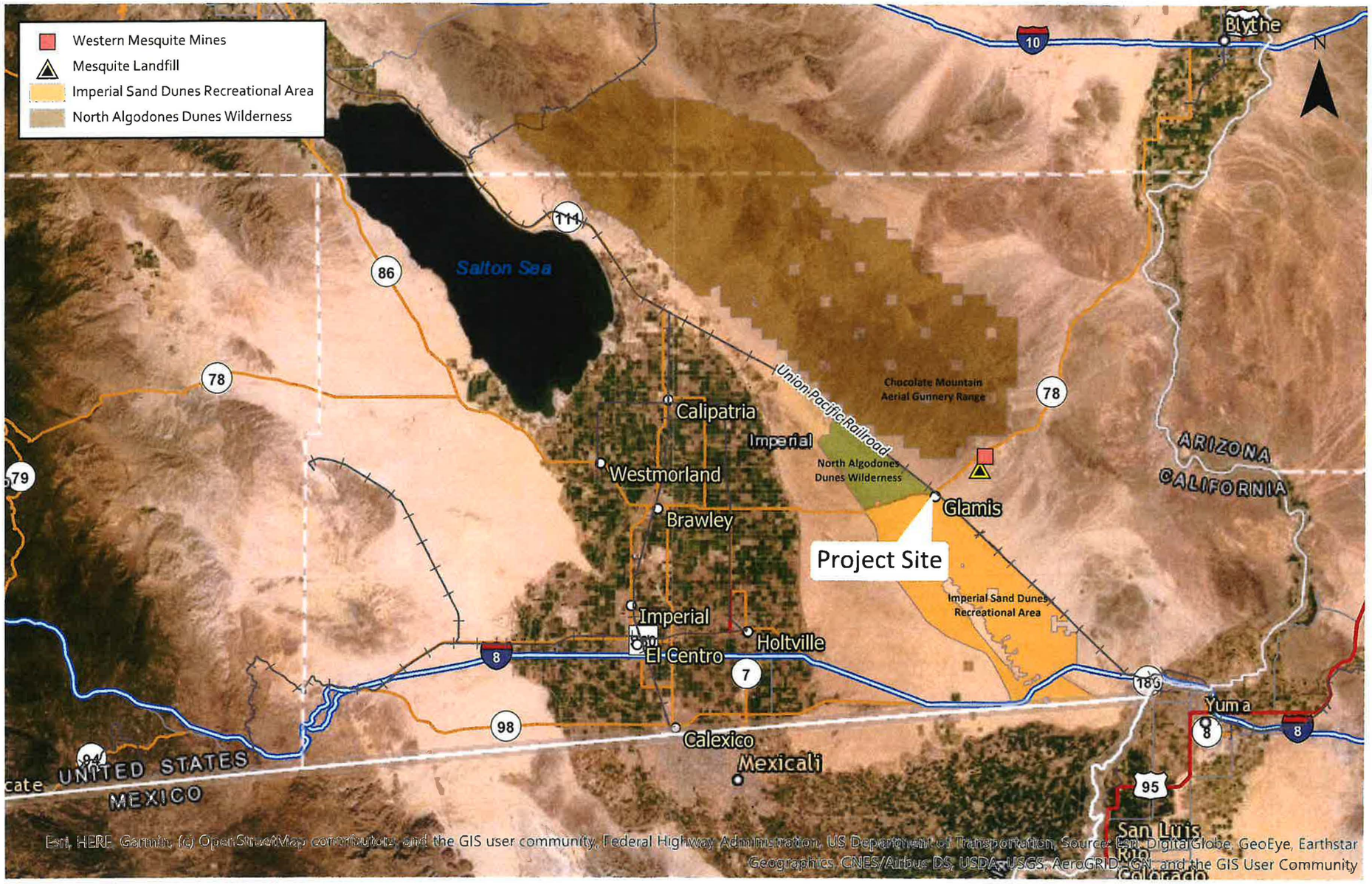

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8768

Jim Minnick
DIRECTOR

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada
8 Crestwood Rd.
Boulevard, CA 91905

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Gwendolyn Parada,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the LA POSTA BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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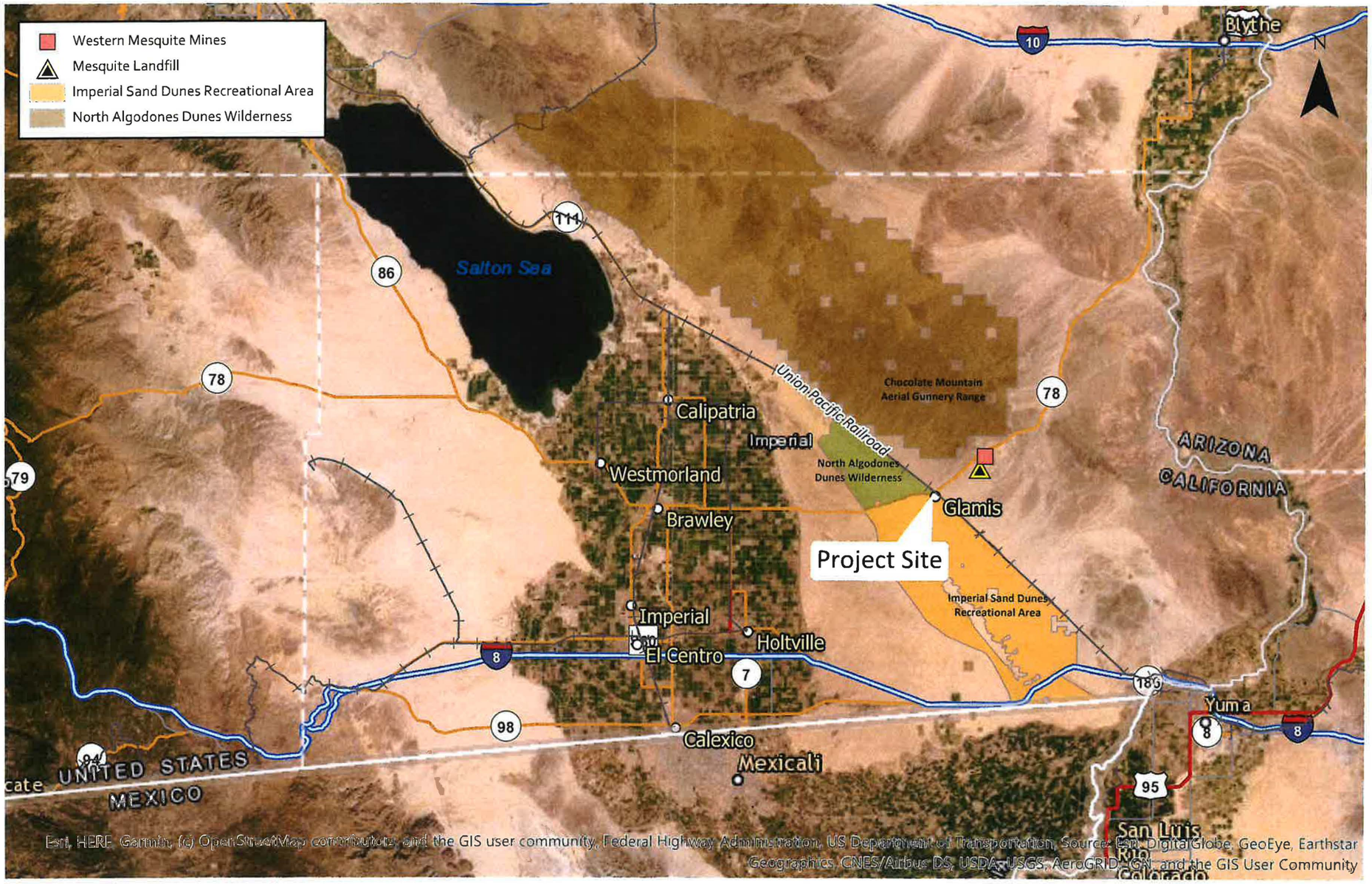

Imperial County Planning & Development Services
Planning / Building

Jim Minnick
DIRECTOR

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8751

Ewiiaapaayp Band of Kumeyaay Indians
Michael Garcia
4054 Willows Rd.
Alpine, CA 91901

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Michael Garcia,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the EWIIAAPAAYP BAND OF KUMEYAAY INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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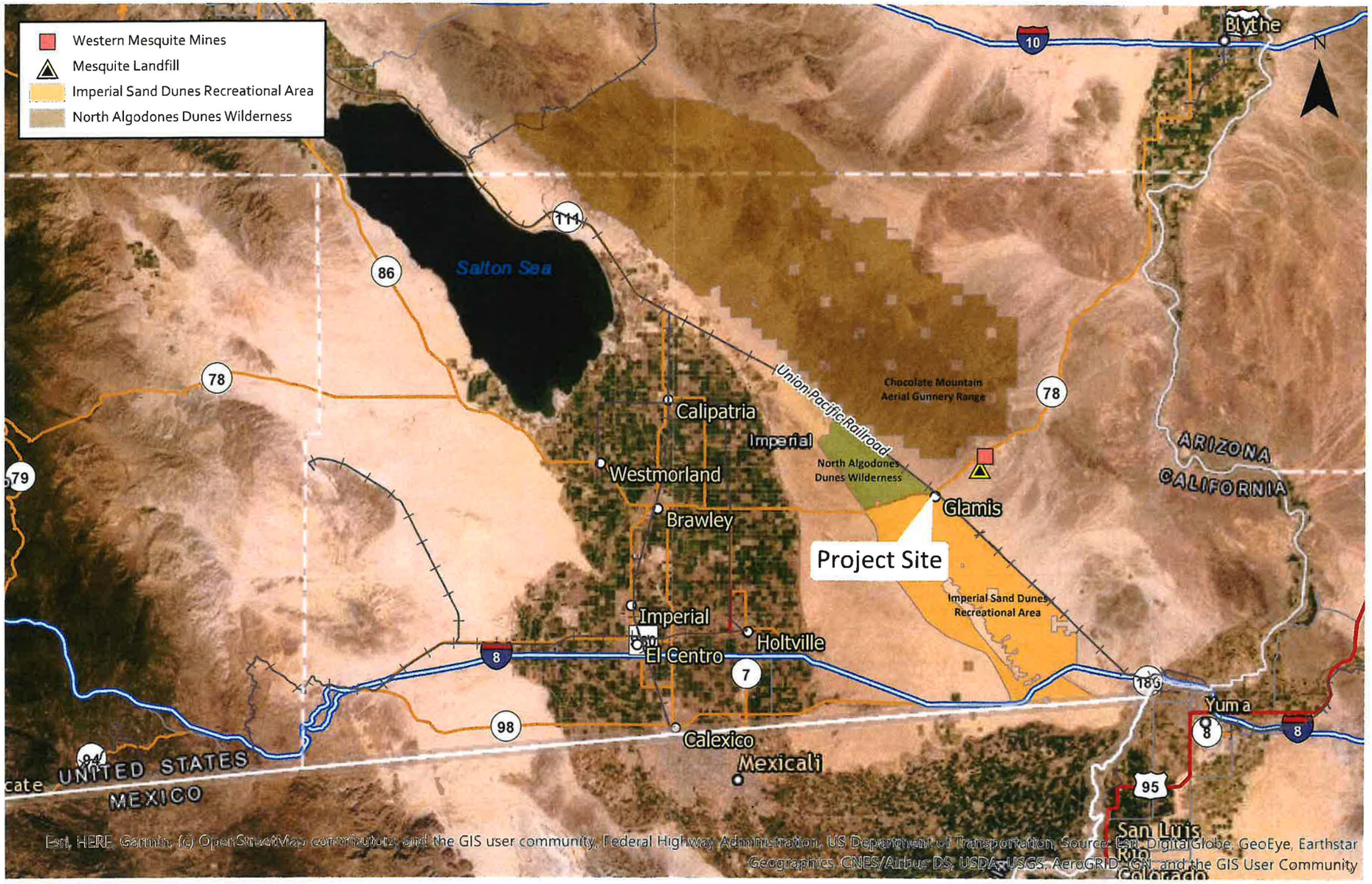

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Jim Minnick
DIRECTOR

Certified Mail No.
7016 2140 0000 2121 8744

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775
Pine Valley, CA 91962

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Carmen Lucas,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the KWAAYMII LAGUNA BAND OF MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

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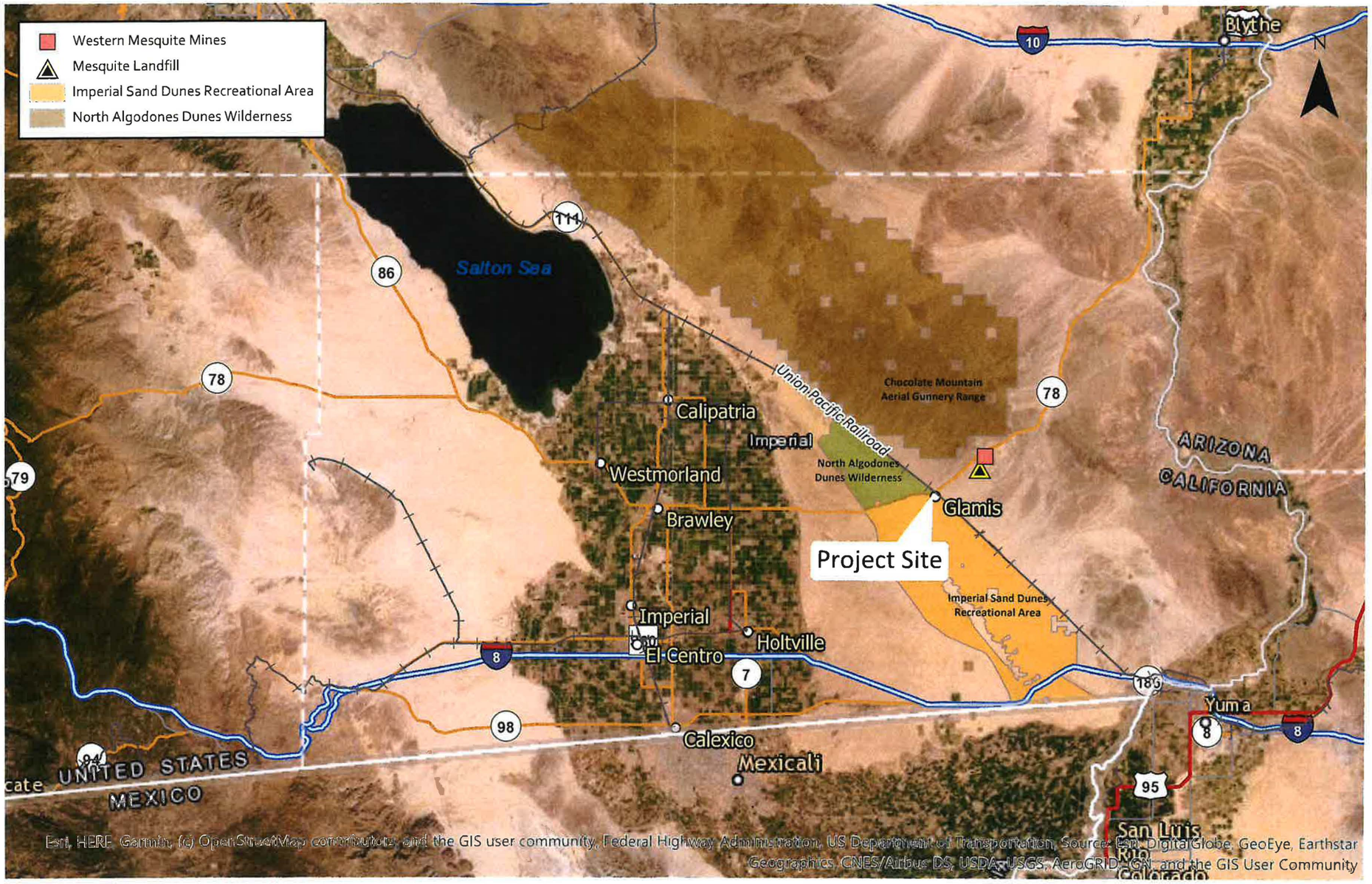

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8737

Jim Minnick
DIRECTOR

Ewiiaapaayp Band of Kumeyay Indians
Robert Pinto
4054 Willows Rd.
Alpine, CA 91901

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Robert Pinto,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the EWIIAAPAAYP BAND OF KUMEYAY INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

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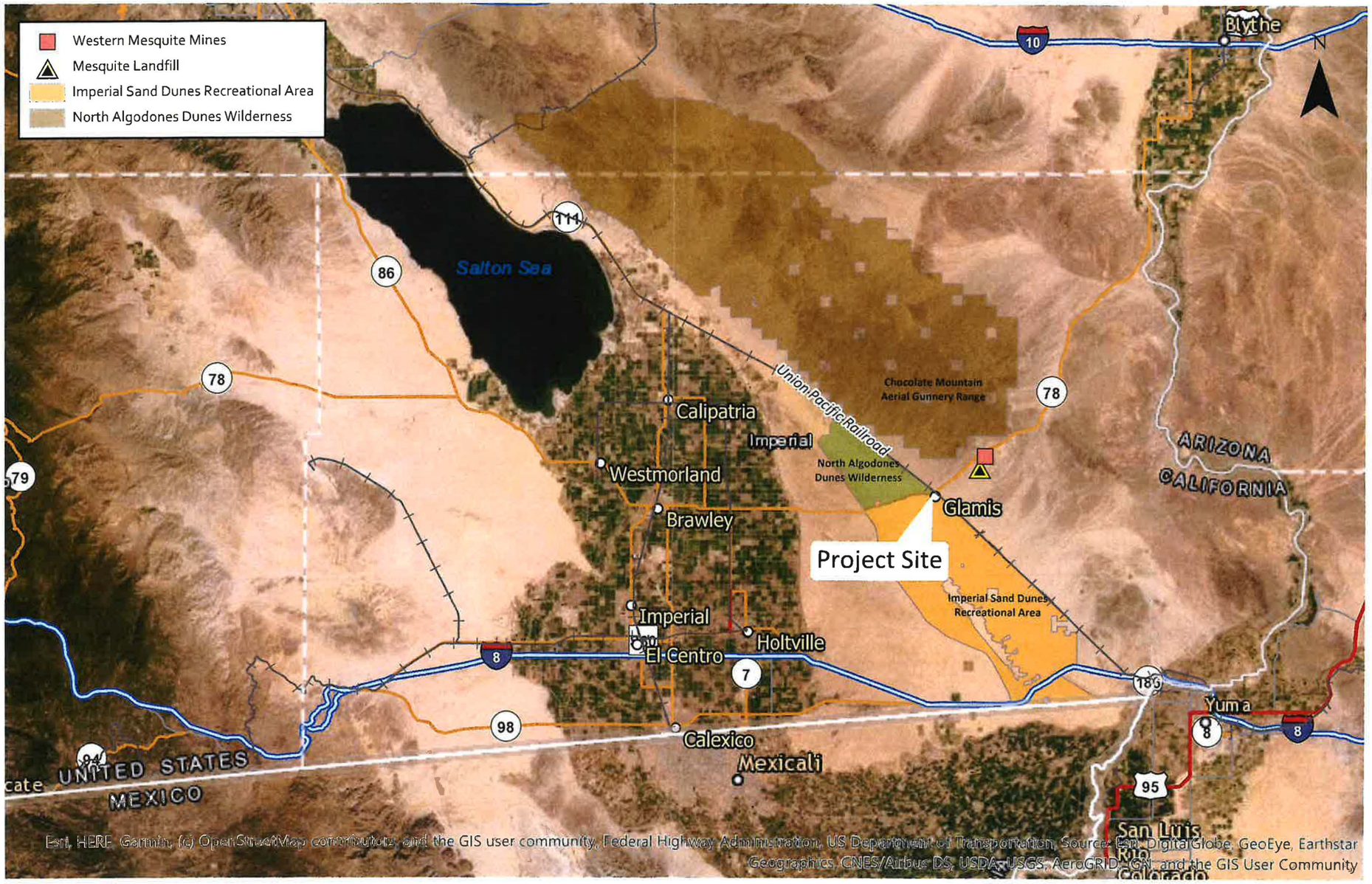

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8720

Jim Minnick
DIRECTOR

Jamul Indian Village
Erica Pinto
P.O. Box 612
Jamul, CA 91935

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Erica Pinto,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the JAMUL INDIAN VILLAGE for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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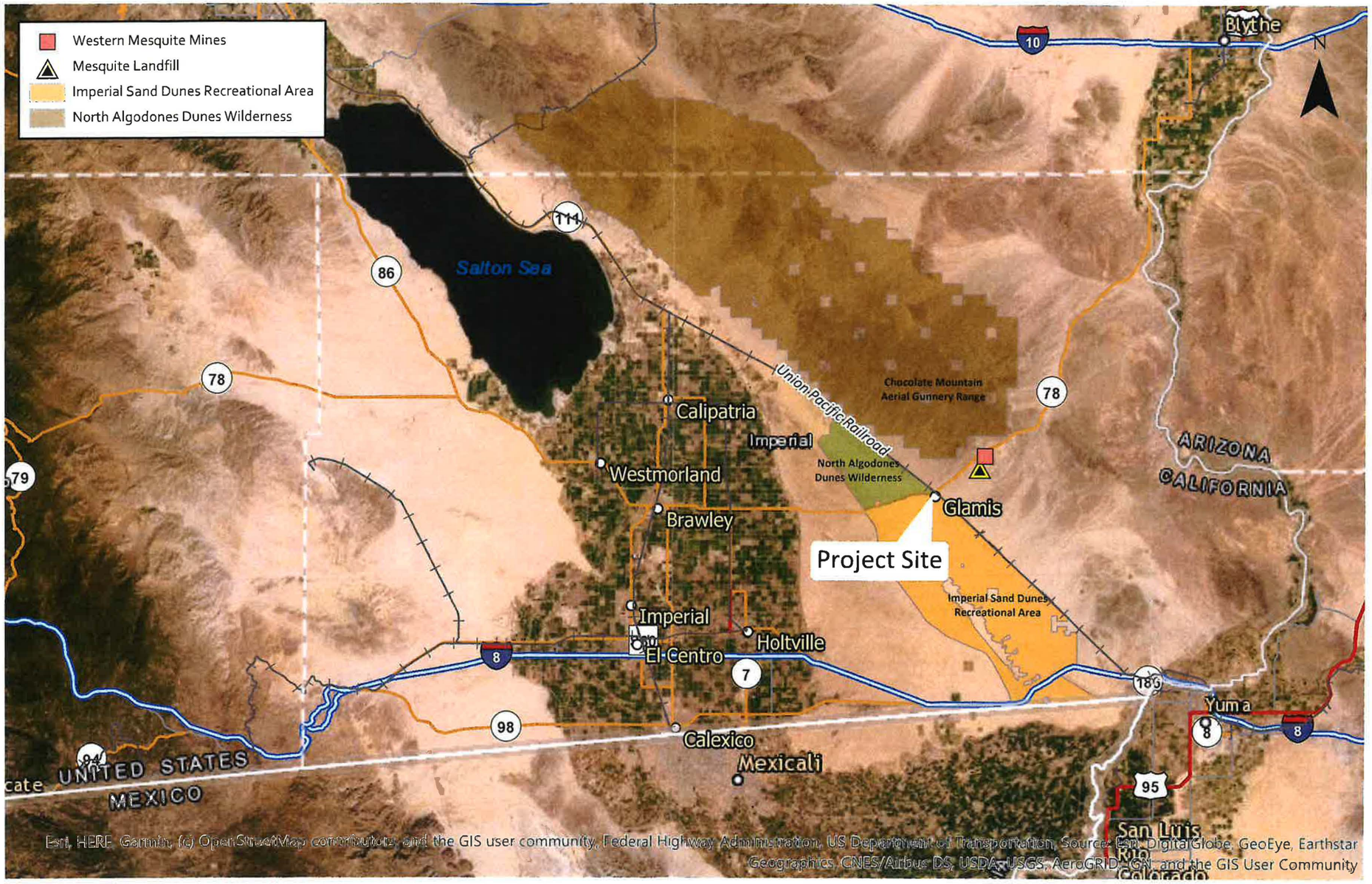

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8713

Jim Minnick
DIRECTOR

Campo Band of Diegueno Mission Indians
Ralph Goff
36190 Church Rd. Suite 1
Campo, CA 91906

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Ralph Goff,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the CAMPO BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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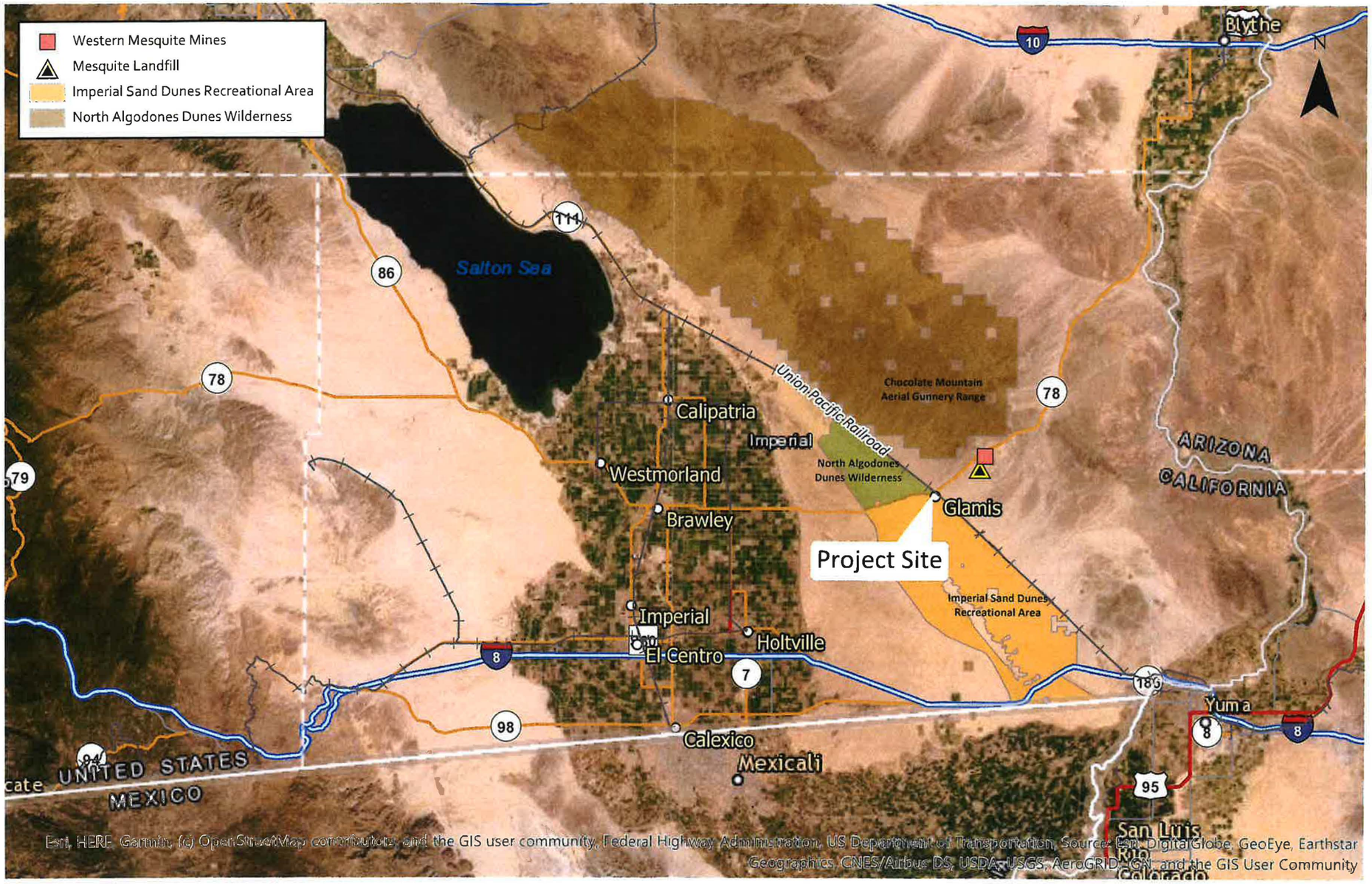

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8690

Jim Minnick
DIRECTOR

Barona Group of the Captain Grande
Edwin Romero
1095 Barona Rd.
Lakeside, CA 92040

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Edwin Romero,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the BARONA GROUP OF THE CAPTAIN GRANDE for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

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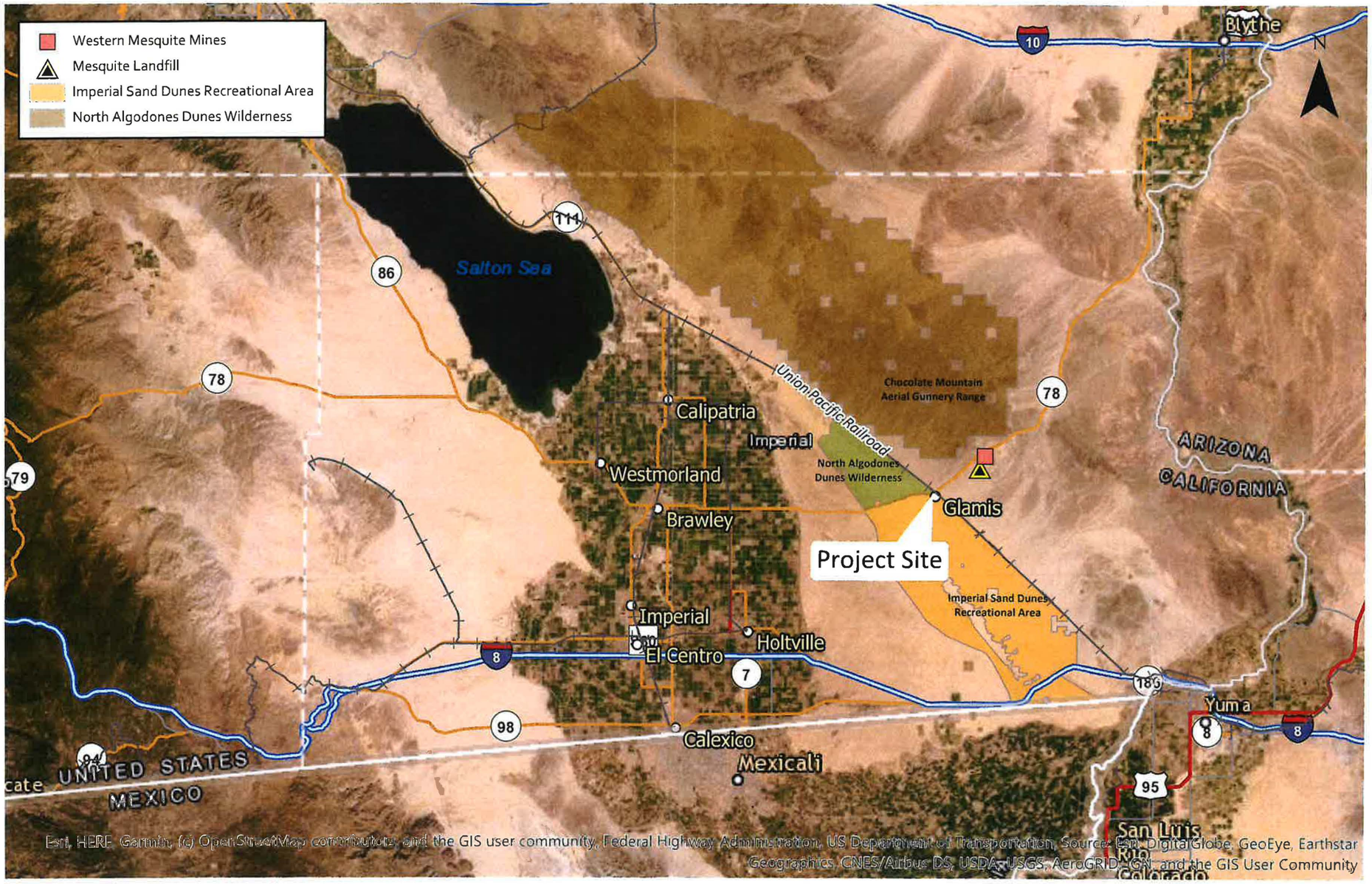

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Jim Minnick
DIRECTOR

Certified Mail No.
7016 2140 0000 2121 8850

San Pasqual Band of Diegueno Mission Indians
Allen Lawson
P.O. Box 365
Valley Center, CA 92082

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Allen Lawson,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the SAN PASQUAL BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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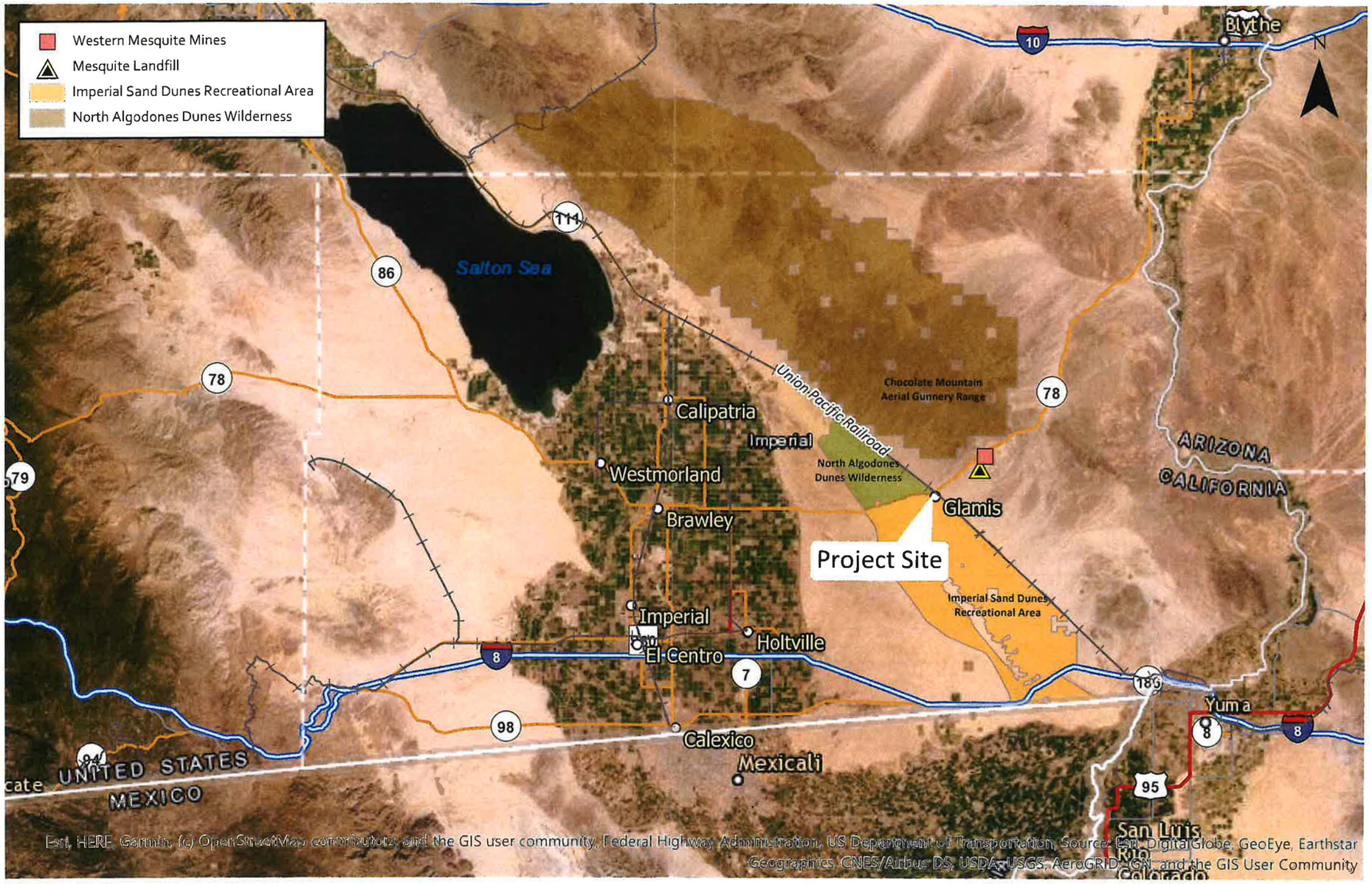

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Jim Minnick
DIRECTOR

Certified Mail No.
7016 2140 0000 2121 9000

Viejas Band of Kumeyaay Indians
Ernest Pingleton
1 Viejas Grade Rd.
Alpine, CA 91901

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Ernest Pingleton,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the VIEJAS BAND OF KUMEYAAY INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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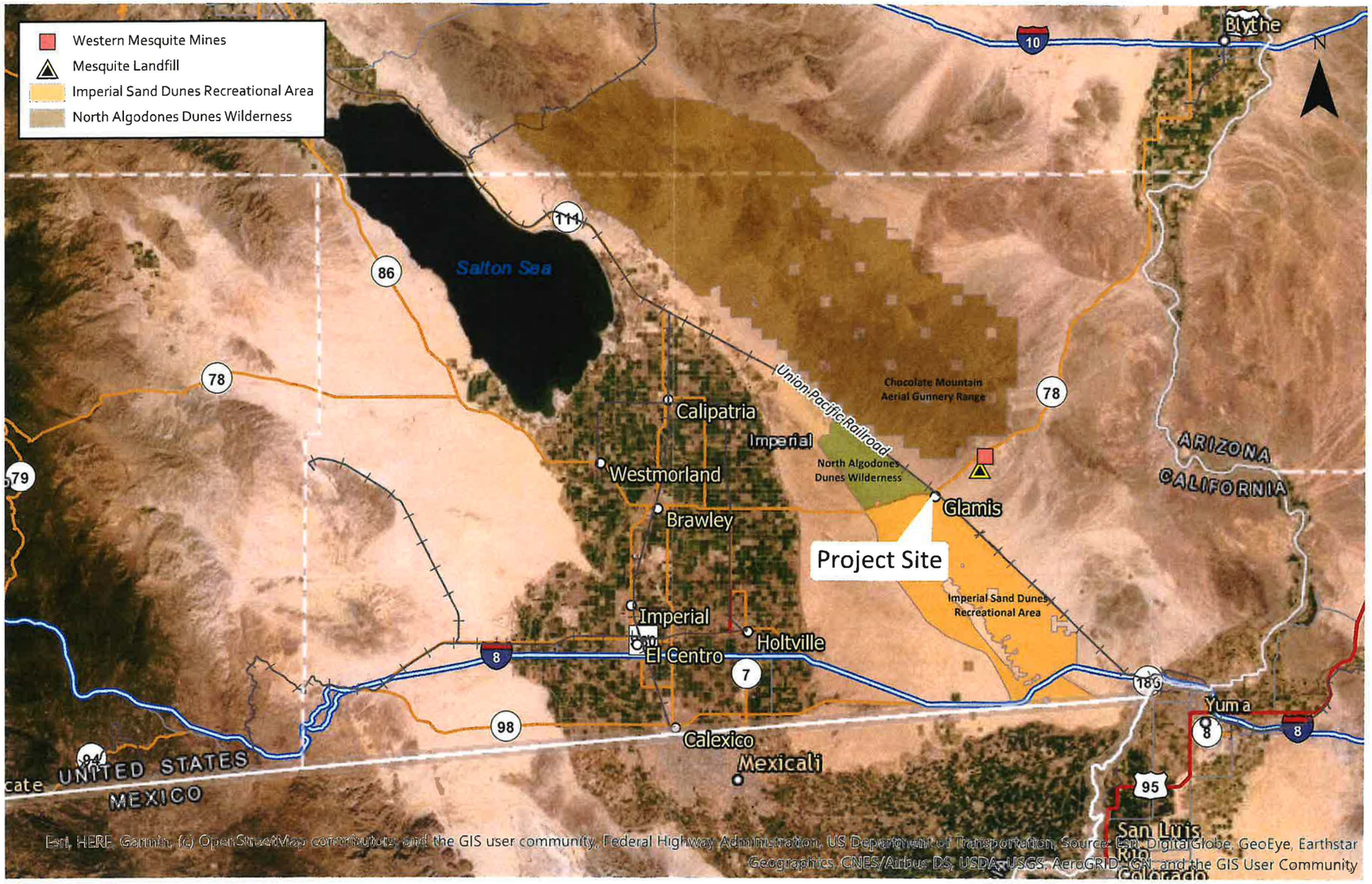
Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8867

Jim Minnick
DIRECTOR

San Pasqual Band of Diegueno Mission Indians
John Flores
P.O. Box 365
Valley Center, CA 92082

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear John Flores,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the SAN PASQUAL BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

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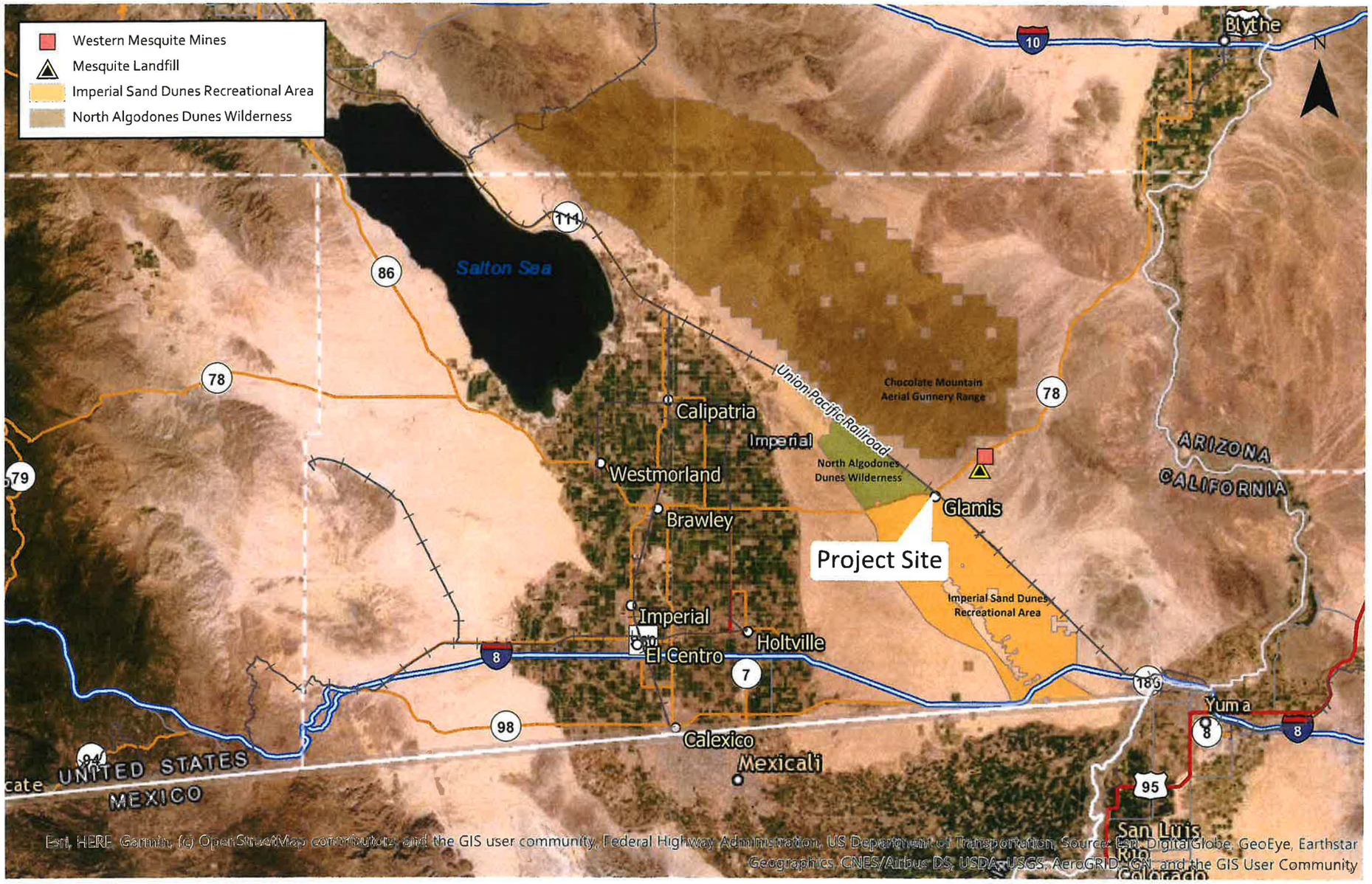

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Jim Minnick
DIRECTOR

Certified Mail No.
7016 2140 0000 2121 8874

Sycuan Band of the Kumeyaay
Kristie Orosco
1 Kwaaypaay Court
El Cajon, CA 92019

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Kristie Orosco,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the SYCUAN BAND OF THE KUMEYAAY for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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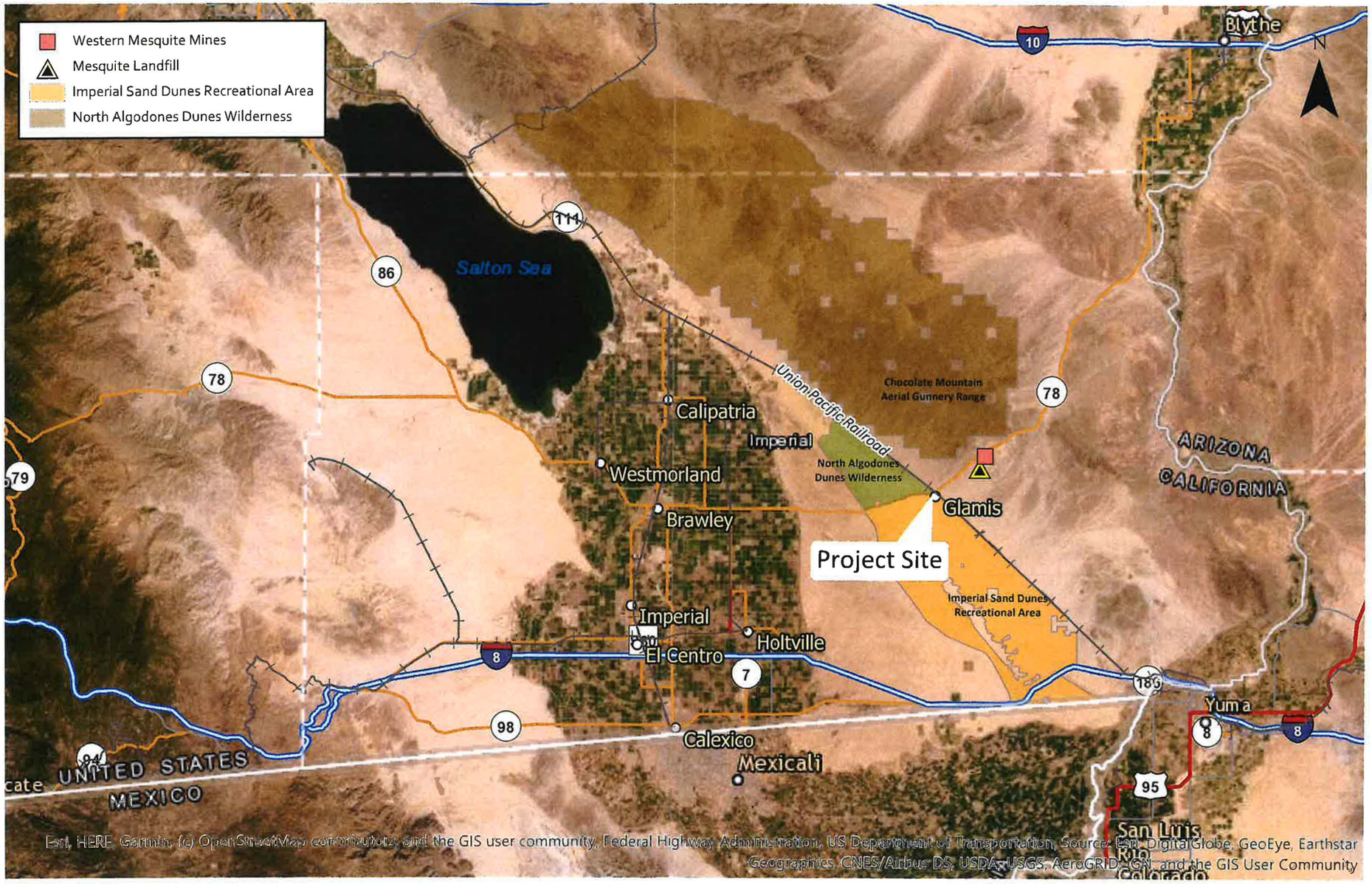

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8843

Jim Minnick
DIRECTOR

Viejas Band of Kumeyaay Indians
John Christman
1 Viejas Grade Rd.
Alpine, CA 91901

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear John Christman,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the VIEJAS BAND OF KUMEYAAY INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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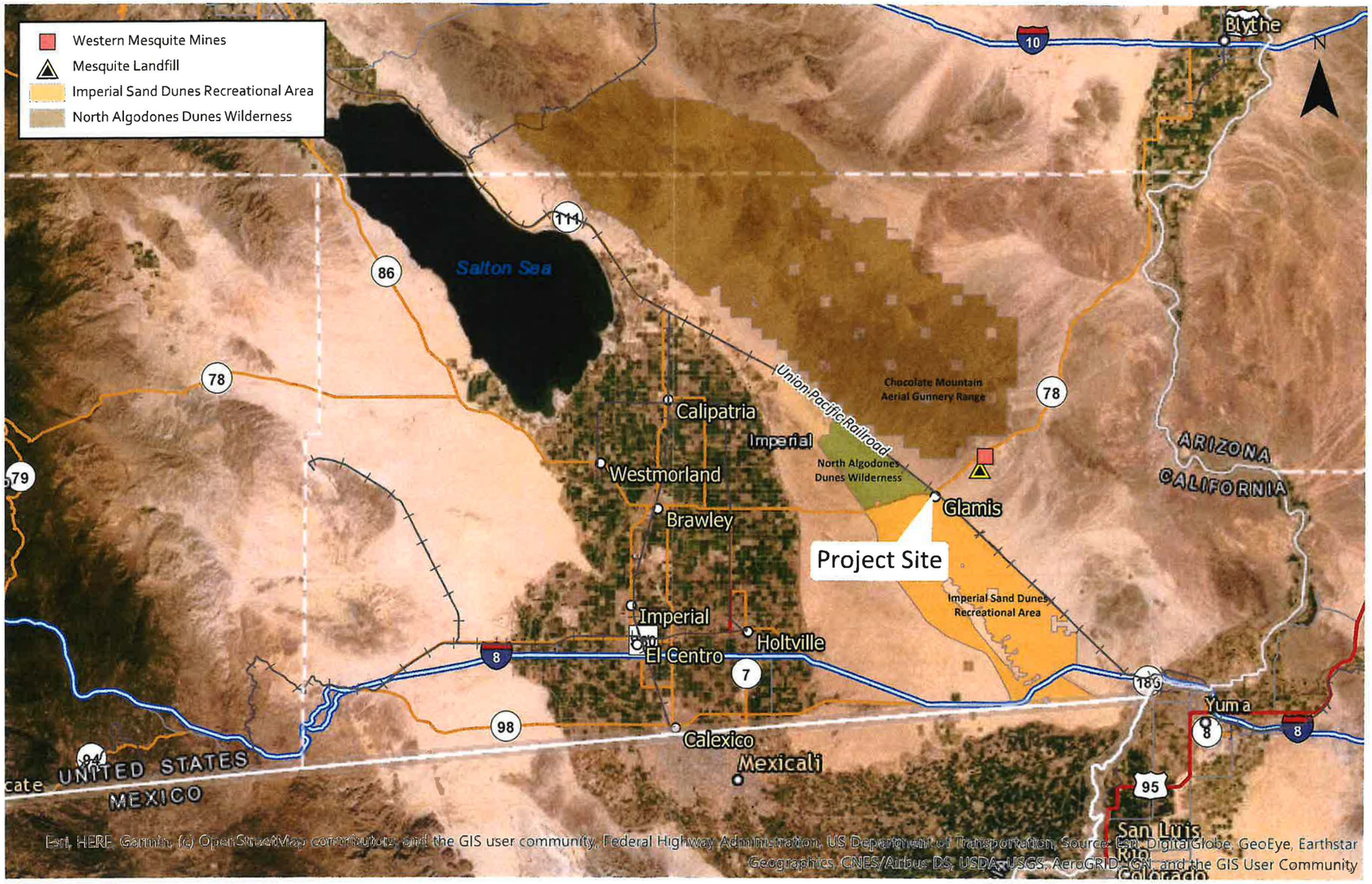

G Geotechnical Report

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The Altum Group
73-710 Fred Waring Drive, Suite 219
Palm Desert, California 92260

Geotechnical Engineering Feasibility Report
Proposed Glamis Specific Plan Project
State Highway 78 and the Union Pacific Railroad
Glamis, Imperial County, California

August 29, 2019

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File No.: 303235-001
Doc. No.: 19-08-705

Earth Systems
79-811 Country Club Drive, Suite B | Bermuda Dunes, CA 92203 | Ph: 760.345.1588 | www.earthsystems.com

August 29, 2019

File No.: 303235-001
Doc. No.: 19-08-705

The Altum Group
73-710 Fred Waring Drive, Suite 219
Palm Desert, California 92260

Attention: Mr. Taku Shiozaki

Project: **Proposed Glamis Specific Plan Project**
State Highway 78 and the Union Pacific Railroad
Glamis, Imperial County, California

Subject: **Geotechnical Engineering Feasibility Report**

Earth Systems Pacific is pleased to submit this geotechnical feasibility report for the proposed Glamis Specific Plan Project, totaling approximately 141 acres. We understand that a design-level recommendation report is not required at this time. A feasibility level report has fewer exploration locations and more general recommendations about site development considering that the exact plan for the site area is not yet developed. Once plans are developed, site-specific design-level exploration and reporting should be performed.

We understand the proposed development is located at six APNs: 039-310-022, 039-310-023, 039-310-026, 039-310-027, 039-310-029, and 039-310-030 within Imperial County, California. This report completes our scope of services in accordance with our agreement BER-19-4-002, authorization date June 5, 2019. Other services may be required, such as design-level reports once structure locations are decided. More field exploration, reporting, consultation, plan review, construction testing, inspection, and grading observation, are additional services and will be billed according to our Fee Schedule in effect at the time services are provided when such services are requested. Unless requested in writing, the client is responsible for distributing this report to the appropriate governing agency or other members of the design team.

We appreciate the opportunity to provide our professional services. Please contact our office if there are any questions or comments concerning this report or its recommendations.

Respectfully submitted,
EARTH SYSTEMS PACIFIC

REGISTERED PROFESSIONAL ENGINEER
ANTHONY COLAROSSI
No. 60302
Exp. 6/30/2020
CIVIL
STATE OF CALIFORNIA

PROFESSIONAL GEOLOGIST
MARK S. SPYKERMAN
No. 1174
CERTIFIED ENGINEERING GEOLOGIST
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SER/ac/cgj/klp/mss

Distribution: 4/The Altum Group
1/Mr. Taku Shiozaki (taku.shiozaki@thealtumgroup.com)
1/Ms. Tonya Carnevale (carnevale@thealtumgroup.com)
1/BER File

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Geotechnical Feasibility Report
Proposed Glamis Specific Plan Project
State Highway 78 and the Union Pacific Railroad
Glamis, Imperial County, California

Section 1
INTRODUCTION

1.1 Project Description

This geotechnical feasibility report has been prepared for the proposed Glamis Specific Plan. The Glamis Specific Plan is intended to accommodate recreation-supporting land uses including retail and service commercial, motel accommodations, recreational vehicle and mobile home parks, and community facilities. A conceptual layout prepared by The Altum Group and provided to us on December 3, 2019 is included with this report. Although dated August 29, 2019, this report was held such that a conceptual plan could be included.

Actual structure types and locations are not available at this time. This report is feasibility in nature in order to better guide the project forward from a geotechnical perspective until structure locations and scope are developed and actual location-specific geotechnical reports are authorized and prepared. We assume the project will use one to two story masonry, wood-framed or metal stud construction founded on shallow permanent foundations, and that there will be no below grade basement levels. Anticipated loads are assumed will be less than 100 kips for isolated spread footings and 4.0 kip/ft for continuous footings. Preliminary grading and foundation plans were not available at the time this proposal was prepared. We assume that proposed finish grades will likely be within approximately five feet of existing site grades.

As the basis for the foundation recommendations, all loading is assumed to be dead plus actual live load. No preliminary design loading was provided by the structural engineer. If actual structural loading exceeds these assumed values, we will need to reevaluate the given recommendations. In addition, the geotechnical engineer of record should evaluate structural plans for additive pressures from closely spaced footings and differential settlements between nearby heavily and lightly loaded footings.

1.2 Site Description

The project is located approximately 27 miles east of the city of Brawley at the intersection of State Highway 78 and the Union Pacific Railroad in Imperial County, California, see Figure 1 below, and Plate 1 in Appendix A. The legal addresses of the project site are Accessor Parcel Numbers (APN): 039-310-022, 039-310-023, 039-310-026, 039-310-027, 039-310-029, and 039-310-030, and its combined area is approximately 141 acres. The latitude and longitude of the local Glamis Store, somewhat central to the project area, is approximately 32.99594°N and 115.07267°W.

Based on a USGS topographic (USGS, 1968), the project is located between contour elevations 300 and 360 feet above Mean Sea Level (MSL); grades dip towards the west-southwest. Based

on a google image (Google, 2019), the project area is generally flat. The site appears to have past use and demolition performed, see Section 3.2 for aerial photo research. The project area is mostly bare of vegetation.

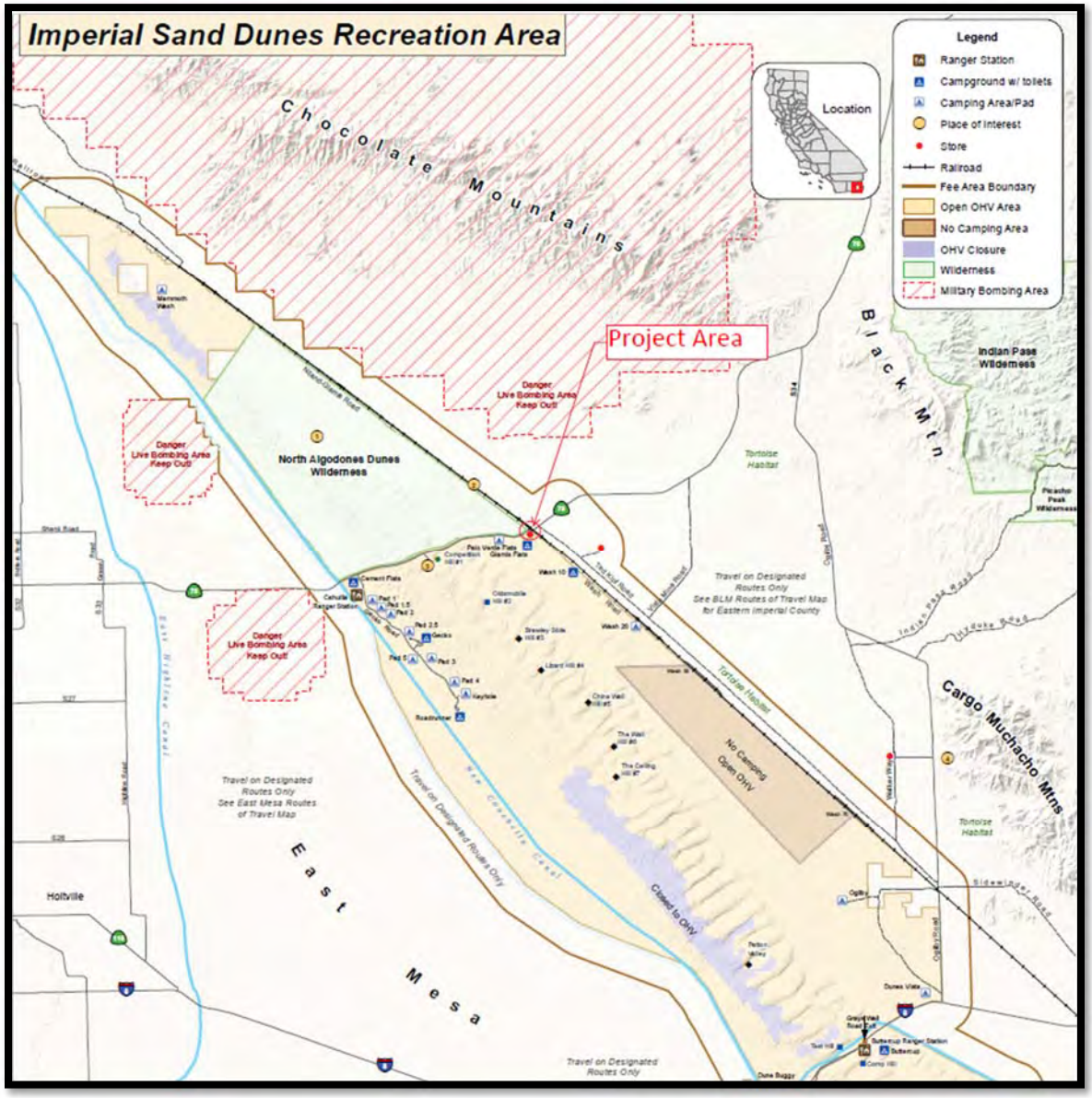

Figure 1 Imperial Sand Dunes Recreation Area

1.3 Scope of Services

The scope of services provided by Earth Systems consisted of the following:

1. A visual site assessment was made by our representative regarding surficial observed site conditions. In addition, we reviewed our files and select published literature pertinent to the site vicinity. We marked our proposed boring locations and had them cleared through Underground Service Alert (USA).

2. Near-surface soil conditions were explored by means of approximately 21 exploratory borings using truck-mounted drilling rig equipment with hollow-stem augers. The borings extended to depths of approximately 20 to 50 feet below the existing ground surface. The borings were backfilled with soil derived from the auger cuttings. The exposed soil profiles were observed relative to soil and groundwater (not encountered) conditions. Samples of the surface and subsurface materials were collected at various intervals, logged by our representative, and returned to our laboratory.
3. Near-surface soil conditions were also explored by means of approximately 7 test pits that were excavated using a backhoe equipped with a 24-inch-wide bucket. The test pits extended to a maximum depth of approximately 8 feet below the ground surface. The test pits were backfilled with soil derived from the excavation. Compaction was not performed. The exposed soil profiles were observed relative to soil and groundwater (not encountered) conditions. Samples of the surface and subsurface materials were collected at various intervals, logged by our representative, and returned to our laboratory.
4. Laboratory tests were performed on selected samples to evaluate the physical characteristics of the materials encountered during our field exploration. Laboratory testing included moisture content, dry unit weight, maximum density/optimum moisture content, sieve analysis, consolidation/collapse potential, and Expansion Index. Testing was performed in general accordance with American Society for Testing and Materials [ASTM] or appropriate test procedure. Selected samples will also be tested for a screening level of corrosion potential (pH, electrical resistivity, water-soluble sulfates, and water-soluble chlorides). Earth Systems does not practice corrosion engineering; however, these test results may be used by a qualified engineer in designing an appropriate corrosion control plan for the project. The tests selected and the frequency of testing may be modified and will be based on the subsurface conditions actually encountered.
5. We conducted a feasibility level engineering analysis of the data generated from this commission and prepared a written report presenting our findings and feasibility level recommendations related to the following:

    - A description of the proposed project including a site plan showing the approximate boring locations.
    - A description of the surface and subsurface site conditions including groundwater conditions, as encountered in our field exploration (if applicable).
    - A description of the site geologic setting and possible associated geology-related hazards, including a liquefaction, subsidence, and seismic settlement analysis.
    - A discussion of regional geology and site seismicity.
    - A description of local and regional active faults, their distances from the site, their potential for future earthquakes.
    - A discussion of other geologic hazards such as ground shaking, landslides, flooding, and tsunamis.
    - A discussion of site conditions, including the geotechnical feasibility suitability of the site for the general type of construction proposed.

- A seismic analysis including recommendations for geotechnical feasibility level seismic design coefficients in accordance with the 2016 CBC.
- Recommendations for imported fill (if required) for use in compacted fills.
- Feasibility level recommendations for foundation design including parameters for shallow foundations and building pad and subgrade preparation.
- Preliminary recommendations for the mitigation of seismic induced settlement.
- Recommendations for lateral earth pressures (active, at-rest, and passive) for below grade structures and retaining walls, including drainage requirements, coefficients of friction and seismic earth pressures.
- General feasibility recommendations for site grading and earthwork, and fill compaction specifications.
- Discussion of anticipated excavation conditions, including preliminary shrinkage and/or bulking.
- Recommendations for underground utility trench backfill and import soils.
- Recommendations for stability of temporary trench excavations.
- Recommendations for slabs-on-grade (building slabs and walkways), including recommendations for reducing the potential for moisture transmission through interior slabs.
- Recommendations for collapsible or expansive soils (if applicable).
- Asphalt concrete pavement and Portland cement concrete preliminary recommendations for onsite driveways and parking areas, using assumed Traffic Indices.
- A discussion of the corrosion potential of the near-surface soils encountered during our field exploration.
- An appendix, which will include a summary of the field exploration and laboratory testing program.

- Services that investigate or detect the presence of moisture, mold, or any biological contaminants in or around any structure, or any service that was designed or intended to prevent or lower the risk of the occurrence of the amplification of the same, were not provided. Mold is ubiquitous to the environment with mold amplification occurring when building materials are impacted by moisture. Site conditions are outside of Earth Systems control, and mold amplification will probably occur, or even continue to occur, in the presence of moisture. As such, Earth Systems cannot be held responsible for the occurrence or recurrence of mold amplification.

- Services that investigate or detect water quality in or around any structure, or any service that was designed or intended to determine water quality, were not provided.

Section 2
METHODS OF EXPLORATION AND TESTING

2.1 Field Exploration

Exploratory Borings

Twenty-one exploratory borings were drilled to depths ranging from 21½ to 51½ feet below the existing ground surface to observe soil profiles and obtain samples for laboratory testing. The borings were drilled on June 18, 19 and 21, 2019, using either an approximate 6 or 8-inch outside diameter hollow-stem auger. Augers were powered by a Mobile B-61 truck-mounted rubber tired drill rig. The boring locations are shown on the Boring Location Map, Plate 2, in Appendix A. The locations shown are approximate, established by pacing and line-of-sight bearings from adjacent landmarks and consumer grade GPS coordinates (+/- 15 feet).

A representative from Earth Systems maintained a log of the subsurface conditions encountered and obtained samples for visual observation, classification and laboratory testing. Subsurface conditions encountered in the borings were categorized and logged in general accordance with the Unified Soil Classification System [USCS] and ASTM D 2487 and 2488 (current edition). Our typical sampling interval within the borings was approximately every 2½ to 5 feet to the full depth explored; however, sampling intervals were adjusted depending on the materials encountered onsite. Samples were obtained within the test borings using a Standard Penetration [SPT] sampler (ASTM D 1586) and a Modified California [MC] ring sampler (ASTM D 3550 similar to ASTM D 1586). The SPT sampler has an approximate 2-inch outside diameter and an approximate 1.38-inch inside diameter. The MC sampler has an approximate 3-inch outside diameter and an approximate 2.4-inch inside diameter.

Both the ring and SPT samplers were mounted on drill rod and driven using a rig-mounted 140-pound automatic hammer falling for a height of 30 inches. The number of blows necessary to drive either a SPT sampler or a MC type ring sampler within the borings was recorded.

Design parameters provided by Earth Systems in this report have considered an estimated 72% hammer efficiency based on data provided by the drilling subcontractor. The number of blows necessary to drive either a SPT sampler or a MC type ring sampler within the borings was recorded. Since the MC sampler was used in our field exploration to collect ring samples, the N-values using the California sampler can be roughly correlated to SPT N-values using a conversion factor that may vary from about 0.5 to 0.7. In general, a conversion factor of approximately 0.63 from a study at the Port of Los Angeles (Zueger and McNeilan, 1998 per SP 117A) is considered satisfactory. A value of 0.63 was applied in our calculations for this project.

Bulk samples of the soil materials were obtained from the drill auger cuttings, representing a mixture of soils encountered at the depths noted. Following drilling, sampling, and logging the borings were backfilled with native cuttings and tamped upon completion. Our field exploration was provided under the direction of a registered Geotechnical Engineer from our firm.

The final logs of the borings represent our interpretation of the contents of the field logs and the results of laboratory testing performed on the samples obtained during the subsurface

exploration. The final logs are included in Appendix A of this report. The stratification lines represent the approximate boundaries between soil types, although the transitions may be gradual. In reviewing the logs and legend, the reader should recognize the legend is intended as a guideline only, and there are a number of conditions that may influence the soil characteristics observed during drilling. These include, but are not limited to, the presence of cobbles or boulders, cementation, variations in soil moisture, presence of groundwater, and other factors.

The boring logs present field blowcounts per 6 inches of driven embedment (or portion thereof) for a total driven depth attempted of 18 inches. The blowcounts on the logs are uncorrected (i.e. not corrected for overburden, sampling, etc.). Consequently, the user must correct the blowcounts per standard methodology if they are to be used for design and exercise judgment in interpreting soil characteristics, possibly resulting in soil descriptions that vary somewhat from the legend.

Test Pits

Seven exploratory test pits were excavated using a mechanical backhoe with a 24-inch bucket to a maximum depth of eight feet below existing surface. The test pits were excavated for soil classification purposes. The pits were excavated June 20, 2019. The test pit locations are shown on Plate 2 in Appendix A. The locations shown are approximate, established by pacing and line-of-sight bearings from adjacent landmarks and survey stakes.

A representative from Earth Systems maintained a log of the subsurface conditions encountered and obtained samples for visual observation, classification and laboratory testing. Subsurface conditions encountered in the test pits were categorized and logged in general accordance with the Unified Soil Classification System [USCS] and ASTM D 2487 and 2488 (current edition). Our typical sampling interval within the pits was at the locations of soil change. Samples were obtained within the test pits using a standard shovel collecting from the sides of the test pits and undisturbed block samples.

2.2 Laboratory Testing

Samples were reviewed along with field logs to select those that would be analyzed further. Test results are presented in graphic and tabular form in Appendix B of this report. The tests were conducted in general accordance with the procedures of the American Society for Testing and Materials [ASTM] or other standardized methods as referenced below. Our testing program consisted of the following:

- Density and Moisture Content of select samples of the site soils (ASTM D 2937 & 2216).
- Maximum dry density tests to evaluate the moisture-density relationship of typical soils encountered (ASTM D 1557).
- Particle Size Analysis to classify and evaluate soil composition. The gradation characteristics of selected samples were made by sieve analysis procedures (ASTM D 6913).
- Expansion Index (EI) test to evaluate the expansive nature of the soil. The samples were surcharged under 144 pounds per square foot at moisture content of near 50%

saturation. The samples were then submerged in water for 24 hours and the amount of expansion recorded with a dial indicator (ASTM D 4829).

- Consolidation/Collapse Potential to evaluate the compressibility and hydroconsolidation (collapse) potential of the soil upon wetting (ASTM D 5333).
- Chemical Analyses (Soluble Sulfates and Chlorides (ASTM D 4327), pH (ASTM D 1293), and Electrical Resistivity/Conductivity (ASTM D 1125) to evaluate the potential for adverse effects of the soil on concrete and steel.
- R-Value to evaluate pavement support characteristics (CTM 301)

Section 3
DISCUSSION

3.1 Geologic Setting

Regional Geology: The site lies within the Imperial Valley, a part of the Colorado Desert geomorphic province (see Plate 3). A significant feature within the Colorado Desert geomorphic province is the Salton Trough, a large northwest-trending structural depression that extends approximately 180 miles from the San Gorgonio Pass to the Gulf of California. Much of this depression in the area of the Salton Sea is below sea level.

The Imperial Valley forms the southerly part of the Salton Trough and exhibits a thick sequence of Miocene to Holocene sedimentary deposits. Mountains bounding the Imperial Valley include the Chocolate Mountains to the northeast, the Santa Rosa Mountains to the west, and associated mountain ranges to the southwest, including the Vallecito, Pinyon, Inkopah, and Jacumba Mountains. These mountains expose primarily Precambrian metamorphic and Mesozoic granitic rocks, with some Tertiary sedimentary deposits and volcanics. Other geologic/geomorphic features in the southern Imperial Valley area include the Salton Sea, Sand Hills (Algodones Dunes), East Mesa, West Mesa, and Borrego Badlands. Within the immediate site area, native geologic lithologic units consist of a mix of younger (Holocene) dune sand and alluvium, and Pleistocene alluvial fan (fanglomerates) deposits associated with the western flank of the Chocolate Mountains.

The San Andreas fault zone within the Imperial Valley consists of the San Andreas fault trending along the northeast shore of the Salton Sea which transitions to the southeast into the Brawley Seismic Zone and Imperial fault (Plate 4). Other significant active faults associated with the San Andreas rift zone, west of the Salton Sea, include the extensions and traces of the Elsinore and San Jacinto fault zones. No major active (last 11,700 years) faults are in the immediate vicinity of the site. The San Andreas fault and associated subsidiary faults are considered the primary sources for seismic ground shaking with approximately 15 recognized active faults within 70 miles of Glamis.

Local Geology: The project site is located slightly northeast of the Sand Hills and is located within a mapped area of borderline sedimentary deposit called Pleistocene nonmarine (Qc) and alluvium (Qal), which are associated with deposits from the southwestern flanks of the Chocolate Mountains. Immediately east are the Sand Hills, which is mapped as “Dune Sand” associated with wind-blown deposits. Artificial fill associated with various areas of the project, including building pads, graded parking areas, elevated roadways, railroad beds/right-of-way, and drainage control berms are present. The fills are considered uncompacted and locally contain debris and aggregate base.

Native soils consist of thin deposits of dune sand overlying Quaternary younger and older alluvial deposits. Fills are a mix of locally derived materials. Within the project limits, the thickness of the true dune sand is generally less than two feet thick. Fills vary in thickness, being the thickest for roadways and flood control berms (+10 feet).

There are no active faults currently mapped within the project limits. The nearest mapped faults are the in-active and buried Sand Hills fault, located approximately one mile southwest of the site and several Quaternary faults about 9 miles west of the property (see Regional Fault Map, Plate 4). Several in-active faults within the Chocolate Mountains are located several miles northwest of the site. The nearest mapped active fault zone is the Brawley seismic zone, located approximately 24 miles west of the site, and the Imperial fault located approximately 27 miles west-southwest of the property.

Site Soil Conditions: The field exploration indicates that site soils consist generally of poorly and well graded sand, poorly and well graded sand with silt, silty sand, silty-clayey-sand and poorly graded gravels to the maximum depth of exploration of 51½ feet below the ground surface. These soils have designations of SP, SW, SP-SM, SW-SM, SM, SC-SM, and GP soil types and were classified according to the Unified Soil Classification System. Cobbles and boulders may be present at depth and were noted based on drilling operations. Refusal was not encountered however high blow counts were encountered at shallow depths ranging between 5 and 20 feet below the ground surface (bgs) or greater. Dune sand deposits are relatively thin (<2') across the site. Fills are considered undocumented and for the most part are probably poorly compact. Clay zones could exist.

The site lies within an area of high potential for wind and water erosion. Fine particulate matter (PM10) can create an air quality hazard if dust is blowing. Watering the surface, planting grass or landscaping, or placing hardscape normally mitigates this hazard.

The boring and trench logs provided in Appendix A include more detailed descriptions of the soils encountered. Site soils are classified as Type C in accordance with Cal OSHA.

3.2 Aerial Image Reconnaissance

Earth Systems reviewed past aerial photographs of the project area. The dates ranged from 1996 to 2018. A summary of our findings is presented below.

- June 1996; the well-known Glamis store is shown along with some improvements or parking use in the northeast portion of the project. Possible structure in the northeast portion;
- April 2004; grading improvements occur on the southwest portion of the site adjacent to the Glamis Store;
- October 2006; possible erosion channels in the middle of the project and south of the Glamis store. Large square object near the northwest portion of the project. Significant use (probably parking) on the southeast portion of the project;
- February 2008; grading and rectangular object observed south of the Glamis Store.
- April 2016; large rectangular object in the southwest portion of the project area.

3.3 Groundwater

This section will discuss both current and past groundwater levels at or near the project site. For this report, we used information dated back to 1979 to use as historic information. Also, this

section provides a brief discussion of the moisture contents of the soils found during the exploration and the ability of storm water retention facilities to produce a perched water table.

Recent Exploration Information: Free groundwater was not encountered in borings or test pits during our explorations conducted on January of 2019. Boring depths exceeded 50 feet from the ground surface. Moisture contents observations of the soils indicate the soils are dry to moist.

Perched Water Table: By definition, perched ground water conditions were not observed during our exploration. Observations did not indicate "wet" soils meaning free water was noted on the soil. Impermeable type soils (generally clay) were not found at depths ranging from the ground surface to 50 feet bgs. Moisture contents performed in the lab indicated values between 1 percent and 9 percent, which indicates degrees of saturation less than approximately 50 percent.

Nearby Well Information

We researched the California Department of Water Resources groundwater database and found one well very close to the project. Station Well No. 13S18E33A001S is within one of the project site's APN, APN 039-310-026. The well reading information is provided in Figure 2 below.

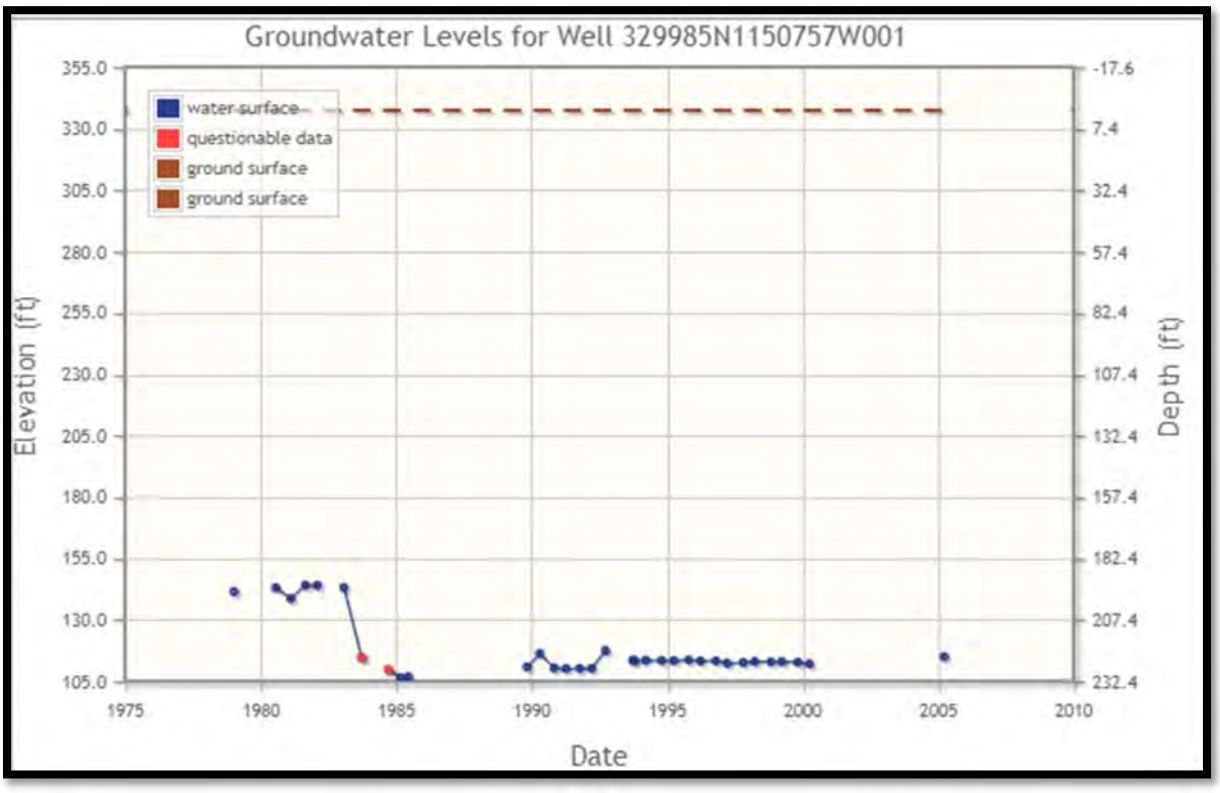

Figure 2 Groundwater Information from Nearby Well

The graph indicates the well readings dropped significantly sometime before 1985 and stayed in generally consistent till 2005. From the tabled data in the State database, the depth the water was approximately 196 feet on 1/10/1979 and 222 feet on 3/24/2005, a difference of 26 feet.

Estimated Project Groundwater Depth

Based on the information provided above, it is anticipated that the current depth of groundwater below the projects surface is over 100 feet. Groundwater levels may fluctuate with precipitation, irrigation, drainage, regional pumping from wells, site grading, and nearby faults.

3.4 Collapse/Consolidation Potential

Collapsible soil deposits generally exist in regions of moisture deficiency. Collapsible soils are generally defined as soils having potential to suddenly decrease in volume upon increase in moisture content even without an increase in external loads. Soils susceptible to collapse include loess, weakly cemented sands and silts where the cementing agent is soluble (e.g. soluble gypsum, halite), valley alluvial deposits within semi-arid to arid climate, and certain granite residual soils above the groundwater table.

In arid climatic regions, granular soils may have a potential to collapse upon wetting. Collapse (hydroconsolidation) may occur when the soluble cements (carbonates) in the soil matrix dissolve, or particles are lubricated causing the soil to densify from its loose configuration from deposition.

The degree of collapse of a soil can be defined by the Collapse Potential [CP] value, which is expressed as a percent of collapse of the total sample using the Collapse Potential Test (ASTM Standard Test Method D 5333). Based on the Naval Facilities Engineering Command (NAVFAC) Design Manual 7.1, the severity of collapse potential is commonly evaluated by the following Table 1, Collapse Potential Values.

Table 1
Collapse Potential Values

Collapse Potential Value	Severity of Problem
0-1%	No Problem
1-5%	Moderate Problem
5-10%	Trouble
10-20%	Severe Trouble
> 20%	Very Severe Trouble

The project site is located in a geologic environment where the potential for collapsible soil exists. For alluvial deposits without cementation, studies suggest some sites with densities above 103 pcf are “not likely to collapse” and N_{60} Values > 10 do not fit into the category of “Likely Collapsible” (Lommler, C. J. and Bandini). In addition, soils with greater than 85 percent relative compaction are compact and not likely to settle, especially after initial inundation. Earth Systems provides key items of interest that supports Earth Systems recommendations regarding collapse settlement determined for this site:

1. Soils are granular in nature and cementation was observed or apparent upon chemical testing

2. Pinhole voids were observed in the field or lab samples.
3. High blow-counts during the exploration were noted, as well as disturbed samples due to high blow counts.
4. High dry densities (Estimated compaction equal or greater than 85%) of the soils located below the over-excavation zone are assumed to have a low potential for collapse.
5. The soils can have a high gravel content; however the soil matrix portion can be susceptible to collapse including differential collapse where gravel content may be higher in differing site areas.
6. Boring B-11 was found to exhibit the worst case for collapsible soils.

The results of eight (8) collapse potential tests were performed on selected single ring samples from different depths and locations and indicated a range of collapse potential on the order of 1.3 to 4.7 percent at an applied vertical stress of 2,000 psf. Additional testing involving maximum density testing along with larger volume in-situ density determination was used to further evaluate the potential of collapse based on larger samples. Based on the larger sample size, the range of collapse potential ranged between on the order of 1.1 to 4.0 percent at an applied vertical stress of 2,000 psf.

Our collapse settlement analysis used an estimated active wetting depth of approximately 15 feet below the existing surface. Based on the analysis and the active wetting depth, the collapse potential zone now ranged between 1.5 percent and 2.7 percent. Earth Systems notes that the potential for collapse is “Moderate” and we evaluated samples within the active wetting zone having a value of 1 to 2.7 percent. Boring B-11 was determined to exhibit the worst case for collapse and was used for settlement analysis due to collapse.

Three estimates of collapse settlement based on three possible grading recommendations are presented: Pavement Recommendations, Building Pad Four Foot Over-excavation, and Building Pad Six Foot Over-Excavation. Please note that collapse settlement is based on the worst case for the samples collected, from boring B-11. The three settlements for the worst-case scenario for the locations tested are provided in the table below:

Table 2
Estimated Settlement due to Hydro Collapse

Grading Recommendation	General Collapse Settlement (inches)**
Pavement Area*	1
4 Feet Over-Excavation *	⅝
6 Feet Over-Excavation	½

*--Assuming 2 ksf overburden exists during inundation

**--Localized areas where direct water is applied could be significantly greater. These settlements are based upon the limited samples obtained in the site area. Increased water introduction into the site through drywells, infiltrating structures or leach fields/seepage pits could increase the collapse potential and related settlement. Site and structure specific exploration and testing with specific recommendations should be provided via a design-level geotechnical report at each site once plans are developed.

3.5 Expansive Soils

Expansive soils are characterized by their ability to undergo significant volume change (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors, and may cause unacceptable settlement or heave of structures, concrete slabs supported-on-grade, or pavements supported over these materials. Depending on the extent and location below finished subgrade, expansive soils can have a detrimental effect on structures. Based on our visual observations, site soils were observed to be granular however clayey zones could be present. As such, the Expansion Index of the onsite soils is anticipated to be "very low" for granular soils, and if encountered, could be medium to high for clayey soils as defined by ASTM D 4829. Samples of building pad soils should be observed or tested during grading to confirm or modify these findings.

3.6 Corrosivity

Three samples of the near-surface blended soil and one in situ sample from a depth of 10 feet within the site area were tested for potential to corrosion of concrete and ferrous metals. The tests were conducted in general accordance with the ASTM test methods to evaluate pH, resistivity, and water-soluble sulfate and chloride content. The test results are presented in Appendix B. These tests should be considered as only an indicator of corrosivity for the samples tested. Other earth materials found on site may be more, less, or of a similar corrosive nature. Water-soluble sulfates in soil can react adversely with concrete. ACI 318 provides the relationship between corrosivity to concrete and sulfate concentration, presented in the table below:

Table 3
Sulfate Corrosion Correlations

Water-Soluble Sulfate in Soil (ppm)	Corrosivity to Concrete
0-1,000	Negligible
1,000 – 2,000	Moderate
2,000 – 20,000	Severe
Over 20,000	Very Severe

In general, the lower the pH (the more acidic the environment), the higher the soil corrosivity will be with respect to ferrous structures and utilities. As soil pH increases above 7 (the neutral value), the soil is increasingly more alkaline and less corrosive to buried steel structures, due to protective surface films, which form on steel in high pH environments. A pH between 5 and 8.5 is generally considered relatively passive from a corrosion standpoint. High chloride levels tend to reduce soil resistivity and break down otherwise protective surface deposits, which can result in corrosion of buried steel or reinforced concrete structures. Soil resistivity is a measure of how easily electrical current flows through soils and is the most influential factor. Based on the findings of studies presented in ASTM STP 1013 titled "Effects of Soil Characteristics on

Corrosion" (February, 1989), the approximate relationship between soil resistivity and soil corrosivity was developed as shown in Table 4.

Table 4
Resistivity Corrosion Correlations

Soil Resistivity (Ohm-cm)	Corrosivity to Ferrous Metals
0 to 900	Very Severely Corrosive
900 to 2,300	Severely Corrosive
2,300 to 5,000	Moderately Corrosive
5,000 to 10,000	Mildly Corrosive
10,000 to >100,000	Very Mildly Corrosive

Four samples recovered from our field sampling were tested for pH, Resistivity, Chlorides, and Sulfate Content. Test results (presented in Appendix B) and shown below in Table 5 shows pH values ranging from 7.9 to 8.6, chloride contents from 17 ppm to 808 ppm, sulfate contents from 11 ppm to 348 ppm, and resistivities from 520 Ohm-cm to 6,400 Ohm-cm. Although Earth Systems does not practice corrosion engineering, the corrosion values from the soil tested are normally considered as being "Mildly to Very Severely Corrosive" to buried metals and as possessing a "Negligible" exposure to sulfate attack for concrete as defined in American Concrete Institute (ACI) 318, Section 4.3.

Table 5
Corrosivity Chemical Test Results

Location Boring/Depth	pH	Chloride (ppm)	Sulfate (ppm)	Corrosivity to Concrete	Resistivity Saturated (ohm-cm)	Corrosivity to Ferrous Metals
B2 / 0-5ft	8.3	22	26	Negligible	4,800	Moderately
B13 / 0-5ft	7.9	79	11	Negligible	3,160	Moderately
B18 / 0-5ft	8.2	17	21	Negligible	6,400	Mildly
B19 / 10ft	8.6	808	348	Negligible	520	Very Severely

The above values can potentially change based on several factors, such as importing soil from another job site and the quality of construction water used during grading and subsequent landscape irrigation. As such, an engineer competent in corrosion mitigation should review these results and design corrosion protection appropriately. Additionally, we recommend an engineer competent in corrosion analysis evaluate the results presented in Appendix B in relation to other constituents that may be of concern such as chlorides, nitrates, ammonium, etc.

3.7 Geologic Hazards

Geologic hazards that may affect the region include seismic hazards (ground shaking, surface fault rupture, soil liquefaction, and other secondary earthquake-related hazards), ground

subsidence, slope instability, flooding, and erosion. A discussion follows on the specific hazards to this site.

3.7.1 Seismic Hazards

Seismic Sources: Approximately 15 active faults or seismic zones lie within 70 miles of the project site. The primary seismic hazard to the site is strong ground shaking from earthquakes along regional faults including the Brawley and Imperial faults. The Brawley segment of the San Andreas fault is located approximately 24 miles west of the site. The Imperial segment of the San Andreas fault is located approximately 27 miles west of the site.

Surface Fault Rupture: The project site does not lie within a currently delineated State of California, *Alquist-Priolo* Earthquake Fault Zone (CGS, 2018). Well-delineated fault lines cross through this region as shown on California Geological Survey [CGS] maps (Jennings, 2010); however, no active faults are mapped in the immediate vicinity of the site. Therefore, active fault rupture is unlikely to occur at the project site. While fault rupture would most likely occur along previously established fault traces, future fault rupture could occur at other locations. Aerial photographs from 1961 to 2016 were reviewed and no naturally occurring lineaments were observed within or adjacent to the site. Anthropic lineal features associated with drainage control are common in the site vicinity.

Historic Seismicity: The site is located within a very active seismic area in southern California where large numbers of earthquakes are recorded each year. Approximately 31 magnitude 5.5 or greater earthquakes have occurred within 60 miles of the site since 1852. Significant local Imperial Valley earthquakes have included the 1940 Imperial Valley (6.9), 1942 Fish Creek Mountains (6.6), 1968 Borrego Mountain (6.6), 1979 Imperial (6.4), 1987 Elmore Ranch and Superstition Hills (6.6), and 2010 Baja (7.2) earthquakes, see Table A-2 in the Appendix. Most of the historic earthquakes have occurred along segments of the San Jacinto fault or Brawley seismic zone which produces very regular ground shaking of low (magnitude 1) to higher magnitude as described above. Ground shaking which may be tolerable from a structural design perspective, can have psychological effects that need to be understood by buyers and users of the site.

Seismic Risk: While accurate earthquake predictions are not possible, various agencies have conducted statistical risk analyses. In 2013, the California Geological Survey [CGS] and the United States Geological Survey [USGS] presented new earthquake forecasts for California (USGS UCERF3). We have used these maps in our evaluation of the seismic risk at the site. The recent Working Group of California Earthquake Probabilities (WGCEP, 2014) estimated a 35 to 41 percent conditional probability that a magnitude 6.7 to 7.0 or greater earthquake may occur in 30 years (2014 as base year) along the nearby Coachella segment of the San Andreas fault, 37 to 45 percent for the Brawley seismic zone, 30 to 41 percent for the Imperial fault, and about 5 to 7 percent for the San Jacinto (Superstition Hills section) fault. The revised estimate for an 8+ magnitude earthquake along the local San Andreas fault is about 7%.

The primary seismic risk at the site is a potential earthquake along the Brawley seismic zone and San Andreas, San Jacinto, and Imperial faults that are northwest and west of Glamis. Geologists believe that the San Andreas fault has characteristic earthquakes that result from rupture of each fault segment. The estimated characteristic earthquake is magnitude 8.1 for a multi-segment San

Andreas rupture event. The San Jacinto fault is historically be one of the most active faults in southern California, especially in the southern Imperial Valley and San Jacinto Valley. Multi-segment magnitudes for a San Jacinto fault rupture is approximately 7.9.

3.7.2 Secondary Hazards

Secondary seismic hazards related to ground shaking include soil liquefaction, ground subsidence, tsunamis, flooding, slope instability, erosion and seiches. The site is far inland, so the hazard from tsunamis is non-existent. The site is relatively flat so the hazard from slope instability is not considered a significant issue for this site, except in the near vicinity of dune fields located offsite.

Seiches: A small water storage tank and basin are located approximately 4 miles northeast and upgradient of the project, associated with mining activities. In the event of tank rupture or basin failure due to seiching, there is a remote possibility of some flooding within the defined drainages of the alluvial fan, although it appears, that any runoff would trend southerly of the project, depending on localized drainage courses and man-made modifications to drainage paths.

Soil Liquefaction and Lateral Spreading: Liquefaction is the loss of soil strength from sudden shock (usually earthquake shaking), causing the soil to become a fluid mass. Liquefaction describes a phenomenon in which saturated soil loses shear strength and deforms as a result of increased pore water pressure induced by strong ground shaking during an earthquake. Dissipation of the excess pore pressures will produce volume changes within the liquefied soil layer, which can cause settlement. Shear strength reduction combined with inertial forces from the ground motion may also result in lateral migration (lateral spreading). Factors known to influence liquefaction include soil type, structure, grain size, relative density, confining pressure, depth to groundwater (typically occurs in the upper 50 feet), and the intensity and duration of ground shaking. Soils most susceptible to liquefaction are saturated, loose sandy soils and low plasticity clay and silt. The results of our analyses indicate that groundwater depth is more than 50 feet below the ground surface and therefore liquefaction potential is low.

Dry Seismic Settlement: The amount of dry seismic settlement is dependent on relative density of the soil, ground motion, and earthquake duration. In accordance with current CGS policy (Earth Systems discussion with Jennifer Thornburg, CGS May 2014), we used a site peak ground acceleration of ⅔ $PGA_{M,}$ where PGA_M was found to be 0.39 and an earthquake magnitude of 7.9. Based upon methods presented by Tokimatsu and Seed (1987), the potential for seismically induced dry settlement of soils above the groundwater table and the full soil column heights ranging between 7.5 feet and 50 feet bgs was calculated for all borings. Earth Systems found the largest settlement was less than ⅛ inch due to dry seismic forces found at boring B-11, which had a maximum depth of 50 feet. Although the 50-foot deep boring had the largest settlement, the highest differential settlement occurred for the 25 feet bgs borings (B-15 and B-28). The highest differential settlements was found less than ⅛ inch.

Due to the general uniformity of the soils encountered, seismic settlement is expected to occur on an areal basis and as such per Special Publication 117 (2008), the calculated differential settlement (after Section 5.1 mitigation) between all borings is estimated to be less than ¼ inch.

Ground Subsidence: Based on research of nearby State-monitored groundwater wells, elevations of groundwater and the well ground surface has been generally stable for the last 20 years. Figure 2 in this report indicates the groundwater has deviated approximately 26 feet between 1979 and 2005. As areal subsidence typically occurs on a regional basis and with a large fluctuation of groundwater levels, the effects of subsidence on structures within the site should have a low potential. Based on a USGS web site (https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html), the project area is not located within an area of land subsidence in California.

Flooding: The project site lies within two designated FEMA Flood Zones: A and X (see Figure 4) Zone "A" is defined as "Without Base Flood Elevation" and Zone "X" is defined as "Areas of 0.2% annual chance floodplain; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas of less than 1 square mile; and areas protected by levees from 1% annual chance flood." These zones are defined on FEMA Map Number 06025C1125C and 06025C1475C both effective 9/26/2008. The project site is in an area where sheet and concentrated flow and erosion could occur. Appropriate project design by the civil engineer, construction, and maintenance can minimize the sheet flooding potential.

From Section 3.2 of this report, please be aware the 2006 google photo shows what looks like natural storm channel erosion (dry stream beds) present in the middle of the project and south of the Glamis store. Therefore, uncontrolled concentrated flows may exist at or near the project site and debris flow may occur.

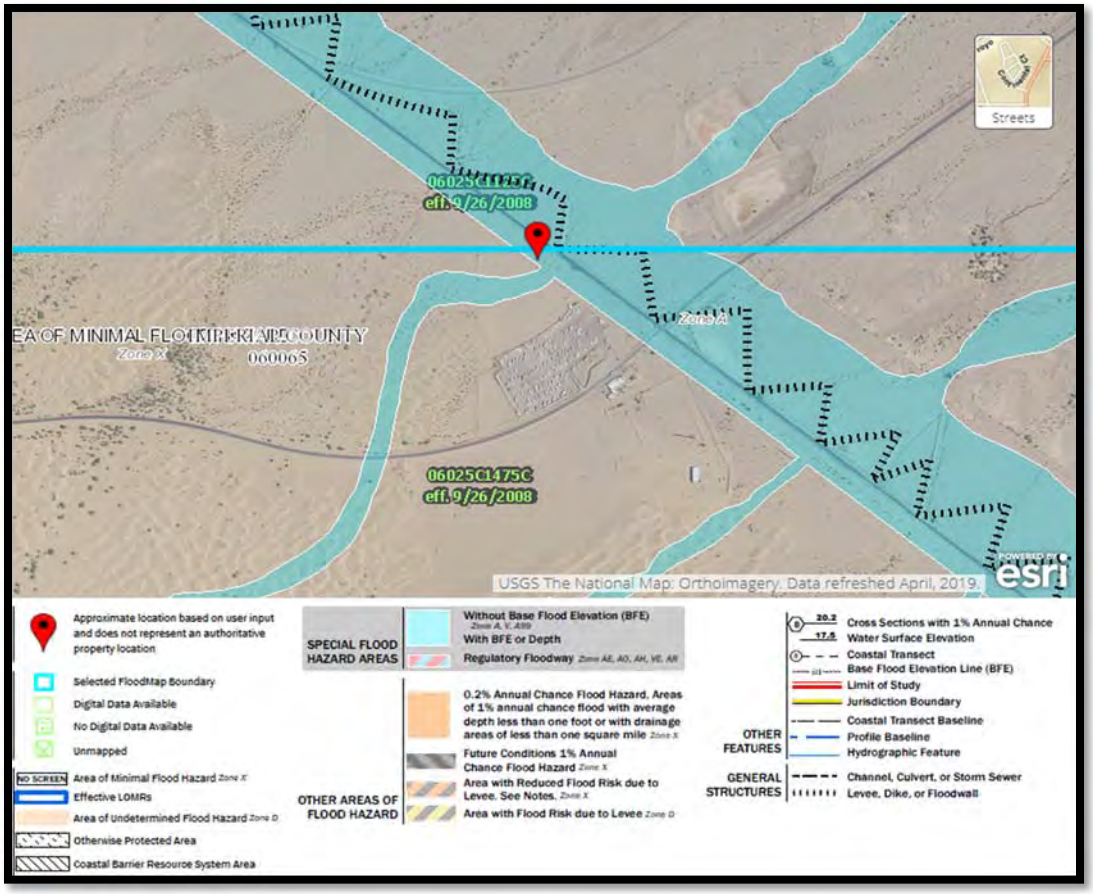

Figure 3 Zone A Flood Boundary

Section 4
CONCLUSIONS

The following is a summary of our conclusions and professional opinions based on the data obtained from a review of selected technical literature and the site evaluation.

General:

- Based on the limited exploration associated with a feasibility study, from a geotechnical feasibility level perspective, the sites are generally suitable for the proposed development as described within, provided further design-level studies are performed to quantify actual design parameters and hazards. Design-level reports will supersede recommendations within. Additionally, site-specific design recommendations may differ from recommendations presented within if differing conditions are found.

Geotechnical Constraints and Mitigation:

- The primary geologic hazard is severe ground shaking from earthquakes originating on regional faults. A major earthquake above magnitude 7 originating on the local segments of the San Andreas, San Jacinto, and Imperial faults, the Brawley seismic zones or other nearby fault zones would be the critical sources for seismic event that may affect the site within the design life of the proposed development. Engineered design and earthquake-resistant construction increase safety and allow development of seismic areas.

- The underlying geologic condition for seismic design is Site Class D. A qualified professional should design any permanent structure constructed on the site. The minimum seismic design should comply with the 2016 edition of the California Building Code.

- The site is about 24 miles from an active seismic source as defined in the California Geological Survey. A qualified professional should design any permanent structure constructed on the site. The minimum seismic design should comply with the 2016 or 2019 edition of the California Building Code.

- The soils are susceptible to wind and water erosion. Preventative measures to reduce seasonal flooding and erosion should be incorporated into site grading plans. Dust control should also be implemented during construction. Site grading should be in strict compliance with the requirements of the South Coast Air Quality Management District [SCAQMD].

- The soils tested have a low to moderate potential for collapse. Preventative measures to reduce collapse should be incorporated into site grading plans. Storm drainage should flow away from foundations per the minimum building code regulations and water conduits should be repaired immediately or the design should follow the potential for maximum collapse not based on an active water depth as assumed in this report. Water introduction into the subsurface should be kept well away from planned structures and improved areas.

- Other geologic hazards, including fault rupture, liquefaction, seismically induced flooding, and lateral spreading are considered low.

- Site soils are generally very low in Expansion Index, but clayey zones could exist that could affect foundation design and grading recommendations. Grading recommendations within require blending of site soils to achieve a “very low” expansion fill soil for support of structures, flatwork, and pavement.

- Site soils are potentially “Very Severely Corrosive” to buried metallic elements and “Negligible” for sulfate exposure. See Section 3.6 for further information. Site soils should be reviewed by an engineer competent in corrosion evaluation.

- Currently the project area is not located within an area of land subsidence in California as described by the USGS. Groundwater overdraft does not appear to be changing significantly. It is important to emphasize increased pumping and continued groundwater pumping may lead to increased subsidence related settlement which is impossible to predict given the current level of information. If differential pumping occurs, subsidence and the damaging effects of differential settlement can occur.

- Site soils are non-uniform and are generally in a loose to very dense condition. Undocumented fill is present. Overexcavation and recompaction is required to reduce the potential for settlement by providing a compacted fill mat below foundations in order to better distribute loading.

- Site soils were generally dry to moist. The addition of significant water for compaction moisture conditioning will likely be required.

Section 5
RECOMMENDATIONS

The recommendations in the following are feasibility level only. More detailed recommendations should be provided in a design-level geotechnical report. The recommendations in the following should not be used for construction unless verified by a design-level report performed by Earth Systems.

5.1 Site Development – General Grading

A representative of Earth Systems should observe site clearing, grading, and the bottoms of excavations before placing fill. Local variations in soil conditions may warrant increasing the depth of recompaction and overexcavation.

Proper geotechnical observation and testing during construction is imperative to allow the geotechnical engineer the opportunity to verify assumptions made during the design process, to verify our geotechnical recommendations from future design-level studies have been properly interpreted and implemented during construction and is required by the 2016 California Building Code. Observation of fill placement by the Geotechnical Engineer of Record should be in conformance with Section 17 of the 2016 California Building Code. California Building Code requires full time observation by the geotechnical consultant during site grading (fill placement). Additionally, the California Building Code requires the testing agency to be employed by the project owner or representative (i.e. architect) to avoid a conflict of interest if employed by the contractor.

Clearing and Grubbing: At the start of site grading, existing vegetation, pavement, septic systems, irrigation systems, undocumented fill, construction debris, foundations, structures, trash, and underground utilities should be removed from the proposed building pad and improvement areas. Onsite soil with deleterious material may be reused if the deleterious material can be removed. Oversize material, trash, debris, vegetation (greater than 1% organic content), etc. should be removed before use as engineered fill.

Undocumented fill, and buried utilities may be located in the vicinity of proposed structures and within other areas of the project site. All buried structures which are removed should have the resultant excavation backfilled with soil compacted as engineered fill described herein or with a minimum 2-sack sand slurry approved by the project geotechnical engineer. Abandoned utilities should be removed entirely, or pressure-filled with concrete or grout and be capped. Abandoned buried utilities structures, or foundations should not extend under building limits.

After stripping and grubbing operations, areas to receive fill should be stripped of loose or soft earth materials until a firm subgrade is exposed, as evaluated by the geotechnical engineer or geologist. Before the placement of fill or after cut, the existing surface soils within the building pads and improvement areas should be over-excavated as follows:

Pad Preparation: Due to the non-uniform and variable low-density of shallow soils and hydro collapse potential, the existing soils within the building pad and foundation areas should be over-excavated a minimum of six feet below existing or finished grade, or four feet below the bottom

of the foundation, whichever is lower. The exposed subgrade bottom should be observed and tested by the geotechnical engineer or their representative to verify an in-place density of the subgrade is at or greater than 85% relative compaction per ASTM D 1557 or soils are firm (as determined by the geotechnical engineer). Deeper over-excavation may be recommended if the required in-place density is not achieved or soils are not firm.

Once the subgrade is attained and approved, the surface should be scarified an additional 12 inches, moisture conditioned to near 3% over optimum for an additional 2 feet depth below the scarification to near optimum moisture and recompacted to a minimum of 90% relative compaction per ASTM D 1557. On the bottom of the overexcavation a layer of geogrid such as Terrafix BX3000, or Tensar TX160 should be placed and overlapped at least 3 feet. Placement should be as per the manufacturer's recommendation. Moisture conditioned, compacted engineered fill should then be placed to finished grade in maximum 8-inch thick loose lifts, and be compacted to at least 90% relative compaction prior to the placement of subsequent lifts. The over-excavation should extend for at least 10 feet beyond the outer edge of the building pad and include all exterior footings or slabs, where possible, and include any overhead canopy/or covered walkway and patio areas.

Pad Preparation in High Risk Flood Hazard Areas: Pad preparation in flood hazard areas should follow pad preparation as state previously except for changes note in this section. Fill used to support or protect a structure shall be compacted to at least 95 percent of its maximum modified Proctor density. Structural fill, including side slopes, shall be protected from scouring and erosion under flood conditions up to and including the design flood, (ASCE, 2000, page 9).

Over-excavation depth shall be the minimum stated above or as set forth per the foundation depth described above.

Auxiliary Structures Subgrade Preparation: Auxiliary structures such as CMU/CIP garden or fence walls, trash enclosure, equipment pads, or retaining walls, and slabs-on-grade for support of structures/skids should have the foundation subgrade prepared similar to the building pad recommendations given above depending on their location. The lateral extent of the over-excavation needs only to extend 2 feet beyond the face of the footing. Moisture conditioned, compacted engineered fill should then be placed to finished grade as described above.

Pavement Area Preparation: In street, drive, and permanent parking areas, the exposed subgrade should be over-excavated, scarified, moisture conditioned, and compacted to at least 90% relative compaction (ASTM D 1557) for a depth of 3 feet below existing grade or finish grade (whichever is deeper). The bottom of the overexcavation should be scarified 12 inches and moisture conditioned for an additional depth of 2 feet to near 3% over optimum moisture. Engineered fill should then be moisture conditioned, placed in suitable lifts, and compacted to a minimum of 90% relative compaction to finish grade as described above, with the upper 1 foot compacted to at least 95% relative compaction. Compacted fill should be placed to finish subgrade elevation. Compaction should be verified by testing.

All over-excavations should extend to a depth where the project geologist, engineer or his representative has deemed the exposed soils as being suitable for receiving compacted fill. The

materials exposed at the bottom of excavations should be observed by a geotechnical engineer or geologist from our office before the placement of any compacted fill soils to verify all old fill is removed. Additional removals may be required as a result of observation and/or testing of the exposed subgrade after the required over-excavation.

Subgrade Preparation: In areas to receive fill not supporting structures or lightly loaded hardscape (i.e. no vehicle traffic), the subgrade should be overexcavated; moisture conditioned, and compacted to at least 90% relative compaction (ASTM D 1557) for a depth of 1½ feet below existing or finished subgrade, whichever is lower. Compaction should be verified by testing.

Engineered Fill Soils: The native soil (SM, SC, SC-SM, SP-SM, SW-SM, SW, and SP) is suitable for use as engineered fill and utility trench backfill, provided they are free of significant organic or deleterious matter. The native soil and any import should be placed in maximum 8-inch lifts (loose) and compacted to at least 90 percent relative compaction (ASTM D 1557) near its optimum moisture content prior to the placement of subsequent lifts. Soils having low plasticity or designated Clayey Sand (SC) should have their moisture content approximately 2 to 4 percent above optimum moisture content during compaction. Within pavement areas, the upper 12 inches of subgrade should be compacted to a at least 95 percent relative compaction (ASTM D 1557). Compaction should be verified by testing. Rocks larger than 6 inches in greatest dimension should be removed from fill or backfill material.

Within areas to receive foundations and slabs-on-grade the fill should be “very low” in Expansion Index. Expansive soils which are identified should be removed and replaced with low permeability soils which are “very low” in expansion potential or blended with lesser expansive soils to achieve a “very low” expansion fill. Soils which are found to have an Expansive Index greater than “very low” will require differing foundation recommendations for each specific building location which could require redesign.

Imported fill soils (if needed) should be very low in Expansion Index (ASTM D 4829) granular soils meeting the Unified Soil Classification System (USCS) classifications of SM, SP-SM, or SW-SM with a maximum rock size of 3 inches and 5 to 35-percent passing the No. 200 sieve (unless otherwise approved by the geotechnical engineer).

A program of compaction testing, including frequency and method of test, should be developed by the project geotechnical engineer at the time of grading. Acceptable methods of test may include Nuclear methods such as those outlined in ASTM D 6938 (Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods), alternative methods may include methods outlined in ASTM D 1556 (Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method), or correlated hand probing.

Engineered Fill Soils in High Risk Flood Hazard Areas: Engineered fill in flood hazard areas should follow the recommendations stated in the Section above “Engineered Fill Soils” except for changed noted in this section. Structural fill should only be used in flood hazard areas not susceptible to high velocity wave action and other forces capable of eroding the fill. Structural fill used for foundation support and protection should be properly designed, constructed and protected. Guidance on the protection of earth slopes to resist erosion from wave action and/or

high flow velocities is available in several U.S. Army Corps of Engineers' publications (U.S. Army Corps of Engineers, 1978, 1984, and 1994).

For low flood velocities (5 ft/s, or less) adjacent to structural fills, fill and slope protection is normally achieved with vegetation or velocity dissipation devices. Calculations showing the slope protection should be performed. Protection against moderate flood velocities (5-8 ft/s) will require the use of stone or other rip-rap (12 inches or greater dimension) materials. Use of structural fill for flow velocities greater than 8 ft/s may not be feasible. The use of piers, posts, columns, or piles may be a more appropriate choice. For geotechnical design requirements for pier, posts, columns, or piles, please contact Earth Systems for additional information. Earth Systems should review precise and structural foundation plans for geotechnical conformance.

Shrinkage and Oversize Losses: Based upon a 95 percent confidence level using 24 in-place soil densities in the upper five feet of soil, three maximum density curves, assuming an average 93% compaction for fill placement, we calculate the shrinkage limits between 1 and 10 percent with a mean shrinkage of 7 percent. One standard deviation from the mean is 5 percent (Negative shrinkage is bulking).

Fugitive Dust: Site soils are generally dry and have a high potential for wind erosion. General requirements for dust control include:

- Utilize continuous to semi-continuous moisture conditioning of disturbed surfaces, including graded areas and haul roads.
- Use best management practices during construction to minimize dust generation, including reduced speeds for vehicular traffic across unpaved areas.
- Terminate dust generating activities when wind speeds exceed 20 mph and employ high-wind dust mitigation protocols during high wind events.
- Use track out devices to eliminate generation of dust onto paved access roads.
- Pave or use gravel surfaces on haul roads.
- Use chemical binders or palliatives on exposed surfaces to maintain surface crusts.
- Cover exposed stock piles.
- Minimize areas of soil disturbance by phased construction practices to avoid large expanses of disturbed land at any given time.

The proposed site lies within an area of high potential for wind erosion. The site soils have a fine-grained component of their composition. As such, exposed soil surfaces may be subject to disturbed fine particulate matter (PM10) which can create airborne dust if the soil surface or roadways are not maintained. During construction, watering the soil surface can reduce airborne dust. Alternatively, a dust control palliative may be spray applied to the soil surface to act as a tackifier which contains loose soil particles. Palliatives must be reapplied periodically as they weather and degrade.

Further guidance for dust palliatives can be found in reviewing the United States Department of Agriculture publication Dust Palliative Selection and Application Guide, Document No. 9977-1207-SDTDC. Soil data related to dust palliative selection is provided in the Guide's Table 3 as shown in Figure 4 below. Earth Systems performed several classification tests on the soil. Plastic Index (PI) are in general less than 3 and fines content vary but are in general between 7 and 30 percent; however, some soils have been classified as clean sands, which have a fines content between 0 and 5 percent. Final observations and possible testing of the disturbed area needing protection should be performed for greater accuracy.

Table 3—Product selection chart.

Dust Palliative	Traffic Volumes, Average Daily Traffic			Surface Material								Climate During Traffic		
				Plasticity Index			Fines (Passing 75μm, No. 200, Sieve)							
	Light <100	Medium 100 to 250	Heavy >250 (1)	<3	3–8	>8	<5	5–10	10–20	20–30	>30	Wet &/or Rainy	Damp to Dry	Dry (2)
Calcium Chloride	✓✓	✓✓	✓	✗	✓	✓✓	✗	✓	✓✓	✓	✗ (3)	✗ (3,4)	✓✓	✗
Magnesium Chloride	✓✓	✓✓	✓	✗	✓	✓✓	✗	✓	✓✓	✓	✗ (3)	✗ (3,4)	✓✓	✓
Petroleum	✓	✓	✓	✓✓	✓	✗	✓ (5)	✓	✓ (6)	✗	✗	✓ (3)	✓✓	✓
Lignin	✓✓	✓✓	✓	✗	✓	✓✓ (6)	✗	✓	✓✓	✓✓	✓ (3,6)	✗ (4)	✓✓	✓✓
Tall Oil	✓✓	✓	✗	✓✓	✓	✗	✗	✓	✓✓ (6)	✓ (6)	✗	✓	✓✓	✓✓
Vegetable Oils	✓	✗	✗	✓	✓	✓	✗	✓	✓	✗	✗	✗	✓	✓
Electro-chemical	✓✓	✓	✓	✗	✓	✓✓	✗	✓	✓✓	✓✓	✓✓	✓ (3,4)	✓	✓
Synthetic Polymers	✓✓	✓	✗	✓✓	✓	✗	✗	✓✓	✓✓ (6)	✗	✗	✓	✓✓	✓✓
Clay Additives (6)	✓✓	✓	✗	✓✓	✓✓	✓	✓✓	✓	✓	✗	✗	✗ (3)	✓	✓✓

Legend

✓✓ = Good ✓ = Fair ✗ = Poor

Notes:

(1) May require higher or more frequent application rates, especially with high truck volumes
(2) Greater than 20 days with less than 40% relative humidity
(3) May become slippery in wet weather
(4) SS-1 or CSS-1 with only clean, open-graded aggregate
(6) Road mix for best results

Figure 4 Excerpt from United States Department of Agriculture (Table 3)

5.2 Excavations

Excavations should be made in accordance with OSHA requirements. Using the OSHA standards and general soil information obtained from the field exploration, classification of the near surface on-site soils will likely be characterized as Type C. Actual classification of site-specific soil type per OSHA specifications as they pertain to trench safety should be based on real-time observations and determinations of exposed soils by the contractor's Competent Person (as defined by OSHA) during grading and trenching operations.

Our site exploration and knowledge of the general area indicates there is a high potential for caving and slaking of site excavations (overexcavation areas, utilities, footings, etc.). Gravels were common in the explorations and cobbles noted during drilling operation. Where excavations over 4 feet deep are planned lateral bracing or appropriate cut slopes of 1½:1 (horizontal/vertical) should be provided. No surcharge loads from stockpiled soils or construction materials should be

allowed within a horizontal distance measured from the top of the excavation slope and equal to the depth of the excavation.

Excavations which parallel structures, pavements, or other flatwork, should be planned so that they do not extend into a plane having a downward slope of 1.5:1 (horizontal: vertical) from the bottom edge of the footings, pavements, or flatwork. Shoring or other excavation techniques may be required where these recommendations cannot be satisfied due to space limitations or foundation layout. Where overexcavation will be performed adjacent to existing structures, ABC slot cutting techniques may be used. The width of the slot cuts will depend on the soils encountered at the point of excavation (slot cut widths are generally no greater than 5 to 8 feet and excavated in an alternating A then B, then C pattern to minimize disturbance and undermining to the existing foundations).

Shoring: Shoring may be required where soil conditions, space or other restrictions do not allow a sloped excavation. A braced or cantilevered shoring system may be used.

A temporary cantilevered shoring system should be designed to resist an active earth pressure equivalent to a fluid weighing 50 pounds per cubic foot (pcf). Braced or restrained excavations above the groundwater table should be designed to resist a uniform horizontal equivalent soil pressure of 65 pounds per cubic foot (pcf). The values provided above assume a level ground surface adjacent to the top of the shoring and do not include a factor of safety.

Fifty percent of an areal surcharge placed adjacent to the shoring may be assumed to act as a uniform horizontal pressure against the shoring. Special cases such as combinations of slopes and shoring or other surcharge loads may require an increase in the design values recommended above. These conditions should be evaluated by the project geotechnical engineer on a case-by-case basis.

Cantilevered shoring must extend to a sufficient depth below the excavation bottom to provide the required lateral resistance. We recommend required embedment depths be determined using methods for evaluating sheet pile walls and based on the principles of force and moment equilibrium. For this method, the allowable passive pressure against shoring, which extends below the level of excavation, may be assumed to be equivalent to a fluid weighing 270 pcf. Additionally, we recommend a factor of safety of at least 1.2 be applied to the calculated embedment depth and passive pressure be limited to 2,000 psf.

The contractor should be responsible for the structural design and safety of all temporary shoring systems. The contractor should carefully review the boring logs in this report, and perform their own assessment of potential construction difficulties, and methods should be selected accordingly. The method of excavation and support is ultimately left to the contractor.

A representative from our firm should be present during all site demolition, and clearing and grading operations to monitor site conditions; substantiate proper use of materials; evaluate compaction operations; and verify the recommendations contained herein are met.

5.3 Utility Trenches

Backfill of utilities within roads or public right-of-ways should be placed in conformance with the requirements of the governing agency (water district, public works department, etc.). Utility trench backfill within private property should be placed in conformance with the provisions of this report. Backfill operations should be observed and tested to monitor compliance with these recommendations.

Trench Width and Vertical Loads on Pipelines: Vertical loads to the pipeline are highly dependent upon the geometry of the trench. In general, the narrower the trench is at the top of the pipe/conduit with respect to the diameter of the conduit, the less vertical load is applied to the conduit. This is because as the trench backfill and bedding compress or consolidate over time, the weight of the soil mass is partially offset by the frictional resistance along the trench sidewalls. In addition, the type of bedding supporting the pipeline affects the bearing strength of the conduit. This is accounted by a load factor that is multiplied to the design strength of the conduit. The pipe manufacturer recommendations for trench installation and maximum width should be followed to reduce the potential for overloading the pipe due to excess backfill load.

Pipe Subgrade and Bedding: Pipeline subgrade should be compacted to a minimum of 90% relative compaction (ASTM D 1557) or be in a firm condition as evaluated by the geotechnical engineer or his representative for a depth of 6 inches below any bedding. Bedding material shall consist of sand 100 percent passing a No. 4 sieve and less than 5 percent fines (passing a No. 200 sieve) and a sand equivalent of 30 or more if jetted and a fines content no greater than 15 percent with a sand equivalent of 30 or more if mechanically compacted, or as approved by the project inspector and geotechnical engineer. The unprocessed native soils are not typical of that used for bedding and import will be required if needed. Bedding should be compacted to at least 90% relative compaction or firm (less than 3" insertion of a ½" probe under typical 200 lb weight).

Pipe-Zone, Trench–Zone, Trench Backfill and Compaction: Backfill of utilities should be placed in conformance with the requirements of the specifications. Backfill of utilities within roads or public right-of-ways should be placed in conformance with the requirements of the governing agency (water district, public works department, etc.).

Pipe zone backfill material (the pipe area from the bedding to 12 inches above the top of pipe) may consist of native soils screened to a ¾" maximum particle size or import sand (as described above for bedding) as dictated by the pipe designer or manufacturer. The pipe zone backfill material should be placed in maximum 8-inch lifts (loose) and compacted near its optimum moisture content. Pipe zone backfill should be compacted to a minimum of 90% relative compaction (ASTM D 1557) or to a firm condition as evaluated by the geotechnical engineer or his representative. Compaction should be assured in the pipe haunches.

The native soil is suitable for use as trench zone and street zone (and manholes) backfill (from the top of pipe zone up to finished grade), provided it is free of significant organic or deleterious matter and oversize materials. This backfill shall contain no particles larger than 3 inches in greatest dimension. The final backfill material should be placed in maximum 8-inch lifts (loose) and compacted to at least 90% relative compaction (ASTM D 1557) near its optimum moisture

content for the trench zone and 95% for the street zone (upper 12 inches) where below pavement. Compaction should be verified by testing.

Backfill materials should be brought up at substantially the same rate on both sides of the pipe or conduit. Reduction of the lift thickness may be necessary to achieve the above recommended compaction. Care should be taken to not overstress the piping during compaction operations. Mechanical compaction is recommended; ponding or jetting is not recommended.

Alternatively, if the utility cannot accommodate the increased stress, or if compaction is difficult, we recommend the pipe be encased by at least 1 foot of 1-sack cement-sand slurry (at least 1 foot as measured from the top of pipe). Backfill operations should be observed and tested to monitor compliance with these recommendations.

In general, coarse-grained sand and/or gap graded gravel (i.e. ¾-inch rock or pea-gravel, etc.) should not be used for pipe or trench zone backfill due to the potential for soil migration into the relatively large void spaces present in this type of material and water seepage along trenches backfilled with coarse-grained sand and/or gravel. Water seepage or soil migration will cause settlement of the overlying soils. Rock backfill where permitted should be wrapped in filter fabric such as Mirafi 140N where there is contact with native or other fill soils.

Compaction should be verified by testing. Backfill operations should be observed and tested to monitor compliance with these recommendations. Trench backfill compacted per these requirements can be expected to settle 0.1 to 0.3 percent of the trench depth. This can cause an elevation difference between backfilled trenches and the surrounding soil or pavement. Increased relative compaction can reduce settlement if the potentials presented are not acceptable. The geotechnical engineer should be consulted on a case-by-case basis to provide further recommendations to reduce the settlement potential.

5.4 Slope Construction

Slopes are not generally proposed for this project; however, minor slopes (less than 5 feet in height) may be constructed. Site soils are highly susceptible to erosion. Compacted fill slopes protected against erosion (per approved methods such as significant planting, facing (concrete, soil cement, or similar), or erosion blankets, etc.) should be constructed at 2:1 (horizontal: vertical) or flatter inclinations. Unprotected slopes with exposed native soils at the surface should be expected to require repair after heavy nuisance or storm runoff occurs due to significant erosion. The above slope recommendations may change pending a more in-depth geotechnical evaluation once design plans are developed. Slopes used as nuisance or storm drainage channel slopes which should be no steeper than 3:1.

Compacted fill should be placed at near optimum moisture content and compacted to a minimum 90 percent of the maximum dry unit weight, as measured in relation to ASTM D 1557 test procedures. The exposed face of any cut or fill slope (upper 12 inches) should have a minimum relative density of 90 percent of the maximum dry unit weight, as measured in relation to ASTM D 1557 test procedures, and be compacted at near optimum moisture content. Due to the highly erodible site soils, slope faces should be protected with facing or rip-rap to reduce the erosion potential, or be maintained on a regular basis when erosion occurs.

5.4.1 Surficial Slope Failures

Site soils are highly susceptible to erosion from wind and water sources. All slopes will be exposed to weathering, resulting in decomposition of surficial earth materials, thus potentially reducing shear strength properties of the surficial soils. In addition, these slopes become increasingly susceptible to rodent burrowing. As these slopes deteriorate, they can be expected to become susceptible to surficial instability such as soil slumps, erosion, soil creep, and debris flows. Development areas immediately adjacent to ascending or descending slopes should address future surficial sloughing of soil material and erosion. Such measures may include debris fences, slope facing, catchment areas or walls, diversion ditches or berms, soil planting, velocity reducers or other techniques to contain soil material away from developed areas and reduce erosion. Additionally, foundations should be set back at least 5 feet from the edge of slope or as per the 2016 CBC, whichever is greater. See also Section 5.1 for erosion mitigation recommendations.

Operation and maintenance inspections should be done after a significant rainfall event and on a time-based criteria (annually or less) to evaluate distress such as erosion, slope condition, rodent infestation burrows, etc. Inspections should be recorded and photographs taken to document current conditions. The repair procedure should outline a plan for fixing and maintaining surficial slope failures, erosional areas, gullies, animal burrows, etc. Repair methods could consist of excavating and infilling with compacted soil erosional features, track walking the slope faces with heavy equipment, as determined by the type and size of repair. These repairs should be performed in a prompt manner after their occurrence. Slope inclinations should be maintained and a maintenance program should include identifying areas where slopes begin to steepen. Where future maintenance is not possible, slopes should be faced to reduce the erosion and degradation potential.

Slope faces are highly erodible even if compacted and will gradually erode and move down slope presenting maintenance issues and debris deposited in drainage devices and flatwork areas. The minimum material necessary to support landscaping should be specified by the landscape consultant (typically less than 6 inches).

5.5 Shallow Foundations

In our professional opinion, foundations for the structures proposed (as presented within) could be supported on shallow foundations bearing in properly prepared and compacted soils placed as recommended in Section 5.1. The following recommendations are based on “very low” expansion category soils in the upper 6 feet of subgrade. Soils which are found to be more expansive than a “very low” Expansion Index will require differing foundation requirements which should be provided on a case by case basis.

Footing design of widths, depths, and reinforcing are the responsibility of the Structural Engineer, considering the structural loading and the geotechnical feasibility level parameters given in this report. The recommended minimum footing depth below lowest adjacent grade should be maintained (lowest grade within 2 feet laterally as measured from the foundation bottom). Earth Systems should be retained to observe foundation excavations before placement of reinforcing steel or concrete. Loose soil or construction debris should be removed from footing excavations

before placement of concrete. *All footing excavations should be probed for uniformity. Soft or loose zones should be excavated and recompacted to finish foundation bottom subgrade. The bottom of all foundations should be tested to confirm a minimum of 90% relative compaction (ASTM D 1557).*

Slope Setback for Foundations: Earth Systems recommends a minimum setback distance of 5 feet. The 2016 California Building Code provides setback distances for foundations along slopes. Setback distances are measured differently for foundations located above the slope and those located below the slope. For foundations located at the top of the slope, the measurement is taken horizontally from the outside face of the foundation footing to the face of the slope. For foundations located below the slope, the horizontal distance is measured from the face of the structure to the top of the slope. For pools and slopes steeper than 1(H):1(V), please contact Earth System for these setbacks with submittal of detailed information using plan form.

Conventional Spread Foundations: Allowable soil bearing pressures are given below for foundations bearing on recompacted soils as described in Section 5.1. Allowable bearing pressures are net (weight of footing and soil surcharge may be neglected).

- Continuous Wall foundations, 12-inch minimum width and 4-feet maximum width and minimum 18 inches below grade:
  1500 psf for dead plus design live loads

- Pad foundations, 2 x 2 foot minimum and approximately 7 x 7 foot maximum in plan and 24 inches below grade:
  2000 psf for dead plus design live loads

A one-third (⅓) increase in the allowable bearing pressure may be used when calculating resistance to wind or seismic loads as bearing is controlled by tolerable long-term settlement. The allowable bearing values indicated are based on the anticipated maximum loads of 100 kips for isolated spread footings (7'x7' maximum) and 4 kip/ft for continuous footings. If the anticipated loads exceed these values, the geotechnical engineer must reevaluate the allowable bearing values as the allowable bearing was controlled by the allowable settlement such that total settlement due to static and collapse provides a distortion angle equal or greater than 1:480.

The spacing between any large spread footings should be evaluated by the geotechnical engineer during the plan review stage to confirm or modify the settlement estimates and bearing capacity due to large footings and the influences from adjacent footings. A preliminary analysis suggests spacing the footings (adjacent edge to adjacent edge) a lateral distance from one another of the width of the largest footing from any adjacent footing, such that influence effects are minor.

Maximum foundation sizes given above are based on settlement due to Dead + Sustained Live loads. Transient loads such as earthquake or wind loads are not subject to the stated size limitations; however, the allowable bearing pressure (including ⅓ increase) should be followed considering the relevant foundation sizes given above.

An average modulus of subgrade reaction, k, of 200 pounds per cubic inch (pci) can be used to design lightly loaded footings and slabs founded upon compacted fill. Other foundations such as mat slabs, will require the use of differing modulus of subgrade reaction values than used for lightly loaded slabs.

Minimum Foundation Reinforcement: Minimum reinforcement should be provided by the structural engineer to accommodate the settlement potentials presented within. Minimum reinforcement for continuous wall footings should be four, No. 4 steel reinforcing bars, two placed near the top and two placed near the bottom of the footing. This reinforcing is not intended to supersede any structural requirements provided by the structural engineer.

5.5.1 Estimated Settlements for Foundations

Estimated Settlements for Shallow Foundations: We estimated a total settlement of approximately ⅝ inch based on static loading. Collapse settlement was estimated in Section 3.2 and was found to be approximately ½ inch based on grading recommendation of Section 5.1 (6ft existing and 2ft below footing). Differential settlement from the combination of static and collapse settlement condition is estimated to be less than ¾ inch. As such, considering the differential settlement for the settlement condition (static loading, seismic and collapse) applied over a typical foundation distance of 40 feet, the angular distortion is considered 1:480 which meets the typical allowable of 1:480, which is normally defined as a tolerable level for typical buildings with standard foundations.

Earth Systems should review the foundation plan to review and analyze the actual distortion angles. The structural engineer should submit the plans and column and wall loading for review and analysis.

5.6 Seismic Coefficients

This site may be subject to severe ground shaking due to potential fault movements along regional faults. The site soils are not subject to liquefaction induced bearing failure. As such, the *minimum* seismic design should comply with the 2016 edition of the CBC using the seismic coefficients given in the list below.

Seismic parameters are based upon computation by American Society of Civil Engineers (ASCE) hazard map database, which developed a web interface that uses the USGS web services and retrieve the seismic design data and presents it in a report format. This website does not perform any calculations to the table values. The web site can be located at: https://asce7hazardtool.online and Earth Systems entered the site on July 29, 2019.

2016 CBC (ASCE 7-10 w/ July 2013 errata) Seismic Parameters

Site Location:	32.99677°N/115.07081°W (approximate central site location)
Site Class:	D

Maximum Considered Earthquake [MCE] Ground Motion

Short Period Spectral Response S_s:	0.974 g
1 second Spectral Response, S_1:	0.358 g

Design Earthquake Ground Motion

Short Period Spectral Response, S_{DS}	0.721 g
1 second Spectral Response, S_{D1}	0.402 g
PGA_M	0.39 g

The intent of the CBC lateral force requirements are to provide a structural design that will resist collapse to provide reasonable life safety from a major earthquake, but may experience some structural and nonstructural damage. A fundamental tenet of seismic design is inelastic yielding is allowed to adapt to the seismic demand on the structure. In other words, *damage is allowed*. The CBC lateral force requirements should be considered a *minimum* design. The owner and the designer may evaluate the level of risk and performance that is acceptable. Performance based criteria could be set in the design. The design engineer should exercise special care so that all components of the design are fully met with attention to providing a continuous load path. An adequate quality assurance and control program is urged during project construction to verify the design plans and good construction practices are followed. This is especially important for sites lying close to major seismic sources. Design peak horizontal ground accelerations are estimated to be above 0.4 g. Vertical accelerations are typically 1/3 to 2/3 of the horizontal acceleration but can equal or exceed horizontal accelerations depending upon underlying geologic conditions and basin effects.

Depending upon the extent of structural and geotechnical design of exterior flatwork, walls, utilities, roadways, and other similar site improvements, some damage due to seismic events will occur. We recommend a standard statement for purchasers of the property and within title reports that seismic induced damage may occur. Note that all of southern California in general is in earthquake country. Site developments in southern California are typically not designed to mitigate anticipated seismic events without some damage. In fact, the Building Code is intended to provide Life-Safety performance, not complete damage-free design. In other words, some damage from earthquakes in the form of structural damage, settlement, cracking, and disruption of utilities is expected and that repair after an earthquake event will likely be required. It is not the current standard of care for site developers to fully mitigate all anticipated earthquake induced hazards. It is incumbent on the developer to advise the end-users of the project of the anticipated hazards in the form of disclosure statements during the initial and subsequent purchase processes.

According to literature from Robert W. Day, doors and windows may stick at distortion angles between 1:240 and 1:175. In this situation, a human being could be put in a life-threatening situation. Therefore, Earth Systems recommends the maximum distortion angle using all the settlement conditions including seismic settlements be 1:240. For all settlement conditions excluding seismic settlement, the structure's maximum distortion angle should be the typical required 1/480.

5.7 Slabs

Subgrade: Concrete slabs-on-grade and flatwork should be supported by compacted soil placed in accordance with Section 5.1 of this report.

Vapor Retarder: In areas of moisture-sensitive floor coverings, coatings, adhesives, underlayment, goods or equipment stored in direct contact with the top of the slab, bare slabs, humidity controlled environments, or climate-controlled cooled environments, an appropriate vapor retarder that maintains a permeance of 0.01 perms or less after ASTM E1745's mandatory conditioning tests should be installed to reduce moisture transmission from the subgrade soil to the slab. For these areas, a vapor retarder (Stego wrap 15-mil thickness or equal) should underlie the floor slabs. If a Class A vapor retarder (ASTM E 1745) is specified, the retarder can be placed directly on non-expansive soil, and be covered with a minimum 2 inches of clean sand.

Clean sand is defined as well or poorly-graded sand (ASTM D 2488) of which less than 5 percent passes the No. 200 sieve and all the material passes a No. 4 sieve. The site soils do not fulfill the criteria to be considered clean sand. Alternatively, the slab designer may consider the use of other vapor retarder systems that are recommended by the American Concrete Institute.

Low-slump concrete should be used to help reduce the potential for concrete shrinkage. The effectiveness of the membrane is dependent upon its quality, the method of overlapping, its protection during construction, the successful sealing of the membrane around utility lines, and sealing the membrane at perimeter terminations and of all penetrations. Capillary breaks, if any, beneath slabs should consist of a minimum of at least four inches of permeable base material (Caltrans) with the following specified gradation.

Table 6
Percent Passing Sieve Size

Sieve Size	Percent Passing
1 inch	100
¾ Inch	90-100
3/8 Inch	40-100
#4	25-40
#8	18-33
#30	5-15
#50	0-7
#200	0-3

Where vapor retarders are placed directly on a gravel capillary break, they should be a minimum of 15 mil thickness. Where concrete is placed directly on the vapor retarder "plastic", proper curing techniques are essential to minimizing the potential of slab edge curl and shrinkage cracking. The edges of slabs can curl upward because of differential shrinkage when the top of the slab dries to lower moisture content than the bottom of the slab. Curling and cracking are caused by the difference in drying shrinkage between the top and bottom of the slab. Curling

and cracking can be exacerbated by hot weather, or dry condition concrete placement, even with proper curing techniques.

The following minimum slab recommendations are intended to address geotechnical feasibility level concerns such as potential variations of the subgrade and are not to be construed as superseding any structural design. A design engineer should be retained to provide building specific systems to handle subgrade moisture to ensure compliance with SB800 with regards to moisture and moisture vapor.

Slab Thickness and Reinforcement: Slab thickness and reinforcement of slabs-on-grade are contingent on the recommendations of the structural engineer or architect. Based upon our findings, a modulus of subgrade reaction of approximately 200 pounds per cubic inch can be used in concrete lightly loaded (not mat) slab design for the expected compacted subgrade. Mat slab design will require differing modulus values.

Concrete slabs and flatwork should be a minimum of 5 inches thick (actual, not nominal). If heavily loaded flatwork is proposed (forklift drive areas, heavy racking, etc.), the actual thickness should be designed by the structural engineer utilizing techniques of the American Concrete Institute (ACI) and may be greater than 4 inches in thickness. We suggest the concrete slabs be reinforced with a minimum of No. 3 rebar at 18-inch centers, both horizontal directions, placed at slab mid-height to better resist cracking related offset. Concrete floor slabs may either be monolithically placed with the foundations or doweled (No. 4 bar embedded at least 40 bar diameters) after footing placement. The thickness, location, and reinforcing given are not intended to supersede any structural or corrosion requirements provided by the structural engineer. The project architect or concrete inspector should continually observe all reinforcing steel in slabs during placement of concrete to check for proper location within the slab. These slab recommendations are based on the shallow surface soils having an Expansive Index of “Very Low”, and prior to placement of concrete, the subgrade is presaturated and compacted as recommended within.

Sidewalks: For sidewalks, 6x6 10/10 welded wire fabric or No. 3 rebar at 18 inches on center may be used. Sidewalks should be at least four inches in actual thickness. A minimum concrete gap of three (3) inches should be provided around the steel reinforcing fabric and the edge of the formwork. Reinforcing steel should be placed at mid-height within the sidewalk and placed upon centralizers rather than lifted into place during placement. Flat sheets should be used instead of rolls, as rolls do not allow for accurate locating of the fabric at mid height of the slab. Where the reinforcing steel does not have adequate cover, it will corrode and can fracture the cured concrete and produce unsightly rust discoloration when exposed to the corrosive site soils and landscape water. Fabric should be overlapped at least six inches at joints. Control joints should be provided in all concrete slabs-on-grade at a maximum spacing of approximately four to six feet. All joints should form approximately square patterns to reduce the potential for randomly oriented, contraction cracks. Contraction joints in the slabs should be tooled at the time of the pour or saw cut (¼ of slab depth (1 inch for a 4-inch slab)) within eight hours of concrete placement. Construction (cold) joints should consist of thickened butt joints with one-half inch dowels at 18 inches on center or a thickened keyed-joint to resist vertical deflection at the joint.

Slab-On-Grade Control Joints: Control joints should be provided in all regular concrete slabs-on-grade at a maximum spacing of 24 to 36 times the slab thickness as recommended by American Concrete Institute [ACI] guidelines. All joints should form approximately square patterns to reduce the potential for randomly oriented shrinkage cracks. Control joints in the slabs should be tooled at the time of the concrete placement or saw cut (¼ of slab depth) as soon as practical but not more than 8 hours from concrete placement, or just after the initial set if concrete is exposed to sunny or hot climatic conditions.

Construction (cold) joints should consist of thickened butt joints with ½-inch dowels at 18 inches on center embedded per ACI or a thickened keyed-joint to resist vertical deflection at the joint. All control joints in exterior flatwork should be sealed to reduce the potential of moisture or foreign material intrusion. These procedures will reduce the potential for randomly oriented cracks, but may not prevent them from occurring.

Curing and Quality Control: The contractor should take precautions to reduce the potential of curling and cracking of slabs in this arid desert region using proper batching, placement, and curing methods. Curing is highly affected by temperature, wind, and humidity.

Quality control procedures should be used, including trial batch mix designs, batch plant inspection, and on-site special inspection and testing. Curing should be in accordance with ACI recommendations contained in ACI 211, 304, 305, 308, 309, and 318. Additionally, the concrete should be vibrated during placement. Concrete should be wet cured for at least 7 days with burlap or plastic and not allowed to dry out to minimize surface cracking.

5.8 Retaining Walls and Lateral Earth Pressures

Retaining Walls:

- Retaining walls should be designed for an active soil pressure equivalent to a fluid density of 40 pcf. The active lateral earth pressures are for horizontal (level) backfills using the on-site native soils on walls free to rotate at least 0.1 percent of the wall height. Walls, which are restrained against movement or rotation at the top, should be designed for an at-rest equivalent fluid pressure of 60 pcf. The lateral earth pressure values presented are for level backfill and are provided for walls backfilled with drainage materials and existing on-site soils. Walls retaining sloping backfill or other conditions should be evaluated on a case-by-case basis by the geotechnical engineer.
- In addition to the active or at rest soil pressure, the proposed wall structures (where not excepted) should be designed to include forces from dynamic (seismic) earth pressure. Dynamic pressures are additive to active and at-rest earth pressure and should be considered as 5 pcf for flexible walls, and 10 pcf for rigid walls. Seismic pressures are based on PGA_M (see Section 5.5) and the near fault location of the site.
- Retaining wall foundations should be placed upon compacted fill described in Section 5.1.
- A backdrain or an equivalent system of backfill drainage should be incorporated into the wall design, whereby the collected water is conveyed to an approved point of discharge. Design should be in accordance with the 2016 California Building Code. Drain rock (1 cubic foot per foot) should be wrapped in filter fabric such as Mirafi 140N as a minimum.

Backfill immediately behind the retaining structure should be a free-draining granular. Waterproofing should be according to the designer's specifications. Water should not be allowed to pond or infiltrate near the top of the wall. To accomplish this, the final backfill grade should divert water away from retaining walls.

- Compaction on the retained side of the wall within a horizontal distance equal to one wall height (to a maximum of six feet) should be performed by hand-operated or other lightweight compaction equipment (90% compaction relative to ASTM D 1557 at near optimum moisture content). This is intended to reduce potential locked-in lateral pressures caused by compaction with heavy grading equipment or dislodging modular block type walls.
- The above recommended values do not include compaction or truck-induced wall pressures. Care must be taken during the compaction operation not to overstress the wall. Heavy construction equipment should be maintained a distance of at least six feet away from the walls while the backfill soils are placed. Upward sloping backfill or surcharge loads from nearby footings can create larger lateral pressures. Should any walls be considered for retaining sloped backfill or placed next to foundations, our office should be contacted for recommended design parameters. Surcharge loads should be considered if they exist within a zone between the face of the wall and a plane projected 45 degrees upward from the base of the wall. The increase in lateral earth pressure should be taken as 50% of the surcharge load within this zone. Retaining walls subjected to traffic loads should include a uniform surcharge load equivalent of 240 psf for auto and 450 psf for truck traffic located at least three feet from the wall back edge. Retaining walls should be designed with a minimum factor of safety of 1.5.

Frictional and Lateral Coefficients:

- Resistance to lateral loads (including those due to wind or seismic forces) may be provided by frictional resistance between the bottom of concrete foundations and the underlying soil, and by passive soil pressure against the foundations. An allowable coefficient of friction of 0.30 may be used between cast-in-place concrete foundations and slabs and the underlying soil. An allowable coefficient of friction of 0.25 may be used between pre-cast or formed concrete foundations and slabs and the underlying soil
- Allowable passive pressure may be taken as equivalent to the pressure exerted by a fluid weighing 275 pounds per cubic foot (pcf). Vertical uplift resistance may consider a soil unit weight of 105 pounds per cubic foot. The upper one foot of soil should not be considered when calculating passive pressure unless confined by overlying asphalt concrete pavement or Portland cement concrete slab. The soils pressures presented have considered onsite fill soils. Testing or observation should be performed during grading by the soils engineer or his representative to confirm or revise the presented values.
- Passive resistance for thrust blocks bearing against firm natural soil or properly compacted backfill can be calculated using an equivalent fluid pressure of 275 pcf. The maximum passive resistance should not exceed 2,000 psf.

- Construction employing poles or posts (i.e. lamp posts) may utilize design methods presented in Section 1807.3 of the CBC for sand (SM) material class for lateral and axial resistance.
- The passive resistance of the subsurface soils will diminish or be non-existent if trench sidewalls slough, cave, or are over widened during or following excavations. If this condition is encountered, our firm should be notified to review the condition and provide remedial recommendations, if warranted.

5.9 Site Drainage, Infiltration, and Maintenance

Positive drainage in native soils should be maintained away from the structures (5 percent for 10 feet minimum) to prevent ponding and subsequent saturation of the foundation soils. Gutters and downspouts in conjunction with a 1 to 2% paved or hardscape grade should be considered as a means to convey water away from foundations if increased fall is not provided.

Drainage should be maintained for all areas. Water should not pond on or near paved areas or foundations. The following recommendations are provided in regard to site drainage and structure performance:

- In no instance should water be allowed to flow or pond against structures, slabs or foundations or flow over unprotected slope faces. Adequate provisions should be employed to control and limit moisture changes in the subgrade beneath foundations or structures to reduce the potential for soil saturation and erosion. Landscape borders should not act as traps for water within landscape areas. Potential sources of water such as piping, drains, broken sprinklers, etc., should be frequently examined for leakage or plugging. Any such leakage or plugging should be immediately repaired.
- It is highly recommended landscape irrigation or other sources of water be collected and conducted to an approved drainage device. Landscaping and drainage grades should be lowered and sloped such that water drains to appropriate collection and disposal areas. All runoff water should be controlled, collected, and drained into proper drain outlets. Control methods may include curbing, ribbon gutters, 'V' ditches, or other suitable containment and redirection devices.
- Drywells, seepage pits, leach fields, washout areas, showers, condensate lines, infiltrating structures, or similar measures which infiltrate water into the subgrade soil should be located or drain at least 75 feet away from structures or improvements where excessive settlement is a concern.
- Maintenance of drainage systems and infiltration structures (basins) can be the most critical element in determining the success of a design. They must be protected and maintained from sediment-laden water both during and after construction to prevent clogging of the surficial soils and any filter medium. The potential for clogging can be reduced by pre-treating structure inflow through the installation of maintainable forebays, biofilters, or sedimentation chambers. In addition, sediment, leaves, and debris must be removed from inlets and traps and basin bottoms on a regular basis, and basin bottoms must have silt soils removed periodically from the bottom.

- The drainage pattern should be established at the time of final grading and maintained throughout the life of the project. Additionally, drainage structures should be maintained (including the de-clogging of piping, basin bottom scarification and removal, etc.) throughout their design life. Maintenance of these structures should be incorporated into the facility operation and maintenance manual. Structural performance is dependent on many drainage-related factors such as landscaping, irrigation, lateral drainage patterns and other improvements.

5.10 Streets, Driveways and Parking Areas

Preliminary pavement structural sections for associated drive areas including recommendations for standard asphalt concrete, and Portland cement concrete are provided below.

Pavement Area Preparation: In street, drive, and parking areas, the exposed subgrade should be overexcavated as recommended in Section 5.1, moisture conditioned, and compacted. Compaction should be verified by testing. Aggregate base should be compacted to a minimum 95% relative compaction (ASTM D 1557).

Automobile Traffic and Parking Areas: Pavement sections presented in the following Table for automobile type traffic areas with typical highway type tires and are based on a tested R-value and current Caltrans design procedures. Traffic Indices (TI) of 5 and 7 were used to facilitate the design of asphalt concrete pavements for parking and main drives. The TI's assumed below should be reviewed by the project Civil Engineer to evaluate the suitability for this project. All design should be based upon an appropriately selected Traffic Index. Changes in the traffic indices will affect the corresponding pavement section.

Table 7
Preliminary Flexible Pavement Section Recommendations
Onsite/Interior Automobile Drive Areas

R-Value of Subgrade Soils – Greater than 60 (tested) Design Method – CALTRANS

Traffic Index (Assumed)	Pavement Use	Flexible Pavements	
		Asphaltic Asphalt-Concrete Thickness (inches)	Aggregate Aggregate Base Thickness (inches)
5	Parking Areas	3.0	4.0
7	Drive Areas	4.0	4.0

The presented Traffic Indices should be confirmed by the project civil engineer. Changes to the Traffic Index will result in a differing pavement section required.

Conventional, rigid pavements, i.e. Portland cement concrete (PCC) pavements, can be used in areas subject to relatively high static wheel loads and/or heavy vehicle loading and unloading and turning areas (i.e. truck/bus lanes). The pavement section below is based upon the American Concrete Institute (ACI) *Guide for Construction of Concrete Parking Lots, ACI 330R*, and the assumptions outlined below.

Table 8
Preliminary Portland Cement Concrete Pavement Sections

Areas	Minimum Pavement PCC Thickness (inches)	Minimum 28-Day Flexural Strength (psi)	Concrete-Compressive Strength (psi)
Truck Access or Loading/Unloading Areas (Traffic Category D, ADTT =700)	7.0*	550	3,650

Modulus of Subgrade Reaction drive area fill, k = 200 pci

*Concrete Pavement may be placed directly on the compacted subgrade (minimum 95% relative compaction ASTM D 1557)

Should the actual traffic category vary from those assumed and listed above, these sections should be modified. All above recommended preliminary pavement sections are contingent on the following recommendations being implemented during construction:

- Pavement should be placed upon compacted fill processed as described in Section 5.1. The upper 12 inches of subgrade soils beneath the asphalt concrete and conventional PCC pavement section should be compacted to a minimum of 95 percent relative compaction (ASTM D 1557).
- Subgrade soils and aggregate base should be in a stable, non-pumping condition at the time of placement and compaction. Exposed subgrades should be proof-rolled to verify the absence of soft or unstable zones.
- Aggregate base materials should be compacted at near optimum moisture content to at least 95 percent relative compaction (ASTM D 1557) and should conform to Caltrans Class II criteria. Compaction efforts should include proof-rolling of the aggregate base with heavy compaction-specific equipment (i.e. drum rollers).
- All concrete curbs separating pavement from landscaped areas should extend at least 6 inches into the subgrade soils to reduce the potential for movement of moisture into the aggregate base layer (this reduces the risk of pavement failures due to subsurface water originating from landscaped areas).
- Asphaltic concrete should be ½-in. or ¾-in. grading and compacted to a minimum of 95% of the 75-blow Marshall density (ASTM D 1559) or equivalent.
- Portland cement concrete pavements should be constructed with transverse joints at maximum spacing of 12 feet. A thickened edge should be used where possible and, as a minimum, where concrete pavements abut asphalt pavements. The thickened edge should be 1.2 times the thickness of the pavement (8.4 inches for a 7-inch pavement), and should taper back to the pavement thickness over a horizontal distance on the order of 3 feet.
- All longitudinal or transverse control joints should be constructed by hand forming or placing pre-molded filler such as "zip strips." Expansion joints should be used to isolate fixed objects abutting or within the pavement area.

The expansion joint should extend the full depth of the PCC pavement. Joints should run continuously and extend through integral curbs and thickened edges. We recommend joint layout be adjusted to coincide with the corners of objects and structures. In addition, the following is recommended for concrete pavements:

1. Slope pavement at least ½ percent to provide drainage;
2. Provide rough surface texture for traction;
3. Cure PCC concrete with curing compound or keep continuously moist for a minimum of seven days;
4. Keep all traffic off concrete until PCC compressive strength exceeds 2,000 pounds per square inch (truck traffic should be limited until the concrete meets the design strength (3,650 psi); and
5. Consideration should be given to having PCC construction joints keyed or using slip dowels on 24-inch centers to strengthen control and construction joints. Dowels placed within dowel baskets should be incorporated into the concrete at each saw-cut control joint (i.e. dowel baskets and dowels are set in place before placement of concrete).

- Portland cement concrete placement and curing should, at a minimum, be in accordance with the American Concrete Institute [ACI] recommendations contained in ACI 211, 304, 305, 308, 309, and 318.
- Within the structural pavement section areas, positive drainage (both surface and subsurface) should be provided. In no instance should water be allowed to pond on the pavement. Roadway performance depends greatly on how well runoff water drains from the site. This drainage should be maintained both during construction and over the entire life of the project.
- Proper methods, such as hot-sealing or caulking, should be employed to limit water or sand infiltration into concrete joints and the pavement base course and/or subgrade at construction/expansion joints and/or between existing and reconstructed asphalt concrete sections (if any). Water or sand infiltration could lead to premature pavement failure, or “walking” slabs from thermal loading.
- To reduce the potential for detrimental settlement, excess soil material, and/or fill material removed during any footing or utility trench excavation, should not be spread or placed over compacted finished grade soils unless subsequently compacted to at least 95 percent of the maximum dry unit weight, as evaluated by ASTM D 1557 test procedure, at near optimum moisture content, if placed under areas designated for pavement.
- Where new roadways will be installed against existing roadways, the repaired asphalt concrete pavement section should be designed and constructed to have at least the pavement and aggregate base section as the original pavement section thickness (for both AC and base) or upon the newly calculated pavement sections presented within, whichever is greater.

The appropriate pavement design section depends primarily on the shear strength of the subgrade soil exposed after grading and anticipated traffic over the useful life of the pavement.

R-value testing or observation of subgrade soils should be performed during grading to verify and/or modify the preliminary pavement sections presented within this report. Pavement designs assume heavy construction traffic will not be allowed on base cap or finished pavement sections.

Section 6
LIMITATIONS AND ADDITIONAL SERVICES

6.1 Uniformity of Conditions and Limitations

Our evaluation of subsurface conditions at the site has considered subgrade soil and groundwater conditions present at the time of our study. The influence(s) of post-construction changes to these conditions such as introduction or removal of water into or from the subsurface will likely influence future performance of the proposed project. The magnitude of the introduction or removal, and the effect on the surface and subsurface soils is currently unknown.

It should be recognized that definition and evaluation of subsurface conditions are difficult. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions due to the limitation of data from field studies. The availability and broadening of knowledge and professional standards applicable to engineering services are continually evolving. As such, our services are intended to provide the Client with a source of professional advice, opinions and recommendations based on the information available as applicable to the project location and scope. Recommendations contained in this report are based on our field observations and subsurface explorations, select published documents (referenced), and our present knowledge of the proposed construction. If the scope of the proposed construction changes from that described in this report, the conclusions and recommendations contained in this report are not considered valid unless the changes are reviewed, and the conclusions of this report are modified or approved in writing by Earth Systems.

Final grading and foundation plans were not available for our review before the preparation of this report, and therefore, the recommendations presented within may change pending a review of grading and foundation plans or proposed site use as this report is considered Feasibility Level. Recommendations presented in this report should not be extrapolated to other areas or be used for other projects without our prior review. This report is not valid for final site or structure design as it is feasibility only. Design-level report(s) should be prepared once plans are developed.

Findings of this report are valid as of the issued date of the report and are strictly for the client. Changes in conditions of a property can occur with passage of time, whether they are from natural processes or works of man, on this or adjoining properties. In addition, changes in applicable standards occur, whether they result from legislation or broadening of knowledge. Accordingly, findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of one year. Land use, site conditions (both on site and off site) or other factors may change over time, and additional work may be required with the passage of time.

If during construction or further exploration, soil conditions are encountered which differ from those described herein, we should be notified immediately in order that a review may be made and any supplemental recommendations provided. In such an event, the contractor should promptly notify the owner so that Earth Systems geotechnical engineer can be contacted to confirm those conditions. We recommend the contractor describe the nature and extent of the differing conditions in writing and that the construction contract include provisions for dealing

with differing conditions. Contingency funds should be reserved for potential problems during earthwork and foundation construction.

This report is issued with the understanding that the owner or the owner's representative has the responsibility to bring the information and recommendations contained herein to the attention of the architect and engineers for the project so that they are reviewed for applicability and conformance to the current design and incorporated into the plans for the project. Earth Systems has striven to provide our services in accordance with generally accepted geotechnical engineering practices in this locality at this time. No warranty or guarantee, express or implied, is made. This report was prepared for the exclusive use of the Client and the Client's authorized agents.

Demolition, grading and compaction operations should be performed in conjunction with observation and testing. The recommendations provided in this report are based on the assumption that design-level reports will be prepared and Earth Systems will be retained to provide observation during the construction phase to evaluate our recommendations in relation to the apparent site conditions at that time. If we are not accorded this observation or if design-level reports are not prepared, Earth Systems assumes no responsibility for the suitability of our recommendations. In addition, if there are any changes in the field to the plans and specifications, the Client must obtain written approval from Earth Systems engineer that such changes do not affect our recommendations. Failure to do so will vitiate Earth Systems recommendations. These services will be performed on a time and expense basis in accordance with our agreed upon fee schedule once we are authorized and contracted to proceed. Maintaining Earth Systems as the geotechnical consultant from beginning to end of the project will provide continuity of services. *The geotechnical engineering firm providing tests and observations shall assume the responsibility of Geotechnical Engineer of Record.*

Any party other than the client who wishes to use this report shall notify Earth Systems of such intended use. Based on the intended use of the report, Earth Systems may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Earth Systems from any liability resulting from the use of this report by any unauthorized party.

6.2 Additional Services

This report is based on the assumption that an adequate program of client consultation, design reports, construction monitoring, and testing will be performed during the final design and construction phases to check compliance with these recommendations. Maintaining Earth System as the geotechnical consultant from beginning to end of the project will provide continuity of services. Proper geotechnical observation and testing during construction is imperative to allow the geotechnical engineer the opportunity to verify assumptions made during the design process and to verify that our geotechnical recommendations have been properly interpreted and implemented during construction and is required by the 2016 California Building Code. Therefore, we recommend that Earth Systems be retained during the construction of the proposed improvements to provide testing and observe compliance with the design concepts and geotechnical recommendations, and to allow design changes in the event that subsurface conditions or methods of construction differ from those assumed while completing our previous

study. Additionally, the California Building Codes requires the testing agency to be employed by the project owner or representative (i.e. architect) to avoid a conflict of interest if employed by the contractor.

Construction monitoring and testing would be additional services provided by our firm. The costs of these services are not included in our present fee arrangements, but can be obtained from our office. The recommended review, tests, and observations include, but are not necessarily limited to, the following:

- Consultation during the final design stages of the project.
- Preparation of design-level reports.
- A review of the building and grading plans to observe that recommendations of our report have been properly implemented into the design.
- Observation and testing during site preparation, grading, and placement of engineered fill and Special Inspection as required by CBC Sections or local grading ordinances.
- Consultation as needed during construction.

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Appendices as cited are attached and complete this report.

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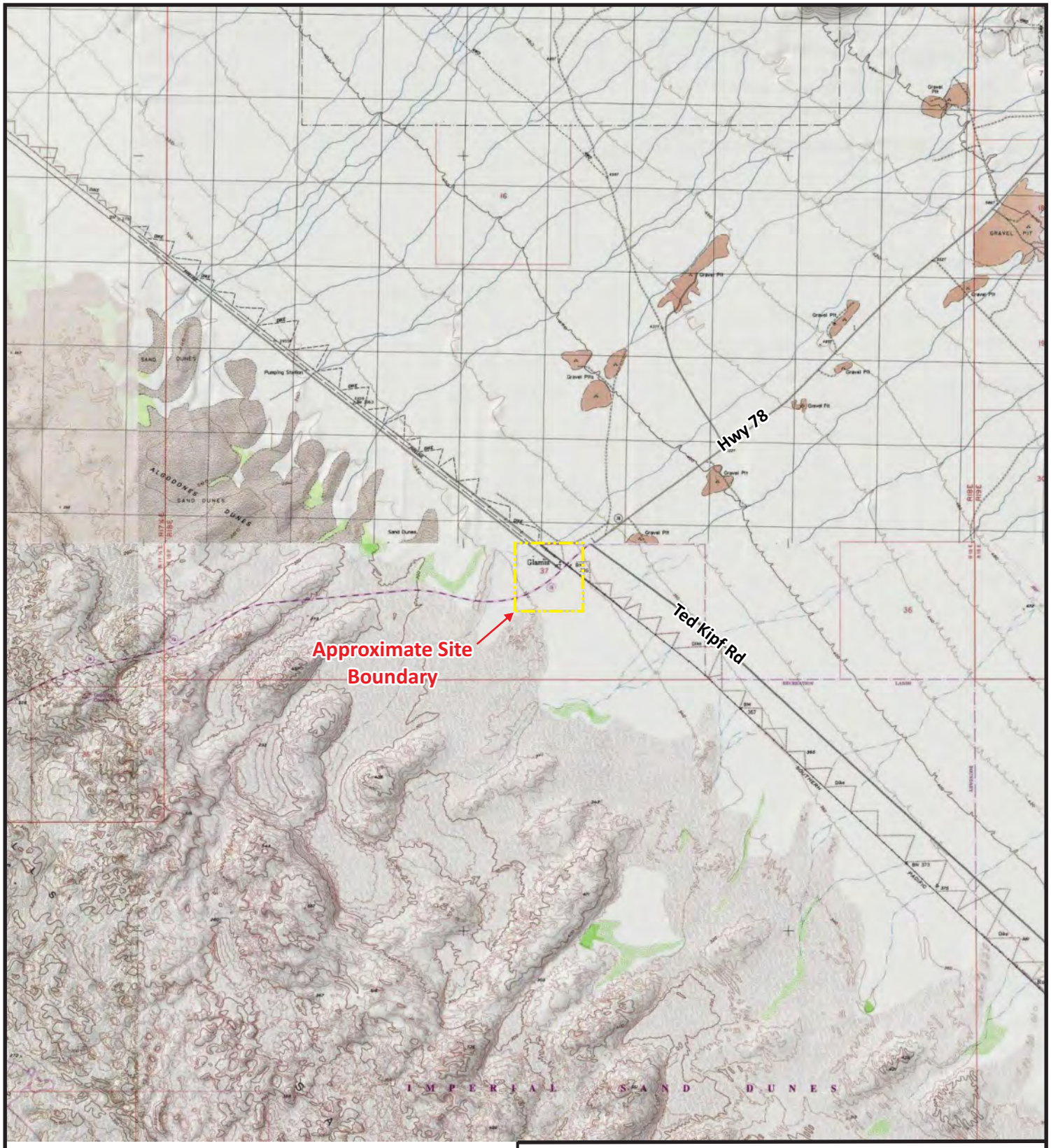
APPENDIX A

Plate 1 – Site Vicinity Map
Plate 2 – Exploration Location and Local Geologic Map
Plate 3 – Regional Geology Map
Plate 4 – Regional Fault Map
Conceptual Plan
Table A-1 Fault Parameters
Table A-2 Historic Earthquakes
Historical Aerial Photos (6 pages)
Terms and Symbols Used on Boring Logs
Soil Classification System (2 pages)
Logs of Borings and Test pits (28 pages)
Total Static Load (Spread Footing, 1 page)
Total Static Load (Continuous Footing, 1 page)
Dry Seismic Settlement after OX (3 pages)
Site Class Estimator (1 page)



LEGEND

Approximate Site Boundary

Approximate Scale: 1" = 1 Mile

0 1 Mile 2 Miles

N

Reference: Google Earth satellite image dated with USGS topographic map overlay.

Plate 1
Site Vicinity Map

Proposed Glamis Specific Plan Project
Highway 78 & Ted Kipf Road
Glamis, Imperial County, California

Earth Systems

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115.07917° W 115.07778° W 115.07639° W 115.075° W 115.07361° W 115.07222° W 115.07083° W 115.06944° W 115.06806° W 115.06667° W 115.06528° W 115.06389° W 115.0625° W

33° N
32.99861° N
32.99722° N
32.99583° N
32.99444° N
32.99306° N

B-4 B-3 B-28 T-6A B-26 B-25 B-27 T-5 B-2 T-24 B-23 B-22 B-1 B-21 T-7 B-20 B-19 B-18 T-8 B-9 T-17 B-10 B-13 B-16 B-11 B-12 T-14 B-15

Ted Kipf Rd
Highway 78
Glamis Store
Southern Pacific Railroad
Qal

LEGEND

- af_1 Artificial Fill - Roadway & Berms
- af_2 Artificial Fill - Disturbed Surface w/Minor Fill Thickness (<2-3')
- Qs Quaternary Younger Alluvium
- Qal Quaternary Dune Sand

Approximate Boring Locations
Approximate Test Pit Locations

Approximate Project Boundary
CA Wetlands South
North Algodones Dunes Wilderness

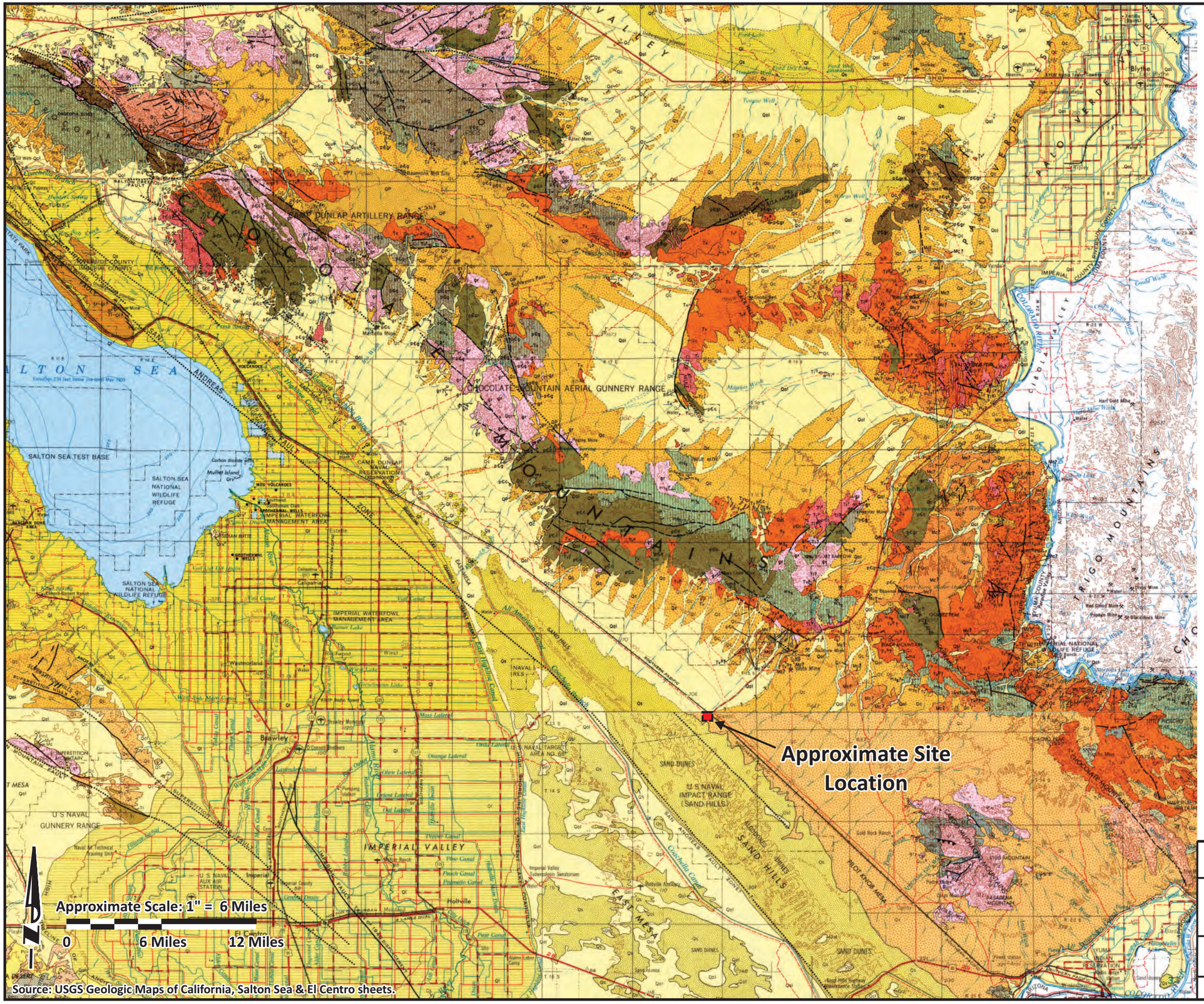
0 155 310 620 930 1,240 1,550 Feet

Plate 2
Exploration Location & Local Geologic Map

Proposed Glamis Specific Plan Project
Highway 78 & Ted Kipf Road
Glamis, Imperial County, California

Earth Systems

8/29/2019 | File No.: 303235-001



EXPLANATION

SEDIMENTARY AND METASEDIMENTARY ROCKS

CENOZOIC

QUATERNARY

Recent

- Qa — Dune sand
- Qal — Alluvium
- Qsc — Stream channel deposits (GREAT VALLEY)
- Qf — Fan deposits (GREAT VALLEY)
- Qfs — Basin deposits (GREAT VALLEY)
- Qsf — Salt deposits
- Ql — Quaternary lake deposits
- Qg — Glacial deposits
- Qt — Quaternary nonmarine terrace deposits
- Qtm — Pleistocene marine and marine terrace deposits
- Qc — Pleistocene nonmarine

Pleistocene

- Qp — Plio-Pleistocene nonmarine

TERTIARY

Pliocene

- Pu — Undivided Pliocene nonmarine
- Pun — Upper Pliocene nonmarine
- Pm — Upper Pliocene marine
- Pmc — Middle and/or lower Pliocene nonmarine
- Pmd — Middle and/or Lower Pliocene marine

Miocene

- Mc — Undivided Miocene nonmarine
- Muc — Upper Miocene nonmarine
- Mu — Upper Miocene marine
- Mmc — Middle Miocene nonmarine
- Mm — Middle Miocene marine
- Ml — Lower Miocene marine

Oligocene

- Oc — Oligocene nonmarine
- O — Oligocene marine

Eocene

- Ec — Eocene nonmarine
- E — Eocene marine

Paleocene

- Pzc — Paleocene nonmarine
- Pz — Paleocene marine

Undivided

- QTc — Cenozoic nonmarine
- Tn — Tertiary nonmarine
- Tl — Tertiary lake deposits
- Tm — Tertiary marine

MESOZOIC

CRETACEOUS

- K — Undivided Cretaceous marine
- Kun — Upper Cretaceous marine
- Kl — Lower Cretaceous marine

JURASSIC

- Kx — Knoxville Formation
- Ju — Upper Jurassic marine
- Jmd — Middle and/or Lower Jurassic marine

TRIASSIC

- Tr — Triassic marine

Franciscan Formation (Kfr)

- Kfv — Franciscan volcanic and metavolcanic rocks
- gr — Mesozoic granite rocks: gr^g-granite and adamellite; gr^d-granodiorite; gr^t-tonalite and diorite
- Ti — Mesozoic basic intrusive rocks
- Mu — Mesozoic ultrabasic intrusive rocks
- Jtv — Jura-Trias metavolcanic rocks

IGNEOUS AND META-IGNEOUS ROCKS

- Qrv — Recent volcanic: $Q_R v^r$ –rhyolite; $Q_R v^a$ –andesite; $Q_R v^b$ –basalt; $Q_R v^p$ –pyroclastic rocks
- Qpv — Pleistocene volcanic: $Q_P v^r$ –rhyolite; $Q_P v^a$–andesite; $Q_P v^b$ –basalt; $Q_P v^p$ –pyroclastic rocks
- Quaternary and/or Pliocene cinder cones
- Pv — Pliocene volcanic: $P_l v^r$ –rhyolite; $P_l v^a$–andesite; $P_l v^b$ –basalt; $P_l v^p$ –pyroclastic rocks
- Mv — Miocene volcanic: $M_l v^r$ –rhyolite; $M_l v^a$ –andesite; $M_l v^b$ –basalt; $M_l v^p$ –pyroclastic rocks
- Ov — Oligocene volcanic: $O v^r$–rhyolite; $O v^a$–andesite; $O v^b$ –basalt; $O v^p$– pyroclastic rocks
- Ev — Eocene volcanic: $E v^r$ –rhyolite; $E v^a$ –andesite; $E v^b$ –basalt; $E v^p$ –pyroclastic rocks
- Tgr — Tertiary granitic rocks
- Ti — Tertiary intrusive (hypabyssal) rocks: $T_i v^r$–rhyolite; $T_i v^a$–andesite; $T_i v^b$ –basalt
- Tv — Tertiary volcanic: $T_v v^r$ –rhyolite; $T_v v^a$–andesite; $T_v v^b$ –basalt; $T_v v^p$–pyroclastic rocks

– Fault: Dashed where approximate, dotted where concealed

Plate 3
Regional Geologic Map

Proposed Glamis Specific Plan Project
Highway 78 & Ted Kipf Road
Glamis, Imperial County, California

Earth Systems

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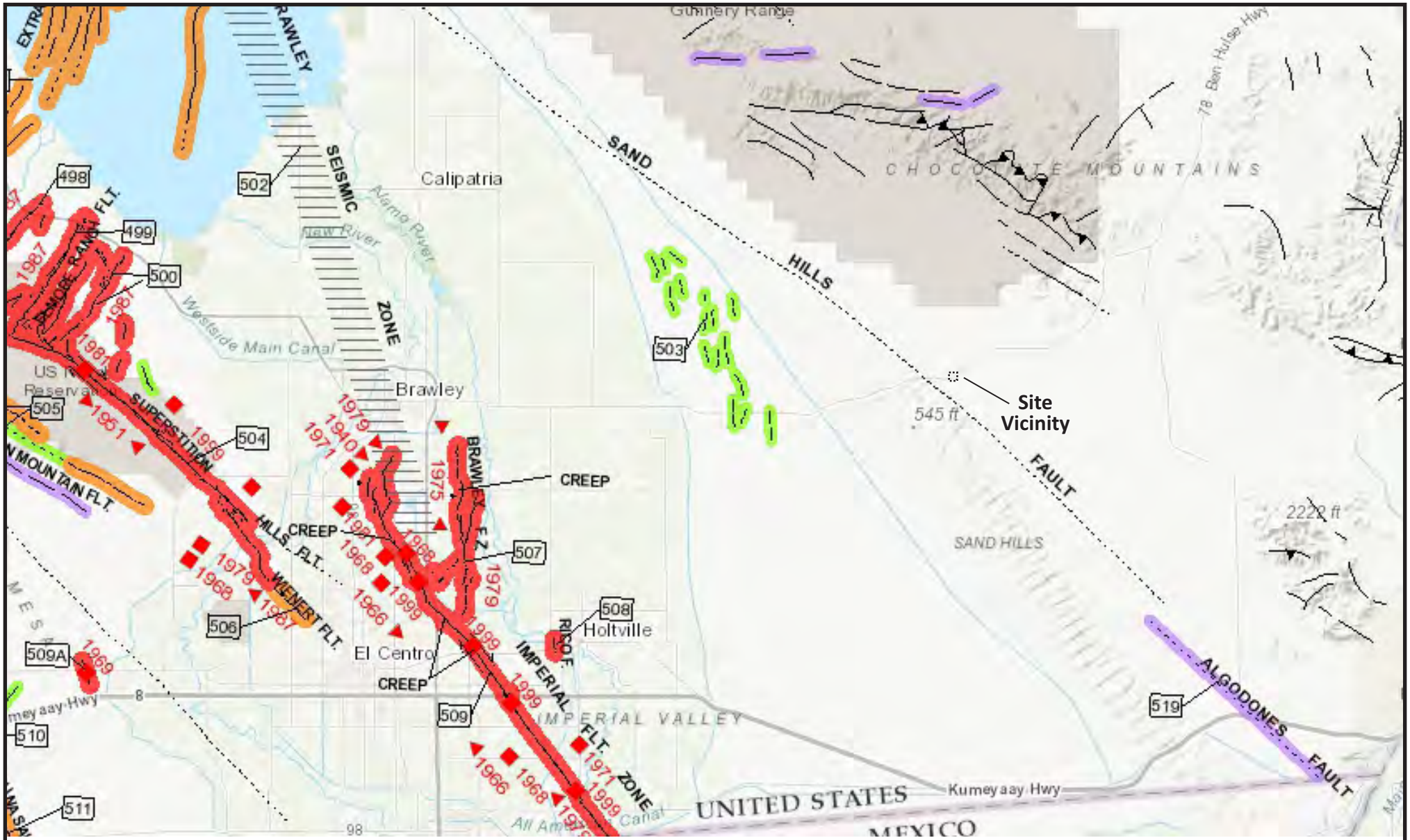


Source: CGS Data Map Series, Fault Activity Map of California.

LEGEND

- Fault along which historic (last 200 years) displacement has occurred.
- Fault along which Holocene (last 11,700 years) displacement, has occurred.
- Fault along which Late Quaternary (past 700,000 years) displacement has occurred.
- Fault along which Quaternary (past 1.6 million years) displacement has occurred.

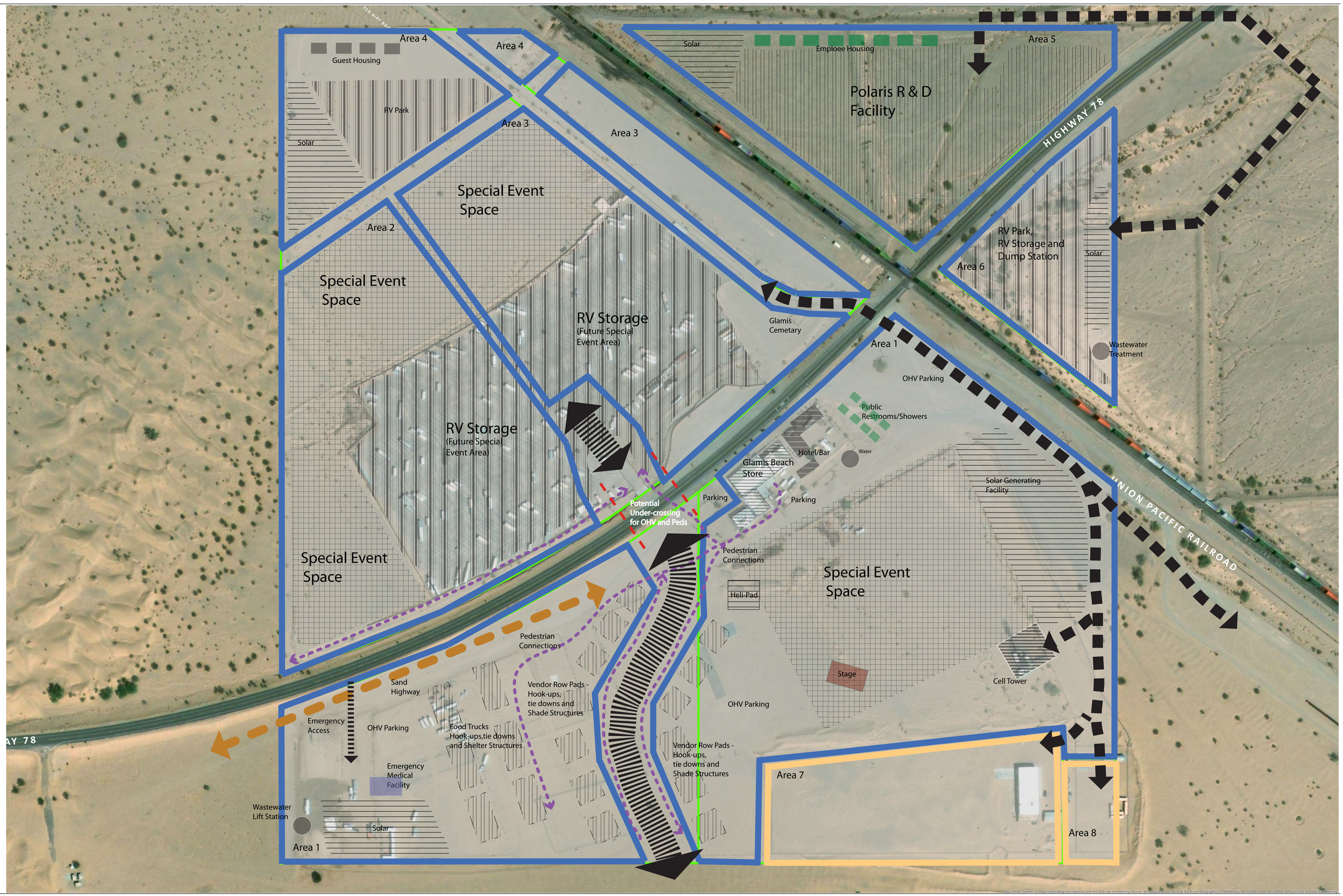
N

Plate 4
Regional Fault Map

Proposed Glamis Specific Plan Project
Highway 78 & Ted Kipf Road
Glamis, Imperial County, California

Earth Systems

8/29/2019 | File No.: 303235-001



The Altum Group

Exhibit 8

GLAMIS SPECIFIC PLAN

CONCEPTUAL SITE PLAN

0 125 250 500 750 1,000 Feet

1 INCH = 100 FEET

Table A-1
Fault Parameters

Fault Section Name	Distance (miles)	Distance (km)	Avg Dip Angle (deg.)	Avg Dip Direction (deg.)	Avg Rake (deg.)	Trace Length (km)	Fault Type	**Mean Mag**	Mean Return Interval (years)	Slip Rate (mm/yr)
Brawley (Seismic Zone), alt 2	23.8	38.4	90	250	na	61	B'	**7.0**		
Imperial	26.9	43.3	82	55	180	46	A	**6.8**	89	20
Brawley (Seismic Zone), alt 1	28.8	46.3	90	250	na	60	B'	**7.0**		
Superstition Hills	33.1	53.3	90	220	180	36	A	**7.4**	199	4
San Jacinto (Superstition Mtn)	37.2	59.8	90	210	180	26	B'	**6.6**		
Superstition Mountain	37.3	60.1	37	37	37	37	B	**7.0**		0.1
Elmore Ranch	37.5	60.3	90	310	0	29	B	**6.6**		1
Cerro Prieto	39.4	63.5	90	221	na	84	B'	**7.2**		
San Andreas (Coachella) rev	44.4	71.4	90	224	180	69	A	**7.2**	69	20
Laguna Salada	48.9	78.7	90	41	180	99	A	**6.8**	89	3.5
San Jacinto (Borrego)	50.5	81.3	90	223	180	34	A	**7.0**	146	4
Canada David (Detachment)	51.2	82.4	37	255	na	37	B'	**7.1**		
Elsinore (Coyote Mountain)	56.3	90.6	82	35	180	39	A	**7.1**	322	3
San Jacinto (Clark) rev	62.1	99.9	90	214	180	47	A	**7.6**	211	14
San Jacinto (Coyote Creek)	67.2	108.1	90	223	180	43	A	**7.3**	259	4
Blue Cut	68.0	109.5	90	177	na	79	B'	**7.1**		
Earthquake Valley (So Extension)	72.4	116.6	90	204	180	9	B'	**6.3**		
Elsinore (Julian)	74.5	119.9	84	36	180	75	A	**7.6**	725	3
Earthquake Valley	77.8	125.2	90	217	180	20	B	**6.7**		2
San Andreas (San Gorgonio Pass-Garnet HIll)	87.1	140.1	58	20	180	56	A	**7.6**	219	10
San Andreas, (North Branch, Mill Creek)	87.1	140.1	76	204	180	106	A	**7.5**	110	17
Earthquake Valley (No Extension)	88.6	142.5	90	221	180	33	B'	**6.9**		
San Jacinto (Anza) rev	90.0	144.8	90	216	180	46	A	**7.6**	151	18
Pinto Mtn	91.6	147.4	90	175	0	74	B	**7.2**		2.5
Pisgah-Bullion Mtn-Mesquite Lk	95.3	153.4	90	60	180	88	B	**7.3**		0.8
Joshua Tree (Seismicity)	95.9	154.3	90	271	na	17	B'	**6.5**		
Eureka Peak	98.9	159.2	90	75	180	19	B	**6.6**		0.6
Burnt Mtn	99.9	160.7	67	265	180	21	B	**6.7**		0.6
Calico-Hidalgo	102.3	164.6	90	52	180	117	B	**7.4**		1.8
So Emerson-Copper Mtn	102.4	164.8	90	51	180	54	B	**7.0**		0.6
Ludlow	109.9	176.9	90	239	na	70	B'	**7.0**		
Mission Creek	110.9	178.5	65	5	180	31	B'	**6.9**		
Landers	112.1	180.5	90	60	180	95	B	**7.4**		0.6
Elsinore (Temecula) rev	114.5	184.2	90	230	180	40	A	**7.4**	431	5
San Jacinto (San Jacinto Valley, stepover)	117.9	189.8	90	224	180	24	A	**7.4**	199	9
San Jacinto (Anza, stepover)	117.9	189.8	90	224	180	25	A	**7.6**	151	9
San Jacinto (Stepovers Combined)	117.9	189.8	90	229	180	25	B'	**6.7**		
San Gorgonio Pass	118.0	189.9	60	11	na	29	B'	**6.9**		
San Andreas (San Bernardino S)	120.7	194.2	90	210	180	43	A	**7.6**	150	16
Johnson Valley (No)	120.9	194.6	90	51	180	35	B	**6.8**		0.6

Reference: USGS OFR 2007-1437 (CGS SP 203) Based on Site Coordinates of 32.99677 Latitude, -115.07081 Longitude

Mean Magnitude for Type A Faults based on 0.1 weight for unsegmented section, 0.9 weight for segmented model (weighted by probability of each scenario with section listed as given on Table 3 of Appendix G in OFR 2007-1437). Mean magntude is average of Ellworths-B and Hanks & Bakun moment area relationship.

Site Coordinates: 32.996 N 115.073 W

Table A-2

Historic Earthquakes in Vicinity of Project Site, M > 5.5

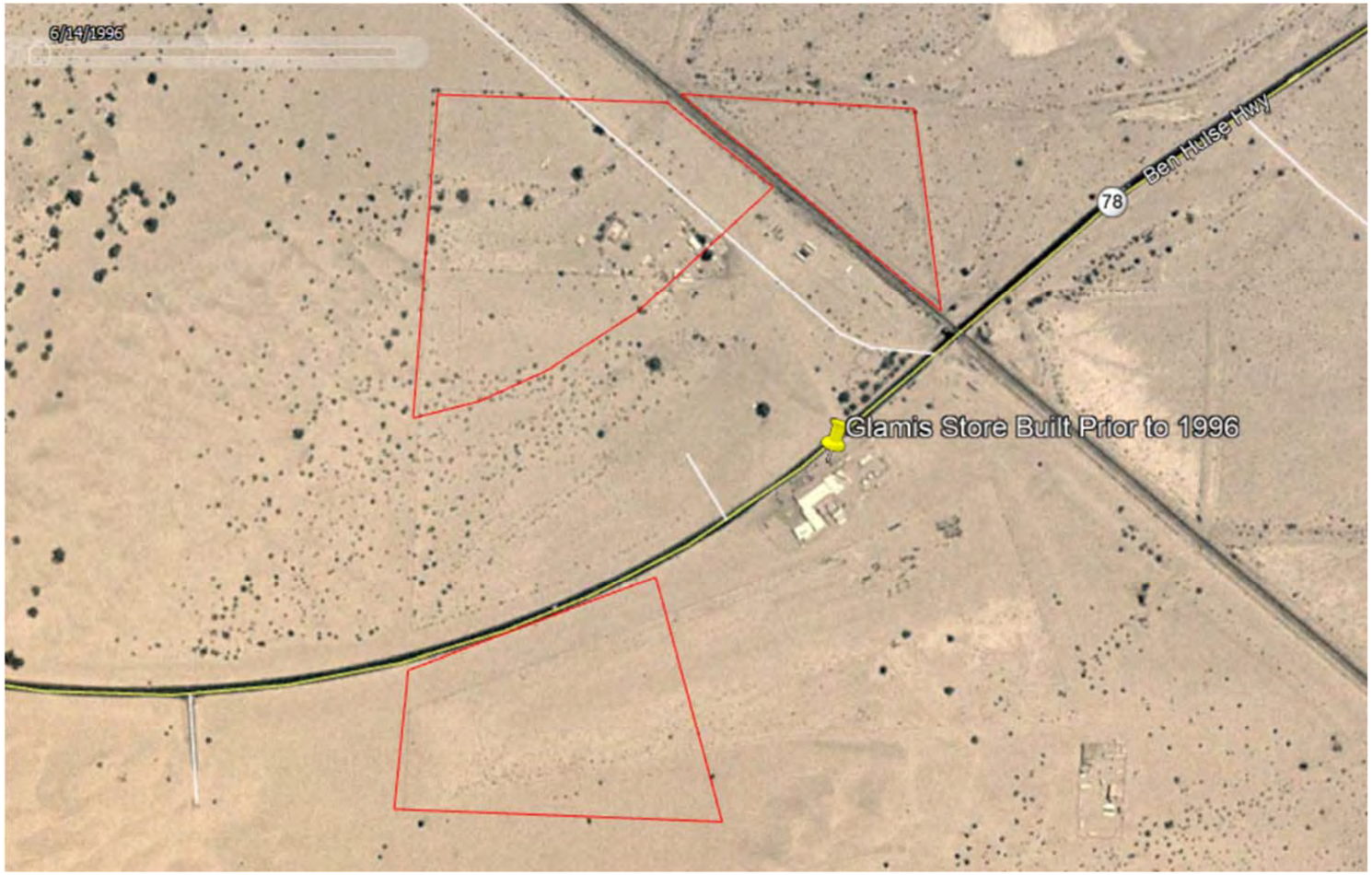
Event Name	*Day*	*Year*	*Epicenter Latittude (Degrees)*	*Epicenter Longitude (Degrees)*	*Distance from Site (mi)*	*Reported Magnitudes* M_W	M_S	M_L	M_I	Estimated Site PGA (g)
	05/03	1872	33.00	115.00	*4*				5.8	0.25
	05/28	1917	32.80	115.30	*19*				5.5	0.06
Imperial Valley	04/19	1906	32.90	115.50	*26*	**6.2**	*6.2*		5.8	0.07
Brawley Aftershock	10/15	1979	32.98	115.55	*28*			*5.8*		0.05
Imperial Valley	06/23	1915	32.80	115.50	*28*		*5.9*		5.6	0.05
Imperial Valley	06/23	1915	32.80	115.50	*28*	**6.0**	*6.0*		5.6	0.05
	07/29	1950	33.12	115.57	*30*			*5.5*		0.04
Imperial Valley	10/15	1979	32.61	115.32	*30*	**6.5**	*6.8*	*6.6*	6.0	0.07
El Centro	05/19	1940	32.73	115.50	*31*	**7.0**	*7.2*	*6.2*	7.0	0.10
Westmorland	04/26	1981	33.10	115.63	*33*	**5.9**	*6.0*	*5.6*		0.04
Fort Yuma	11/29	1852	32.50	115.00	*34*	**7.0**			7.0	0.09
	06/14	1953	32.95	115.72	*37*			*5.5*		0.03
	01/24	1951	32.98	115.73	*38*			*5.6*		0.03
	10/22	1942	33.23	115.72	*41*			*5.5*		0.03
Elmore Ranch	11/23	1987	33.08	115.78	*41*	**5.9**	*6.2*	*5.8*		0.03
	11/15	1875	32.50	115.50	*42*	**6.2**			6.2	0.04
North San Jacinto	11/07	1923	32.50	115.50	*42*				5.5	0.02
	01/01	1927	32.50	115.50	*42*			*5.5*		0.02
	01/01	1927	32.50	115.50	*42*			*5.8*		0.03
Superstition Hills	11/24	1987	33.01	115.84	*44*	**6.5**	*6.6*	*6.0*		0.05
Laguna Salada	02/24	1892	32.55	115.63	*45*	**7.0**			7.0	0.06
	02/01	1954	32.30	115.30	*50*			*5.6*		0.02
Victoria	06/09	1980	32.20	115.08	*55*	**6.4**	*6.4*	*6.1*		0.02
Laguna Salada	12/30	1934	32.25	115.50	*57*	**6.4**		*6.5*		0.03
Fish Creek Mountain	10/21	1942	33.05	116.08	*59*	**6.6**		*6.5*	6.3	0.03
Fish Creek Mountain	10/21	1942	33.05	116.08	*59*	**6.6**		*6.5*	6.3	0.04
Borrego Mountain	04/09	1968	33.19	116.13	*63*	**6.5**	*6.8*	*6.8*	6.3	0.03
	08/15	1945	33.22	116.13	*63*			*5.7*		0.02
	12/01	1958	32.25	115.75	*65*			*5.8*		0.02
	05/28	1892	33.20	116.20	*67*	**6.5**			6.3	0.03
Arroyo Salada	03/19	1954	33.28	116.18	*67*	**6.4**		*6.2*	6.2	0.03

Notes:

1.) Earthquake information primarily from Ellsworth (1990) in USGS Professional Paper 1515

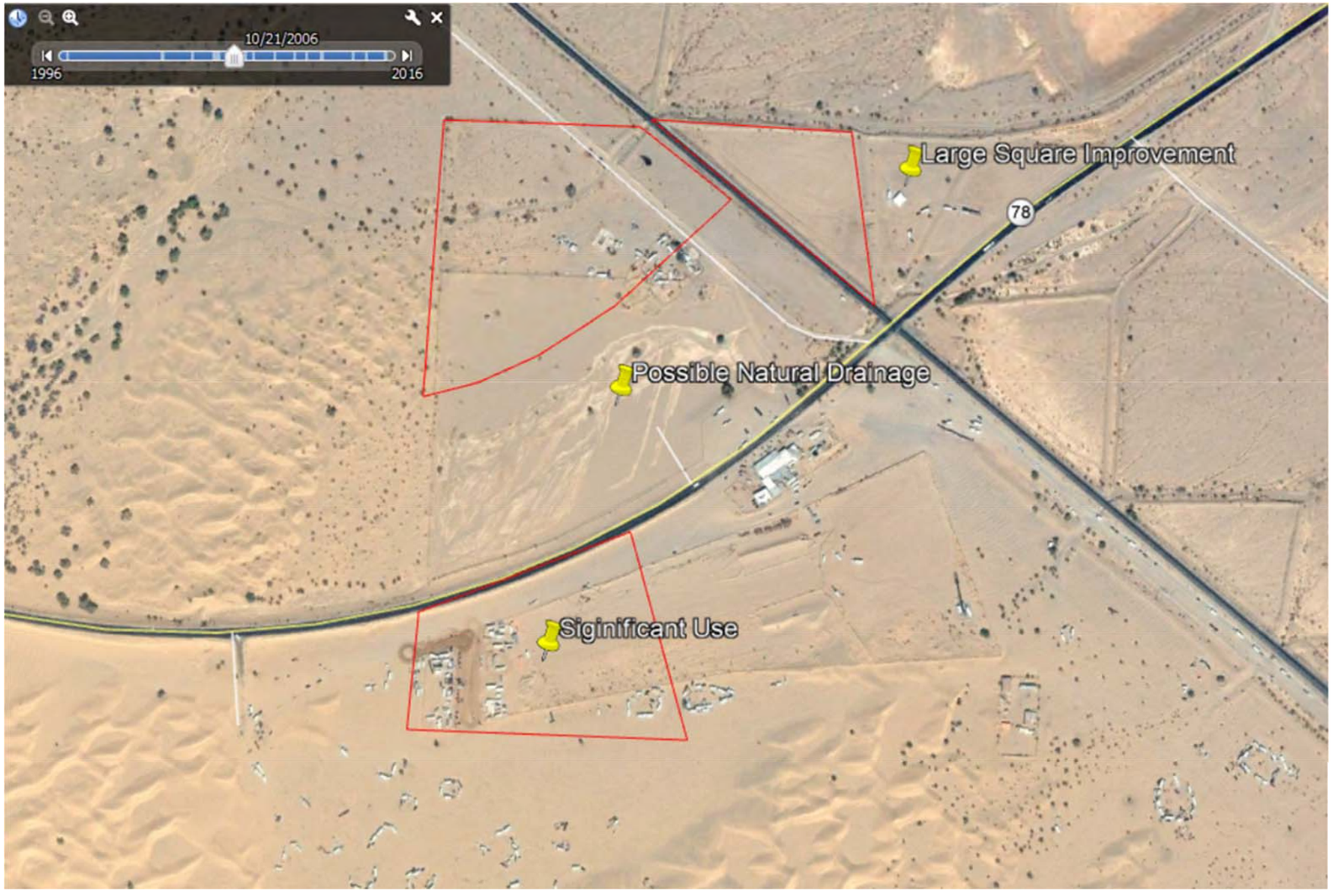
2.) Magnitude Scales: M_W - moment magntude, M_L - Local (Richter) magnitude, M_S - surface wave magnitude, M_I - estimated from felt area intensity.

3.) Before 1932, Epicenters of earthquakes are approximate, indicated to nearest 0.5 to 0.1 degree.



Aerial 1 June 1996

Aerial 2 April 2004 (Grading)



Aerial 3 October 2006

Aerial 4 August 2007

Aerial 5 February 2008

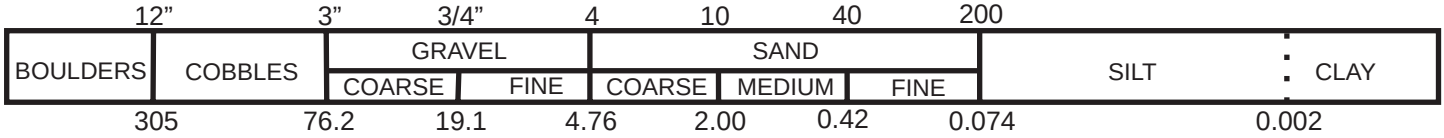
Aerial 6 June 2016

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on ASTM Designations D 2487 and D 2488 (Unified Soil Classification System). Information on each boring log is a compilation of subsurface conditions obtained from the field as well as from laboratory testing of selected samples. The indicated boundaries between strata on the boring logs are approximate only and may be transitional.

SOIL GRAIN SIZE

U.S. STANDARD SIEVE



SOIL GRAIN SIZE IN MILLIMETERS

RELATIVE DENSITY OF GRANULAR SOILS (GRAVELS, SANDS, AND NON-PLASTIC SILTS)

Very Loose	*N=0-4	RD=0-30	Easily push a 1/2-inch reinforcing rod by hand
Loose	N=5-10	RD=30-50	Push a 1/2-inch reinforcing rod by hand
Medium Dense	N=11-30	RD=50-70	Easily drive a 1/2-inch reinforcing rod with hammer
Dense	N=31-50	RD=70-90	Drive a 1/2-inch reinforcing rod 1 foot with difficulty by a hammer
Very Dense	N>50	RD=90-100	Drive a 1/2-inch reinforcing rod a few inches with hammer

*N=Blows per foot in the Standard Penetration Test at 60% theoretical energy. For the 3-inch diameter Modified California sampler,140-pound weight, multiply the blow count by 0.63 (about 2/3) to estimate N. If automatic hammer is used, multiply a factor of 1.3 to 1.5 to estimate N. RD=Relative Density (%). C=Undrained shear strength (cohesion).

CONSISTENCY OF COHESIVE SOILS (CLAY OR CLAYEY SOILS)

Very Soft	*N=0-1	*C=0-250 psf	Squeezes between fingers
Soft	N=2-4	C=250-500 psf	Easily molded by finger pressure
Medium Stiff	N=5-8	C=500-1000 psf	Molded by strong finger pressure
Stiff	N=9-15	C=1000-2000 psf	Dented by strong finger pressure
Very Stiff	N=16-30	C=2000-4000 psf	Dented slightly by finger pressure
Hard	N>30	C>4000	Dented slightly by a pencil point or thumbnail

MOISTURE DENSITY

Moisture Condition: An observational term; dry, damp, moist, wet, saturated.
Moisture Content: The weight of water in a sample divided by the weight of dry soil in the soil sample expressed as a percentage.
Dry Density: The pounds of dry soil in a cubic foot.

MOISTURE CONDITION

Dry.....Absence of moisture, dusty, dry to the touch
Damp.....Slight indication of moisture
Moist.....Color change with short period of air exposure (granular soil)
Below optimum moisture content (cohesive soil)
Wet.....High degree of saturation by visual and touch (granular soil)
Above optimum moisture content (cohesive soil)
Saturated.....Free surface water

PLASTICITY

DESCRIPTION	FIELD TEST
Nonplastic	A 1/8 in. (3-mm) thread cannot be rolled at any moisture content.
Low	The thread can barely be rolled.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit.
High	The thread can be rerolled several times after reaching the plastic limit.

GROUNDWATER LEVEL

Water Level (measured or after drilling)

Water Level (during drilling)

RELATIVE PROPORTIONS

Trace.....minor amount (<5%)
with/some.....significant amount
modifier/and...sufficient amount to influence material behavior (Typically >30%)

LOG KEY SYMBOLS

Bulk, Bag or Grab Sample

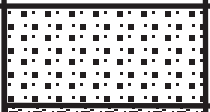
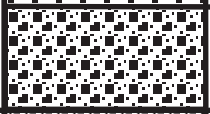
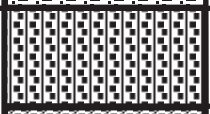
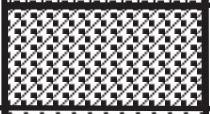
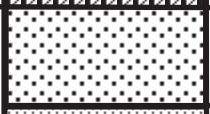
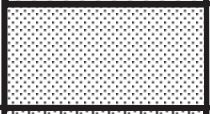
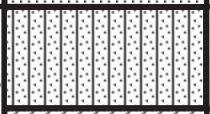
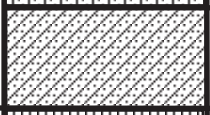
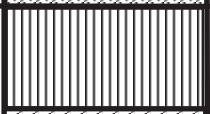
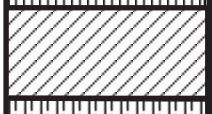
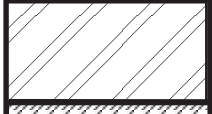
Standard Penetration Split Spoon Sampler (2” outside diameter)

Modified California Sampler (3” outside diameter)

No Recovery

Terms and Symbols Used on Boring Logs

Earth Systems

MAJOR DIVISIONS			GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS More than 50% of material is larger than No. 200 sieve size	GRAVEL AND GRAVELLY SOILS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly-graded gravels, gravel-sand mixtures. Little or no fines
		GRAVELS WITH FINES		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
	SAND AND SANDY SOILS More than 50% of coarse fraction passing No. 4 sieve	CLEAN SAND (Little or no fines)		SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sands, little or no fines
		SAND WITH FINES (appreciable amount of fines)		SM	Silty sands, sand-silt mixtures
				SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS More than 50% of material is smaller than No. 200 sieve size	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	Inorganic silts and very fine sands, rock flour, silty low clayey fine sands or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Inorganic silty, micaceous, or diatomaceous fine sand or silty soils
				CH	Inorganic clays of high plasticity, fat clays
				OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS				PT	Peat, humus, swamp soils with high organic contents
VARIOUS SOILS AND MAN MADE MATERIALS					Fill Materials
MAN MADE MATERIALS					Asphalt and concrete

Soil Classification System

Earth Systems

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-1
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

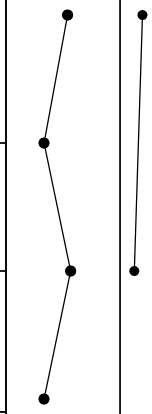
Drilling Date: June 19, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				SM			SILTY SAND WITH GRAVEL: yellow brown, loose, dry, fine to coarse grained sand, fine gravel, Fill
				SM			SILTY SAND WITH GRAVEL: yellow brown, loose, dry, fine to coarse grained sand, fine gravel, Qa
5	MOD Calif.	31,50/5"			122	2	very dense at 4 feet
10	MOD Calif.	50/6"		SW			WELL GRADED SAND: reddish brown, very dense, dry, fine to coarse grained sand, trace fine gravel and silt, calcium carbonate lenses, Qoa
15	MOD Calif.	35,50/5"		SW	114	2	WELL GRADED SAND WITH GRAVEL: reddish brown, very dense, dry, fine to coarse grained sand, fine gravel, calcium carbonate cementation
20	MOD Calif.	50/6"					no recovery
25							
30							
35							
40							
45							
50							
55							Boring completed at 20-1/2 feet No groundwater encountered Backfill with cuttings
60							

Graphic Trend
Blow Count Dry Density



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-2
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 19, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Depth (Ft.)	Sample Type (Bulk, SPT, MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SC-SM			SILTY CLAYEY SAND WITH GRAVEL: brown, medium dense, damp, fine to medium grained sand, trace silt, fine gravel, Fill
5		11,10,10		SC-SM			SILTY CLAYEY SAND WITH GRAVEL: brown, medium dense, damp, fine to medium grained sand, trace silt, fine gravel, Qa
10		25,15,22		SC			CLAYEY SAND: reddish brown to white, dense, dry, fine to medium grained sand, low plasticity, calcium carbonate lenses, Qoa
15		21,33,34		SM			SILTY SAND: light reddish brown, very dense, dry, fine to coarse grained sand, some fine gravel
20		18,20,27					
25		25,32,43					orange brown, trace fine gravel, trace calcium carbonate
30		21,17,17					
35							
40							
45							
50							
55							Boring completed at 31-1/2 feet No groundwater encountered Backfill with cuttings
60							

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
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Boring No. B-3
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

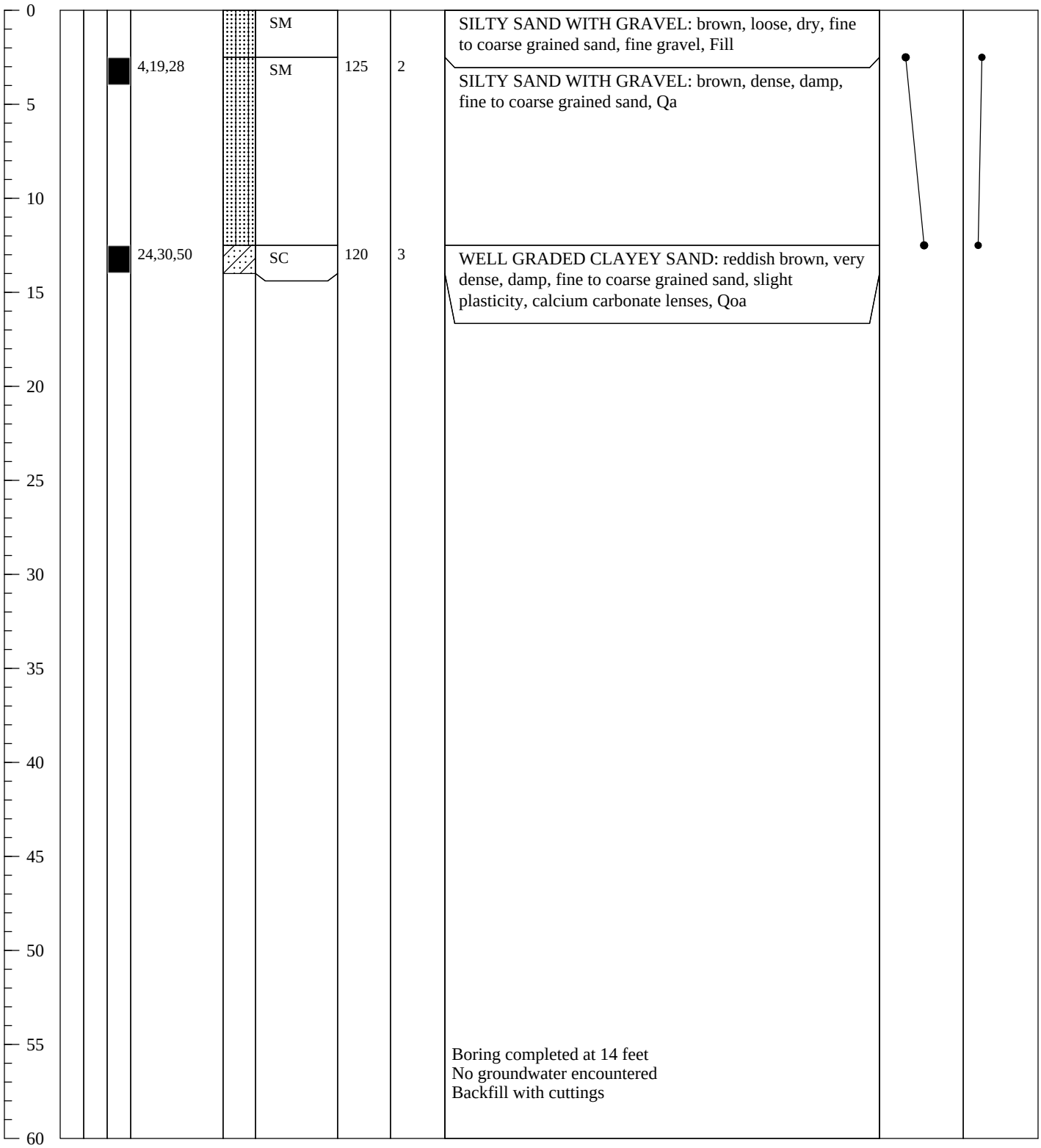
Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SM			SILTY SAND WITH GRAVEL: brown, loose, dry, fine to coarse grained sand, fine gravel, Fill
5	MOD Calif.	4,19,28		SM	125	2	SILTY SAND WITH GRAVEL: brown, dense, damp, fine to coarse grained sand, Qa
10	MOD Calif.	24,30,50		SC	120	3	WELL GRADED CLAYEY SAND: reddish brown, very dense, damp, fine to coarse grained sand, slight plasticity, calcium carbonate lenses, Qoa
15							
20							
25							
30							
35							
40							
45							
50							
55							Boring completed at 14 feet No groundwater encountered Backfill with cuttings
60							



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1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-4

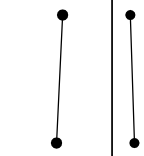
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				SP-SM			POORLY GRADED SAND WITH SILT: reddish brown, loose, damp, fine to coarse grained sand, trace fine gravel, Fill
5	MOD Calif.	35.50/5"		SP-SM	118	4	POORLY GRADED SAND WITH SILT: reddish brown, dense, damp, fine to coarse grained sand, trace fine gravel, Qa
10	MOD Calif.	20,27,50		SP	122	4	POORLY GRADED SAND: grey to brown, very dense, damp, fine to coarse grained sand, some fine gravel, Qoa
15							
20							
25							
30							
35							
40							
45							
50							
55							Boring completed at 11-1/2 feet No groundwater encountered Backfill with cuttings
60							

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-9
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units	Graphic Trend: Blow Count / Dry Density
0				SM			SILTY SAND: grey brown, loose, damp, fine to coarse grained sand, Fill	
5	MOD Calif.	8,9,13			117	4	medium dense	
10	MOD Calif.	28,37,50/5"		SW-SM	124	4	WELL GRADED SAND WITH SILT: reddish brown, very dense, damp, fine to coarse grained sand, calcium carbonate lenses, alternating layers with silty sand, Qoa	
15								
20								
25								
30								
35								
40								
45								
50								
55							Boring completed at 9 feet No groundwater encountered Backfill with cuttings	
60								

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-10
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SM			SILTY SAND: reddish brown, medium dense, dry, fine to medium grained sand, trace calcium carbonate stringers, Fill
5	MOD Calif.	8,20,31		SM	118	3	SILTY SAND: reddish brown, damp, dense, fine to medium grained sand, Qoa
10	MOD Calif.	23,46,50/6"		SW			POORLY GRADED SAND WITH GRAVEL: reddish brown, very dense, damp, fine to coarse grained sand, trace silt, fine gravel trace clay, calcium carbonate streaking
15	MOD Calif.	16,50/6"					
20	MOD Calif.	44,50/5"		SC			CLAYEY SAND: reddish brown, very dense, damp, fine to coarse grained sand, calcium carbonate, low placticity
25							
30							
35							
40							
45							
50							
55							Boring completed at 21 feet No groundwater encountered Backfill with cuttings
60							

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
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Boring No. B-11
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

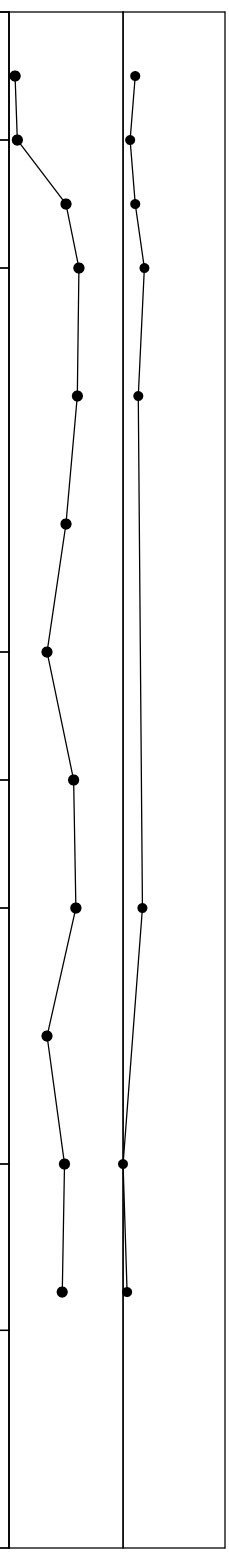
Drilling Date: June 18, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				SM			SILTY SAND: yellow brown, loose, dry, fine to medium grained sand, trace fine gravel, Fill
		4,5,7			112	2	
5		4,8,10		SP-SM	107	3	SAND WITH SILT: yellow brown, dense, damp, fine grained sand, some cementation, Qa
		13,29,46			112	9	moist
10		26,42,50		SW-SM	121	2	WELL GRADED SAND WITH SILT AND GRAVEL: brown, very dense, dry, fine to coarse grained sand, fine gravel, Qoa
15		19,40,50			115	3	damp
20		12,25,50/5"			104	2	
25		50/6"		SM	---	5	SILTY SAND: brown, dry, very dense, fine to medium grained sand
30		35,50/6"		SM	107	2	SILTY SAND: light brown, very dense, dry, fine grained sand
35		32,38,50/5"		SM	119	2	SILTY SAND: grey brown, very dense, dry, fine to coarse grained sand, some fine gravel
40		50/3"			---	3	some cobble/coarse
45		23,50/6"		SM	---	3	SILTY SAND: yellow brown, very dense, damp, fine grained sand
50		20,50/6"			---	2	dry
55							Boring completed at 51-1/2 feet No groundwater encountered Backfill with cuttings
60							



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-12
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				SW-SM			WELL GRADED SAND WITH SILT: brown, loose, damp, fine to coarse grained sand, Fill
5	MOD Calif.	8,8,9		SW-SM	109	3	WELL GRADED SAND WITH SILT: brown, loose, damp, fine to coarse grained sand, calicum carbonate lenses, Qa
10	MOD Calif.	17,24,34		SC	118	3	CLAYEY SAND: reddish brown, dense, damp, fine grained sand, low to medium plasticity, calcium carbonate lenses, Qoa
15	MOD Calif.	26,50/6"			120	6	very dense, fine to medium grained sand
20	MOD Calif.	13,27,50		SW-SM	123	3	WELL GRADED SAND WITH SILT: grey brown, dense, damp, fine to coarse grained sand, trace fine gravel
25							
30							
35							
40							
45							
50							
55							Boring completed at 19-1/2 feet No groundwater encountered Backfill with cuttings
60							

Earth Systems

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Boring No. B-13
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0	Bulk			SM			SILTY SAND: brown, medium dense, damp, fine to medium grained sand, some fine gravel, Fill
5	MOD Calif.	8,10,23		SW	118	3	WELL GRADED SAND WITH GRAVEL: reddish brown, medium dense, damp, fine to coarse grained sand, calcium carbonate stringers and lenses, Qa
10	MOD Calif.	20,40,50/4"			118	3	clayey sand lenses at 10 feet, Qoa
15							
20							
25							
30							
35							
40							
45							
50							
55							Boring completed at 11-1/2 feet No groundwater encountered Backfill with cuttings
60							

Graphic Trend
Blow Count Dry Density

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-15
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SP-SM			POORLY GRADED SAND WITH SILT: brown, loose, damp, fine to medium grained sand, trace fine gravel, Fill
5	MOD Calif.	8,11,11			121	3	
	MOD Calif.	8,18,28		SP-SM	119	2	POORLY GRADED SAND WITH SILT AND GRAVEL: reddish brown, medium dense, dry, fine to medium grained sand, fine gravel, trace clay, trace calcium carbonate lenses, Qa
10	MOD Calif.	20,20,20		SM	126	3	SILTY SAND: red brown, medium dense, damp, fine to medium grained sand, low plasticity, calcium carbonate lenses, Qoa
15	MOD Calif.	16,16,17		SM	107	3	SILTY SAND WITH GRAVEL: reddish brown, medium dense, damp, fine to coarse grained sand, fine gravel, some cementation
20	MOD Calif.	20,30,50			125	6	minor calcium carbonate lenses, trace clay, slight plasticity very dense
25							Boring completed at 21-1/2 feet No groundwater encountered Backfill with cuttings
30							
35							
40							
45							
50							
55							
60							

Graphic Trend
Blow Count Dry Density

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-16

Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SP-SM			POORLY GRADED SAND WITH SILT: brown, dry, loose, fine grained sand, Fill/Qs
		7,9,13			116	2	medium dense, trace medium gravel
5		6,7,17		SW	114	3	WELL GRADED SAND: grey brown, medium dense, damp, fine to coarse grained sand, some calcium carbonate cementation
10		20,36,50/6"		SP-SM	122	5	POORLY GRADED SAND WITH SILT: reddish brown, very dense, damp, fine to medium grained sand, trace calcium carbonate cementation, Qoa
15							
20							
25							
30							
35							
40							
45							
50							
55							Boring completed at 11-1/2 feet No groundwater encountered Backfill with cuttings
60							

Graphic Trend
Blow Count Dry Density

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-18
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 6" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description	Graphic Trend: Blow Count	Graphic Trend: Dry Density
0									
5	Bulk	12,24,33		SP-SM	121	4	POORLY GRADED SAND WITH SILT AND GRAVEL: brown, medium dense, damp, fine to coarse grained sand, fine gravel, Qs dense at 2-1/2 feet		
10	MOD Calif.	17,30,35		SM	115	4	SILTY SAND: reddish brown to white, damp, dense, fine to medium grained sand, calcium carbonate lenses, Qoa		
10	MOD Calif.	21,35,50/4"		SW	123	3	WELL GRADED SAND: brown to reddish, very dense, damp, fine to coarse grained sand, trace calcium carbonate, trace clay, coarse gravel in sample tip		
15									
20									
25									
30									
35									
40									
45									
50									
55							Boring completed at 11-1/2 feet No groundwater encountered Backfill with cuttings		
60									

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
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Boring No. B-19
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 6" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SC-SM			SILTY CLAYEY SAND WITH GRAVEL: red brown to white, loose, damp, fine to coarse grained sand, fine to coarse gravel, calcium carbonate cementation, low plasticity, upper 1 to 2 feet disturbed, Qa
5	MOD Calif.	17,27,27			126	6	dense, Qoa
10	MOD Calif.	23,35,46			125	7	very dense, moist, fine to medium grained sand, fine gravel
15	MOD Calif.	33,40,50/5"		SP	125	8	POORLY GRADED SAND: reddish brown, very dense, moist, fine to medium grained sand, calcium carbonate lenses cementation, trace clay lenses, slight plasticity
20							
25							
30							
35							
40							
45							
50							
55							Boring completed at 16-1/2 feet No groundwater encountered Backfill with cuttings
60							

Graphic Trend
Blow Count Dry Density

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-20
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

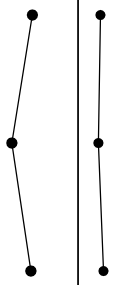
Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 6" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				SP-SM			POORLY GRADED SAND WITH SILT: reddish brown, medium dense, damp, fine to medium grained sand, minor calcium carbonate lenses, trace clay, upper 1 to 2 feet disturbed, Fill
5	MOD Calif.	22,40,50/6"			122	4	very dense, Qoa
10	MOD Calif.	10,14,49		SW	120	4	WELL GRADED SAND WITH GRAVEL: brown, dense, damp, fine to coarse grained sand, fine gravel, calcium carbonate lenses
15	MOD Calif.	27,38,50/5"			125	4	very dense, calcium carbonate lenses
20							
25							
30							
35							
40							
45							
50							
55							Boring completed at 16-1/2 feet No groundwater encountered Backfill with cuttings
60							

Graphic Trend
Blow Count Dry Density



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-21
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

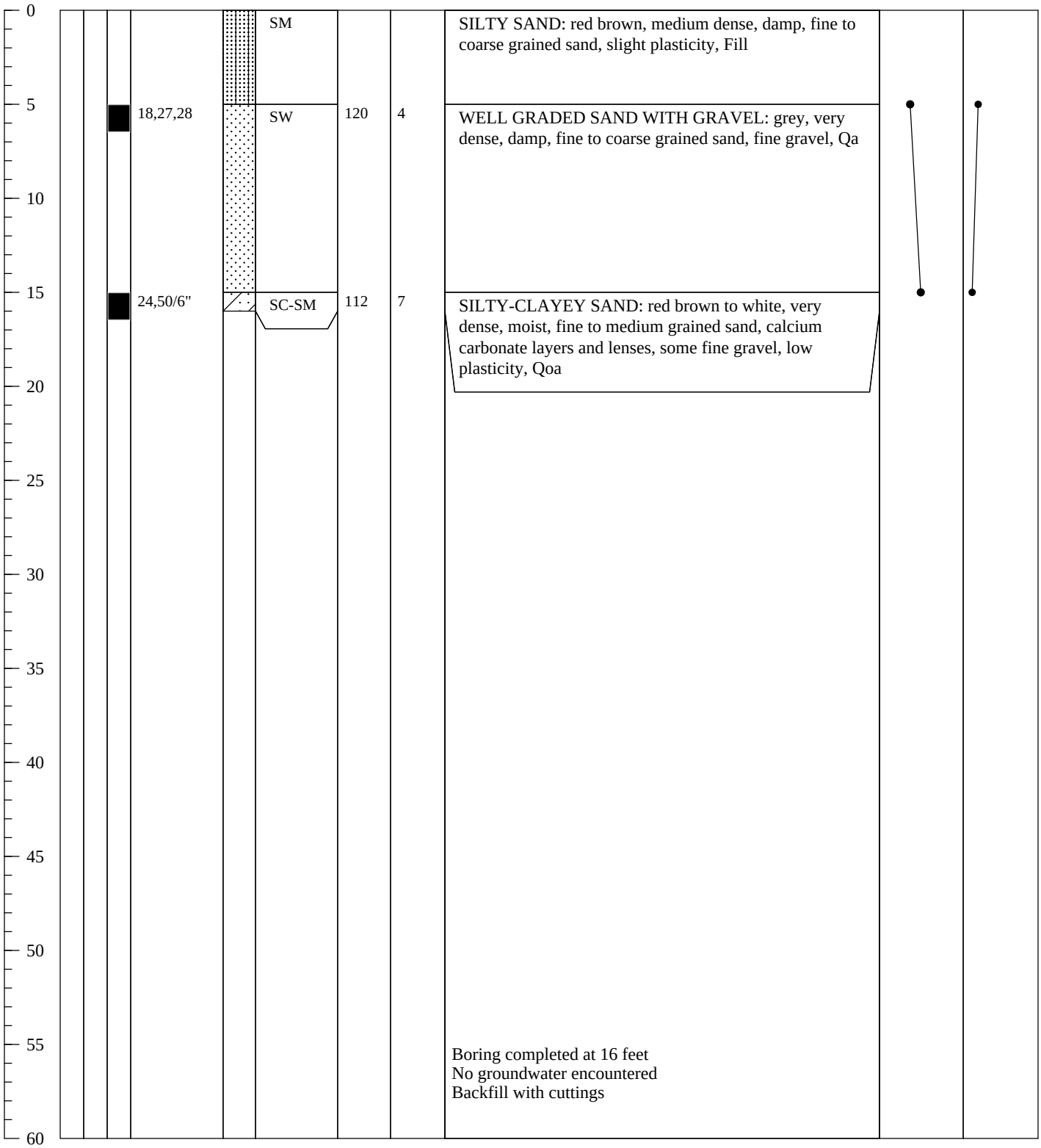
Drilling Date: June 21, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 6" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SM			SILTY SAND: red brown, medium dense, damp, fine to coarse grained sand, slight plasticity, Fill
5	MOD Calif.	18,27,28		SW	120	4	WELL GRADED SAND WITH GRAVEL: grey, very dense, damp, fine to coarse grained sand, fine gravel, Qa
15	MOD Calif.	24,50/6"		SC-SM	112	7	SILTY-CLAYEY SAND: red brown to white, very dense, moist, fine to medium grained sand, calcium carbonate layers and lenses, some fine gravel, low plasticity, Qoa
16							Boring completed at 16 feet No groundwater encountered Backfill with cuttings

Graphic Trend
Blow Count Dry Density



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-22
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 19, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 6" HSA
Logged By: R. Howe

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				SW			WELL GRADED SAND WITH GRAVEL: reddish brown, dense, dry, fine to coarse grained sand, fine gravel, upper 1 to 2 feet disturbed, af
5	MOD Calif.	21,22,23					Qoa
10	MOD Calif.	18,16,15					increasing gravel, trace calcium carbonate lenses
15	MOD Calif.	19,31,28					
20	MOD Calif.	14,29,25					reddish to greyish brown, very dense, damp
25							
30							
35							
40							
45							
50							
55							Boring completed at 21-1/2 feet No groundwater encountered Backfill with cuttings
60							

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-23
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

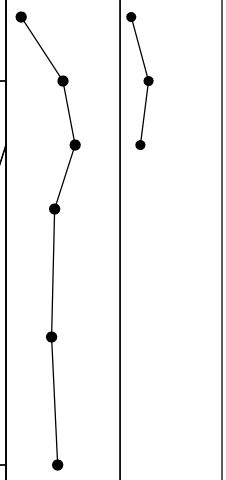
Drilling Date: June 19, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 6" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SW			WELL GRADED SAND WITH GRAVEL: brown, loose, dry, fine to coarse grained sand, trace silt, Fill
	MOD	6,8,12			111	1	
5	MOD	7,25,50/5"		GP	128	3	POORLY GRADED GRAVEL WITH SAND: grey to brown, very dense, damp, fine to medium grained sand, fine gravel, cementation in sample tip, Qoa
	MOD	41,50/6"		SW	120	4	
10	Bulk	19,38,26					WELL GRADED SAND WITH GRAVEL: reddish brown, very dense, damp, fine to coarse grained sand, fine to coarse gravel
15	Bulk	24,38,22					SC lenses interbedded, low plasticity
20	Bulk	23,27,41		SW			WELL GRADED SAND: reddish brown, very dense, dry, fine to coarse grained sand
25							
30							
35							
40							
45							
50							
55							Boring completed at 21-1/2 feet No groundwater encountered Backfill with cuttings
60							



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-25
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

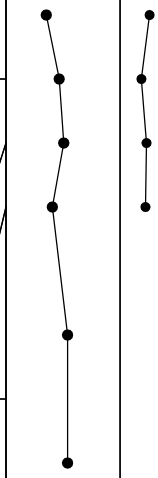
Drilling Date: June 19, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 6" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SW			WELL GRADED SAND WITH GRAVEL: reddish brown, medium dense, damp, fine to coarse grained sand, fine gravel, trace silt, Fill, damp at 2 feet
	MOD Calif.	15,22,31			129	5	
							Qoa below 2 feet
5	MOD Calif.	23,34,36		SP	121	5	POORLY GRADED SAND: reddish brown to white, dense, damp, fine grained sand, calcium carbonate lenses, some cementation
	MOD Calif.	23,35,41		SC	126	7	
10	MOD Calif.	23,31,30		SM	125	5	CLAYEY SAND: dense, moist, fine grained sand, trace fine gravel, low plasticity, some cementation
							SILTY SAND: reddish brown, dense, damp, fine to coarse grained sand, trace fine gravel
15	Bulk / SPT	31,50/5"			---	7	clayey sand lenses, very dense, calcium carbonate stringers
				SW-SM			SAND WTIH SILT: reddish brown, damp, fine to coarse grained sand, some fine gravel
20	Bulk / SPT	31,50/5"			---	4	
25							
30							
35							
40							
45							
50							
55							Boring completed at 21 feet No groundwater encountered Backfill with cuttings
60							



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-26
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

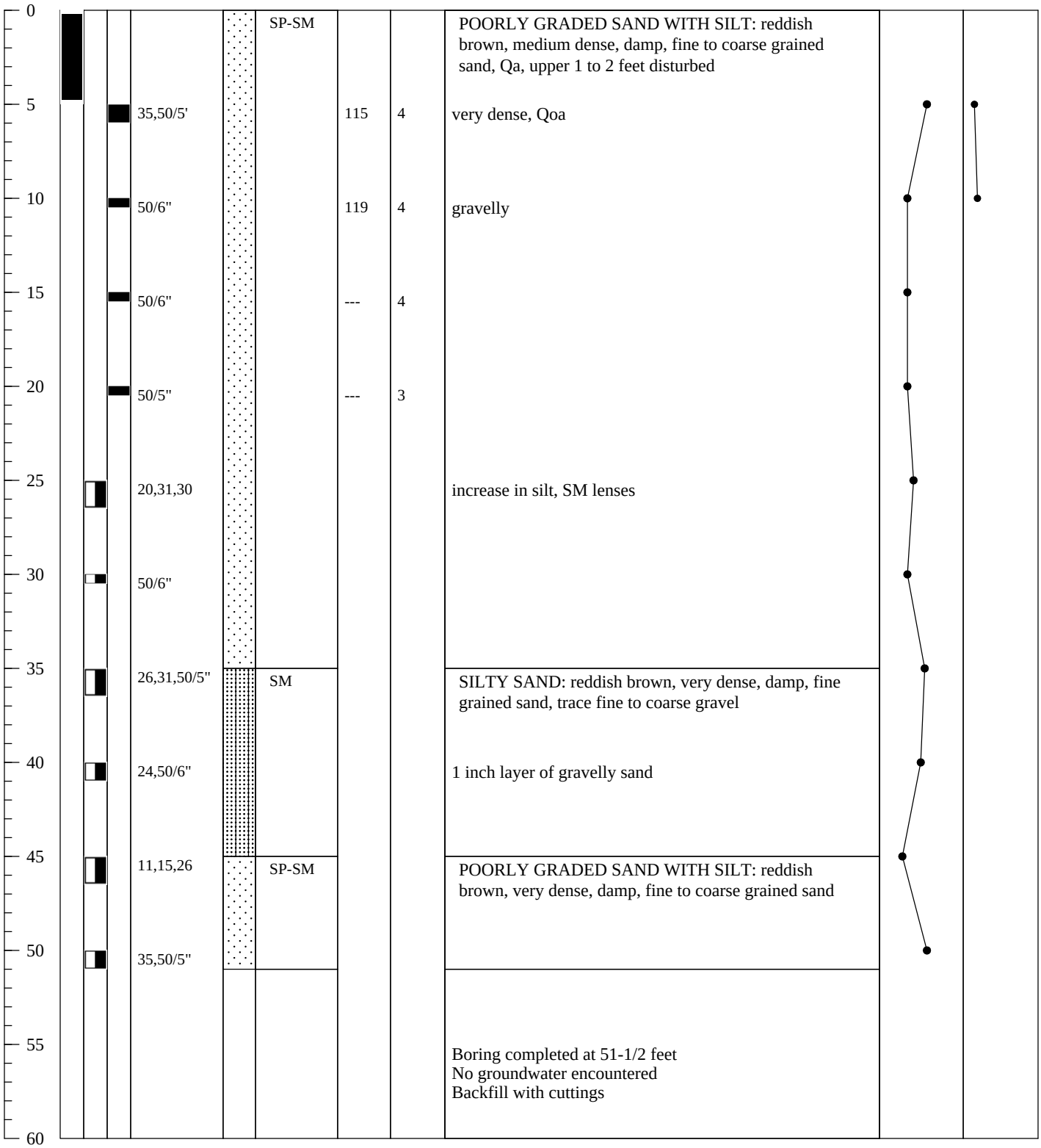
Drilling Date: June 18, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0				SP-SM			POORLY GRADED SAND WITH SILT: reddish brown, medium dense, damp, fine to coarse grained sand, Qa, upper 1 to 2 feet disturbed
5	MOD Calif.	35,50/5'			115	4	very dense, Qoa
10	MOD Calif.	50/6"			119	4	gravelly
15	MOD Calif.	50/6"			---	4	
20	MOD Calif.	50/5"			---	3	
25	Bulk	20,31,30					increase in silt, SM lenses
30	Bulk	50/6"					
35	Bulk	26,31,50/5"		SM			SILTY SAND: reddish brown, very dense, damp, fine grained sand, trace fine to coarse gravel
40	Bulk	24,50/6"					1 inch layer of gravelly sand
45	Bulk	11,15,26		SP-SM			POORLY GRADED SAND WITH SILT: reddish brown, very dense, damp, fine to coarse grained sand
50	Bulk	35,50/5"					
55							Boring completed at 51-1/2 feet No groundwater encountered Backfill with cuttings
60							



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-27
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

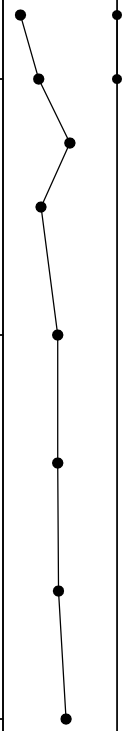
Drilling Date: June 19, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Depth (Ft.)	Sample Type (Bulk, SPT, MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				SW			WELL GRADED SAND WITH GRAVEL: reddish brown, loose, damp, fine to coarse grained sand, trace silt, Qa, upper 1 to 2 feet disturbed
5	MOD Calif.	4,8,15			110	3	
	MOD Calif.	7,23,24		GP	116	2	POORLY GRADED GRAVEL WITH SAND: reddish brown to grey, medium dense, dry, fine to coarse grained sand, fine gravel
	MOD Calif.	38,50/4"			---	3	
10	MOD Calif.	50/6"					no recovery, very dense, Qoa
15	Bulk	35,38,34		SP-SM			POORLY GRADED SAND WITH SILT AND GRAVEL: reddish brown, very dense, damp, fine to coarse grained sand, fine gravel
20	Bulk	22,50/6"					
25	Bulk	26,34,39					increasing coarse gravel
30	Bulk	16,33,50/5"		SM			SILTY SAND: brown, very dense, damp, fine grained sand, trace fine to coarse gravel
35							
40							
45							
50							
55							Boring completed at 31-1/2 feet No groundwater encountered Backfill with cuttings
60							

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. B-28
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

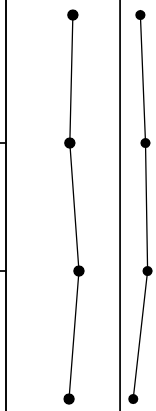
Drilling Date: June 19, 2019
Drilling Method: Mobile B-61 w/autohammer
Drill Type: 8" HSA
Logged By: R. Howe

Description of Units

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description
0	Bulk			SW			WELL GRADED SAND WITH GRAVEL: reddish brown, medium dense, damp, fine to coarse grained sand, fine gravel, upper 1 to 2 feet disturbed, af
5	MOD Calif.	24,38,50/5"			120	4	very dense, Qoa
10	MOD Calif.	34,50/5"		GP	125	4	POORLY GRADED GRAVEL WITH SAND: grey to brown, very dense, damp, fine gravel, fine to coarse grained sand, trace silt
15	MOD Calif.	33,46,50		SW	127	5	WELL GRADED SAND WITH GRAVEL: white to reddish brown, very dense, damp, fien to coarse grained sand, fine gravel, calcium carbonate, caliche, gravel sized fragments of calcium carbonate
20	MOD Calif.	33,50/5"			113	3	
55							Boring completed at 21 feet No groundwater encountered Backfill with cuttings

Graphic Trend
Blow Count Dry Density



Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. T-5
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 20, 2019
Drilling Method: Backhoe
Drill Type: 18" Bucket
Logged By: R. Howe

Depth (Ft.)	Sample Type (Bulk, SPT, MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				SW			WELL GRADED SAND WITH GRAVEL: brown, dense, dry, fine to coarse grained sand, fine to coarse gravel, cementation, calcium carbonate lenses, upper 1 foot fill, Qa below that
5							
10							
15							
20							
25							
30							
35							
40							
45							
50							
55							Trenching completed at 8 feet No groundwater encountered Backfill with cuttings
60							

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. T-6A
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 20, 2019
Drilling Method: Backhoe
Drill Type: 18" Bucket
Logged By: R. Howe

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				SP/GP			POORLY GRADED SAND WITH GRAVEL: brown to reddish brown, medium dense, damp, fine to coarse grained sand, fine gravel, trace silt, alternating layers with poorly graded gravel with sand, Fill
5				SW-SM			WELL GRADED SAND WITH SILT: red brown to white, dry, loose, fine to coarse grained sand, calcium carbonate lenses, Qoa
10							
15							
20							
25							
30							
35							
40							
45							
50							
55							Boring completed at 8 feet No groundwater encountered Backfill with cuttings
60							

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. T-17
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 20, 2019
Drilling Method: Back Hoe
Drill Type: 18" Bucket
Logged By: R. Howe

Depth (Ft.)	Sample Type (Bulk, SPT, MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units	Graphic Trend: Blow Count / Dry Density
0				SP			POORLY GRADED SAND: light brown, loose, dry, fine to coarse grained sand, some silt, Fill	
5				SW			WELL GRADED SAND WITH GRAVEL: brown, loose, damp, fine to coarse grained sand, fine gravel, Qa cementation calcium carbonate lenses	
10								
15								
20								
25								
30								
35								
40								
45								
50								
55							Boring completed at 8 feet No groundwater encountered Backfill with cuttings	
60								

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. T-8
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 20, 2019
Drilling Method: Backhoe
Drill Type: 18" Bucket
Logged By: R. Howe

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				GP/SW-SM			POORLY GRADED GRAVEL WITH SAND: reddish brown, damp, fine to coarse grained sand, fine gravel, alternating layers with well graded sand with gravel, Fill
5							
	■			SP-SM			POORLY GRADED SAND WITH SILT: yellow brown, dry, loose, fine grained sand, trace fine gravel, Qs
10							
15							
20							
25							
30							
35							
40							
45							
50							
55							Trenching completed at 8 feet No groundwater encountered Backfill with cuttings
60							

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. T-14
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 20, 2019
Drilling Method: Backhoe
Drill Type: 18" Bucket
Logged By: R. Howe

Depth (Ft.)	Sample Type: Bulk / SPT / MOD Calif.	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				GP			POORLY GRADED GRAVEL WITH SAND: brown to grey, damp, fine to coarse grained sand, fine gravel, alternating layers with well graded sand with gravel, Fill
5				SW-SM			SAND WITH SILT AND GRAVEL: reddish brown, dry, very dense, fine to coarse grained sand, fine gravel, calcium carbonate, hard digging, cementation, Qoa
10		■					
15							
20							
25							
30							
35							
40							
45							
50							
55							Trenching completed at 8 feet No groundwater encountered Backfill with cuttings
60							

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Graphic Trend
Blow Count Dry Density

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. T-17
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 20, 2019
Drilling Method: Back Hoe
Drill Type: 18" Bucket
Logged By: R. Howe

Depth (Ft.)	Sample Type (Bulk / SPT / MOD Calif.)	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units	Graphic Trend: Blow Count / Dry Density
0				SP/SP-SM			POORLY GRADED SAND: light brwon, loose, dry, alternating layers with poorly graded sand with silt, alternating layers with poorly graded sand with silt	
5				SW			WELL GRADED SAND WITH GRAVEL: brown, loose, damp, fine to coarse grained sand	
10							cementation calcium carbonate lenses	
15								
20								
25								
30								
35								
40								
45								
50								
55							Boring completed at 8 feet No groundwater encountered Backfill with cuttings	
60								

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

Earth Systems

1680 Illinois Avenue, Suite 20, Perris, CA 92571
Phone (951) 928-9799

Boring No. T-24
Project Name: Glamis Specific Plan
Project Number 303235-001
Boring Location: Plate 2

Drilling Date: June 20, 2019
Drilling Method: Backhoe
Drill Type: 18" Bucket
Logged By: R. Howe

Depth (Ft.)	Sample Type: Bulk / SPT / MOD Calif.	Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	Description of Units
0				GP/SW-SM			POORLY GRADED GRAVEL: brown to red brown, damp, fine to coarse grained sand, fine gravel, alternating layers with well graded sand with silt, Fill
5							
	■			SW-SM			WELL GRADED SAND WITH SILT: brown to white, dense, dry, fine to coarse grained sand, calcium carbonate lenses, Qa
10							
15							
20							
25							
30							
35							
40							
45							
50							
55							Trenching completed at 8 feet No groundwater encountered Backfill with cuttings
60							

Note: The stratification lines shown represent the approximate boundary between soil and/or rock types and the transition may be gradational.

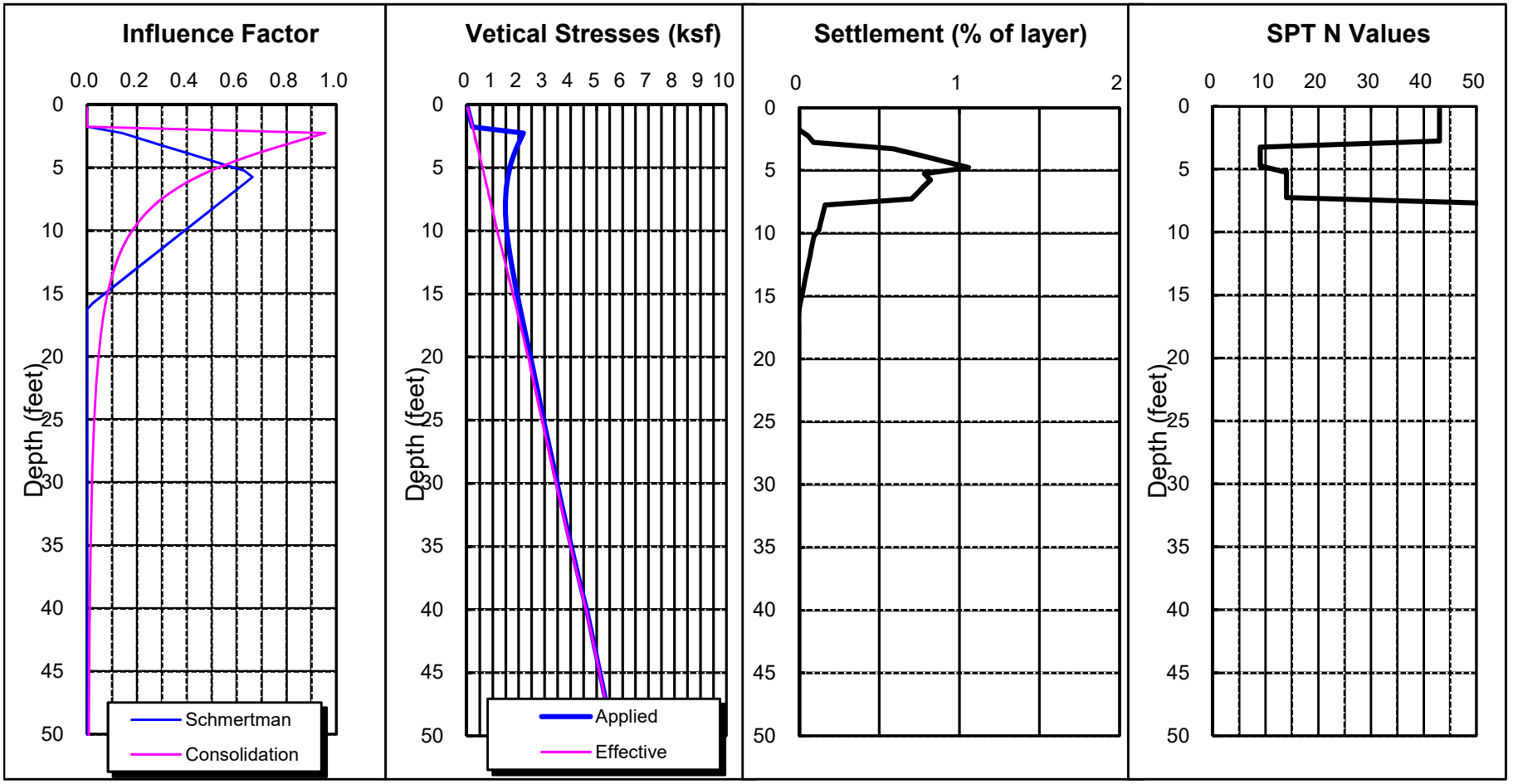
Graphic Trend
Blow Count Dry Density

EARTH SYSTEMS SOUTHWEST - SETTLEMENT ANALYSES

Glamis

303235-001

Width, ft: 7.1 Length, ft: 7.1 Net pressure, ksf: 2.00 **Settlement, inches: 0.5**



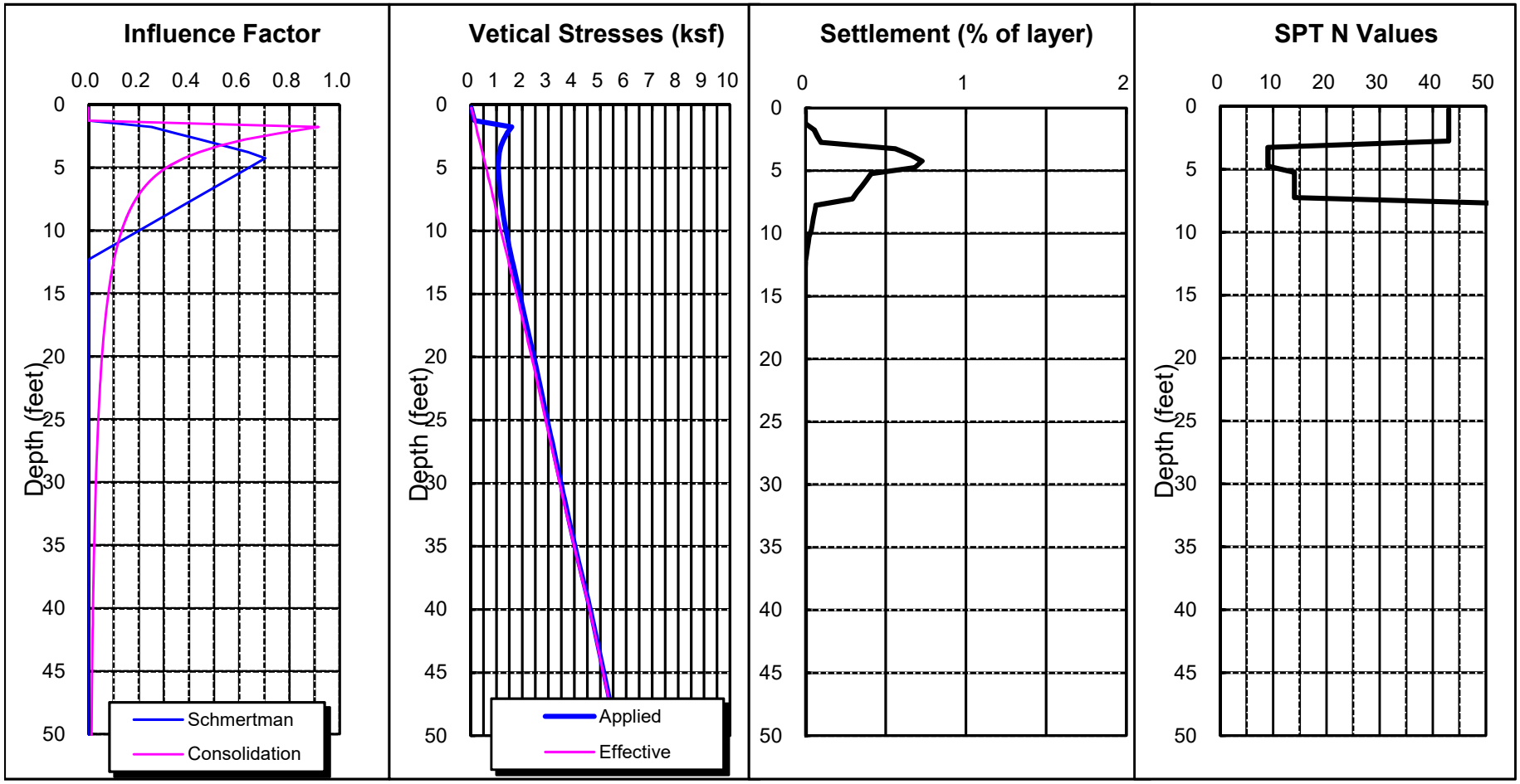
Load, Q: 100 kips Embedment, feet: 2.0 **Boring: 11**

EARTH SYSTEMS SOUTHWEST - SETTLEMENT ANALYSES

Glamis

303235-001

Width, ft: 2.7 Length, ft: 40.0 Net pressure, ksf: 1.50 **Settlement, inches: 0.3**



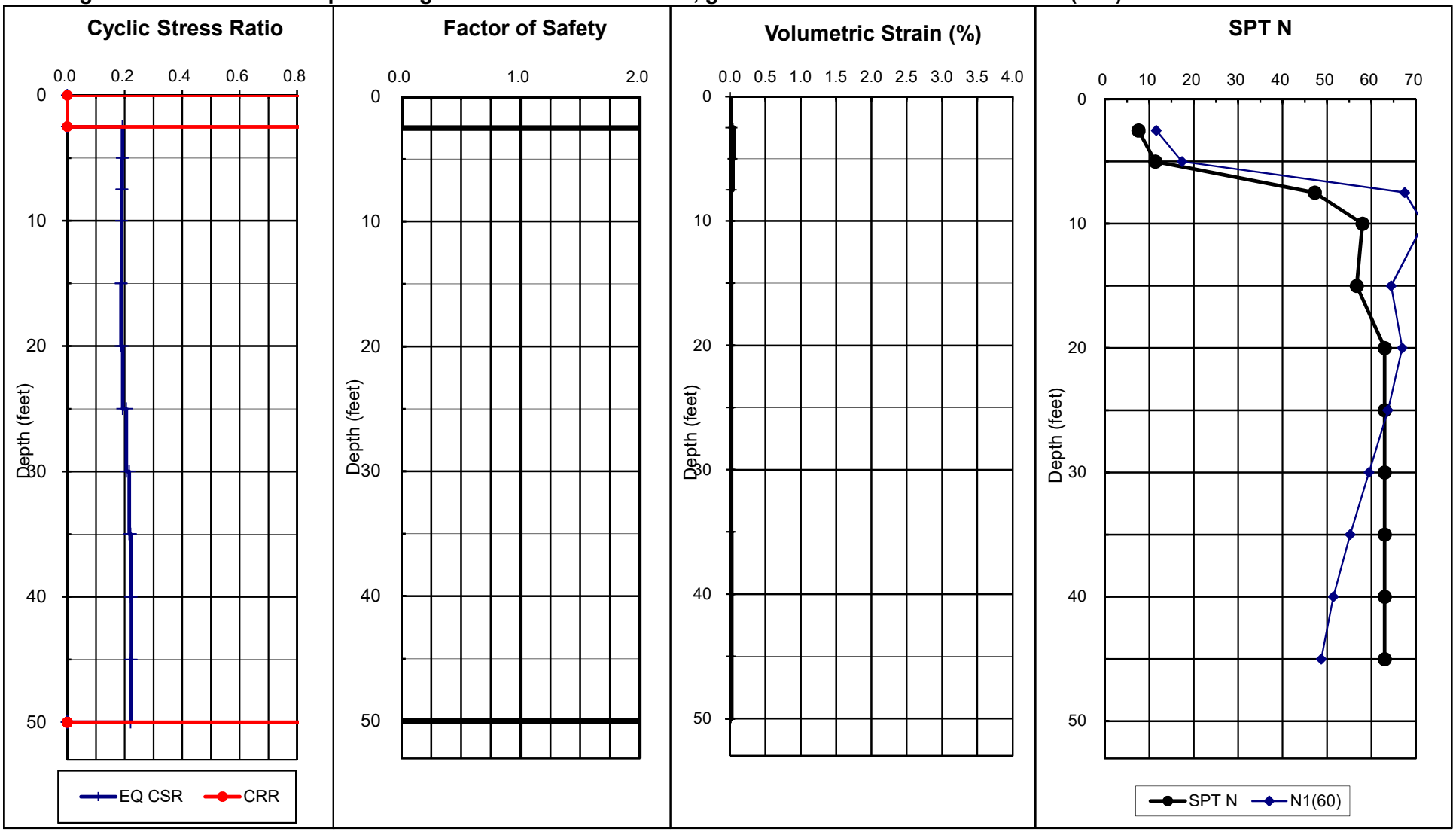
Load, Q: 4 kpf Embedment, feet: 1.5 **Boring: 11**

EARTH SYSTEMS - EVALUATION OF LIQUEFACTION POTENTIAL AND INDUCED SUBSIDENCE

Proposed Glamis Specific Plan Project **Project No: 303235-001** 1996/1998 NCEER Method

Ground Compaction Remediated to 3 foot depth

Boring: 11 **Earthquake Magnitude: 7.9** **PGA, g: 0.26** **Calc GWT (feet): 100**



Total Thickness of Liquefiable Layers: 0.0 feet

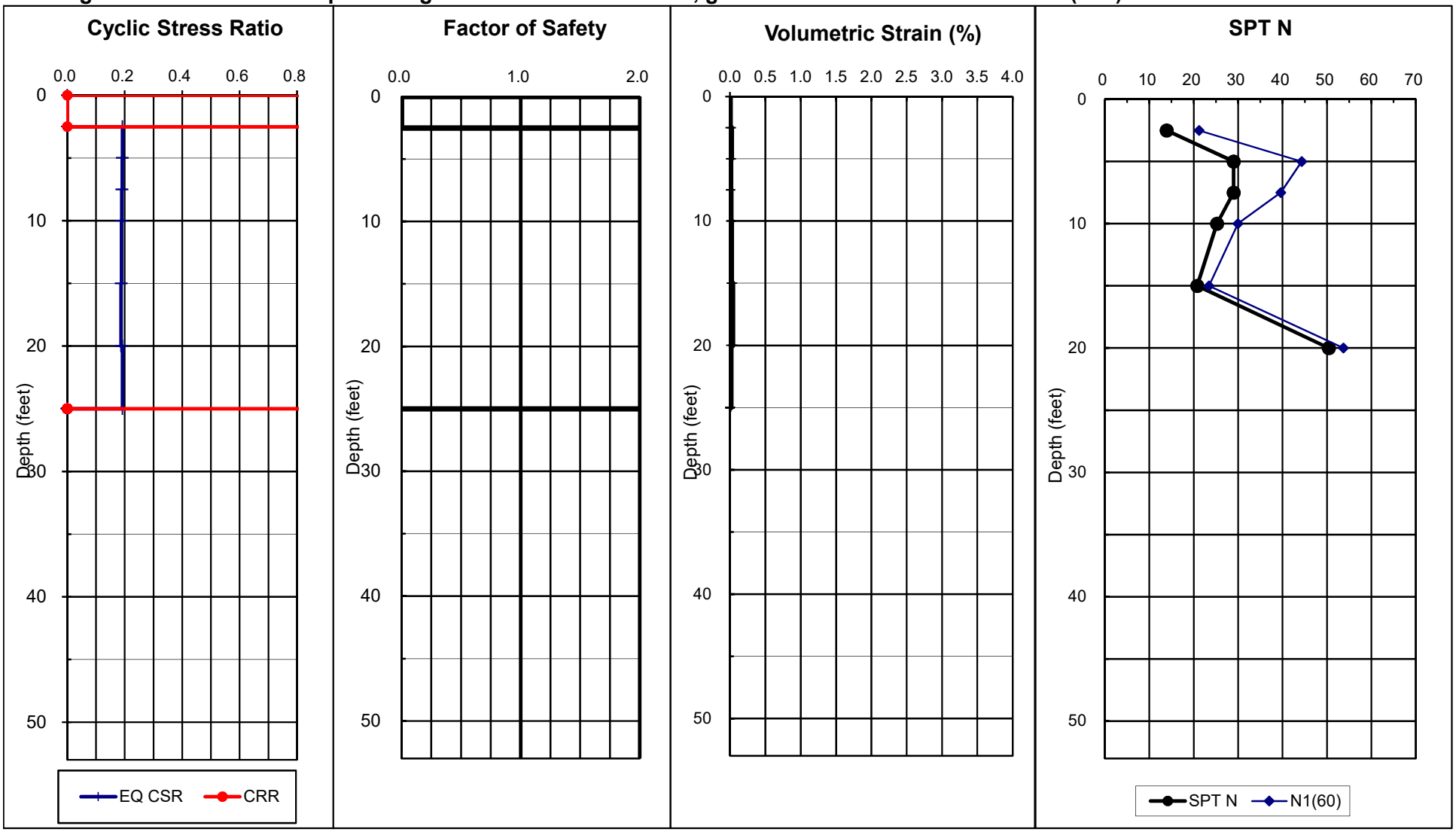
Estimated Total Ground Subsidence: 0.1 inches

EARTH SYSTEMS - EVALUATION OF LIQUEFACTION POTENTIAL AND INDUCED SUBSIDENCE

Proposed Glamis Specific Plan Project **Project No: 303235-001** 1996/1998 NCEER Method

Ground Compaction Remediated to 3 foot depth

Boring: 15 **Earthquake Magnitude:** 7.9 **PGA, g:** 0.26 **Calc GWT (feet):** 100



Total Thickness of Liquefiable Layers: 0.0 feet

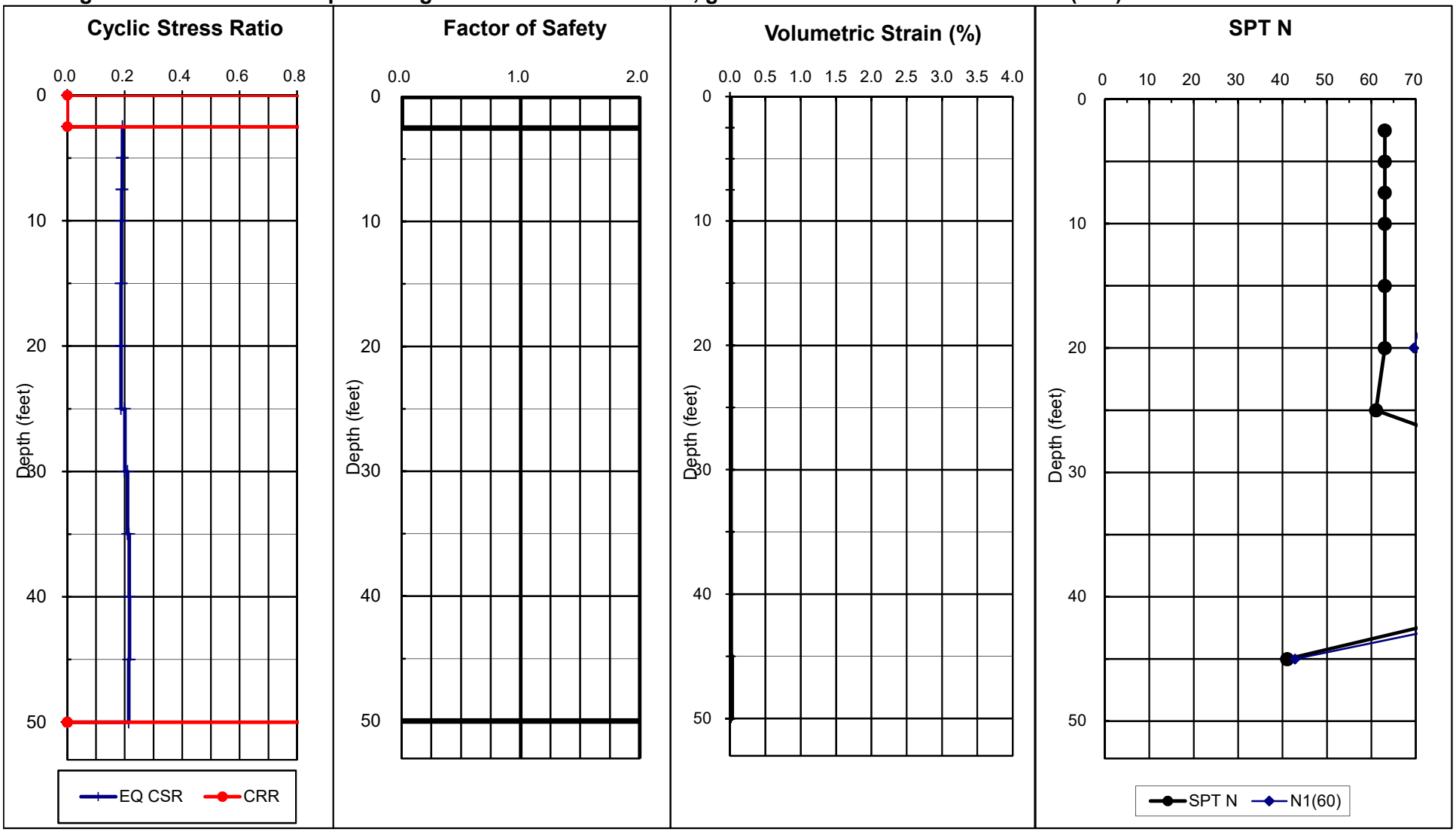
Estimated Total Ground Subsidence: 0.1 inches

EARTH SYSTEMS - EVALUATION OF LIQUEFACTION POTENTIAL AND INDUCED SUBSIDENCE

Proposed Glamis Specific Plan Project **Project No: 303235-001** 1996/1998 NCEER Method

Ground Compaction Remediated to 3 foot depth

Boring: 26 **Earthquake Magnitude: 7.9** **PGA, g: 0.26** **Calc GWT (feet): 100**



Total Thickness of Liquefiable Layers: 0.0 feet

Estimated Total Ground Subsidence: 0.0 inches

Boring No.	11	Project and Number	Proposed Glamis Spec	303235-001
		ESSW Field Staff	R. Howe	
		Drilling Company	Calpac	
		Drilling Method	B-61 HAS	HSA Inner Diameter 8"
		Site Latitude (North)	Decimal Degrees	32.9934
		Site Longitude (West)	Decimal Degrees	-115.0774

27.40

Date Drilled
6/18/2019

Hammer Weight (lbs)
140

Hammer Drop (inches)
30

Hammer Efficiency (E_M)
72

Borehole Correction (Cb)*
1

*inside diameter of Hollow Stem Auger

Sampler Correction Mod Cal to SPT
0.63

Sampler Liner Correction (Cs)
1.2 Applied if SPT Sampler Used
1.0 Applied if Cal Sampler Used

Rod Length Above Ground (ft)
3

Depth to Estimate Vs Over (ft)*
100

*Caltrans Estimation Method

*N_{sub} Value Desired For Column 6
70

*Only Used for Calculating Nsub otherwise not used by program (i.e.N50, N70, N80, etc)

Calculation Results
Ave. SPT N_{60HE}-value (blows/ft)
34
(Based on Upper 50 feet)
Ave. Shear Wave Velocity (ft/sec)
1015
(Based on Upper 50 feet)
Soil Profile Type (Site Class)
D
(Based on Upper 50 feet)
Ave. Friction Angle (degrees)
38
(Based on Upper 50 feet)
Estimated Shear Wave Velocity **
Based on Depth Less than 100' ft
1003 (ft/sec Upper 100 feet)
Soil Profile Type (Site Class)**
D
Based on
Ave. Shear Wave Velocity (ft/sec)
306 (m/sec Upper 100 feet)
Ave. Field SPT N-value (blows/ft)
28.6
(Based on Upper 50 feet)
Ave. Field SPT N-value (blows/ft)
46.6
(Based on Upper 100 feet)

Soil Profile Type (Site Class)**
D
Based on
Ave. Field Blow Count
47 (Upper 100 feet)

	Equipment variable	Typical Correction (%/100)
Energy ratio (Skempton, 1986)	Donut Hammer	0.50 to 1.00
	Safety Hammer	0.70 to 1.20
	Automatic-Trip Donut-type Hammer	0.80 to 1.30

→ Hammer energy as related to the standard 60% delivered energy, i.e. a 72% hammer has and energy ratio of 1.2, i.e. (72/60=1.2)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Bottom of Layer Depth (ft)	Blow Count***	Type of Sampler	d_i (feet)	N_{60} (blows/ft)	N70 (blows/ft)	N_{60HE} (blows/ft)	V_{si}** (m/sec)	V_{si} (ft/sec)	Φ_i (degrees)	d_i/N_{60HEi}	d_i/V_{si}	d_i/Φ_i	Consistency if Coarse Grained (Based on ASTM and Corrected for N60)	Consistency if Fine Grained (Based on ASTM and Corrected for N60)
2.5	8	c	2.5	4.54	3.89	6.05	169.37	555.53	27.40	0.41336	0.00450	0.091251	Loose	Firm
5.0	12	c	2.5	6.80	5.83	9.07	190.50	624.85	28.86	0.27557	0.00400	0.086615	Loose	Firm
7.5	18	c	2.5	10.21	8.75	13.61	214.27	702.81	30.51	0.18372	0.00356	0.081942	Medium Dense	Stiff
10.0	75	c	2.5	42.53	36.45	56.70	324.12	1063.11	38.07	0.04409	0.00235	0.065672	Dense	Hard
15.0	92	c	5.0	59.12	50.67	69.55	343.90	1128.00	39.42	0.07189	0.00443	0.126829	Very Dense	Hard
20.0	90	c	5.0	64.64	55.40	68.04	341.72	1120.83	39.27	0.07349	0.00446	0.127312	Very Dense	Hard
25.0	100	c	5.0	71.82	61.56	75.60	352.32	1155.61	40.00	0.06614	0.00433	0.125002	Very Dense	Hard
30.0	100	c	5.0	75.60	64.80	75.60	352.32	1155.61	40.00	0.06614	0.00433	0.125002	Very Dense	Hard
35.0	100	c	5.0	75.60	64.80	75.60	352.32	1155.61	40.00	0.06614	0.00433	0.125002	Very Dense	Hard
40.0	100	c	5.0	75.60	64.80	75.60	352.32	1155.61	40.00	0.06614	0.00433	0.125002	Very Dense	Hard
45.0	100	c	5.0	75.60	64.80	75.60	352.32	1155.61	40.00	0.06614	0.00433	0.125002	Very Dense	Hard
50.0	100	c	5.0	75.60	64.80	75.60	352.32	1155.61	40.00	0.06614	0.00433	0.125002	Very Dense	Hard
		Total:	50.0	"d" Feet				Total:		1.45894	0.04926	1.329633		

**Used When Boring Depths are less than 100 feet to estimate Shear Wave Velocity over 100 feet. Caltrans Geotechnical Services Design Manual, Version 1.0, August 2009 using N60HE corrected only for Hammer Energy (Empirical Calculation)

*** Uncorrected blowcount not to exceed 100 blows as entry per CBC

Consistency classification based upon ASCE 1996

BOREHOLE, SAMPLER, AND ROD CORRECTION FACTORS

Factor	Equipment Variables	Value
Borehole diameter factor, C_B	2.5 - 4.5 in (65 - 115 mm)	1.00
	6 in (150 mm)	1.05
	8 in (200 mm)	1.15
Sampling method factor, C_S	Standard sampler	1.00
	Sampler without liner	1.20
Rod length factor, C_R	10 - 13 ft (3 - 4 m)	0.75
	13 - 20 ft (4 - 6 m)	0.85
	20 - 30 ft (6 - 10 m)	0.95
	> 30 ft (> 10 m)	1.00

Adapted from Skempton (1986).

Spreadsheet Version 2.6, 2019: Prepared by Kevin L. Paul, PE, GE

Boring No.	26	Project and Number	Proposed Glamis Spec	303235-001
		ESSW Field Staff	R. Howe	
		Drilling Company	Calpac	
		Drilling Method	B-61 HAS	HSA Inner Diameter 8"
		Site Latitude (North)	Decimal Degrees	32.9995
		Site Longitude (West)	Decimal Degrees	-115.0593

33.65

Date Drilled
6/18/2019

Hammer Weight (lbs)
140

Hammer Drop (inches)
30

Hammer Efficiency (E_M)
72

Borehole Correction (Cb)*
1

*inside diameter of Hollow Stem Auger

Sampler Correction Mod Cal to SPT
0.63

Sampler Liner Correction (Cs)
1.2 Applied if SPT Sampler Used
1.0 Applied if Cal Sampler Used

Rod Length Above Ground (ft)
3

Depth to Estimate Vs Over (ft)*
100

*Caltrans Estimation Method

*N_{sub} Value Desired For Column 6
70

*Only Used for Calculating Nsub otherwise not used by program (i.e.N50, N70, N80, etc)

Calculation Results
Ave. SPT N_{60HE}-value (blows/ft)
73
(Based on Upper 50 feet)
Ave. Shear Wave Velocity (ft/sec)
1162
(Based on Upper 50 feet)
Soil Profile Type (Site Class)
D
(Based on Upper 50 feet)
Ave. Friction Angle (degrees)
40
(Based on Upper 50 feet)
Estimated Shear Wave Velocity **
Based on Depth Less than 100' ft
1151 (ft/sec Upper 100 feet)
Soil Profile Type (Site Class)**
D
Based on
Ave. Shear Wave Velocity (ft/sec)
351 (m/sec Upper 100 feet)
Ave. Field SPT N-value (blows/ft)
60.6
(Based on Upper 50 feet)
Ave. Field SPT N-value (blows/ft)
66.3
(Based on Upper 100 feet)
Soil Profile Type (Site Class)**
Check Rock Type for Either A, B, or C
Based on
Ave. Field Blow Count
66 (Upper 100 feet)

	Equipment variable	Typical Correction (%/100)
Energy ratio (Skempton, 1986)	Donut Hammer	0.50 to 1.00
	Safety Hammer	0.70 to 1.20
	Automatic-Trip Donut-type Hammer	0.80 to 1.30

→ Hammer energy as related to the standard 60% delivered energy, i.e. a 72% hammer has and energy ratio of 1.2, i.e. (72/60=1.2)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Bottom of Layer Depth (ft)	Blow Count***	Type of Sampler	d_i (feet)	N_{60} (blows/ft)	N70 (blows/ft)	N_{60HE} (blows/ft)	V_{si}** (m/sec)	V_{si} (ft/sec)	Φ_i (degrees)	d_i/N_{60HEi}	d_i/V_{si}	d_i/Φ_i	Consistency if Coarse Grained (Based on ASTM and Corrected for N60)	Consistency if Fine Grained (Based on ASTM and Corrected for N60)
2.5	35	c	2.5	19.85	17.01	26.46	259.85	852.30	33.65	0.09448	0.00293	0.074285	Medium Dense	Very Stiff
5.0	100	c	2.5	56.70	48.60	75.60	352.32	1155.61	40.00	0.03307	0.00216	0.062501	Very Dense	Hard
7.5	100	c	2.5	56.70	48.60	75.60	352.32	1155.61	40.00	0.03307	0.00216	0.062501	Very Dense	Hard
10.0	100	c	2.5	56.70	48.60	75.60	352.32	1155.61	40.00	0.03307	0.00216	0.062501	Very Dense	Hard
15.0	100	c	5.0	64.26	55.08	75.60	352.32	1155.61	40.00	0.06614	0.00433	0.125002	Very Dense	Hard
20.0	100	c	5.0	71.82	61.56	75.60	352.32	1155.61	40.00	0.06614	0.00433	0.125002	Very Dense	Hard
25.0	100	c	5.0	71.82	61.56	75.60	352.32	1155.61	40.00	0.06614	0.00433	0.125002	Very Dense	Hard
30.0	61	s	5.0	87.84	75.29	73.20	349.04	1144.85	39.77	0.06831	0.00437	0.125708	Very Dense	Hard
35.0	100	s	5.0	144.00	123.43	120.00	402.84	1321.30	43.45	0.04167	0.00378	0.115062	Very Dense	Hard
40.0	100	s	5.0	144.00	123.43	120.00	402.84	1321.30	43.45	0.04167	0.00378	0.115062	Very Dense	Hard
45.0	100	s	5.0	144.00	123.43	120.00	402.84	1321.30	43.45	0.04167	0.00378	0.115062	Very Dense	Hard
50.0	41	s	5.0	59.04	50.61	49.20	311.05	1020.26	37.17	0.10163	0.00490	0.134508	Very Dense	Hard
		Total:	50.0	"d" Feet				Total:		0.68703	0.04302	1.242194		

**Used When Boring Depths are less than 100 feet to estimate Shear Wave Velocity over 100 feet. Caltrans Geotechnical Services Design Manual, Version 1.0, August 2009 using N60HE corrected only for Hammer Energy (Empirical Calculation)

*** Uncorrected blowcount not to exceed 100 blows as entry per CBC

Consistency classification based upon ASCE 1996

BOREHOLE, SAMPLER, AND ROD CORRECTION FACTORS

Factor	Equipment Variables	Value
Borehole diameter factor, C_B	2.5 - 4.5 in (65 - 115 mm)	1.00
	6 in (150 mm)	1.05
	8 in (200 mm)	1.15
Sampling method factor, C_S	Standard sampler	1.00
	Sampler without liner	1.20
Rod length factor, C_R	10 - 13 ft (3 - 4 m)	0.75
	13 - 20 ft (4 - 6 m)	0.85
	20 - 30 ft (6 - 10 m)	0.95
	> 30 ft (> 10 m)	1.00

Adapted from Skempton (1986).

Spreadsheet Version 2.6, 2019: Prepared by Kevin L. Paul, PE, GE

APPENDIX B

Laboratory Test Results

File No.: 303235-001 August 29, 2019

Lab No.: 19-073

UNIT DENSITIES AND MOISTURE CONTENT ASTM D2937 & D2216

Job Name: Glamis Plan

Sample Location	Depth (feet)	Unit Dry Density (pcf)	Moisture Content (%)	USCS Group Symbol
B1	5	122	2	SM
B1	15	114	2	SW
B3	2.5	125	2	SM
B3	12.5	120	3	SC
B4	5	118	4	SP-SM
B4	10	122	4	SP
B9	2.5	117	4	SM
B9	7.5	124	4	SW-SM
B10	5	118	3	SM
B11	2.5	112	2	SM
B11	5	107	3	SP-SM
B11	7.5	112	9	SM
B11	10	121	2	SW-SM
B11	15	115	3	SW-SM
B11	20	104	2	SW-SM
B11	25	---	5	SM
B11	30	107	2	SM
B11	35	119	2	SM
B11	40	---	3	SM
B11	45	---	3	SM
B11	50	---	2	SM
B12	2.5	109	3	SW-SM
B12	7.5	118	3	SC
B12	12.5	120	6	SC
B12	17.5	123	3	SW-SM

File No.: 303235-001 August 29, 2019

Lab No.: 19-073

UNIT DENSITIES AND MOISTURE CONTENT ASTM D2937 & D2216

Job Name: Glamis Plan

Sample Location	Depth (feet)	Unit Dry Density (pcf)	Moisture Content (%)	USCS Group Symbol
B13	5	118	3	SW
B13	10	118	3	SW
B15	2.5	121	3	SP-SM
B15	5	119	2	SP-SM
B15	10	126	3	SM
B15	15	107	3	SM
B15	20	125	6	SM
B16	2.5	116	2	SP-SM
B16	5	114	3	SW
B16	10	122	5	SP-SM
B18	2.5	121	4	SP-SM
B18	7.5	115	4	SM
B18	10	123	3	SW
B19	5	126	6	SC-SM
B19	10	125	7	SC-SM
B19	15	125	8	SP
B20	5	122	4	SP-SM
B20	10	120	4	SW
B20	15	125	4	SW
B21	5	120	4	SW
B21	15	112	7	SC-SM
B23	2.5	111	1	SW
B23	5	128	3	GP
B23	7.5	120	4	SW

File No.: 303235-001 August 29, 2019

Lab No.: 19-073

UNIT DENSITIES AND MOISTURE CONTENT ASTM D2937 & D2216

Job Name: Glamis Plan

Sample Location	Depth (feet)	Unit Dry Density (pcf)	Moisture Content (%)	USCS Group Symbol
B25	2.5	129	5	SW
B25	5	121	5	SP
B25	7.5	126	7	SC
B25	10	125	5	SM
B25	15	---	7	SM
B25	20	---	4	SW-SM
B26	5	115	4	SP-SM
B26	10	119	4	SP-SM
B26	15	---	4	SP-SM
B26	20	---	3	SP-SM
B27	2.5	110	3	SW
B27	5	116	2	GP
B27	7.5	---	3	GP
B28	5	120	4	SW
B28	10	125	4	GP
B28	15	127	5	SW
B28	20	113	3	SW

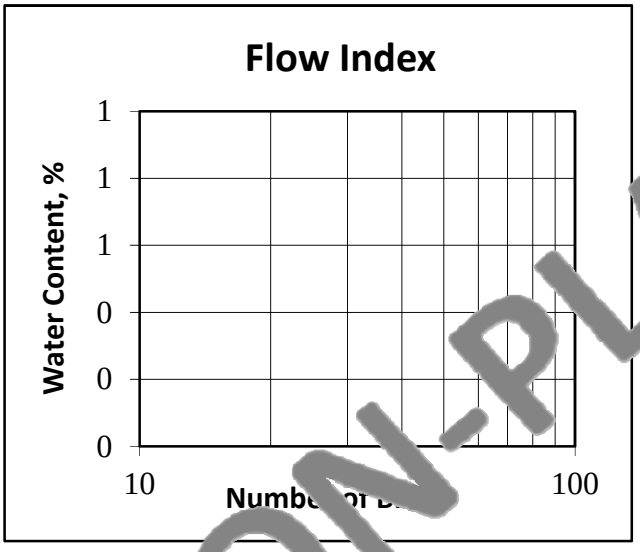
File No.: 303235-001 August 29, 2019
Lab No.: 19-073

PLASTICITY INDEX

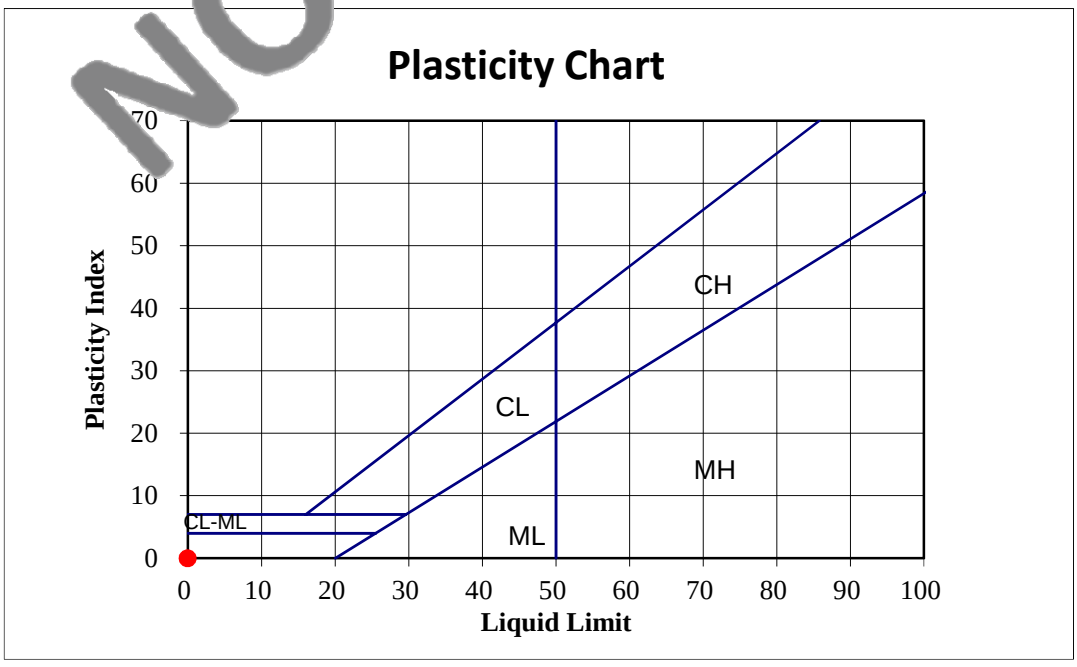
ASTM D 4318

Job Name: Glamis Plan
Sample ID: B11 @ 25 feet
Soil Description: Well Graded Sand w/Silt and Gravel (SW-SM)

DATA SUMMARY				TEST RESULTS	
Number of Blows:	0	0	0	**LIQUID LIMIT**	**#DIV/0!**
Water Content, %	#DIV/0!	#DIV/0!		**PLASTIC LIMIT**	**#DIV/0!**
				PLASTICITY INDEX	**#DIV/0!**



NON-PLASTIC



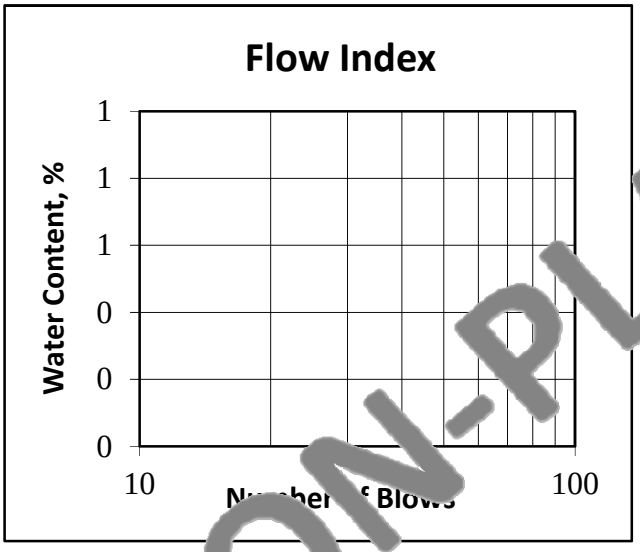
File No.: 303235-001 August 29, 2019
Lab No.: 19-073

PLASTICITY INDEX

ASTM D 4318

Job Name: Glamis Plan
Sample ID: B26 @ 25 feet
Soil Description: Poorly Graded Sand w/Silt (SP-SM)

DATA SUMMARY				TEST RESULTS	
Number of Blows:	0	0	0	LIQUID LIMIT	#DIV/0!
Water Content, %	#DIV/0!	#DIV/0!		PLASTIC LIMIT	#DIV/0!
				PLASTICITY INDEX	#DIV/0!



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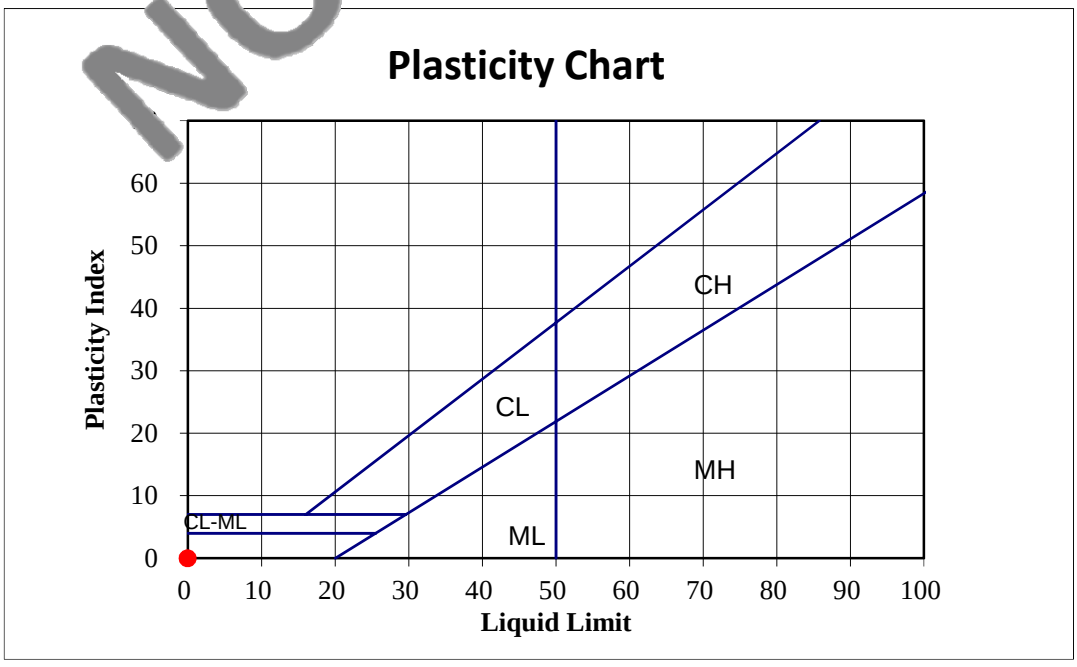


File No.: 303235-001 August 29, 2019

Lab No.: 19-073

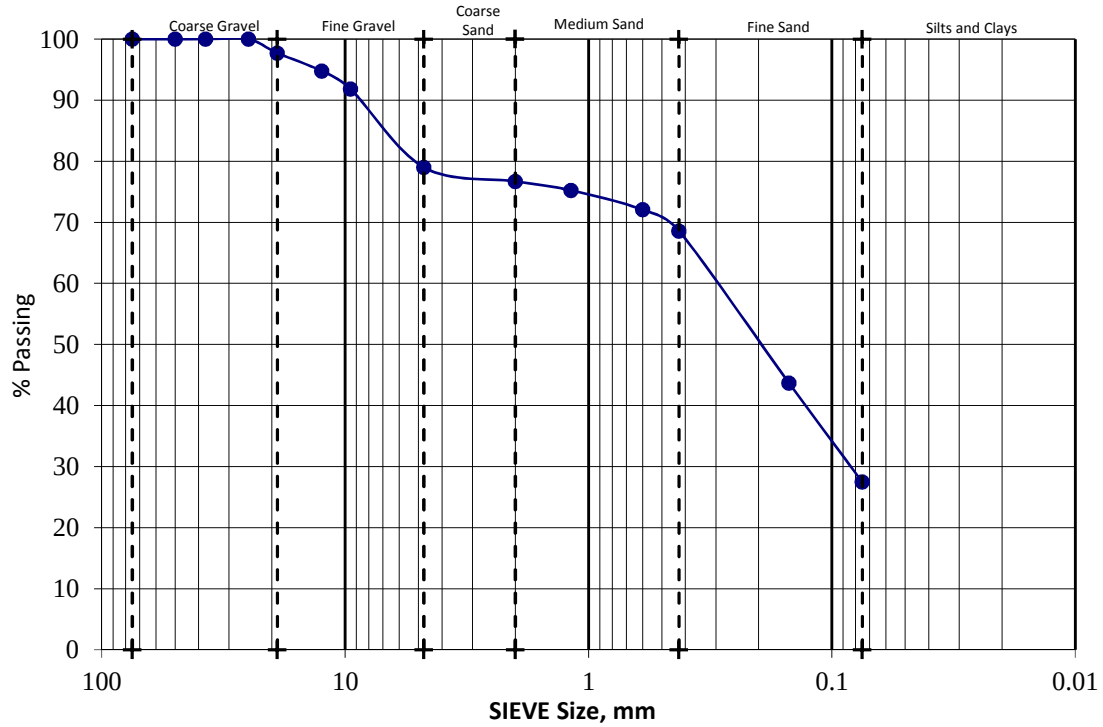
SIEVE ANALYSIS ASTM D6913

Job Name: Glamis Plan

Sample ID: B2 @ 0-5 feet

Description: Silty Clayey Sand w/Gravel (SC-SM)

Sieve Size	% Passing
3"	100
2"	100
1-1/2"	100
1"	100
3/4"	98
1/2"	95
3/8"	92
#4	79
#10	77
#16	75
#30	72
#40	69
#100	44
#200	27.5



% Coarse Gravel:	2	% Coarse Sand:	2			
% Fine Gravel:	19	% Medium Sand:	8	Cu:	NA	
		% Fine Sand:	41	Cc:	NA	Gradation
% Total Gravel	21	% Total Sand	52	% Fines:	27.5	NA

File No.: 303235-001 August 29, 2019

Lab No.: 19-073

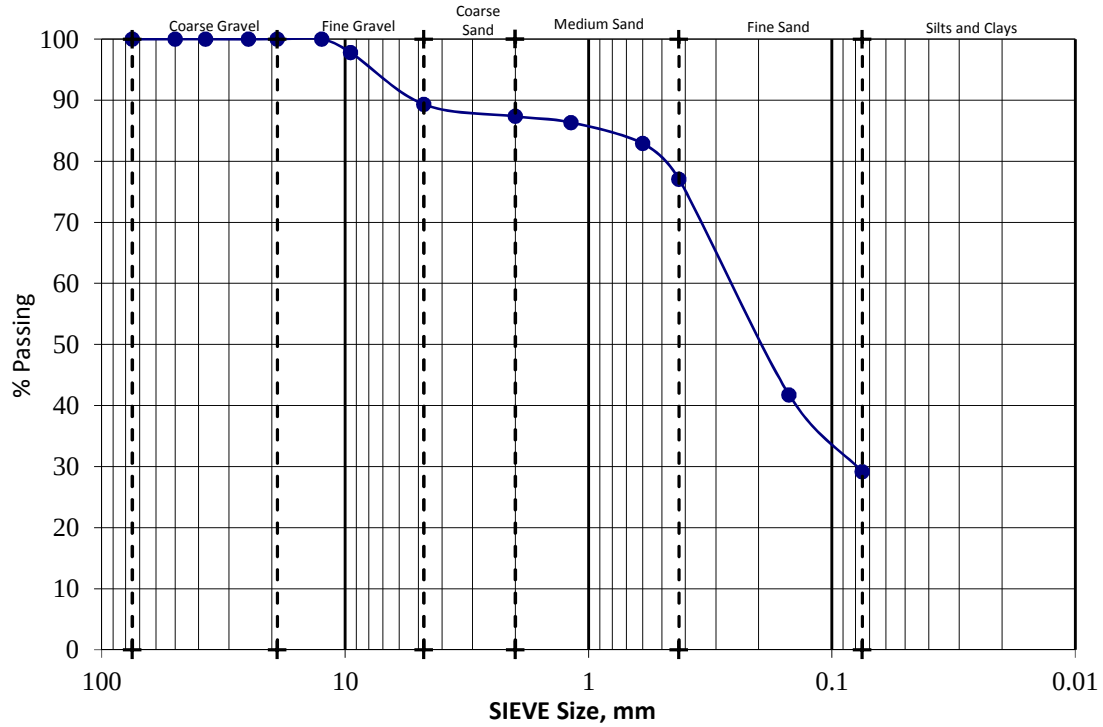
SIEVE ANALYSIS ASTM D6913

Job Name: Glamis Plan

Sample ID: B13 @ 0-5 feet

Description: Silty Sand (SM)

Sieve Size	% Passing
3"	100
2"	100
1-1/2"	100
1"	100
3/4"	100
1/2"	100
3/8"	98
#4	89
#10	87
#16	86
#30	83
#40	77
#100	42
#200	29.1



% Coarse Gravel:	0	% Coarse Sand:	2			
% Fine Gravel:	11	% Medium Sand:	10	Cu:	NA	
		% Fine Sand:	48	Cc:	NA	Gradation
% Total Gravel	11	% Total Sand	60	% Fines:	29.1	NA

File No.: 303235-001 August 29, 2019

Lab No.: 19-073

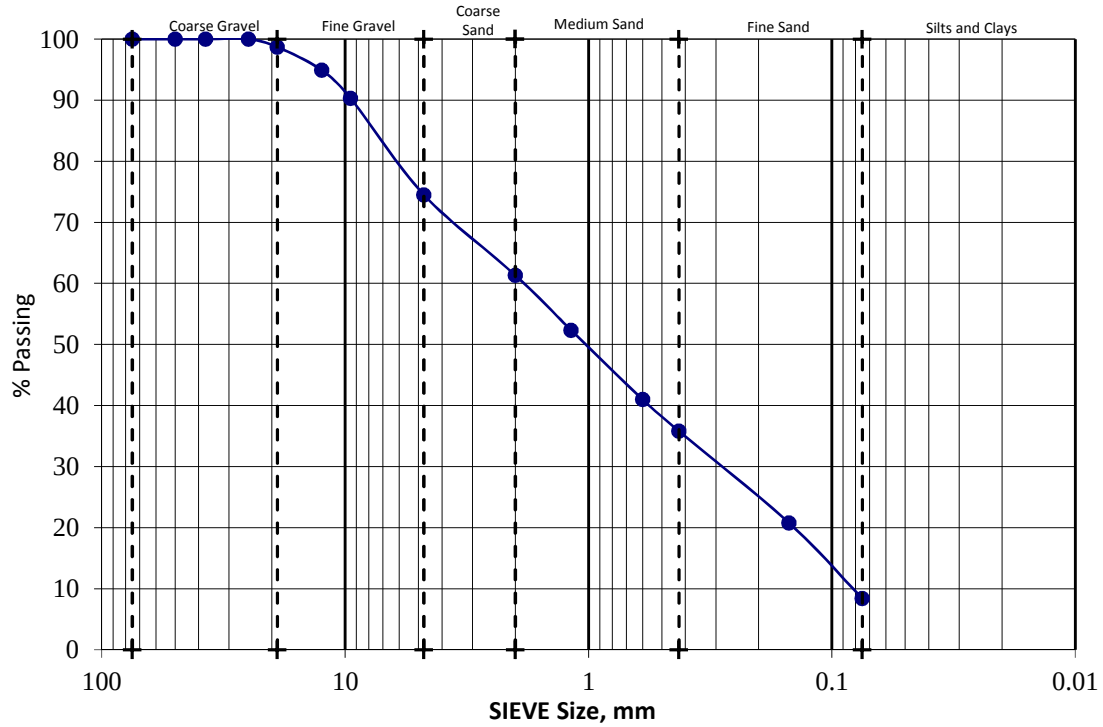
SIEVE ANALYSIS ASTM D6913

Job Name: Glamis Plan

Sample ID: B18 @ 0-5 feet

Description: Poorly Graded Sand w/Gravel (SP-SM)

Sieve Size	% Passing
3"	100
2"	100
1-1/2"	100
1"	100
3/4"	99
1/2"	95
3/8"	90
#4	74
#10	61
#16	52
#30	41
#40	36
#100	21
#200	8.4



% Coarse Gravel:	1	% Coarse Sand:	13		
% Fine Gravel:	24	% Medium Sand:	26	Cu: 22.54	
		% Fine Sand:	27	Cc: 0.533	Gradation
% Total Gravel	26	% Total Sand	66	% Fines: 8.4	Poorly Graded

File No.: 303235-001 August 29, 2019
Job Name: Glamis Plan
Lab Number: 19-073

AMOUNT PASSING NO. 200 SIEVE

ASTM D 1140

Sample Location	Depth (feet)	Fines Content (%)	USCS Group Symbol	Soaking Time (min)
B2	5	7.5	SC-SM	10
B2	10	20.7	SC	10
B2	15	18.5	SM	10
B2	20	13.3	SM	10
B2	25	16.4	SM	10
B2	30	15.6	SM	10
B11	25	16.4	SM	10
B26	25	12.2	SM	10

File No.: 303235-001
Lab No.: 19-073

August 29, 2019

CONSOLIDATION TEST **ASTM D 2435 & D 5333**

Glamis Plan
B11 @ 5 feet

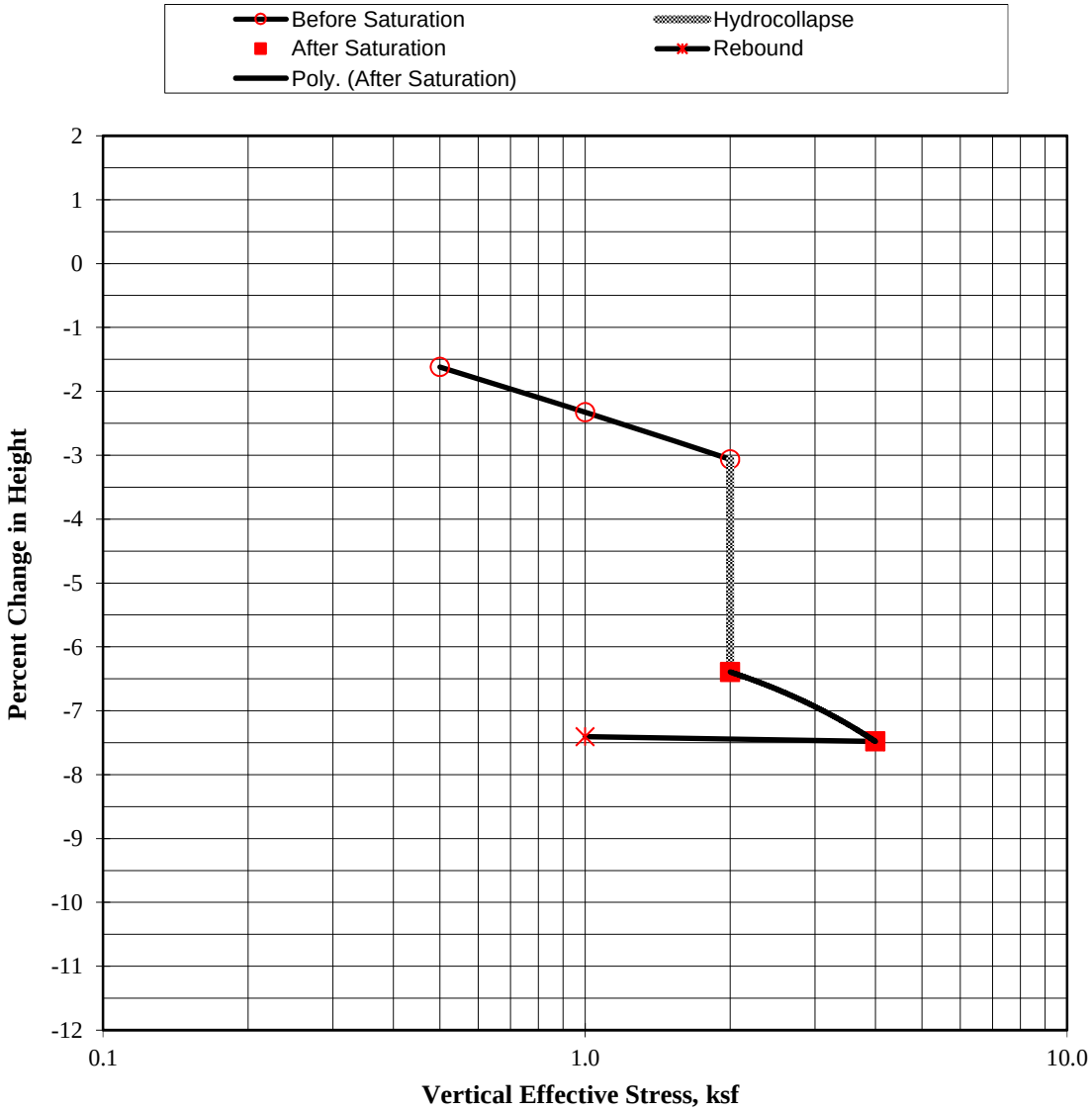
Sand w/Silt (SP-SM)

Ring Sample

Initial Dry Density: 105.1 pcf
Initial Moisture: 4.6%
Specific Gravity: 2.67
Initial Void Ratio: 0.586

Hydrocollapse: 3.3% @ 2.0 ksf

% Change in Height vs Normal Pressure Diagram



File No.: 303235-001
Lab No.: 19-073

August 29, 2019

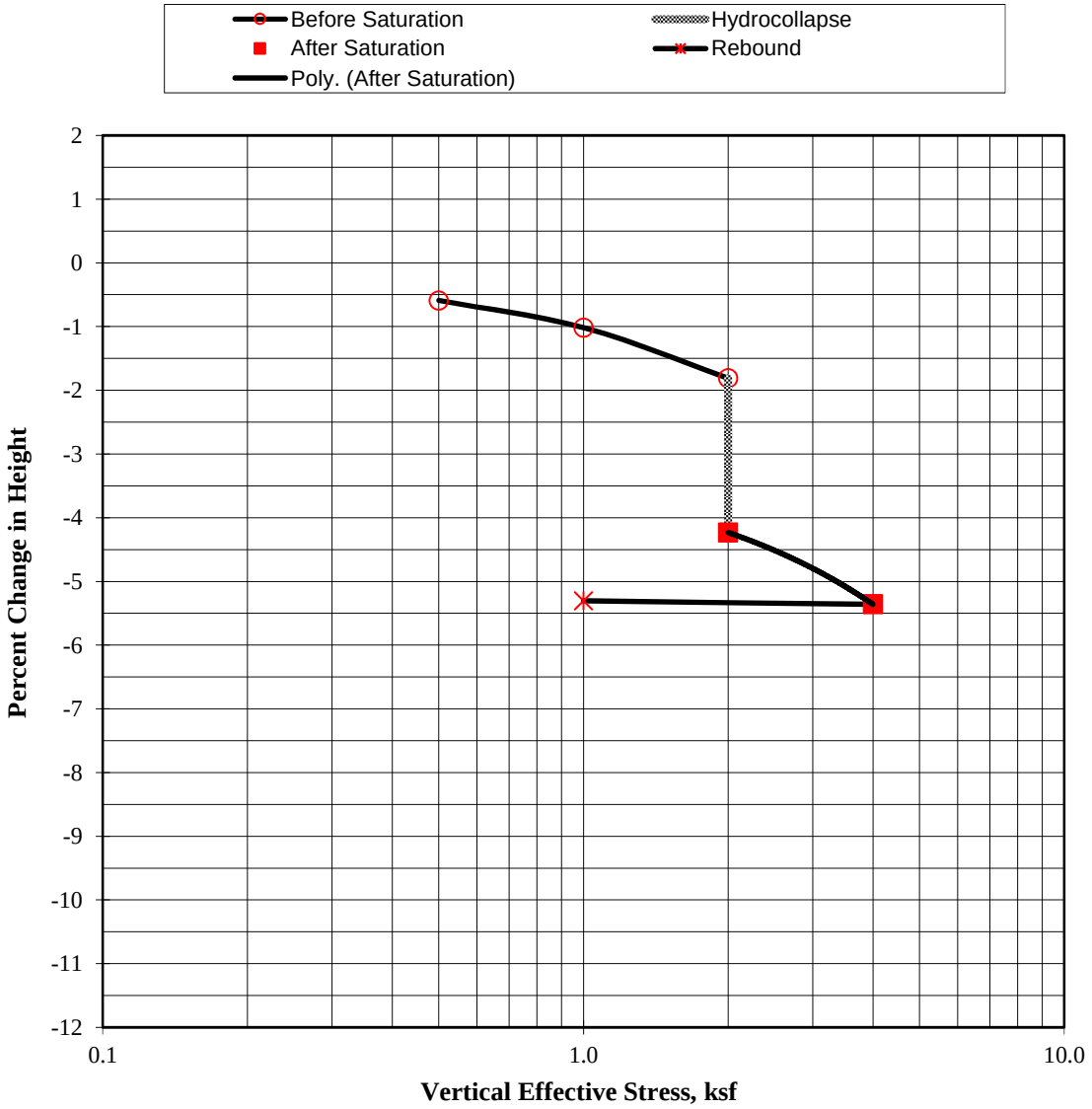
CONSOLIDATION TEST **ASTM D 2435 & D 5333**

Glamis Plan
B11 @ 10 feet
Well Graded Sand w/Silt and Gravel (SW-SM)
Ring Sample

Initial Dry Density: 107.0 pcf
Initial Moisture: 3.3%
Specific Gravity: 2.67
Initial Void Ratio: 0.367

Hydrocollapse: 2.4% @ 2.0 ksf

% Change in Height vs Normal Pressure Diagram



File No.: 303235-001
Lab No.: 19-073

August 29, 2019

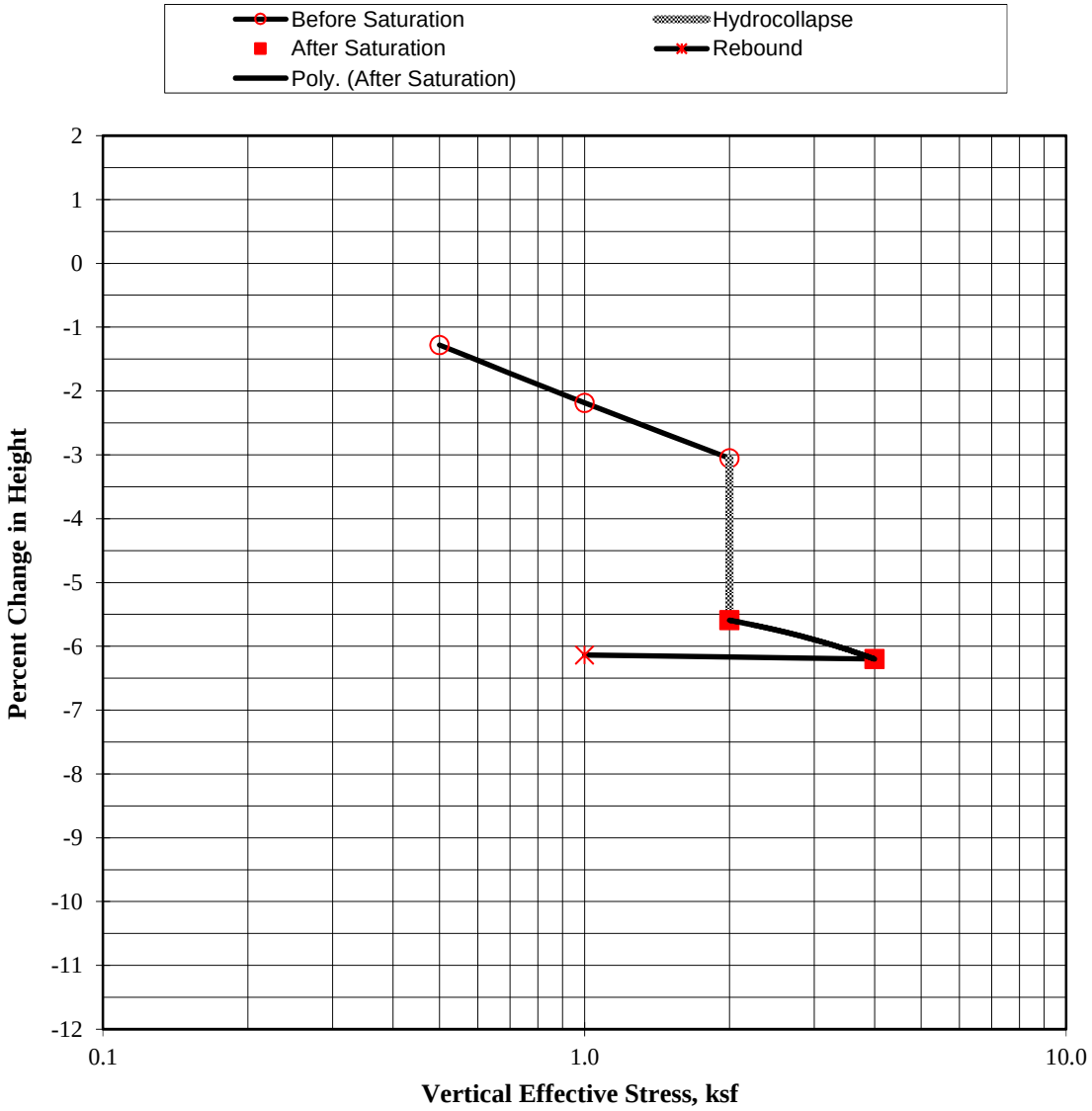
CONSOLIDATION TEST **ASTM D 2435 & D 5333**

Glamis Plan
B11 @ 15 feet
Well Graded Sand w/Silt and Gravel (SW-SM)
Ring Sample

Initial Dry Density: 107.0 pcf
Initial Moisture: 7.8%
Specific Gravity: 2.67
Initial Void Ratio: 0.489

Hydrocollapse: 2.5% @ 2.0 ksf

% Change in Height vs Normal Pressure Diagram



File No.: 303235-001
Lab No.: 19-073

August 29, 2019

CONSOLIDATION TEST **ASTM D 2435 & D 5333**

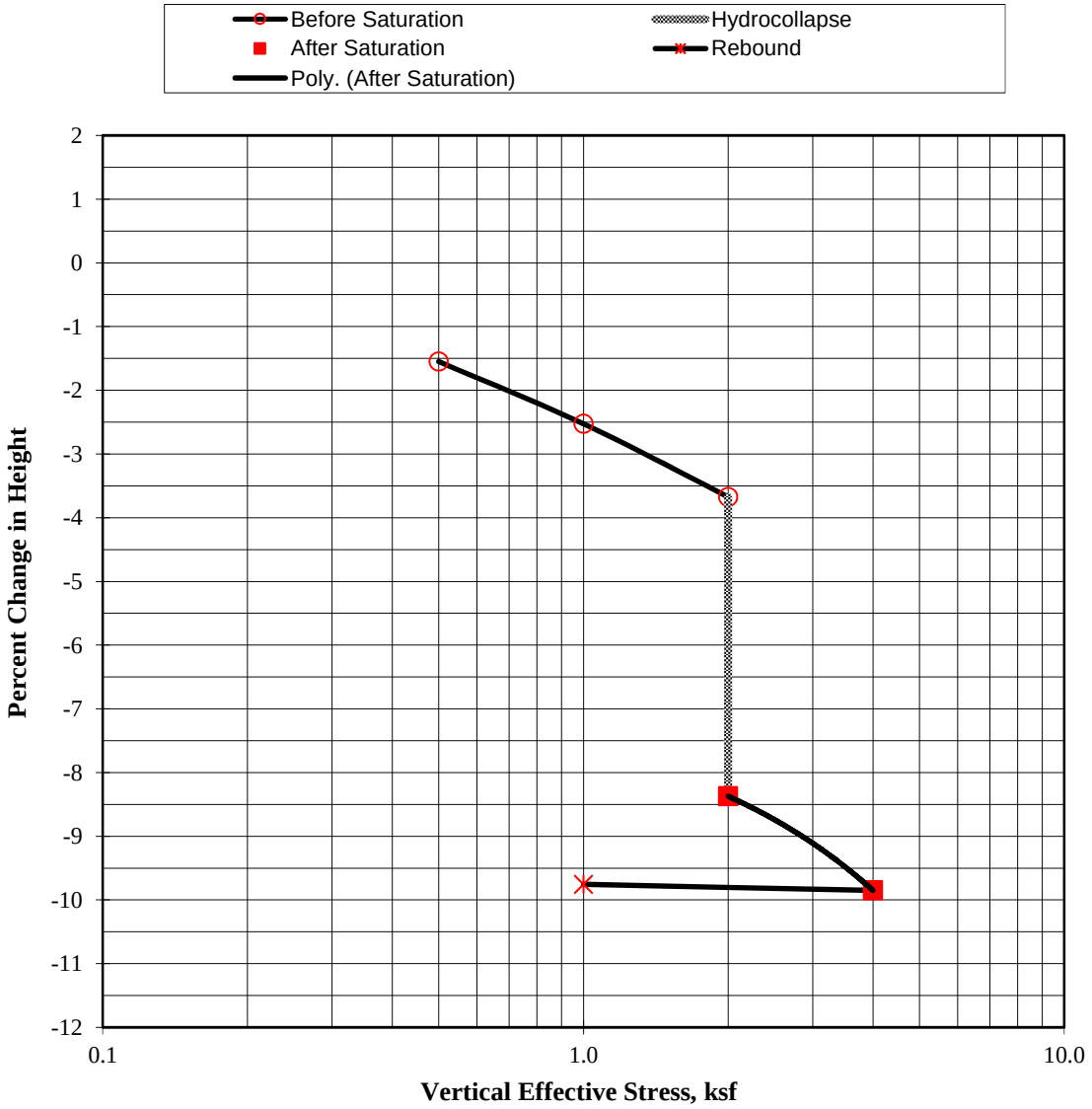
Glamis Plan
B11 @ 20 feet
Well Graded Sand w/Silt and Gravel (SW-SM)
Ring Sample
Sample disturbed

Initial Dry Density: 99.8 pcf
Initial Moisture: 7.0%
Specific Gravity: 2.67
Initial Void Ratio: 0.670

Hydrocollapse: 4.7% @ 2.0 ksf

Test run for low density vs. wetting collapse evaluation

% Change in Height vs Normal Pressure Diagram



File No.: 303235-001
Lab No.: 19-073

August 29, 2019

CONSOLIDATION TEST **ASTM D 2435 & D 5333**

Glamis Plan
B13 @ 5 feet

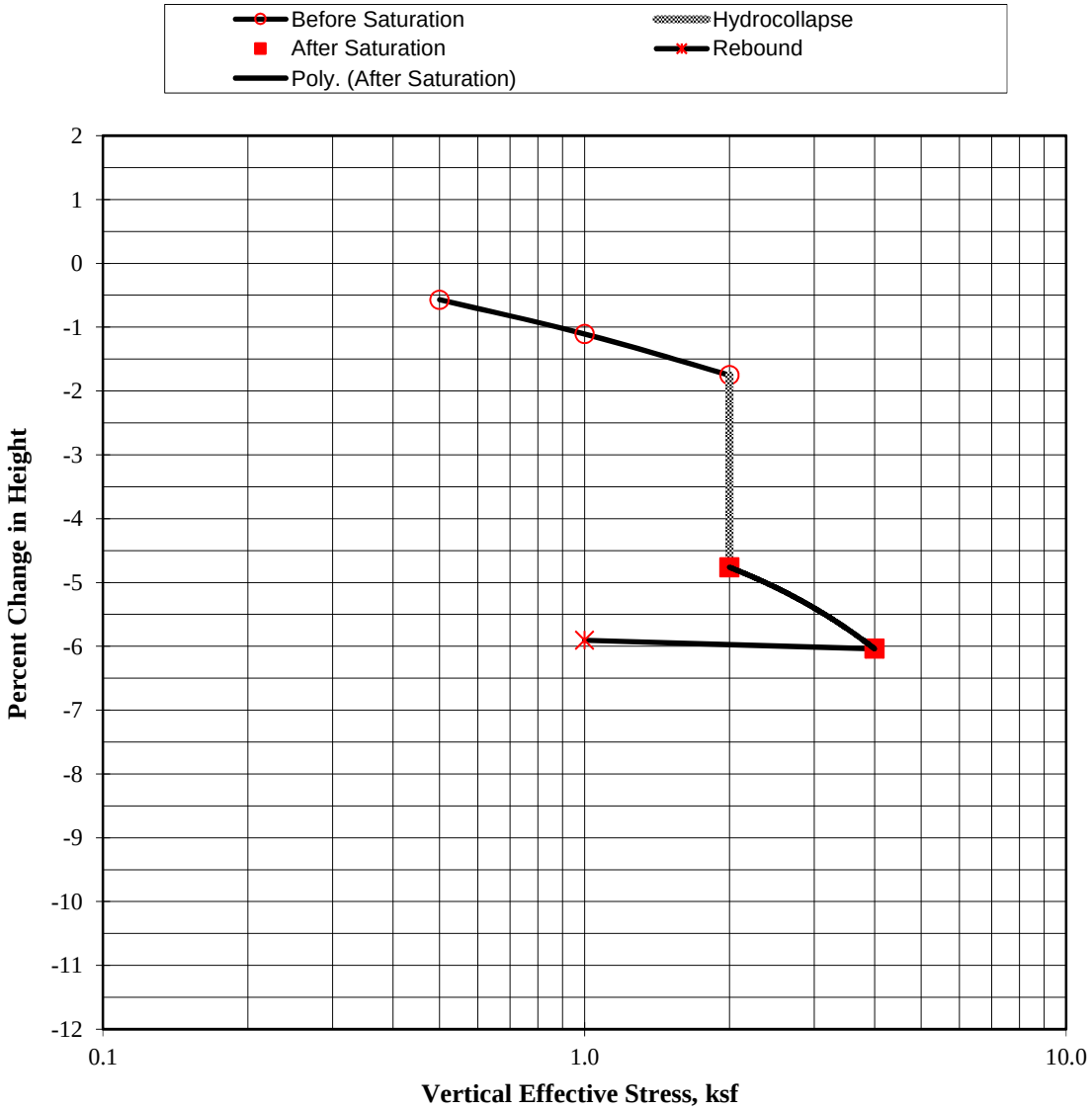
Well Graded Sand w/Gravel (SW)

Ring Sample

Initial Dry Density: 105.0 pcf
Initial Moisture: 4.8%
Specific Gravity: 2.67
Initial Void Ratio: 0.417

Hydrocollapse: 3.0% @ 2.0 ksf

% Change in Height vs Normal Pressure Diagram



File No.: 303235-001
Lab No.: 19-073

August 29, 2019

CONSOLIDATION TEST **ASTM D 2435 & D 5333**

Glamis Plan
B15 @ 10 feet

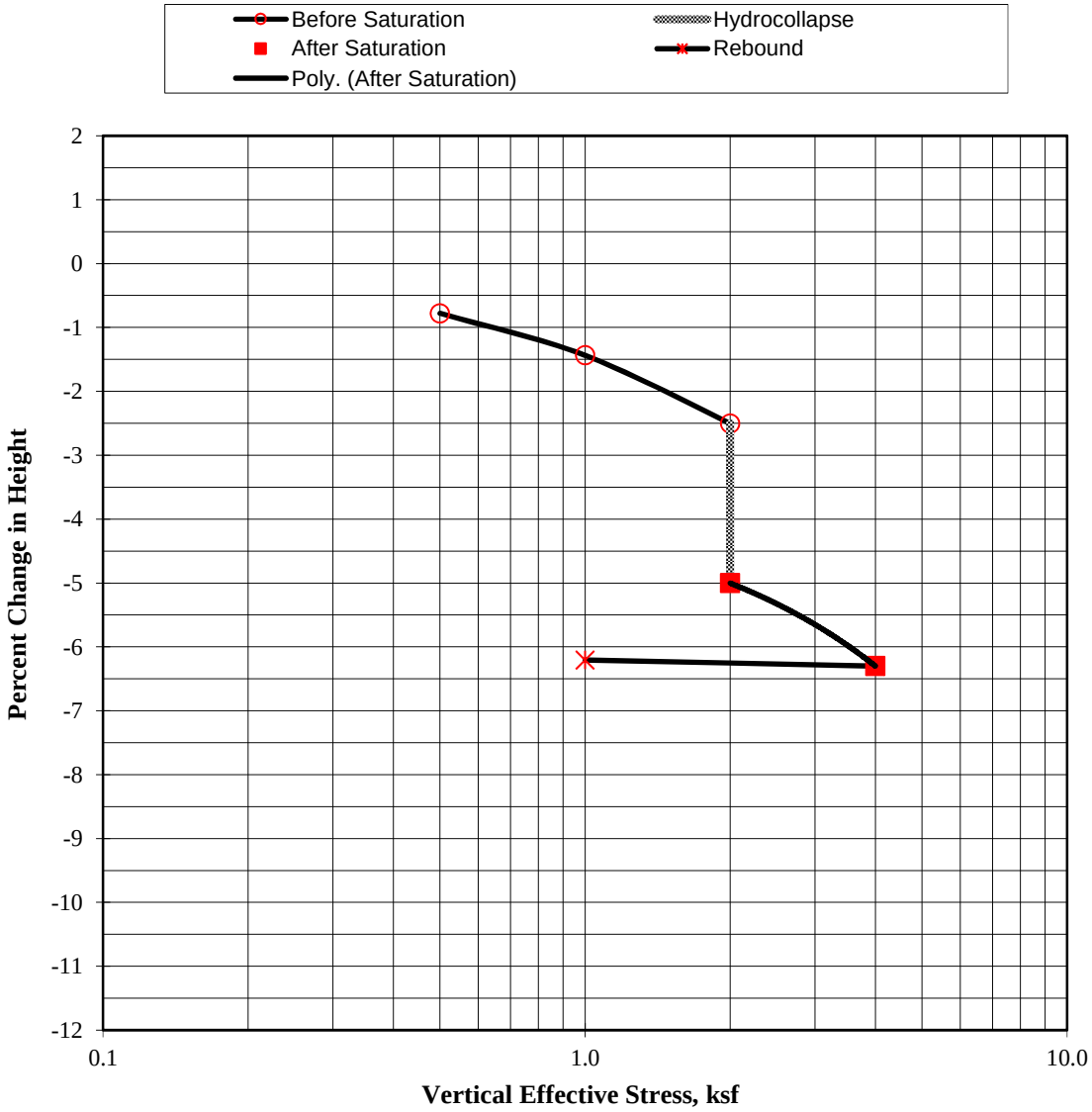
Silty Sand (SM)

Ring Sample

Initial Dry Density: 107.0 pcf
Initial Moisture: 6.5%
Specific Gravity: 2.67
Initial Void Ratio: 0.326

Hydrocollapse: 2.5% @ 2.0 ksf

% Change in Height vs Normal Pressure Diagram



File No.: 303235-001
Lab No.: 19-073

August 29, 2019

CONSOLIDATION TEST **ASTM D 2435 & D 5333**

Glamis Plan
B15 @ 15 feet

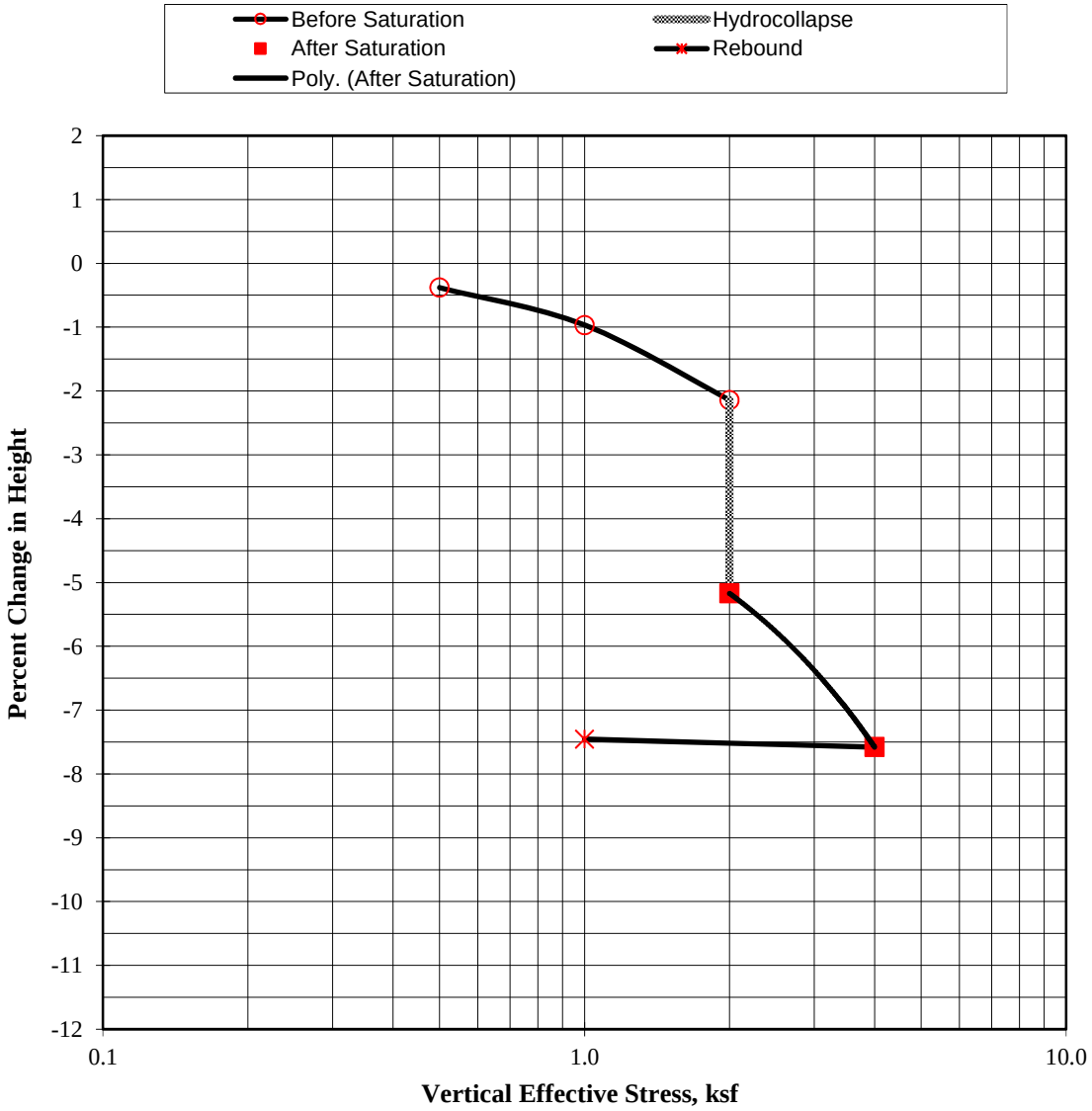
Well Graded Sand w/Gravel (SW)

Ring Sample

Initial Dry Density: 102.9 pcf
Initial Moisture: 6.5%
Specific Gravity: 2.67
Initial Void Ratio: 0.621

Hydrocollapse: 3.0% @ 2.0 ksf

% Change in Height vs Normal Pressure Diagram



File No.: 303235-001
Lab No.: 19-073

August 29, 2019

CONSOLIDATION TEST **ASTM D 2435 & D 5333**

Glamis Plan
B16 @ 5 feet

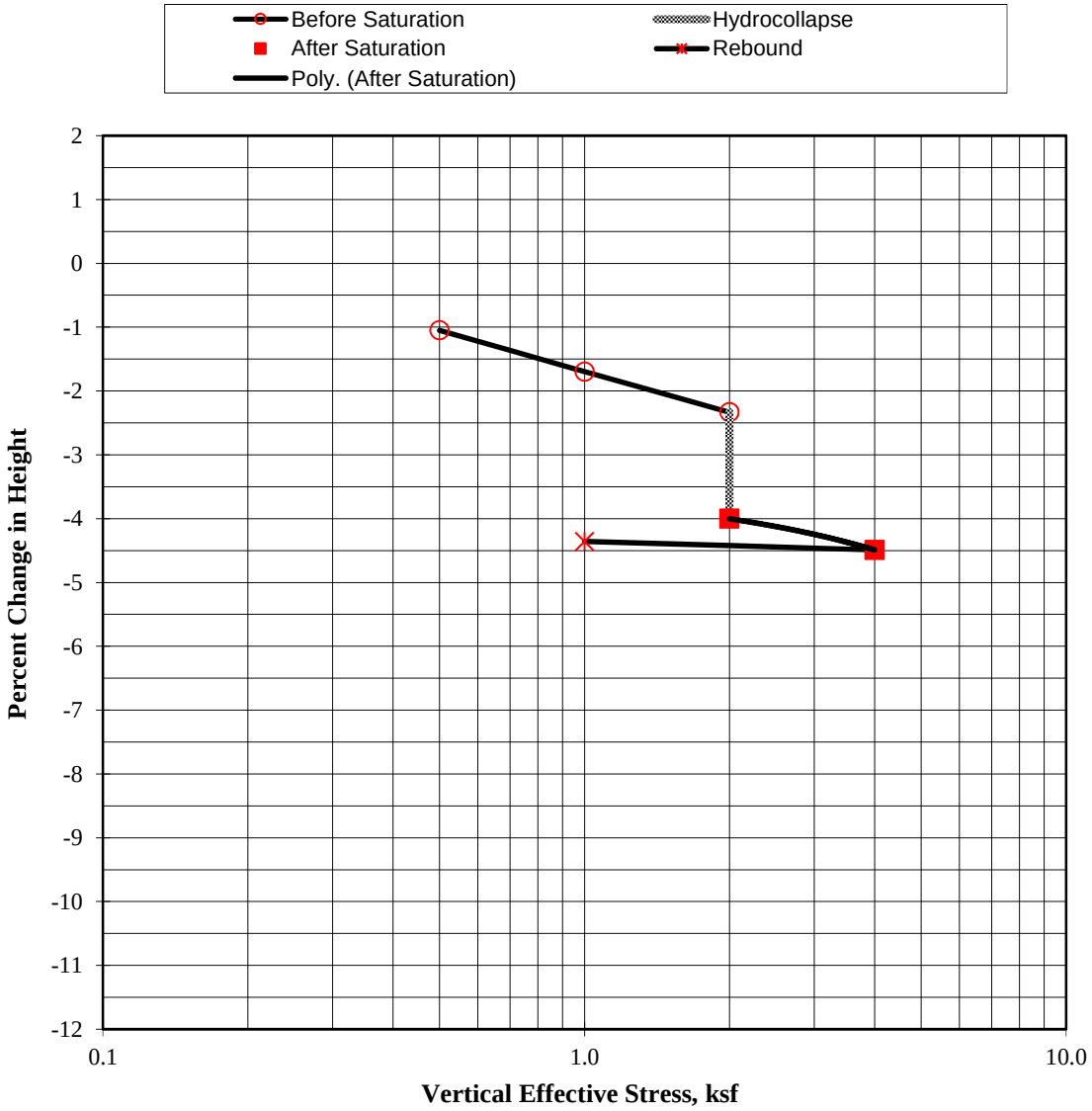
Well Graded Sand (SW)

Ring Sample

Initial Dry Density: 110.0 pcf
Initial Moisture: 2.4%
Specific Gravity: 2.67
Initial Void Ratio: 0.634

Hydrocollapse: 1.7% @ 2.0 ksf

% Change in Height vs Normal Pressure Diagram



File No.: 303235-001
Lab No.: 19-073

August 29, 2019

CONSOLIDATION TEST **ASTM D 2435 & D 5333**

Glamis Plan
B27 @ 5 feet

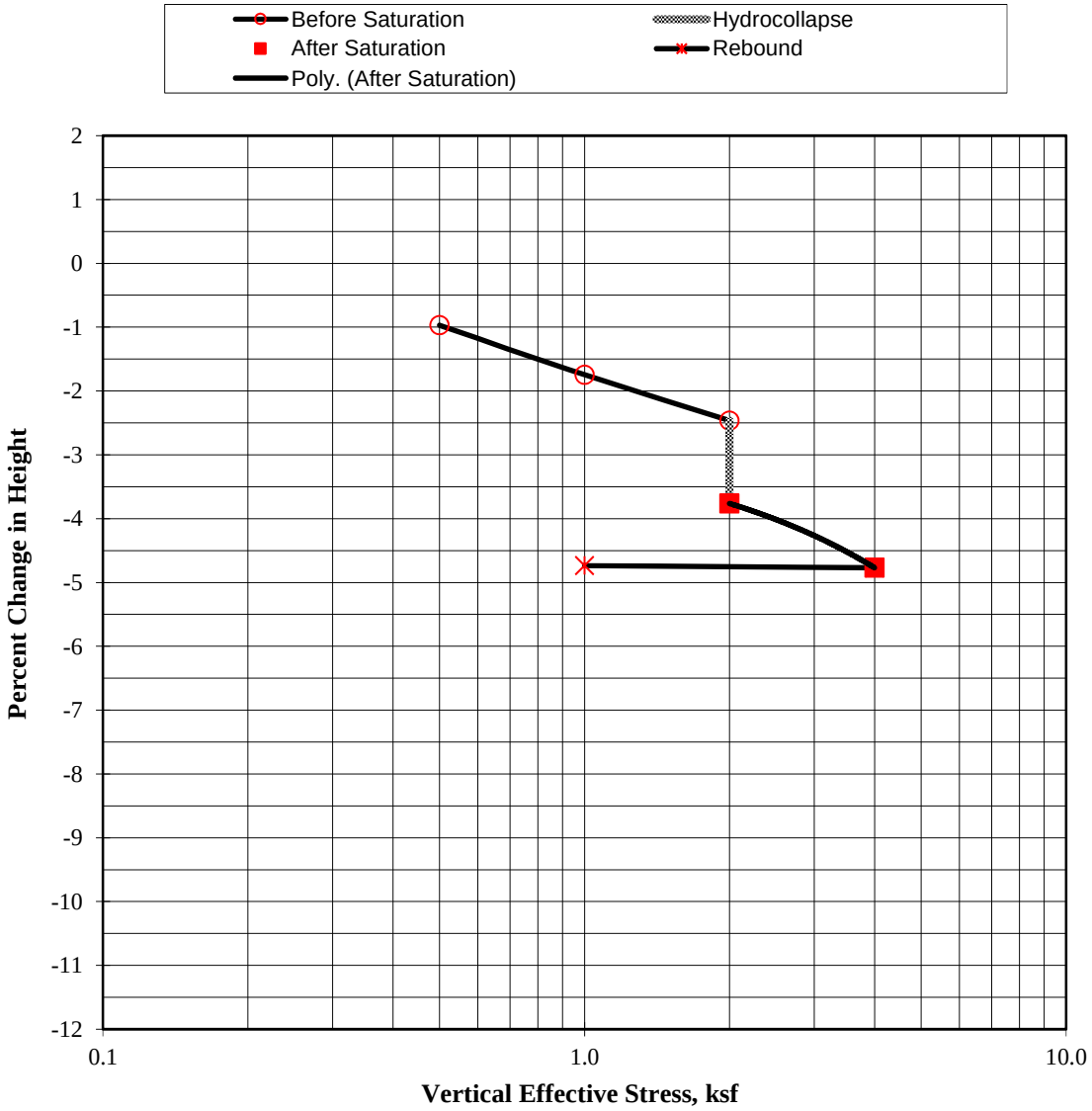
Poorly Graded Gravel w/Sand (GW)

Ring Sample

Initial Dry Density: 114.5 pcf
Initial Moisture: 3.3%
Specific Gravity: 2.67
Initial Void Ratio: 0.337

Hydrocollapse: 1.3% @ 2.0 ksf

% Change in Height vs Normal Pressure Diagram



File No.: 303235-001 August 29, 2019
Lab No.: 19-073

EXPANSION INDEX **ASTM D-4829**

Job Name: Glamis Plan
Sample ID: B2 @ 0-5 feet
Soil Description: Silty Clayey Sand w/Gravel (SC-SM)

Initial Moisture, %:	8.9	
Initial Compacted Dry Density, pcf:	114.0	
Initial Saturation, %:	51	
Final Moisture, %:	16.7	
Volumetric Swell, %:	0.7	
Expansion Index, EI:	**7**	**Very Low**

EI	ASTM Classification
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

File No.: 303235-001 August 29, 2019
Lab No.: 19-073

EXPANSION INDEX **ASTM D-4829**

Job Name: Glamis Plan
Sample ID: B4 @ 0-5 feet
Soil Description: Poorly Graded Sand w/Silt (SP-SM)

Initial Moisture, %:	9.7	
Initial Compacted Dry Density, pcf:	109.2	
Initial Saturation, %:	49	
Final Moisture, %:	27.6	
Volumetric Swell, %:	-1.1	
Expansion Index, EI:	**0**	**Very Low**

EI	ASTM Classification
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

File No.: 303235-001 August 29, 2019
Lab No.: 19-073

EXPANSION INDEX **ASTM D-4829**

Job Name: Glamis Plan
Sample ID: B4 @ 5 feet
Soil Description: Poorly Graded Sand w/Silt (SP-SM)

Initial Moisture, %:	8.7	
Initial Compacted Dry Density, pcf:	114.3	
Initial Saturation, %:	50	
Final Moisture, %:	20.9	
Volumetric Swell, %:	0.0	
Expansion Index, EI:	**0**	**Very Low**

EI	ASTM Classification
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

File No.: 303235-001 August 29, 2019
Lab No.: 19-073

EXPANSION INDEX **ASTM D-4829**

Job Name: Glamis Plan
Sample ID: B15 @ 5 feet
Soil Description: Poorly Graded Sand w/Silt and Gravel (SP-SM)

Initial Moisture, %:	9.1	
Initial Compacted Dry Density, pcf:	114.3	
Initial Saturation, %:	52	
Final Moisture, %:	14.1	
Volumetric Swell, %:	-0.9	
Expansion Index, EI:	**0**	**Very Low**

EI	ASTM Classification
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

File No.: 303235-001 August 29, 2019
Lab No.: 19-073

EXPANSION INDEX **ASTM D-4829**

Job Name: Glamis Plan
Sample ID: B19 @ 5 feet
Soil Description: Silty Clayey Sand w/Gravel (SC-SM)

Initial Moisture, %:	8.2	
Initial Compacted Dry Density, pcf:	116.0	
Initial Saturation, %:	49	
Final Moisture, %:	24.9	
Volumetric Swell, %:	0.8	
Expansion Index, EI:	**8**	**Very Low**

EI	ASTM Classification
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

File No.: 303235-001 August 29, 2019
Lab No.: 19-073

EXPANSION INDEX **ASTM D-4829**

Job Name: Glamis Plan
Sample ID: B13 @ 0-5 feet
Soil Description: Silty Sand (SM)

Initial Moisture, %:	9.7	
Initial Compacted Dry Density, pcf:	109.7	
Initial Saturation, %:	49	
Final Moisture, %:	16.3	
Volumetric Swell, %:	-0.3	
Expansion Index, EI:	**0**	**Very Low**

EI	ASTM Classification
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

File No.: 303235-001 August 29, 2019
Lab No.: 19-073

EXPANSION INDEX **ASTM D-4829**

Job Name: Glamis Plan
Sample ID: B15 @ 10 feet
Soil Description: Silty Sand (SM)

Initial Moisture, %:	8.5	
Initial Compacted Dry Density, pcf:	114.4	
Initial Saturation, %:	49	
Final Moisture, %:	25.5	
Volumetric Swell, %:	-1.6	
Expansion Index, EI:	**0**	**Very Low**

EI	ASTM Classification
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

File No.: 303235-001 August 29, 2019

Lab No.: 19-073

MAXIMUM DRY DENSITY / OPTIMUM MOISTURE

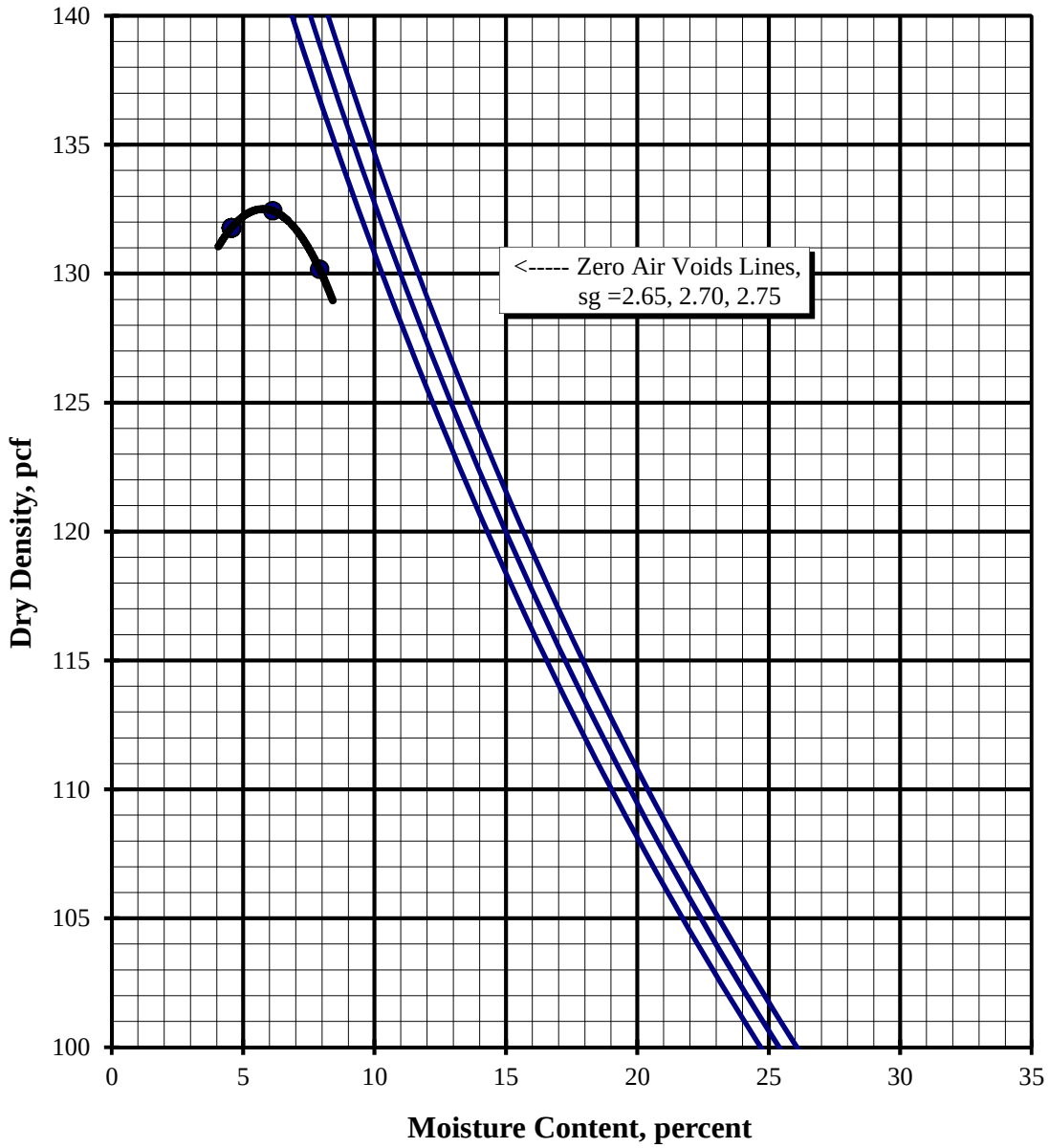
ASTM D 1557 (Modified)

Job Name: Glamis Plan
Sample ID: 1
Location: B2 @ 0-5 feet
Description: Silty Clayey F-M Sand w/Gravel (SC-SM)

Procedure Used: A
Preparation Method: Moist
Rammer Type: Mechanical
Lab Number: 19-073

Maximum Dry Density: 132.5 pcf
Optimum Moisture: 5.9%
Corrected for Oversize (ASTM D4718)

Sieve Size	% Retained (Cumulative)
3/4"	2.3
3/8"	8.2
#4	21.0



File No.: 303235-001 August 29, 2019

Lab No.: 19-073

MAXIMUM DRY DENSITY / OPTIMUM MOISTURE

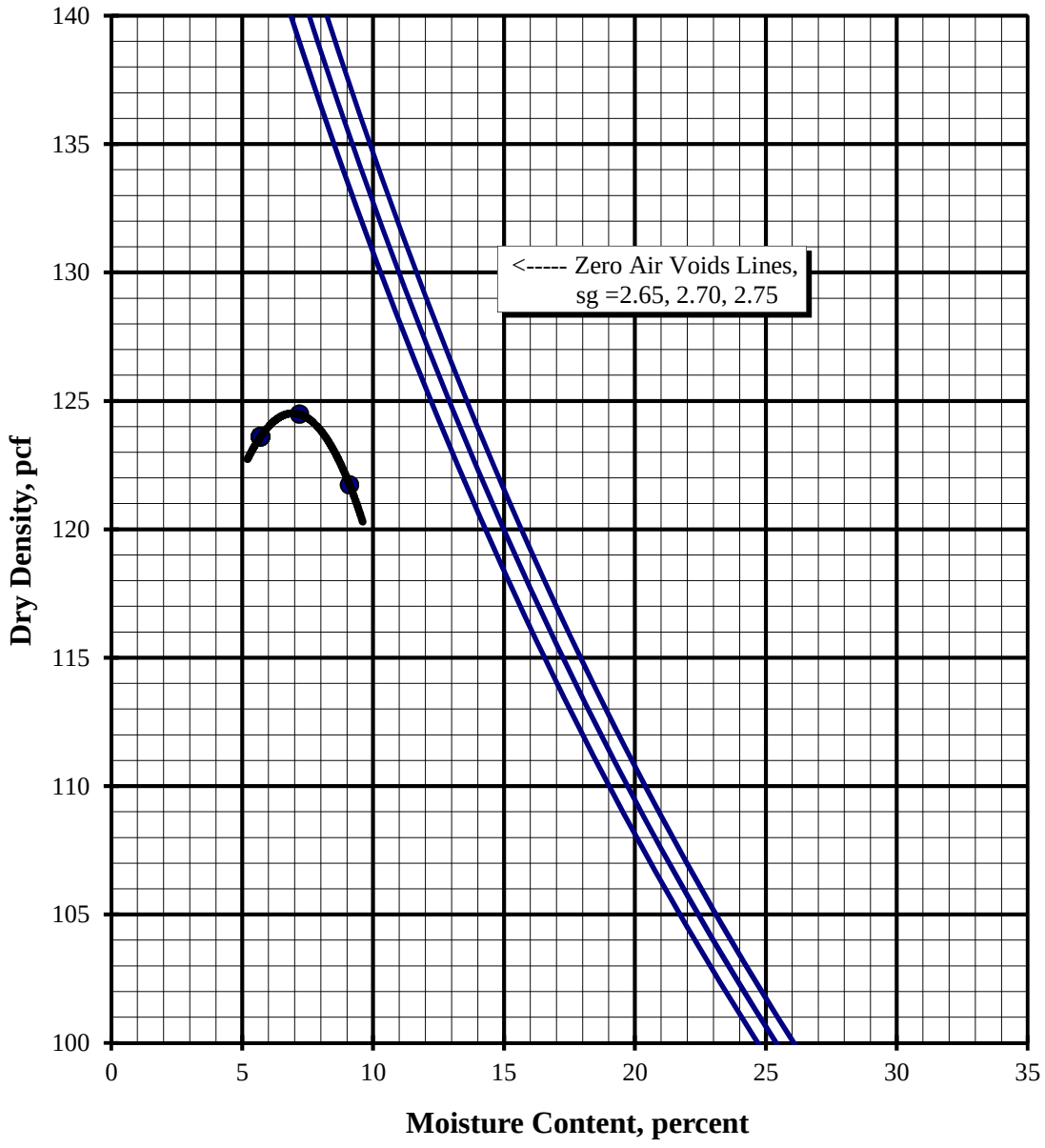
ASTM D 1557 (Modified)

Job Name: Glamis Plan
Sample ID: 2
Location: B13 @ 0-5 feet
Description: Silty F-M Sand (SM)

Procedure Used: A
Preparation Method: Moist
Rammer Type: Mechanical
Lab Number: 19-073

Maximum Dry Density: 124.5 pcf
Optimum Moisture: 7.1%
Corrected for Oversize (ASTM D4718)

Sieve Size	% Retained (Cumulative)
3/4"	0.0
3/8"	2.2
#4	10.7



File No.: 303235-001 August 29, 2019

Lab No.: 19-073

MAXIMUM DRY DENSITY / OPTIMUM MOISTURE

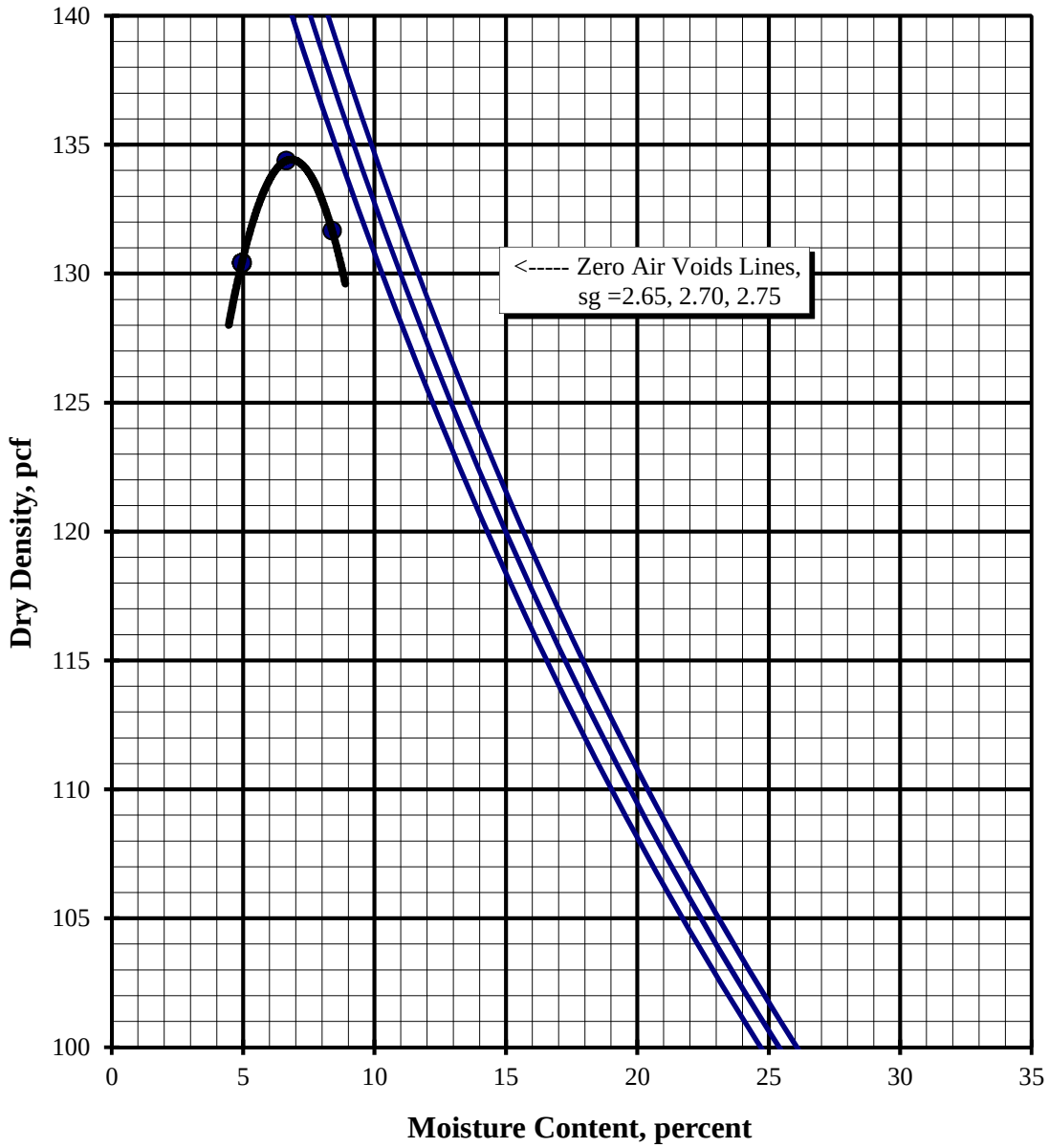
ASTM D 1557 (Modified)

Job Name: Glamis Plan
Sample ID: 3
Location: B18 @ 0-5 feet
Description: Poorly Graded F-C Sand w/Silt and Gravel (SP-SM)

Procedure Used: B
Preparation Method: Moist
Rammer Type: Mechanical
Lab Number: 19-073

Maximum Dry Density: 134.5 pcf
Optimum Moisture: 7%
Corrected for Oversize (ASTM D4718)

Sieve Size	% Retained (Cumulative)
3/4"	1.3
3/8"	9.7
#4	25.5



File No.: 303235-001 August 29, 2019

Lab No.: 19-073

SOIL CHEMICAL ANALYSES

Job Name:	Glamis Plan			
Job No.:	303235-001			
Sample ID:	B2	B13	B18	B19
Sample Location:	0-5	0-5	0-5	10
Resistivity (Units)				
as-received (ohm-cm)	12,400	68,000	180,000	22,800
saturated (ohm-cm)	4,800	3,160	6,400	520
pH	8.3	7.9	8.2	8.6
Electrical Conductivity (mS/cm)	0.09	0.11	0.07	0.81
Chemical Analyses				
Cations				
calcium Ca^{2+} (mg/kg)	72	62	75	25
magnesium Mg^{2+} (mg/kg)	1.6	1.4	2.7	3.2
sodium Na^{1+} (mg/kg)	61	85	34	884
potassium K^{1+} (mg/kg)	18	18	21	21
Anions				
carbonate CO_3^{2-} (mg/kg)	17	14	ND	78
bicarbonate HCO_3^{1-}(mg/kg)	125	110	204	104
fluoride F^{1-} (mg/kg)	1.4	ND	ND	7.5
chloride Cl^{1-} (mg/kg)	22	79	17	808
sulfate SO_4^{2-} (mg/kg)	26	11	21	348
phosphate PO_4^{3-} (mg/kg)	ND	ND	ND	ND
Other Tests				
ammonium NH_4^{1+} (mg/kg)	ND	ND	ND	ND
nitrate NO_3^{1-} (mg/kg)	29	21	13	29
sulfide S^{2-} (qual)	na	na	na	na
Redox (mV)	na	na	na	na

Note: Tests performed by Subcontract Laboratory:
HDR Engineering, Inc.
431 West Baseline Road
Calremont, California 91711 Tel: (909) 962-5485

mg/kg = milligrams per kilogram (parts per million) of dry soil.
Redox = oxidation-reduction potential in millivolts
ND = not detected
na = not analyzed
T.O.P. = top of pipe

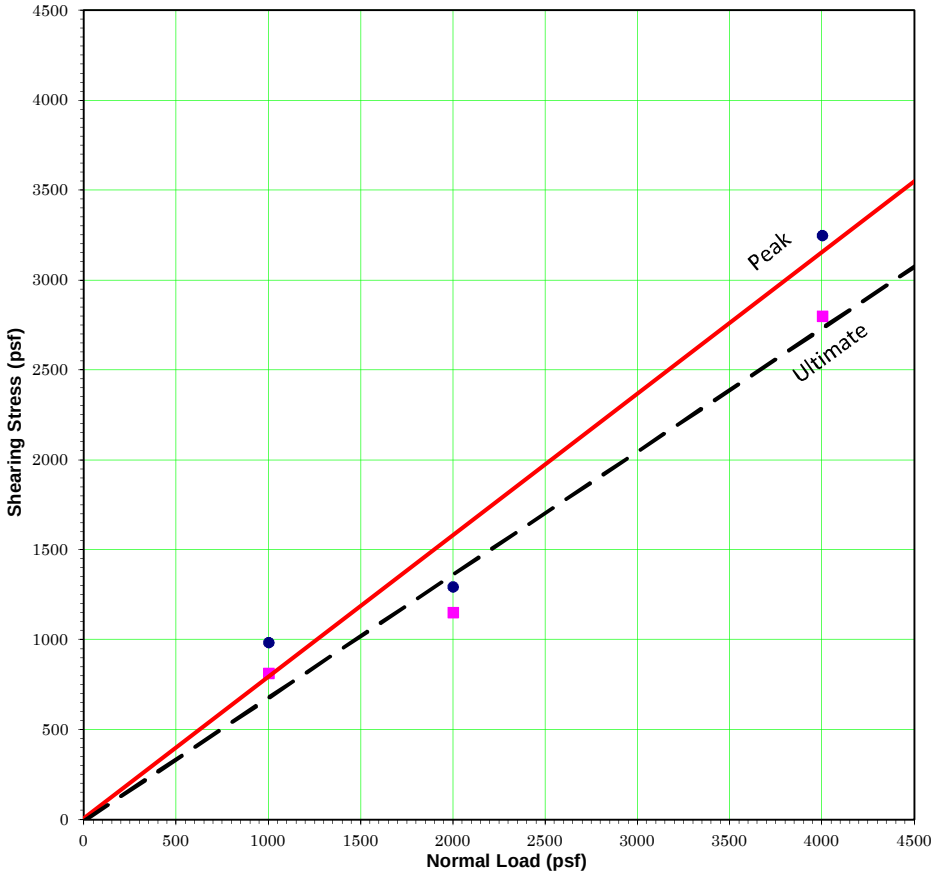
Resistivity per ASTM G187, Cations per ASTM D6919, Anions per ASTM D4327, and Alkalinity per APHA 2320-B. Electrical conductivity in millisiemens/cm and chemical analyses were made on a 1:5 soil-to-water extract.

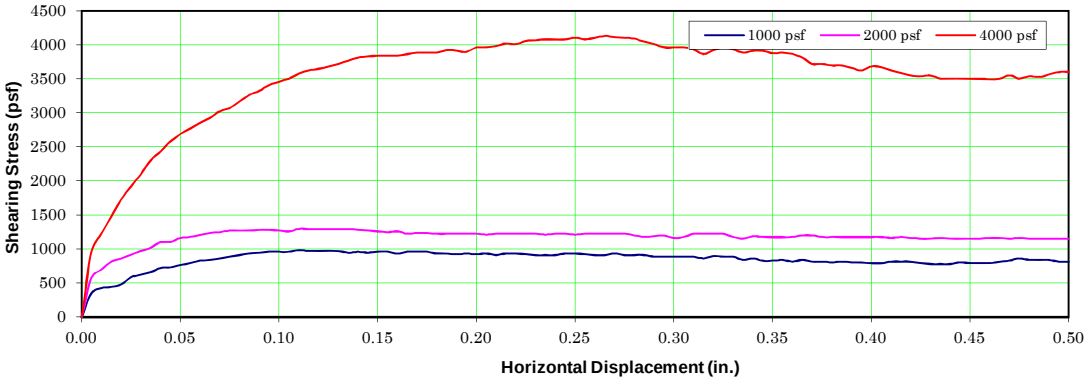
General Guidelines for Soil Corrosivity		
Chemical Agent	Amount in Soil	Degree of Corrosivity
Soluble Sulfates[1]	0 -1,000 mg/Kg (ppm) [0-.1%]	Low
	1,000 - 2,000 mg/Kg (ppm) [0.1-0.2%]	Moderate
	2,000 - 20,000 mg/Kg (ppm) [0.2-2.0%]	Severe
	> 20,000 mg/Kg (ppm) [>2.0%]	Very Severe
Resistivity[2] (Saturated)	0- 900 ohm-cm	Very Severely Corrosive
	900 to 2,300 ohm-cm	Severely Corrosive
	2,300 to 5,000 ohm-cm	Moderately Corrosive
	5,000-10,000 ohm-cm	Mildly Corrosive
	10,000+ ohm-cm	Progressively Less Corrosive

1 - General corrosivity to concrete elements. American Concrete Institute (ACI) Water Soluble Sulfate in Soil by Weight, ACI 318, Tables 4.2.2 - Exposure Conditions and Table 4.3.1 - Requirements for Concrete Exposed to Sulfate-Containing Solutions. ***It is recommended that concrete be proportioned in accordance with the requirements of the two ACI tables listed above (4.2.2 and 4.3.1). The current ACI should be referred to for further information.***

2 - General corrosivity to metallic elements (iron, steel, etc.). Although no standard has been developed and accepted by corrosion engineering organizations, it is generally agreed that the classification shown above, or other similar classifications, reflect soil corrosivity. Source: Corrosionsource.com. The classification presented is excerpted from ASTM STP 1013 titled "Effects of Soil Characteristics on Corrosion" (February, 1989)

3 - Earth Systems does not practice corrosion engineering. Results should be reviewed by an engineer competent in corrosion evaluation, especially in regard to nitrites and ammonium.





DIRECT SHEAR DATA*

Sample Location: B16 @ 2 1/2 feet

Material: Poorly Graded Sand w/Silt (SP-SM)

Dry Density (pcf): 115.8

	Initial	Final
Moisture Content (%):	1.6	14.8
Saturation (%):	10	100
	Peak	**Ultimate**
ϕ Angle of Friction (degrees):	38	34
c Cohesive Strength (psf):	0	0

Test Type: Peak and Ulitimate

Shear Rate (in/min): 0.007

* Test Method: ASTM D-3080

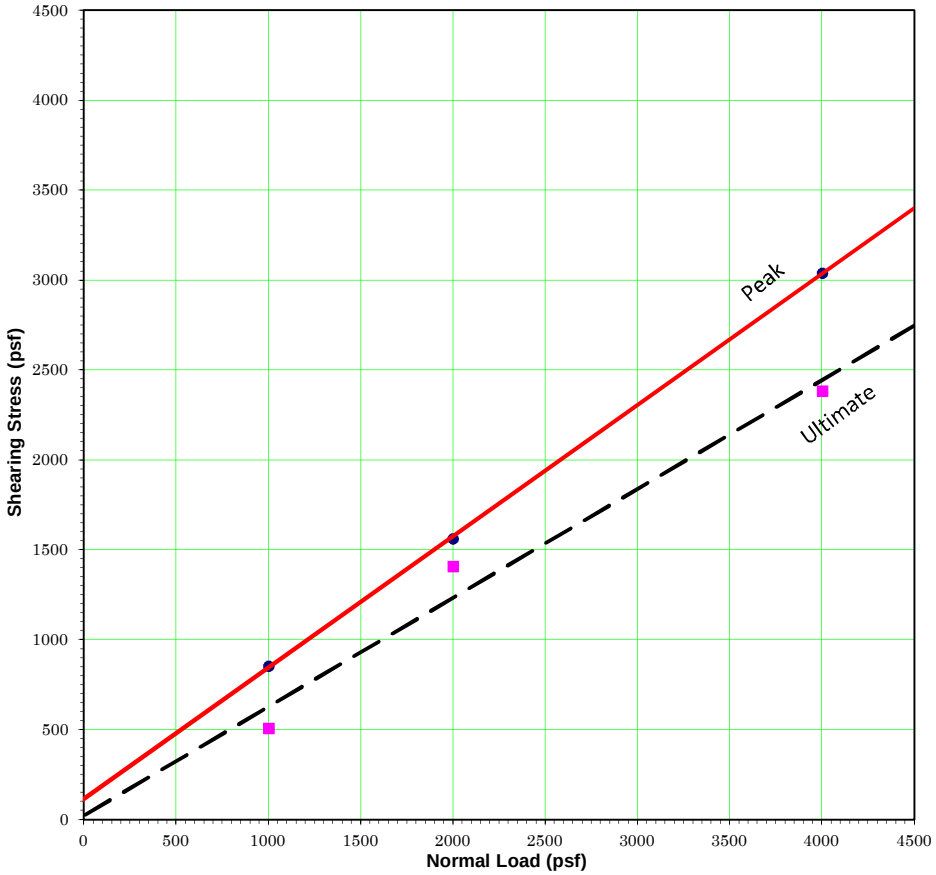
DIRECT SHEAR TEST

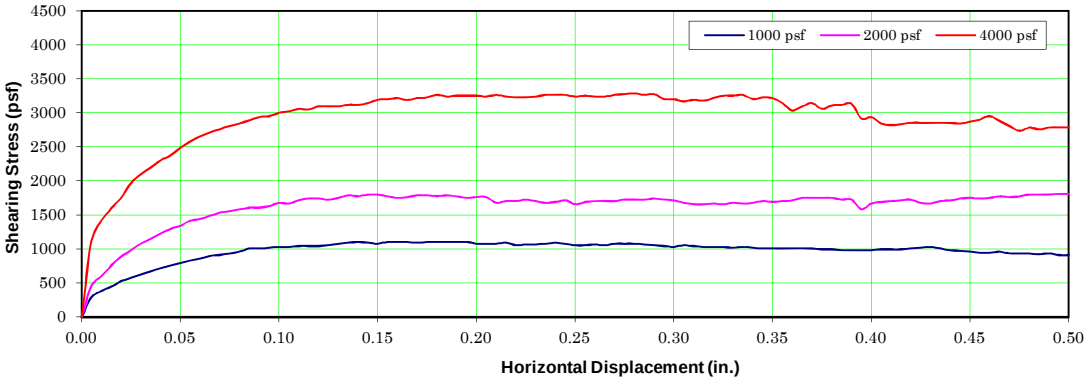
Glamis Plan

Glamis, California

Earth Systems Pacific

8/29/2019 | 303235-001





DIRECT SHEAR DATA*

Sample Location: B23 @ 2 1/2 feet

Material: Well Graded Sand w/Gravel (SW)

Dry Density (pcf): 111.4

	Initial	Final
Moisture Content (%):	1.2	13.9
Saturation (%):	6	100
	Peak	**Ultimate**
ϕ Angle of Friction (degrees):	36	31
c Cohesive Strength (psf):	110	20

Test Type: Peak and Ulitimate

Shear Rate (in/min): 0.007

* Test Method: ASTM D-3080

DIRECT SHEAR TEST

Glamis Plan

Glamis, California

Earth Systems Pacific

8/29/2019 | 303235-001

AP Engineering and Testing, Inc.
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

R-VALUE TEST DATA

ASTM D2844

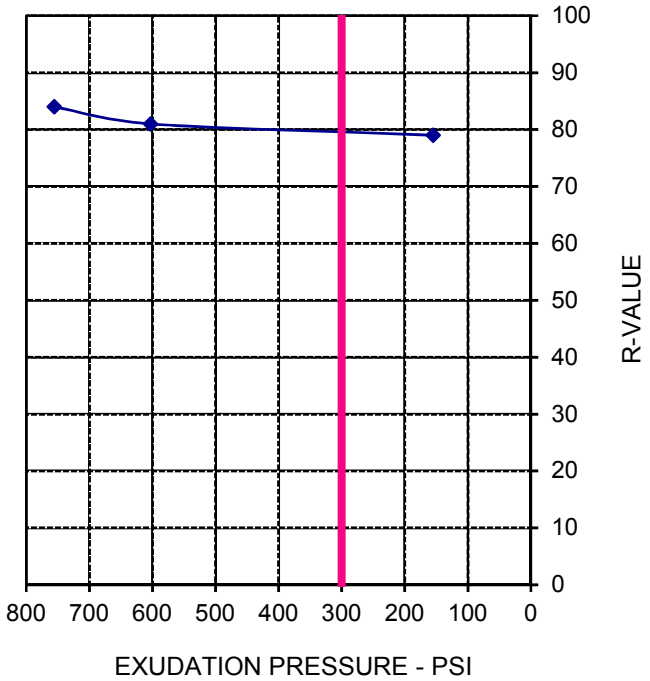
Project Name:	Glamis Specific Plan	Tested By:	ST	Date:	07/13/19
Project Number:	303235-001	Computed By:	KM	Date:	07/15/19
Boring No.:	B2	Checked By:	AP	Date:	07/18/19
Sample Type:	-	Depth (ft.):	0-5		
Location:	N/A				
Soil Description:	Silty Clayey Sand w/gravel				

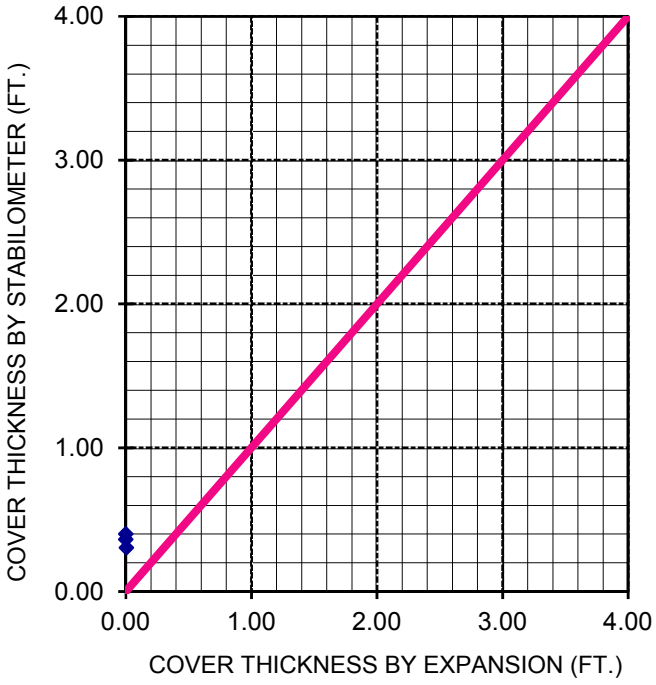
Mold Number	A	C	B	
Water Added, g	31	35	41	
Compact Moisture(%)	7.6	8.0	8.5	
Compaction Gage Pressure, psi	350	350	350	
Exudation Pressure, psi	756	603	155	
Sample Height, Inches	2.4	2.4	2.4	
Gross Weight Mold, g	3044	3048	3047	
Tare Weight Mold, g	1967	1968	1969	
Net Sample Weight, g	1078	1080	1078	
Expansion, inchesx10^{-4}	1	0	0	
Stability 2,000 (160 psi)	8/15	10/18	11/20	
Turns Displacement	4.32	4.44	4.46	
R-Value Uncorrected	85	82	80	
R-Value Corrected	84	81	79	
Dry Density, pcf	126.5	126.3	125.4	
Traffic Index	8.0	8.0	8.0	
G.E. by Stability	0.31	0.36	0.40	
G.E. by Expansion	0.00	0.00	0.00	

R-VALUE		
	By Exudation:	80
	By Expansion:	*N/A
	At Equilibrium: (by Exudation)	80

Remarks

Gf = 1.34, and 3.8 % Retained on the ¾"
*Not Applicable





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2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

R-VALUE TEST DATA

ASTM D2844

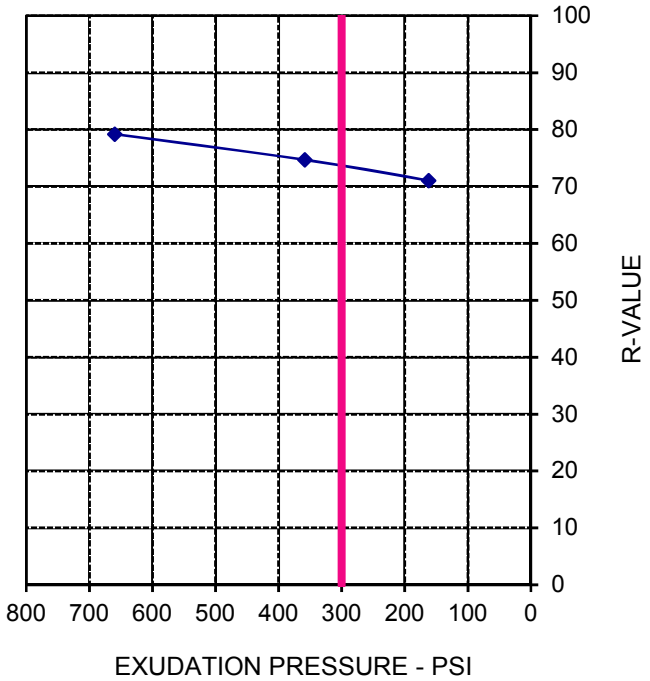
Project Name:	Glamis Specific Plan	Tested By:	ST	Date:	07/13/19
Project Number:	303235-001	Computed By:	KM	Date:	07/15/19
Boring No.:	B13	Checked By:	AP	Date:	07/18/19
Sample Type:	-	Depth (ft.):	0-5		
Location:	N/A				
Soil Description:	Silty Sand				

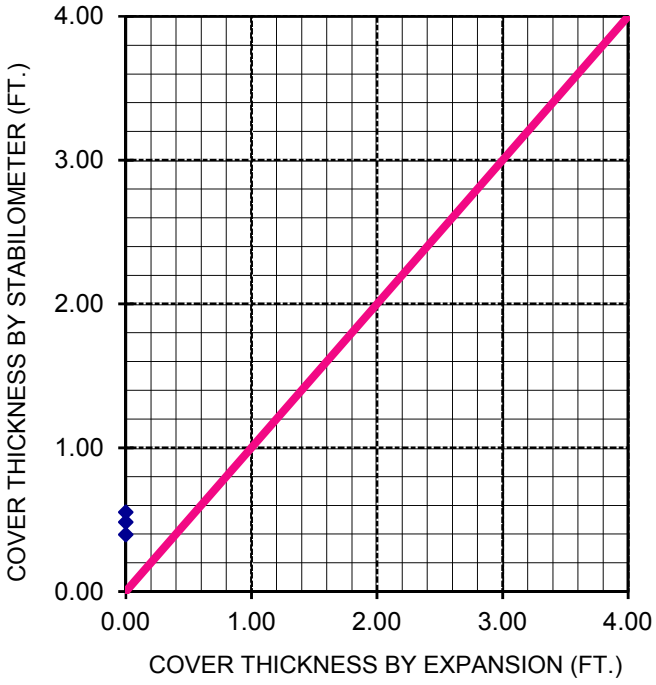
Mold Number	R6	R8	R7	
Water Added, g	82	90	102	
Compact Moisture(%)	9.5	10.3	11.4	
Compaction Gage Pressure, psi	350	350	350	
Exudation Pressure, psi	660	358	162	
Sample Height, Inches	2.6	2.6	2.6	
Gross Weight Mold, g	3134	3145	3147	
Tare Weight Mold, g	2011	2015	2010	
Net Sample Weight, g	1123	1130	1137	
Expansion, inchesx10^{-4}	0	0	0	
Stability 2,000 (160 psi)	10/20	13/24	15/28	
Turns Displacement	4.94	5.24	5.32	
R-Value Uncorrected	78	73	69	
R-Value Corrected	79	75	71	
Dry Density, pcf	119.6	119.3	118.9	
Traffic Index	8.0	8.0	8.0	
G.E. by Stability	0.40	0.48	0.55	
G.E. by Expansion	0.00	0.00	0.00	

R-VALUE		
	By Exudation:	74
	By Expansion:	*N/A
	At Equilibrium: (by Exudation)	74

Remarks

Gf = 1.34, and 0.0 % Retained on the ¾"
*Not Applicable





H Paleontological Report

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PALEOSERVICES
SAN DIEGO NATURAL HISTORY MUSEUM

Paleontological Resource Assessment

Glamis Specific Plan
Imperial County, California

June 21, 2019

Prepared for:
ASM Affiliates, Inc.
2034 Corte Del Nogal
Carlsbad, California 92011

Prepared by:
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San Diego Natural History Museum
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San Diego, California 92101

Katie M. McComas, M.S., Paleontological Report Writer
Thomas A. Deméré, Ph.D., Principal Paleontologist

thenat | SAN DIEGO NATURAL HISTORY MUSEUM

Executive Summary

This technical report provides an assessment of paleontological resources at the Glamis Specific Plan Area (study area) in Imperial County, California. The purpose of this report is to aid the preparation of a Specific Plan for the Glamis area by identifying and summarizing paleontological resources that may occur in the vicinity of the study area, identifying elements of future development (if any) that may negatively impact such resources, and providing recommendations to reduce any potential negative impacts to less than significant levels (if necessary). The report includes the results of an institutional records search conducted at the San Diego Natural History Museum (SDNHM) and a paleontological field survey of the site.

The approximately 141 acre study area is located approximately 27 miles east of the City of Brawley in the eastern portion of Imperial County, and lies at the intersection of State Highway 78 (SR 78) and the Union Pacific Railroad (UPR). Possible future development at the site includes retail and service commercial facilities, motels, recreational vehicle and mobile home parks, and community facilities in support of existing recreational land uses. Specific details on planned earthwork at the site are currently undefined, but shallow remedial over-excavation earthwork and trenching for subgrade utilities is anticipated.

Published geologic mapping for the study area reports that the site is underlain by Pleistocene nonmarine deposits, which are generally described as consisting of alluvial sediments derived from the Chocolate Mountains located to the northeast. During the paleontological field survey, however, the surface of the study area was observed to be mostly level, undissected ground, suggesting the presence of younger alluvium of Holocene age. In addition, localized deposits of previously placed gravel fill up to 4 feet thick were present in previously graded/developed portions of the study area. No exposures of older Pleistocene-age alluvial fan deposits were observed. There are no SDNHM fossil collection localities known from within a 5-mile radius of the study area. While Pleistocene-age alluvial deposits have produced fossils of large vertebrates in Imperial County (e.g., remains of the horse *Equus* sp., camel *Camelops* sp., and ground sloth *Nothrotheriops* sp.), sedimentary deposits of Holocene age are generally considered too young to contain fossil remains.

Based on the observation of Holocene-age alluvial deposits at the study area and lack of documented fossil localities nearby, the sediments underlying the study area are assigned a low paleontological resource potential. In addition, the undocumented gravel fill present within previously developed portions of the study area is assigned no paleontological potential.

Although precise grading plans were not available at the time this report was prepared, future suggested development at the study area will likely involve only minor grading and trenching. Based on this assumption, it is likely that earthwork will be confined to the Holocene-age alluvial deposits (low paleontological resource potential) and overlying deposits of artificial fill (no paleontological resource potential) observed during the field survey

Consequently, construction is not likely to create negative impacts to paleontological resources, and thus paleontological mitigation is not recommended for future development within the study area. In the unlikely event that fossils are unearthed during construction (i.e., an inadvertent discovery), mitigation measures are provided to ensure proper collection and treatment of the fossils.

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1.0 Introduction

1.1 Glamis Specific Plan Area Description and Scope of Work

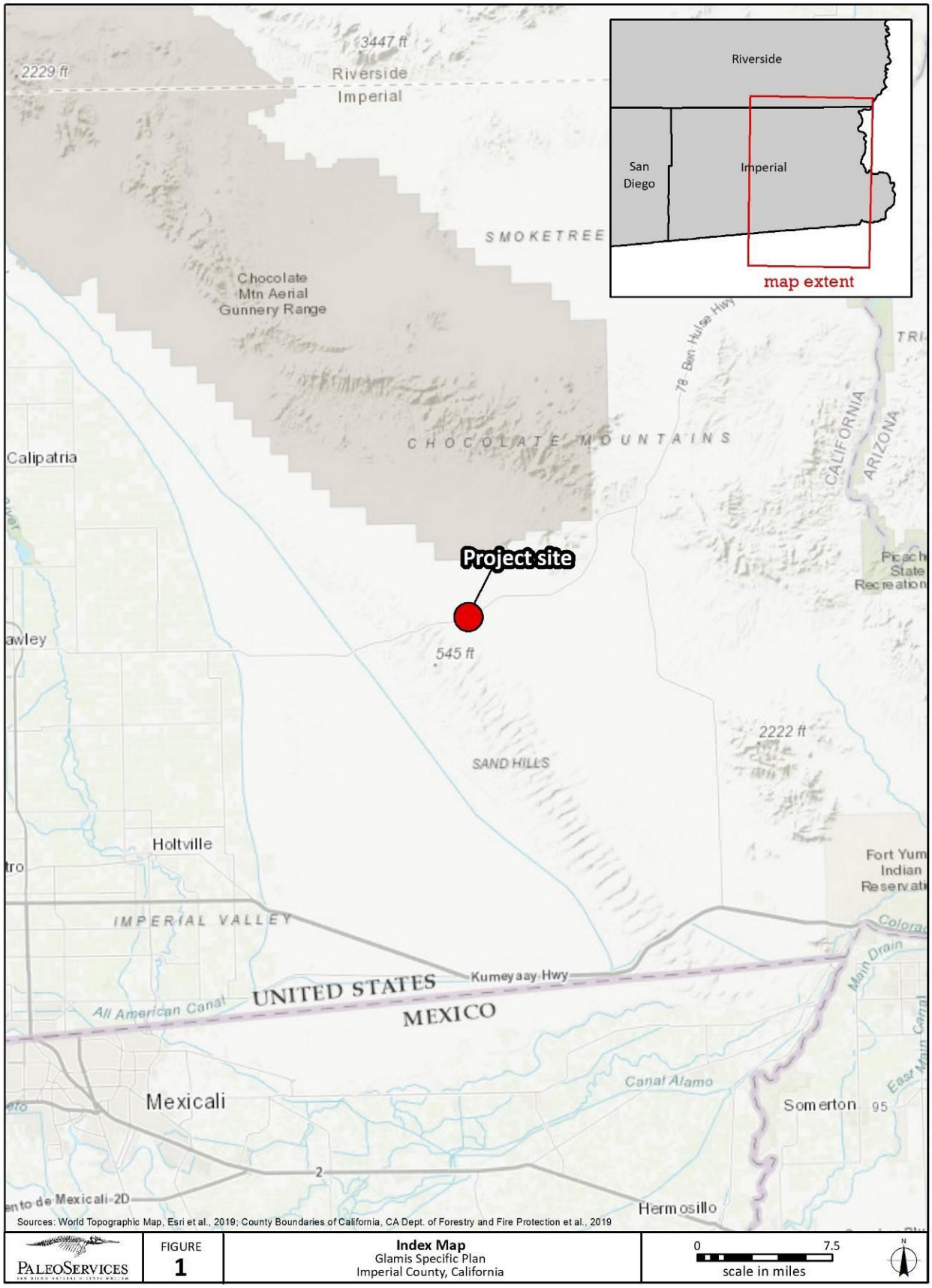
This technical report provides an assessment of paleontological resources at the Glamis Specific Plan Area (study area) in Imperial County, California (Figure 1). The approximately 141 acre study area is located approximately 27 miles east of the City of Brawley in the eastern portion of Imperial County, and lies at the intersection of State Highway 78 (SR 78) and the Union Pacific Railroad (UPR). Possible future development at the site includes retail and service commercial facilities, motels, recreational vehicle and mobile home parks, and community facilities in support of existing recreational land uses. Specific details on planned earthwork at the site are currently undefined.

Because the study area occurs in an area underlain by native sedimentary deposits, a paleontological resource assessment was conducted in order to evaluate whether future development within the study area has the potential to negatively impact paleontological resources. This assessment report is intended to identify and summarize paleontological resources that occur in the vicinity of the study area, identify elements of future development (if any) that may negatively impact paleontological resources, and provide recommendations to reduce any potential negative impacts to less than significant levels (if necessary) to aid the preparation of a Specific Plan for the Glamis area. The report includes the results of an institutional records search conducted at the San Diego Natural History Museum (SDNHM) and a paleontological field survey of the site. This report was prepared by Katie M. McComas and Thomas A. Deméré of the Department of PaleoServices, SDNHM.

1.2 Definition of Paleontological Resources

As defined here, paleontological resources (i.e., fossils) are the buried remains and/or traces of prehistoric organisms (i.e., animals, plants, and microbes). Body fossils such as bones, teeth, shells, leaves, and wood, as well as trace fossils such as tracks, trails, burrows, and footprints, are found in the geologic deposits within which they were originally buried. The primary factor determining whether an object is a fossil or not isn't how the organic remain or trace is preserved (e.g., "petrified"), but rather the age of the organic remain or trace. Although typically it is assumed that fossils must be older than ~11,700 years (i.e., the generally accepted end of the last glacial period of the Pleistocene Epoch), organic remains of early Holocene age can also be considered to represent fossils because they are part of the record of past life.

Fossils are considered important scientific and educational resources because they serve as direct and indirect evidence of prehistoric life and are used to understand the history of life on Earth, the nature of past environments and climates, the membership and structure of ancient ecosystems, and the pattern and process of organic evolution and extinction. In addition, fossils are considered to be non-renewable resources because typically the organisms they represent no longer exist. Thus, once destroyed, a particular fossil can never be replaced. And finally, for the purposes of this report, paleontological resources can be thought of as including not only the actual fossil remains and traces, but also the fossil collecting localities and the geologic units containing those localities.


3447 ft
2229 ft
Riverside
Imperial
Riverside
San Diego
Imperial
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SMOKETREE
Chocolate Mtn Aerial Gunnery Range
78 Ben Hulse Hwy
CHOCOLATE MOUNTAINS
CALIFORNIA
ARIZONA
Calipatria
Project site
545 ft
2222 ft
SAND HILLS
Holtville
IMPERIAL VALLEY
UNITED STATES
MEXICO
Kumeyaay Hwy
All American Canal
Canal Alamo
Mexicali
Somerton
Hermosillo
Sources: World Topographic Map, Esri et al., 2019; County Boundaries of California, CA Dept. of Forestry and Fire Protection et al., 2019
PALEOSERVICES
FIGURE 1
Index Map
Glamis Specific Plan
Imperial County, California
0
7.5
scale in miles
N

1.3 Regulatory Framework

Paleontological resources are considered scientifically and educationally significant nonrenewable resources, and as such they are protected under a variety of federal (e.g., Antiquities Act of 1906; National Environmental Policy Act of 1969; Federal Land Policy Management Act of 1976; Paleontological Resources Preservation Act of 1009), state (e.g., California Environmental Quality Act; Public Resources Code), and local (e.g., General Plan for the County of Imperial) laws, regulations, and ordinances.

The study area is located within Imperial County; therefore, local laws, ordinances, and regulations are applicable, as outlined below.

1.3.1 Local

The General Plan for the County of Imperial does not specify any requirements for paleontological resources. Paleontological resources, however, are often considered a sub-category of cultural resources. The Conservation and Open Space Element of the General Plan contains requirements for cultural resources that involve the identification and documentation of significant historic and prehistoric resources and the preservation of representative and worthy examples. The Conservation and Open Space Element also recognizes the value of historic and prehistoric resources and the need to assess current and proposed land uses for impacts upon these resources.

2.0 Methods

2.1 Paleontological Records Search and Literature Review

A paleontological records search was conducted at the SDNHM in order to determine if any documented fossil collection localities occur within the study area or immediate surrounding area. This involved examination of the SDNHM paleontological database for any records of known fossil collection localities within a 5-mile radius of the study area.

Additionally, a review was conducted of relevant published geologic maps (e.g., Strand, 1962; Jennings, 1967), published geological and paleontological reports (e.g., Jefferson, 1991a,b), and other relevant literature (e.g., field trip guidebooks, theses and dissertations, unpublished paleontological mitigation reports). This approach was followed in recognition of the direct relationship between paleontological resources and the geologic units within which they are entombed. Knowing the geologic history of a particular area and the fossil productivity of geologic units that occur in that area, it is possible to predict where fossils may, or may not, be encountered.

2.2 Paleontological Field Survey

A paleontological field survey of the study area was conducted on June 17, 2019, by Bradford O. Riney of the Department of PaleoServices, SDNHM. The purpose of the field survey was to confirm the published geologic mapping, to field check the results of the literature and record searches, and to determine the paleontological potential of the strata present within the study area. The field survey included inspection of all available outcrops (e.g., graded pads and roads, and natural surfaces) within the study area, in order to collect stratigraphic data (e.g., bedding type, thickness, geologic contacts), detailed lithologic descriptions of strata (e.g., color, sorting of grains, texture, sedimentary structures, and grain size of sedimentary rocks), and prospect for any fossilized remains present at the surface.

During the survey, the field paleontologist was equipped with standard field equipment (e.g., rock hammer, camera, hand lens, tape measure), a Garmin Handheld GPS unit, and an iPhone loaded with

Esri's Collector app that was used to view relevant maps and collect field data. Collected field data included waypoints that were keyed to field notes and photographs.

2.3 Paleontological Resource Assessment Criteria

The Society of Vertebrate Paleontology (SVP, 2010) has developed standards for assessing the paleontological potential of a given geologic unit using a four-part scale: High Potential, Undetermined Potential, Low Potential, and No Potential. The specific criteria for each scale of Paleontological Potential is outlined below.

2.2.1 High Potential

High potential is assigned to geologic units known to contain paleontological localities with rare, well-preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleobiology and evolutionary history (phylogeny) of animal and plant groups. Generally speaking, highly sensitive formations produce vertebrate fossil remains or are considered to have the potential to produce such remains.

2.2.2 Undetermined Potential

Undetermined potential is assigned to geologic units that exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the geology and/or paleontological resources of the unit or the area is known. This may indicate the unit or area is poorly studied, and field surveys may be useful for more precisely determining the paleontological potential.

2.2.3 Low Potential

Low potential is assigned to geologic units that, based on their relatively youthful age and/or high-energy depositional history, are judged unlikely to produce important fossil remains.

2.2.4 No Potential

No paleontological potential is assigned to geologic formations that are entirely igneous in origin or have undergone high-grade metamorphism, and therefore have no potential for producing fossil remains, or to artificial fill materials which lack stratigraphic/geologic context for any contained fossil remains.

2.4 Paleontological Impact Analysis

Direct impacts to paleontological resources occur when earthwork activities (e.g., mass grading, utility trenching, or miscellaneous excavations) cut into the geologic units within which fossils are buried, and physically destroy the fossil remains. As such, only earthwork activities that will disturb potentially fossil-bearing sedimentary deposits (i.e., those rated with a high or undetermined paleontological potential) have the potential to significantly impact paleontological resources. Paleontological mitigation typically is recommended to reduce any negative impacts to paleontological resources to less than significant levels.

The purpose of the impact analysis is to determine which (if any) earthwork activities associated with future development of the study area may disturb potentially fossil-bearing geologic units, and where and at what depths this earthwork will occur. The paleontological impact analysis involved analysis of available project documents, and comparison with geological and paleontological data gathered during the records search, literature review, and field survey.

3.0 Existing Conditions: Geologic Setting

The study area is located along the eastern side of the Salton Trough, a geologic region that straddles the complex tectonic junction between the continental North American Plate to the east and the largely oceanic Pacific Plate to the west. The deeply buried spreading center of the East Pacific Rise has its northern terminus beneath the eastern valley floor and is the source of the extensive geothermal resources in this region. In terms of its geologic history, the Salton Trough can be thought of as the northern, landward extension of the Gulf of California. It has been filling with tremendous volumes of sediment for the last approximately 8 million years, first with locally derived terrestrial sediments, then with marine sediments from a northward extension of the Gulf, and finally with terrestrial sediments derived from the Colorado River and its extensive delta. In total, these sediments are thought to be over 5 miles thick. The Salton Trough continues to undergo active tectonic deformation related to transform faulting associated with the San Andreas Fault Zone and associated faults (e.g., Imperial Fault). These competing forces of fault deformation and river delta deposition have combined to create the varied geomorphic features of the Salton Trough with its uplifted local mountains and hills (e.g., Yuha Buttes, Coyote Mountains, Fish Creek Mountains, Superstition Hills, Vallecito Mountains, Borrego Mountain, and San Felipe Hills), its deeply eroded landscapes (e.g., Carrizo Badlands, Borrego Badlands, and Vallecito Badlands), and its broad alluvial and lacustrine lowlands (e.g., the Imperial Valley floor).

In the immediate vicinity of the study area the geology is dominated by two contrasting geomorphic features. To the northeast is a coalescing series of alluvial fans derived from uplift and erosion of the Chocolate Mountains, while to the southwest lies the 45 mile long Algondones Dunes, the largest tract of desert dunes in North America (Norris and Webb, 1990). The dunes are migrating to the southeast being driven by prevailing northwesterly winds, which have deposited a veneer of Holocene-age dune sands over portions of the study area. However, the majority of the study area is underlain by sediments representing the distal portions of the Chocolate Mountains alluvial fan “apron.”

4.0 Results

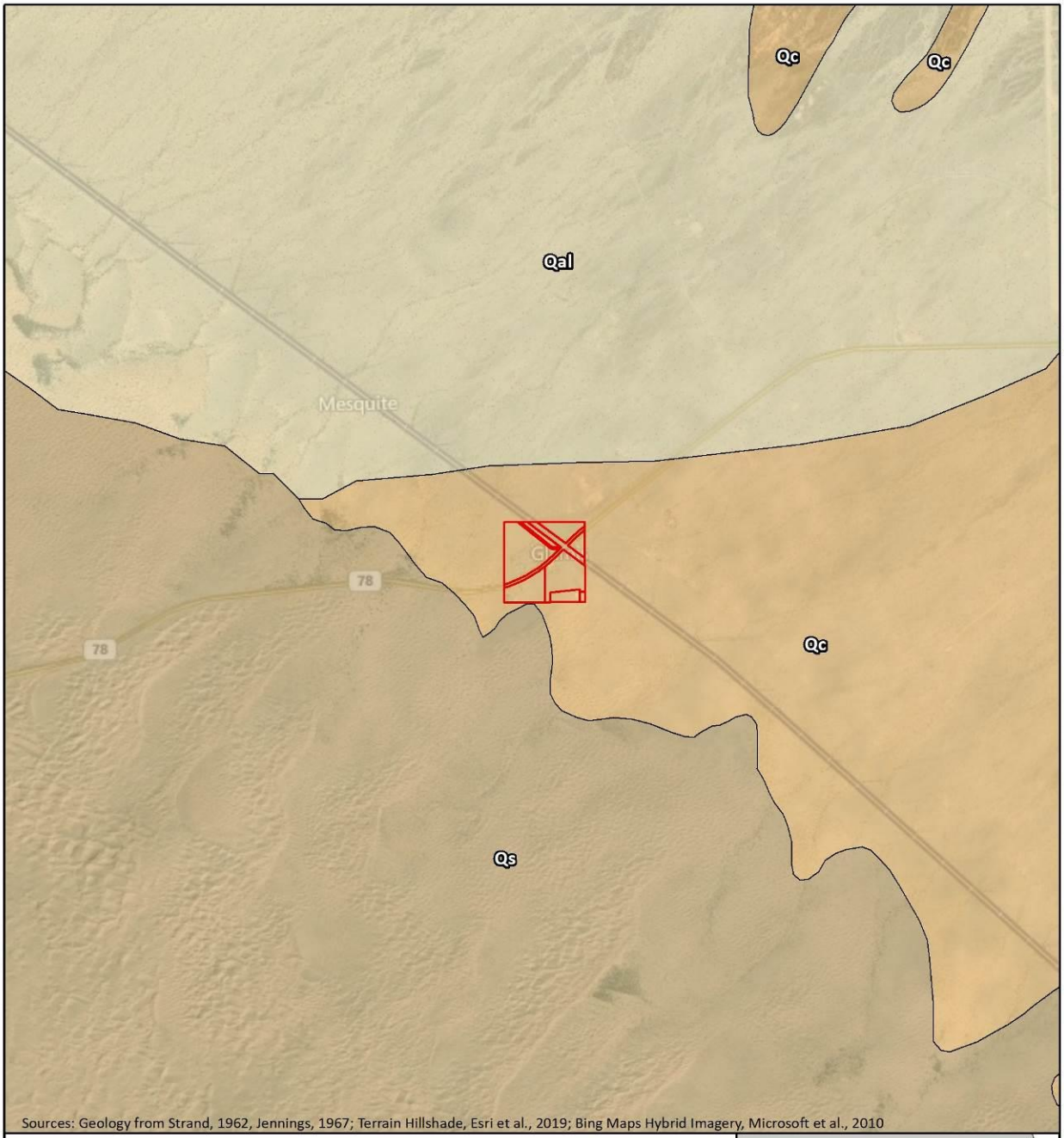
4.1 Results of the Records Search and Literature Review

4.1.1 Study Area Geology

Published geologic mapping reports that the study area is entirely underlain by “Pleistocene nonmarine sedimentary deposits” (Qc) (Figure 2; Strand, 1962; Jennings, 1967). As described above, these sediments appear to be derived from alluvial fans being shed off of the elevated peaks of the Chocolate Mountains to the northeast of the study area. As described in the literature, these deposits consist of well to poorly bedded, unconsolidated or poorly consolidated deposits of light gray, very poorly sorted, pebbly sandstones and cobble to boulder conglomerates that occur as moderately dissected terraces in stream valleys on the higher parts of alluvial fans in the Imperial Valley.

4.1.2 Study Area Paleontology

There are no SDNHM fossil collection localities known from within a 5-mile radius of the study area. However, there is one SDNHM locality recorded from Pleistocene-age gravel deposits located approximately 22 miles southeast of the study area from another portion of the Algodones Dunes, where a partial lower jaw with two cheek teeth identified as horse, *Equus* sp., were found in excavation spoils along the south side of the All American Canal.


Qc
Qc
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Mesquite
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Sources: Geology from Strand, 1962, Jennings, 1967; Terrain Hillshade, Esri et al., 2019; Bing Maps Hybrid Imagery, Microsoft et al., 2010
Geologic Map Units
Holocene
Qs
dune sand
Qal
alluvium
Pleistocene
Qc
Pleistocene nonmarine deposits
site boundary
Riverside
Imperial
map extent
PaleoServices
FIGURE 2
Geologic Map
Glamis Specific Plan
Imperial County, California
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Fossil remains of other large mammals have been found in Pleistocene alluvial deposits in other parts of eastern Imperial County, including near Niland (e.g., camel, *Camelops* sp.) and Salton City (e.g., ground sloth, *Nothrotheriops* sp.) (Jefferson, 1991b). Sparse fossil remains of freshwater fish and small terrestrial mammals were recovered from Pleistocene older alluvium during paleontological monitoring of trenching activities associated with the construction of the North Baja Pipeline Project between Ehrenberg, Arizona and the United States-Mexico international border (Orr and Linder, 2004). Scattered remains of terrestrial mammals also have been reported from deposits of older alluvium near Plaster City. Similar deposits in other areas of southern California have produced significant, but often fragmentary, fossil remains, including bones and teeth of large and small terrestrial "Ice Age" mammals.

4.2 Results of the Paleontological Field Survey

As observed during the field survey, the study area consists of several graded pads supporting various existing facilities (e.g., a large RV storage area, general store, radio tower, and small graveyard). The study area is bisected from southwest to northeast by SR 78, and is crossed in the northeast by the UPR. A dirt road (Ted Kipf Road) parallels the UPR northwest from its intersection with SR 78. Man-made outcrops consisting of disturbed sediments and/or imported gravel fill are present around the margins of the graded pad. Because natural or man-made exposures of undisturbed native sediments were unavailable for inspection, the wind-deflated surface topography of the study area was used to characterize the underlying deposits.

Portions of the study area that have been previously developed consisted of graded pads that were raised above original grade, supported by what appears to be imported gravel fill (Figure 3). The fill was present to varying degrees throughout much of the study area, and measured up to four feet thick.

Figure 3. Previously graded pad built of undocumented gravel fill. Photo taken just south of the intersection of SR 78 and the UPR, looking south at the radio tower located in the southeastern corner of the study area.

The underlying sedimentary deposits were undissected by the action of modern ephemeral streams, and therefore appeared to be younger than the mapped Pleistocene-age alluvial fan deposits. Based on the

distribution and character of these deposits, they likely represent Holocene-age or modern distal-fan deposits derived from the Chocolate Mountains to the northeast of the study area.

No fossils were encountered during the field survey.

Figure 4. Typical appearance of alluvial fan deposits within the study area. The sediments are undissected, and therefore likely Holocene or modern in age. Photo taken from the northwestern portion of the study area, facing south towards the RV storage area.

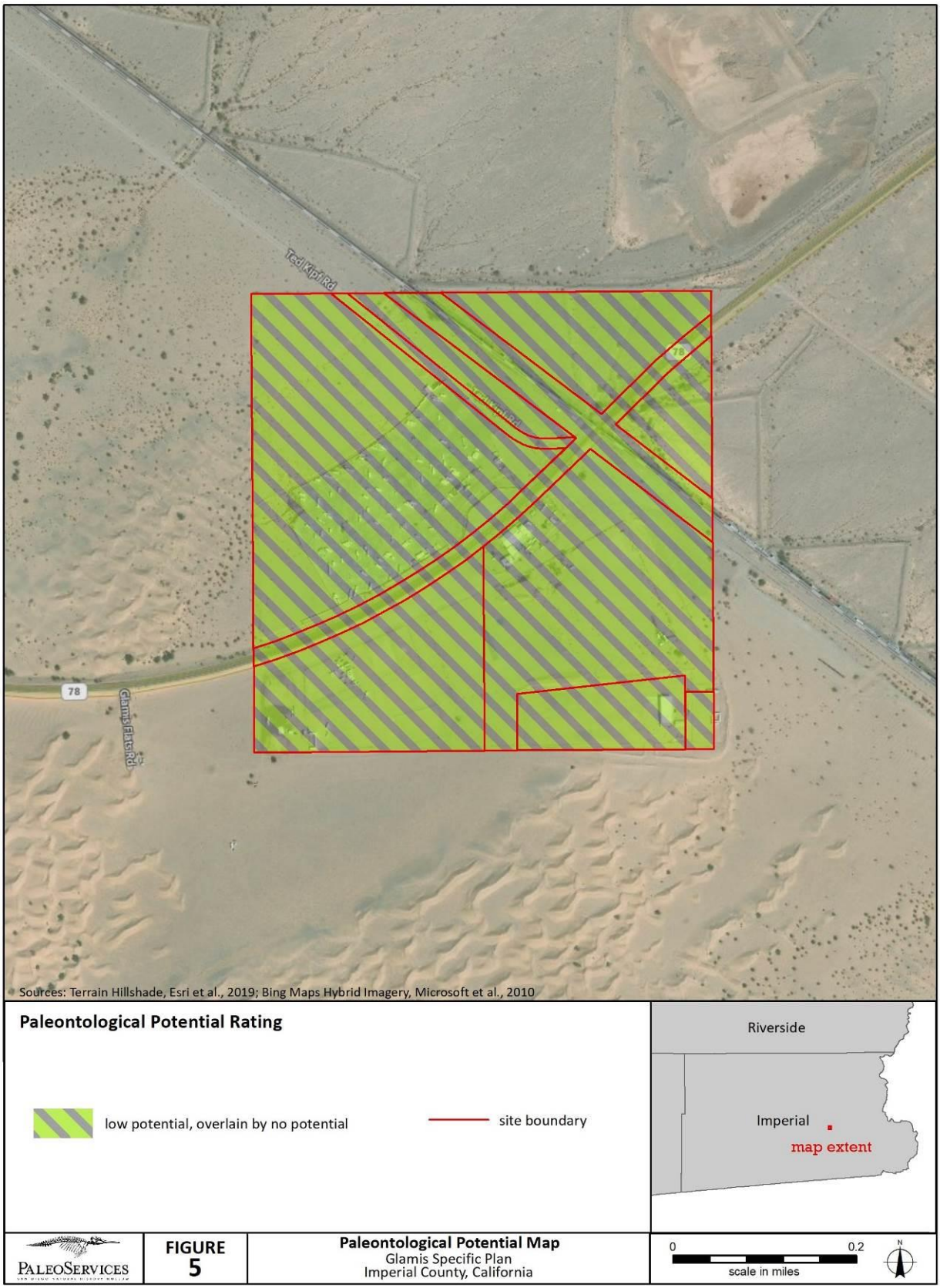
4.3 Results of Paleontological Potential Analysis

Alluvial fan deposits of Pleistocene age are generally assigned an undetermined paleontological potential due to variation in the concentration of fossil resources, typically linked to the grain size of individual alluvial deposits (i.e., fine-grained sediments reflective of low energy conditions more likely to preserve fossil remains vs. coarse-grained and gravelly sediments reflective of high-energy conditions less likely to preserve fossil remains). In addition, paleontological potential typically varies with geologic age (i.e., Pleistocene and older sediments more likely to contain fossil remains than younger, Recent or modern sediments). Among the various methods for determining the age of surficial sedimentary deposits is the degree of surface erosion/dissection evident at a given location (i.e., heavily dissected ground surfaces reflect prolonged time period vs. undissected ground surfaces reflect short time period).

Given these criteria, the sedimentary deposits observed during the paleontological field survey appeared to be Holocene in age (undissected ground surface indicating that these deposits have not been subjected to significant erosion by the action of streams and are, therefore, likely Holocene in age). Holocene-age alluvial fan deposits are assigned a low paleontological potential because of their relatively young geologic age (i.e., less than 11,700 years old). These deposits appear to be present throughout the study area, except in previously graded portions of the study area, where they appear to be overlain by imported gravel fill materials, which are assigned no paleontological potential.

4.4 Results of Paleontological Impact Analysis

As discussed above, published geologic mapping reports that the study area is immediately underlain by "Pleistocene nonmarine sedimentary deposits." Although in most cases Pleistocene sedimentary deposits are typically assigned an undetermined paleontological potential, the observation of probable Holocene-age undissected alluvial deposits on-site during the paleontological field survey supports a low paleontological potential rating for the sedimentary deposits underlying the study area. In addition, the artificial fill present in previously graded portions of the study area has no paleontological potential. Given the no-to-low paleontological potential of the deposits present on site (Figure 5), it is unlikely that their disturbance by earthwork related to future development within the study area will result in negative impacts to paleontological resources.


Ted Kipf Rd
78
Glamis Flats Rd
Sources: Terrain Hillshade, Esri et al., 2019; Bing Maps Hybrid Imagery, Microsoft et al., 2010
Paleontological Potential Rating
low potential, overlain by no potential
site boundary
Riverside
Imperial
map extent
PaleoServices
FIGURE 5
Paleontological Potential Map
Glamis Specific Plan
Imperial County, California
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0.2
scale in miles
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5.0 Recommendations & Conclusions

Implementation of a paleontological mitigation program is not recommended for future development within the Glamis Specific Plan Area, as construction-related earthwork is not anticipated to negatively impact paleontological resources. However, in the unlikely event that fossils are unearthed during earthwork activities (i.e., an inadvertent discovery), the following measures should be followed:

1. Upon discovery of an unearthed fossil, earthwork within the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist.
2. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil.
3. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered, and the qualified paleontologist deems the site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist.
4. Recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository (e.g., the San Diego Natural History Museum) along with associated field notes, photographs, and compiled fossil locality data. Donation of the fossils should be accompanied by financial support for initial specimen curation and storage.
5. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.

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I Hazardous Materials Technical Study

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Hazardous Materials Technical Study

Glamis Specific Plan

Imperial County, California

McIntyre Environmental LLC

1900 West Desert Highlands Drive | Oro Valley, Arizona 85737

October 14, 2020 | Project No. 109106001

Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

Hazardous Materials Technical Study
Glamis Specific Plan
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Distribution: (1) Addressee (via e-mail)

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1 INTRODUCTION

Ninyo & Moore prepared a Hazardous Materials Technical Study (HMTS) for the Glamis Specific Plan (GSP). The GSP Area (GSPA) is located at the intersection of State Route 78 (SR-78) and the Union Pacific Railroad (UPRR) in Imperial County, California (project site or site; Figure 1). The GSPA consists of seven parcels totaling approximately 142 acres (Figure 2). For the purposes of this HMTS, the study area is limited to the seven parcels. The SR-78 and the UPRR rights of way (ROW) are evaluated as off-site features.

The GSP is a regulatory document that addresses the GSPA included in the Imperial County (County) General Plan. The County's General Plan requires a Specific Plan to be developed for the GSPA, in accordance with the GSPA design criteria, objectives, and policies, as outlined in the County's General Plan Land Use Element. The GSP provides a planning framework, which accommodates recreation-supporting land uses including retail and service commercial; hotel accommodations; recreational vehicles; RV parks and fuel stations; and Special Events.

1.1 Purpose

The purpose of this HMTS is to document the presence of properties, which may have been impacted by hazardous materials or wastes, and to document, with respect to the California Environmental Quality Act (CEQA), the significance of impacts of the Project with respect to hazardous materials and wastes, and to discuss measures that can be implemented to reduce or mitigate the impacts. The HMTS consisted of a review and summary of publicly available federal, state, and local regulatory databases and historical resources. Historical and regulatory research was performed in August and September 2020. This report addresses existing environmental conditions at the site.

1.2 Scope of Services

Ninyo & Moore's scope of work for this HMTS included the activities listed below.

- Reviewed physical setting information (e.g., topographic and geologic maps, groundwater elevation data, etc.) for the site.
- Reviewed federal, state, and local regulatory agency databases for the site. The purpose of this review was to document the locations of facilities with unauthorized releases of hazardous materials or wastes to soil and/or groundwater, as well as the regulatory status, where available.
- Reviewed fire insurance map, historical aerial photographs, and historical topographic maps to document, in general, areas at the site and vicinity that may have been historically developed with uses indicative of potential environmental concerns (e.g., agricultural, commercial, industrial, etc.).

- Reviewed the State Water Resources Control Board (SWRCB) GeoTracker website, the California Department of Toxic Substances Control (DTSC) EnviroStor website, and other regulatory online databases to supplement information in the database report.
- Evaluated the findings with respect to Section 9, "Hazards and Hazardous Materials" within Appendix G, "Environmental Checklist Form" of the "Guidelines for Implementation of CEQA."
- Prepared this HMTS report documenting findings and providing opinions and recommendations regarding possible environmental impacts to the site from potential releases of hazardous materials or wastes and potential impacts from hazardous materials or wastes from implementation of the Project.

1.3 Significant Assumptions

Ninyo & Moore assumes the information sources from the third-party environmental database vendor and regulatory agencies utilized for this report provided adequate and accurate information.

1.4 Limitations and Exceptions

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

The findings, opinions, and conclusions are based on an analysis of the observed site conditions and the referenced literature. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of humans at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control. Ninyo & Moore cannot warrant or guarantee that the lack of indicators of a particular hazardous material means that this particular hazardous material, or any other hazardous materials, do not exist on the site. Additional research, including invasive testing, can reduce the uncertainty, but no techniques now commonly employed can eliminate the uncertainty altogether.

2 PROJECT DESCRIPTION

The following section describes the project location, existing characteristics, and project elements.

2.1 Project Location

Glamis is located approximately 27 miles east of the City of Brawley; approximately 32 miles northeast of the City of El Centro; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea (Appendix A, Exhibit 1). The project site is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County. In the site vicinity, the Imperial Sand Dunes Recreation Area (ISDRA) is located immediately to the southwest, the North Algodones Dunes Wilderness (NADW) is located immediately to the northwest, and the Chocolate Mountains and Chocolate Mountain Aerial Gunnery Range (CMAGR) are located to the northeast (Figure 1).

2.2 Existing Characteristics

The GSPA is located on private land that is directly adjacent to the ISDRA in an unincorporated area of Imperial County. It contains the small unincorporated community of Glamis, which is centered around the Glamis Beach Store (Figure 1). The site encompasses approximately 143 acres and is composed of seven parcels of land identified as assessor parcel numbers (APN) 039-310-017; -022; -023; -026; -027; -029; and -030. The project vicinity is regionally accessible via SR-78 (a.k.a. Ben Hulse Highway), which serves as the primary form of access for motorists. Ted Kipf Road, a County-maintained dirt road serves as a secondary form of access extending northwesterly for approximately 17 miles to Niland-Glamis Road from SR-78. The site is also crossed by the UPRR, which runs north and south through the eastern half of the site and Wash Road, which parallels the UPRR south of SR-78.

The site can be characterized as an area of open desert with several adjoined one- and two-story metal building structures representing the Glamis Beach Store, and metal corrugated water tanks situated directly behind the store. Additionally, there is a separate seasonal off-highway vehicle (OHV) repair business connected to the Glamis Beach Store. A wood fence for delineated parking/vendor areas is located directly west of the store. A communications facility tower, approximately 180 feet in height, is located at the southeast portion of the site. Due south is a single-family residence, large RV storage garage, and other related equipment storage buildings. Additionally, a prefabricated residential structure is located on the southeast corner of the site. To the west, across SR-78 and opposite the Glamis Beach Store, there is an RV storage area, as well as vacant desert land. There is also a 20-acre paved RV storage area

for Glamis Dunes Storage and Luv 2 Camp RV Trailer Rentals, and historical cemetery located at the southwest corner of SR-78 and Ted Kipf Road. On the northeast side of the site, crossing the UPRR, there are two triangular parcels that are currently vacant.

2.3 Project Elements

The GSP creates a distinctive masterplan for recreation-serving land uses, which are consistent with the historical use of the Glamis area. It provides flexibility as to the development of potential land uses within the GSP to promote the concept of an open desert playground that derives from the "Camp RZR" event, historically held in October of each year at the GSP area, and the surrounding ISDRA. The GSP will allow for a wide range of commercial and retail development, which include fuel stations, rental facilities, and sporting goods stores to accommodate the needs of visitors to the Glamis area. Recreational activities to complement the established "Glamis" sand dunes experience include an Adventure Center (offering activities such as OHV training, OHV rentals, etc.), amusement facilities, desert tours (off road experience), racetrack, shooting range, park/playground/picnic area, and other recreational-based activities.

The GSPA consists of eight proposed Planning Areas. Planning Areas 1, 2, 3, and 4 are proposed for designation as Commercial-Recreation 3 (CR-3) (Appendix A, Figure 4-1). This designation is intended to accommodate a large variety of commercial uses that are generally supportive of OHV activities and provide for large scale events to be held both on private property as well as adjoining federal lands.

Planning Areas 5 and 6 are designated Commercial-Recreation 1 (CR-1). This designation is intended to allow small scale, low density development of projects that will not enhance or contribute to the use of off-road vehicles on public highways or roads. This could include employee housing, research and development (R & D) facilities, RV park with restrictions and the like.

Planning Area 7 is designated Commercial-Recreation 2 (CR-2). This designation is intended to accommodate recreational related commercial opportunities and projects that will support the OHV and recreational uses of the area at a higher density and allowable uses than CR-1, but still be limited to specific uses that are less intense and more occasional than those allowed in CR-3. This could include small repair shops, limited housing, RV park with restrictions, and the like.

Planning Area 8 would be re-zoned to the County's existing S-1 (Open Space/Recreation) designation. S-1 is used to recognize areas that embody the unique open space and recreational character of Imperial County including the deserts, mountains and water-front areas. The S-1 designation is primarily characterized by low intensity human utilization and small-scale recreation related uses.

The phasing plan component of the GSP would phase the development so that more intense land uses are developed incrementally over time within the various proposed zones (Appendix A, Exhibit 7). Development within the GSP is intended to occur over a span of approximately 20 to 50 years and will depend on market conditions, availability of supporting infrastructure, and other factors.

3 RECORDS REVIEW

The following sections summarize records reviewed for the site.

3.1 Standard Environmental Record Source - Environmental Databases

A computerized, environmental information database search was performed by Environmental Data Resources, Inc. (EDR). The search included federal, state, tribal, and local databases. A summary of the environmental databases searched, their corresponding search radii, and number of noted properties of potential environmental concern, is presented in the EDR report (Appendix B). The review was conducted to evaluate whether the site or properties within the site vicinity have been documented as having experienced significant unauthorized releases of hazardous substances or other events with potentially adverse environmental effects.

The environmental databases searched and search radii were performed in accordance with the ASTM International (ASTM) Standard Practice for Environmental Site Assessments on Commercial Real Estate E1527-13. The following table lists the ASTM Standard Environmental Databases that were searched and the number of listings.

Table 1 – ASTM Standard Environmental Databases

Database Name	Search Radius (mile)	Number of Listings
FEDERAL DATABASES		
NPL (National Priority List)	1	0
Proposed NPL	1	0
NPL LIENS (Federal Superfund Liens)	Site	0
Delisted NPL	1	0
FEDERAL FACILITY (Federal Facility Site Information listing)	0.5	0
SEMS (Superfund Enterprise Management System; formerly Comprehensive Environmental Response Compensation and Liability Information System)	0.5	0
SEMS-ARCHIVE (Superfund Enterprise Management System Archive)	0.5	0
CORRACTS (facilities subject to Corrective Action under RCRA)	1	0
RCRA-TSDF (hazardous waste treatment, storage, or disposal facilities)	0.5	0

Table 1 – ASTM Standard Environmental Databases		
Database Name	**Search Radius (mile)**	**Number of Listings**
RCRA-LQG (large quantity generator)	0.25	1
RCRA-SQG (small quantity generator)	0.25	0
RCRA-VSQG (very small quantity generator)	0.25	0
US ENGINEERING CONTROL (EC)	0.5	0
US INSTITUTIONAL CONTROL (IC)	0.5	0
ERNS (Emergency Notification System)	Site	0
STATE/TRIBAL DATABASES		
RESPONSE (State Response Sites, State- and Tribal- equivalent NPL)	1	0
ENVIROSTOR (The DTSC's Site Mitigation and Brownfields Reuse Program; CERCLIS-equivalent)	1	0
SWF/LF (Solid Waste Information System)	0.5	0
LUST (Geotracker's Leaking Underground Fuel Tank Report)	0.5	1
CA Brownfields	0.5	0
SLIC (Spills, Leaks, Investigation and Cleanup database by the California Regional Water Quality Control Board)	0.5	0
UST (registered underground storage tanks [USTs])	0.25	0
AST (registered aboveground storage tanks [ASTs])	0.25	0
FEMA UST (Underground Storage Tank Listing)	0.25	0
VCP (Voluntary Cleanup Program Properties)	0.5	0

Properties/facilities listed in the database report were evaluated as to their potential to impact soil and/or groundwater at the site. To supplement the information in the EDR report, regulatory agency files from the Regional Water Quality Control, Colorado River Basin Region (RWQCB) and Imperial County Public Health Department (ICPHD) were also requested for the Glamis Beach Store property. The following properties/facilities were interpreted to represent a potential environmental concern to the site, based on their proximity to the site, the nature of the database on which they are listed, and/or the assumed direction of groundwater flow in the site vicinity (southwest).

Table 2 – Facilities of Potential Concern			
Facility Name/ Address	**Distance/ Direction from Site**	**Database**	**Summary**
Glamis Beach Store 1001 Highway 78	site	CERS CORTESE HIST CORTESE LUST	The Glamis Beach Store property has a closed unauthorized release case (7T2227016) associated with a release from an unspecified UST. The case was opened in June 1991 and closed in August 1992. The RWQCB, ICPHD, and DTSC were contacted for additional information related to the closed unauthorized release case; however, the agencies did not have records for the case.
Western Mesquite Mines, Inc. 6502 E Highway 78	Adjacent – west	CHMIRS EMI ICIS RCRA-LQG US AIRS WDS WMUDS/SWAT	The mine was incorrectly plotted by EDR and is located approximately 2 miles northeast of the site. The mine is a Resource Conservation and Recovery Act (RCRA) large quantity generator (LQG) of hazardous waste. Based on the distance to the site, this listing is not a concern to the site at this time.

Notes:
- Distances and direction provided by EDR
- A complete description of each database is provided in the EDR Report (Appendix B).

3.1.1 Online Regulatory Databases

Online regulatory databases were reviewed by Ninyo & Moore to supplement the environmental database search conducted by EDR. The following is a summary of pertinent information.

Table 3 – Online Regulatory Databases

Online Database/Website	Findings
DTSC EnviroStor	Neither the site nor properties within 1,000 feet are listed. The Santa Fe Pacific Gold Mesquite Mine, located at 6502 East Highway 78, is depicted approximately 2 miles northeast of the site.
SWRCB GeoTracker	The Glamis Beach Store is listed with a closed unauthorized release case (7T227016) associated with a diesel release that impacted soil only. The RWQCB is listed as the lead oversight agency. The case was closed in August 1992.
California Department of Resources Recycling and Recovery (CalRecycle) Solid Waste Information System	Mesquite Regional Landfill is listed in the site vicinity and is described as 5 miles northeast of Glamis. The landfill is an active solid waste landfill with a maximum permitted throughput of 20,000 tons per day. Based on the distance to the site, the landfill is not a concern.
United States Pipeline and Hazardous Materials Safety Administration, National Pipeline Mapping System Map Viewer	A petroleum pipeline operated by Kinder Morgan is depicted along the UPRR.

3.2 Physical Setting

The following table summarizes topographic, geologic, and hydrogeologic conditions in the vicinity of the site, based upon the referenced documents review and/or our visual reconnaissance of the site.

Table 4 – Physical Setting

Physical Settings	Reference	Summary
Topography	A, B	The elevation at the site is relatively flat and ranges from approximately 320 feet above mean sea level (MSL) on the southwestern portion of the site to 345 feet on the northeastern portion.
Site Geology	C, D, E	The site is underlain by dune sand (Qs), Pleistocene nonmarine (Qc) and alluvium (Qal), which are associated with deposits from the southwestern flanks of the Chocolate Mountains. As part of the 2019 geotechnical feasibility study, soils consist of thin deposits of dune sand overlying Quaternary younger and older alluvial deposits. Fills were a mix of locally derived materials. Within the project limits, the thickness of the true dune sand was generally less than 2 feet. Fills vary in thickness, being the thickest for roadways and flood control berms (+10 feet).
Surface Water	A, B	A generally northeast to southwest trending intermittent creek or wash traverses the northwestern portion of the site.

Table 4 – Physical Setting		
Physical Settings	**Reference**	**Summary**
Groundwater	F	The site is located in the Imperial Valley Planning Area and the Imperial Hydrologic Unit (HU). The Imperial HU has beneficial uses of groundwater for municipal and industrial supply. Based on groundwater monitoring data in the site vicinity, groundwater is anticipated to be found at depths greater than 100 feet below ground surface. The groundwater level and flow direction may vary due to hydrogeologic properties, such as soil porosity and permeability, groundwater extraction, change in land use, recharge by irrigation and rainfall, and other factors.

References:
A = United States Geological Survey (USGS), East of Acolita, California, 7.5-minute quadrangle map (USGS, 2018a)
B = USGS, East of Glamis, California, 7.5-minute quadrangle map (USGS, 2018b)
C = Geologic Map of California: San Diego - El Centro sheet, 1:250,000 (Strand, R.G., 1962)
D = Geologic Map of California, Salton Sea Sheet, 1:250,000 (Jenkins, O.P., 1962)
E = Geotechnical Feasibility Report (Earth Systems, 2019)
F = RWQCB Water Quality Control Plan for the Colorado River Basin (RWQCB, 2017)

3.3 Site Historical Use Information

Ninyo & Moore conducted a search of historical records for the site. This included a review of city directories, fire insurance maps, aerial photographs, topographic maps, and building department records. The following sections summarize information obtained from the historical sources utilized for this assessment.

3.3.1 Sanborn® Fire Insurance Maps

Sanborn® fire insurance maps were requested from EDR; however, according to EDR's Certified Sanborn Map Report, there is no map coverage in the site vicinity (Appendix C).

3.3.2 Aerial Photographs and Topographic Maps

Historical aerial photographs and topographic maps were provided by EDR for select years from 1907 through 2016. Google Earth was also used to view more recent aerial photographs. A listing of the photographs reviewed and summary of notable observations from the photograph review are provided in the table below. EDR-provided aerial photographs and topographic maps are included in Appendix C.

Table 5 – Aerial Photograph and Topographic Map Summary	
Date - Source	**Summary**
1907 – T	The site is depicted with four structures. Northwest to southeast- oriented railroad tracks traverse the site. A road is present parallel to the railroad on the eastern portion of the site and then the road turns northeast near the central portion of the site.
1953 – T 1955 – T 1956 – A	Approximately 14 structures and a water tank are clustered around the railroad tracks. The roads appear to be re-configured from the previous map. On the northern portion of the site, a road runs parallel to the south of the railroad and crosses the tracks on the eastern portion of the site and runs northeast. A second northeast trending road is present on the eastern portion of the site. On the northwestern portion of the site, an intermittent creek is depicted. A dike is depicted on the northeastern portion of the site and runs along the railroad track.

Table 5 – Aerial Photograph and Topographic Map Summary	
Date - Source	**Summary**
1961 – A 1965 – T 1975 – A 1979 – T	Similar to the previous aerial photographs, with the exception of SR-78 traverses the site in its present-day configuration. The roads generally resemble their current configurations.
1984 – A	The Glamis Beach Store is present to the south of SR-78 near the central portion of the site. The majority of structures along the railroad track are no longer present.
1988 – T 1996 – A	A gravel pit is depicted approximately ¼ mile east of the site. A cluster of recreation vehicles and/or trailers are visible at the northwestern portion of the site. Trailers and a residence are present on the southeastern portion of the site within a fenced area.
2002 – T 2005 – A	A gravel pit is depicted approximately 300 feet northeast of the site. A pipeline is depicted on the south side of the railroad tracks. In the 2005 aerial photograph, a wireless cell tower is visible near the southeastern portion of the site.
2009 – A 2012 – A	Paved RV parking is located on the north side of SR-78, northwest of the Glamis Beach Store.
2016 – A 2017 – G	An additional storage structure is present on the southeastern portion of the site. Recreational vehicles are visible on the western portion of the site and offsite to the adjacent west and southwest.
Sources: A – EDR Aerial Photographs T – EDR Topographic Maps G – Google Earth Photographs	

4 FINDINGS AND OPINIONS

Based upon the results of this HMTS, the following findings and opinions are provided.

- The GSPA consists of seven parcels totaling approximately 142 acres and is located at the intersection of State Route 78 (SR-78) and the UPRR in Imperial County, California.

- The site is developed with adjoined one- and two-story metal building structures representing the Glamis Beach Store, and metal corrugated water tanks situated directly behind the store. Additionally, there is a separate seasonal OHV repair business connected to the Glamis Beach Store. A communications facility tower is located at the southeast portion of the site. Due south is a single-family residence, large RV storage garage, and other related equipment storage buildings. A prefabricated residential structure is located on the southeast corner of the site. To the west, across SR-78 and opposite the Glamis Beach Store, there is an RV storage area as well as vacant desert land. There is also a 20-acre paved RV storage area for Glamis Dunes Storage and Luv 2 Camp RV Trailer Rentals, and historical cemetery located at the southwest corner of SR-78 and Ted Kipf Road.

- Based on the historical records review, portions of the site were developed since at least 1907. In the 1907 topographic map, the site was depicted with four structures clustered around railroad tracks that traverse the site. By the 1950s, the site was depicted with approximately 14 structures around the railroad track. A dike is depicted on the northeastern portion of the site and runs along the railroad track. By the 1960s, SR-78 was constructed and traversed the site. Sometime in the late 1970s or early 1980s, the Glamis Beach Store was constructed. Other site improvements in the 1980s to the present include a residence, storage structures, cell tower, and RV parking.

- The Glamis Beach Store property has a closed unauthorized release case (7T2227016) associated with a release from an unspecified UST. The case was opened in June 1991 and closed in August 1992. The RWQCB and ICPHD were both contacted for additional information related to the closed unauthorized release case; however, the agencies did not have records for the case.

- Potential environmental concerns in the site vicinity include a petroleum pipeline operated by Kinder Morgan along the UPRR and commonly encountered environmental conditions associated with the railroad rights-of-way (ROW) including the potential for creosote-treated railroad ties and herbicides to be present in the immediate vicinity of the railroad. Based on the absence of a reported release from the fuel pipeline and distance from railroad tracks, these off-site potential issues are not a concern to the site at this time.

5 PROJECT IMPACT ANALYSIS – HAZARDS AND HAZARDOUS MATERIALS

The following impact analysis evaluates the effects from hazards and hazardous materials that may result with the implementation of the Proposed Project. The findings of this HMTS were used to evaluate potential impacts relative to hazards and hazardous materials.

5.1 CEQA Significance of Impacts

The following significance criteria listed in the CEQA Appendix G Environmental Checklist were used to evaluate whether implementation of the Proposed Project would result in potentially significant impacts associated with hazards or hazardous materials.

Table 6 – CEQA Thresholds of Significance

Threshold	Criteria
A	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
B	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
C	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
D	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
E	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
F	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
G	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

5.2 Evaluation of Project Impacts and Mitigation Measures

The following question was evaluated based on our findings from the HMTS and our understanding of the proposed Project.

A – Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The proposed Project would have a less than significant impact. The transport, use, or disposal of hazardous materials may increase due to proposed improvements, such as fueling facilities and repair shops; however, the hazardous materials and petroleum products that are transported, used, and disposed of would be under regulatory oversight and not create a significant hazard to the public or the environment.

B – Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The proposed Project would have a less than significant impact with mitigation incorporated. Planned improvements within the footprint of the Glamis Beach Store can potentially emit suspected contaminants in the area to the surrounding area. Implementation of mitigation measures (Section 5.3) would reduce the likelihood of a significant hazard to the public or the environment.

C – Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The proposed Project would have no impact. Existing or proposed schools are not located within ¼-mile of the GSPA.

D – Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The proposed Project would have a less than significant impact with mitigation incorporated. The Glamis Beach Store is listed in the SWRCB GeoTracker database with an unauthorized release case. Implementation of mitigation measures (Section 5.3) would reduce the likelihood of a significant hazard to the public or the environment.

E – For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The proposed Project would have no impact. The proposed Project is not located within an airport land use plan or within 2 miles of a public airport.

F – For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

The proposed Project would have no impact. The proposed Project is not located within the vicinity of a private airstrip.

G – Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The proposed Project would have no impact. The proposed Project is located in an area characterized by open desert land and wildland fires are not a concern.

5.3 Mitigation Framework

The following mitigation framework measures relating to hazardous materials/wastes are provided.

- For areas with documented or suspected impacts to soil and/or groundwater (Glamis Beach Store footprint), appropriate worker and community health and safety measures (e.g., dust control, air monitoring, stockpile management) should be implemented during soil disturbance activities.

- In areas with documented releases, soil generated during construction activities may be considered a waste, and may require characterization (e.g., analytical testing) prior to reuse, export, or disposal.

6 REFERENCES

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United States Geological Survey, 2018a, East of Acolita, California: 7.5-minute series (topographic), Scale 1:24,000.

United States Geological Survey, 2018b, Glamis, California: 7.5-minute series (topographic), Scale 1:24,000.

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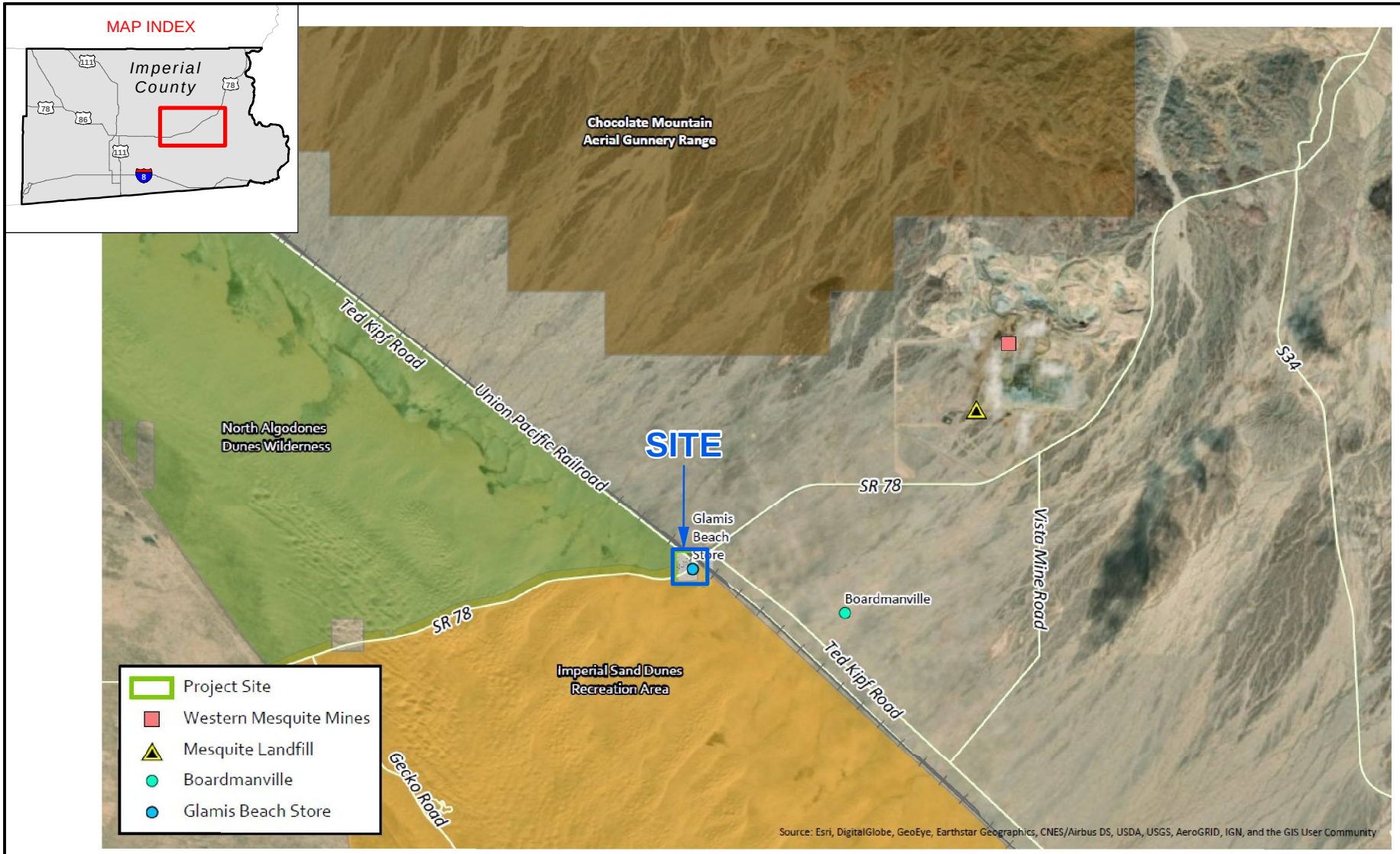
FIGURES



1_109106001_SL.mxd 10/1/2020 JDL

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: GLAMIS SPECIFIC PLAN - THE ALTUM GROUP, DATED: MAY 2020

N

FEET

0 12,000 24,000

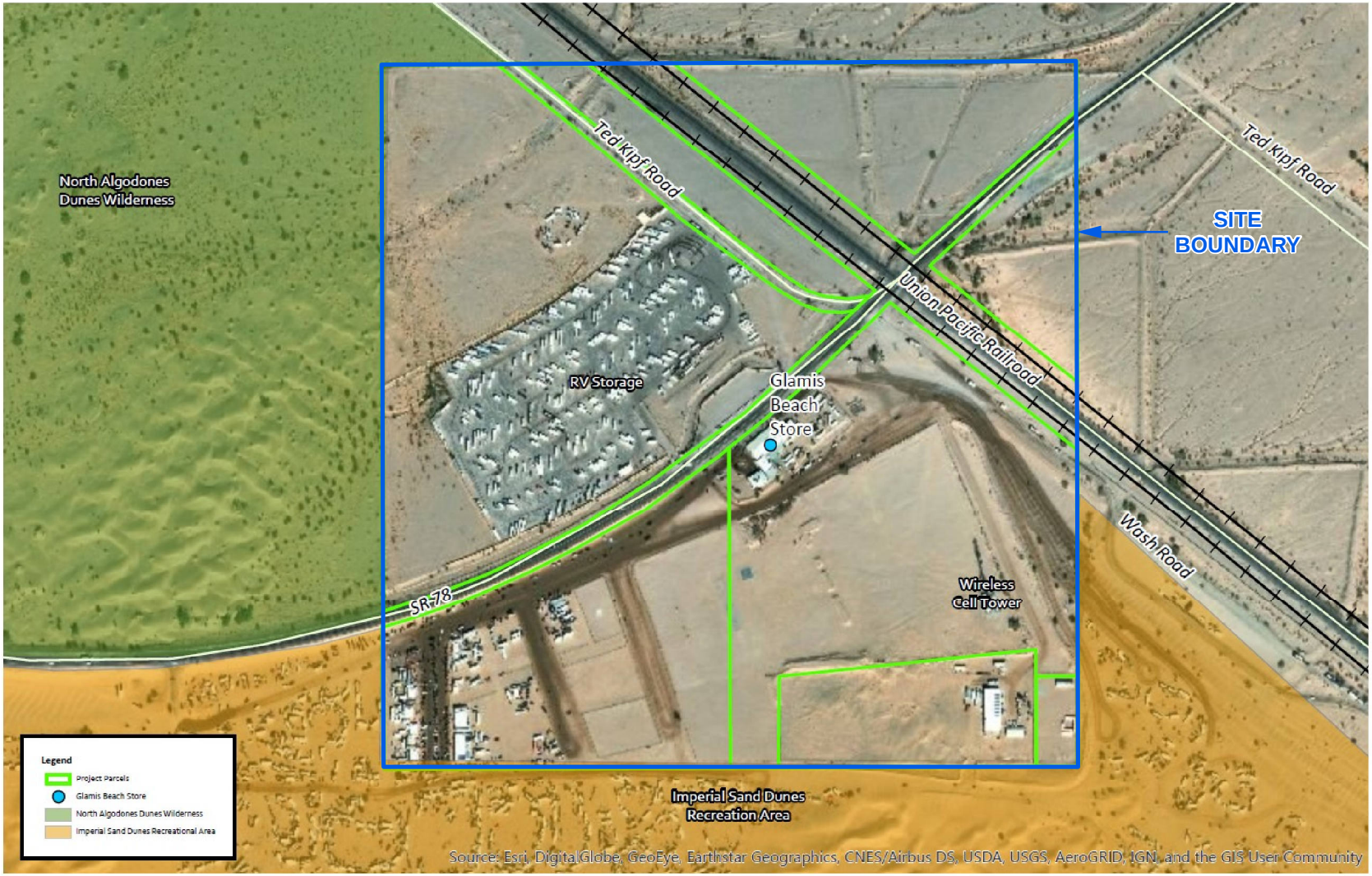
FIGURE 1

SITE LOCATION

GLAMIS SPECIFIC PLAN
IMPERIAL COUNTY, CALIFORNIA

109106001 | 10/20

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants



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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: GLAMIS SPECIFIC PLAN - THE ALTUM GROUP, DATED: MAY 2020

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FEET

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FIGURE 2

SITE AND VICINITY

GLAMIS SPECIFIC PLAN
IMPERIAL COUNTY, CALIFORNIA

109106001 | 10/20

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

APPENDIX A

Project Figures

Exhibit 1 - Regional Location Map

Exhibit 2 - Project Vicinity

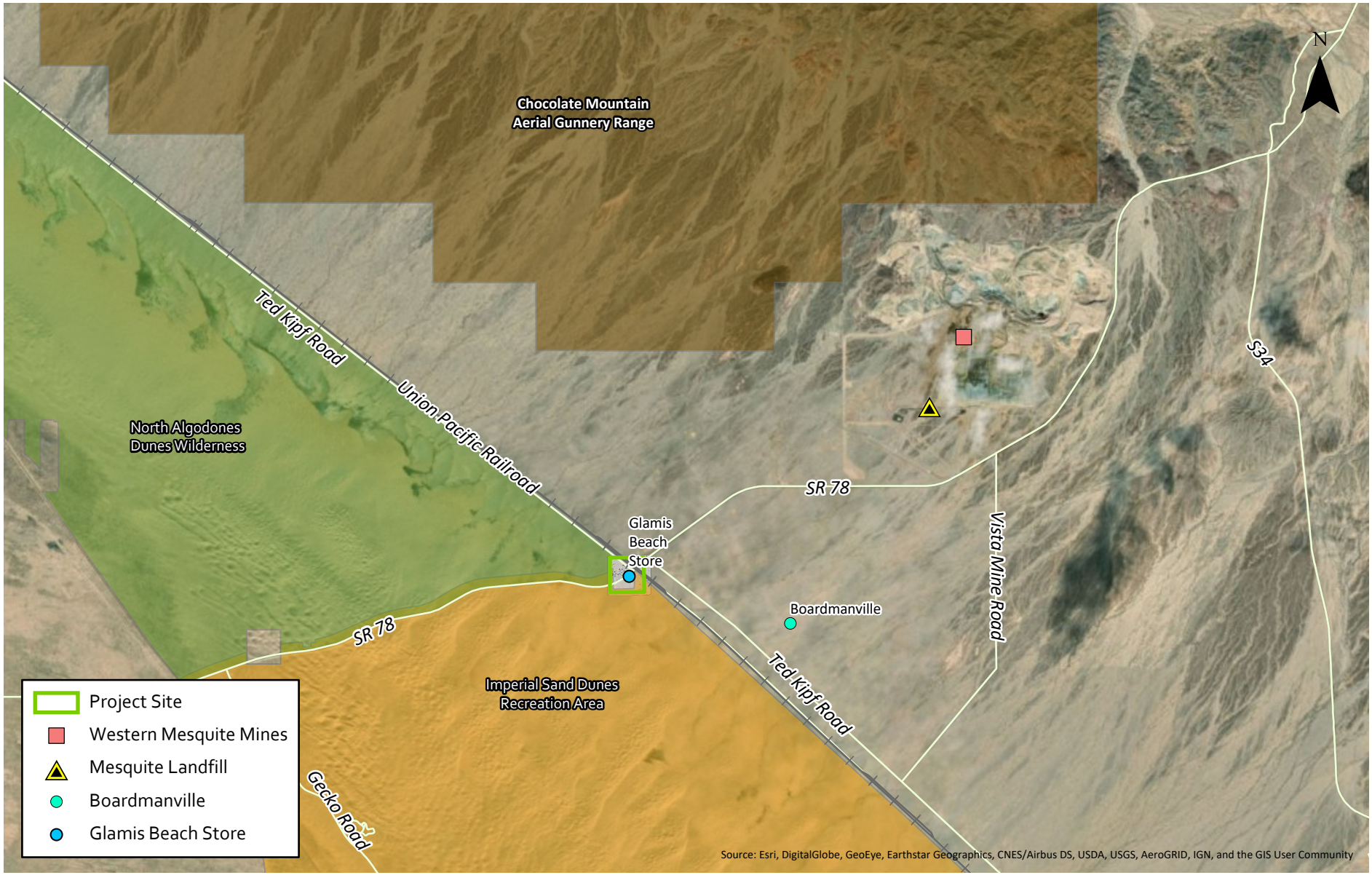


Exhibit 3- Project Site Aerial

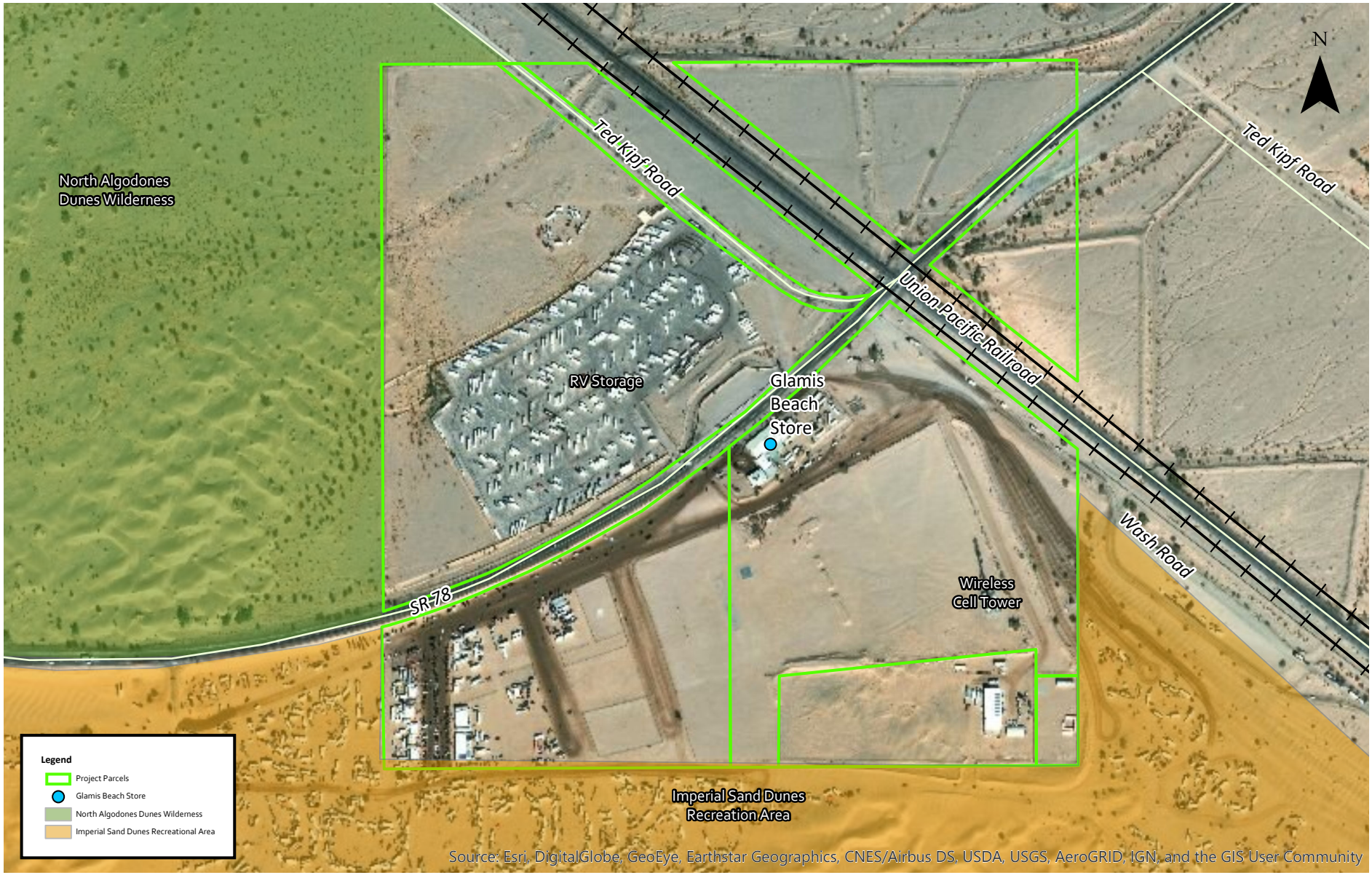


Exhibit 5 - Current Imperial County Zoning Project Site and Vicinity

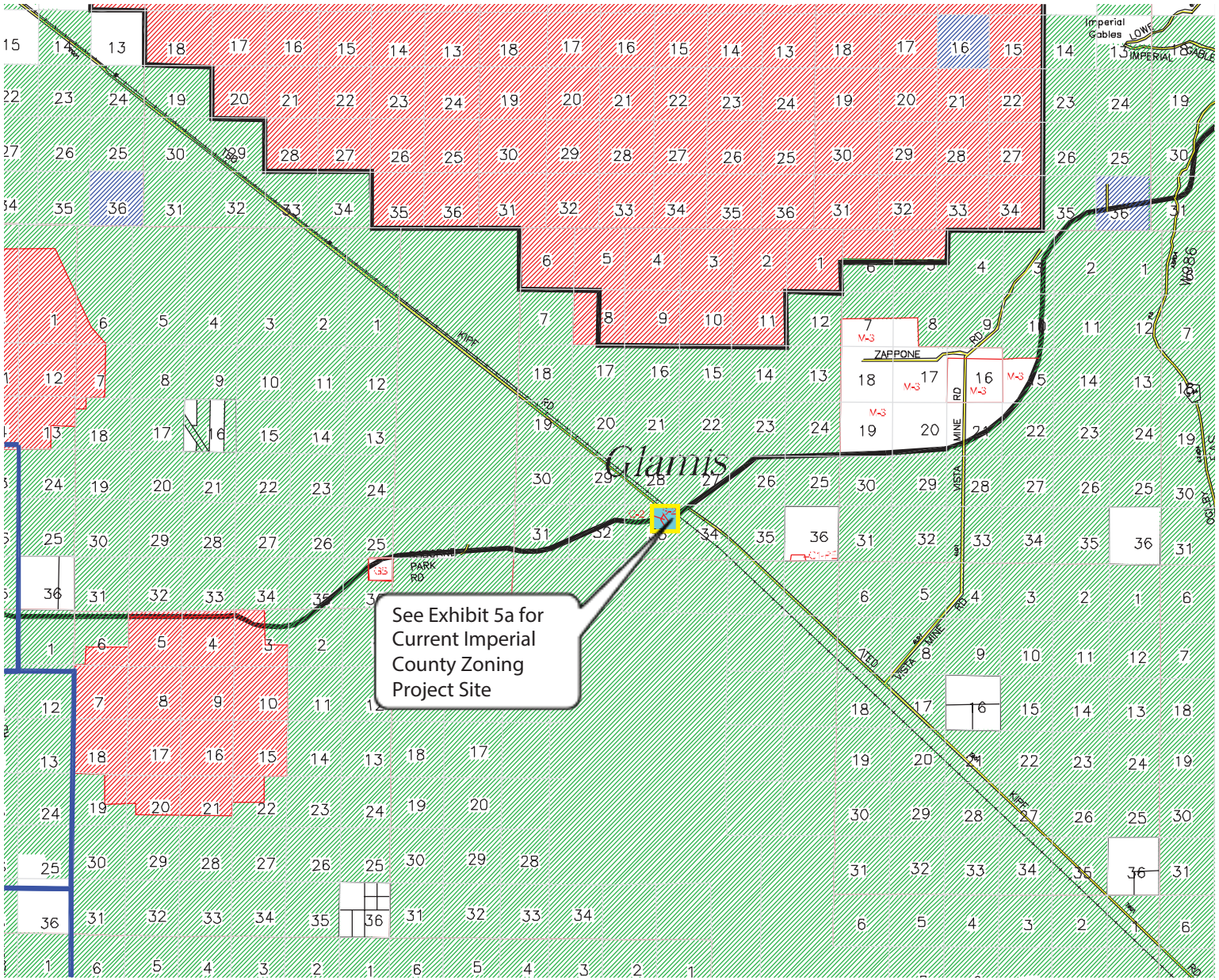
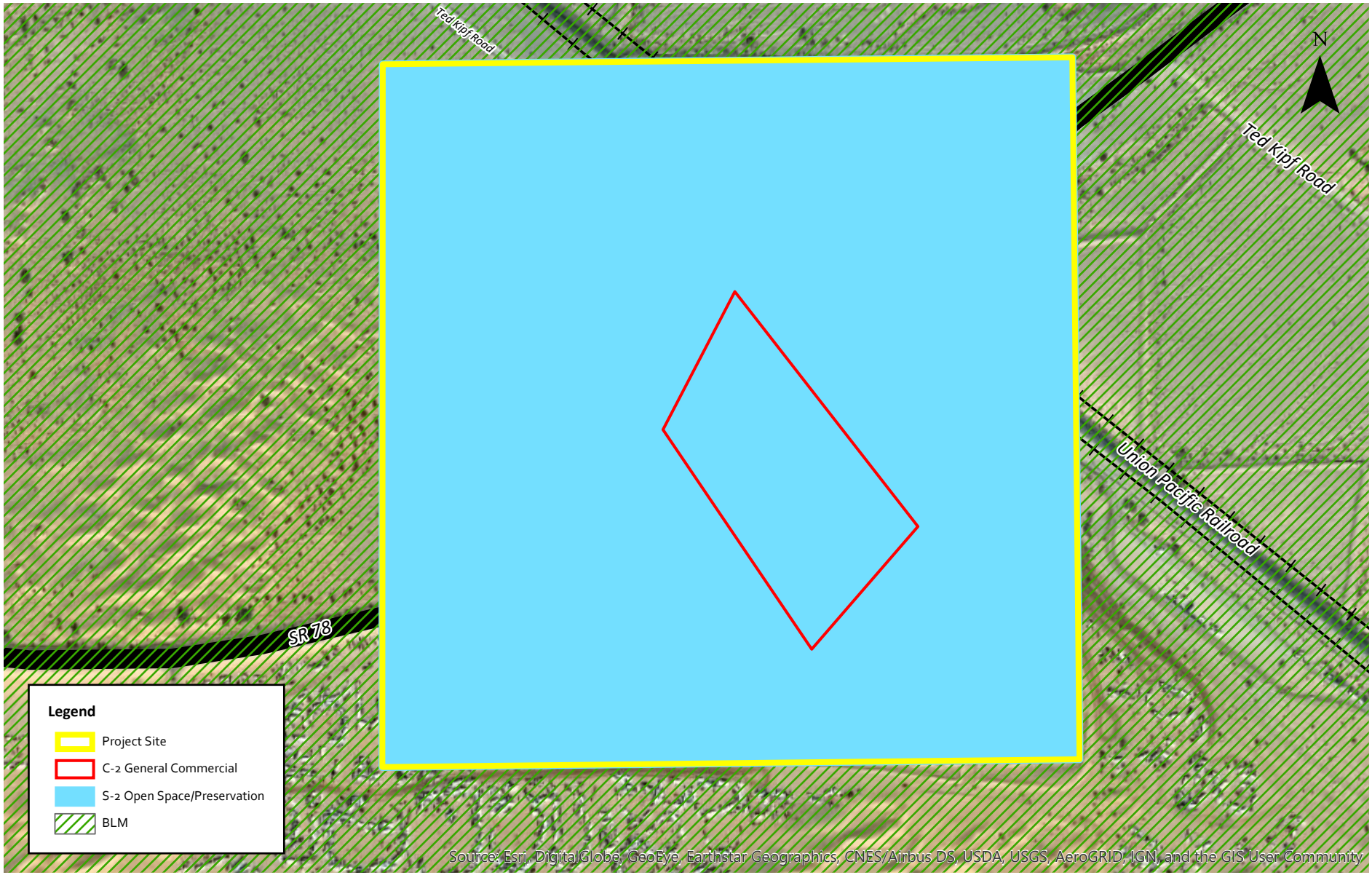
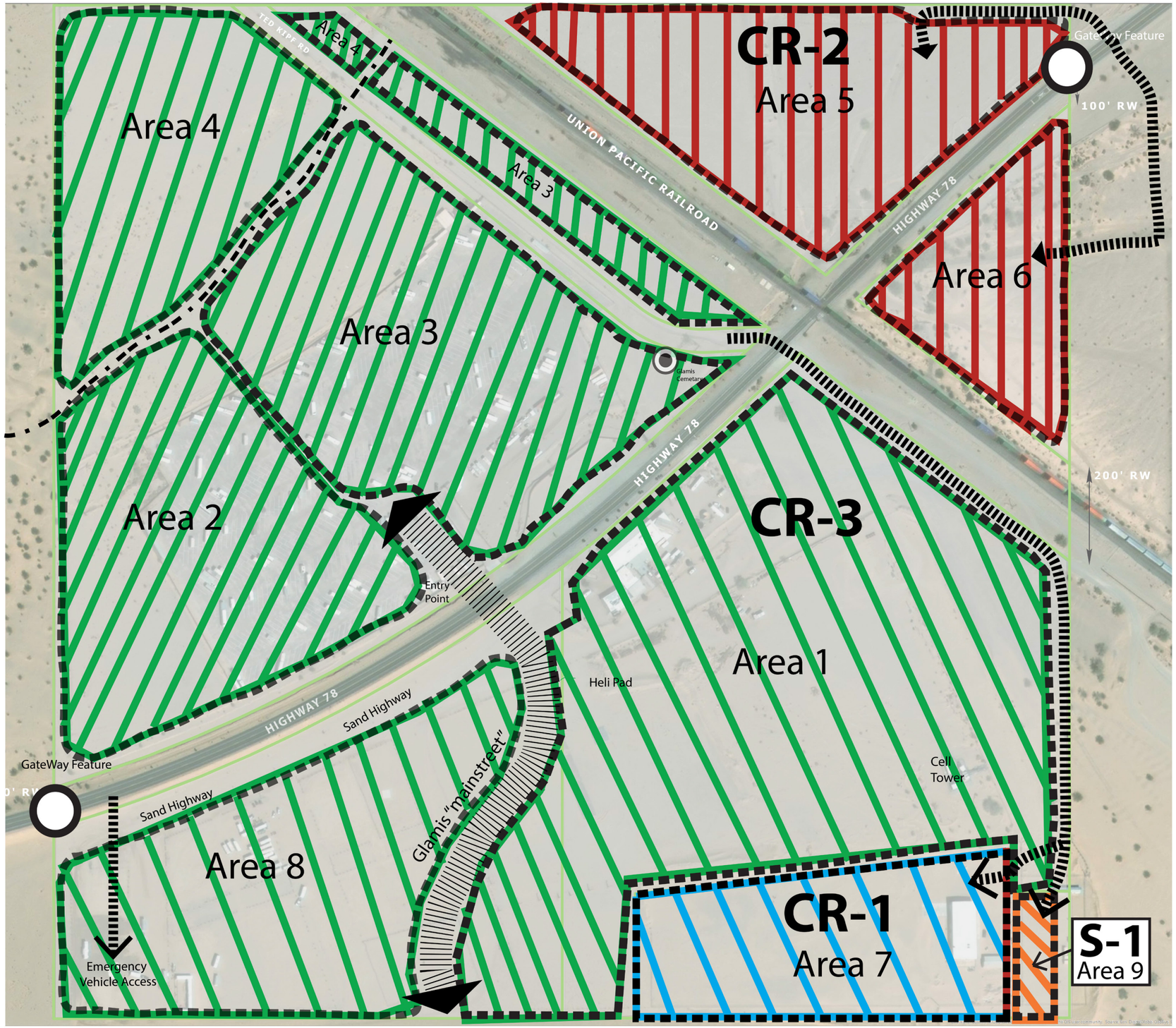


Exhibit 5a - Current Imperial County Zoning Project Site





Zoning Designation

CR-1
- Area 7

CR-2
- Area 5
- Area 6

CR-3
- Area 1
- Area 2
- Area 3
- Area 4
- Area 8

S-1
- Area 9

Exhibit 6 Glamis Specific Plan - Land Use Areas (Preferred)

19-10-22

N

15 ACRES

Phase 3

039-310-022
15 Acres

HIGHWAY 78

Phase 4

039-310-026
50 Acres

Phase 3

039-310-023
7 Acres

RV Storage

Glamis Beach Store

UNION PACIFIC RAILROAD

Phase 1

039-310-029
34 Acres

Cell Tower

Phase 2

039-310-027
27 Acres

039-310-030
8 Acres

039-310-017
1 Acre

HIGHWAY 78

Exhibit 7 -GLAMIS SPECIFIC PLAN PHASING

The Altum Group

0 125 250 500 750 1,000 Feet

1 INCH = 100 FEET

* = CURRENTLY NOT UNDER POLARIS OWNERSHIP

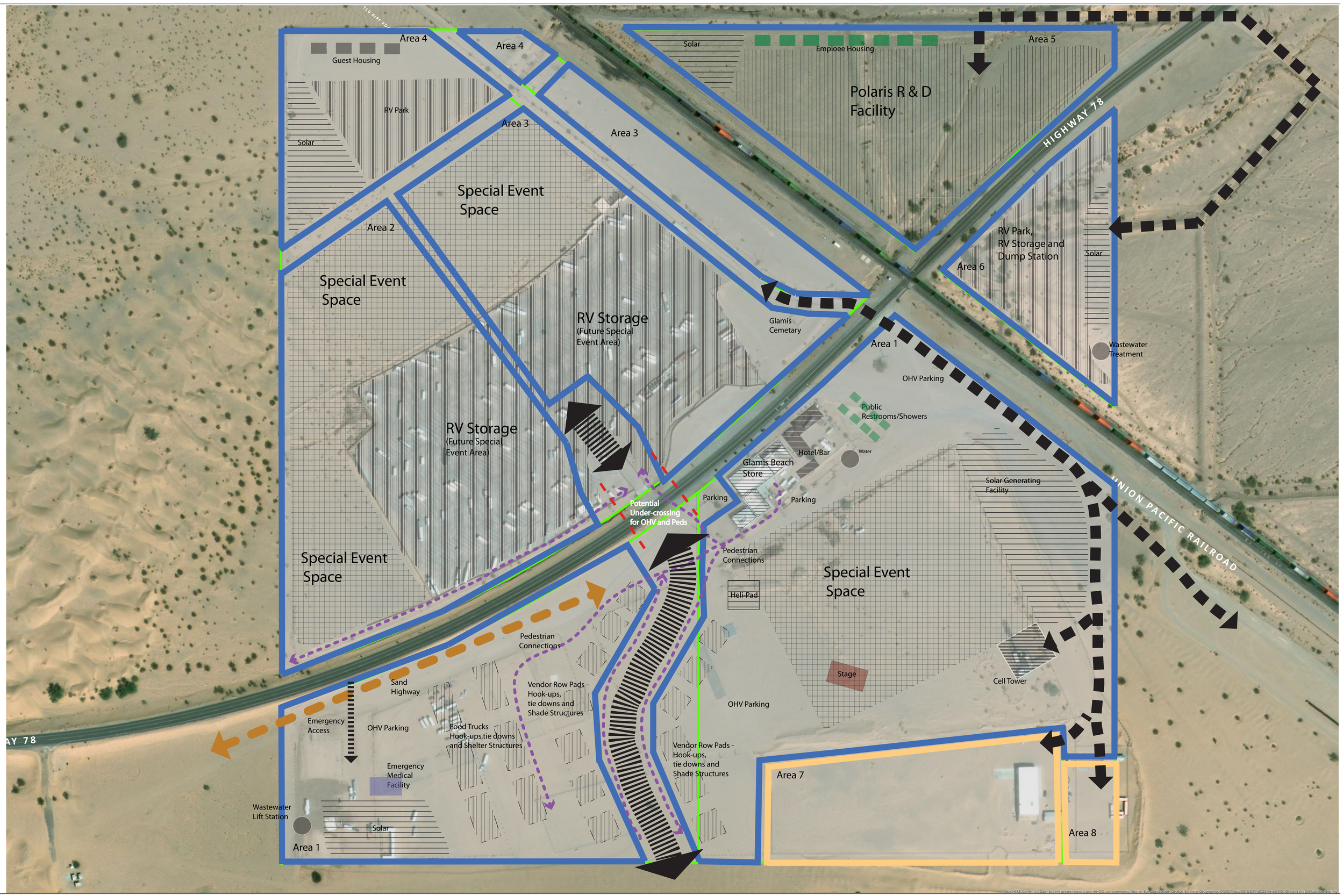
The Altum Group

Exhibit 7 -GLAMIS SPECIFIC PLAN PHASING

0 125 250 500 750 1,000 Feet

1 INCH = 100 FEET

* = CURRENTLY NOT UNDER POLARIS OWNERSHIP



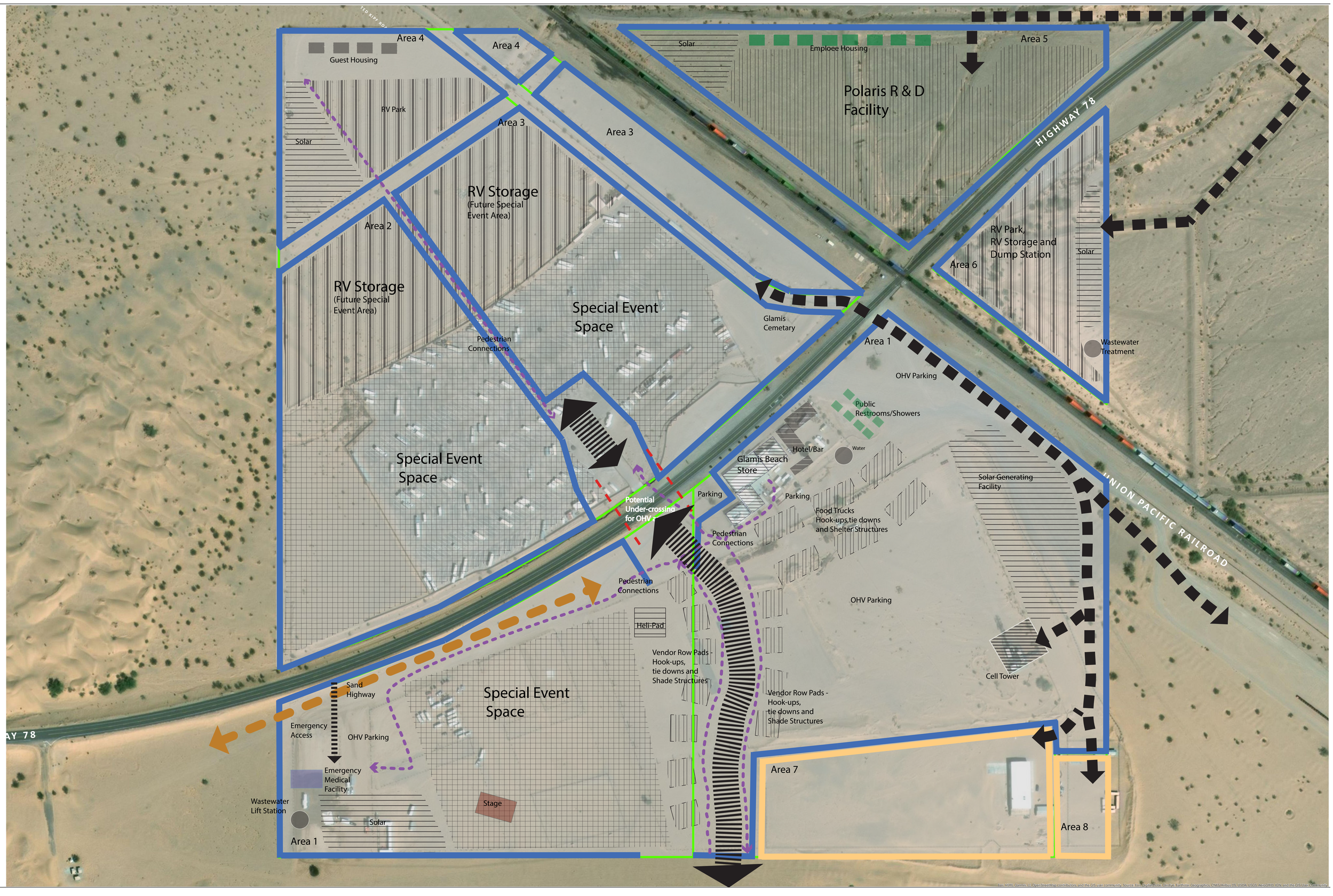
The Altum Group

Exhibit 8

GLAMIS SPECIFIC PLAN
CONCEPTUAL SITE PLAN

0 125 250 500 750 1,000 Feet

1 INCH = 100 FEET



The Altum Group

Exhibit 9

GLAMIS SPECIFIC PLAN
CONCEPTUAL SITE PLAN - ALTERNATIVE

0 125 250 500 750 1,000 Feet

1 INCH = 100 FEET

* = CURRENTLY NOT UNDER POLARIS OWNERSHIP

APPENDIX B

Environmental Database Report

Glamis Specific Plan EIR
Highway 78
Brawley, CA 92227

Inquiry Number: 6154543.2s
August 14, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

HIGHWAY 78
BRAWLEY, CA 92227

COORDINATES

Latitude (North):	32.9962570 - 32° 59' 46.52''
Longitude (West):	115.0731400 - 115° 4' 23.30''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	680024.7
UTM Y (Meters):	3652329.8
Elevation:	331 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5622958 GLAMIS, CA
Version Date:	2012
North Map:	5640282 EAST OF ACOLITA, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140529, 20140606
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
HIGHWAY 78
BRAWLEY, CA 92283

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	WESTERN MESQUITE MIN	6502 E. HIGHWAY 78	RCRA-LQG, WMUDS/SWAT, CHMIRS, ICIS, US AIRS, EMI,...	Lower	1 ft.
2	GLAMIS BEACH STORE	1001 HIGHWAY 78	LUST, Cortese, HIST CORTESE, CERS	Higher	1 ft.

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List

US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ..... EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ..... Underground Storage Tank Listing
UST ..... Active UST Facilities
AST ..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing
VCP ..... Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS ..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
IHS OPEN DUMPS ..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ..... Delisted National Clandestine Laboratory Register

HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
CDL	Clandestine Drug Labs
CERS HAZ WASTE	CERS HAZ WASTE
Toxic Pits	Toxic Pits Cleanup Act Sites
US CDL	National Clandestine Laboratory Register
PFAS	PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST	SWEEPS UST Listing
HIST UST	Hazardous Substance Storage Container Database
CERS TANKS	California Environmental Reporting System (CERS) Tanks
CA FID UST	Facility Inventory Database

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing

DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations
FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
ABANDONED MINES ---- Abandoned Mines
FINDS ---- Facility Index System/Facility Registry System
ECHO ---- Enforcement & Compliance History Information
UXO ---- Unexploded Ordnance Sites
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
CA BOND EXP. PLAN ---- Bond Expenditure Plan
CUPA Listings ---- CUPA Resources List
DRYCLEANERS ---- Cleaner Facilities
EMI ---- Emissions Inventory Data
ENF ---- Enforcement Action Listing
Financial Assurance ---- Financial Assurance Information Listing
HAZNET ---- Facility and Manifest Data
ICE ---- ICE
HWP ---- EnviroStor Permitted Facilities Listing
HWT ---- Registered Hazardous Waste Transporter Database
MINES ---- Mines Site Location Listing
MWMP ---- Medical Waste Management Program Listing
NPDES ---- NPDES Permits Listing
PEST LIC ---- Pesticide Regulation Licenses Listing
PROC ---- Certified Processors Database
Notify 65 ---- Proposition 65 Records
UIC ---- UIC Listing
UIC GEO ---- UIC GEO (GEOTRACKER)
WASTEWATER PITS ---- Oil Wastewater Pits Listing
WDS ---- Waste Discharge System
WIP ---- Well Investigation Program Case List
MILITARY PRIV SITES ---- MILITARY PRIV SITES (GEOTRACKER)
PROJECT ---- PROJECT (GEOTRACKER)
WDR ---- Waste Discharge Requirements Listing
CIWQS ---- California Integrated Water Quality System
CERS ---- CERS
NON-CASE INFO ---- NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS ---- OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS ---- PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT ---- SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ ---- Well Stimulation Project (GEOTRACKER)
MINES MRDS ---- Mineral Resources Data System
HWTS ---- Hazardous Waste Tracking System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---- EDR Exclusive Historical Auto Stations

EXECUTIVE SUMMARY

EDR Hist Cleaner..... EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF..... Recovered Government Archive Solid Waste Facilities List
RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/23/2020 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
WESTERN MESQUITE MIN EPA ID:: CAD109163071	***6502 E. HIGHWAY 78***	***0 - 1/8 (0.000 mi.)***	***1***	***9***

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GLAMIS BEACH STORE	***1001 HIGHWAY 78***	***0 - 1/8 (0.000 mi.)***	***2***	***33***

Database: LUST REG 7, Date of Government Version: 02/26/2004
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Status: 9 - Case Closed
Global Id: T0602500019
Global ID: T0602500019

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
WESTERN MESQUITE MIN	***6502 E. HIGHWAY 78***	***0 - 1/8 (0.000 mi.)***	***1***	***9***

Other Ascertainable Records

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 03/23/2020 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GLAMIS BEACH STORE	***1001 HIGHWAY 78***	***0 - 1/8 (0.000 mi.)***	***2***	***33***

Cleanup Status: COMPLETED - CASE CLOSED

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

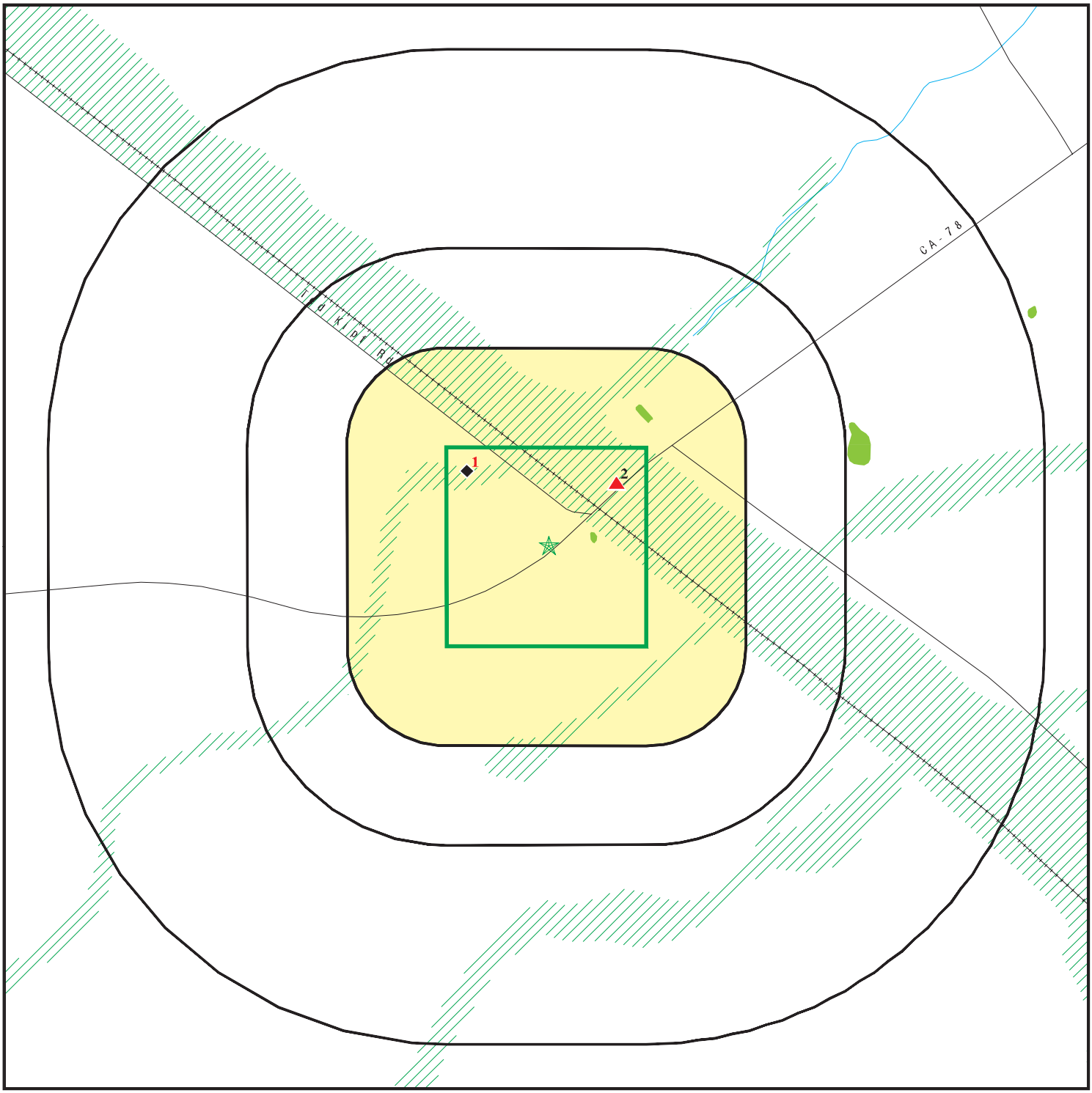
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GLAMIS BEACH STORE	***1001 HIGHWAY 78***	***0 - 1/8 (0.000 mi.)***	***2***	***33***

Reg Id: 7T2227016

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 6154543.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Glamis Specific Plan EIR	CLIENT:	Ninyo & Moore
ADDRESS:	Highway 78 Brawley CA 92227	CONTACT:	Adrian Olivares
LAT/LONG:	32.996257 / 115.07314	INQUIRY #:	6154543.2s
		DATE:	August 14, 2020 3:05 pm

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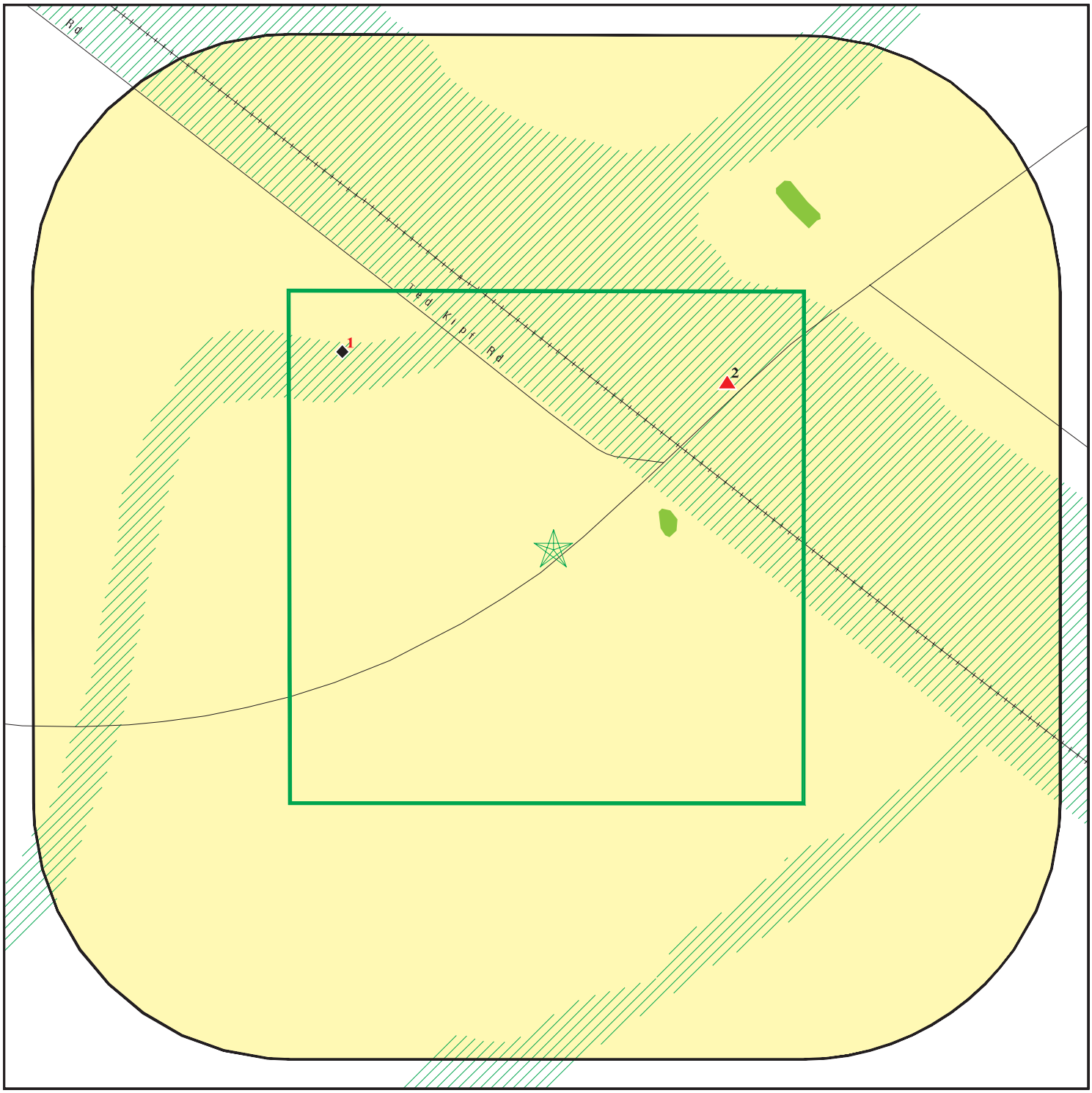
DETAIL MAP - 6154543.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/8 1/4 1/2 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Glamis Specific Plan EIR	CLIENT:	Ninyo & Moore
ADDRESS:	Highway 78 Brawley CA 92227	CONTACT:	Adrian Olivares
LAT/LONG:	32.996257 / 115.07314	INQUIRY #:	6154543.2s
		DATE:	August 14, 2020 3:06 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	0	0	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		1	0	0	NR	NR	1
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		1	0	0	NR	NR	1
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	0	0	NR	NR	1
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
HWTS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	5	0	0	0	0	5

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
< 1/8
1 ft.

Relative: Lower

Actual: 330 ft.

WESTERN MESQUITE MINES, INC
6502 E. HIGHWAY 78
BRAWLEY, CA 92227

Database(s): RCRA-LQG, WMUDS/SWAT, CHMIRS, ICIS, US AIRS, EMI, WDS

EDR ID Number: 1000183151
EPA ID Number: CAD109163071

RCRA-LQG:

Date form received by agency:	2020-03-02 00:00:00.0
Facility name:	WESTERN MESQUITE MINES INC - MESQUITE MINE
Facility address:	6502 EAST HIGHWAY 78 BRAWLEY, CA 92227-0000
EPA ID:	CAD109163071
Contact:	MICHAEL MUSEY
Contact address:	6502 EAST HIGHWAY 78 N/A BRAWLEY, CA 92227
Contact country:	US
Contact telephone:	928-341-4653
Telephone ext.:	3231
Contact email:	MICHAEL.MUSEY@EQUINOXGOLD.COM
EPA Region:	09
Land type:	Private
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	WESTERN MESQUITE MINES, INC.
Owner/operator address:	EAST HIGHWAY 78 BRAWLEY, CA 92227
Owner/operator country:	US
Owner/operator telephone:	928-341-4653
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	2004-01-02 00:00:00.
Owner/Op end date:	Not reported

Owner/operator name:	WESTERN MESQUITE MINES, INC.
Owner/operator address:	6502 EAST HIGHWAY 78 N/A BRAWLEY, CA 92227
Owner/operator country:	US
Owner/operator telephone:	928-341-4653
Owner/operator email:	TOM.RINALDI@EQUINOXGOLD.COM
Owner/operator fax:	Not reported
Owner/operator extension:	3234

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 2018-10-30 00:00:00.
Owner/Op end date: Not reported

Owner/operator name: WESTERN MESQUITE MINES, INC.
Owner/operator address: 6502 EAST HIGHWAY 78 N/A
BRAWLEY, CA 92227
Owner/operator country: US
Owner/operator telephone: 928-341-4653
Owner/operator email: MICHAEL.MUSEY@EQUINOXGOLD.COM
Owner/operator fax: Not reported
Owner/operator extension: 3231
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 2018-10-30 00:00:00.
Owner/Op end date: Not reported

Owner/operator name: WESTERN MESQUITE MINES, INC.
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 2004-01-02 00:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Not reported
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2019-02-07 00:00:00.0
Site name: WESTERN MESQUITE MINES INC - MESQUITE MINE
Classification: Large Quantity Generator

Date form received by agency: 2018-10-30 00:00:00.0
Site name: WESTERN MESQUITE MINES INC - MESQUITE MINE
Classification: Large Quantity Generator

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Date form received by agency: 2016-02-18 00:00:00.0
Site name: WESTERN MESQUITE MINES, INC.
Classification: Large Quantity Generator

Date form received by agency: 2013-03-08 00:00:00.0
Site name: WESTEN MESQUITE MINES INC.
Classification: Large Quantity Generator

Date form received by agency: 2010-06-17 00:00:00.0
Site name: WESTERN MESQUITE MINES, INC.
Classification: Large Quantity Generator

Date form received by agency: 2004-01-02 00:00:00.0
Site name: MESQUITE MINE
Classification: Small Quantity Generator

Date form received by agency: 2000-10-12 00:00:00.0
Site name: NEWMONT GOLD COMPANY - MESQUITE MINE
Classification: Large Quantity Generator

Date form received by agency: 1999-04-15 00:00:00.0
Site name: NEWMONT GOLD COMPANY - MESQUITE MINE
Classification: Large Quantity Generator

Date form received by agency: 1993-04-26 00:00:00.0
Site name: SANTA FE PACIFIC MINERALS MESQUITE MINE
Classification: Small Quantity Generator

Date form received by agency: 1992-02-20 00:00:00.0
Site name: GOLD FIELDS OPER CO MESQUITE
Classification: Large Quantity Generator

Date form received by agency: 1991-06-28 00:00:00.0
Site name: GOLD FIELDS OPER CO MESQUITE
Classification: Large Quantity Generator

Hazardous Waste Summary:

. Waste code: 134
. Waste name: Aqueous solution with <10% total organic residues

. Waste code: 135
. Waste name: Unspecified aqueous solution

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 223
. Waste name: Unspecified oil-containing waste

. Waste code: 291

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

. Waste name: Latex waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 343
. Waste name: Unspecified organic liquid mixture

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 491
. Waste name: Unspecified sludge waste

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P106
. Waste name: SODIUM CYANIDE (OR) SODIUM CYANIDE NA(CN)

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Amount (Lbs): 212.7

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 1201

Waste code: D008
Waste name: LEAD
Amount (Lbs): 16140

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 212.7

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 212.7

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 2003-04-09 00:00:00.0
Date achieved compliance: 2003-05-06 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2003-04-09 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 2013-06-25 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 2010-08-03 00:00:00.0
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 2003-04-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 2003-05-06 00:00:00.0
Evaluation lead agency: State

WMUDS/SWAT:
Edit Date: Not reported
Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.
Primary Waste: SLDWST
Primary Waste Type: Inert/Influent or Solid Wastes that do not contain soluble pollutants or organic wastes and have little adverse impact on water quality. Such wastes could cause turbidity and siltation. Uncontaminated soils, rubble and concrete are examples of this category.
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Base Meridian: Not reported
NPID: Not reported
Tonnage: 0
Regional Board ID: Not reported
Municipal Solid Waste: False
Superorder: False
Open To Public: False
Waste List: False
Agency Type: Private
Agency Name: NEWMONT GOLD COMPANY
Agency Department: Not reported
Agency Address: 6502 EAST HWY 78
Agency City,St,Zip: BRAWLEY CA 92227
Agency Contact: LISA WADE
Agency Telephone: 7603526541
Land Owner Name: Not reported
Land Owner Address: Not reported
Land Owner City,St,Zip: Not reported
Land Owner Contact: Not reported
Land Owner Phone: Not reported
Region: 7

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Facility Type:	Solid Waste Site-Class III - Landfills for non hazardous solid wastes.
Facility Description:	Not reported
Facility Telephone:	Not reported
SWAT Facility Name:	Not reported
Primary SIC:	4953
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	Not reported
Waste Discharge System:	True
Solid Waste Assessment Test Program:	False
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	Not reported
Threat to Water Quality:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Sub Chapter 15:	True
Regional Board Project Officer:	Not reported
Number of WMUDS at Facility:	1
Section Range:	Not reported
RCRA Facility:	No
Waste Discharge Requirements:	A
Self-Monitoring Rept. Frequency:	Semiannual Submittal
Waste Discharge System ID:	7A132222001
Solid Waste Information ID:	Not reported

CHMIRS:

Name:	Not reported
Address:	6502 EAST HWY 78
City,State,Zip:	BRAWLEY, CA 9227
OES Incident Number:	10-1493
OES notification:	03/02/2010
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Merchant/Business
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Gal(s)
Other:	Not reported
Date/Time:	2230
Year:	2010
Agency:	Western Mesquite Mines Inc
Incident Date:	2/28/2010
Admin Agency:	Imperial County Health Services Department
Amount:	Not reported
Contained:	Yes
Site Type:	Not reported
E Date:	Not reported
Substance:	Hydraulic Oil
Quantity Released:	200
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	RP states that a hydraulic line failed causing the release of hydraulic oil onto the ground. No waterways were affected.

ICIS:

Enforcement Action ID:	CAIMPA000006025I192000027
FRS ID:	110009532684
Action Name:	WESTERN MESQUITE MINES, INC 06025I192000027
Facility Name:	WESTERN MESQUITE MINES, INC
Facility Address:	6502 E. HIGHWAY 78 BRAWLEY, CA 92227
Enforcement Action Type:	Civil Judicial Action
Facility County:	IMPERIAL
Program System Acronym:	AIR
Enforcement Action Forum Desc:	Judicial

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

EA Type Code:	CIV
Facility SIC Code:	1041
Federal Facility ID:	Not reported
Latitude in Decimal Degrees:	33.052156
Longitude in Decimal Degrees:	-114.980282
Permit Type Desc:	Not reported
Program System Acronym:	CAIMP00006025I1920
Facility NAICS Code:	212221
Tribal Land Code:	Not reported
Enforcement Action ID:	CAIMPA00006025I192000026
FRS ID:	110009532684
Action Name:	WESTERN MESQUITE MINES, INC 06025I192000026
Facility Name:	WESTERN MESQUITE MINES, INC
Facility Address:	6502 E. HIGHWAY 78 BRAWLEY, CA 92227
Enforcement Action Type:	Administrative Order
Facility County:	IMPERIAL
Program System Acronym:	AIR
Enforcement Action Forum Desc:	Administrative - Formal
EA Type Code:	SCAAAO
Facility SIC Code:	1041
Federal Facility ID:	Not reported
Latitude in Decimal Degrees:	33.052156
Longitude in Decimal Degrees:	-114.980282
Permit Type Desc:	Not reported
Program System Acronym:	CAIMP00006025I1920
Facility NAICS Code:	212221
Tribal Land Code:	Not reported
Enforcement Action ID:	CAIMPA00006025I192000024
FRS ID:	110009532684
Action Name:	WESTERN MESQUITE MINES, INC 06025I192000024
Facility Name:	WESTERN MESQUITE MINES, INC
Facility Address:	6502 E. HIGHWAY 78 BRAWLEY, CA 92227
Enforcement Action Type:	Notice of Violation
Facility County:	IMPERIAL
Program System Acronym:	AIR
Enforcement Action Forum Desc:	Administrative - Informal
EA Type Code:	NOV
Facility SIC Code:	1041
Federal Facility ID:	Not reported
Latitude in Decimal Degrees:	33.052156
Longitude in Decimal Degrees:	-114.980282
Permit Type Desc:	Not reported
Program System Acronym:	CAIMP00006025I1920
Facility NAICS Code:	212221
Tribal Land Code:	Not reported
Enforcement Action ID:	CAIMPA00006025I192000021
FRS ID:	110009532684
Action Name:	WESTERN MESQUITE MINES, INC 06025I192000021
Facility Name:	WESTERN MESQUITE MINES, INC
Facility Address:	6502 E. HIGHWAY 78 BRAWLEY, CA 92227
Enforcement Action Type:	Administrative Order

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Facility County:	IMPERIAL
Program System Acronym:	AIR
Enforcement Action Forum Desc:	Administrative - Formal
EA Type Code:	SCAAAO
Facility SIC Code:	1041
Federal Facility ID:	Not reported
Latitude in Decimal Degrees:	33.052156
Longitude in Decimal Degrees:	-114.980282
Permit Type Desc:	Not reported
Program System Acronym:	CAIMP00006025I1920
Facility NAICS Code:	212221
Tribal Land Code:	Not reported

Enforcement Action ID:	CAIMPA00006025I192000019
FRS ID:	110009532684
Action Name:	WESTERN MESQUITE MINES, INC 06025I192000019
Facility Name:	WESTERN MESQUITE MINES, INC
Facility Address:	6502 E. HIGHWAY 78 BRAWLEY, CA 92227
Enforcement Action Type:	Notice of Violation
Facility County:	IMPERIAL
Program System Acronym:	AIR
Enforcement Action Forum Desc:	Administrative - Informal
EA Type Code:	NOV
Facility SIC Code:	1041
Federal Facility ID:	Not reported
Latitude in Decimal Degrees:	33.052156
Longitude in Decimal Degrees:	-114.980282
Permit Type Desc:	Not reported
Program System Acronym:	CAIMP00006025I1920
Facility NAICS Code:	212221
Tribal Land Code:	Not reported

US AIRS (AFS):

Envid:	1000183151
Region Code:	09
County Code:	CA025
Programmatic ID:	AIR CAIMP00006025I1920
Facility Registry ID:	110009532684
D and B Number:	Not reported
Facility Site Name:	WESTERN MESQUITE MINES, INC
Primary SIC Code:	1041
NAICS Code:	212221
Default Air Classification Code:	SMI
Facility Type of Ownership Code:	POF
Air CMS Category Code:	OTH
HPV Status:	Not reported

US AIRS (AFS):

Region Code:	09
Programmatic ID:	AIR CAIMP00006025I1920
Facility Registry ID:	110009532684
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
Activity Date:	2016-03-17 00:00:00

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Activity Status Date:	2016-08-25 12:11:51
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Active
Region Code:	09
Programmatic ID:	AIR CAIMP00006025I1920
Facility Registry ID:	110009532684
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	New Source Performance Standards
Activity Date:	2015-09-29 00:00:00
Activity Status Date:	2015-12-21 14:46:09
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Active
Region Code:	09
Programmatic ID:	AIR CAIMP00006025I1920
Facility Registry ID:	110009532684
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	New Source Performance Standards
Activity Date:	2016-01-27 00:00:00
Activity Status Date:	2016-07-20 20:10:15
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Active
Region Code:	09
Programmatic ID:	AIR CAIMP00006025I1920
Facility Registry ID:	110009532684
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	New Source Performance Standards
Activity Date:	2007-03-12 00:00:00
Activity Status Date:	Not reported
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Not reported
Region Code:	09
Programmatic ID:	AIR CAIMP00006025I1920
Facility Registry ID:	110009532684
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	New Source Performance Standards
Activity Date:	2008-03-12 00:00:00
Activity Status Date:	Not reported
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Not reported
Region Code:	09
Programmatic ID:	AIR CAIMP00006025I1920
Facility Registry ID:	110009532684
Air Operating Status Code:	OPR

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Default Air Classification Code: SMI
Air Program: New Source Performance Standards
Activity Date: 2008-03-19 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: New Source Performance Standards
Activity Date: 2009-04-14 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: New Source Performance Standards (Non-Major)
Activity Date: 2015-09-29 00:00:00
Activity Status Date: 2015-12-21 14:44:21
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-01-23 00:00:00
Activity Status Date: 2012-03-28 00:00:00
Activity Group: Case File
Activity Type: Case File
Activity Status: Resolved

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-05-01 00:00:00
Activity Status Date: 2013-05-01 00:00:00
Activity Group: Case File
Activity Type: Case File
Activity Status: Resolved

Region Code: 09

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2015-09-29 00:00:00
Activity Status Date: 2015-12-21 14:44:21
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2015-09-29 00:00:00
Activity Status Date: 2015-12-21 14:46:09
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2016-01-27 00:00:00
Activity Status Date: 2016-07-20 20:10:15
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2007-03-12 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2008-03-12 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2008-03-19 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2009-04-14 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-03-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-03-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-12-15 00:00:00

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-03-28 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-12-20 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-04-18 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-06-25 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-03-26 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-10-30 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-12-20 00:00:00
Activity Status Date: 2011-12-20 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Formal
Activity Status: Final Order Issued

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-03-19 00:00:00
Activity Status Date: 2013-03-19 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Formal
Activity Status: Final Order Issued

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-12-20 00:00:00
Activity Status Date: 2011-12-20 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Informal
Activity Status: Achieved

Region Code: 09

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-12-20 00:00:00
Activity Status Date: 2012-12-20 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Informal
Activity Status: Achieved

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-03-27 00:00:00
Activity Status Date: 2013-03-27 00:00:00
Activity Group: Enforcement Action
Activity Type: Judicial
Activity Status: Closed

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: Title V Permits
Activity Date: 2015-02-25 00:00:00
Activity Status Date: 2015-07-03 14:00:57
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: Title V Permits
Activity Date: 2015-03-12 00:00:00
Activity Status Date: 2015-07-03 14:01:36
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CAIMP00006025I1920
Facility Registry ID: 110009532684
Air Operating Status Code: OPR
Default Air Classification Code: SMI
Air Program: Title V Permits
Activity Date: 2014-10-30 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Activity Status: Not reported

EMI:

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	1996
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	943
Part. Matter 10 Micrometers and Smllr Tons/Yr:	198

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	1997
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	943
Part. Matter 10 Micrometers and Smllr Tons/Yr:	198

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	1998
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	943
Part. Matter 10 Micrometers and Smllr Tons/Yr:	198

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	1999
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	943
Part. Matter 10 Micrometers and Smllr Tons/Yr:	198

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2000
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	943
Part. Matter 10 Micrometers and Smllr Tons/Yr:	198

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2001
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	206
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2002
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	206
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2003
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	206
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2004
County Code:	13
Air Basin:	SS
Facility ID:	46

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.6
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43.176

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2005
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.6
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43.176

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2006
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.6
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43.176

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 93721
Year:	2007

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.6
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43.176

Name:	MESQUITE GOLD MINE
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2008
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.6
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43.176

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2009
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.59999999999999
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43.176000000000002

Name:	SANTA FE PACIFIC GOLD CORP.

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2010
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.59999999999999
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43.176000000000002

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2011
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.6
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43.176

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2012
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.6

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Part. Matter 10 Micrometers and Smllr Tons/Yr:43.176

Name:	SANTA FE PACIFIC GOLD CORP.
Address:	6502 E. HWY 78
City,State,Zip:	BRAWLEY, CA 92227
Year:	2013
County Code:	13
Air Basin:	SS
Facility ID:	46
Air District Name:	IMP
SIC Code:	1041
Air District Name:	IMPERIAL COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	205.6
Part. Matter 10 Micrometers and Smllr Tons/Yr:	43.176

WDS:

Name:	MESQUITE MINE WMU 93-043
Address:	6502 EAST HWY 78
City:	BRAWLEY
Facility ID:	West Colorado River 132222001
Facility Type:	Solid Waste Site-Class III - Landfills for non hazardous solid wastes.
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	Not reported
Subregion:	7
Facility Telephone:	Not reported
Facility Contact:	LISA WADE
Agency Name:	WESTERN MESQUITE MINES INC.
Agency Address:	6502 EAST HWY 78
Agency City,St,Zip:	BRAWLEY 92227
Agency Contact:	TOM WEITZ
Agency Telephone:	9283414653
Agency Type:	Private
SIC Code:	4953
SIC Code 2:	Not reported
Primary Waste Type:	Inert/Influent or Solid Wastes that do not contain soluble pollutants or organic wastes and have little adverse impact on water quality. Such wastes could cause turbidity and siltation. Uncontaminated soils, rubble and concrete are examples of this category.
Primary Waste:	SLDWST
Waste Type2:	Not reported
Waste2:	Solid Wastes
Primary Waste Type:	Inert/Influent or Solid Wastes that do not contain soluble pollutants or organic wastes and have little adverse impact on water quality. Such wastes could cause turbidity and siltation. Uncontaminated soils, rubble and concrete are examples of this category.
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0

WESTERN MESQUITE MINES, INC (Continued) **1000183151**

Reclamation: No reclamation requirements associated with this facility.
POTW: The facility is not a POTW.
Treat To Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.

---

2 **GLAMIS BEACH STORE** **LUST** **S105023913**
1001 HIGHWAY 78 **Cortese** **N/A**
< 1/8 **GLAMIS, CA 92227** **HIST CORTESE**
1 ft. **CERS**

Relative: Higher
Actual: 341 ft.

LUST REG 7:
Region: 7
Status: 9 - Case Closed
Case Num: 7T2227016
Substance: Diesel fuel oil and additives
ID: 799
Global ID: T0602500019
Lead Agency: Regional Board
Case Worker: GS

LUST:
Name: GLAMIS BEACH STORE
Address: 1001 HIGHWAY 78
City,State,Zip: GLAMIS, CA 92227
Lead Agency: COLORADO RIVER BASIN RWQCB (REGION 7)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0602500019
Global Id: T0602500019
Latitude: 32.998673
Longitude: -115.0702057
Status: Completed - Case Closed
Status Date: 08/24/1992
Case Worker: KO
RB Case Number: 7T2227016
Local Agency: IMPERIAL COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0602500019
Contact Type: Local Agency Caseworker
Contact Name: JERRY STILWELL
Organization Name: IMPERIAL COUNTY
Address: 939 MAIN STRRET
City: EL CENTRO
Email: Not reported

GLAMIS BEACH STORE (Continued) **S105023913**

Phone Number: Not reported

Global Id: T0602500019
Contact Type: Regional Board Caseworker
Contact Name: KOLA OLATUNBOSUN
Organization Name: COLORADO RIVER BASIN RWQCB (REGION 7)
Address: 73-720 FRED WARING DRIVE, SUIE 100
City: PALM DESERT
Email: kola.olatunbosun@waterboards.ca.gov
Phone Number: 7607768958

LUST:
Global Id: T0602500019
Action Type: Other
Date: 06/21/1991
Action: Leak Discovery

Global Id: T0602500019
Action Type: Other
Date: 08/14/1991
Action: Leak Reported

LUST:
Global Id: T0602500019
Status: Open - Case Begin Date
Status Date: 06/21/1991

Global Id: T0602500019
Status: Completed - Case Closed
Status Date: 08/24/1992

CORTESE:
Name: GLAMIS BEACH STORE
Address: 1001 HIGHWAY 78
City,State,Zip: GLAMIS, CA 92227
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0602500019
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported

GLAMIS BEACH STORE (Continued) **S105023913**

File Name: Active Open

HIST CORTESE:
edr_fname: GLAMIS BEACH STORE
edr_fadd1: 1001 78
City,State,Zip: GLAMIS, CA 92227
Region: CORTESE
Facility County Code: 13
Reg By: LTNKA
Reg Id: 7T2227016

CERS:
Name: GLAMIS BEACH STORE
Address: 1001 HIGHWAY 78
City,State,Zip: GLAMIS, CA 92227
Site ID: 241239
CERS ID: T0602500019
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: KOLA OLATUNBOSUN - COLORADO RIVER BASIN RWQCB (REGION 7)
Entity Title: Not reported
Affiliation Address: 73-720 FRED WARING DRIVE, SUIE 100
Affiliation City: PALM DESERT
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 7607768986

Affiliation Type Desc: Local Agency Caseworker
Entity Name: JERRY STILWELL - IMPERIAL COUNTY
Entity Title: Not reported
Affiliation Address: 939 MAIN STRRET
Affiliation City: EL CENTRO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 30

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/26/2020
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/23/2020
Next Scheduled EDR Contact: 11/01/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 05/20/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/06/2020
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 02/27/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 03/31/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 86

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/05/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 03/01/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/15/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/15/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/05/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/01/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/21/2020
Number of Days to Update: 6

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/21/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/05/2020
Date Data Arrived at EDR: 03/06/2020
Date Made Active in Reports: 05/29/2020
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/19/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74
Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 80
Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 76
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/19/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81
Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/04/2019
Date Data Arrived at EDR: 01/29/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 71
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75
Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59
Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/16/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 8
Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82
Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 02/12/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 72

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/28/2020
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 72

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/12/2020
Date Data Arrived at EDR: 03/13/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/08/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 07/01/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 04/09/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 08/02/2020
Next Scheduled EDR Contact: 10/18/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 16

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 13

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 03/27/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/06/2020
Number of Days to Update: 77

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 04/16/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/08/2020
Number of Days to Update: 79

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/07/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/23/2020
Number of Days to Update: 77

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/10/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/19/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 26

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/14/2020
Number of Days to Update: 77

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/13/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 1

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/21/2020
Date Data Arrived at EDR: 03/05/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 69

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 04/24/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 71

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 77
Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 87

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/12/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 04/22/2020
Date Data Arrived at EDR: 04/24/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 13
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/26/2020
Next Scheduled EDR Contact: 09/13/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 71
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 03/11/2020
Number of Days to Update: 14

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 77
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 79
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/04/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

GLAMIS SPECIFIC PLAN EIR
HIGHWAY 78
BRAWLEY, CA 92227

TARGET PROPERTY COORDINATES

Latitude (North):	32.996257 - 32° 59' 46.53''
Longitude (West):	115.07314 - 115° 4' 23.30''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	680024.7
UTM Y (Meters):	3652329.8
Elevation:	331 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5622958 GLAMIS, CA
Version Date:	2012
North Map:	5640282 EAST OF ACOLITA, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

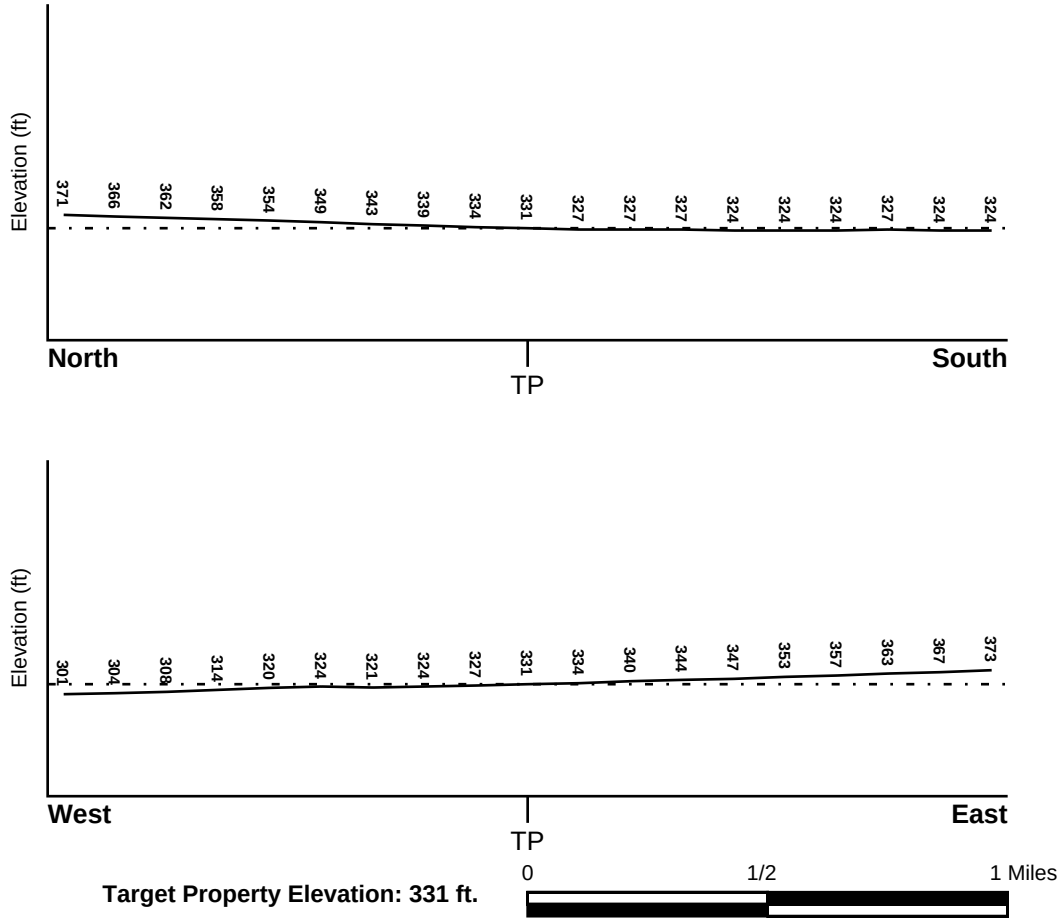
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06025C1475C	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06025C1125C	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
GLAMIS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	CARSITAS
Soil Surface Texture:	gravelly - sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively. Soils have very high and high hydraulic conductivity and low water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	HIGH
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	10 inches	gravelly - sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 20.00 Min: 6.00	Max: 8.40 Min: 7.40
2	10 inches	60 inches	gravelly - sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 20.00 Min: 6.00	Max: 8.40 Min: 7.40

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: fine sand
cobbly - sand
stony - sand
very gravelly - sand

Surficial Soil Types: fine sand
cobbly - sand
stony - sand
very gravelly - sand

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: sand
very stony - coarse sand
stratified

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000130196	1/8 - 1/4 Mile NW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

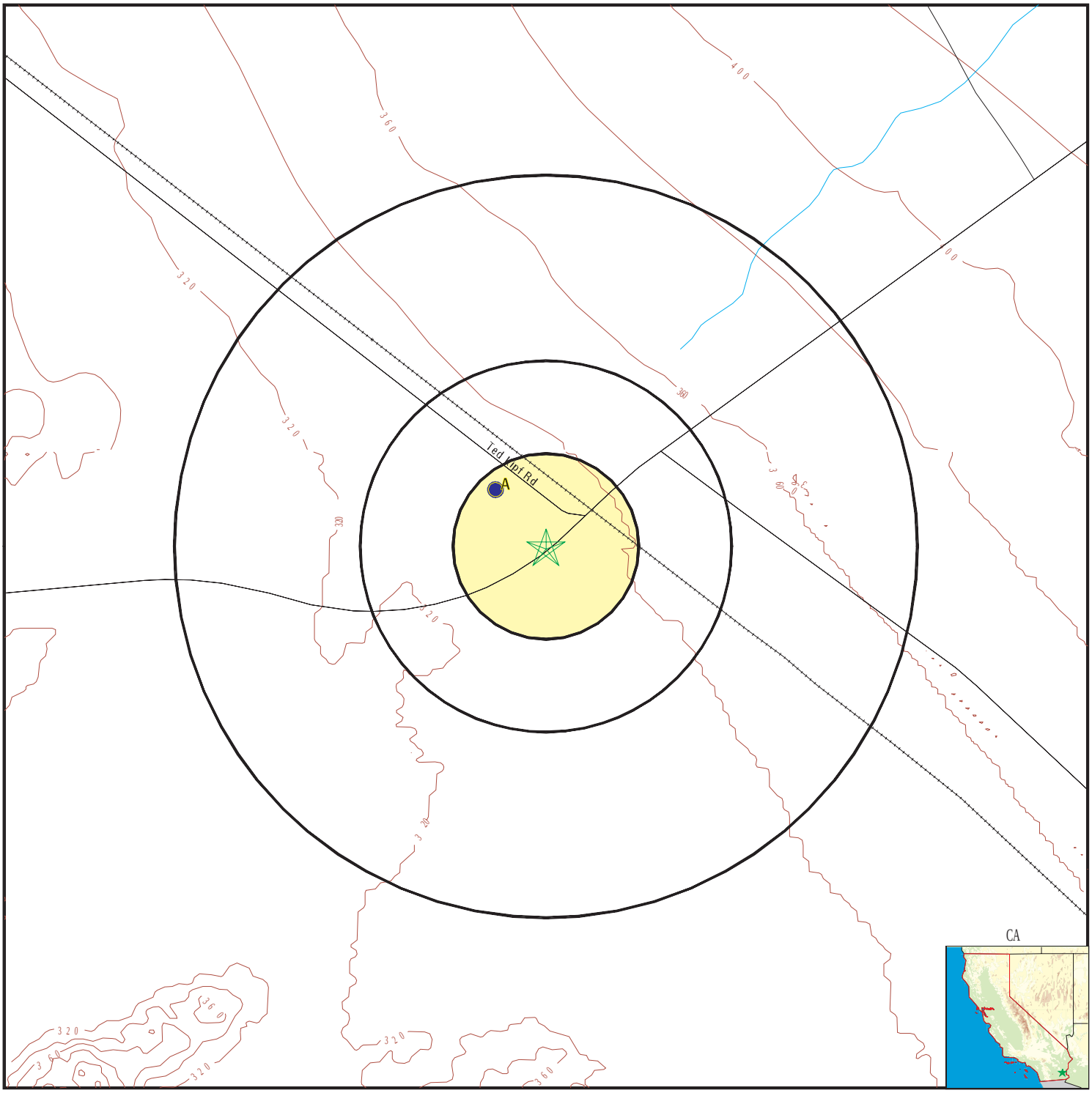
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	CADWR8000000802	1/8 - 1/4 Mile NW

PHYSICAL SETTING SOURCE MAP - 6154543.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Glamis Specific Plan EIR	CLIENT:	Ninyo & Moore
ADDRESS:	Highway 78 Brawley CA 92227	CONTACT:	Adrian Olivares
LAT/LONG:	32.996257 / 115.07314	INQUIRY #:	6154543.2s
		DATE:	August 14, 2020 3:06 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NW
1/8 - 1/4 Mile
Higher | **FED USGS** | **USGS40000130196**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	013S018E33A001S	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19720327	Well Depth:	681
Well Depth Units:	ft	Well Hole Depth:	681
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	86	Level reading date:	2004-11-01
Feet below surface:	222.76	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	2004-11-01	Feet below surface:	222.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2004-03-18	Feet below surface:	222.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2004-03-18	Feet below surface:	222.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-10-22	Feet below surface:	222.63
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-10-22	Feet below surface:	222.63
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-03-24	Feet below surface:	223.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-03-24	Feet below surface:	223.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-10-31	Feet below surface:	222.84
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-10-31	Feet below surface:	222.84
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-03-13	Feet below surface:	223.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-03-13	Feet below surface:	223.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2001-10-24	Feet below surface:	223.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2001-10-24	Feet below surface:	223.11
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	2001-03-28	Feet below surface:	224.73
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2001-03-28	Feet below surface:	224.73
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-10-24	Feet below surface:	225.31
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-10-24	Feet below surface:	225.31
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-03-30	Feet below surface:	225.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-03-30	Feet below surface:	225.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1999-10-26	Feet below surface:	224.73
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1999-10-26	Feet below surface:	224.73
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1999-03-23	Feet below surface:	224.51
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1999-03-23	Feet below surface:	224.51
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-10-28	Feet below surface:	224.61
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-10-28	Feet below surface:	224.61
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-03-24	Feet below surface:	224.41
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-03-24	Feet below surface:	224.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-03-24	Feet below surface:	224.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-03-24	Feet below surface:	224.41
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1997-10-21	Feet below surface:	224.88
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1997-10-21	Feet below surface:	224.88
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1997-03-18	Feet below surface:	225.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1997-03-18	Feet below surface:	225.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1996-10-17	Feet below surface:	224.15
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1996-10-17	Feet below surface:	224.15
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1996-03-20	Feet below surface:	224.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1996-03-20	Feet below surface:	224.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1995-10-17	Feet below surface:	223.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1995-10-17	Feet below surface:	223.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1995-03-30	Feet below surface:	224.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1995-03-30	Feet below surface:	224.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1994-10-17	Feet below surface:	224.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1994-10-17	Feet below surface:	224.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1994-03-15	Feet below surface:	223.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1994-03-15	Feet below surface:	223.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1993-10-21	Feet below surface:	224.06
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1993-10-21	Feet below surface:	224.06
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1993-09-23	Feet below surface:	223.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1993-09-23	Feet below surface:	223.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1992-09-23	Feet below surface:	220.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1992-09-23	Feet below surface:	220.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1992-03-17	Feet below surface:	227.22
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1992-03-17	Feet below surface:	227.22
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1991-10-08	Feet below surface:	227.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1991-10-08	Feet below surface:	227.33
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1991-04-05	Feet below surface:	227.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1991-04-05	Feet below surface:	227.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-10-31	Feet below surface:	227.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-10-31	Feet below surface:	227.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-04-20	Feet below surface:	221.23
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-04-20	Feet below surface:	221.23
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-11-02	Feet below surface:	226.69
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-11-02	Feet below surface:	226.69
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-06-13	Feet below surface:	230.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-06-13	Feet below surface:	230.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-02-28	Feet below surface:	230.87
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-02-28	Feet below surface:	230.87
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-09-17	Feet below surface:	227.84
Feet to sea level:	Not Reported	Note:	The site had been pumped recently.
Level reading date:	1984-09-17	Feet below surface:	227.84
Feet to sea level:	Not Reported	Note:	The site had been pumped recently.
Level reading date:	1983-09-21	Feet below surface:	222.72
Feet to sea level:	Not Reported	Note:	The site had been pumped recently.
Level reading date:	1983-09-21	Feet below surface:	222.72
Feet to sea level:	Not Reported	Note:	The site had been pumped recently.
Level reading date:	1983-01-26	Feet below surface:	194.49
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-01-26	Feet below surface:	194.49
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-02-02	Feet below surface:	193.57
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-02-02	Feet below surface:	193.57
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-08-26	Feet below surface:	193.45
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1981-08-26	Feet below surface:	193.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-02-11	Feet below surface:	198.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-02-11	Feet below surface:	198.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-07-23	Feet below surface:	194.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-07-23	Feet below surface:	194.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-01-10	Feet below surface:	196.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-01-10	Feet below surface:	196.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-04-14	Feet below surface:	227
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-04-14	Feet below surface:	227
Feet to sea level:	Not Reported	Note:	Not Reported

A2
NW
1/8 - 1/4 Mile
Lower

CA WELLS **CADWR8000000802**

State Well #:	13S18E33A001S	Station ID:	32864
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Amos Valley	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for IMPERIAL County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for IMPERIAL COUNTY, CA

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.450 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

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APPENDIX C

Historical Research Documentation

Glamis Specific Plan EIR
Highway 78
Brawley, CA 92227

Inquiry Number: 6154543.3
August 13, 2020

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/13/20

Site Name:

Glamis Specific Plan EIR
Highway 78
Brawley, CA 92227
EDR Inquiry # 6154543.3

Client Name:

Ninyo & Moore
5710 Ruffin Rd
San Diego, CA 92123
Contact: Adrian Olivares

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 25EB-4F56-B8F1

PO # NA

Project 109106001

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 25EB-4F56-B8F1

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Glamis Specific Plan EIR
Highway 78
Brawley, CA 92227

Inquiry Number: 6154543.4
August 13, 2020

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

08/13/20

Site Name:	Client Name:
Glamis Specific Plan EIR	Ninyo & Moore
Highway 78	5710 Ruffin Rd
Brawley, CA 92227	San Diego, CA 92123
EDR Inquiry # 6154543.4	Contact: Adrian Olivares

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Search Results:		*Coordinates:*	
P.O.#	NA	**Latitude:**	32.996257 32° 59' 47" North
Project:	109106001	**Longitude:**	-115.07314 -115° 4' 23" West
		UTM Zone:	Zone 11 North
		UTM X Meters:	680020.75
		UTM Y Meters:	3652520.86
		Elevation:	331.00' above sea level

Maps Provided:

2012
2002
1988
1979
1965
1955
1953, 1955
1907

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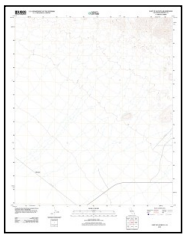
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

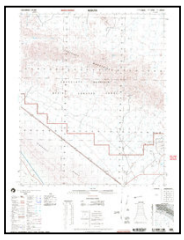
2012 Source Sheets

Glamis
2012
7.5-minute, 24000



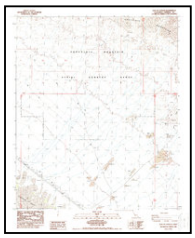
East of Acolita
2012
7.5-minute, 24000

2002 Source Sheets



Acolita
2002
15-minute, 50000

1988 Source Sheets



East of Acolita
1988
7.5-minute, 24000
Aerial Photo Revised 1984

1979 Source Sheets

Glamis
1979
7.5-minute, 24000
Aerial Photo Revised 1976

GLAMIS
1979
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

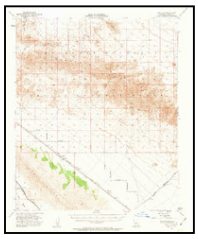
1965 Source Sheets

Glamis
1965
15-minute, 62500
Aerial Photo Revised 1948

1955 Source Sheets

Glamis
1955
7.5-minute, 24000
Aerial Photo Revised 1948

1953, 1955 Source Sheets



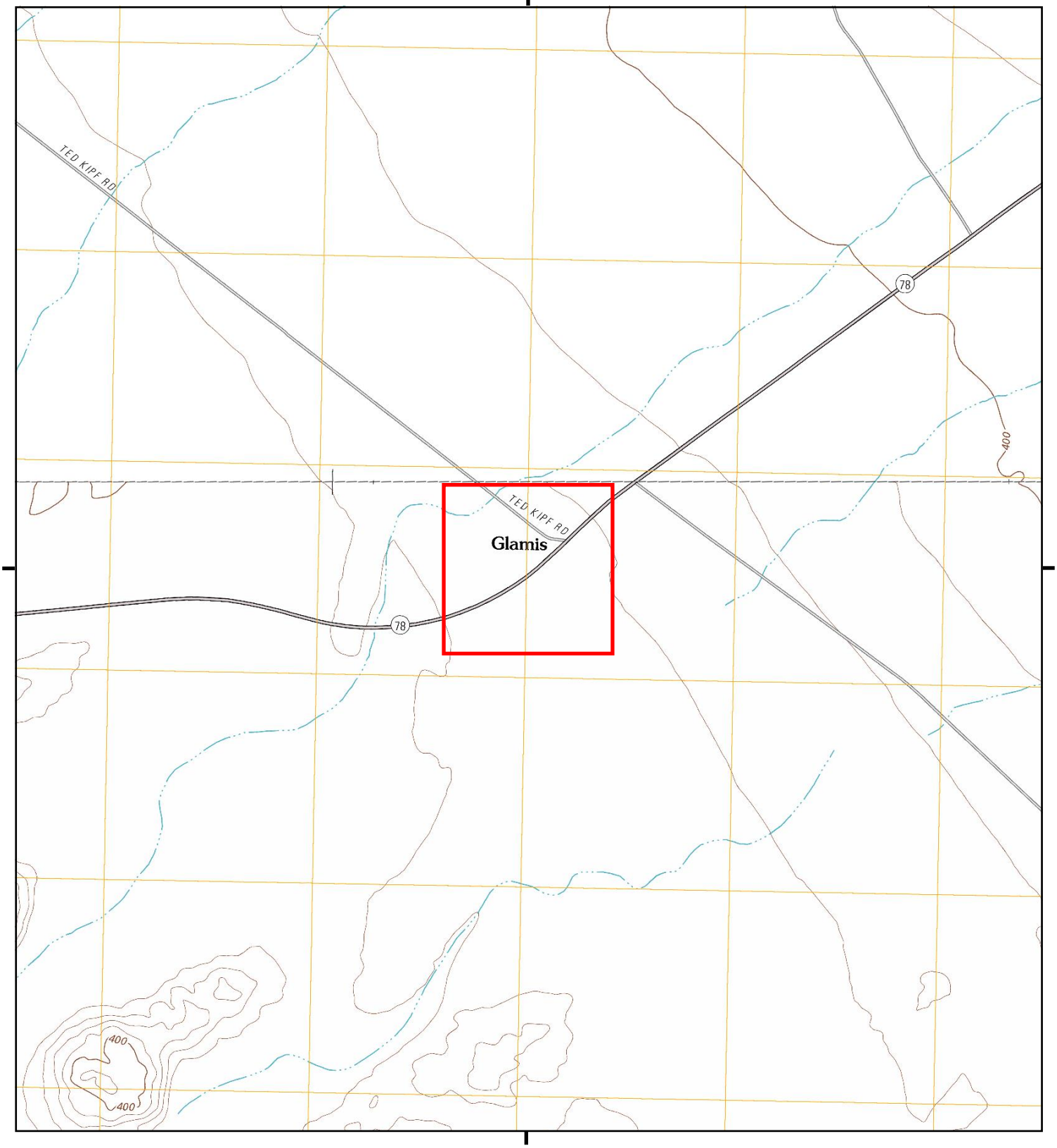
Acolita
1953
15-minute, 62500
Aerial Photo Revised 1948

1907 Source Sheets

Holtville
1907
30-minute, 125000

Historical Topo Map

2012



This report includes information from the following map sheet(s).

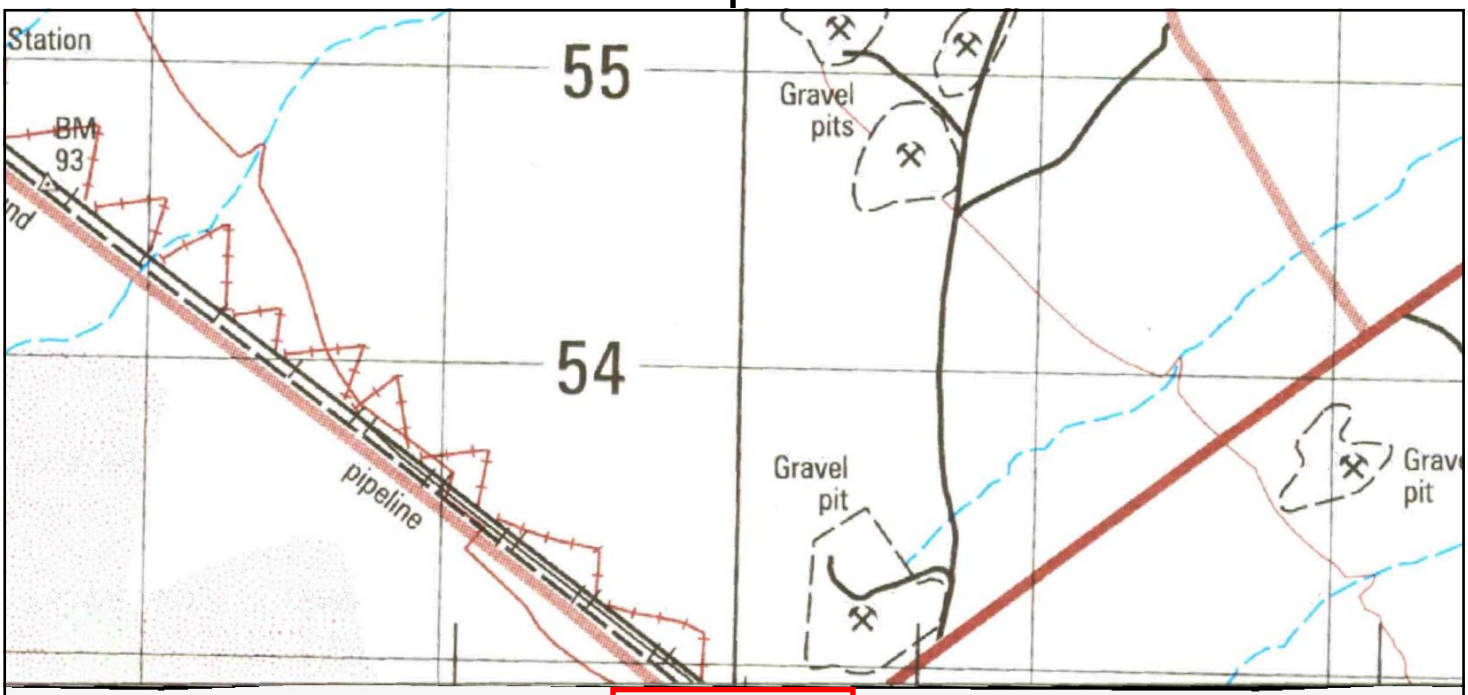
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Glamis, 2012, 7.5-minute
N, East of Acolita, 2012, 7.5-minute

SITE NAME: Glamis Specific Plan EIR
ADDRESS: Highway 78
Brawley, CA 92227
CLIENT: Ninyo & Moore

N



UNMAPPED

This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

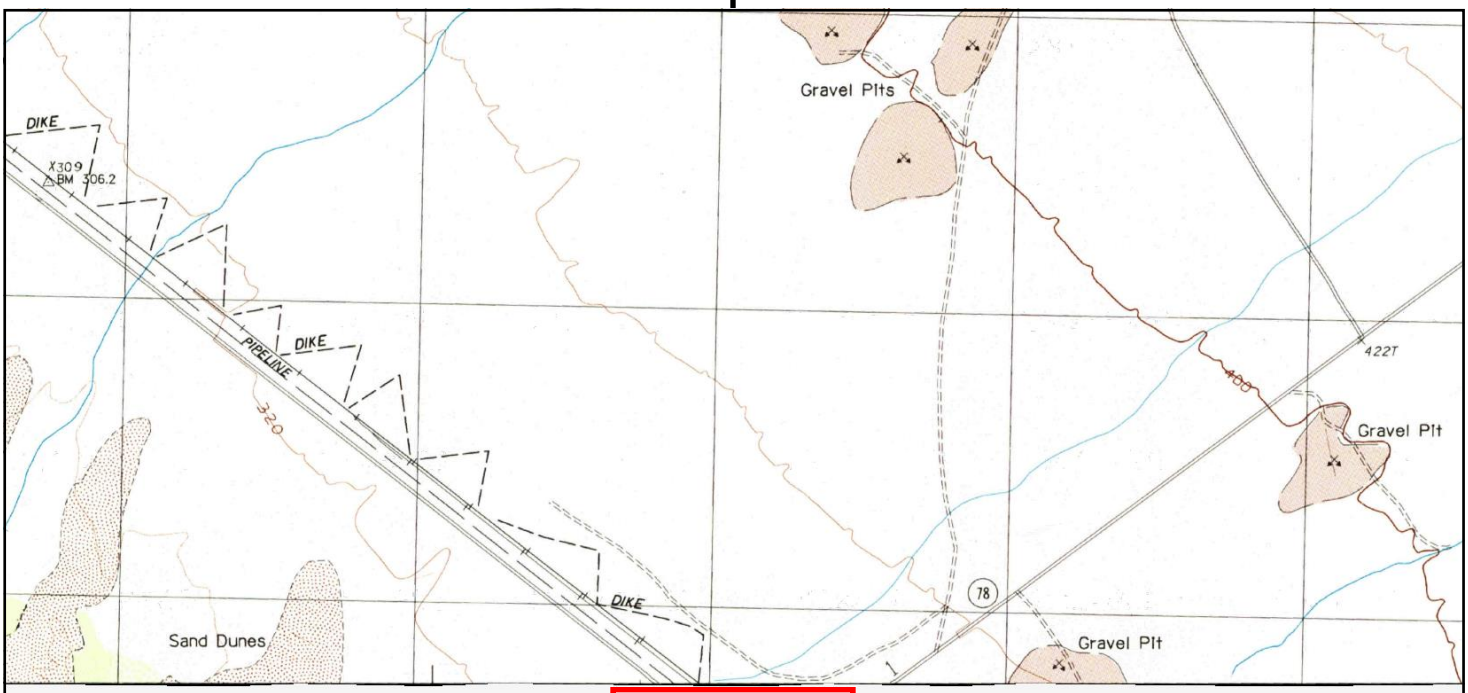
N, Acolita, 2002, 15-minute

SITE NAME: Glamis Specific Plan EIR
ADDRESS: Highway 78
Brawley, CA 92227
CLIENT: Ninyo & Moore

N

Historical Topo Map

1988



UNMAPPED

This report includes information from the following map sheet(s).

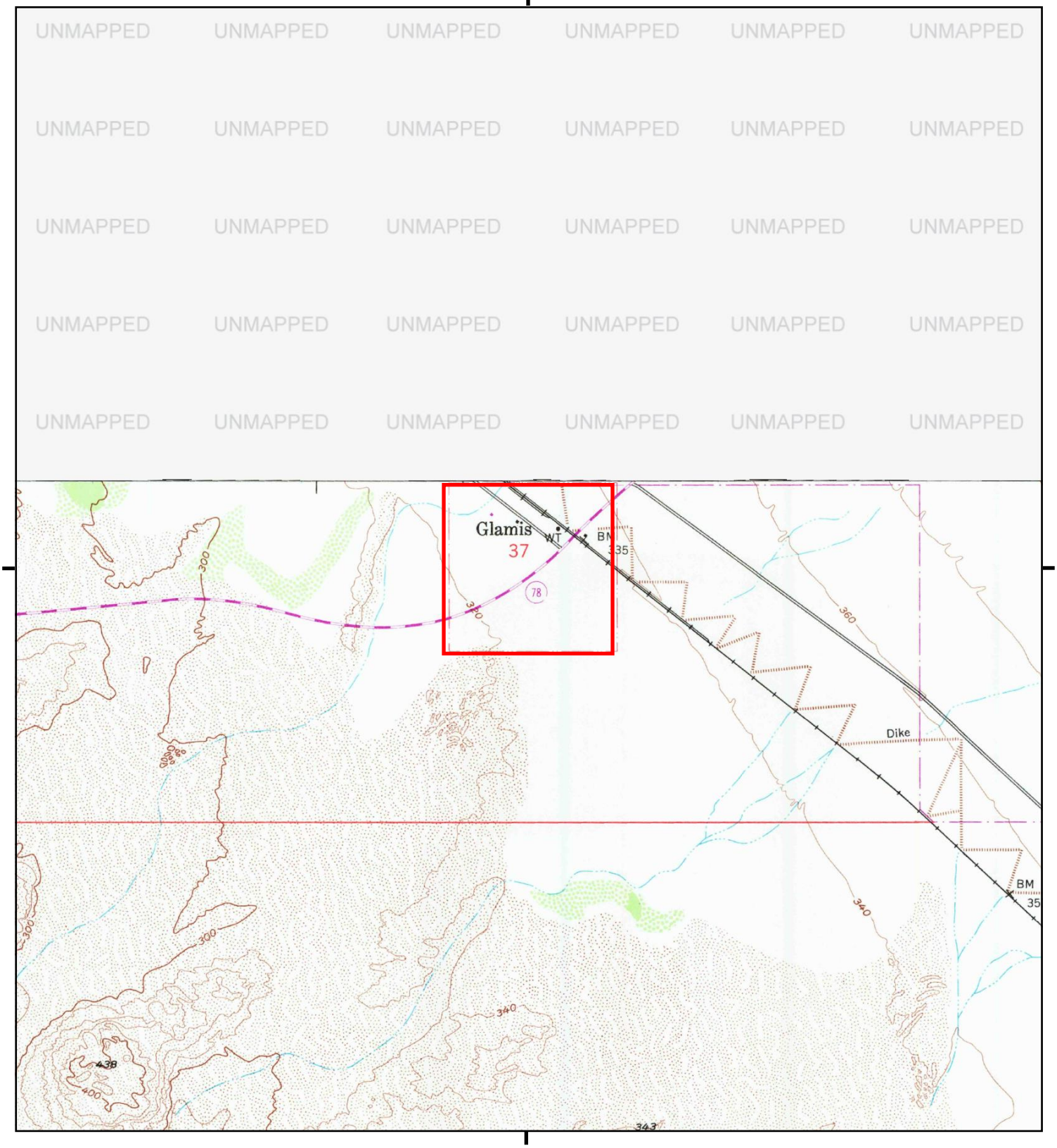
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

N, East of Acolita, 1988, 7.5-minute

SITE NAME: Glamis Specific Plan EIR
ADDRESS: Highway 78
Brawley, CA 92227
CLIENT: Ninyo & Moore

N



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NW N NE
W E
SW S SE

TP, Glamis, 1979, 7.5-minute
TP, GLAMIS, 1979, 7.5-minute

SITE NAME: Glamis Specific Plan EIR
ADDRESS: Highway 78
Brawley, CA 92227
CLIENT: Ninyo & Moore

N

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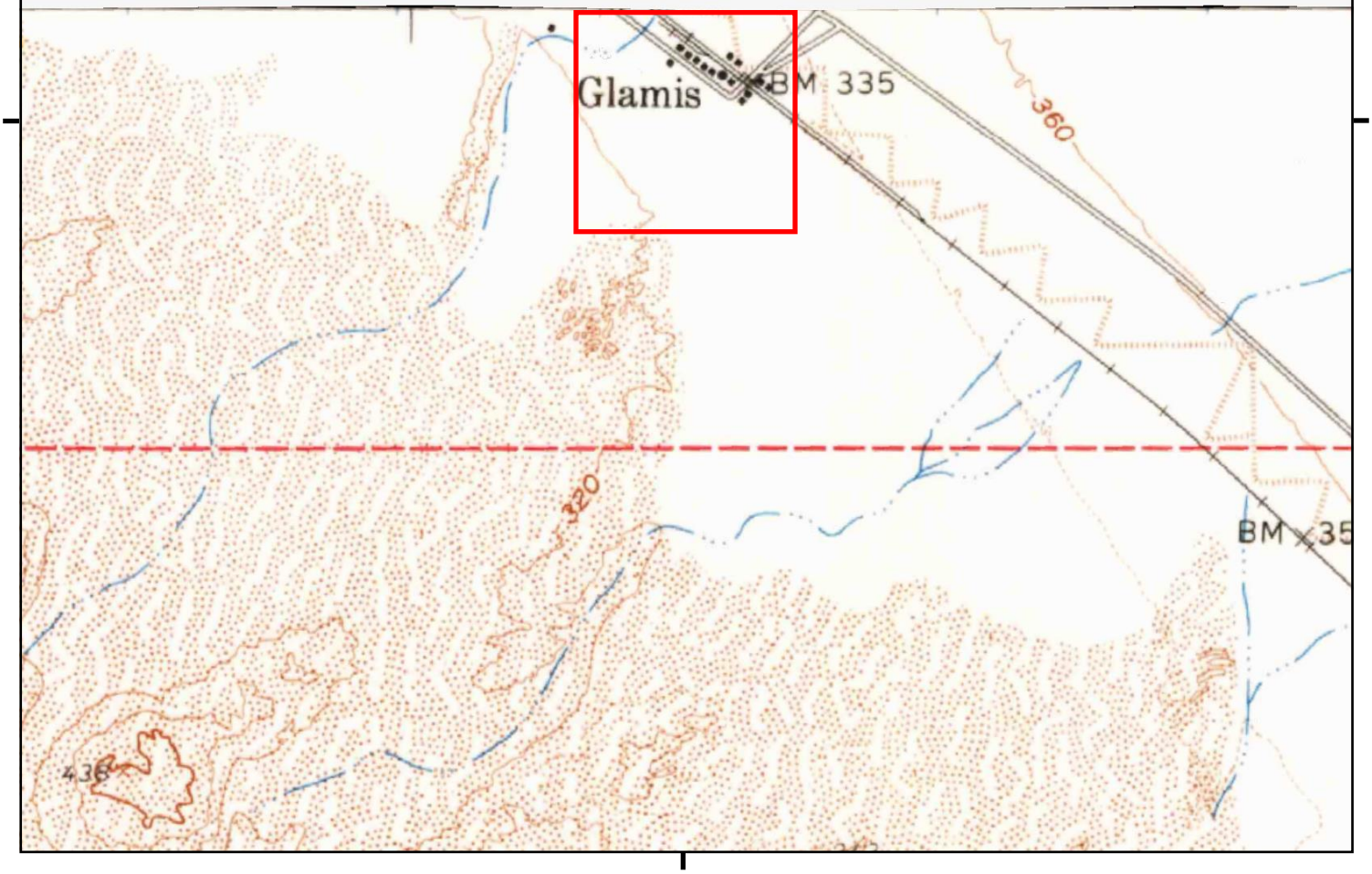

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NW N NE
W E
SW S SE

TP, Glamis, 1965, 15-minute

SITE NAME: Glamis Specific Plan EIR
ADDRESS: Highway 78
Brawley, CA 92227
CLIENT: Ninyo & Moore

N

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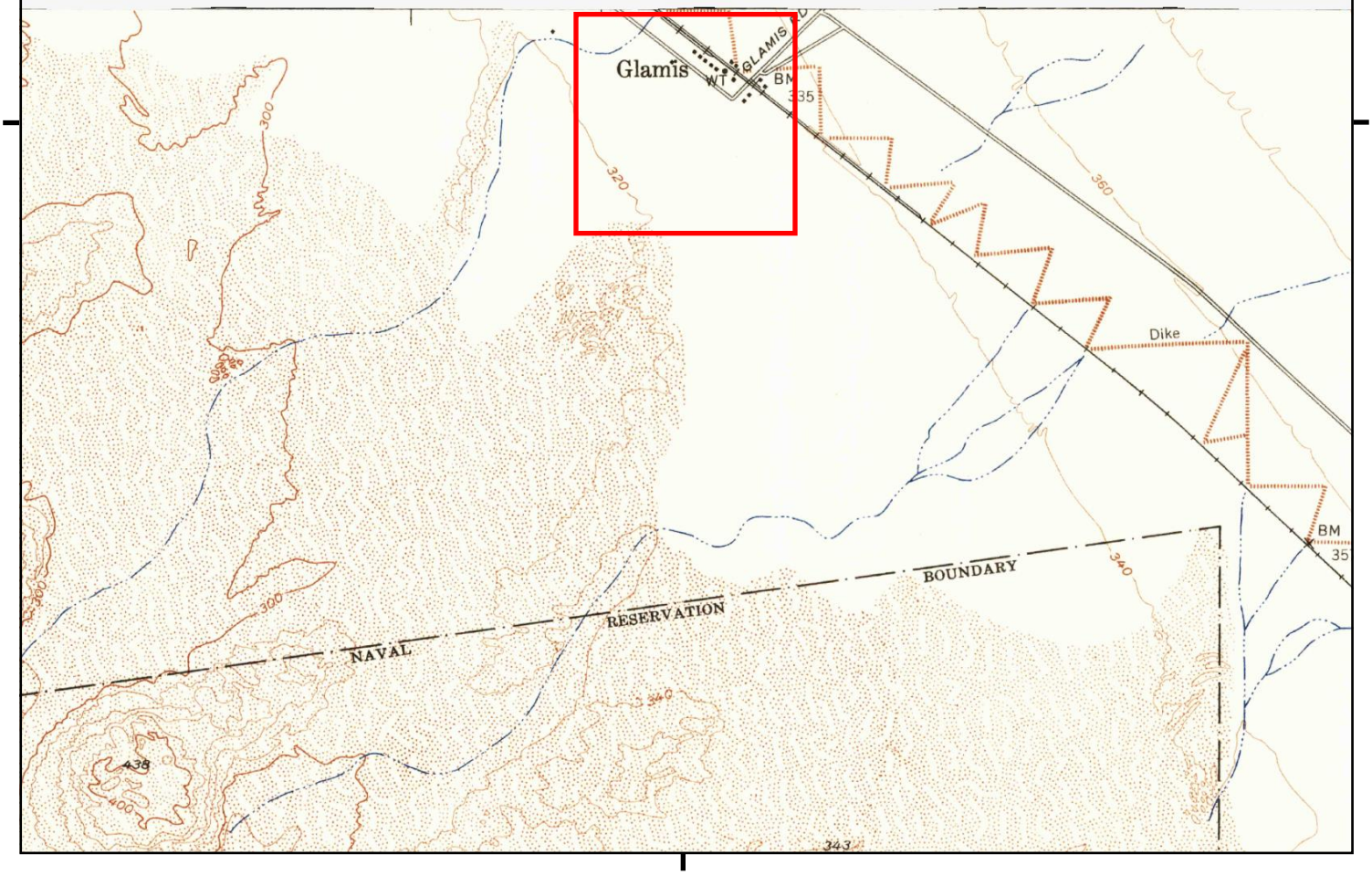

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NW N NE
W E
SW S SE

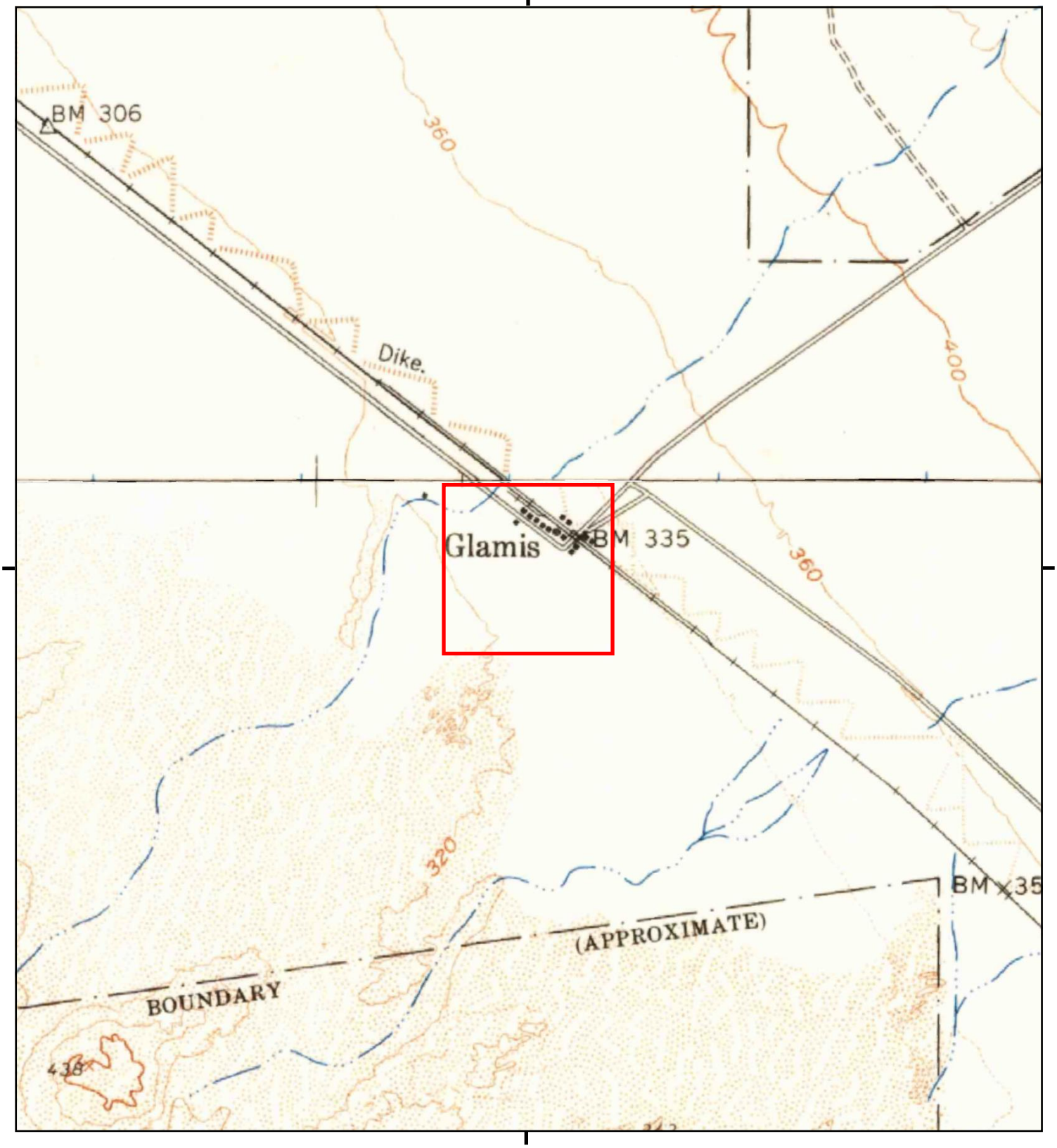
TP, Glamis, 1955, 7.5-minute

SITE NAME: Glamis Specific Plan EIR
ADDRESS: Highway 78
Brawley, CA 92227
CLIENT: Ninyo & Moore

N

Historical Topo Map

1953, 1955



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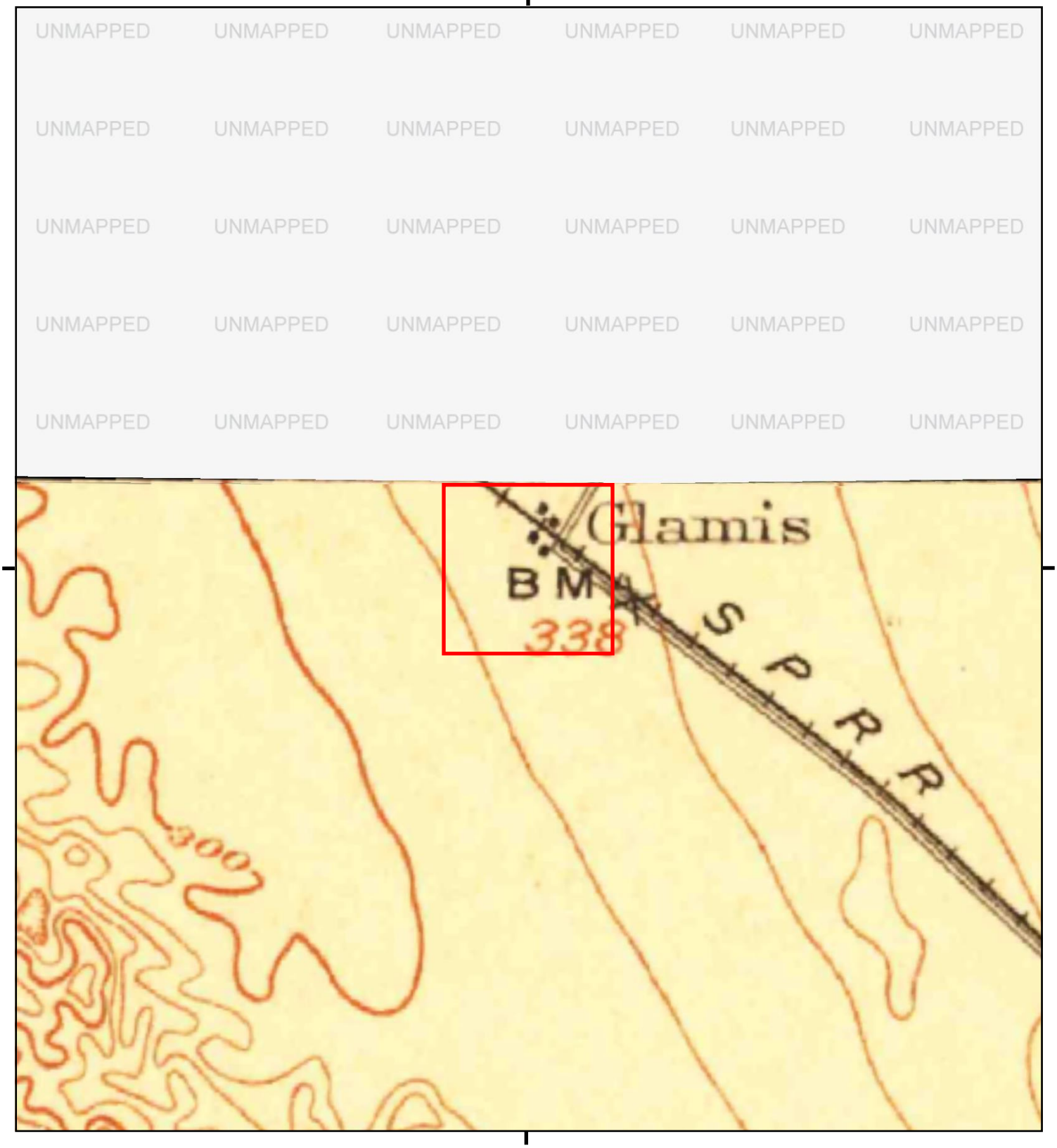
NW N NE
W E
SW S SE

TP, Glamis, 1955, 15-minute
N, Acolita, 1953, 15-minute

SITE NAME: Glamis Specific Plan EIR
ADDRESS: Highway 78
Brawley, CA 92227
CLIENT: Ninyo & Moore

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Holtville, 1907, 30-minute

SITE NAME: Glamis Specific Plan EIR
ADDRESS: Highway 78
Brawley, CA 92227
CLIENT: Ninyo & Moore

N

Glamis Specific Plan EIR

Highway 78

Brawley, CA 92227

Inquiry Number: 6154543.8

August 14, 2020

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08/14/20

Site Name:

Glamis Specific Plan EIR
Highway 78
Brawley, CA 92227
EDR Inquiry # 6154543.8

Client Name:

Ninyo & Moore
5710 Ruffin Rd
San Diego, CA 92123
Contact: Adrian Olivares

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Search Results:

Year	*Scale*	*Details*	*Source*
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1996	1"=500'	Acquisition Date: June 15, 1996	USGS/DOQQ
1984	1"=500'	Flight Date: January 01, 1984	USGS
1975	1"=500'	Flight Date: October 16, 1975	USGS
1961	1"=500'	Flight Date: May 17, 1961	USDA
1956	1"=500'	Flight Date: October 31, 1956	USGS

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INQUIRY #: 6154543.8

YEAR: 2016

= 500'

N

EDR

INQUIRY #: 6154543.8

YEAR: 2012

= 500'

N

EDR

INQUIRY #: 6154543.8

YEAR: 2009

= 500'

N

EDR

INQUIRY #: 6154543.8

YEAR: 2005

= 500'

N

EDR

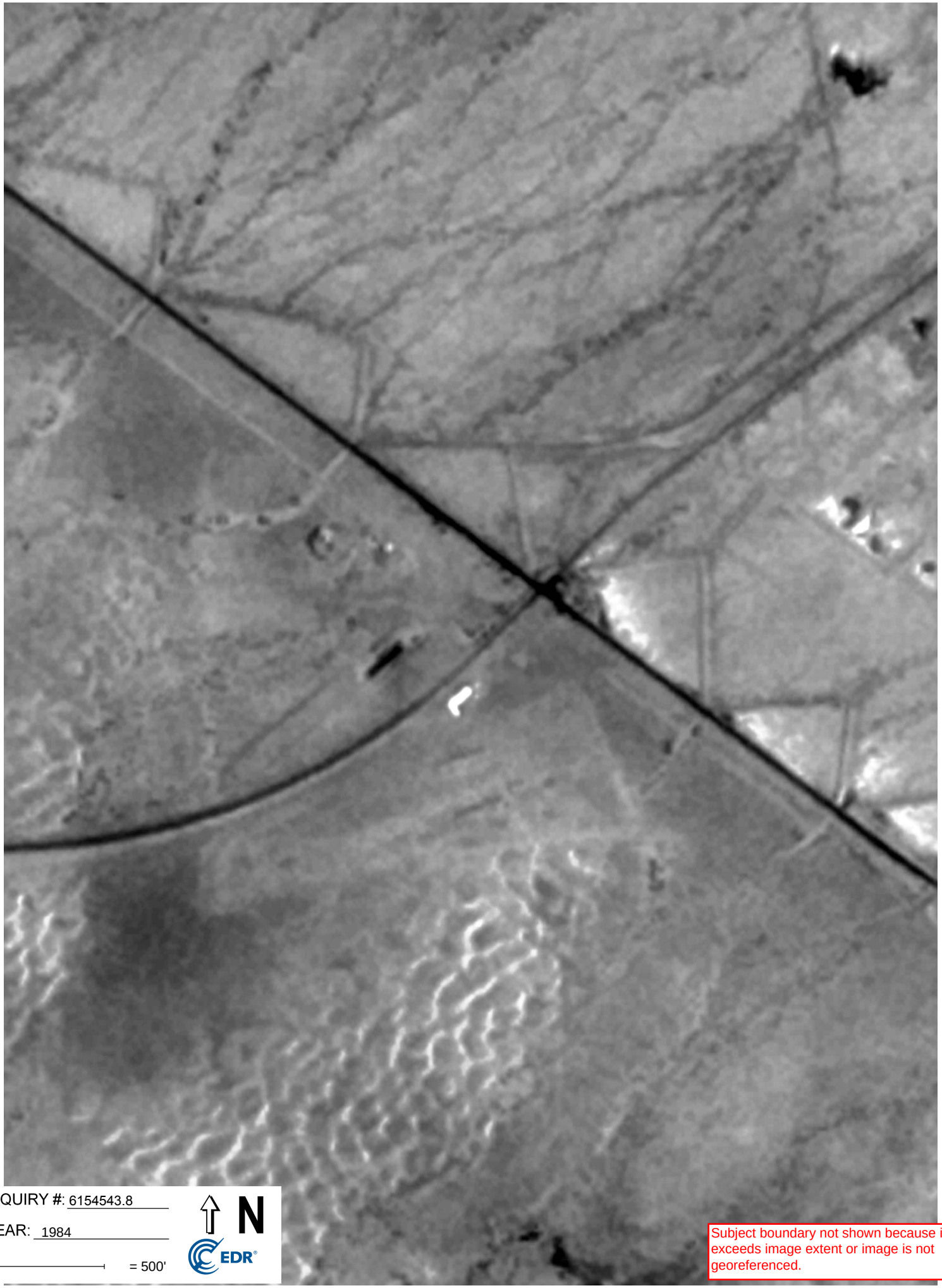
INQUIRY #: 6154543.8

YEAR: 1996

= 500'

N

EDR



INQUIRY #: 6154543.8

YEAR: 1984

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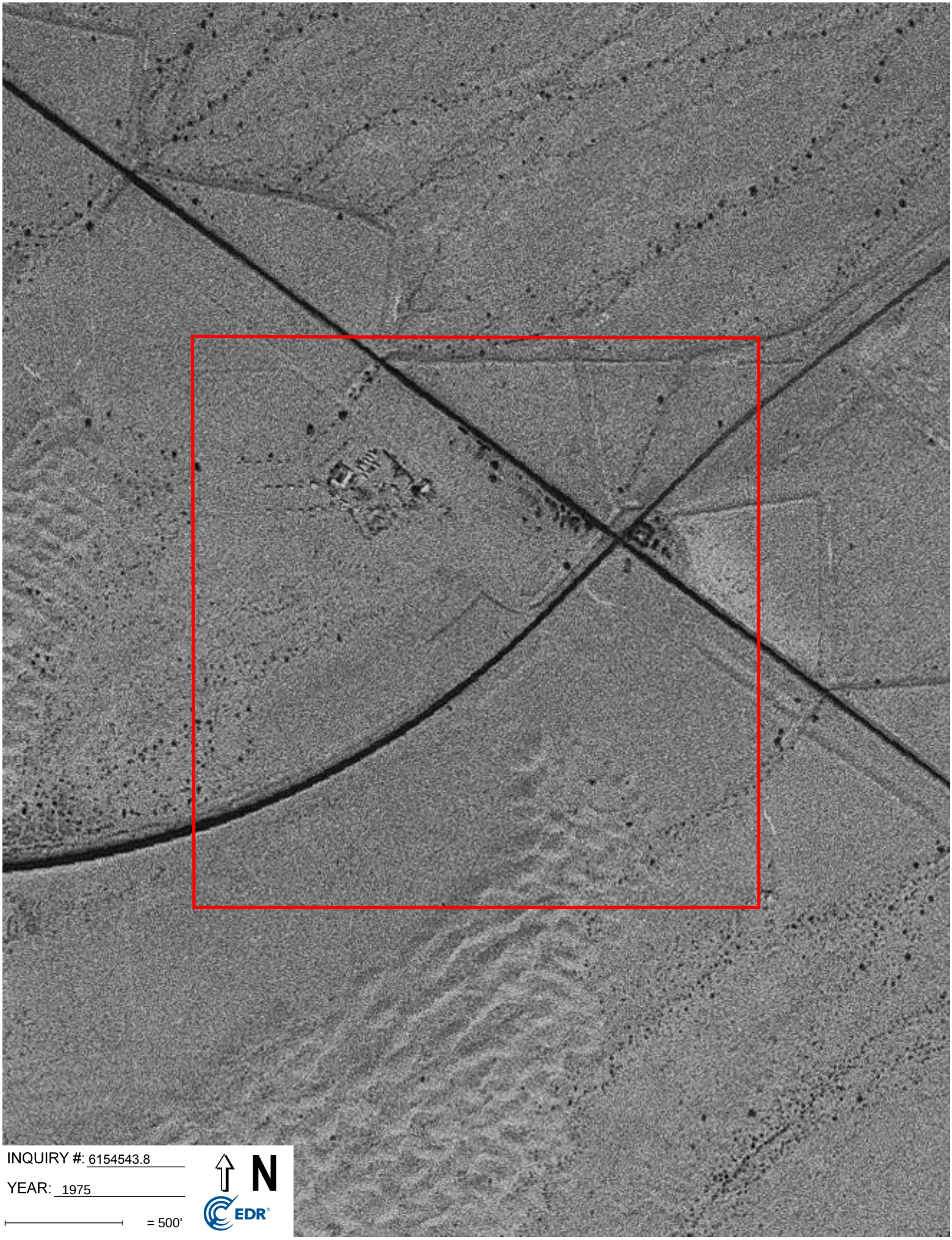
N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.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EDR

INQUIRY #: 6154543.8

YEAR: 1961

= 500'

N

EDR

INQUIRY #: 6154543.8

YEAR: 1956

= 500'

N

EDR

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

5710 Ruffin Road | San Diego, California 92123 | p. 858.576.1000

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

www.ninyoandmoore.com

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J Noise Study

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NOISE STUDY

Glamis Specific Plan
County of Imperial

Prepared for:

The Altum Group
73-710 Fred Waring Dr., Ste. 219
Palm Desert, CA 92260

Prepared by:

Ldn Consulting, Inc.
42428 Chisolm Trail
Murrieta, CA 92562

November 18, 2020

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GLOSSARY OF TERMS

Sound Pressure Level (SPL): a ratio of one sound pressure to a reference pressure (L_{ref}) of 20 µPa. Because of the dynamic range of the human ear, the ratio is calculated logarithmically by 20 log (L/L_{ref}).

A-weighted Sound Pressure Level (dBA): Some frequencies of noise are more noticeable than others. To compensate for this fact, different sound frequencies are weighted more.

Minimum Sound Level (L_{min}): Minimum SPL or the lowest SPL measured over the time interval using the A-weighted network and slow time weighting.

Maximum Sound Level (L_{max}): Maximum SPL or the highest SPL measured over the time interval the A-weighted network and slow time weighting.

Equivalent sound level (L_{eq}): the true equivalent sound level measured over the run time. Leq is the A-weighted steady sound level that contains the same total acoustical energy as the actual fluctuating sound level.

Day Night Sound Level (LDN): Representing the Day/Night sound level, this measurement is a 24 –hour average sound level where 10 dB is added to all the readings that occur between 10 pm and 7 am. This is primarily used in community noise regulations where there is a 10 dB "Penalty" for nighttime noise. Typically, LDN's are measured using A weighting.

Community Noise Exposure Level (CNEL): The accumulated exposure to sound measured in a 24-hour sampling interval and artificially boosted during certain hours. For CNEL, samples taken between 7 pm and 10 pm are boosted by 5 dB; samples taken between 10 pm and 7 am are boosted by 10 dB.

Octave Band: An octave band is defined as a frequency band whose upper band-edge frequency is twice the lower band frequency.

Third-Octave Band: A third-octave band is defined as a frequency band whose upper band-edge frequency is 1.26 times the lower band frequency.

Response Time (F,S,I): The response time is a standardized exponential time weighting of the input signal according to fast (F), slow (S) or impulse (I) time response relationships. Time response can be described with a time constant. The time constants for fast, slow and impulse responses are 1.0 seconds, 0.125 seconds and 0.35 milliseconds, respectively.

EXECUTIVE SUMMARY

This noise analysis has been completed to determine impacts, which may be associated with the construction or operation of the proposed Glamis Specific Plan (GSP) project located on a 142-acre project site located within the designated Glamis Specific Plan Area (GSPA).

The project would maintain similar operations to that of the existing operations though would expand services to the existing seasonal influx of patrons recreating at the Glamis Dunes off-highway vehicle (OHV) areas surrounding the project. The Project's proposed land uses are intended to serve the existing patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat. Operations are expected during the months of October through May or roughly 67% of the year.

Transportation Noise Levels – Onsite

The project proposes primarily commercial uses. Based on the project's traffic study the 2050 traffic volumes along Highway 78 are anticipated to only be 3,360 average daily trips (ADT) near the site. This 2050 traffic volume would equate to the 60 dBA CNEL noise contour being roughly 150 feet from the centerline of Highway 78 and normally acceptable at proposed outdoor uses.

Offsite Project Related Transportation Noise Levels

To determine if direct or cumulative off-site noise level increases associated with the development of the proposed project would create noise impacts. The traffic volumes for the existing conditions were compared with the traffic volume increase of existing plus the proposed project. The project's traffic assessment states that the proposed project site conservatively could generate 470 ADT initially and 1,750 ADT at full buildout (Source: Traffic Analysis for the Glamis Specific Plan – LLG, 2019). The existing ADT volumes adjacent to the project site are 1,920 ADT on Highway 78. Typically, it requires a project to double (or add 100%) to the traffic volumes to have a direct impact of 3 dBA CNEL or be a major contributor to the cumulative traffic volumes. Cumulatively the traffic volumes along the Highway 78 are expected to increase but the project related increase would not double the traffic volumes and therefore no impacts are anticipated.

Construction Noise Levels

Based on the County of Imperial's Noise Element of the General Plan, construction noise from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq}, when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor. Construction noise is not anticipated to exceed 75 dB L_{eq}, when averaged over an eight (8) hour period at adjacent land uses. Construction equipment operation will also be limited to the hours

of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday per the County's requirements. Therefore, a less than significant noise impact would result from construction activities. To further minimize noise from construction activities, the construction equipment should be equipped with properly operating and maintained mufflers. Therefore, a less than significant noise impact would result from construction activities.

Operational Noise Levels

The Property Line Noise Limits listed in Table 9 of the County's General Plan Noise Element and the County's Ordinance, Title 9, Division 7 (Noise Abatement and Control) Section 90702.00 Subsection A provides acceptable Sound level limits based on the property zoning. The existing zoning designation for the project site is Open Space/Preservation (S-2) and a very small area that is General Commercial (C-2). The general area of the Glamis Beach Store (within APN 039-310-029) is zoned as C-2, while the remainder of the project site is zoned as S-2. The project site is surrounded by the Bureau of Land Management (BLM) land uses on all sides. The proposed GSP includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning based upon different levels of allowable land use intensity. Also, the GSP proposes a Change of Zone from S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1-acre parcel on the southeast side of the project site.

Based upon the noise levels determined for the Project none of the proposed noise sources exceeds the property line standards at the residential property lines and the operational noise levels will comply with the County's noise standards at surrounding residences. Therefore, a less than significant noise impact would result from operational activities.

1.0 PROJECT INTRODUCTION

The purpose of this Noise study is to determine noise impacts, if any, to the Project from off-site sources (i.e. vehicular traffic along adjacent roadways and the nearby railroad tracks) and impacts from the Project operations (i.e. traffic generated from Project). Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to reduce impacts to below a level of significance. The project would maintain similar operations to that of the existing operations though would expand services to the existing seasonal influx of patrons recreating at the Glamis Dunes off-highway vehicle (OHV) areas surrounding the project. For this reason, OHVs are not specifically analyzed as it is part of the ambient conditions.

1.1 Project Location

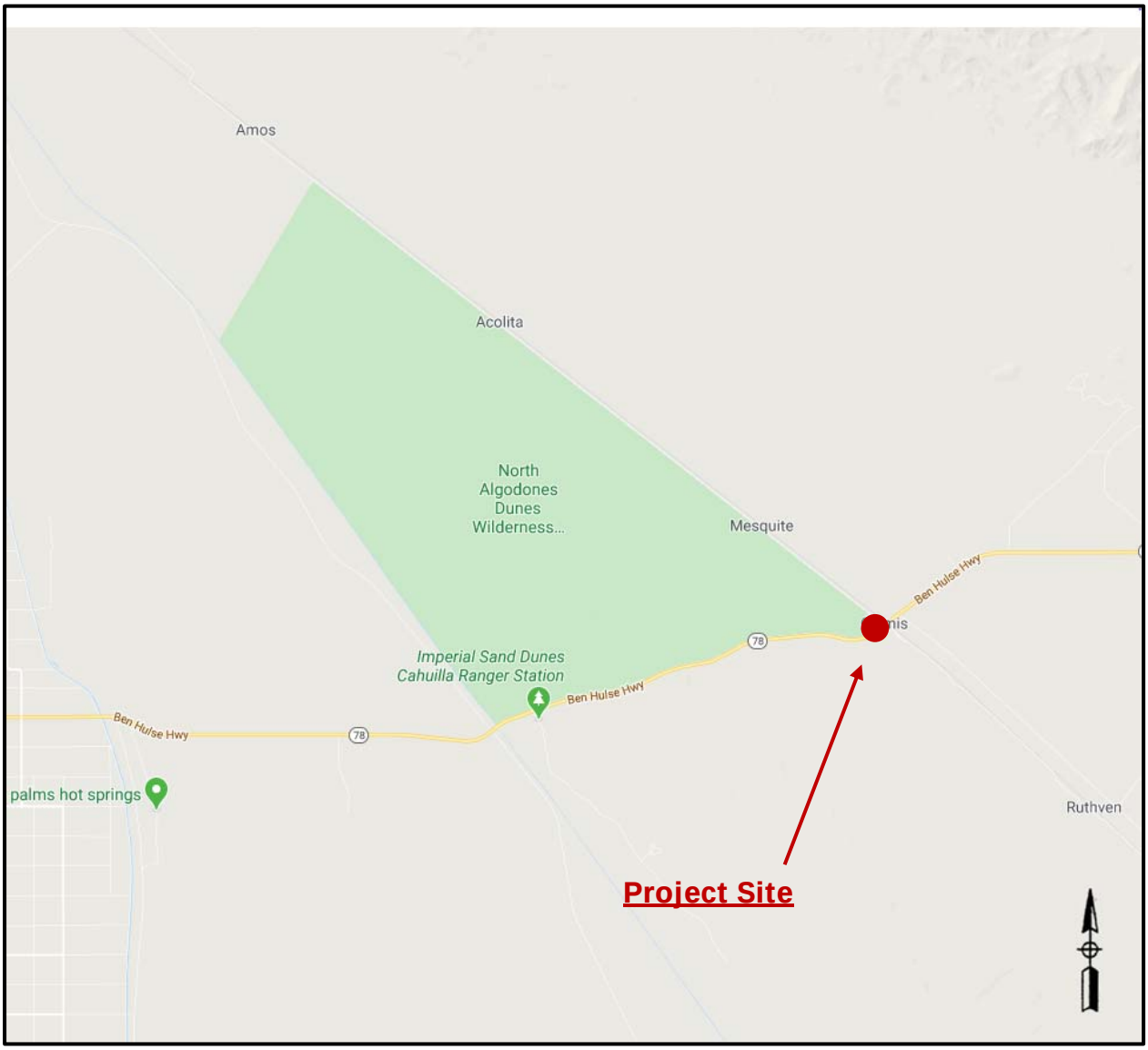
The GSP area is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR 78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the project site is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County (County) within the Salton Sea Air Basin (SSAB). A Project vicinity map and aerial image of the existing site is provided in Figures 1-A of this report.

1.2 Project Description

The approximately 142-acre GSP is located and contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development and creation of a Specific Plan in accordance with GSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. The existing zoning designation for the project site is Open Space/Preservation (S-2) and a very small area that is General Commercial (C-2). The general area of the Glamis Beach Store (within APN 039-310-029) is zoned as C-2, while the remainder of the project site is zoned as S-2. The project site is surrounded by the Bureau of Land Management (BLM) land uses on all sides.

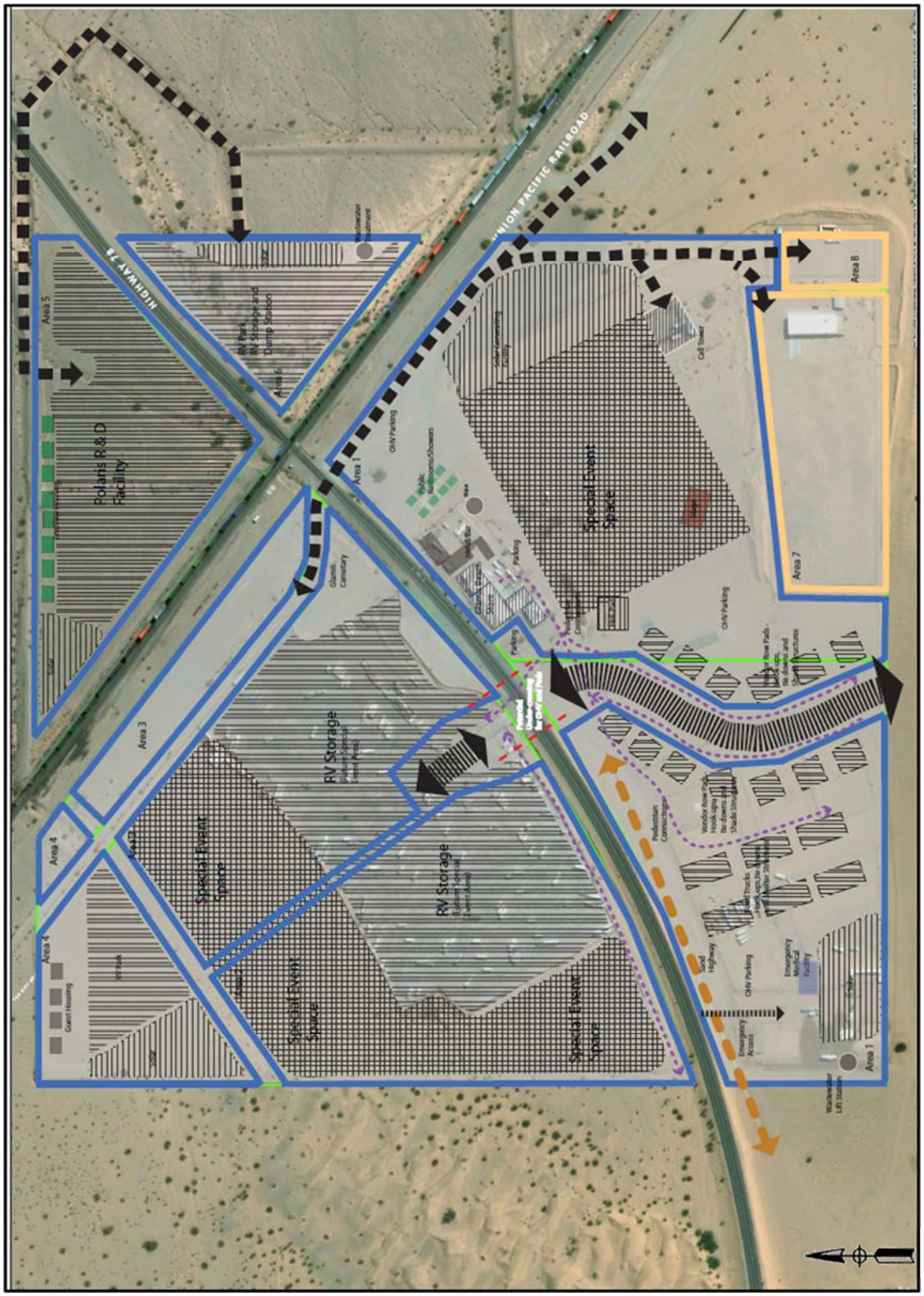
The proposed GSP includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning based upon different levels of allowable land use intensity. Also, the GSP proposes a Change of Zone from S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1-acre parcel on the southeast side of the project site. The phasing plan component of the GSP would phase the development so that more intense land uses are developed incrementally over time within the various proposed zones. Figure 1-B depicts the Conceptual Site Plan.

Figure 1-A: Project Vicinity Map and Project Footprint



Source: Google Maps, 2020

Figure 1-B: Project Area Overview Map



Source: (The Altum Group, 2019)

Project Phasing

Development within the GSP is intended to occur over a span of approximately 20 to 50 years and will depend on market conditions, availability of supporting infrastructure, and other factors. Four (4) phases of development are proposed though do not specifically call for any detailed development scheme but offer a general guideline on construction precedence. Given this, the primary purpose of the GSP is to modify the allowable land uses on the site, not to establish a detailed parcel by parcel development scheme. The general phasing is shown below.

Phase One

Phase One would permit uses which could include restaurant(s), bar(s), repair shop(s), a vendor row area and event area. Additionally, the site could be developed with a possible research and development (R&D) facility an RV park and some employee housing. Phase One would also include the construction of water infrastructure to include both potable water treatment to treat ground water as well as a wastewater treatment facility and upgrades to the electrical system which would include connection to power lines located 7.2 miles from the project site and some additional renewable energy to reduce GHG emissions or construction of a fully islanded 100% renewable energy microgrid (wind or PV including battery backup). The existing site uses diesel generators which would be phased out once electrical services are updated.

Phase Two

Phase Two would most likely be within Land Use Area 1, immediately west of Phase One. Phase Two development would serve as an extension to development occurring within Phase One by incorporating land uses permitted under the CR Zone similar to those permitted in Phase One. Phase Two would incorporate the Glamis Mainstreet to serve as a circulation corridor for Off- Highway Vehicle (OHV) traffic to and from the dunes and to Phase Four (Areas 2, 3, and 4) located directly north of SR 78.

Phase Three

Phase Three, located on the northeast side of the UPRR and bisected by SR 78, would be located within Land Use Area 5 and Land Use Area 6. No major public use facilities would be considered for development within these two APNs to discourage OHV traffic from crossing the UPPR to access these areas. Phase Three however, would serve for the development of uses relevant to employee housing, RV park, and/or an R&D facility and possible PV Solar array system.

Phase Four

Phase Four, located on the north side of SR 78, would be located within Land Use Areas 2, 3 and 4. The Glamis Mainstreet corridor is proposed to provide an optional circulation interconnection between Phase One and Phase Four. All Phasing as proposed will be impacted by possible requirements that Caltrans may impose along SR 78 and for crossing the UPRR. The Imperial County Transportation Commission (ICTC) is currently conducting a feasibility study for a safe crossing over UPRR for off road vehicles either at SR 78 or Wash 10 or some other location, and additional information will be provided once the feasibility study is complete. Overall, the primary objective of the GSP is to formalize the site and provide services and amenities.

Special Events

The GSP area and greater Imperial Sand Dunes area has been historically utilized for OHV recreational events and activities. The applicant has been operating a special recreational event named "Camp RZR" since 2007 that attracts as many as 20,000 visitors each year. This event usually occurs during the weekend before Halloween. In 2008, the County of Imperial issued a Conditional Use Permit (CUP) to the applicant to operate a "seasonal event area" for special events such as Camp RZR on their private property within the ISDRA. Since 2008, the applicant has coordinated with the County, BLM, Imperial County Fire Department, Imperial County Sherriff's Office, California Highway Patrol and other affected public agencies to ensure that proper special event protocols and procedures are enforced to address key issues such as traffic, safety, emergency procedures, restrooms, and other related special event factors.

The GSP will include provisions for additional special events to be held in addition to the longstanding Camp RZR. In concert with the existing operational protocols, procedures and guidelines for special events, the GSP will provide performance standards that will meet the guidelines/requirements of the affected public agencies (i.e., Imperial County Fire Department and Sheriff's Office) to address and ensure compliance with key special event-related issues. Furthermore, the GSP's performance standards will incorporate the BLM's Special Recreation Permit Event Operations Plan Checklist to ensure that operations of the proposed special annual events comply with the special event guidelines of the BLM. Special events that may be held at this site can be sponsored by the owner or by other entities provided they are first approved by the owner. Events can vary and be combined with off-site activities where portions of the event are on site while the remainder is on adjacent BLM lands. These events may include concerts, races, social gatherings, sporting activities, educational activities, training activities, and may include pyrotechnics and other entertainment venues.

Construction

Construction activities for Phase 1 through Phase 4 would occur within a timeframe of 20 to 50 years. The project description calls for the construction of a solar or wind farm development with a battery backup system for power reliability and an option to receive power from as far as 7.2 miles away. For power stability the connection the utility provider would be the most reliable.

Operations

Full buildout operations of the GSP is intended to occur over a span of approximately 20 to 50 years. However, in order to provide a conservative assessment, the entire Project was assumed and added to baseline conditions and was assumed to be built out by 2024.

The project would maintain similar operations to that of the existing operations though would expand services to the existing seasonal influx of patrons recreating at the Glamis Dunes off-highway vehicle (OHV) areas surrounding the project. The project traffic study indicated that the buildout condition would generate roughly 1,750 ADT (LLG Engineers, 2019) over existing operations from this seasonal community. Also, it should be noted that the due to the historic travel patterns, the bulk of the traffic would be Friday through Monday. Therefore, higher noise levels are expected from weekend traffic volumes.
The Project's proposed land uses are intended to serve the existing patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat.

2.0 ACOUSTICAL FUNDAMENTALS

Noise is defined as unwanted or annoying sound which interferes with or disrupts normal activities. Exposure to high noise levels has been demonstrated to cause hearing loss. The individual human response to environmental noise is based on the sensitivity of that individual, the type of noise that occurs, and when the noise occurs.

Sound is measured on a logarithmic scale consisting of sound pressure levels known as a decibel (dB). The sounds heard by humans typically do not consist of a single frequency but of a broadband of frequencies having different sound pressure levels. The method for evaluating all the frequencies of the sound is to apply an A-weighting to reflect how the human ear responds to the different sound levels at different frequencies. The A-weighted sound level adequately describes the instantaneous noise whereas the equivalent sound level depicted as Leq represents a steady sound level containing the same total acoustical energy as the actual fluctuating sound level over a given time interval.

The Community Noise Equivalent Level (CNEL) is the 24-hour A-weighted average for sound, with corrections for evening and nighttime hours. The corrections require an addition of 5 decibels to sound levels in the evening hours between 7 p.m. and 10 p.m. and an addition of 10 decibels to sound levels at nighttime hours between 10 p.m. and 7 a.m. These additions are made to account for the increased sensitivity during the evening and nighttime hours when sound appears louder.

A vehicles noise level is a combination of the noise produced by a vehicle's engine, exhaust, and tires. The cumulative traffic noise levels along a roadway segment are based on three primary factors: the amount of traffic, the travel speed of the traffic, and the vehicle mix ratio or number of medium and heavy trucks. The intensity of traffic noise is increased by higher traffic volumes, greater speeds, and increased number of trucks.

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore, the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Mobile noise levels radiate in an almost oblique fashion from the source and drop off at a rate of 3 dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions. Hard site conditions consist of concrete, asphalt, and hard pack dirt while soft site conditions exist in areas having slight grade changes, landscaped areas, and vegetation. Alternately, fixed/point sources radiate outward uniformly as it travels away from the source. Their sound levels attenuate or drop off at a rate of 6 dBA for each doubling of distance.

3.0 SIGNIFICANCE THRESHOLDS AND STANDARDS

3.1 Operational Standards

The Property Line Noise Limits listed in Table 9 of the County's General Plan Noise Element and the County's Ordinance, Title 9, Division 7 (Noise Abatement and Control) Section 90702.00 Subsection A provides acceptable Sound level limits based on the property zoning. The applicable property line sound level limits are provided in Table 3-1 below and shall apply to noise generation from one property to an adjacent property. The standards imply the existence of a sensitive receptor on the adjacent, or receiving, property. In the absence of a sensitive receptor, an exception or variance to the standards may be appropriate. These standards do not apply to construction noise.

Table 3-1: Property Line Noise Level Limits

Zone	Time	Applicable Limit One-hour Average Sound Level (Decibels)
Residential Zones	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
Multi-residential Zones	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial Zones	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
Light Industrial/Industrial Park Zones	Anytime	70
General Industrial Zones	Anytime	75
When the noise-generating property and the receiving property have different uses, the more restrictive standard shall apply. When the ambient noise level is equal to or exceeds the Property Line noise standard, the increase of the existing or proposed noise shall not exceed 3 dB L_{eq}. The sound level limit between two zoning districts (different land uses) shall be measured at the property line between the properties. Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise level limits of subsection A of this section, measured at or beyond six feet from the boundary of the easement upon which the equipment is located. This section does not apply to noise generated by helicopters at heliports or helistops authorized by a conditional use permit. This section does not apply to noise generated by standard agricultural field operating practices such as planting and harvesting of crops. The County of Imperial has a Right to Farm Ordinance (1031) which serves as recognition to agricultural practices to new development. Agricultural/industrial operations shall comply with the noise levels prescribed under the general industrial zones.		

Source: County of Imperial Ordinance, Title 9, Division 7 (Noise Abatement and Control)

These standards are enforced through the County's code enforcement program on the basis of complaints received from persons impacted by excessive noise. It must be acknowledged that a noise nuisance may occur even though an objective measurement with a sound level meter is not available. In such cases, the County may act to restrict disturbing, excessive, or offensive noise which causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

3.2 Construction Noise Standards

Based on the County of Imperial's Noise Element of the General Plan, construction noise from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq}, when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB L_{eq} when averaged over a one (1) hour period.

Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays. In cases of a person constructing or modifying a residence for himself/herself, and if the work is not being performed as a business, construction equipment operations may be performed on Sundays and holidays between the hours of 9 a.m. and 5 p.m. Such non-commercial construction activities may be further restricted where disturbing, excessive, or offensive noise causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

3.3 Significant Increase of Ambient Noise Levels

The Noise/Land Use Compatibility Guidelines are not intended to allow the increase of ambient noise levels up to the maximum without consideration of feasible noise reduction measures. The following guidelines are established by the County of Imperial for the evaluation of significant noise impact.

a. If the future noise level after the Project is completed will be within the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, but will result in an increase of 5 dB CNEL or greater, the Project will have a potentially significant noise impact and mitigation measures must be considered.

b. If the future noise level after the Project is completed will be greater than the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, a noise increase of 3 dB CNEL or greater shall be considered a potentially significant noise impact and mitigation measures must be considered.

4.0 NOISE ENVIRONMENT

4.1 Existing Noise Environment Onsite

Noise measurements were taken June 6, 2019 using a Larson-Davis Model LxT Type 1 precision sound level meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

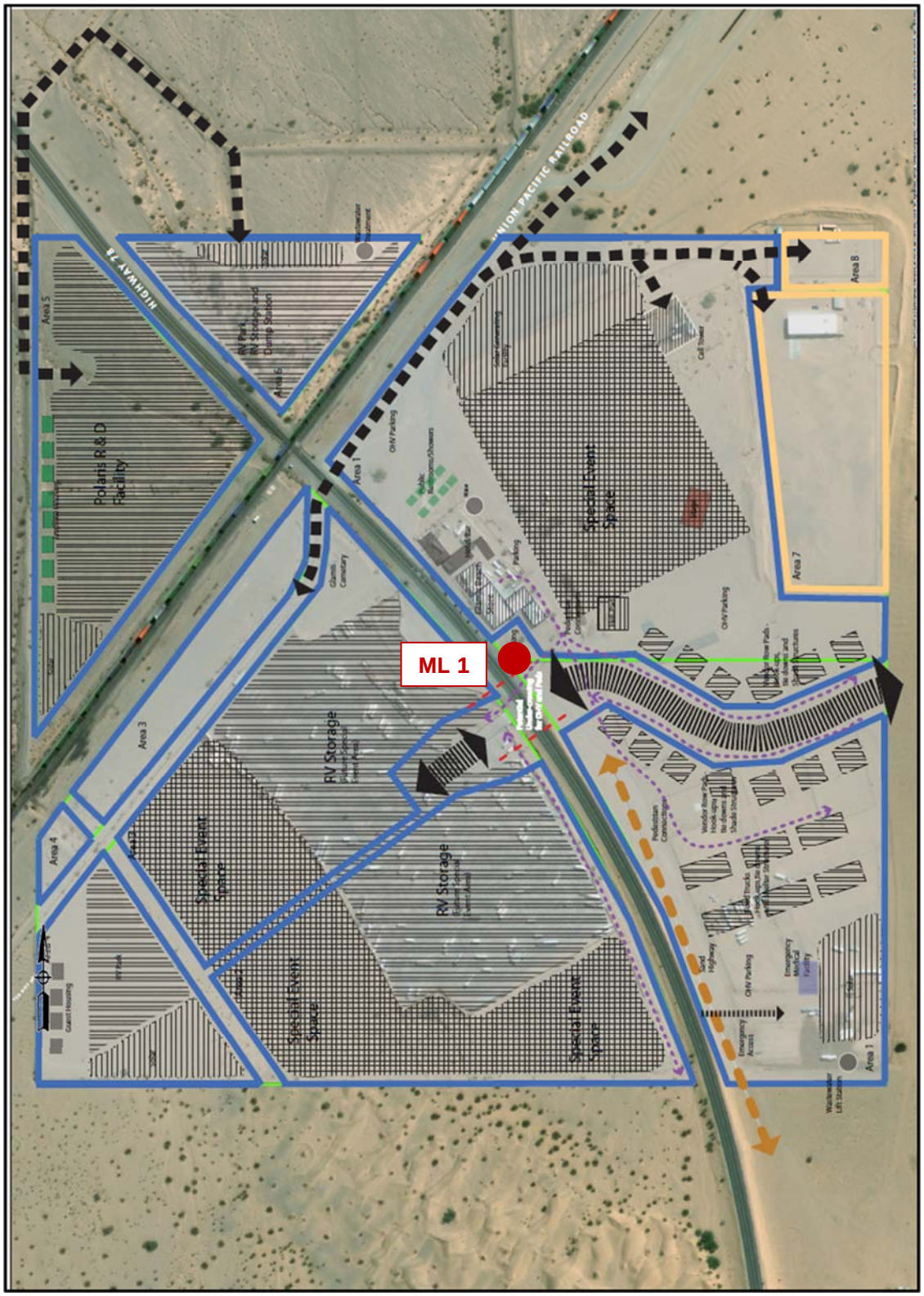
Due to site constraints and fencing, monitoring location 1 (ML1) was located along Highway 78. The result of the noise level measurements are presented in Table 4-1. The noise measurement was monitored for a time period of 15 minutes. The existing noise levels in the project area consisted primarily of traffic from adjacent Highway 78. The ambient Leq noise level measured in the area of the project during the morning hours was found to be roughly 48 dBA Leq. The statistical indicators Lmax, Lmin, L10, L50 and L90, are given for the monitoring location. As can be seen from the L90 data, 90% of the time the noise level is 43 dBA. The traffic volumes consisted of several dozen passenger vehicles and 4 larger trucks along Highway 78 and no OHV activities were occurring due to the time of the year but there were some gusty wind conditions that increased the ambient noise levels. The noise monitoring location is provided graphically in Figure 4-A on the following page.

Table 4-1: Measured Ambient Noise Levels

Measurement Identification	Location	Time	Noise Levels (dBA)					
			Leq	Lmin	Lmax	L10	L50	L90
M1	Along East Broadway	3:15–3:30 p.m.	48.2	41.9	72.7	48.5	44.4	42.5
Source: Ldn Consulting, Inc. June 6, 2019								

A noise study and survey were conducted for the Final Environmental Impact Report Heber Dunes SVRA General Plan, December 2011 by AECOM. The survey was conducted between Friday, April 17 and Sunday, April 19, 2009, to document the existing noise environment at various locations in the vicinity. During the survey, average daytime hourly noise levels within the project area ranged from approximately 55 dBA to 63 dBA Leq, with maximum noise levels that ranged from 60 dBA to 88 dBA Lmax. Additional information is provided below.

Figure 4-A: Ambient Noise Monitoring Location



According to the Final Environmental Impact Report Heber Dunes SVRA, the primary noise sources at the noise measurement locations for the Heber Dunes SVRA were OHV operations for measurement locations on the project site and adjacent to the Heber Dunes SRVA boundary. At the time of the measurements, OHV use was moderate and it is estimated that peak use would be approximately double the activity at the time the measurements were conducted; thus, hourly noise levels during peak activity would likely be 3 dBA higher than the measured noise levels. Maximum noise levels, as they are associated with individual events, would not likely increase with the increased activity.

4.2 Offsite Project Related Transportation Noise Levels

To determine if direct or cumulative off-site noise level increases associated with the development of the proposed project would create noise impacts. The traffic volumes for the existing conditions were compared with the traffic volume increase of existing plus the proposed project. The project's traffic assessment states that the proposed project site conservatively could generate 470 average daily trips (ADT) initially and 1,750 ADT at full buildout (Source: Traffic Analysis for the Glamis Specific Plan – LLG, 2019). The existing ADT volumes adjacent to the project site are 1,920 ADT on Highway 78. Typically, it requires a project to double (or add 100%) to the traffic volumes to have a direct impact of 3 dBA CNEL or be a major contributor to the cumulative traffic volumes. Cumulatively the traffic volumes along the Highway 78 are expected to increase but the project related increase would not double the traffic volumes and therefore no impacts are anticipated. It should be noted: there are no existing sensitive uses located near the project site. The nearest use, is a residence, located approximately 15 miles to the west along Highway 78.

4.3 Transportation Related Onsite Noise

The project proposes primarily commercial uses. Based on the project's traffic study the 2050 traffic volumes along Highway 78 are anticipated to only be 3,360 ADT near the site. This 2050 traffic volume would equate to the 60 dBA CNEL noise contour being roughly 150 feet from the centerline of Highway 78, which is normally acceptable at sensitive outdoor uses. Additionally, the Southern Pacific Railway is the primary source of railroad transportation noise in the County. The main line right-of-way runs from the Riverside County border, just east of the Salton Sea, southeast to Niland. From Niland, the main line continues southeast to Yuma, Arizona.

Based on the County General Plan, the railway noise levels could be 74 dBA CNEL at 100 feet and 60 dBA CNLE at 700 feet. The County normally acceptable noise standards are 60 dBA CNEL for residential and hotel uses. The County has a conditionally acceptable threshold of 70 dBA CNEL for residential uses and 75 dBA CNEL for hotels uses.

The Union Pacific railroad bisects the site, and the site is surround by OHV uses. If sensitive uses, hotels for example are developed, a site specific noise study should be performed to determine if noise reductions are needed at proposed outdoor use areas to comply with the above stated standards and what noise reductions are needed to reduce interior noise to an acceptable level of 45 dBA CNEL.

5.0 CONSTRUCTION NOISE LEVELS

5.1 County of Imperial Construction Standards

Construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq}, when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB L_{eq} when averaged over a one (1) hour period. Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays.

5.2 Project Construction Noise

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders, and scrapers and can reach relatively high levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours.

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from 60 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor, and reduced to 63 dBA at 200 feet from the source.

Construction activities for Phase 1 through Phase 4 would occur within a timeframe of 20 to 50 years. The construction scenario includes construction of a conceptual scenario which includes multiple uses to include a water/wastewater infrastructure, potentially a hotel use, retail uses, additional employee residential uses, research and development uses, renewables such as photovoltaics or wind turbines to offset electrical usage and additional recreational vehicle parking.

The noise levels utilized in this analysis for the mass grading are based upon the anticipated list of equipment proved by the Project Applicant and is shown in Table 5-1 below. Most of the construction activities for Phases will consist of clearing and grubbing the site and the

trenching of utilities. The equipment is anticipated to be spread out over the entire site of each Phase with some equipment potentially operating at or near the property line while the rest of the equipment may be located over 500 feet from the same property line. This would result in an acoustical center for the grading operation of more than 200 feet from the nearest property line. It should be noted: no sensitive uses existing adjacent to or near the site. Construction activities from subsequent Phases may potentially elevate noise levels at the previous Phases if constructed with sensitive uses (i.e., employee housing).

Table 5-1: Construction Grading Noise Levels

Construction Equipment	Quantity	Duty Cycle (Hours/Day)	Source Level @ 50-Feet (dBA)	Cumulative Noise Level @ 50-Feet (dBA Leq-8h)
Rubber Tired Dozers	3	6.8	72	76.1
Excavators	2	6.8	73	75.3
Graders	2	6.8	74	73.3
Scrapers	1	6.8	74	76.3
Tractors/Loaders/Backhoes	2	6.8	73	77.1
			Cumulative Levels @ 50 Feet (dBA)	82.8
			Average Distance to Property Line	200
			Noise Reduction Due to Distance	-12.0
			PROPERTY LINE NOISE LEVEL	70.8
			County of Imperial Threshold	75
			IMPACT?	**NO**

As can be seen in Table 5-1, if all the equipment was operating in the same location, which is not physically possible, at an average distance of 200 feet from the nearest property line a noise level of less than 75 dBA over an 8-hour period at the property line is anticipated. Given this and the spatial separation of the equipment, the noise levels will comply with the County of Imperial's 75 dBA standard at all Project property lines of each Phase and no impacts are anticipated.

The project may also include the installation of off-site utility infrastructure which will generate temporary noise. Unlike construction associated with on-site development, utility construction is linear and usually extends roughly 300 feet along the alignment. Excavation and utility equipment would be limited due to alignment and work area constraints. Based on a construction area of approximately 50 feet by 300 feet, the average hourly off site construction

noise levels would be approximately 75 dBA Leq at the edge of the right-a-way and 72 dBA Leq 8 hour or lower at 50 feet from the edge of construction. No sensitive uses are located along the utility alignment and no impacts are anticipated.

To further minimize noise from construction activities, the construction equipment should be equipped with properly operating and maintained mufflers. Therefore, a less than significant noise impact would result from construction activities.

6.0 OPERATIONAL NOISE LEVELS

6.1 County of Imperial Operational Standards

The existing zoning designation for the project site is Open Space/Preservation (S-2) and a very small area that is General Commercial (C-2). The general area of the Glamis Beach Store (within APN 039-310-029) is zoned as C-2, while the remainder of the project site is zoned as S-2. The project site is surrounded by the Bureau of Land Management (BLM) land uses on all sides. The proposed GSP includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning based upon different levels of allowable land use intensity. Also, the GSP proposes a Change of Zone from S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1-acre parcel on the southeast side of the project site.

6.2 Project Operational Noise

Section 90702.00 of the Noise Ordinance will be applied to accommodate the planning of not just existing but potential future uses that could be adjacent to the proposed project. Section 90702.00 of the Noise Ordinance sets a sound level limit of 60 dBA Leq for daytime hours of 7 a.m. to 10 p.m. and 55 dBA Leq during the noise sensitive nighttime hours of 10 p.m. to 7 a.m. for commercial noise sensitive land uses. Most of the proposed Project components will only operate during the daytime hours but a few may operate during nighttime or early morning hours and therefore the most restrictive and conservative approach is to apply the 55 dBA Leq nighttime standard at the property lines. When the noise-generating property and the receiving property have different uses, the more restrictive standard shall apply. When the ambient noise level is equal to or exceeds the Property Line noise standard, the increase of the existing or proposed noise shall not exceed 3 dB Leq. Due to the location of the project site and the surrounding OHV area, ambient noise levels may be elevated above the Property Line noise standard during the seasonal uses from the OHV area.

This section examines the potential stationary noise source levels associated with the development and operation of the proposed project. Noise from a fixed or point source drops off at a rate of 6 dBA for each doubling of distance. Which means a noise level of 70 dBA at 5-feet would be 64 dBA at 10-feet and 58 dBA at 20-feet.

A review of the proposed project indicates that noise sources such as deliveries, parking lot activities and mechanical ventilation system (HVAC) are the primary sources of stationary noise from the project. This section provides a description and reference noise level measurement results.

Deliveries

The proposed project includes commercial uses that would involve occasional truck deliveries. Typically, trucks used to make deliveries can generate a maximum noise level of 70-75 dBA at a distance of 50 feet depending on the size of the truck. The proposed project is not anticipated to require a significant number of truck deliveries or the need for larger trucks. The deliveries for the proposed project would consist of smaller deliveries in smaller trucks and/or step side vans and would be somewhat infrequent. The noise associated with one large truck delivery and smaller truck would not result in a significant number of truck trips to significantly increase noise within the project area. Therefore, truck deliveries would not be intrusive or result in substantially greater noise levels than currently exist and impacts would be less than significant.

Parking Lots

Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale. However, the instantaneous sound levels generated by a car door slamming and engine starting up and acceleration may be an annoyance to adjacent sensitive receptors. The estimated noise levels associated with parking lot activities typically range from 60-65 dBA and are short term. It should be noted that parking lot noise are instantaneous noise levels compared to noise standards in the CNEL scale, which are averaged over time. As a result, actual noise levels over time resulting from parking lot activities would be far lower. Therefore, the proposed parking would not result in substantially greater noise levels than currently exist at the project site and impacts would be less than significant

Mechanical Ventilation

Typically, mechanical equipment (HVAC) noise is 50-55 dBA at 50 feet from the source. HVAC units would be included on the roof of the proposed building and would be shielded by a mechanical screen and/or the roof parapet, which would further reduce the noise. The noise from the HVAC units would meet the County's Noise Standards at the nearest residents. It is important to note that the roof-top mounted mechanical ventilation (HVAC) all occurring at the same time. Additionally, mechanical ventilation system will cycle on and off throughout the day. No sensitive uses existing adjacent to the project and impacts from mechanical equipment would be less than significant.

7.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the noise environment and impacts within and surrounding the GSP Project. The information contained in this report was based on the best available data at the time of preparation.

DRAFT

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Date November 18, 2020

K Water Supply Assessment

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2021

Water Supply Assessment – Glamis Specific Plan (GSP) Project

DRAFT – April 2021

PREPARED FOR IMPERIAL COUNTY PLANNING & DEVELOPMENT SERVICES

BY DUBOSE DESIGN GROUP, INC.

Glamis Specific Plan Project
Draft Water Supply Assessment

Draft September 2021

Prepared for Imperial County Planning and Development Services

Dubose Design Group.

ACRONYMS

AAC	All-American Canal
AF	Acre-Foot or Acre-Feet
AFY	Acre-Feet per Year
AMSL	above mean sea level
APN	Assessor's Parcel Number
BGS	Below Ground Surface
BLM	Bureau of Land Management
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CMAGR	Chocolate Mountain Aerial Gunnery Range
CUP	Conditional Use Permit
County	Imperial County
CWC	California Water Code
DDG	Dubose Design Group
GHG	Greenhouse Gas
GMP	Groundwater Management Plan
GPA	General Plan Amendment
GSPA	Glamis Specific Plan Areas
DU	Dwelling Unit
ICPDS	Imperial County Planning and Development Services
IID	Imperial Irrigation District
In	Inches
IRWMP	Integrated Regional Water Management Plan
ISDRA	Imperial Sand Dunes Recreational Area
K.G.R.A	Known Geothermal Resource Area
LNL	Livermore National Laboratory
MAF	Million Acre- Feet
MGD	Million Gallons per Day
MW	Megawatt
NADW	North Algodones Dunes Wilderness
PV	Photo Voltaic
PRC	Public Resource Code
R&D	Research and Development
RMZ	Recreation Management Zones
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
SB	Senate Bill

SR	State Route
TDS	Total Dissolved Solids
UPRR	Union Pacific Railroad
US	United States
USGS	United States Geological Survey
USBR	United States Bureau of Reclamation
WSA	Water Supply Assessment

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1. PURPOSE OF THE WATER SUPPLY ASSESSMENT & APPLICABILITY

This Water-Supply Assessment (WSA) was prepared for the Imperial County Planning and Development Services (ICPDS) and Polaris, Inc. (The "Applicant") by water supply experts at DuBose Design Group, Inc (DDG) for the proposed Glamis Specific Plan (GSP) Project ("The Project"). The proposed Project consists of four phases of land use development, encompassing many land use types which are either permitted by right or through the process of a Conditional Use Permit (CUP). This WSA is a requirement of California law, specifically Senate Bill (SB) 610 (referred to as SB 610). SB 610 is an Act that amended Section 21151.9 of the Public Resources Code (PRC), and Sections 10631, 10656, 10910, 10911, 10912, and 10915 of the California Water Code (CWC). For the purposes of CWC Section 10912, the following terms have the following meanings: (a) "Project" means any of the following: (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit (du) project.

SB-610 essentially requires a Lead Agency to determine that a project, as defined by CWC Section 10912, which is subject to the California Environmental Quality Act (CEQA) (1) has identified a public water system or groundwater basin that may supply the water the project needs, and (2) to request the project's applicant to prepare a specific WSA for the project.

2. DESCRIPTION OF THE PROPOSED PROJECT AREA

Imperial County (the County) is in southeast California and borders Arizona and Mexico. The County is in an arid region and a part of the Sonoran Desert. The GSP area (GSPA) is located approximately 27 miles east of Brawley at the intersection of State Route (SR) 78 (SR 78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the Project site is located within the lower Colorado River Sonoran Desert Region in the east central portion of the County. The Project site is owned by the Applicant. Figure 1, *Regional Location*, shows the location of the Project site in relation to Imperial County and surrounding areas. Figure 2, *Project Vicinity*, shows the relationship between the GSPA and surrounding vicinity with the Imperial Sand Dunes Recreation Area (ISDRA) located immediately to the southwest, the North Algodones Dunes Wilderness (NADW) immediately to the northwest, and the Chocolate Mountains and Chocolate Mountain Aerial Gunnery Range (CMAGR) located to the northeast.

The GSP consists of seven (7) parcels which include Assessor's Parcel Numbers (APNs) 039-310-017, 039- 310-022, 039-310-027, 039-310-023, 039-310-029, 039-310-026, and 039-310-030) totaling approximately 142 acres. The Project site is located in the northeast quarter of Section 33 and the northwest quarter of Section 34, Township 13 South, Range 18 East of the Glamis 7.5-minute quad. The Project site is further defined as located at Latitude 32°59'46.95" North and Longitude 115°04'21.77" (approximate geographic center of the Project site), see Figure 3, Aerial Imagery, for the Project site.

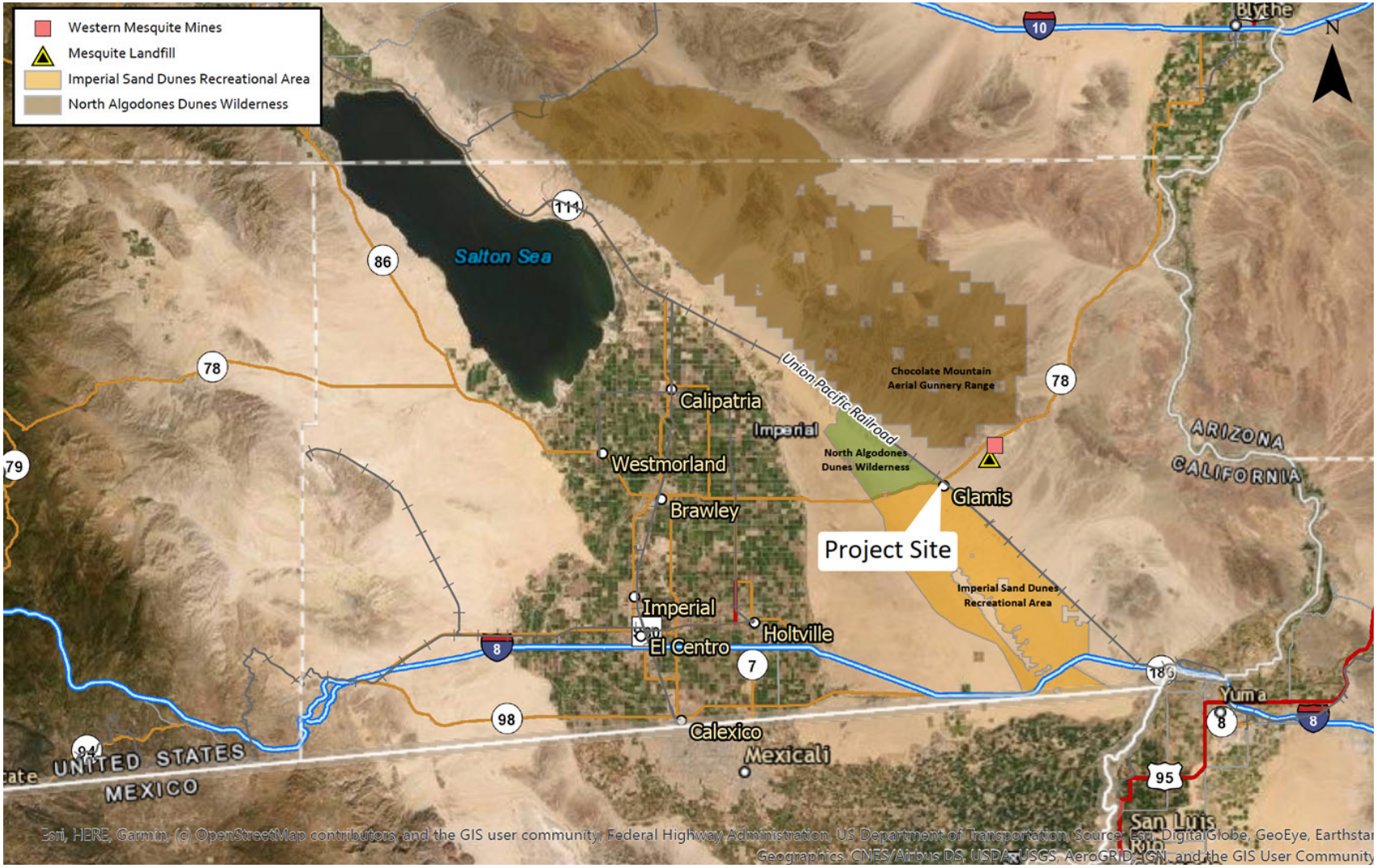

Figure 1: Regional Location

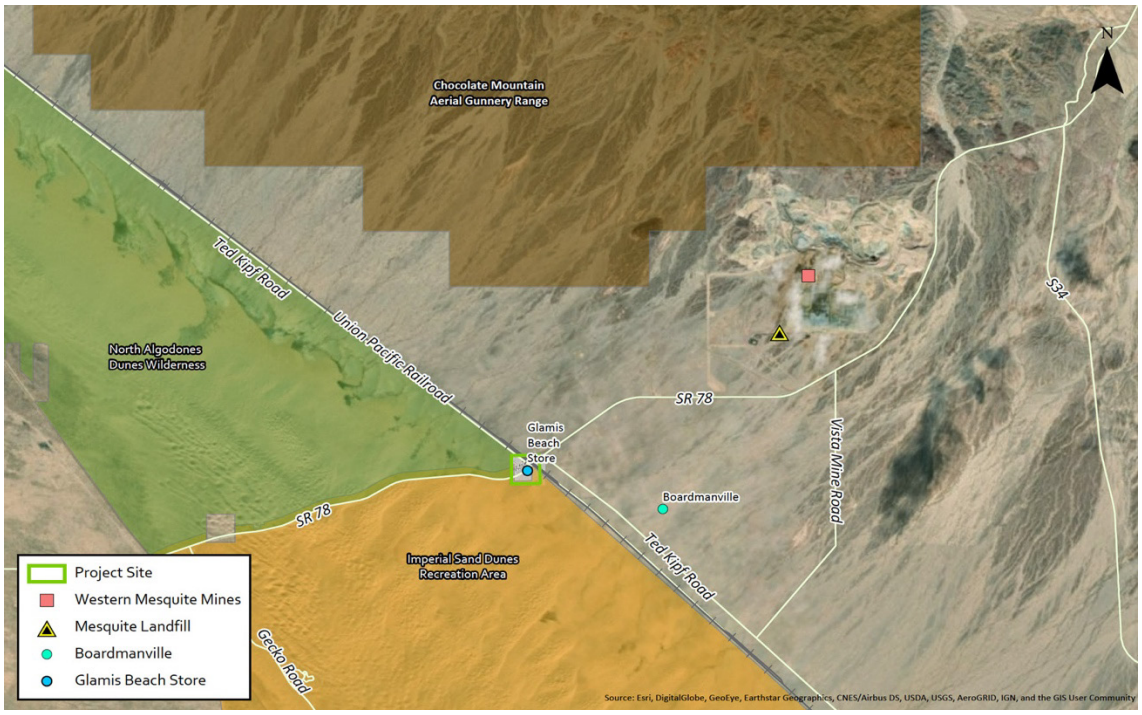

Figure 2: Project Location

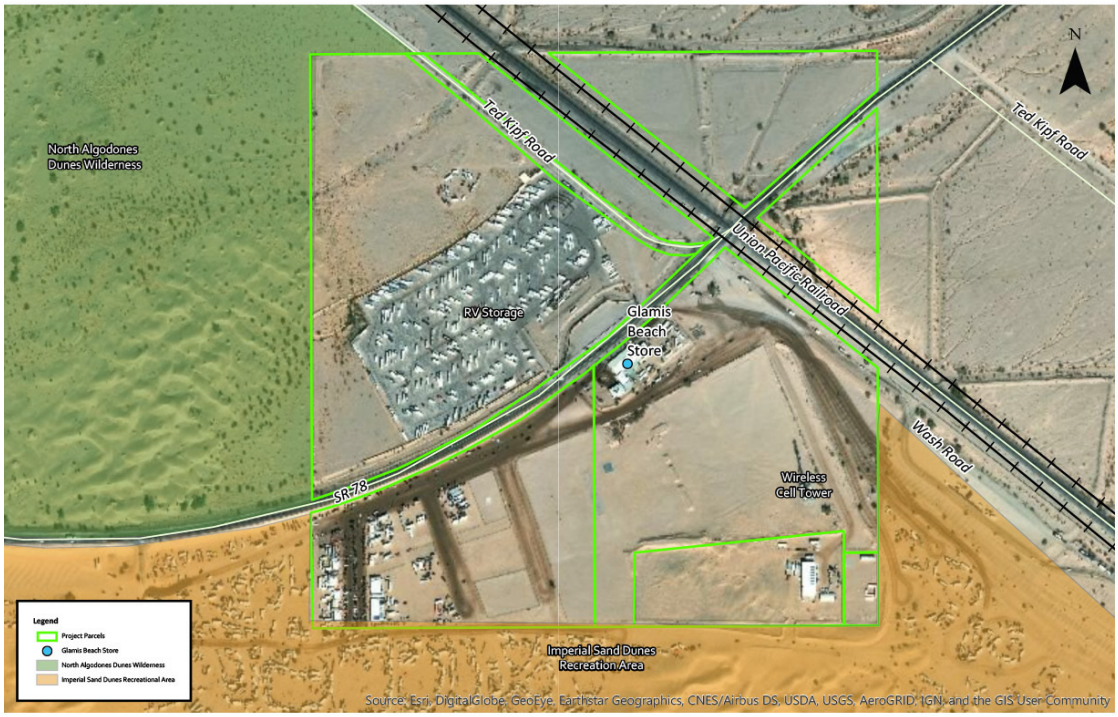

Figure 3: Aerial Photograph of Project Site

3. EXISTING CHARACTERISTICS

The Project site can be characterized as an area of open, sandy, disturbed desert land with all existing development occurring in close proximity (within approximately 0.25 mile) to the intersection of SR 78 and the UPRR. The Project site consists of several adjoining parcels. On one parcel (APN 039-310-029) there is a one- and a two-story metal building structure with water tanks, a wireless communications facility, a private residence/storage building, and an unmaintained storage shed and shipping containers which together comprise what is commonly referred to as the "Glamis Beach Store." Also, there is a separate seasonal off-highway vehicle (OHV) repair business (and two related Recreational Vehicle [RV] trailers) connected to the Glamis Beach Store. Immediately south of the APN 039-310-029 parcel, is the 8-acre parcel (APN 039-310-030), which includes a single-family residence, large RV storage garages, and other related equipment storage buildings while the southeast corner of the Project site is a 1-acre parcel (APN 039-310-017).

Opposite the Glamis Beach Store (to the north of SR 78 from Glamis Beach Store) is an existing RV storage area, and other vacant desert land. On the parcel on the southwest side of the Project site (APN 039-310-027) there are wood posts to form a sectioned-off parking/vendor area. On the northeast side of the GSPA, there are two triangular parcels (on the northeast side of the UPRR, APN 039-310-022 and APN 039-310-023), which are currently vacant.

The Project site is relatively flat with a southwest-to-northeast trending grade of less than one percent or an approximate difference in elevation of 23 feet above mean sea level (AMSL) between the southwest corner of the site (approximate elevation of 324 feet AMSL) and the northeast corner of the site (approximately 347 feet AMSL). Areas of wind-blown sand dunes with sporadic native vegetation are found situated and encroaching upon the southeast corner of the Project site.

4. SURROUNDING AREAS

The GSP contains the only private commercial land uses within the Project vicinity and is surrounded by open desert land that is managed by the Bureau of Land Management (BLM). Also, the CMAGR is located approximately 3 miles to the north of the GSPA. The GSPA is within and surrounded by the ISDRA and is bordered by the NADW to the northwest. Within all of the various BLM lands surrounding the GSPA, the BLM has designated Recreation Management Zones (RMZs) which dictate the allowable recreation activities within those areas and provide for BLM's management objectives within those areas. The ISDRA, NADW and RMZs are briefly discussed below.

4.1 Imperial Sand Dunes Recreation Area (ISDRA)

The ISDRA is the largest mass of sand dunes in the State of California, extending for more than 40 miles in length (from north to south), and averaging approximately 5 miles wide (from east to west). Dunes within the ISDRA can reach heights of 300 feet above the desert floor, providing OHV recreationists an ideal location for their activities. The ISDRA, which is managed by the BLM, includes a variety of camping areas, ranger stations, restrooms, and other facilities to support OHV recreationists who visit the area primarily between October and April. The BLM allows special events with a permit within the ISDRA.

4.2 North Algodones Dunes Wilderness (NADW)

The NADW covers more than 26,000 acres and is manages by the BLM as a part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use. Camping is allowed throughout the area, however there is no water no facilities for visitors within the NADW.

4.3 BLM Recreation Management Zones (RMZs)

The BLM has designated RMZs on BLM lands located though the area surrounding the GSPA. The RMZs provide an activity-level planning framework for BLM's recreation management. The RMZs have been allocated throughout the planning area to represents permitted recreational niches (activities, experiences and benefits). The GSPA is bordered by three RMZs. An Open RMZ to the south, a Limited RMZ to the northeast, and the NADW RMZ to the northwest. The Open RMZ allows for unrestricted OHV recreation, camping, commercial vending, hiking and wildlife viewing. The Limited RMZ allows for limited use OHV recreation (travel limited to designated routes of travel or areas with seasonal restrictions under specific conditions), camping, environmental education, and tourism opportunities. The NADW RMZ prohibits any motorized recreation opportunities and allows for non-motorized recreation, such as camping, hiking, and educational opportunities.

4.4 Chocolate Mountain Aerial Gunnery Range

The CMAGR is a live-fire training range used for developing and training U.S. Marine Corps and Navy aviators/land combat forces (see Figure 2, Project Vicinity). The CMAGR consists of approximately 459,000 acres and is bounded on the west by the Salton Sea basin, and on the east by the Chuckwalla and Palo Verde mountains. It straddles the northern portion of the Chocolate Mountains east of the Salton Sea in Imperial and Riverside Counties, California, with restricted airspace in both California and Arizona. The northern border is separated from the Orocopia Mountains by Salt Creek and extends south to (near) SR 78 approximately 3 miles northeast of the GSPA. The CMAGR is under the jurisdiction of the U.S. Navy and Marine Corps and is closed to the public. The authorization for aircrews to deliver live ordnance on realistic targets is a central component of the overall value of the CMAGR. However, due to the significant distance between the GSP and the CMAGR, these ongoing military activities do not have any impacts to the GSPA.

The Holtville Rocket Target Range has two live bombing locations to the west and north of the GSPA, however both are approximately 10 and 8 miles away, respectively. Those live bombing/ target range areas that are used by the U.S. Navy and Marine Corps do not currently have any effect on the use of the GSPA, nor would any impact be expected in the future.

5. CLIMATE FACTORS

Imperial Valley is in the northern Sonoran Desert, which has a subtropical desert climate characterized by hot, dry summers and mild winters. Clear and sunny conditions typically prevail, and frost is rare. The region receives 85 to 90 percent of possible sunshine each year, the highest in the United States. Winter temperatures are mild rarely dropping below 32°F, but summer temperatures are very hot, with more than 100 days over 100°F each year. The remainder of the year has a relatively mild climate with temperatures averaging in the mid-70s. The 100-year average climate characteristics are provided in Table 5-1 below. Rainfall contributes around 50,000 acre-feet (AF) of effective agricultural water per inch of rain. Most rainfall occurs from November through March; however, summer storms can be significant in some years. Annual areawide rainfall is shown in Table 5-

2 below. The thirty-year, 1988-2017, average annual air temperature was 74.1°F, and average annual rainfall was 2.59 inches. This record shows that while average annual rainfall has fluctuated, the 10-year average temperatures have slightly increased over the 30-year averages.1 Furthermore, January can be noted as the month that has the most amount of rainfall in Imperial, CA which can be observed in Table 5-3 (below).

Table 5-1: Climate Characteristics, Imperial, CA 100-Year Record, 1918-2017

Climate Characteristic	Annual Value
Average Precipitation (100-year record, 1918-2017)	2.96 inches (In)
Minimum Temperature, Jan 1937	16 °F
Maximum Temperature, July 1995 & June 2017	121 °F
Average Minimum Temperature, 1918-2017	47.9 °F
Average Maximum Temperature, 1918-2017	98.3 °F
Average Temperature, 1918-2017	72.9 °F

Source: IID Imperial Weather Station Record

Table 5-2: Monthly Mean Temperature (ºF) – Imperial, CA 10-Year, 30-Year & 100-Year (2008-2017, 1988-2017, 1918-2017)

	Jan			Feb			Mar			Apr		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	82	32	56	86	36	61	95	41	67	100	46	72
30-year	81	33	56	84	37	60	93	41	66	99	47	71
100-year	80	31	55	84	35	59	91	40	64	99	46	71
	May			Jun			Jul			Aug		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	107	53	78	115	61	87	114	69	92	114	67	91
30-year	106	54	79	113	60	86	114	68	92	113	69	92
100-year	105	52	78	113	59	86	114	68	92	113	68	91
	Sep			Oct			Nov			Dec		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	114	67	92	103	51	76	92	38	64	82	30	55
30-year	113	69	92	102	51	76	90	39	64	80	32	55
100-year	113	68	91	101	49	75	90	38	63	80	32	56

Source: IID Imperial Headquarters Station Record (Data provided by IID staff).

[1] IID WSA BOILERPLATE

Table 5-3: Monthly Mean Rainfall (In) – Imperial, CA 10-Year, 30-Year & 100-Year (2008-2017, 1988-2017, 1918-2017)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
10-year	0.54	0.30	0.13	0.04	0.08	0.01	0.26	0.31	0.16	0.13	0.14	0.44	2.53
30-year	0.50	0.44	0.26	0.07	0.06	0.00	0.15	0.22	0.22	0.16	0.18	0.34	2.59
100-year	0.40	0.39	0.25	0.10	0.03	0.00	0.12	0.34	0.37	0.26	0.20	0.50	2.96

Source: IID WIS: CIMIS stations polygon calculation (Data provided by IID staff).

6. POPULATION TRENDS

The Imperial County Housing Element states, "According to the 2010 US Census, the total population of Imperial County was 174,528 in 2010, an increase of 23 percent since 2000. The population of the unincorporated county increased 15 percent over the same period, from 32,865 to 37,778. Heber was the most populated townsite in the unincorporated county, with a population of 4,275 in 2010; however, Salton City saw the most growth from 2000 to 2010. The Salton City population increased from 944 residents to 3,763, an increase of 299 percent.2" Table 6-1 below identifies the population projections for the unincorporated county and Imperial County as a whole for 2020 and 2035."3.

The Southern California Association of Governments (SCAG) prepares a population forecast as part of its Regional Transportation Plan/Sustainable Growth Strategy. The population in the unincorporated areas of the county grew nearly 80 percent from 2010 to 2020 and another 26 percent from 2020 to 2035.

Table 6-1: Unincorporated Population Trend

Year	2000	2010	2020	2035
Population	32,865	37,778	67,900	73,400

Imperial County Housing Element, 2013

7. GLAMIS SPECIFIC PLAN AREA DESCRIPTION

7.1 Project Location

The approximately 142-acre GSP is located and contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development and creation of a Specific Plan in in accordance with GSPA design criteria, objectives and policies as outlined in the County's General Plan. The existing zoning designation for the GSPA is Open Space/ Preservation (S-2) and a very small area that is General Commercial (C-2).

The general area of the Glamis Beach Store (within APN 039-310-029) is zoned as C-2, while the remainder of the Project site is zoned S-2. The Project site is surrounded by BLM land uses on all sides. The Applicant has prepared this proposed GSP, which includes a General Plan Amendment (GPA) and Zone Change for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning based upon different levels of allowable land use intensity. Also, the GSP proposes a Zone Change from S-2 (Open Space/

[2] http://www.icpds.com/CMS/Media/3_ImperialCountyHE_-FINAL_9-27-13.pdf, Retrieved June 2020

[3] http://www.icpds.com/CMS/Media/3_ImperialCountyHE_-FINAL_9-27-13.pdf, Retrieved June 2020

Preservation) to S-1 (Open Space/ Recreation) for the approximate 1 –acre parcel on the southeast side of the Project (APN 039-310-017). The phasing plan component of the GSP would phase the development so that more intense land uses are developed incrementally over time within the various proposed zones. The CR zoning designations are discussed in greater detail below. In conjunction with the Specific Plan a matching land use ordinance to implement the GSP is also provided.

7.2 Project Elements

Figure 7-1, *Glamis Specific Plan – Land Use Areas*, identifies proposed land uses that would be permitted within the CR zones. Three zoning categories as shown below are being implemented. The following CR Zones are described in their current setting.

7.2.1 CR-1 Zone

The CR-1 Zone is proposed as the least intensive CR zone of the GSP and allows for a limited range of land uses for use focused on private residences, guest housing, vehicle storage, accessory storage building, equipment storage, off-road vehicle maintenance, repair and development off road vehicle maintenance, repairs and development by owner, Research and Development (R&D) facility and vehicle wash areas for owners own use only, As shown in Table 7-1, a total of approximately twenty-two (22) land uses are permitted within this zone.

7.2.2 CR-2 Zone

The CR-2 Zone is proposed for moderate intensity CR Zone of the GSP and allows for a limited range of land uses focused on research and development, employee housing and utility infrastructure uses. As shown in Table 7-1, a total of thirty-four (34) land uses are permitted within this Zone. The permitted land uses of the CR-2 Zone are intended to restrict land uses that promote traffic trips and crossings of the UPRR.

7.2.3 CR-3 Zone

The CR-3 Zone allows for a maximum range of recreational, commercial, resort, retail, medical, entertainment and utility infrastructure land uses. There is a total of 66 land uses which are permitted within this Zone. The purpose of the CR-3 Zone is to provide the greatest flexibility of land use. This zoning, based on the 66 permitted uses listed from Table 7-1, is the highest in water use. Table 7-1 illustrates the list of uses allowed or permitted with a CUP. It is important to note those indicated in red, are deemed high water users. Thus, those users in red are land uses that although they may be permitted, by right, or with a CUP, will have to submit a Water Engineering Study at the time of development as well as a project independent WSA. In addition, they would be required to consult the East Mesa Planning Division at the Regional Water Quality Control Board.

Table 7-1: CR Zones Allowed/PermittedUses[1]

#	Allowed/Permitted Land Uses	CR-1	CR-2	CR-3
1	Accessory storage buildings	X	X	X
2	Adventure Center			X
3	Amusement Facilities			X
4	Bar(s)			X
5	Billboards		X	X

[1]https://www.icpds.com/assets/5-Zoning-Areas-Established-.pdf

Table 7-1: CR Zones Allowed/PermittedUses[1]

#	Allowed/Permitted Land Uses	CR-1	CR-2	CR-3
6	Bulk water sales (RV and general retail sale)			X
7	Caretakers quarter(s) maximum of 3	X	X	X
8	Communications Facilities (i.e., towers)	X	X	X
9	Condominium housing	X	X	X
10	Convention area			X
11	Desert Tours (off road experience)		X	X
12	Drive-in food facilities			X
13	Employee Housing	X	X	X
14	Entertainment Events	X		X
15	Equipment Storage	X	X	X
16	Film production / movie studio		X	X
17	Fireworks display area (as permitted by fire dept and other authorities)		X	X
18	Fuel Station (gas/diesel/propane, including convenience mart)	X	X	X
19	Guest Housing	X	X	X
20	Helipad (emergency/public)	X	X	X
21	Hotel/Motel Accommodations		X	X
22	Lighting or light shows (non-fireworks) as permitted		X	X
23	Medical Services Facility		X	X
24	Mobile food trucks			X
25	Movie theater			X
26	Obstacle Course / Technical driving area			X
27	Off road driving school / Public workshops			X
28	Off road vehicle maintenance, repair, development, research by owner (no sales/leasing)	X	X	X
29	Oil, gas, geothermal exploration		X	X
30	Park, Playground and Picnic area(s)	X		X
31	Power Generation (on site use i.e., diesel/propane)	X	X	X
32	Private Residences	X	X	X
33	Public Parking area(s)			X
34	Public Restrooms			X
35	Public showers			X
36	Racetrack			X
37	Rental Facilities (off road equipment/vehicles)			X
38	Research and Development Facilities	X	X	X
39	Restaurant(s)			X
40	Retail displays / entrance signage			X
41	RV Dump Station(s) provided it meets County requirements		X	X
42	RV Park	X	X	X
43	RV and off-road vehicle storage	X	X	X
44	RV repair facility		X	X
45	Shooting range		X	X

Table 7-1: CR Zones Allowed/PermittedUses[1]

#	Allowed/Permitted Land Uses	CR-1	CR-2	CR-3
46	Solar generating facility including battery storage up to 30 MW for onsite and export	X	X	X
47	Sporting goods store(s)			X
48	Stores (retail general)			X
49	Stores (retail specialty)			X
50	Temporary sales facilities			X
51	Testing facilities (off road equipment)			X
52	Tourist information center			X
53	Training Facilities (off road vehicle use/safety)		X	X
54	Utility Buildings	X	X	X
55	Utility Substation	X	X	X
56	Vehicle parts sales			X
57	Vehicle Repair and Service			x
58	Vehicle Sale			x
59	Vehicle storage area	X	X	X
60	Vehicle wash down area	X	X	X
61	Vendor Sales Area(s) restricted by owner			X
62	Viewing Deck or Tower			X
63	Village area			X
64	Water and/or Wastewater treatment facilities	X	X	X
65	Wedding Chapel			X
66	Wind generating (for electrical power systems) including battery storage up to 30 MW for onsite and export		X	X

*Those uses indicated in red, are land uses that although they may be permitted by right, or with a Conditional Use Permit, will have to submit at the time of development a Water Engineering Study as well as submit on the project's behalf and project independent Water Supply Assessment, as well as consult the East Mesa Planning Division at the Regional Water Quality Control Board. .

7.2.4 Zone (Open Space/Recreation)

The S-1 Zone (Open Space/Recreation) applies only within Planning Area 8. Within this parcel, the GSP proposes a change of zone from the current S-2 Zone to S-1 Zone. As per Title 9, Division 5, Chapter 18, Section 90518.00 of the County's development code, the purpose of the S-1 zone is to designate areas that recognize the unique Open Space and Recreational character of Imperial County including the deserts, mountains and waterfront areas. Primarily, the S-1 Zone is characterized by low intensity human utilization and small-scale recreation related uses. Any new subdivision in the S-1 zone will require all necessary infrastructure, including potable water, sewer and roads to County Standards. The S-1 Zone allows the following uses permitted with a CUP (see Table 7-2 below). Those users in red are land uses that although they may be permitted, by right, or with a CUP, will have to submit a Water Engineering Study at the time of development as well as a project independent WSA. In addition, they would be required to consult the East Mesa Planning Division at the Regional Water Quality Control Board.

Table 7-2 : County of Imperial S-1 Open Space/Recreation Zone – Allowed/Permitted Uses

#	Allowed/Permitted Uses
1	Accessory Structure including cargo container (provided they have an approved building permit and are subordinate to a primary building/use)
2	Crop and tree farming
3	Directional signs of not to exceed six (6) square feet in area but not including commercial advertising
4	Duck clubs
5	Fish farms
6	Forest industries
7	Grazing
8	Gun clubs
9	Harvesting of any wild crop
10	Hotels and motels
11	Marinas, boat liveries and boat launching ramps
12	Mobile home/RV Park (provided 50% of the total use is for RV use)
13	Residence (one per legal parcel)
14	RV park
15	Solar energy extraction generation (provided that it is for on-site consumption only).
16	Home Occupation (per Division 4, Chapter 4; home occupation permit required).

*Those uses indicated in red, are land uses that although may be permitted by right will have to submit at the time of development a Water Engineering Study as well as submit on the project's behalf and project independent Water Supply Assessment, as well as consult the East Mesa Planning Division at the Regional Water Quality Control Board. .

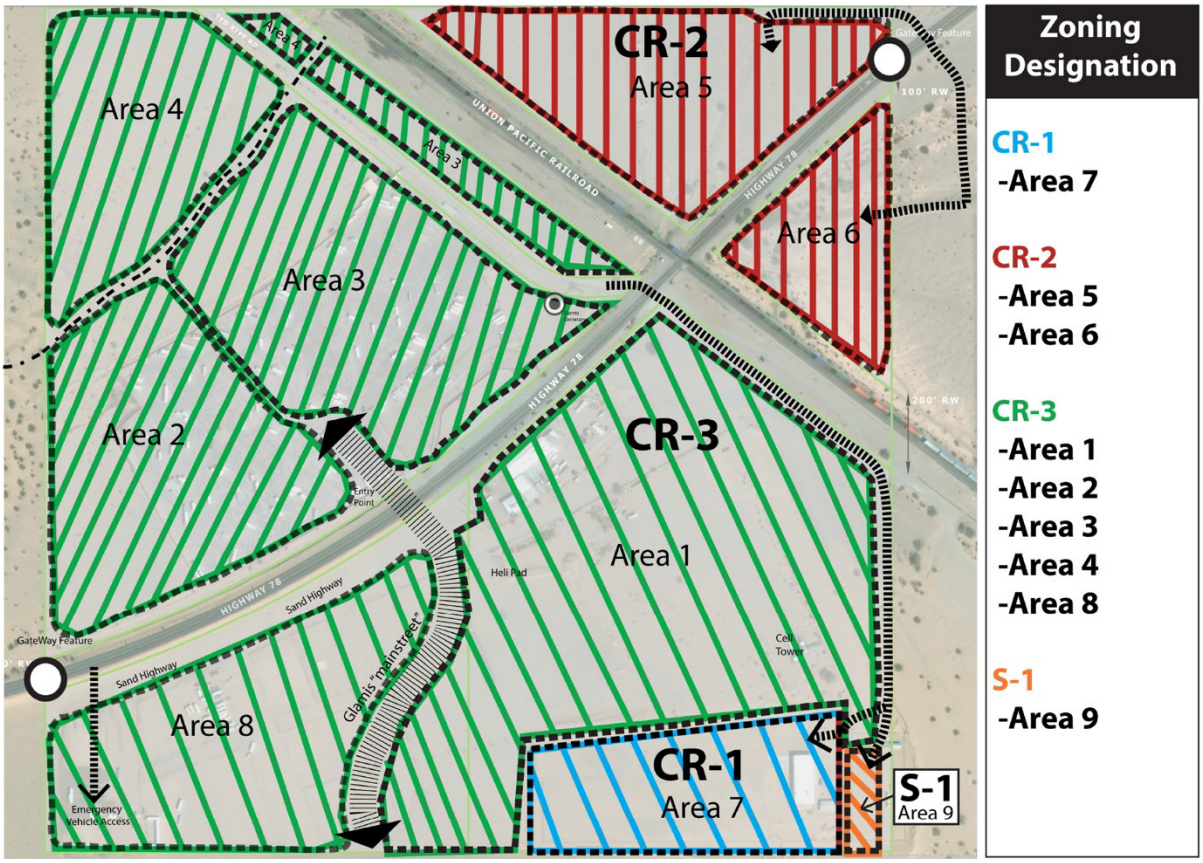

Figure 4 Land Use Preferred

7.2.4.1 Land Use Areas

As shown in Figure 4, Glamis Specific Plan – Land Use Areas, the GSP consist of nine (9) Land Use Areas. Figure 4 shows the CR (CR-1, CR-2, and CR 3) and S-1 zoning applicable within each Land Use Area. Land Use Area 1 is considered as the most developable area of the GSP due to the lack of safety concerns such as pedestrian and OHV crossings along SR 78 and the UPRR. Additionally, special events such as Camp RZR, have been historically hosted in this area that is adjacent to the Open RMZ to the south (within the IDSDRA) which provides for the greatest OHV accessibility of the entire Project site. As shown in the list below, the Land Use Areas correspond with the following Project APNs.

7.3 Phasing Plan

Development within the GSPA is intended to occur over a span of approximately 20 to 50 years and will depend on market conditions, availability of supporting infrastructure, and other factors. Four (4) phases of development are proposed. Within these phases additional phasing may occur and are described as follows which is shown in Figure 5, Glamis Specific Phasing Plan. The proposed zoning is determined based on the total acres involved with the site as seen on Table 7-3. Throughout the Project, the given areas will correspond with a particular APN as well as a certain phase. Table 7-4 provides the relationship among these three factors. It is important to note that according to the applicant, phasing will not be done in a sequential order as the project is built out over the proper water engineering and industry will need to be evaluated through independent studies. Before certain

significant structural improvements are made to this area, required and necessary infrastructure improvements relevant to potable water, wastewater treatment and electrical service would be needed and developed in order to accommodate the projected demand from visitors. There may be some improvements made within this parcel that are not dependent on such services and therefore could be implemented ahead of such infrastructure.

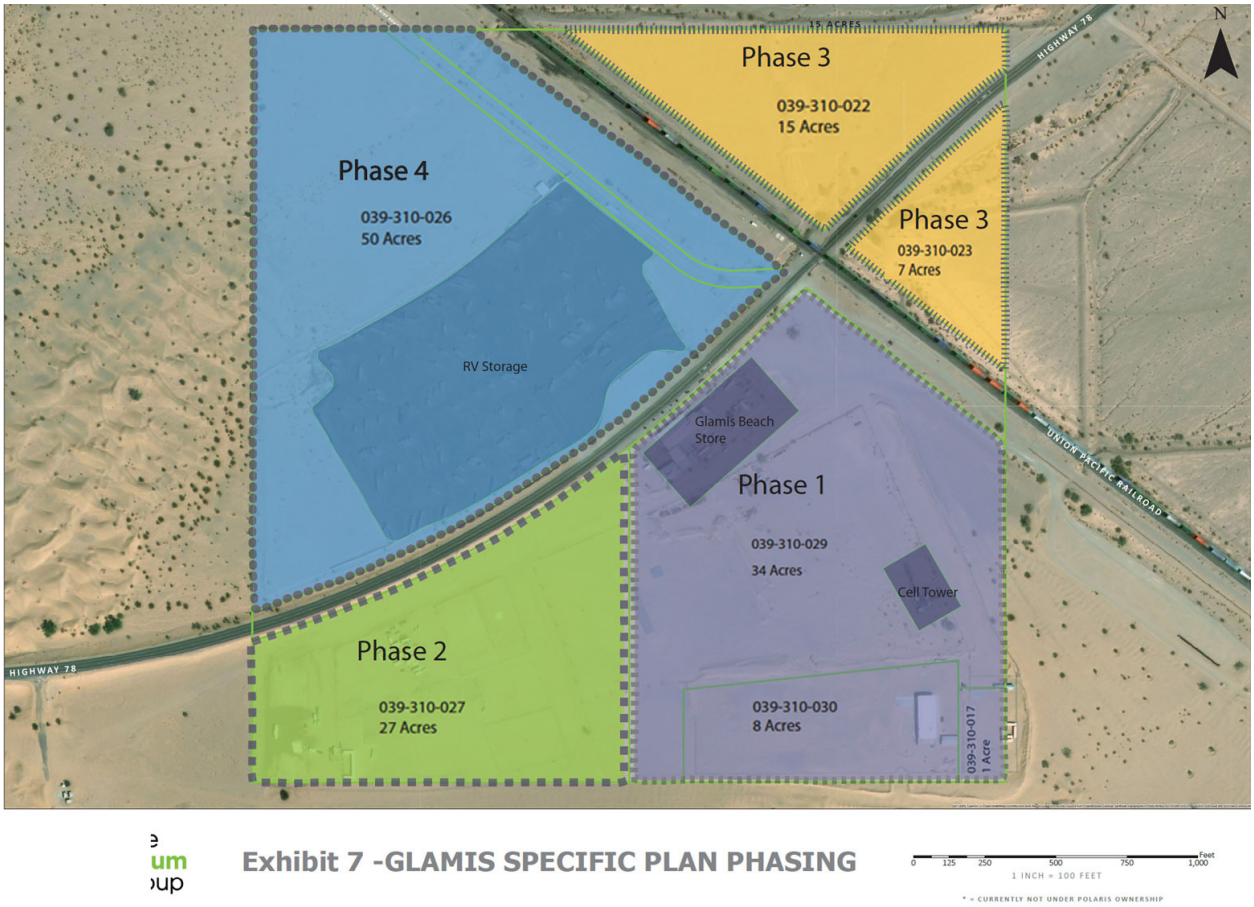

Figure 5 Glamis Specific Plan Phasing

Table 7-3:Phasing Plan in Relation to Zoning and Total Acreage

Phase	Total Acres	Proposed Zoning
Phase One	43 AC	CR-1 and CR-3
Phase Two	27 AC	CR-3
Phase Three	22 AC	CR-3
Phase Four	50 AC	CR-1 and CR-3

Table 7-4: Relationship Table Summary, GSP Land Area and APN and Corresponding Phases

Land Use Area	APN	Phase
Area 1	039-310-029 & 039-310-027	Phase One (390-310-029) Phase Two (390-310-027)
Area 2	390-310-026	Phase Four
Area 3	390-310-026	Phase Four
Area 4	039-310-026	Phase Three Phase Four
Area 5	390-310-026	Phase Three
Area 6	039-310-023	Phase One Phase Four
Area 7	039-310-030	Phase One*
Area 8	039-310-027	

* Small portion overlaps special events space.

8. OVERALL WATER DEMAND FOR PROJECT

Overall water demand is divided between construction and operations. Construction of Phase 1 would likely occur within the first three years. Development of all four phases is estimated to take place over a 20 to 50 year period. Construction water use is based on the square footage of the proposed facilities and the amount of water required for a 4-inch slab of concrete. Estimated construction water use is shown in Table 8-1.

Table 8-1: Construction Water Demand

Proposed Land Uses (PHASES) & Water Consumption					
Proposed Land Uses	Size (Square Feet [SF])	80 lb Bags of Cement Required[5]	Gallons of Water Required per Bag[4]	Total Water use (Gallons)	Total Water Use Acre Feet (AF)
Phase One					
R&D Facility	5,000 SF	2,778	5	13,890	0.04
Hotel / Motel	20 Rooms (8347 SF)[1]	4,638	5	23,190	0.07
Restaurant					
Restaurant	4,000 SF	2,223	5	11,115	0.03
Fast food	4,000 SF	2,223	5	11,115	0.03
Bar	4,000 SF	2,223	5	11,115	0.03
Retail Expansion	2,000 SF	1,112	5	5,560	0.02

Proposed Land Uses (PHASES) & Water Consumption					
Proposed Land Uses	**Size (Square Feet [SF])**	**80 lb Bags of Cement Required[5]**	**Gallons of Water Required per Bag[4]**	**Total Water use (Gallons)**	**Total Water Use Acre Feet (AF)**
Service Center	4 Bays (792 SF)[2]	440	5	5,560	0.02
RV Park	10 RV-sites (43,560 SF)	24,200	5	121,000	0.37
PV Solar Generation Facility	7 AC				19.32
			Total for Phase One	***165,465***	***19.93***
Phase Two					
EMS Facility	5,000 SF	2,778	5	13,890	0.04
Glamis Mainstreet Circulation Corridor	4,450 x72 = 13,4451 SF	74,695	5	373,475	1.14
			Total for Phase Two	***387,365***	***1.18***
Phase Three					
Multi-Family Residential / Staff Housing	14 DU (5,843 SF)[1]	32,464	5	162320	0.49
RV Park	20 sites (87,120 SF)	48,400	5	242000	0.74
			Total for Phase Three	***404,320***	***1.23***
Phase Four					
Guest Housing	14 DU (5,843 SF)[1]	32,464	5	162320	0.49
RV Storage	30 sites (1,306,800 SF)	72,600	5	363000	1.11
Special Event Space					
			Total for Phase Four	***525,320***	***1.6***

Overall operational water demand for the Project is shown in Table 8-2.

Table 8-2: Overall Proposed Water Consumption Usage per Land Use by Phase

Proposed Land Uses (PHASES) & Water Consumption					
Proposed Land Uses	Size	Gallons Per Day (GPD)	Total Gallons Per Days (211)	Total Acre Feet (AF)	Duration of Time (Days) October –April
Phase One					
R&D Facility	5,000 SF	44 (4 people)	9,284	0.02	211
Hotel / Motel	20 Rooms	72.6	306,372	0.94	211
Restaurant					211
Restaurant	4,000 SF	5,800	1,223,800	3.75	211
Fast food	4,000 SF	1,934	408,074	1.25	211
Bar	4,000 SF	3,000	633,000	1.94	211
Retail Expansion	2,000 SF	244	51,484	0.16	211
Service Center	4 Bays	1000	211,000	0.65	211
RV Park	10 Sites	27.5 (11 Person) 302.5	63827.5	0.19	211
Vendors [e]	30 Vendors	55 (Per Vendor)	348,150	1.06	211
PV Solar Generation Facility	7AC	-NA	NA	0.7 AF	365
Total for Phase One				**10.66**	
Phase Two					
EMS Facility	5000 SF	44 (4 people)	9284	0.02	211
Glamis Mainstreet Circulation Corridor	NA	NA	NA	NA	NA
Total for Phase Two	**NA**	**NA**	**NA**	**.02**	**NA**
Phase Three					
Multi-Family Residential / Staff Housing	14 DU	55 Gallons per[2] day per Unit	162,470	0.50	211
RV Park	20 sites	27.5 (22 persons) (605)	127,655	0.39	211
Total for Phase Three	**-**	**-**	**684,695**	**0.89**	**211**
Phase Four					

[2] https://www.sandiegocounty.gov/content/dam/sdc/pds/SGMA/Human-Right-To-Water-Presentation-Notes.pdf

Proposed Land Uses (PHASES) & Water Consumption					
Proposed Land Uses	Size	Gallons Per Day (GPD)	Total Gallons Per Days (211)	Total Acre Feet (AF)	Duration of Time (Days) October –April
Guest Housing	14 DU	55 Gallons per[3] day per Unit	162,470	0.50	211
RV Storage	NA				
Special Event Space	NA				
Total for Phase Four	**NA**	**NA**	**NA**	**0.50**	**NA**

8.1 Phase One

As shown in Figure 5, *Glamis Specific Phasing Plan*, development of Phase One will occur where the existing Glamis Beach Store, Restaurant and Bar, and OHV repair facility are located as contained within Land Use Area 1 (APN 039-310-029), Area 5 (039-310-026) and Area 6 (APN 039-301-023).

Before certain significant structural improvements are made to this area, required and necessary infrastructure improvements relevant to potable water, wastewater treatment and electrical service would be needed and developed to accommodate the projected demand from visitors. There may be some improvements made within these Land Use Areas that are not dependent on such services and therefore could be implemented ahead of such infrastructure.

Uses permitted within Phase One could include restaurant(s), bar(s), repair shop(s), a vendor row area and event area, and other uses (see Table 7-1).

Phase One would be contained within Land Use Areas 1 with the exception of possible development of a research and development (R&D) facility which would occur in Area 5 and an RV park in Area 6. Part of Land Use Area 7 (APN 039-310-030) could be developed during Phase One as it slightly overlaps onto current land used for Camp RZR.

The estimated water demand for construction for Phase 1 is expected to be approximately 19.93 AF over a three year period of construction (6.64 AF annually for three years) and 10.66 AF annually for operational use. During the first three years of Phase One the Applicant would be using 17.3 AF per year. Once construction is completed this amount would be reduced to 10.66 AF per year. It is important to note that the Applicant currently has an allocated amount of 1.5 AF through an existing CUP. The Applicant has requested an increase to 25 AF through the application of an additional CUP. The existing water treatment system has the capability to treat 22 AF of water per year.

In addition, the Applicant is proposing to host special events three to four times per year that could host up to 50,000 people. Water use for these individual events could range from 2 to 5 AF based on the

[3] https://www.sandiegocounty.gov/content/dam/sdc/pds/SGMA/Human-Right-To-Water-Presentation-Notes.pdf

calculations shown in Tables 8-3 and 8-4. Estimated water use for these special events could be as much as 20 AF if four, maximum capacity events, are held. Water use for these events would be brought in and the Applicant would be required to prove to the County they have the ability to source this water.

Table 8-3: Per Capita Health and Safety Water Quantity Calculation[3]

Facility	Non-Conserving		Conservation Fixtures	
Toilets	4 Flushes X 3.5 gpf	14.0	4 Flushes X 1.6 gpf	10.5
Showers	5 min X 3.0 gpm	15.0	5 min X 2.0 gpm	10.0
Washers	12.0 gpcd	4.0	10. gpcd	10.0
Kitchen	4 gpcd	4.0	4 gpcd	3
Other	4 gpcd	4	4 gpcd	4
Gallons per Person Per day		**49.0**		**33.4**

[3] http://www.cityofelcentro.org/userfiles/6-23-16%20FINAL%20El%20Centro%202015%20UWMP.pdf

Table 8-4: Water Consumption based on Event Population (Hypothetical Model)

Event	Population	Average Per Capita Health and Safety Water Calculations	Gallons per Event	Acre Feet
Event A	20,000 people	33 gpd	660,000 g	2 AF
Event B	30,000 people	33 gpd	990,000 g	3 AF
Event C	50,000 people	33 gpd	1,650,000 g	5 AF

8.1.1 Electrical Service Upgrades for Phase One

The third system of infrastructure improvement would be electrical service upgrades. The Project site currently relies on diesel generators for all of its electrical power demand needs. It may not be a feasible option for new development to be reliant upon diesel generators in the future since air quality and greenhouse gas (GHG) emissions regulations are likely to become more restrictive over time. With this in mind, three options are being evaluated to determine which available source of power supply would best fit as the preferred option for the GSP.

- The first option would to be for Imperial Irrigation District (IID) to construct and install a power line (transmission line and/or distribution line) to extend from the nearest substation (approximately 7.2 miles to the northeast). This could potentially occur during Phase One in Area 1.
- A second and potentially more viable option would be to develop a small commercial solar photovoltaic (PV) system, with a back-up battery storage component or another green power system. This could potentially occur during any phase although it is anticipated for purposes of this WSA to occur in Phase One in Areas 1, 4 or 5.
- A third option may be wind generation. Although winds in this area are sporadic, there is newer technology and future technology that may make wind or other green energy an option.

The timing for either of these three (3) powers supply/delivery options to be developed is unknown at this time. However, one of these three power supply/delivery options will need to be considered prior to initial development, since the use of diesel generators (existing condition) to support future development, would be prohibitively costly and complex in meeting air quality regulatory requirements.

8.1.2 Water Demand For Phase One

Per the State of California, the California Water Code states the following:

> *"California Water Code section 10912. For the purposes of this part, the following terms have the following meanings: (a) "Project" means any of the following: (1) A proposed residential development of more than 500 dwelling units. (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space. (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space. (4) A proposed hotel or motel, or both, having more than 500 rooms. (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area. (6) A mixed-use project that*

includes one or more of the projects specified in this subdivision. (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. (b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections."

Phase One encompasses many potential land use types and, if permitted as indicated on Table 7-1, any high demand land use will have to submit a Water Engineering Study as well as project independent WSA. In addition, they would have to consult the East Mesa Planning Division at the Regional Water Quality Control Board. The Applicant is currently using 1.5 AF per year with an additional CUP application pending of an additional allowance of 23.5 AF which would total 25 AF per year. This amount would be able to accommodate all the proposed land use categories.

8.2 Phase Two

Phase Two would most likely be within Area 1, immediately west of Phase One. Phase Two development would serve as an extension to development occurring within Phase One by incorporating land uses permitted under the CR Zone similar to those permitted in Phase One. Phase Two would involve development of an EMS Facility in APN 039-310-027 and would also incorporate the Glamis Mainstreet (as shown on Figure 4) to serve as a circulation corridor for OHV traffic to and from the dunes and to Phase Four (Areas 2, 3, 4, and 6) located directly north of SR 78 and east of the UPRR.

8.2.1 Water Demand for Phase Two

Similarly, as stated for Phase One, Per the State of California, the CWC states the following:

"California Water Code section 10912. For the purposes of this part, the following terms have the following meanings: (a) "Project" means any of the following: (1) A proposed residential development of more than 500 dwelling units. (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space. (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space. (4) A proposed hotel or motel, or both, having more than 500 rooms. (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area. (6) A mixed-use project that includes one or more of the projects specified in this subdivision. (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. (b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections."

Phase Two is anticipated to occur after Phase One is complete. The amount of water required for construction of Phase Two would be 1.18 AF and operational water use would be 0.02 AF per year. Thus, operational water uses for Phase Two would represent only a minor increase in water demand from Phase One.

8.3 Phase Three

Phase Three, located on the northeast side of the UPRR and bisected by SR 78, would be located within Areas 4 and 5. No major public use facilities would be considered for development within these two APNs to discourage OHV traffic from crossing the UPPR to access these areas. Phase Three however, would serve for the development of uses relevant to employee housing, RV park, and possible PV Solar array system.

8.3.1 Water Demand for Phase Three

Per the State of California, the CWC states the following:

> *"California Water Code section 10912. For the purposes of this part, the following terms have the following meanings: (a) "Project" means any of the following: (1) A proposed residential development of more than 500 dwelling units. (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space. (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space. (4) A proposed hotel or motel, or both, having more than 500 rooms. (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area. (6) A mixed-use project that includes one or more of the projects specified in this subdivision. (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. (b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections."*

The amount of water required for construction of Phase Three would be 1.23 AF and 0.89 AF per year of water would be required for operations. Thus, operational water uses for Phase Three would represent only a slight increase in operational water use from Phase One and Phase Two and additional water would not be required.

8.4 Phase Four

Per the State of California, the CWC states the following:

"California Water Code section 10912. For the purposes of this part, the following terms have the following meanings: (a) "Project" means any of the following: (1) A proposed residential development of more than 500 dwelling units. (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space. (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space. (4) A proposed hotel or motel, or both, having more than 500 rooms. (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area. (6) A mixed-use project that includes one or more of the projects specified in this subdivision. (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. (b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections."

Phase Four, located on the north side of SR 78, would be located within Land Use Areas 2, 3 4 and 64. Phase Four would encompass development of guest housing in Area 4, additional RV storage in Area 6 and special event space in Areas 2 and 3. Most of the infrastructure improvements for this phase will be based on regulatory, safety and liability concerns, and consequently, will require specific infrastructure improvements to be in place prior to development.

8.4.1 Water Demand for Phase 4

Phase Four would require 1.6 AF of construction water and 0.5 AF per year of operational water use. Thus, operational water uses for Phase Four would only be a slight increase over Phases One, Two and Three and additional water would not be required.

9. PREPARATION OF SB 610 ASSESSMENTS – GROUNDWATER

9.1 Imperial Integrated Regional Water Management Plan (October 2012)

Imperial County has an Integrated Regional Water Management Plan (IRWMP) which was adopted in October of 2012. As stated in the IRWMP, "…The Imperial IRWMP area lies within the Salton Trough of southern California as shown on Figure 6. The Salton Trough is the dominant feature of the Colorado Desert geomorphic province of California. The trough is about 130 miles long and up to 70 miles wide and is generally considered the northwesterly landward extension of the Gulf of California (Loeltz et al., 1975). The term Salton Basin (Basin) applies to the broad region draining directly into the Salton Sea. The Imperial Valley lies in the central part of the Basin south of the Salton Sea. Most of the IID service area overlies the area defined as the Imperial Valle. The Salton Sea is a critical component of the Pacific Flyway migratory corridor as it is an essential overwintering site for thousands of migratory waterfowl. Its marsh areas provide significant habitat for the endangered Yuma clapper rail…[4]"

[4] https://www.iid.com/water/water-supply/water-plans/imperial-integrated-regional-water-management-plan, Retrieved , June 2020

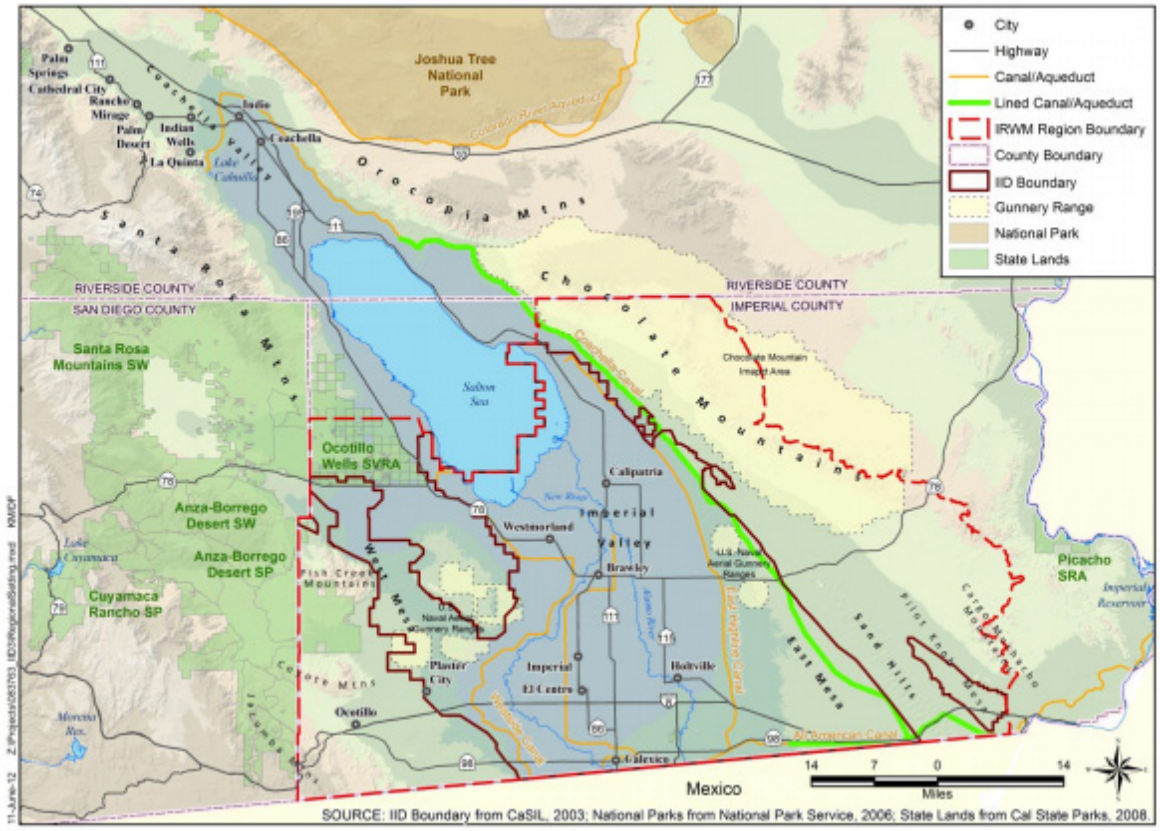

Figure 6: Imperial IRWMP Area

The IRWMP encompasses three principal physiographic and hydrologic areas: (1) the Imperial Valley which lies within the valley floor generally inside the boundaries of the Westside Main and East Highline Canals and north of Mexico; (2) the East Mesa which is generally east of the East Highline Canal; and (3) the West Mesa generally west of the Westside Main canal. The proposed Project is in the East Mesa, which is in the southeastern portion of the Salton Basin. The IRWMP describes this area as the broad area east of the East Highline Canal and east margin of pre-historic Lake Cahuilla, and west of the Sand Hills Fault. The East Mesa is also roughly bordered by the Coachella Canal on the east and the AAC on the south. The East Mesa is an alluvial surface that slopes gently west-southwest, covered with thin veneers of wind-blown sand. The East Mesa aquifer is chiefly unconfined, homogenous, and composed of coarse grained deposits of gravels, sands, silts, and silty clays that were deposited by the Colorado River. Faults in East Mesa (e.g., San Andreas Fault and Algodones Fault) act as partial barriers to the westward flow of groundwater from this area. The Calipatria Fault also crosses a small portion of the East Mesa along the southwest margin and also impedes the flow of groundwater out of East Mesa.

According to the IRWMP, the East Mesa has the greatest amount of available data on groundwater quality, and it includes a large number of groundwater wells. It also has a small number (12) of water supply wells, some of which are used for agricultural purposes. It has two aquifers: a shallow unconfined zone from 0 to 85 feet and a deeper semi-confined zone from 85 to 160 feet (Crandall, 1983). The aquifers were differentiated based on

chemistry of their waters and the perforated interval of the particular well. Table 9-2 below provides the analysis and characterization of the water quality[5].

Table 9-1: East Mesa Water Quality from IRWMP

Table B-1. East Mesa Water Quality

	Zone A (85 to 160 Feet)		Zone B (0 to 85 Feet)	
Chemical Character	Sodium Chloride	15 wells	Sodium Chloride	13 wells
	Sodium Sulfate	3 wells	Sodium Sulfate	10 wells
	Sodium Bicarbonate	0 wells	Sodium Bicarbonate	6 wells
pH	Range: 7.4- 8.6	17 wells	Range: 4.3-11.2	17 wells
	Common 7.4- 8.6		Common 6.9- 9.0	
	4.3- 6.4	0 wells	4.3- 6.4	4 wells
	6.5- 7.5	1 well	6.5- 7.5	5 wells
	7.6- 8.6	16 wells	7.6- 8.6	11 wells
	8.7- 9.7	0 wells	8.7- 9.7	3 wells
	9.8-11.2	0 wells	9.8-11.2	4 wells
TDS (ppm)	Range 589-2860	17 wells	Range: 250-2620	27 wells
	Common: 750- 995	9 wells	Common: 434- 787	16 wells
	589	1 well	250	1 well
	1270	1 well	882-1413	7 wells
	1710-2860	6 wells	1750-2620	3 wells
	7112	1 well	7151	1 well
F (ppm)	Range: 0.2-1.4	10 wells	Range 0.1-1.6	22 wells
	1.9	1 well	3	1 well
B	0.26 and 0.46	2 wells	0.41	1 well

Source: Crandall, 1983

According to the IRWMP, hydraulic conductivity values for the shallow and deeper aquifers values varied from a low value of 0.5 foot per day in the central irrigated area of the to a high value of 80 feet per day in East Mesa, where sediments are highly transmissive sands and gravels. Therefore, the IRWMP concludes that on average, new wells in the East Mesa would be expected to have higher yields than those in the West Mesa[5].

The IRWMP states, "Data available in the IRWMP for wells in the East Mesa include well yields and specific capacities. Reported well yields varied from 80 to 3,000 gallons per minute (gpm), depending on depth and location. In general, yields in excess of 900 gpm were associated with depths of 200 feet or more. Specific capacity data reported for seven wells in the East Mesa, varied from 0.8 to 85 gallons per minute per square foot. The well with the highest specific capacity was located at the junction of the All American Canal (AAC) and Coachella Canal. Specific capacities were highest to the east and diminished to the west. Higher specific capacities were associated with wells deeper than 200 feet (Crandall, 1983). Consistent with the overall geologic model for the Imperial IRWMP area, the highest transmissivities are associated with the East and West Mesas

[5] https://www.iid.com/water/water-supply/water-plans/imperial-integrated-regional-water-management-plan, Retrieved, June 2020.

[5] https://www.iid.com/water/water-supply/water-plans/imperial-integrated-regional-water-management-plan

where aquifer formations are generally more homogenous and include a much higher proportion of coarse sands and gravels then the Imperial Valley floor, allowing groundwater to move at higher rates."[5]

The direction of groundwater movement in the East Mesa is controlled primarily by contours of groundwater level elevation; the rate of groundwater movement is proportional to the gradient or slope of the groundwater table. Groundwater levels and flow have changed with lining of the canals; therefore, two temporal sets of water level data are presented: one for 1960 representing conditions with recharge from the canals and one for 1993 after the southerly portions of the Coachella Canal was lined. Lining of portions of the AAC, generally about six miles east of the East Highline Canal to about five miles east of the Coachella Canal was not started until 2006 so neither set of maps reflect the reduction of seepage from the AAC. A portion of the AAC still contributes recharge to East Mesa. Additional details groundwater contour maps are also provided for both the East and West Mesas.

10. EAST MESA GROUNDWATER MANAGEMENT PLANNING AREA[5]

The Project is located in the East Mesa Groundwater Management Planning Area (Figure 7) which is a planned and coordinated locally to ensure a sustainable groundwater basin to meet future water supply needs. Planning elements are the tasks that go into developing an adopted Groundwater Management Plan (GMP) and forming a governance structure to represent and implement the plan over the Management Area. To reach this goal, many of the legal requirements now in effect have to be addressed in the planning stage to include their implementation when governance has been formed and active monitoring and reporting are taking place. This chapter introduces each of the planning elements that go into developing the GMP.

The Groundwater Management Planning Elements for the East Mesa Area include elements from three sources: SB 1938 mandatory components, Assembly Bill (AB) 3030 and SB 1938 voluntary components, and California Department of Water Resources (CDWR) Bulletin 118 suggested components. The seven mandatory components that are required to be compliant with SB 1938 will need to be addressed in the GMP. The GMP will also need to address the twelve (12) specific technical elements identified in the CWC, along with the seven recommended components identified in DWR Bulletin 118 (DWR 2003). This guidance document encourages a locally developed, stakeholder-driven GMP process that reflects current State law; coordinates existing groundwater management; and defines actions for developing projects and management programs to monitor the operation of the East Mesa Area and to improve the long-term sustainability of groundwater resources in the area and support the goals and objectives of the IRWMP. This guidance document also provides the required action items of an adopted GMP that, when implemented, will maintain or enhance groundwater levels and water quality, minimize inelastic land subsidence, and manage available surface and groundwater conjunctively to allow greater operational flexibility.

[5] https://www.iid.com/water/water-supply/water-plans/imperial-integrated-regional-water-management-plan

[5] https://www.iid.com/home/showpublisheddocument?id=9546

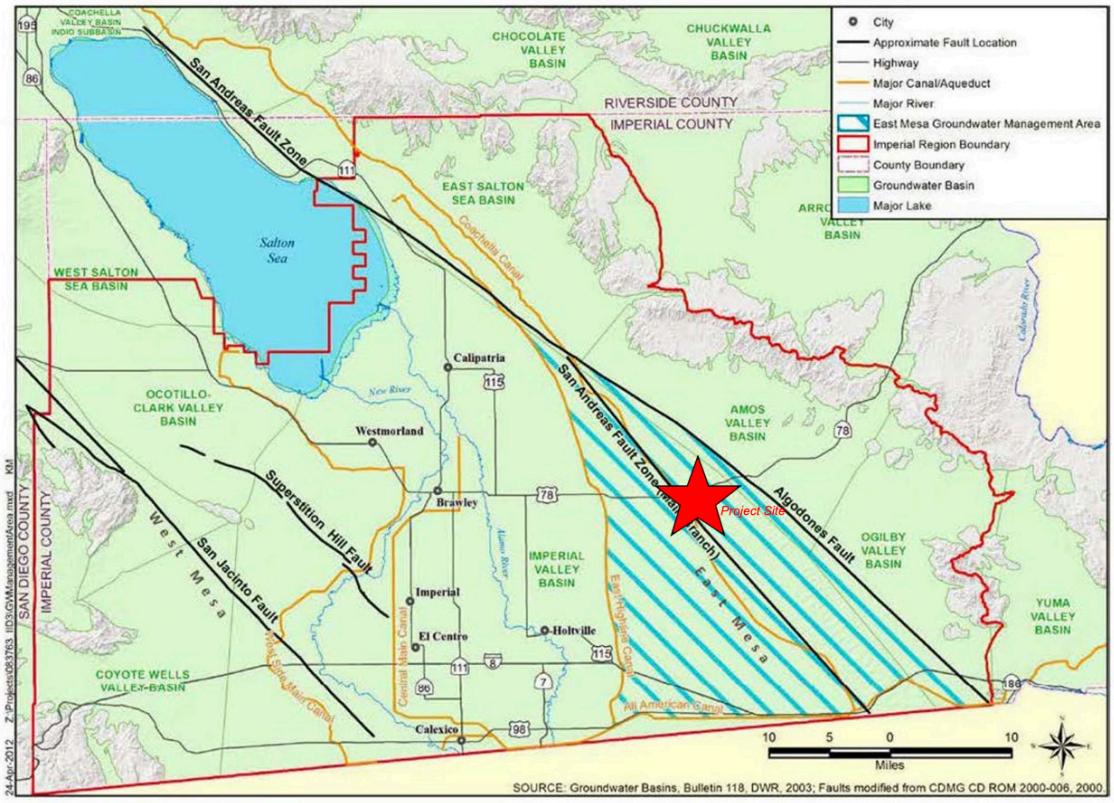

Figure 7 :East Mesa Groundwater Management Plan Area & Project Location[5]

10.1 Title 9, Division 21, Water Well Regulation [Division 21 Adopted November 24, 1998 (Amended October 31, 2006)]

Title 9, Division 21, Water Well Regulation, Division 21, Sec. 92102.00 Permit(S) Required

Title 29, Section 92102.00 states, in relevant part, that "No person shall (1) drill a new well, (2) activate a previously drilled but unused well, (unused shall mean a well or wells that have not been used for a 12 month) period by installing pumps, motors, pressure tanks, piping, or other equipment necessary or intended to make the well operational, (3) increase the pumping capacity of a well, or (4) change the use of a well, without first obtaining a CUP through the ICPDS. The pumping capacity shall mean the "permitted amount" or in the absence of a permit the annual acreage, over 3-year period." Therefore, the Applicant would need to obtain a CUP from the County for the onsite well.

Additionally, this Section of Title 29 states that "[Sec. 92102.00…] (B) Well Construction Permit. No person shall dig, bore, drill, deepen, enlarge, refurbish, or destroy a water well, cathodic protection well, observation well,

[5] Please see Appendix A for East Mesa Groundwater Management Elements

monitoring wells or any other excavation that intersects ground water without first obtaining a well construction permit through the Planning & Development Services Department…" The Applicant would also have to obtain a Well Construction Permit from the County.

Title 9, Division 21, Water Well Regulation, Division 21, Sec. 92102.05 Suspension and Revocation

A. Circumstances for such action: Enforcement agency may suspend or revoke any permit issued pursuant to this Ordinance, whenever it finds that the permittee has violated any of the provisions of this Ordinance or has misrepresented any material fact in his/her application or any supporting documents for such a permit. Prior to ordering any such suspension or revocation, the enforcement agency shall give permittee an opportunity for a hearing thereon, after reasonable notice. The hearing shall be before the enforcement agency, the director, or his designated representative.

B. Consequences: No person whose permit has been suspended or revoke shall continue to perform the work for which the permit was granted until, in case of suspension, such permit has been reinstated by the enforcement agency.

C. Additional Work: Upon suspending or revoking any permit, the enforcement agency may order permittee to perform any work reasonably necessary to protect the ground water from pollution or contamination, if any work already done by permittee has left a well in such a condition as to constitute a hazard to the quality of the ground water. No permittee or person who has obtained a permit issued pursuant to this Ordinance shall fail to comply with such order

TITLE 9, DIVISION 21, WATER WELL REGILATION, DIVISION 21, SEC. 92103.01 REPORTS

This Section of Title 9 requires the submission of a Completion Report: "The driller shall provide the enforcement agency a completion report within 30 days of the completion of any well construction, reconstruction, or destruction job.

A. Submittal of State "Report of Completion": A copy of the "Report of Completion" (Driller's well log) required by CWC, Section 13751, shall be submitted by the well driller to the enforcement agency within 30 days of construction or destruction of any well (except driven wells). This report shall document that the work was completed in accordance with all applicable standards and additional permit conditions. This section shall not be deemed to release any person from the requirement to file said report with the CDWR.

B. Confidentiality of Report: With the exception of the well driller's name, the date the well was drilled and the well yield, all information contained in this report shall remain "Confidential".

C. Other Agency's Requirements: Nothing in this Ordinance shall be deemed to excuse any person from compliance with the provisions of CWC, Section 13752, relating to notices and reports of completion or any other federal, state, or local reporting regulations.

TITLE 9, DIVISION 21, WATER WELL REGILATION, DIVISION 21, SEC. 92103.00 REGISTRATION OF WELL

This Section requires that any person who uses a new or existing well shall first register said well with the ICPDS. If a well is under an active conditional use permit, the well shall be deemed to be registered. Any well that is not under an Imperial County CUP shall be registered with the ICPDS and the State pursuant to CWC, Section 13750. An application to register any well shall be filed with the ICPDS and said application shall contain all information required upon said form.

TITLE 9, DIVISION 21, WATER WELL REGILATION, DIVISION 21, § 92103.02 WELL STANDARDS

Except as otherwise specified, the standards for the construction, repair, reconstruction, alteration, reactivation, operation, or abandonment of wells shall be as set forth in:

A. The CDWR Bulletin 74-81 entitled, "Water Well Standards, State of California", except as modified by subsequent supplements or revisions issued by the CDWR. Division 21 Adopted November 24, 1998 (Amended October 31, 2006)

B. The CDWR Bulletin 74-90 and any subsequent supplements or revisions issued by the CDWR.

C. The following factors, to the extent necessary to avoid conditions of overdraft, subsidence, well interference, water quality degradation, or other environmental degradation: 1. The type of use or uses served. 2. The number of users served. 3. Wasteful or inefficient use. 4. Water conservation activities. 5. Reasonable need of the extractor and other affected water users. 6. The quality of groundwater. 7. The affected groundwater basin or sub-basins. 8. Environmental impact as determined through the CEQA review. 9. Any other factors that the ICPDS reasonably believes it should consider in order to reach an equitable result within the entire County in accordance with the provisions of this Ordinance, and of California Law.

11. COLORADO RIVER BASIN REGION OF CALIFORNIA (BASIN PLAN) (2019)5

For water quality planning and protection purposes, the Project is within the Colorado River Basin Region of the California Regional Water Quality Control Board (RWQCB). The Water Quality Control Plan for the Colorado River Basin (Basin Plan) is the Board's master plan for water quality protection. The Basin Plan identifies the waters in the Region, their beneficial uses, and water quality objectives to protect those uses. The Basin Plan fulfills state and federal statutory requirements for water quality planning, thereby preserving and protecting ground and surface waters of the Colorado River Basin Region. The proposed Project is in the Imperial Valley Hydrologic Unit.

11.1 Beneficial Use Designations Of Aquifers

The groundwater Beneficial Use Designations for this Region are currently based on hydrologic units. The Basin Plan designates Municipal and Industrial supply as the beneficial uses of groundwater in the Imperial Valley Hydrologic Unit. However, first encountered groundwater beneath the Project's site is likely too saline (TDS > 5,000 mg/L) to support the Municipal Supply designation. Because of this, in the next three years, Regional

[5] https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/docs/bp032014/r7_bp2019fullbp.pdf, Retrieved, June 2020

Water Board staff intends to review the appropriate groundwater data and propose changes to the Beneficial Use Designations so that they will correspond to individual groundwater aquifers within the various hydrologic units. Nevertheless, based on a recent hydrologic evaluation conducted by Stantec for the Project, deeper groundwater is expected to be available beneath the site in quantity and quality for the proposed Project5.

11.2 Historic Use In The Basin- Records

The closest historical records of related to groundwater pumping on record belongs to the Western Mesquite Mines, with ORDER R7-2014-0032, Waste Discharge Requirements and Monitoring and Reporting Program permit with the California RWQCB Colorado River Basin Region.

The newly approved Wister Solar Project will also be receiving water from this aquifer.

According to the IRWMP there is proof that farmers did use groundwater wells at one point to water crops, however there are no records on file at the County of Imperial of such permits. The majority of farmers rely on the IIDs water conveyance system for water deliveries.

The proposed well would be new and therefore has no other historical use. All water being pumped will from this proposed ground water well will be a net increase.

12. PROJECT WELL HYDRAULIC EVALUATION [5]

East Mesa is located in the southeastern portion of the Salton Basin and is described as the broad area east of the East Highline Canal and east margin of pre-historic Lake Cahuilla, and west of the Sand Hills Fault. The Sand Hills Fault (also named the Algodones Fault), an easterly splay of the San Andreas Fault system, is mapped as bordering the east side of the Sand Hills (Loeltz et. al., 1975). The East Mesa is also roughly bordered by the Coachella Canal on the east and the AAC on the south. The East Mesa is an alluvial surface that slopes gently west-southwest, covered with thin veneers of wind-blown sand. The East Mesa aquifer is chiefly unconfined, homogenous, and composed of coarse grained deposits of gravels, sands, silts, and silty clays that were deposited by the Colorado River. In East Mesa, the San Andreas Fault zone includes a main branch along the west margin of the Sand Hills, and an easterly splay identified as the Algodones Fault (Loeltz et. al., 1975). These faults act as partial barriers to the westward flow of groundwater from this area. The Calipatria Fault also crosses a small portion of the East Mesa along the southwest margin and also impedes the flow of groundwater out of East Mesa.[5]

12.1 Aquifer Extent and Properties

The groundwater storage capacity was estimated at 360,000 AF (DWR, 1975). High permeability units likely include coarse sands and gravels, where present. Aquifer extents are bounded by outcropping bedrock in the Chocolate Mountains and possibly low-permeability fault zones such as the San Andreas Fault Zone, the Banning Mission Fault, and other unnamed faults. Specific to East Mesa, aquifers in this area are generally unconfined, homogenous, and composed of sediments deposited by the Colorado River (IIWMP, 2012). A geothermal test well was previously drilled at the Project by Ormat (well 12-27) to a depth of 3401 feet below ground surface (bgs). The shallow groundwater system was not specifically characterized during drilling and testing. However,

[5] Stantec: Hydrological Evaluation, Wister Solar Development Project. June 2020.
[5] STANTEC STUDY
[5] https://imperialirwmp.org/wp-content/uploads/2013/07/Appendix-B-Desalination-Groundwater-Development-20121016_Proof21.pdf

static temperature logs from the well may indicate the presence of an aquifer zone as shallow as 40 to 50 feet bgs. Other aquifer zones are likely present but were not identified due to the limitations of temperature logs. Geothermal properties of the test well were non-economical, and the well was abandoned. The nearest East Mesa well with a lithological log is 12S/16E-9A, which is located 9 miles to the southwest of the Proposed Well. In the 1000-foot log, 61% of the thickness is dominated by sand, 34% dominated by clay and approximately 1% dominated by sandstone. Sand and clay intervals also include silts and gravels. Coarse sands and gravels, likely having high hydraulic conductivities, are intermittently present throughout the logged sequence. The perforated interval of the well was placed at 150-1,000 feet and the static water level was recorded at 154.5 feet bgs, which is an elevation of 65.5 feet bgs. Other nearby wells with lithological logs were completed in the Imperial Valley and contain higher percentages of clay (Loeltz et al., 1975).

In the East Mesa, the source of water supply recharge to the groundwater aquifer was from canal seepage from the old unlined Coachella Canal and the AAC. However, recharge has essentially ceased when portions of unlined Coachella Canal were lined in 1979. Although portions of the AAC were lined between 2006 and 2010, the project did not complete lining of the canal completely through the East Mesa area, so some recharge from the canal to the mesa still continues. Due to the arid conditions, virtually no direct precipitation reaches the groundwater aquifer in the East Mesa (Crandall, 1983). Groundwater from the East Mesa is discharged at ground surface in springs and in the subsurface into Imperial Valley aquifers. Discharge of groundwater onto ground surface in springs occurs at areas of shallow groundwater along the AAC. In these areas, where wetlands have been created from canal seepage, discharged groundwater consumptive use is mainly attributable to evapotranspiration by phreatophytes and surface evaporation. Subsurface outflow in the East Mesa occurs toward the Imperial Valley, toward Mexico, and into a portion of the East Highline Canal.

The storage capacity of the Imperial Valley has been estimated at approximately 14 MAF of water (CDWR, 1975). Available aquifer storage within the East Mesa in between the East Highline Canal and the old unlined Coachella Canal is estimated to be one (1) MAF (USBR, 1988). The aquifer storage potential of the West Mesa has not been quantified; however, aquifer conditions in the area appear favorable for storage of water. However, it will be more difficult to supply the water to the West Mesa area as there are no canals along the topographical higher areas where permeable sediments are present.

The East Mesa area is the most favorable for an aquifer storage and recovery operation. The concept of storing and recovering Colorado River water during IID underruns in the East Mesa and has been the subject of investigation by both IID and the U.S. Bureau of Reclamation (USBR) since the mid-1980s. In 1989, a recharge study using a portion of the old unlined Coachella Canal just south of the Glamis Known Geothermal Resource Area and west of the San Andreas Fault, diverted an average of 80 cfs (17,000 AF) of water into the canal for 3.5 months proving the sediments are favorable for a recharge facility (USBR, 1992). The recharged water raised the water table by about 15 feet near the canal, but only raised the piezometric head in the semi-confined intermediate aquifer by about 3 feet. USBR postulated the piezometric head in the intermediate aquifer was raised due to the overburden of the recharged mound of water in the shallow aquifer applying great pressure to the intermediate aquifer. Most likely the confining layer separating the two aquifers is not a significant barrier to groundwater flow and that by pumping from the intermediate aquifer could induce recharged water to enter the intermediate aquifer where the aquifers have a higher transmissive capacity and potential for developing high yielding wells. Additional testing is needed. The upper and intermediate aquifers beneath East Mesa are highly permeable. Groundwater in storage beneath the East Mesa west of the San Andreas fault in just the upper aquifer is estimated to be about 1.5 million AF. The aquifers are generally full and may need to be pumped to

create storage for recharged water. The aquifers are favorable for development of high capacity wells, and water is generally of good quality, with TDS ranging from 500 to 1,000 mg/L.

12.2 Recharge

Groundwater recharge in the East Mesa area was historically dominated by seepage from the Coachella Canal, prior to replacement with concrete lined channels in the late 1970s and mid-2000s. Prior to lining, seepage from the 36.5-mile section near the Project has been estimated at 26,000 acre-feet per year. Unlined sections of the AAC continue to recharge the East Mesa groundwater aquifer. However, the unlined section is approximately 45 miles from the Project. In the absence of canal seepage, recharge to the East Mesa aquifer from direct precipitation is estimated to be near zero (Leroy Crandall and Associates, 1983). Groundwater recharge in the Chocolate Mountains may include mountain front recharge and stream flow runoff (Tompson et al., 2008). The Lawrence Livermore National Laboratory (LLNL) groundwater model (Tompson et al., 2008) estimated that recharge from precipitation within the Imperial Valley and portions of surrounding ranges was 0.019 inches/year, which is less than 1% of precipitation. Furthermore, the LLNL model did not include additional recharge along the mountain fronts. The 2013 groundwater model, which was updated by Argonne National Laboratory (ANL; Greer et al., 2013) estimated recharge at 0.056 inches/year in Imperial Valley and 7.2 inches/year along the mountain-front area of the Chocolate Mountain. This estimate of mountain-front recharge may not be supported by the estimated precipitation rates for the Chocolate Mountains (4-6 inches/year; PRISM, 2020). In 2003, the DWR classified the East Salton Sea Basin groundwater budget type as 'C', which indicates that groundwater data is insufficient to estimate the groundwater budget or groundwater extraction (DWR, 2003).

12.3 Groundwater Levels

Groundwater levels in the vicinity of the Project have been influenced by the presence of the canal systems, including the Coachella Canal, East Highline Canal, and associated laterals and drains. Seepage from the unlined Coachella Canal created a groundwater mound in the shallow alluvial aquifer of East Mesa, with water levels rising over 70 feet in some areas (Loeltz et al., 1975). Groundwater level decline in the vicinity of the Coachella Canal has been monitored since the late 1970s when the first 49 miles of the earthen canal channel was replaced with a concrete channel. United States Geological Survey (USGS) well 11S/15E-23M, which is approximately 9 miles southeast of the Proposed Well (Figure 3), shows an asymptomatic groundwater level decline from 20.68 feet bgs in 1979 to approximately 50 feet bgs at present. The water level elevations as of March 2020 were approximately 70 feet AMSL. No groundwater levels have been reported along the Coachella Canal section that was lined in the late 2000s. However, a similar asymptotic decline could be expected. Groundwater levels in Imperial Valley have been historically measured at two multi-level wells located approximately 6.5 to 7.5 miles southwest of the Proposed Well (11S14E30C and 11S14E19N; Figure 3). Water levels at these locations were within 10 feet of the ground surface in 1989. The groundwater elevation at that time was approximately 215 feet AMSL. Groundwater levels in the irrigated areas have been controlled by the drain systems (IIRWMP, 2012). Current groundwater levels, although sparse, generally agree with historical groundwater elevation distributions. Groundwater elevations are higher in mountainous areas and East Mesa and decline towards Imperial Valley and the Salton Sea. This distribution of groundwater elevations suggests groundwater flow directions roughly coincide with topography. However, the flow of groundwater and distribution of groundwater levels is likely influenced by faults, which act as barriers, and changes in transmissivity.

12.4 Groundwater Quality

Groundwater quality in the East Mesa is generally reported as poor and not suitable for domestic, municipal, or agricultural purposes (DWR, 2004). Water types include sodium chloride and sodium sulfate. Total dissolved solids (TDS) concentrations are reported as 356 to 51,632 mg/L, whereas the National Secondary Drinking Water Regulations limit TDS to 500 mg/L. Groundwater quality is generally considered better in the vicinity of the unlined canals due to the recharge of lower TDS water. The closest well to the Proposed Well with available water quality data is located 2 miles to the west (Loeltz et al., 1975). A limited number of water quality constituents were measured in 1961, including pH (8.0), specific conductivity (19,200 µS/cm), bicarbonate (210 mg/L), chloride (6,050 mg/L), calcium-magnesium hardness (2,440 mg/L), and non-carbonate hardness 2,270 mg/L). The screened interval depth of this well is unknown.

13. PROJECT WATER DEMAND

The Applicants request for 25 total AFY would be able to accommodate all proposed land uses. Water from the aquifer can be supplied to the Project via the proposed well in accordance with County and State regulations. The Project is anticipated to use approximately 12.07 AF per year after all construction is complete. As stated previously, the Applicant would be required to submit revised and additional WSAs prior to development of any water intensive land use development. The applicant will have to upgrade their infrastructure at the time of development and infrastructure will have to be analyzed thoroughly through the independent WSA.

14. SUMMARY AND CONCLUSIONS

- The proposed Project has an estimated total water demand of 12.07 AF. Thus, the proposed Project demand is an increase of AFY from the historical 10-year average or percent (100 %) than the historic 10-year average.
- The Applicant will have to upgrade their water infrastructure in order to meet the water demands for land uses permitted by right in the CR-1, 2 and 3 Zones as well as the S-1 Zone of Open Space.
- Based on the amount of groundwater within the basin and the recharge rate of 200 acre-feet/year the project supply is able to meet the projected demand of the Project.
- Based on the Environmental Impact Report (EIR) prepared for this proposed Project pursuant to the CEQA, California Public Resources Code sections 21000, *et seq*., the Lead Agency hereby finds that the County of Imperial groundwater for the East Mesa projected water supply will be sufficient to satisfy the demands of this proposed Project for Phase One, however Phase Two and onward will have to in addition to existing and planned future uses, including agricultural and non-agricultural uses for a 30-year Water Supply Assessment period and for the year proposed Project life.
- Permitting: The applicant is subject to all Local, State and Federal Laws during construction and operations for the GSP.
- Approval of CUP – Groundwater Well. Pursuant to Title 9 Division 21: Water Well Regulations, §92102.00, the Applicant will be required to obtain a CUP for the proposed on-site groundwater well. As required by §92102.00, no person shall (1) drill a new well, (2) activate a previously drilled but unused well, (unused shall mean a well or wells that have not been used for a 12 month) period by installing pumps, motors, pressure tanks, piping, or other equipment necessary

or intended to make the well operational, (3) increase the pumping capacity of a well, or (4) change the use of a well, without first obtaining a CUP through the ICPDS.

- It is suggested that the applicant run water quality analysis for precautionary purposes.

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L-1 Traffic Report

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LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION IMPACT ANALYSIS

GLAMIS SPECIFIC PLAN

Imperial County, California
February 7, 2022

LLG Ref. 3-19-3112

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APPENDIX

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1.0 INTRODUCTION

The following transportation study has been prepared to determine and evaluate the traffic impacts on the local circulation system due to the development of the Glamis Specific Plan project (Project) in Imperial County. The purpose of this transportation study is to assess the potential impacts to the local circulation system as a result of the Project.

Included in this traffic study are the following:

- Project Description
- Vehicle Miles Traveled Assessment
- Existing Conditions Discussion
- Project Study Area, Analysis Scenarios & Methodology
- Level of Service Standards
- Analysis of Existing Conditions
- Project Trip Generation, Distribution, & Assignment
- Cumulative Projects
- Analysis of Near-Term Scenarios
- Analysis of Long-Term Scenarios
- Access Assessment
- Conclusions & Recommendations

2.0 PROJECT DESCRIPTION

2.1 Project Location

The Glamis Specific Plan (GSP) area is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR 78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the project site is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County (County).

Figure 2–1 depicts the Project vicinity. ***Figure 2–2*** shows a more detailed Project area map.

2.2 Project Description

The approximately 142-acre GSP is located and contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development and creation of a Specific Plan in accordance with GSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. The existing zoning designation for the project site is Open Space/Preservation (S-2) and a very small area that is General Commercial (C-2). The general area of the Glamis Beach Store (within APN 039-310-029) is zoned as C-2, while the remainder of the project site is zoned as S-2. The project site is surrounded by the Bureau of Land Management (BLM) land uses on all sides.

The proposed GSP includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning based upon different levels of allowable land use intensity. Also, the GSP proposes a Change of Zone from S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1-acre parcel on the southeast side of the project site (APN 039-310-017). The phasing plan component of the GSP would phase the development so that more intense land uses are developed incrementally over time within the various proposed zones. ***Figure 2–3*** depicts the Conceptual Site Plan.

Figure 2–4 depicts the Preferred Land Use Areas and Specific Plan Phasing. An unabridged version of the Project description is provided in ***Appendix A***.

2.3 Project Phasing

Development within the GSP is intended to occur over gradually over many years, and will depend on market conditions, availability of supporting infrastructure, and other factors. Four (4) phases of development are proposed as follows. In general, the specific land-uses to be developed have not yet been determined. At this time, the GSP aims to modify the allowable land uses on the site, not to establish a detailed parcel by parcel development scheme.

Phase One

Phase One would be contained within Land Use Area 1, with the exception of possible development of a research and development (R&D) facility to occur either within Land Use Area 5 or 6, and an RV park or employee housing in Land Use Areas 2, 3, and/or 4. Part of Land Use Area 8 could be

developed during Phase One as it slightly overlaps onto current land used for Camp RZR. Uses permitted within Phase One could include restaurant(s), bar(s), repair shop(s), a vendor row area and event area.

Phase Two

Phase Two would most likely be within Land Use Area 1, immediately west of Phase One. Phase Two development would serve as an extension to development occurring within Phase One by incorporating land uses permitted under the CR Zone similar to those permitted in Phase One. Phase Two would also incorporate the Glamis Mainstreet to serve as a circulation corridor for Off-Highway Vehicle (OHV) traffic to and from the dunes and to Phase Four (Areas 2, 3, and 4) located directly north of SR 78.

Phase Three

Phase Three, located on the northeast side of the UPRR and bisected by SR 78, would be located within Land Use Area 5 and Land Use Area 6. No major public use facilities would be considered for development within these two APNs to discourage OHV traffic from crossing the UPPR to access these areas. Phase Three however, would serve for the development of uses relevant to employee housing, RV park, and/or an R&D facility and possible PV Solar array system.

Phase Four

Phase Four, located on the north side of SR 78, would be located within Land Use Areas 2, 3 and 4. The Glamis Mainstreet corridor is proposed to provide an optional circulation interconnection between Phase One and Phase Four. All Phasing as proposed will be impacted by possible requirements that Caltrans may impose along SR 78 and for crossing the UPRR. The Imperial County Transportation Commission (ICTC) is currently conducting a feasibility study for a safe crossing over UPRR for off road vehicles either at SR 78 or Wash 10 or some other location, and additional information will be provided once the feasibility study is complete.

Overall, the primary objective of the GSP is to formalize the site and provide services and amenities. The Project's proposed land uses are intended to serve the existing patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat. It is not expected that the Project will draw a significant number of new users to the dunes.

This traffic study analyzes the following specific components of the Project, which are anticipated to be developed within the first ten years:

- Restaurant Expansion: 4,000 SF
- Retail Expansion: 2,000 SF
- Service Center: Four (4) Service Bays
- Research & Development Facility: 5,000 SF
- Hotel / Motel: 20 Rooms
- Multi-Family Residential / Staff Housing: 14 Units

- RV Park: 30 Sites
- Vendor Row Expansion

Any additional future development that is not listed above and that exceeds the number of trips generated by the above uses will require a new traffic study and may require additional mitigation based on that study. All additional traffic studies will need to be submitted to the County of Imperial and Caltrans for review and approval.

2.4 Project Access

The Project site is regionally accessible via SR 78 and serves as the primary transportation route for cars and trucks. Wash Road, a County-maintained dirt road, serves as access to BLM land and extends southeasterly from SR 78 for approximately 18.4 miles to County Highway S34 (Ogilby Road), a County maintained and paved two-lane highway. Circulation flow will be provided via the proposed "Glamis Mainstreet", which will interconnect by crossing SR 78. A secondary and emergency only access point to/from the project site to SR 78 will be provided on the west side of the project site, immediately south of SR 78.

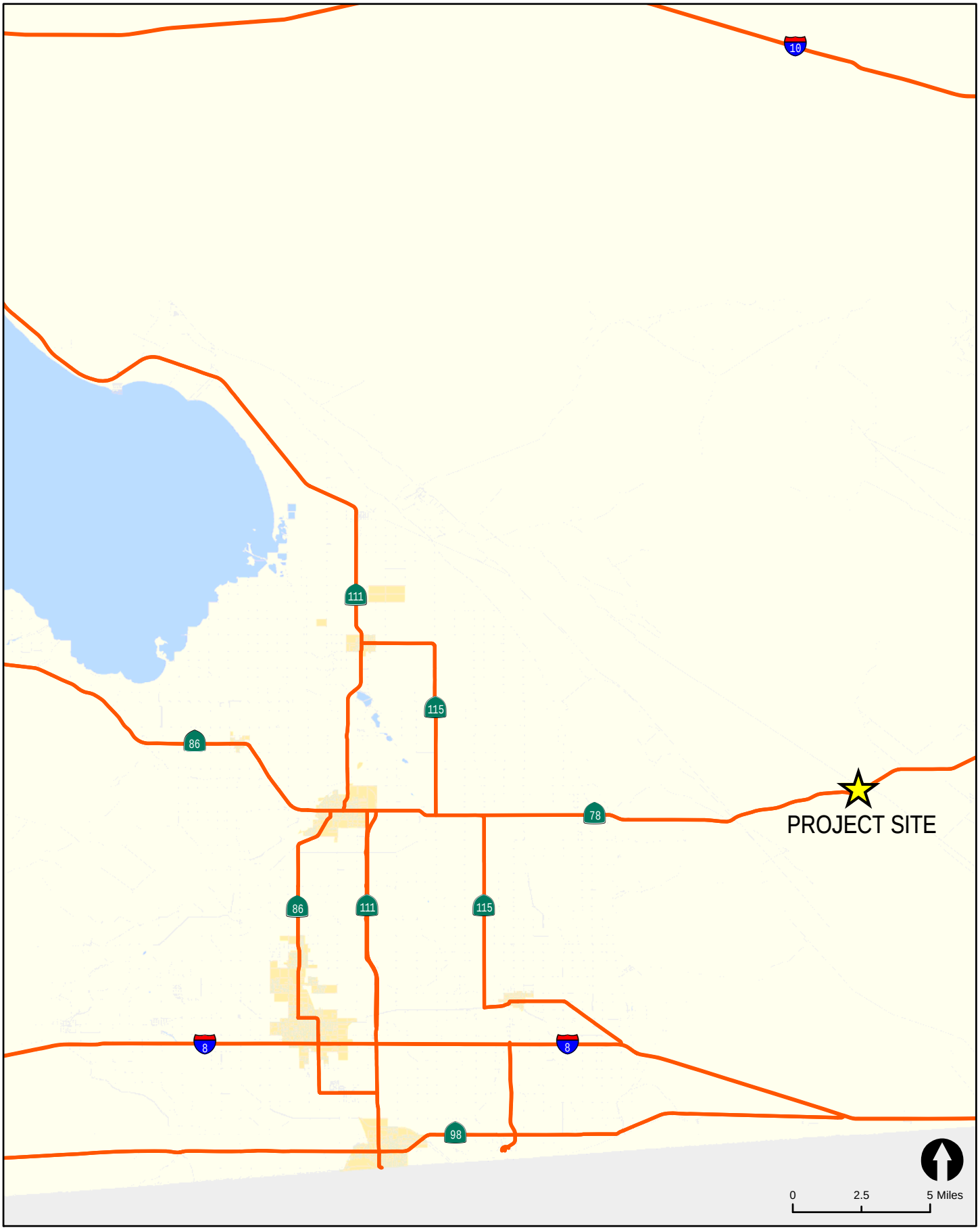

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Figure 2-1

Vicinity Map

GLAMIS SPECIFIC PLAN

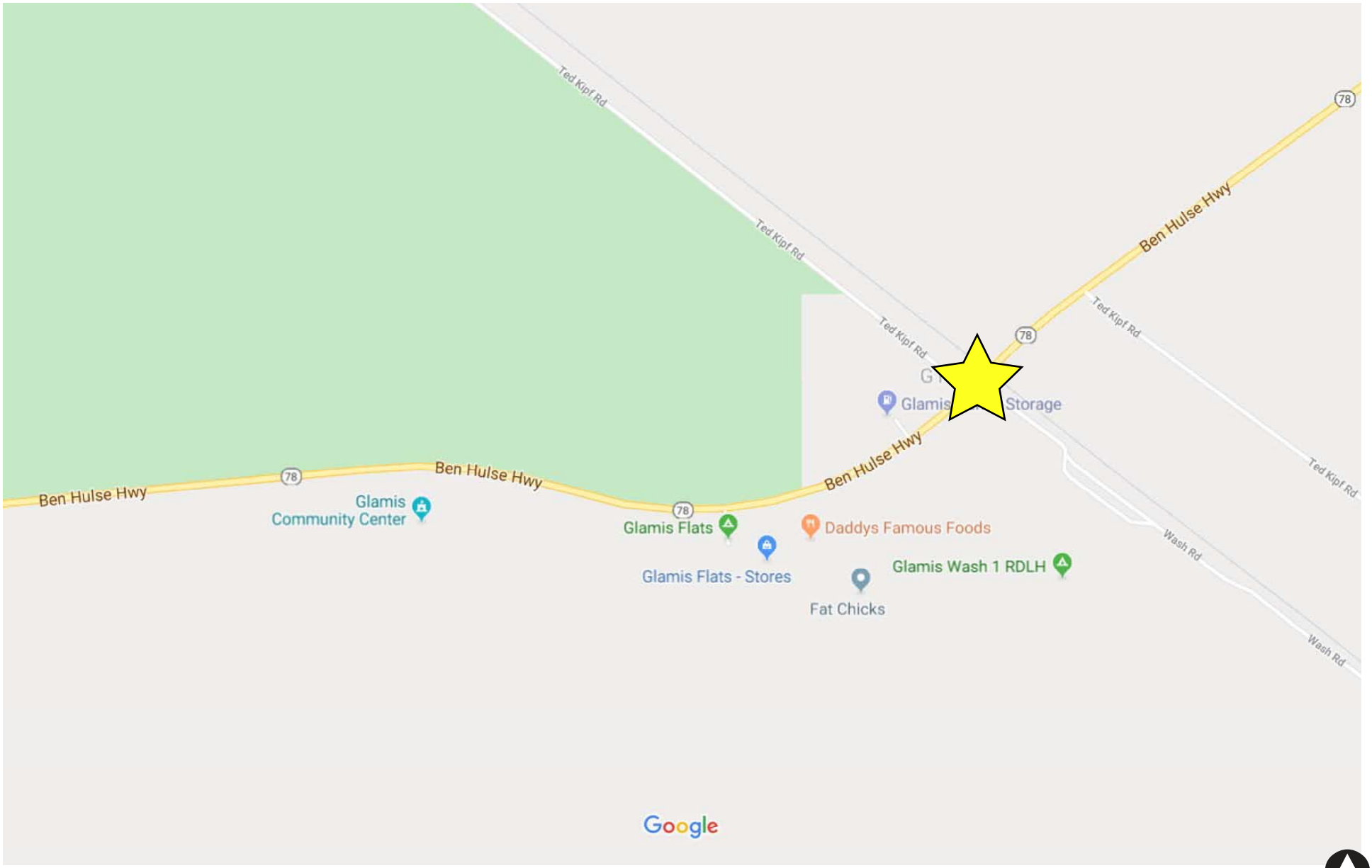

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Figure 2-2

Project Area Map

GLAMIS SPECIFIC PLAN

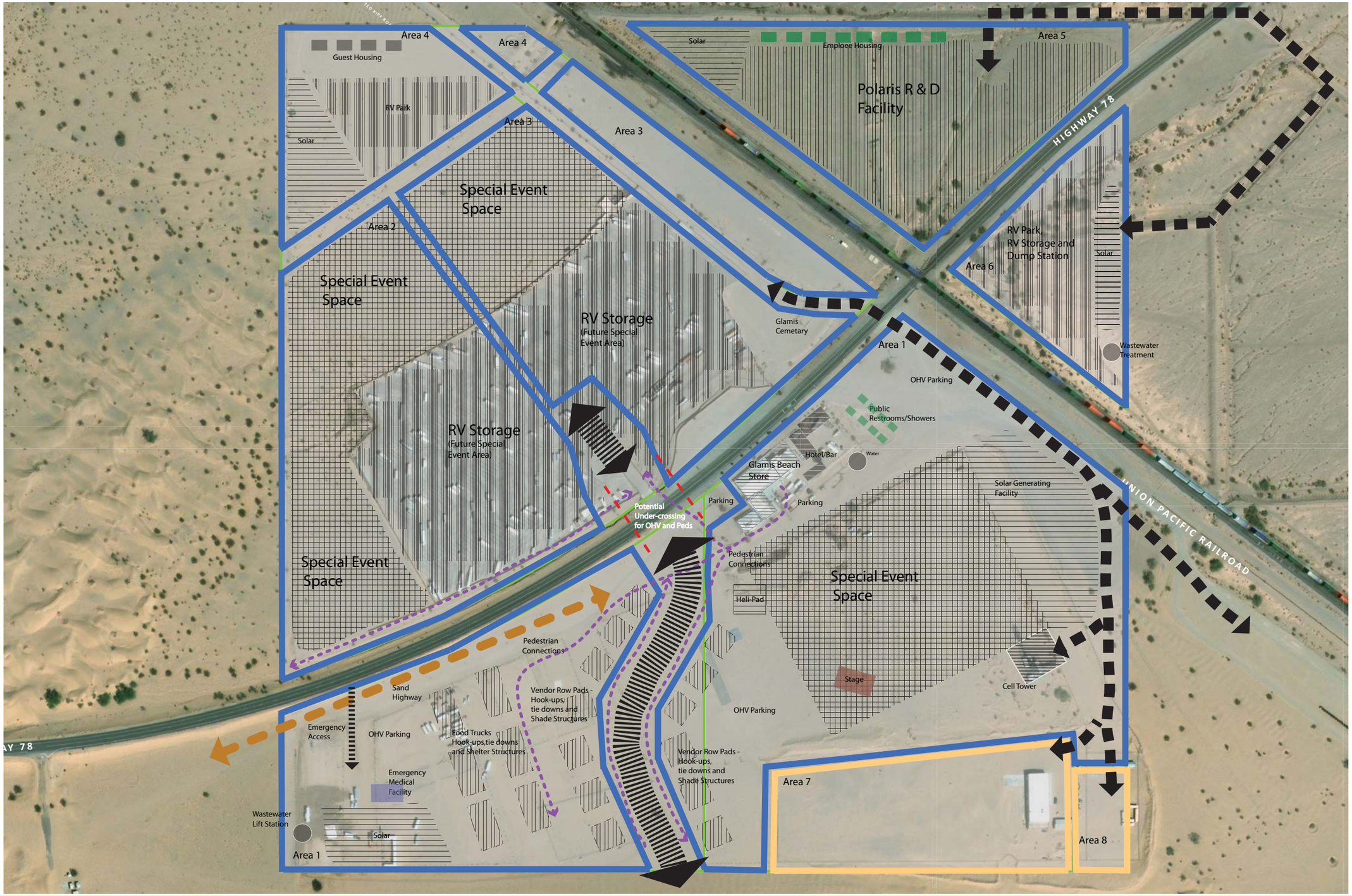

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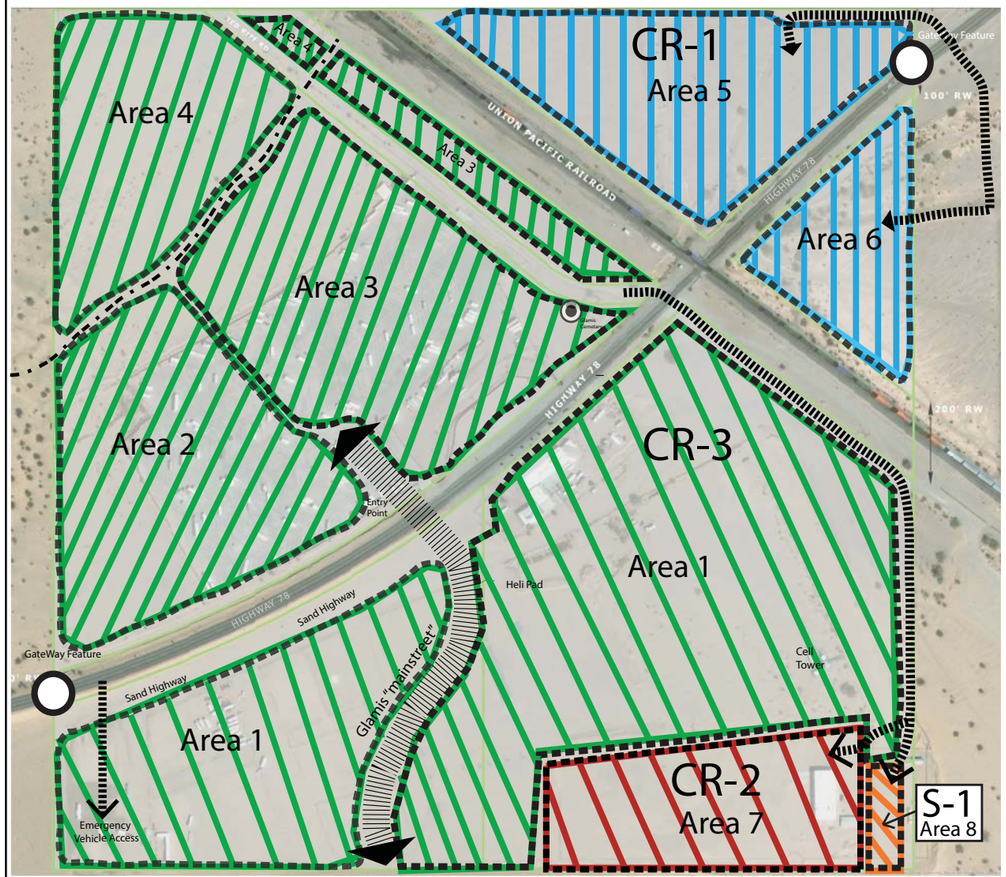
Figure 2-3

Site Plan

GLAMIS SPECIFIC PLAN



Glamis Specific Plan - Land Use Areas (Preferred)

Zoning Designation

CR-1
- -Area 5
- -Area 6

CR-2
- -Area 7

CR-3
- -Area 1
- -Area 2
- -Area 3
- -Area 4

S-1
- -Area 8

GLAMIS SPECIFIC PLAN PHASING

0 125 250 500 750 1,000 Feet
1 INCH = 100 FEET

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Figure 2-4

Preferred Land Use Areas and Specific Plan Phasing

3.0 VEHICLE MILES TRAVELED ASSESSMENT

3.1 Background

Vehicle Miles Traveled (VMT) is a measurement of miles traveled by vehicles within a specified region and for a specified time period. VMT measures the efficiency of the transportation network. VMT is calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (round trip) travel and is often estimated for a typical weekday to measure transportation impacts.

3.1.1 *Senate Bill 743*

In September 2013, the Governor's Office signed SB 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. These changes include the elimination of auto delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. The guidance identifies VMT as the most appropriate CEQA transportation metric, along with the elimination of Auto Delay/LOS for CEQA purposes statewide. The justification for this paradigm shift is that Auto Delay/LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions.

In December 2018, after over five years of stakeholder-driven development, the California Natural Resource Agency certified and adopted the CEQA Statute. As of July 1, 2020, the VMT guidelines are applicable statewide.

3.2 VMT Assessment

The County of Imperial has not yet formally developed draft guidelines or adopted significance criteria and technical methodologies for VMT analysis. Therefore, LLG utilized guidance provided in the Governor's Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December, 2018, and ITE's *Guidelines for Transportation Impact Studies in the San Diego Region*, May, 2019

According to the ITE guidelines, it is recommended that local-serving retail projects be presumed to have less than significant VMT impacts and regional-serving retail projects be presumed to have significant VMT impacts if they increase VMT above the level that would occur for conditions without the project. As noted in OPR's technical advisory, "*by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact*."

While the Project site is not located in an urban area, the primary objective of the Project is to formalize the site and provide services and amenities that patrons of the dunes would otherwise have to drive long distances to access. This includes food services, repair services, and retail services. The Project's proposed land uses are intended to serve patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat.

Therefore, the OPR guidance pertaining to locally serving retail projects is applicable to this Project. The Project land uses will improve service-destination proximity, shorten trips, and reduce VMT. As such, the Project is presumed to have a less-than-significant transportation impact and does not require a detailed VMT analysis.

4.0 EXISTING CONDITIONS

Effective evaluation of the traffic impacts associated with the proposed Project requires an understanding of the existing transportation system within the project area. ***Figure 4–1*** depicts the existing conditions, including intersections and lane configurations.

4.1 Existing Street Network

The following is a description of the existing street network in the study area.

SR 78 is classified as a Major Arterial on the City of Brawley Circulation Element. Within the Project Study area, SR 78 is constructed as a four-lane undivided roadway west of Best Avenue / Old Highway 111 and as a two-lane undivided roadway east of Best Avenue / Old Highway 111, through the Project area. Bike lanes and bus stops are not provided and the posted speed limit is 45 mph. Curbside parking is prohibited along both sides of the roadway.

Best Avenue / Old Highway 111 is classified as a Major Arterial on the City of Brawley Circulation Element. Within the Project study area Best Avenue / Old Highway 111 is constructed as a four-lane divided roadway north of Main Street (SR 78), and as a two-lane undivided roadway south of Main Street (SR 78). Bike lanes and bus stops are not provided and the posted speed limit ranges from 40-50 mph. Curbside parking is prohibited along both sides of the roadway.

SR 111 is classified as an Expressway on the City of Brawley Circulation Element. It is a north-south four-lane divided roadway. Bike lanes or bus stops are not provided and the posted speed limit ranges from55 to 60 mph. Curbside parking is prohibited along both sides of the roadway.

SR-115 is an east-west two-lane undivided state highway within the study area and per the County of Imperial Circulation Element is classified as a Major Collector. SR-The posted speed limit is 45 mph. Curbside parking is prohibited along the highway. No bicycle facilities currently exist.

4.2 Existing Traffic Volumes

Existing Weekday and Weekend PM (5-7 PM) peak hour turning movement counts for the study area intersections were conducted in October / November 2019. The counts were conducted over the Halloween weekend (Thursday October 31– Sunday November 3), which is one of the busiest times of the year at the dunes. Traffic volumes are much lower during most of the year and therefore this analysis is conservative.

Daily traffic counts along Gecko Road, Osborne Park Road, Glamis Flats Road, and Wash Road were also conducted at the same time in order to assist in estimating the GSP's trip distribution. These four (4) roadways provide direct access to the campgrounds for the majority of the visitors to the northern dunes.

Average daily traffic (ADT) counts along SR 78 were obtained from the Caltrans 2017 Traffic Volumes document, which provided the most recent data available at the time this report was prepared. Based on previous traffic studies conducted in the area and discussions with Caltrans, the

peak 2017 volumes were adjusted upward by 2% per year for two years to estimate the 2019 baseline volumes.

Figure 4–2 depicts the Existing Traffic Volumes. ***Appendix B*** contains the manual count sheets.

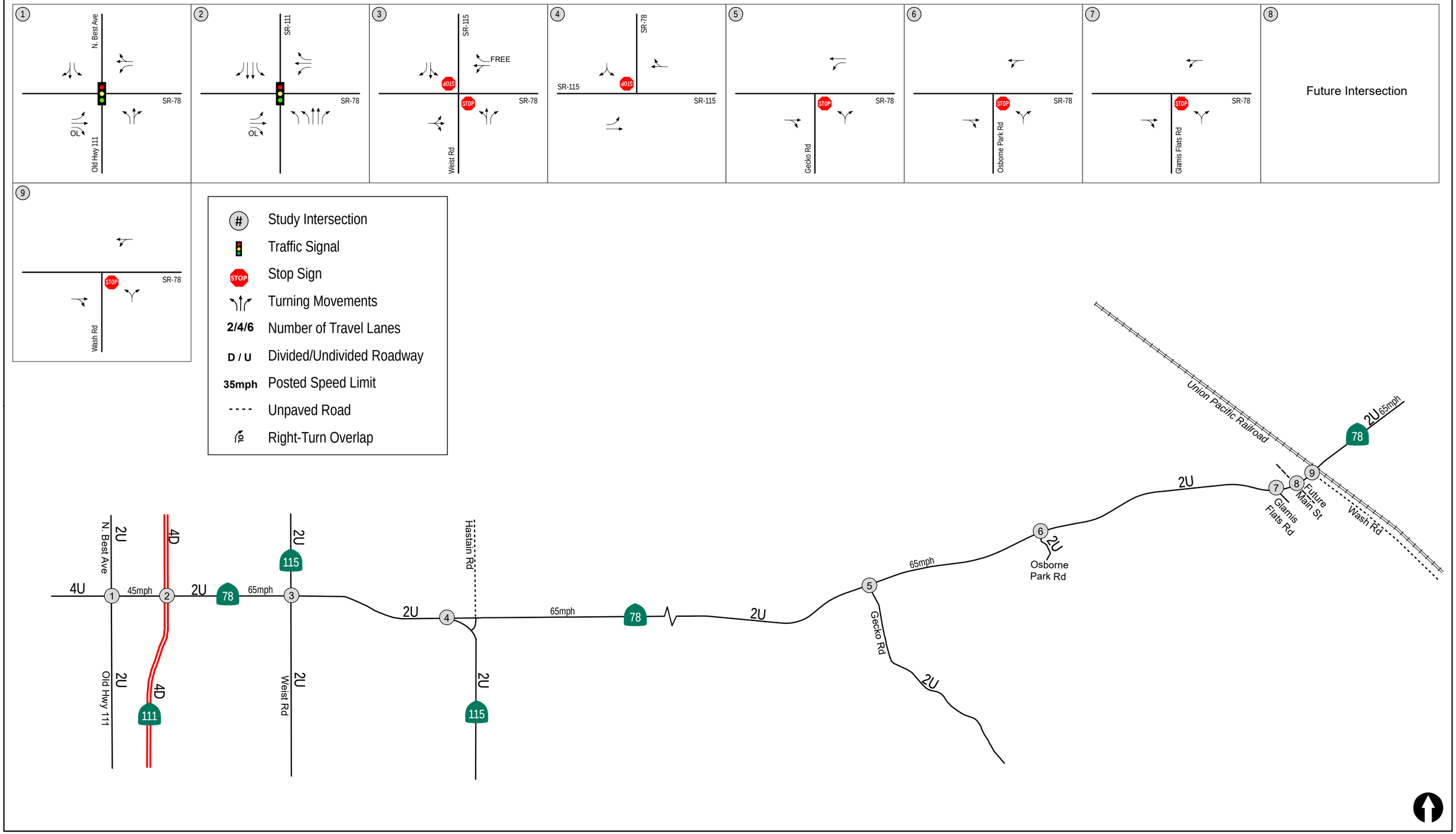

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Figure 4-1

Existing Conditions Diagram

Glamis Specific Plan

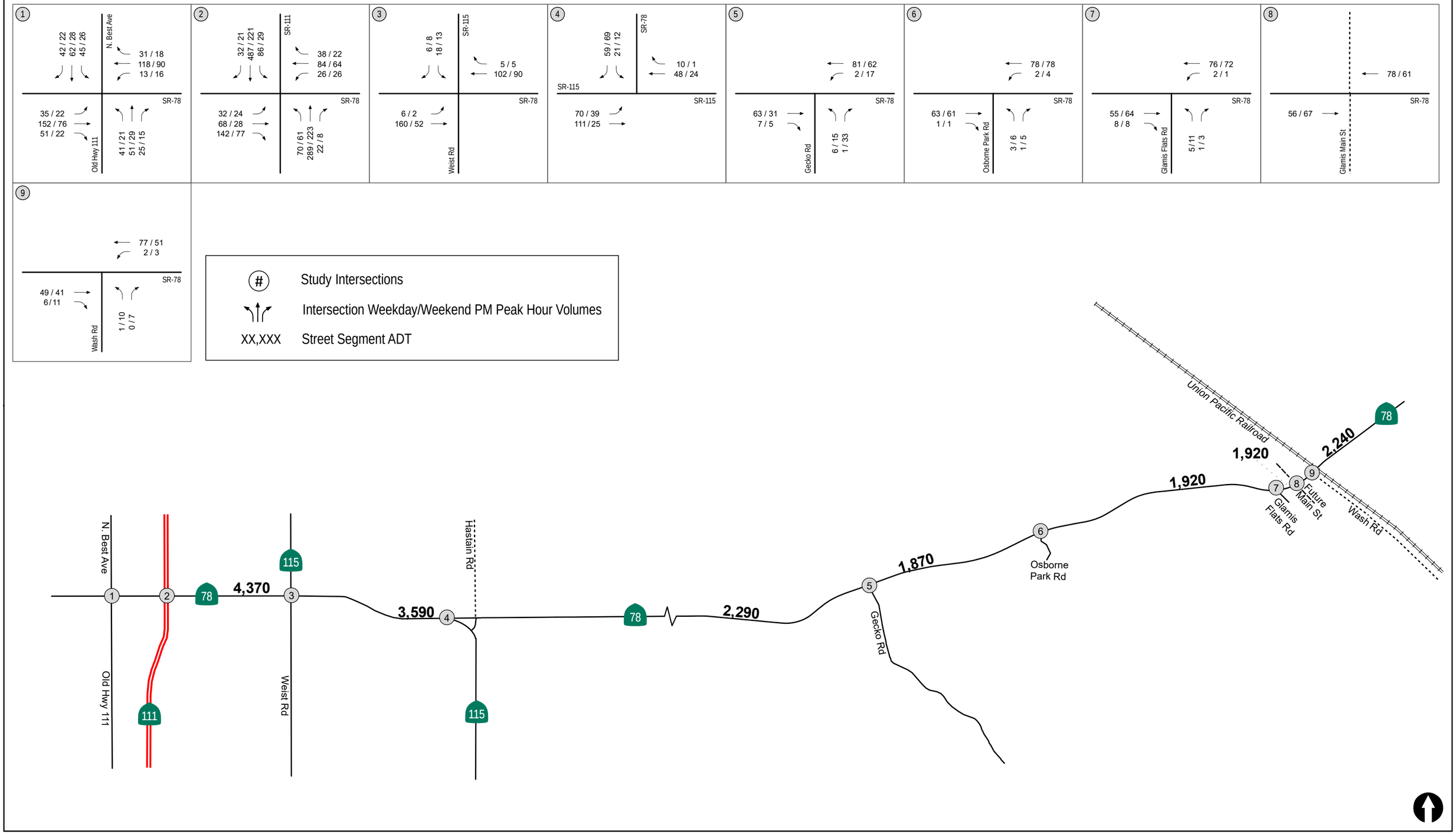

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Figure 4-2

Existing Traffic Volumes

Glamis Specific Plan

5.0 PROJECT STUDY AREA, ANALYSIS SCENARIOS AND METHODOLOGY

5.1 Project Study Area

The following intersections and segments were analyzed in this study and were chosen since they will carry the majority of Project traffic.

Intersections:

1. SR 78 / Old Highway 111/ Best Avenue
2. SR 78 / SR 111
3. SR 78 / SR 115 (west)
4. SR 78 / SR 115 (east)
5. SR 78 / Gecko Road
6. SR 78 / Osborne Park Road
7. SR 78 / Glamis Flats Road
8. SR 78 / Glamis Mainstreet (future access)
9. SR 78 / Wash Road

Segments:

SR 78:

- Old Highway 111/ Best Avenue to SR 115 (west)
- SR 115 (west) to SR 115 (east)
- SR 115 (east) to Gecko Road
- Gecko Road to Osborne Park Road
- Osborne Park Road to Glamis Flats Road
- Glamis Flats Road to Glamis Mainstreet (future access)
- Glamis Mainstreet (future access) to Wash Road
- East of Wash Road

5.2 Analysis Scenarios

The following scenarios are analyzed in this report:

- Existing
- Existing + Project
- Existing + Project + Cumulative Projects
- Year 2050
- Year 2050 + Project

Analysis of weekday and weekend peak hour conditions (5:00-7:00 PM) was conducted for the analysis scenarios listed above since these are the times where Project related traffic is expected to be most prevalent. An analysis of daily traffic was also conducted.

5.3 Analysis Methodology

The operations of the project area intersections and segments are characterized using the concept of "Level of Service" (LOS). LOS is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A through F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments.

Table 5–1 summarizes the description for each level of service. ***Table 5–2*** depicts the criteria, which are based on the average control delay for any particular minor movement (unsignalized intersections).

5.3.1 *Heavy Vehicle Rate*

SR 78 is a goods movement route connecting California with Arizona and Nevada. As such, a greater than average percentage of the vehicles traveling on SR 78 are multi-axle and considered to be "heavy vehicles". A 30.8% heavy-vehicle rate was recorded on SR 78 per the *2018 Truck Traffic: Annual Average Daily Truck Traffic* published on the Caltrans Traffic Census Program website. This rate was used in the Synchro traffic analysis for the Project instead of the default 2%.

5.3.2 *Signalized Intersections*

For signalized intersections, level of service criteria is stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

5.3.3 *Unsignalized Intersections*

For unsignalized intersections, level of service is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole.

TABLE 5–1
INTERSECTION LEVEL OF SERVICE DESCRIPTIONS

Level of Service	Description
A	Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Generally, occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
C	Generally, results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Generally, results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.
F	Considered to be unacceptable to most drivers. This condition often occurs with over saturation i.e. when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume-to-capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

TABLE 5–2
INTERSECTION LOS & DELAY RANGES

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	**Unsignalized Intersections**
A	≤ 10.0	≤ 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥ 80.1	≥ 50.1

Source: Highway Capacity Manual

5.3.4 *Street Segments*

Street segments were analyzed based upon the comparison of ADT to the County of Imperial *Roadway Classifications, Levels of Service (LOS) and Average Daily Traffic (ADT)* table (see ***Table 5–3*** below). *Table 5–3* provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The segment capacities were originally developed based on observations of weekday traffic volumes, and therefore, only an analysis of weekday conditions was conducted. Segment analysis is a comparison of ADT volumes and an approximate daily capacity on the subject roadway.

TABLE 5–3
IMPERIAL COUNTY STANDARD STREET CLASSIFICATION AVERAGE DAILY VEHICLE TRIPS

Road		Level of Service W/ADT*				
Class	**X-Section**	**A**	**B**	**C**	**D**	**E**
Expressway	128 / 210	30,000	42,000	60,000	70,000	80,000
Prime Arterial	106 / 136	22,200	37,000	44,600	50,000	57,000
Minor Arterial	82 / 102	14,800	24,700	29,600	33,400	37,000
Major Collector (Collector)	64 / 84	13,700	22,800	27,400	30,800	34,200
Minor Collector (Local Collector)	40 / 70	1,900	4,100	7,100	10,900	16,200
Residential Street	40 / 60	*	*	< 1,500	*	*
Residential Cul-de-Sac / Loop Street	40/60	*	*	< 1,500	*	*
Industrial Collector	76 / 96	5,000	10,000	14,000	17,000	20,000
Industrial Local Street	44 / 64	2,500	5,000	7,000	8,500	10,000

* Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

6.0 LEVEL OF SERVICE STANDARDS

The County of Imperial does not have published level of service (LOS) standards. However, the County General Plan does state that the LOS goal for intersections and roadway segments is to operate at LOS C or better. Therefore, if an intersection or segment degrades from LOS C or better to LOS D or worse with the addition of project traffic, the effect is considered substantial. If the location operates at LOS D or worse with and without project traffic, the effect is considered substantial if the project causes the intersection delta to increase by more than two (2) seconds, or the V/C ratio to increase by more than 0.02. These thresholds are summarized below in ***Table 6-1***, and are consistent with those used in the City of El Centro and the County of Imperial in numerous traffic studies.

TABLE 6–1
TRAFFIC EFFECT THRESHOLDS

Level of Service with Project [a]	Allowable Increase Due to Project Effect [b]					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
D, E & F (*or ramp meter delays above 15 minutes*)	0.01	1	0.02	1	2	2[c]

Footnotes:

a. All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume. The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

b. If a proposed project's traffic causes the values shown in the table to be exceeded, the effects are deemed to be substantial. These changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible improvements that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note a above), or if the project adds a significant amount of peak hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for improving substantial effect changes.

c. The allowable increase in delay at a ramp meter with more than 15 minutes of delay and freeway LOS E is 2 minutes and at LOS F is 1 minute.

General Notes:

1. V/C = Volume to Capacity Ratio
2. Speed = Arterial speed measured in miles per hour
3. Delay = Average stopped delay per vehicle measured in seconds for intersections, or minutes for ramp meters.
4. LOS = Level of Service

7.0 ANALYSIS OF EXISTING CONDITIONS

7.1 Peak Hour Intersection Levels of Service

Table 7–1 summarizes the existing intersection operations. As seen in *Table 7–1*, all study area intersections are calculated to currently operate at LOS C or better, with most locations operating at LOS A.

The Existing intersection analysis worksheets are included in ***Appendix C***.

7.2 Daily Street Segment Levels of Service

Table 7–2 summarizes the existing segment operations. As seen in *Table 7–2*, all study area segments are calculated to currently operate at LOS C or better.

TABLE 7–1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay [a]	LOS [b]
1. SR 78 / Old Highway 111 / Best Avenue	Signal	Wkday	15.5	B
		Wkend	15.3	B
2. SR 78 / SR 111	Signal	Wkday	24.8	C
		Wkend	21.2	C
3. SR 78 / SR 115 (west)	MSSC[c]	Wkday	11.8	B
		Wkend	10.0	A
4. SR 78 / SR 115 (east)	MSSC	Wkday	10.6	B
		Wkend	9.3	A
5. SR 78 / Gecko Road	MSSC	Wkday	10.0	A
		Wkend	9.4	A
6. SR 78 / Osborne Flats Road	MSSC	Wkday	9.8	A
		Wkend	9.4	A
7. SR 78 / Glamis Flats Road	MSSC	Wkday	9.8	A
		Wkend	9.7	A
8. SR 78 / Glamis Mainstreet (future access)	-[d]	Wkday	-	-
		Wkend	-	-
9. SR 78 / Wash Road	Yield	Wkday	9.9	A
		Wkend	9.4	A

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. MSSC = Minor Street Stop-Controlled intersection. Worst-case delay reported.
d. Intersection does not exist under existing conditions.

General Notes:
1. Wkday= Weekday PM Peak Hour (5:00-7:00 PM)
2. Wkend= Weekend PM Peak Hour (5:00-7:00 PM)

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 7–2
EXISTING STREET SEGMENT OPERATIONS

Street Segment	LOS E [a] Capacity	ADT [b]	LOS [c]	V/C [d]
SR 78				
Old Highway 111 / Best Avenue to SR 115 (west)	16,200	4,370	C	0.270
SR 115 (west) to SR 115 (east)	16,200	3,590	B	0.222
SR 115 (east) to Gecko Road	16,200	2,290	B	0.141
Gecko Road to Osborne Park Road	16,200	1,870	A	0.115
Osborne Park Road to Glamis Flats Road	16,200	1,920	B	0.119
Glamis Flats Road to Glamis Mainstreet (future access)	16,200	1,920	B	0.119
Glamis Mainstreet (future access) to Wash Road	16,200	1,920	B	0.119
East of Wash Road	16,200	2,240	B	0.138

Footnotes:

a. The capacity of the roadway at Level of Service E.
b. Average Daily Traffic
c. Level of Service.
d. The Volume to Capacity ratio.

8.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

8.1 Trip Generation

The primary objective of the Project is to formalize the site and provide services and amenities. The Project's proposed land uses are intended to serve the existing patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat.

However, in order to provide comprehensive assessment of the Project's effects to the surrounding street system, this traffic study analyzes the following specific components of the Project, which are anticipated to be developed within the first ten years:

- Restaurant Expansion: 4,000 SF
- Retail Expansion: 2,000 SF
- Service Center: Four (4) Service Bays
- Research & Development Facility: 5,000 SF
- Hotel / Motel: 20 Rooms
- Multi-Family Residential / Staff Housing: 14 Units
- RV Park: 30 Sites
- Vendor Row Expansion

Any additional future development that is not listed above and that exceeds the number of trips generated by the above uses will require a new traffic study and may require additional mitigation based on that study. All additional traffic studies will need to be submitted to the County of Imperial and Caltrans for review and approval.

Trip generation rates for the Project were based on ITE's *Trip Generation Manual (10th Edition)*. ***Table 8–1*** tabulates the total Project traffic generation. The Project is calculated to generate a total of approximately 1,245 ADT with 90 trips (49 inbound / 41 outbound) during the Weekday PM peak hour and 106 trips (56 inbound / 50 outbound) during the Weekend PM peak hour. No trip generation credits were taken to account for existing visitors to the dunes. The analysis assumes that 100% of the trips to the Project site will be new trips, not trips by existing patrons of the dunes. This is an extremely conservative approach.

8.2 Trip Distribution/Assignment

The trip distribution percentages were estimated based on the existing traffic flow patterns observed at Gecko Road, Osborne Park Road, Glamis Flats Road, and Wash Road, and the Project's proximity to regional highways / freeways in the vicinity. As noted above, the Project's proposed land uses are intended to serve the existing patrons of the dunes. These patrons are expected to access the Project site predominately via the dunes (not via SR 78) on All Terrain Vehicles (ATVs). Existing patrons of the dunes in the vicinity of the Project site mostly set up camp via one of the four main access points: Gecko Road, Osborne Park Road, Glamis Flats Road, and Wash Road. Once they pull of the

road to set up camp on the sand, their "on-road" vehicles remain primarily parked for the duration of their stay, and transportation around the Glamis dunes is by ATV on the sand, not on SR 78.

Therefore, the trip distribution assumes 10% of the Project trips on Gecko Road, 10% on Osborne Park Road, 10% on Glamis Park Road, 15% on Glamis Mainstreet to the north, 45% on Glamis Mainstreet to the south, and 10% to Wash Road.

Figure 8-1 depicts the trip distribution. ***Figure 8-2*** depicts the assignment of project traffic and ***Figure 8-3*** depicts the Existing + Project traffic volumes.

TABLE 8–1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate[a]	Volume	Rate	In:Out Split	Volume In	Volume Out	Rate	In:Out Split	Volume In	Volume Out
Restaurant Expansion	4 KSF	112.18 /KSF	449	9.94	55:45	22	18	9.77	62:38	24	15
Retail Expansion	2 KSF	37.75 /KSF	76	0.94	50:50	1	1	3.81	48:52	4	4
Service Center[b]	4 Bays	12.48 /Bay	50	1.52	68:32	4	2	2.17	32:68	3	6
R&D Facility[c]	5 KSF	16.19 /KSF	81	1.92	83:17	8	2	2.45	32:68	4	8
Hotel / Motel	20 Rooms	8.36 /Room	167	0.47	59:41	6	3	0.60	51:49	6	6
Multi-Family Residential / Staff Housing	14 DU	7.32 /DU	102	0.46	23:77	1	5	0.56	63:37	5	3
RV Park[d]	30 Sites	4.00 /Site	120	0.21	36:64	2	4	0.27	65:35	5	3
Vendors[e]	-	-	200			5	5	-		5	5
Total Trips			**1,245**			**49**	**41**			**56**	**50**

Footnotes:

a. Trip generation rates are based on the 10th edition of the Trip Generation Manual, Institute of Transportation Engineers (ITE).
b. Weekday ADT rate not provided by ITE. Therefore, the Saturday ADT rate of 12.48 trips per service bay was used.
c. "Small Office Building" Rate assumed.
d. Weekday ADT rate not provided by ITE. Therefore, the SANDAG ADT rate of 4 trips per site was used.
e. No additional vendors are expected as a part of the Project. However, in order to provide a conservative trip generation calculation, an additional 200 ADT was assumed.

General Notes:

The trip generation calculated in *Table 8-1* only includes trips for potential uses for the first ten-years of development. Any additional future development that is not listed above and that exceeds the number of trips generated by the above uses will require a new traffic study and may require additional mitigation based on that study. All additional traffic studies will need to be submitted to the County of Imperial and Caltrans for review and approval.

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Figure 8-1

Project Traffic Distribution

Glamis Specific Plan

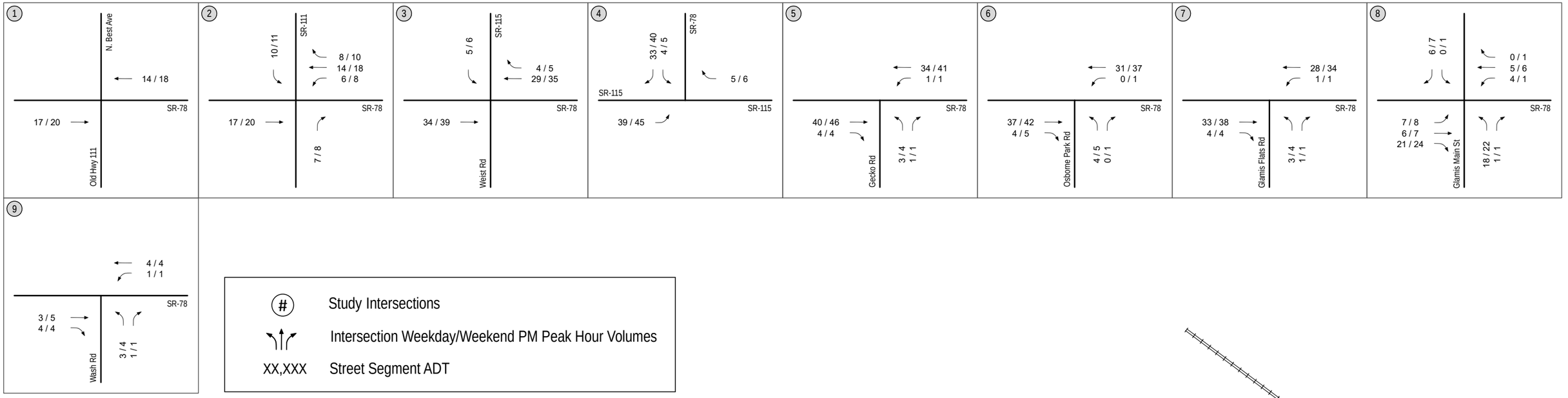

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Figure 8-2

Project Traffic Volumes

Glamis Specific Plan

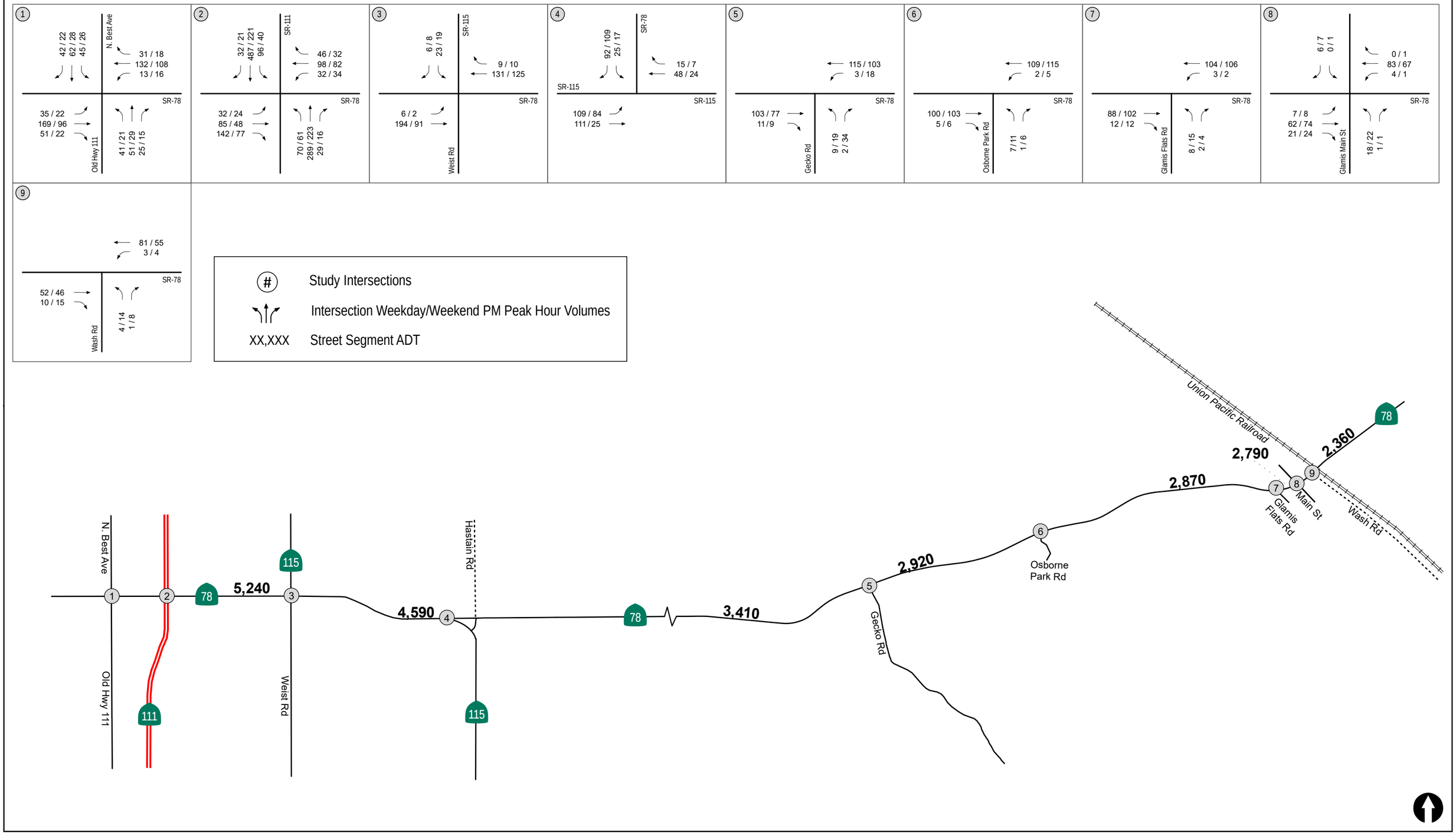

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Figure 8-3

Existing + Project Traffic Volumes

Glamis Specific Plan

9.0 CUMULATIVE PROJECTS

No specific cumulative projects were identified in the Project vicinity. Therefore, based on previous traffic studies conducted in the area and discussions with Caltrans, the 2019 volumes were adjusted upward by 2% per year for six (6) years to estimate Year 2025 with Cumulative traffic volumes. This time frame represents the approximate Opening Year of the Project.

Figure 9-1 depicts the Cumulative only trips and ***Figure 9-2*** depicts the Existing + Project + Cumulative Project trips.

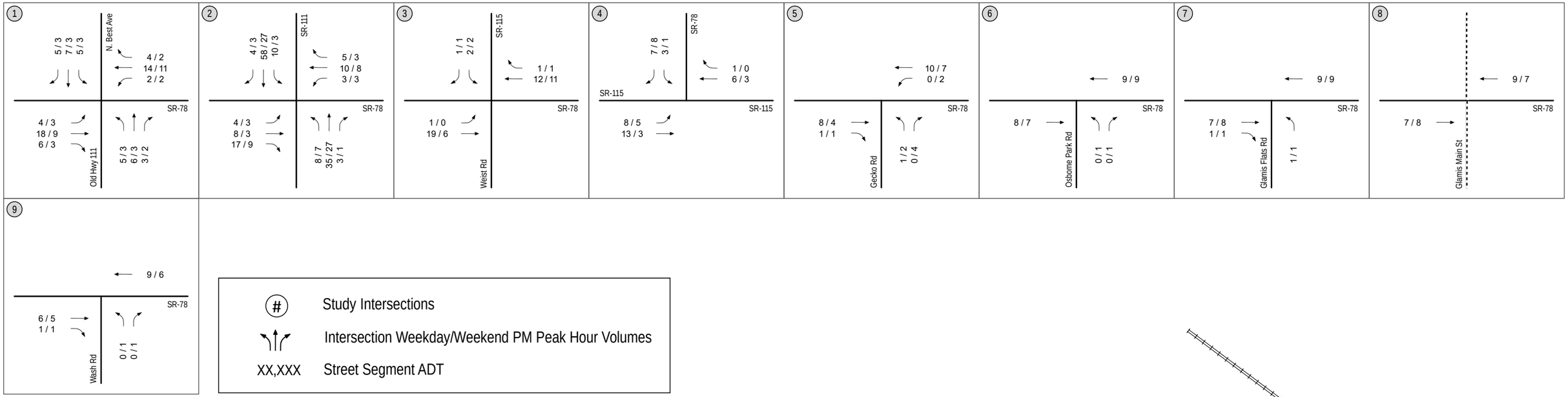

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Figure 9-1

Total Cumulative Traffic Volumes

Glamis Specific Plan

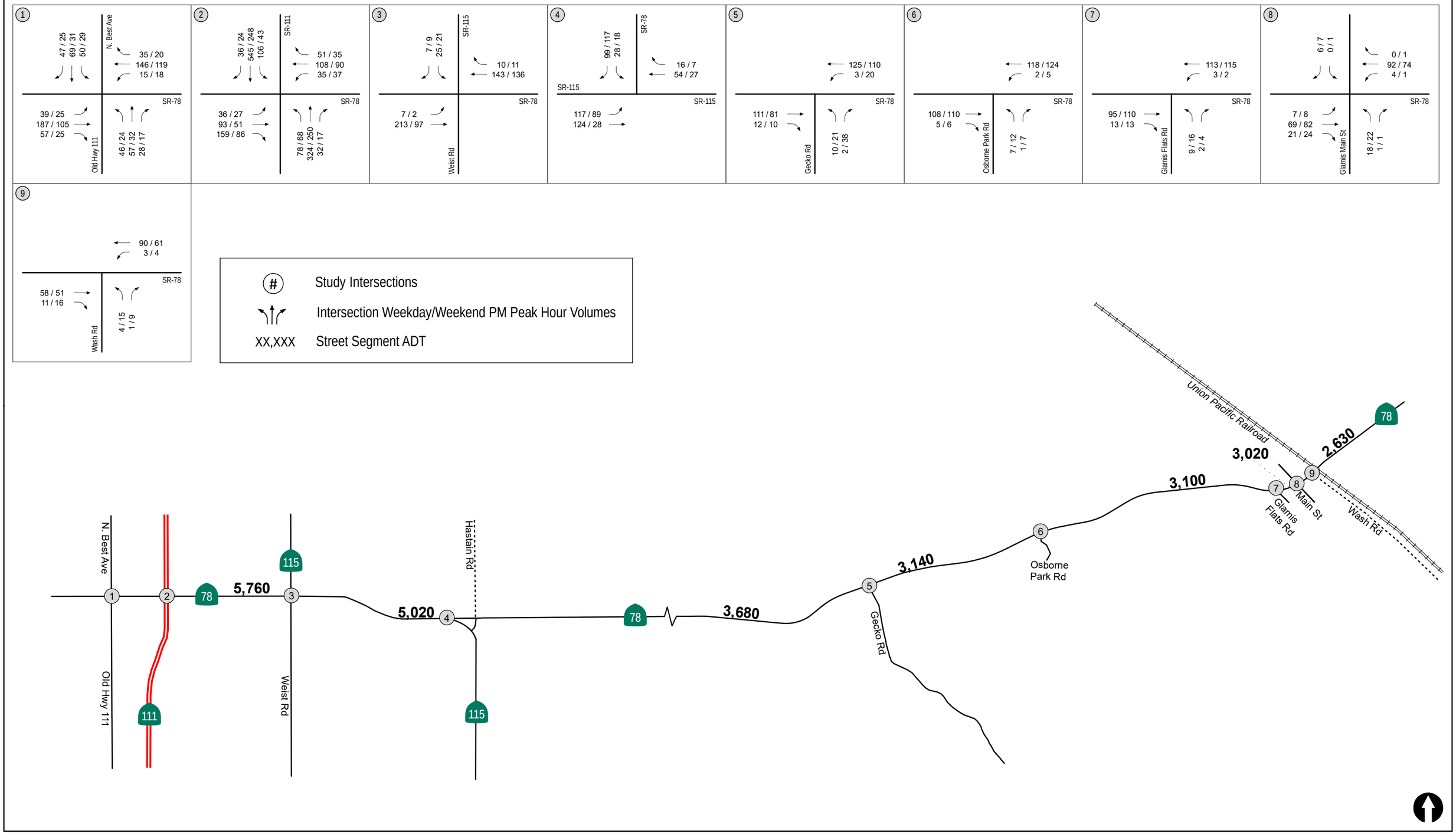

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Figure 9-2

Existing + Project + Cumulative Projects Traffic Volumes

Glamis Specific Plan

10.0 ANALYSIS OF NEAR-TERM SCENARIOS

10.1 Existing + Project

10.1.1 *Intersection Analysis*

Table 10–1 summarizes the Existing + Project intersection operations. As seen in *Table 10–1*, with the addition of Project traffic, all study area intersections are calculated to continue to operate at LOS C or better. No substantial effects are identified.

The Existing + Project intersection analysis worksheets are included in ***Appendix D***.

10.1.2 *Segment Operations*

Table 10–2 summarizes the Existing + Project segment operations. As seen in *Table 10–2*, with the addition of Project traffic, the study area segments are calculated to continue to operate at LOS C or better. No substantial effects are identified.

10.2 Existing + Project + Cumulative Projects

10.2.1 *Intersection Analysis*

Table 10–1 summarizes the Existing + Project + Cumulative projects intersection operations. As seen in *Table 10–1,* with the addition of Project traffic and cumulative projects traffic, all study area intersections are calculated to continue to operate at LOS C or better. No substantial effects are identified.

The Existing + Project intersection + Cumulative projects analysis worksheets are included in ***Appendix E***.

10.2.2 *Segment Operations*

Table 10–2 summarizes the Existing + Project + Cumulative projects segment operations. As seen in *Table 10–2*, with the addition of Project traffic and cumulative projects traffic, the study area segments are calculated to continue to operate at LOS C or better. No substantial effects are identified.

TABLE 10–1
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Existing + Project + Cumulative Projects		Δ[c]	Effect Type
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS		
1. SR 78 / Old Highway 111 / Best Avenue	Signal	Wkday	15.5	B	15.6	B	16.1	B	0.6	None
		Wkend	15.3	B	15.3	B	15.3	B	0.0	None
2. SR 78 / SR 111	Signal	Wkday	24.8	C	27.9	C	30.4	C	5.6	None
		Wkend	21.2	C	21.7	C	22.2	C	1.0	None
3. SR 78 / SR 115 (west)	MSSC[d]	Wkday	11.8	B	12.8	B	13.5	B	1.7	None
		Wkend	10.0	A	10.7	B	10.9	B	0.9	None
4. SR 78 / SR 115 (east)	MSSC	Wkday	10.6	B	11.4	B	11.9	B	1.3	None
		Wkend	9.3	A	9.7	A	9.8	A	0.5	None
5. SR 78 / Gecko Road	MSSC	Wkday	10.0	A	10.8	B	11.1	B	1.1	None
		Wkend	9.4	A	10.1	B	10.2	B	0.8	None
6. SR 78 / Osborne Park Road	MSSC	Wkday	9.8	A	10.6	B	10.8	B	1.0	None
		Wkend	9.4	A	10.0	A	10.1	B	0.7	None
7. SR 78 / Glamis Flats Road	MSSC	Wkday	9.8	A	10.4	B	10.6	B	0.8	None
		Wkend	9.7	A	10.3	B	10.5	B	0.8	None
8. SR 78 / Glamis Mainstreet (future	MSSC	Wkday	-[e]	-	10.2	B	10.4	B	-	None
		Wkend	-	-	10.2	B	10.4	B	-	None
9. SR 78 / Wash Road	MSSC	Wkday	9.9	A	9.9	A	10.0	A	0.1	None
		Wkend	9.4	A	9.5	A	9.6	A	0.2	None

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Δ denotes an increase in delay due to project.
d. MSSC = Minor Street Stop-Controlled intersection. Worst-case delay reported.
e. Intersection does not exist under existing conditions.

General Notes:

1. Wkday= Weekday PM Peak Hour (5:00-7:00 PM)
2. Wkend= Weekend PM Peak Hour (5:00-7:00 PM)

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 10–2
NEAR-TERM STREET SEGMENT OPERATIONS

Street Segment	Existing Capacity (LOS E)[a]	Existing			Existing + Project			Existing + Project + Cumulative Projects			Δ[e]	Effect Type
		ADT[b]	LOS[c]	V/C[d]	ADT	LOS	V/C	ADT	LOS	V/C		
SR 78												
Old Highway 111 / Best Avenue to SR 115 (west)	16,200	4,370	C	0.270	5,240	C	0.323	5,760	C	0.356	0.086	None
SR 115 (west) to SR 115 (east)	16,200	3,590	B	0.222	4,590	C	0.283	5,020	C	0.310	0.088	None
SR 115 (east) to Gecko Road	16,200	2,290	B	0.141	3,410	B	0.210	3,680	B	0.227	0.086	None
Gecko Road to Osborne Park Road	16,200	1,870	A	0.115	2,920	B	0.180	3,140	B	0.194	0.078	None
Osborne Park Road to Glamis Flats Road	16,200	1,920	B	0.119	2,870	B	0.177	3,100	B	0.191	0.073	None
Glamis Flats Road to Glamis Mainstreet (future access)	16,200	1,920	B	0.119	2,790	B	0.172	3,020	B	0.186	0.068	None
Glamis Mainstreet (future access) to Wash Road	16,200	1,920	B	0.119	2,120	B	0.131	2,350	B	0.145	0.027	None
East of Wash Road	16,200	2,240	B	0.138	2,360	B	0.146	2,630	B	0.162	0.024	None

Footnotes:

a. The capacity of the roadway at Level of Service E.
b. Average Daily Traffic
c. Level of Service
d. The Volume to Capacity ratio.
e. Increase in V/C ratio due to the addition of project traffic.

11.0 ANALYSIS OF LONG-TERM SCENARIOS

11.1 Year 2050 Traffic Volumes

Based on previous traffic studies conducted in the area and discussions with Caltrans, long-term volumes were estimated by applying a growth rate of 1.25% per year for 31 years (2019 through 2050 for a total of 38.75%) to the existing volumes.

Figure 11–1 depicts the long-term Year 2050 Traffic Volumes, and ***Figure 11–2*** depicts the Year 2050 + Project Traffic Volumes.

11.2 Year 2050 Segment Operations

Table 11–1 summarizes the Year 2050 segment operations. As seen in *Table 11–1*, all study area segments are calculated operate at LOS C or better.

11.3 Year 2050 + Project Segment Operations

Table 11–1 summarizes the Year 2050 + Project segment operations. As seen in *Table 11–1*, with the addition of Project traffic, all study area segments are calculated to continue to operate at LOS C or better.

TABLE 11–1
YEAR 2050 STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS E)[a]	Existing		Year 2050			Year 2050 + Project			Impact Type
		ADT [b]	LOS [c]	ADT [b]	LOS [c]	V/C [d]	ADT	LOS	V/C	
SR 78										
Old Highway 111 / Best Avenue to SR 115 (west)	16,200	4,370	C	6,060	C	0.374	6,930	C	0.428	None
SR 115 (west) to SR 115 (east)	16,200	3,590	B	4,980	C	0.307	5,980	C	0.369	None
SR 115 (east) to Gecko Road	16,200	2,290	B	3,180	B	0.196	4,300	C	0.265	None
Gecko Road to Osborne Park Road	16,200	1,870	A	2,590	B	0.160	3,640	B	0.225	None
Osborne Park Road to Glamis Flats Road	16,200	1,920	B	2,660	B	0.164	3,610	B	0.223	None
Glamis Flats Road to Glamis Mainstreet (future access)	16,200	1,920	B	2,660	B	0.164	3,530	B	0.218	None
Glamis Mainstreet (future access) to Wash Road	16,200	1,920	B	2,660	B	0.164	2,860	B	0.177	None
East of Wash Road	16,200	2,240	B	3,110	B	0.192	3,230	B	0.199	None

Footnotes:

a. The capacity of the roadway at Level of Service E.
b. Average Daily Traffic
c. Level of Service
d. The Volume to Capacity ratio.

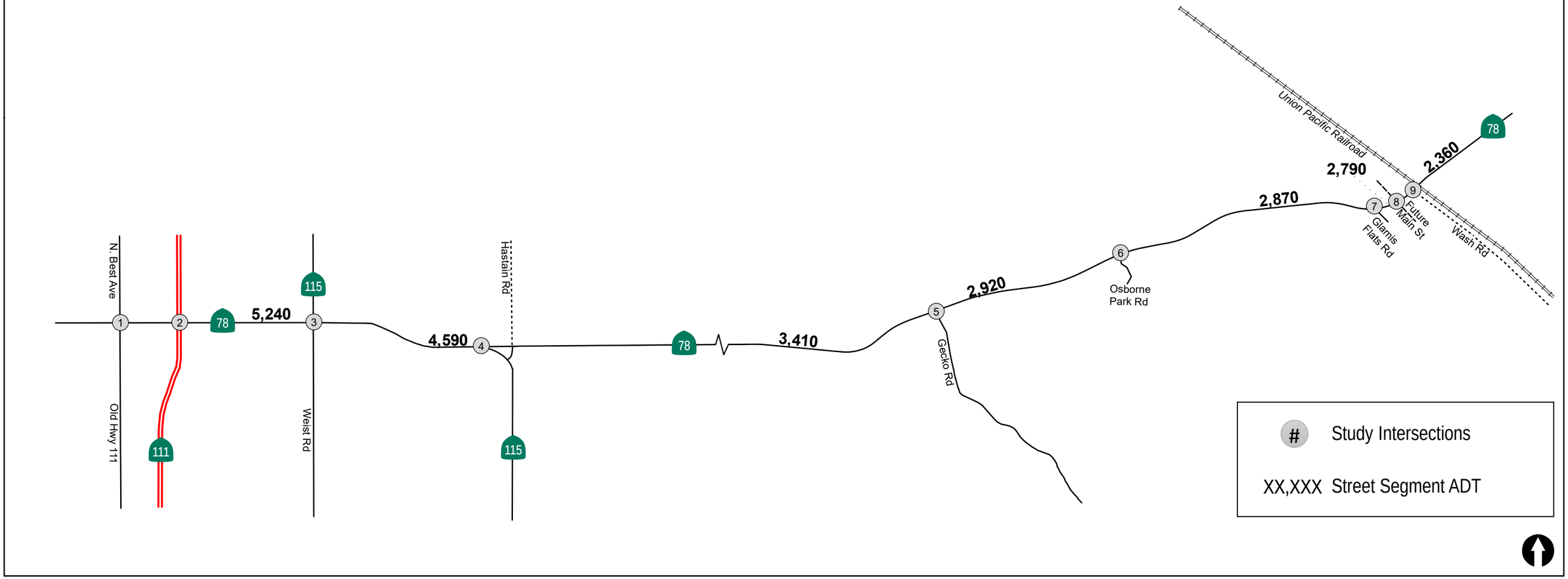

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Figure 11-1

Year 2050 Traffic Volumes

Glamis Specific Plan

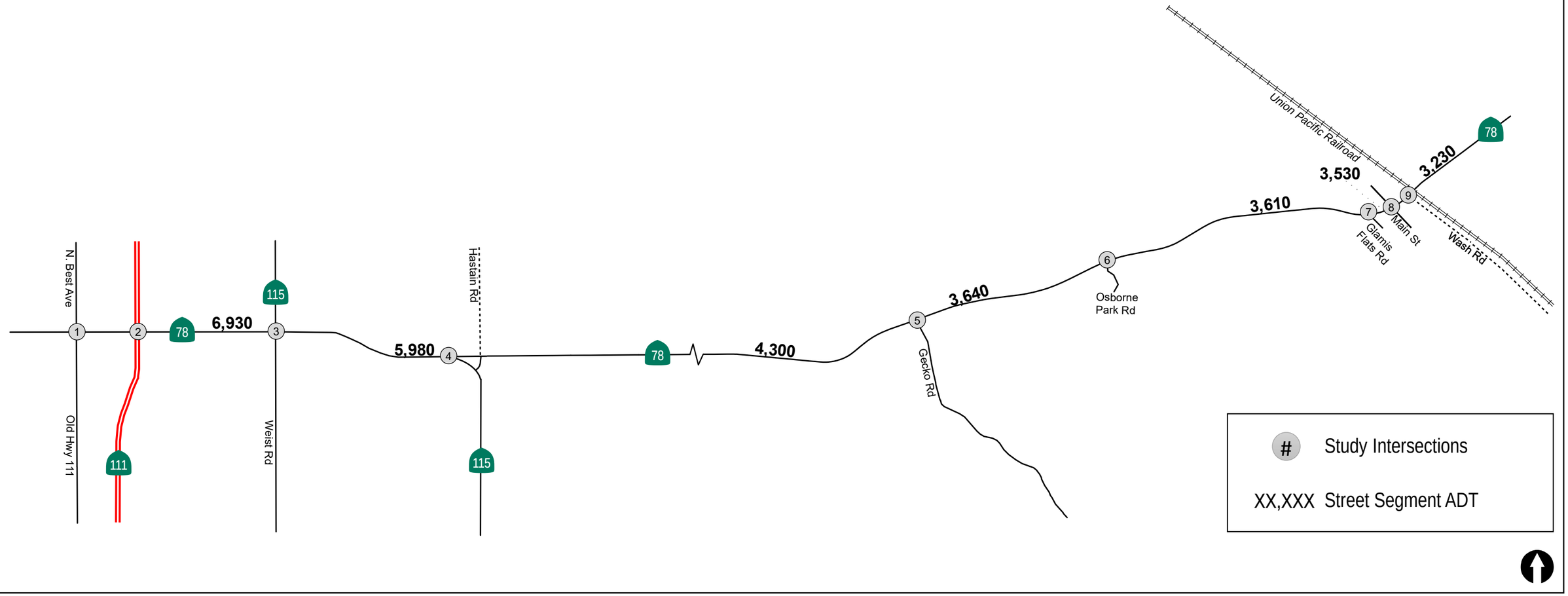

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Figure 11-2

Year 2050 + Project Traffic Volumes

Glamis Specific Plan

12.0 ACCESS ASSESSMENT

The Project site is regionally accessible via SR 78 which serves as the primary transportation route for cars and trucks. Wash Road, a County-maintained dirt road, serves as access to BLM land and extends southeasterly from SR 78 for approximately 18.4 miles to County Highway S34 (Ogilby Road), a County maintained and paved two-lane highway.

12.1 Glamis Mainstreet

Primary circulation flow will be provided via the proposed "Glamis Mainstreet", to be located between Glamis Flats Road and Wash Road, just southwest of the Glamis Beach Store, which will interconnect by crossing SR 78. A concept plan showing the proposed new intersection configuration on SR 78 is included in ***Appendix F***.

Fencing along SR 78 to assist in prohibiting access to the site other than at establishes intersections is recommended commensurate with the development of Glamis Mainstreet. A OHV tunnel running under SR 78 connecting the northern and southern portions of the Project site is recommended to be constructed at the time the Land Use Areas north of SR 78 are developed.

Figure 12-1 depicts the assumed geometric lane configuration based on the preliminary design provided in *Appendix F* as well as the Project trips at the future SR 78 / Glamis Mainstreet intersection.

Table 12–1 summarizes the Existing + Project + Cumulative projects intersection operations at the future SR 78 / Glamis Mainstreet intersection. As seen in *Table 12–1,* the intersection is calculated to operate acceptably at LOS B under Weekday and Weekend PM peak hour conditions. It is recommended that the Project conduct an annual signal warrant assessment to determine whether signalization at the intersection should be implemented. In addition, a formal Intersection Control Evaluation (ICE) report should be conducted at a subsequent engineering phase.

TABLE 12–1
SR 78 / GLAMIS MAINSTREET INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay [a]	LOS [b]
SR 78 / Glamis Mainstreet	MSSC[a]	Wkday	10.4	B
		Wkend	10.4	B

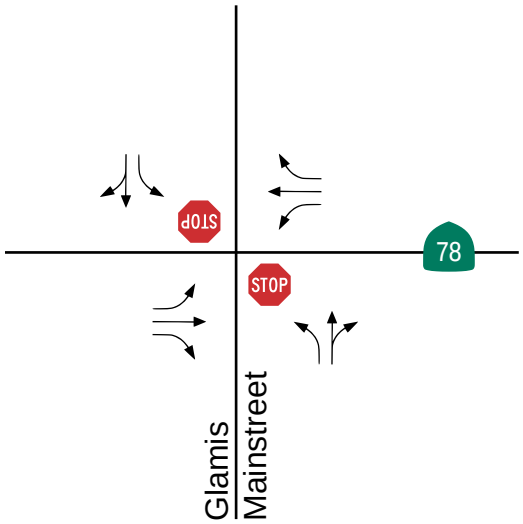
Footnotes:

a. MSSC = Minor Street Stop-Controlled intersection. Worst-case delay reported.

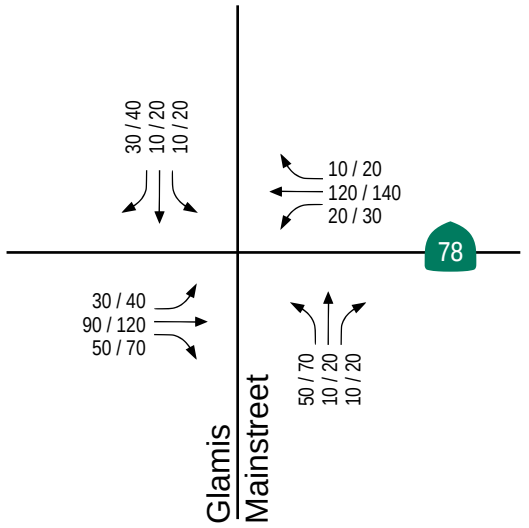
12.2 Additional Access Points

Access to Land Use Areas 5 and 6, just east of the Union Pacific Rail Road (UPRR), via SR 78 is proposed. Given the very low expected traffic volumes, signalization of the intersection is likely not needed, however, dedicated left-turn lanes on SR 78 are recommended.

In addition, a secondary gated emergency only access point to/from the Project site to SR 78 should be provided on the west side of the Project site, immediately south of SR 78.



Proposed Conditions Diagram



Project Buildout Traffic Volumes

Note:
Weekday / Weekend PM Intersection Traffic Volumes

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Figure 12-1

Glamis Mainstreet Operations

13.0 CONCLUSIONS & RECOMMENDATIONS

This traffic study analyzes the following specific components of the Project, which are anticipated to be developed within the first ten years:

- Restaurant Expansion: 4,000 SF
- Retail Expansion: 2,000 SF
- Service Center: Four (4) Service Bays
- Research & Development Facility: 5,000 SF
- Hotel / Motel: 20 Rooms
- Multi-Family Residential / Staff Housing: 14 Units
- RV Park: 30 Sites
- Vendor Row Expansion

Any additional future development that is not listed above and that exceeds the number of trips generated by the above uses will require a new traffic study and may require additional mitigation based on that study. All additional traffic studies will need to be submitted to the County of Imperial and Caltrans for review and approval.

13.1 Vehicle Miles Traveled

According to the ITE guidelines, it is recommended that local-serving retail projects be presumed to have less than significant VMT impacts and regional-serving retail projects be presumed to have significant VMT impacts if they increase VMT above the level that would occur for conditions without the project. As noted in OPR's technical advisory, "*by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact*."

While the Project site is not located in an urban area, the primary objective of the Project is to formalize the site and provide services and amenities that patrons of the dunes would otherwise have to drive long distances to access. This includes food services, repair services, and retail services. The Project's proposed land uses are intended to serve patrons of the dunes and will not operate year-round due to the long distance from population bases and the extreme heat.

Therefore, the OPR guidance pertaining to locally serving retail projects is applicable to this Project. The Project land uses will improve service-destination proximity, shorten trips, and reduce VMT. As such, the Project is presumed to have a less-than-significant transportation impact and does not require a detailed VMT analysis.

13.2 Level of Service

The intersection and segment analysis provided in this study shows that the analyzed facilities are consistent with the County of Imperial General Plan LOS standards, and therefore no improvements

are required. However, it is recommended that the Project enact the following measures to provide safe access and efficient operations to/from the site*:*

- Construct the future intersection of SR 78 / Glamis Mainstreet per the sketch provided in *Appendix F*.
- Conduct an annual signal warrant assessment at the future intersection of SR 78 / Glamis Mainstreet to determine when / if signalization should be implemented.
- Provide fencing along SR 78 to assist in prohibiting access to the site other than at established intersections.
- An OHV tunnel running under SR 78 connecting the northern and southern portions of the Project site is recommended to be constructed at the time the Land Use Areas north of SR 78 are developed.
- Access to Land Use Areas 5 and 6, just east of the UPRR, via SR 78 will be required. Given the very low expected traffic volumes, signalization of the intersection is likely not needed, however, dedicated left- turn lanes on SR 78 are recommended.
- A secondary gated emergency only access point to/from the Project site to SR 78 should be provided on the west side of the Project site.
- All driveways connected to SR 78 shall be reconstructed to current Caltrans standards.
- A formal Intersection Control Evaluation (ICE) report should be conducted at a subsequent engineering phase. The ICE report shall be reviewed and approved prior to the beginning of any construction. The proposed improvements at the intersection of SR 78 / Glamis Main Street may change based on the findings from the ICE report.

L-2 Traffic Report Appendices

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engineers

TECHNICAL APPENDICES
GLAMIS SPECIFIC PLAN
Imperial County, California
February 7, 2022

LLG Ref. 3-19-3112

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APPENDIX A

PROJECT DESCRIPTION

Project Description

1.1 Project Location

The Glamis Specific Plan (GSP) area is located approximately 27 miles east of Brawley at the intersection of State Route 78 (SR 78) and the Union Pacific Railroad (UPRR) in Imperial County, California. Geographically, the project site is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County (County). The project site is owned by the Polaris Inc. (Applicant).

Exhibit 1, *Regional Location Map*, shows the location of the project site in relation to Imperial County and surrounding areas. Exhibit 2, *Project Vicinity*, shows the relationship between the GSP area and surrounding vicinity with the Imperial Sand Dunes Recreation Area (ISDRA) located immediately to the southwest, the North Algodones Dunes Wilderness (NADW) immediately to the northwest, and the Chocolate Mountains and Chocolate Mountain Aerial Gunnery Range (CMAGR) located to the northeast.

The GSP consists of seven (7) parcels (including Assessor Parcel Numbers [APNs] 039-310-017, 039-310-022, 039-310-027, 039-310-023, 039-310-029, 039-310-026, and 039-310-030) totaling approximately 142 acres. See Exhibit 3, *Project Site Aerial*, for an aerial depiction of the project site vicinity. The project site is located in the northeast quarter of Section 33 and the northwest quarter of Section 34, Township 13 South, Range 18 East of the Glamis 7.5-minute quad. The project site is further defined as located at Latitude 32°59’46.95” North and Longitude 115°04’21.77” (approximate geographic center of the project site).

1.2 Existing Characteristics

The project site can be characterized as an area of open, sandy, disturbed desert land with all existing development occurring in close proximity (within approximately 0.25 mile) to the intersection of SR 78 and the UPRR. The project site consists of several adjoining parcels. On one parcel (APN 039-310-029) there is a one- and two-story metal building structure with water tanks, a wireless communications facility, a private residence/storage building and an unmaintained storage shed and shipping containers which together comprise what is commonly referred to as the “Glamis Beach Store.” Also, there is a separate seasonal off-highway vehicle (OHV) repair business (and two related RV trailers) connected to the Glamis Beach Store. Immediately south of the APN 039-310-029 parcel, is the 8-acre parcel (APN 039-310-030), which includes a single-family residence, large recreational vehicle storage garages, and other related equipment storage buildings. On the southeast corner of the project site is a 1-acre parcel (APN 039-310-017) which currently includes a rather dilapidated/abandoned pre-fab residential structure. On the parcel (APN 039-310-026) directly

opposite of the Glamis Beach Store (to the north of SR 78 from the Glamis Beach Store) is an existing RV storage area, and other vacant desert land. On the parcel on the southwest side of the project site (APN 039-310-027) there are wood posts to form a sectioned-off parking/vendor area. On the northeast side of the GSP, there are two triangular parcels (on the northeast side of the UPRR, APN 039-310-022 and APN 039-310-023), which are currently vacant.

The project site is relatively flat with a southwest-to-northeast trending grade of less than one percent or an approximate difference in elevation of 23 feet above mean sea level (amsl) between the southwest corner of the site (approximate elevation of 324 feet amsl) and the northeast corner of the site (approximately 347 feet amsl). Areas of wind-blown sand dunes with sporadic native vegetation are found situated and encroaching upon the southeast corner of the project site.

1.3 Surrounding Land Uses

The GSP contains the only private commercial land uses within the project vicinity and is surrounded by open desert land that is managed by the Bureau of Land Management (BLM). Also, the Chocolate Mountain Aerial Gunnery Range (CMAGR) is located approximately 3 miles to the north of the GSP. The GSP is within and surrounded by the ISDRA and is bordered by the NADW to the northwest. Within all of the various BLM lands surrounding the GSP, the BLM has designated Recreation Management Zones (RMZs) which dictate the allowable recreation activities within those areas and provide for BLM's management objectives within those areas. The ISDRA, NADW and RMZs are briefly discussed below:

Imperial Sand Dunes Recreation Area (ISDRA)

The ISDRA is the largest mass of sand dunes in the State of California, extending for more than 40 miles in length (from north to south), and averaging approximately 5 miles wide (from east to west). Dunes within the ISDRA can reach heights of 300 feet above the desert floor, providing OHV recreationists an ideal location for their activities. The ISDRA, which is managed by the BLM, includes a variety of camping areas, ranger stations, restrooms, and other facilities to support OHV recreationists who visit the area primarily between October and April. The BLM allows special events with a permit within the ISDRA.

North Algodones Dunes Wilderness (NADW)

The NADW covers more than 26,000 acres and is managed by the BLM as a part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use. Camping is allowed throughout the area, however there is no water and no facilities for visitors within the NADW.

BLM Recreation Management Zones (RMZs)

The BLM has designated Recreation Management Zones (RMZs) on BLM lands located throughout the area surrounding the GSP. The RMZs provide an activity-level planning framework for BLM's

recreation management. The RMZs have been allocated throughout the planning area to represent permitted recreation niches (activities, experiences and benefits). The GSP is bordered by three RMZs: Open RMZ to the south, Limited RMZ to the northeast, and the North Algodones Dunes Wilderness RMZ to the northwest. The Open RMZ allows for unrestricted OHV recreation, camping, commercial vending, hiking and wildlife viewing. The Limited RMZ allows for limited use OHV recreation (travel limited to designated routes of travel or areas with seasonal restrictions under specific conditions), camping, environmental education, and tourism opportunities. The North Algodones Dunes Wilderness RMZ prohibits any motorized recreation opportunities and allows for non-motorized recreation, such as camping, hiking, and educational opportunities.

Chocolate Mountain Aerial Gunnery Range (CMAGR) The Chocolate Mountain Aerial Gunnery Range (CMAGR) is a live-fire training range used for developing and training Marine Corps and Navy aviators/land combat forces (see Exhibit 2 – Project Vicinity). The CMAGR consists of approximately 459,000 acres and is bounded on the west by the Salton Sea basin, and on the east by the Chuckwalla and Palo Verde mountains. It straddles the northern portion of the Chocolate Mountains east of the Salton Sea in Imperial and Riverside Counties, California, with restricted airspace in both California and Arizona. The northern border is separated from the Orocopia Mountains by Salt Creek and extends south to (near) Highway 78 approximately 3 miles northeast of the GSP. The CMAGR is under the jurisdiction of the United States Navy and Marine Corps and is closed to the public. The authorization for aircrews to deliver live ordnance on realistic targets is a central component of the overall value of the CMAGR. However, due to the significant distance between the GSP and the CMAGR, these ongoing military activities do not have any impacts to the GSP.

The Holtville Rocket Target Range has two live bombing locations to the west and northwest of the GSP, however both are approximately 10 and 8 miles away, respectively. Those live bombing/target range areas that are used by the U.S. Navy and Marine Corps, do not currently have any effect on the use of the GSP area, nor would any impact be expected in the future.

1.4 General Plan and Zoning Designation

The approximately 142-acre GSP is located and contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development and creation of a Specific Plan in accordance with GSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. Exhibit 4, *Existing General Plan Designations*, shows the land use designations for the project site and the surrounding area. The existing zoning designation for the project site is Open Space/Preservation (S-2) and a very small area that is General Commercial (C-2). The general area of the Glamis Beach Store (within APN 039-310-029) is zoned as C-2, while the remainder of the project site is zoned as S-2. The project site is surrounded by BLM land uses on all sides. Exhibit 5, *Current Imperial County Zoning Project Site and Vicinity*, shows the zoning for the project site and surrounding

area, and Exhibit 5a, *Current Imperial County Zoning Project site*, shows the zoning for the project site only.

The Applicant has prepared this proposed GSP, which includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning based upon different levels of allowable land use intensity. Also, the GSP proposes a Change of Zone from S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1-acre parcel on the southeast side of the project site (APN 039-310-017). The phasing plan component of the GSP (see Section 1.5) would phase the development so that more intense land uses are developed incrementally over time within the various proposed zones. The CR zoning designations are discussed in greater detail below. In conjunction with the Specific Plan a matching land use ordinance to implement the GSP is also provided.

1.5 Project Elements

Exhibit 6, *Glamis Specific Plan – Land Use Areas*, identifies proposed land uses that are permitted within the CR zones. Three zoning categories as shown below are being implemented. The following CR Zones are described in their current setting:

CR-1 Zone

The CR-1 Zone is proposed as the least intensive CR zone of the GSP, and allows for a limited range of land uses focused on research and development, employee housing and utility infrastructure uses. As shown in Table 1, *CR Zones Permitted Land Uses*, a total of twenty-one (21) land uses are permitted within this Zone. The permitted land uses of the CR-1 Zone are intended to restrict land uses that promote traffic trips and crossings of the UPRR.

CR-2 Zone

The CR-2 Zone is proposed for moderate intensity CR Zone of the GSP, and allows for a limited range of land uses focused on guest housing, vehicle storage, accessory storage buildings, equipment storage, vehicle wash down areas, and solar and wind power generation. As shown in Table 1, *CR Zones Permitted Land Uses*, a total of thirty (30) land uses are permitted within this Zone.

CR-3 Zone

The CR-3 Zone is the most intense CR Zone of the GSP and allows for a maximum range of recreational, commercial, resort, retail, medical, entertainment, and utility infrastructure land uses. As shown in Table 1, *CR Zones Permitted Land Uses*, a total of sixty-six (66) land uses are permitted within this Zone. The permitted land uses of the CR-3 Zone are intended to provide the greatest flexibility of land uses.

Table 1 CR Zones Allowed/Permitted Uses

#	Allowed/Permitted Land Uses	CR-1	CR-2	CR-3
1	Accessory storage buildings	x	x	x
2	Adventure Center			x
3	Amusement Facilities			x
4	Bar(s)			x
5	Billboards		x	x
6	Bulk water sales (RV and general retail sale)			x
7	Caretakers quarter(s) maximum of 3	x	x	x
8	Communications Facilities (i.e. towers)	x	x	x
9	Condominium housing	x	x	x
10	Convention area			x
11	Desert Tours (off road experience)			x
12	Drive-in food facilities			x
13	Employee Housing	x	x	x
14	Entertainment Events	x		x
15	Equipment Storage	x	x	x
16	Film production / movie studio		x	x
17	Fireworks display area (as permitted by fire dept and other authorities)		x	x
18	Fuel Station (gas/diesel/propane, including convenience mart)	x	x	x
19	Guest Housing	x	x	x
20	Helipad (emergency/public)			x
21	Hotel/Motel Accommodations		x	x
22	Lighting or light shows (non-fireworks) as permitted		x	x
23	Medical Services Facility		x	x
24	Mobile food trucks			x
25	Movie theater			x
26	Obstacle Course / Technical driving area			x
27	Off road driving school / Public workshops			x
28	Off road vehicle maintenance, repair, development, research by owner (no sales/leasing)	x	x	x
29	Oil, gas, geothermal exploration		x	x
30	Park, Playground and Picnic area(s)	x		x
31	Power Generation (on site use i.e. diesel/propane)	x	x	x

#	Allowed/Permitted Land Uses	CR-1	CR-2	CR-3
32	Private Residences	x	x	x
33	Public Parking area(s)			x
34	Public Restrooms			x
35	Public showers			x
36	Racetrack			x
37	Rental Facilities (off road equipment/vehicles)			x
38	Research and Development Facilities	x	x	x
39	Restaurant(s)			x
40	Retail displays / entrance signage			x
41	RV Dump Station(s) provided it meets County requirements		x	x
42	RV Park	x	x	x
43	RV and off-road vehicle storage	x	x	x
44	RV repair facility		x	x
45	Shooting range			x
46	Solar generating facility including battery storage up to 30 MW for onsite and export		x	x
47	Sporting goods store(s)			x
48	Stores (retail general)			x
49	Stores (retail specialty)			x
50	Temporary sales facilities			x
51	Testing facilities (offroad equipment)			x
52	Tourist information center			x
53	Training Facilities (off road vehicle use/safety)	x		x
54	Utility Buildings	x	x	x
55	Utility Substation	x	x	x
56	Vehicle parts sales			x
57	Vehicle Repair and Service			x
58	Vehicle Sale			x
59	Vehicle storage area	x	x	x
60	Vehicle wash down area		x	x
61	Vendor Sales Area(s) restricted by owner			x
62	Viewing Deck or Tower			x
63	Village area			x
64	Water and/or Wastewater treatment facilities	x	x	x

#	Allowed/Permitted Land Uses	CR-1	CR-2	CR-3
65	Wedding Chapel			x
66	Wind generating (for electrical power systems) including battery storage up to 30 MW for onsite and export		x	x

S-1 Zone (Open Space/Recreation) The S-1 Zone (Open Space/Recreation) applies only within Planning Area 8. Within this parcel, the GSP proposes a change of zone from the current S-2 Zone to S-1 Zone. As per Title 9, Division 5, Chapter 18, Section 90518.00 of the County's development code, the purpose of the S-1 zone is to designate areas that recognize the unique Open Space and Recreational character of Imperial County including the deserts, mountains and waterfront areas. Primarily the S-1 Zone is characterized by low intensity human utilization and small-scale recreation related uses. Any new subdivision in the S-1 zone will require all necessary infrastructure, including potable water, sewer and roads to County standards.

The S-1 Zone allows the following permitted uses, and the following uses permitted with a Conditional Use Permit (CUP) (see Table 2 below)

Table 2 – County of Imperial – S-1 Open Space/Recreation Zone – Allowed/Permitted Uses

#	Allowed/Permitted Uses
1	Accessory Structure including cargo container (provided they have an approved building permit and are subordinate to a primary building/use)
2	Crop and tree farming
3	Directional signs of not to exceed six (6) square feet in area but not including commercial advertising
4	Duck clubs
5	Fish farms
6	Forest industries
7	Grazing
8	Gun clubs
9	Harvesting of any wild crop
10	Hotels and motels
11	Marinas, boat liveries and boat launching ramps

#	Allowed/Permitted Uses
12	Mobile home/RV Park (provided 50% of the total use is for RV use)
13	Residence (one per legal parcel)
14	RV park
15	Solar energy extraction generation (provided that it is for on-site consumption only).
16	Home Occupation (per Division 4, Chapter 4; home occupation permit required).

Land Use Areas

As shown in Exhibit 6, the GSP consists of nine (9) Land Use Areas. Exhibit 6 also shows the respective CR (CR-1, CR-2, and CR 3) and S-1 zoning applicable within each Land Use Area. Land Use Area 1 is considered as the most developable area of the GSP due to the lack of safety concerns such as pedestrian and OHV crossings along SR 78 and the UPRR. Additionally, special events such as Camp RZR, have been historically hosted in this area that is adjacent to the Open RMZ to the south (within the IDSDRA) which provides for the greatest OHV accessibility of the entire project site. As shown in the list below, the Land Use Areas correspond with the following project APNs:

- Land Use Area 1 – APN 039-310-029 and APN 039-310-027
- Land Use Area 2 – Southwest portion of APN 039-310-026
- Land Use Area 3 – Western portion of APN 039-310-026
- Land Use Area 4 – Northern portion of APN 039-310-026
- Land Use Area 5 – APN 039-310-022 (north side of SR 78)
- Land Use Area 6 – APN 039-310-023 (south side of SR 78)
- Land Use Area 7 – APN 039-310-030
- Land Use Area 8 – APN 039-310-017

Table 3 below identifies the Preferred Land Uses within each of the Land Use Areas.

Table 3 Planning Area Preferred Land Uses

Planning Area	Preferred Land Uses	Proposed Zoning
1	Accessory storage buildings, adventure center, amusement facilities, bar(s), billboards, bulk water sales, caretakers quarters, communications facilities, condominiums, convention area, desert tours (off road experience), drive-in food facilities, employee housing, entertainment events, equipment storage, film production/movie studio, fireworks display area (as permitted by fire dept and other authorities), fuel station (gas/diesel and propane), guest housing, helipad (emergency/public), hotel/motel accommodations, lighting or light shows, medical services facility, mobile food trucks, movie theater, obstacle course/technical driving area, off road driving school/public workshops, oil/gas/geothermal exploration, park/playground/picnic areas, power generation (on site use i.e. diesel/propane), private residences, public parking areas, public restrooms and showers, racetrack, rental facilities (off-road equipment/vehicles), research and development facilities, restaurant(s), retail displays/entrance signage, RV dump station(s), RV park, RV and off-road vehicle storage, RV repair facility, RV and general retail sales, shooting range, sporting goods store(s) solar generating (on site use), stores (retail general and retail specialty), testing facility (off road equipment), temporary sales facilities, tourist information center, training facilities (off road vehicle use/safety), utility buildings, utility substation, vehicle parts sales, vehicle repair and service, vehicle sale, vehicle storage, vehicle wash down area, vendor sales area(s) restricted by owner, viewing deck or tower, village area, water/wastewater treatment facilities, wedding chapel, and wind generating (for electrical power systems) including battery storage.	CR-3
2, 3, & 4	Accessory storage buildings, adventure center, entertainment events, equipment storage, guest housing, medical services facility, obstacle course/technical driving area, off road driving school/public workshops, public parking areas, RV dump station(s), RV park, RV repair facility, RV storage, mobile food trucks, obstacle course/technical driving area, off	CR-3

Planning Area	Preferred Land Uses	Proposed Zoning
	road driving school/public workshops, public showers, public restrooms, racetrack, solar generating (on site use).	
5 & 6	Accessory storage buildings, billboards, caretaker quarters, communications facilities, condominiums, equipment storage, employee housing, film production/movie studio, fireworks display area, fuel stations (gas, diesel and propane), guest housing, hotel/motel accommodations, lighting and light shows, medical services facility, off road vehicle maintenance/repair/development, oil/gas/geothermal exploration, power generation, private residences, research and development facility, RV park, RV dump station(s), RV storage, RV repair facility, solar generating (on-site use) including battery storage, utility buildings, utility substation, vehicle storage, vehicle wash down area, water and/or wastewater treatment facilities, and wind generating (for electrical power systems) including battery storage.	CR-1
7	Accessory storage buildings, , caretaker quarters, communication facilities, condominiums, entertainment events, equipment storage, fuel station (gas/diesel/propane), guest housing, off road vehicle maintenance/repair/development/research by owner (no sales or leasing), park/playground/picnic areas, power generation, private residence, testing facilities (off road equipment), training facilities (off road vehicle use/safety), vehicle storage, and water and/or wastewater treatment facilities.	CR-2
8	Accessory structure including cargo container (provided they have an approved building permit and are subordinate to a primary building/use), crop and tree farming, directional signs of not to exceed six (6) square feet in area but not including commercial advertising, duck clubs, fish farms, forest industries, grazing, gun clubs, harvesting of any wild crop, hotels and motels, marinas, boat liveries and boat launching ramps, mobile home/RV park (provided 50% of the total use is for RV use), residence (one per legal parcel), RV park, solar energy extraction generation (provided that it is for on-site consumption only),	S-1

Planning Area	Preferred Land Uses	Proposed Zoning
	and home occupation per Division 4, Chapter 4 (home occupation permit required).	

Conceptual Circulation Plan

The project site is regionally accessible via SR 78 and serves as the primary transportation route for cars and trucks. Ted Kipf Road, a County-maintained dirt road serves as access to BLM land and extends southeasterly from SR 78 for approximately 18.4 miles to County Highway S34 (Ogilby Road), a County maintained and paved two-lane highway. Circulation flow will be provided via the "Glamis Mainstreet", which will interconnect by crossing SR 78 (see Exhibit 6, *Glamis Specific Plan – Land Use Areas*). A secondary and emergency only access point to/from the project site to SR 78 will be provided on the west side of the project site immediately south of SR 78.

Conceptual Drainage Plan

Text to be added once Conceptual Drainage Plan has been prepared.

Conceptual Domestic Water Plan

Text to be added once Conceptual Domestic Water Plan is available.

Conceptual Wastewater Treatment Plan

Text to be added once Conceptual Wastewater Treatment Plan is available.

Phasing Plan

Development within the GSP is intended to occur over a span of approximately 20 to 50 years and will depend on market conditions, availability of supporting infrastructure, and other factors. Four (4) phases of development are proposed. Within these phases additional phasing may occur and are described as follows:

Phase One

As shown in Exhibit 7, *Phasing Plan*, development of Phase One will occur where the existing Glamis Beach Store, Restaurant and Bar, and OHV repair facility are located as contained within APN 039-310-029 Land Use Area 1, 34-acre parcel). Also, APN 039-310-030 (Land Use Area 7, 8-acres parcel) and APN 039-310-017 (Land Use Area 8, 1-acre parcel) are included as part of Phase One.

Before certain significant structural improvements are made to this area, required and necessary infrastructure improvements relevant to potable water, wastewater treatment and electrical service would be needed and developed in order to accommodate the projected demand from visitors. There may be some improvements made within this parcel that are not dependent on such services and therefore could be implemented ahead of such infrastructure.

The first required infrastructure improvement would be the development of a water treatment system, which would treat ground water extracted from existing onsite wells. This is currently in progress and a water treatment plant complying with California standards is being constructed to meet the needs of the current uses and with room for expansion. As new development is implemented, this water plant may need to be expanded as determined by the regulatory agencies.

The second required infrastructure improvement may be the development of a wastewater treatment system. Currently, wastewater generated by the Glamis Beach Store, restaurant and bar is discharged into an existing septic tank located near to those buildings. For some initial development(s) septic system(s) may be possible and allowed. However, this decision relies entirely upon regulatory requirements. If and when a development is proposed and a wastewater system is required the project will implement the regulatory required system(s).

The amount of wastewater treatment infrastructure needed (i.e., secondary and tertiary treatment) would be determined by the amount and intensity of each structural improvement envisioned, and the amount of wastewater forecasted to be generated by each structural improvement. To assure wastewater does not exceed the treatment capacity at any given time during development of phase one (and for all other subsequent phases), a wastewater generation analysis will be required for each structural improvement to determine whether existing wastewater infrastructure would, or would not need upgraded improvements in order to maintain wastewater treatment capacity.

The third system of infrastructure improvement would be electrical service upgrades. The project site currently relies on diesel generators for all of its electrical power demand needs. It may not be a feasible option for new development to be reliant upon diesel generators in the future, since air quality and greenhouse gas (GHG) emissions regulations are likely to become more restrictive over time. With this in mind, three options are being evaluated to determine which available source of power supply would best fit as the preferred option for the Glamis Specific Plan. The first option would

to be for Imperial Irrigation District (IID) to construct and install a power line (transmission line and/or distribution line) to extend from the nearest substation (approximately 7.2 miles to the northeast). A second and potentially more viable option would be to develop a small commercial solar photovoltaic (PV) system, with a back-up battery storage component or another green power system. A third option may be wind generation. Although winds in this area are sporadic, there is newer technology and future technology that may make wind or other green energy an option. The timing for either of these three power supply/delivery options to be developed is unknown at this time. However, one of these three power supply/delivery options will need to be considered prior to initial development, since the use of diesel generators (existing condition) to support future development, would be prohibitively costly and complex in meeting air quality regulatory requirements.

As shown in Table 2, uses permitted within Phase One could include restaurant(s), bar(s), repair shop(s), a vendor row area and event area.

Phase One would be contained within Land Use Area 1, with the exception of possible development of a research and development (R&D) facility to occur either within Land Use Area 5 or 6, and an RV park or employee housing in Land Use Areas 2, 3, and/or 4. Part of Land Use Area 8 (APN 039-310-017) could be developed during Phase One as it slightly overlaps onto current land used for Camp RZR.

Phase Two

Phase Two would most likely be within Land Use Area 1, immediately west of Phase One. Phase Two development would serve as an extension to development occurring within Phase One by incorporating land uses permitted under the CR Zone similar to those permitted in Phase One. Phase Two would also incorporate the Glamis Mainstreet (as shown on Exhibit 6) to serve as a circulation corridor for OHV traffic to and from the dunes and to Phase Four (Areas 2, 3, and 4) located directly north of SR 78.

Phase Three

Phase Three, located on the northeast side of the UPRR and bisected by SR 78, would be located within Land Use Area 5 and Land Use Area 6. No major public use facilities would be considered for development within these two APNs to discourage OHV traffic from crossing the UPPR to access these areas. Phase Three however, would serve for the development of uses relevant to employee housing, RV park, and/or an R&D facility and possible PV Solar array system.

Phase Four

Phase Four, located on the north side of SR 78, would be located within Land Use Areas 2, 3 and 4. Most of the infrastructure improvements for this phase will be based on regulatory, safety and liability concerns, and consequently, will require specific infrastructure improvements to be in place prior to development.

The Glamis Mainstreet corridor is proposed to provide an optional circulation interconnection between Phase One and Phase Four. The project applicant will first need to work with and create a nexus as well as approvals between State, County of Imperial, agencies and local governments as to the appropriate safe type of highway crossing (undercrossing or overcrossing) to be constructed across SR 78. This process will ensure that the crossing is designed to incorporate all required safety measures to the fullest extent possible.

All Phasing as proposed will be impacted by possible requirements that Caltrans may impose along SR 78 and for crossing the UPRR. The Imperial County Transportation Commission (ICTC) is currently conducting a feasibility study for a safe crossing over UPRR for off road vehicles either at SR 78 or Wash 10 or some other location, and additional information will be provided once the feasibility study is complete. The GSP does not encourage or desire to have off road vehicles cross the UPRR, therefore the parcels of land on the northeast side of the UPRR are proposed to have very restricted uses.

Special Events

The GSP area and greater Imperial Sand Dunes area has been historically utilized for OHV recreational events and activities. The applicant has been operating a special recreational event named “Camp RZR” since 2007 that attracts as many as 20,000 visitors each year. This event usually occurs during the weekend before Halloween. In 2008, the County of Imperial issued a Conditional Use Permit (CUP) to the applicant to operate a “seasonal event area” for special events such as Camp RZR on their private property within the ISDRA. Since 2008, the applicant has coordinated with the County, BLM, Imperial County Fire Department, Imperial County Sherriff’s Office, California Highway Patrol and other affected public agencies to ensure that proper special event protocols and procedures are enforced to address key issues such as traffic, safety, emergency procedures, restrooms, and other related special event factors.

The GSP will include provisions for additional special events to be held in addition to the longstanding Camp RZR. In concert with the existing operational protocols, procedures and guidelines for special events, the GSP will provide performance standards that will meet the guidelines/requirements of the affected public agencies (i.e., Imperial County Fire Department and Sheriff’s Office) to address and ensure compliance with key special event-related issues. Furthermore, the GSP’s performance standards will incorporate the BLM’s Special Recreation Permit Event Operations Plan Checklist to

ensure that operations of the proposed special annual events comply with the special event guidelines of the BLM. Special events that may be held at this site can be sponsored by the owner or by other entities provided they are first approved by the owner. Events can vary and be combined with off-site activities where portions of the event are on site while the remainder is on adjacent BLM lands. These events may include concerts, races, social gatherings, sporting activities, educational activities, training activities, and may include pyrotechnics and other entertainment venues.

Conceptual Site Plan

Exhibit 8, *Conceptual Site Plan*, presents a hypothetical, conceptual site plan for the GSP, and that depicts the arrangement of preferred land uses (as detailed in Table 3) within the identified Land Use Areas at the time of full project build-out. Per Exhibit 8, potential structures, circulatory corridors, and other related-facilities are identified to provide a conceptual project layout in accordance with the proposed CR Zones for the GSP. In addition to the Conceptual Site Plan for the GSP, Exhibit 9, *Conceptual Site Plan – Alternative*, provides an alternative arrangement of preferred land uses for the GSP. Specifically, Exhibit 9 presents the relocation of the vendor row area to APN 039-310-029 on the east portion of Planning Area 1 and the special events area to APN 039-310-027 on the western portion of Planning Area 1.

Project Entitlements

The County of Imperial is the lead agency for the proposed Glamis Specific Plan. The applicant is requesting approval of the following entitlements by the County of Imperial:

- Specific Plan XX-XX
- Land Use Ordinance
- Change of Zone
- Conditional Use Permit(s)
- Air Quality Permits
- Water Treatment Permits

Other discretionary actions that may be required by the County include approval of:

- Tentative and Final Parcel Maps
- Plot Plans and/or Conditional Use Permits
- All of these will also be subject to CEQA compliance.

Other Public Agencies whose Approval is Required:

The Glamis Specific Plan may also require approval from the following additional public agencies:

Caltrans District 11 – potential traffic signal/intersection improvements, and encroachment permit(s) for driveway access.

Exhibit 1 - Regional Location Map

Exhibit 2 - Project Vicinity

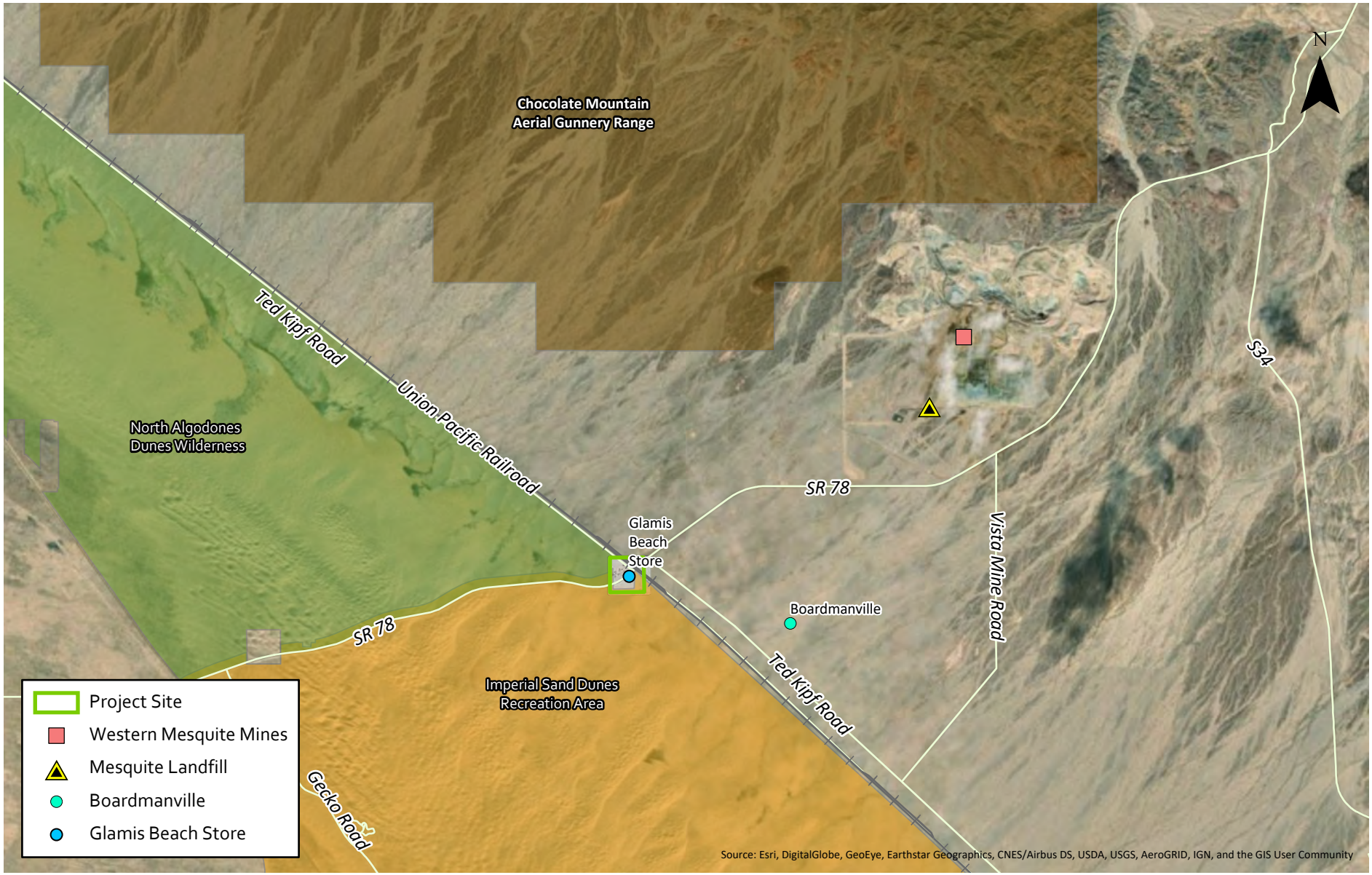


Exhibit 3- Project Site Aerial

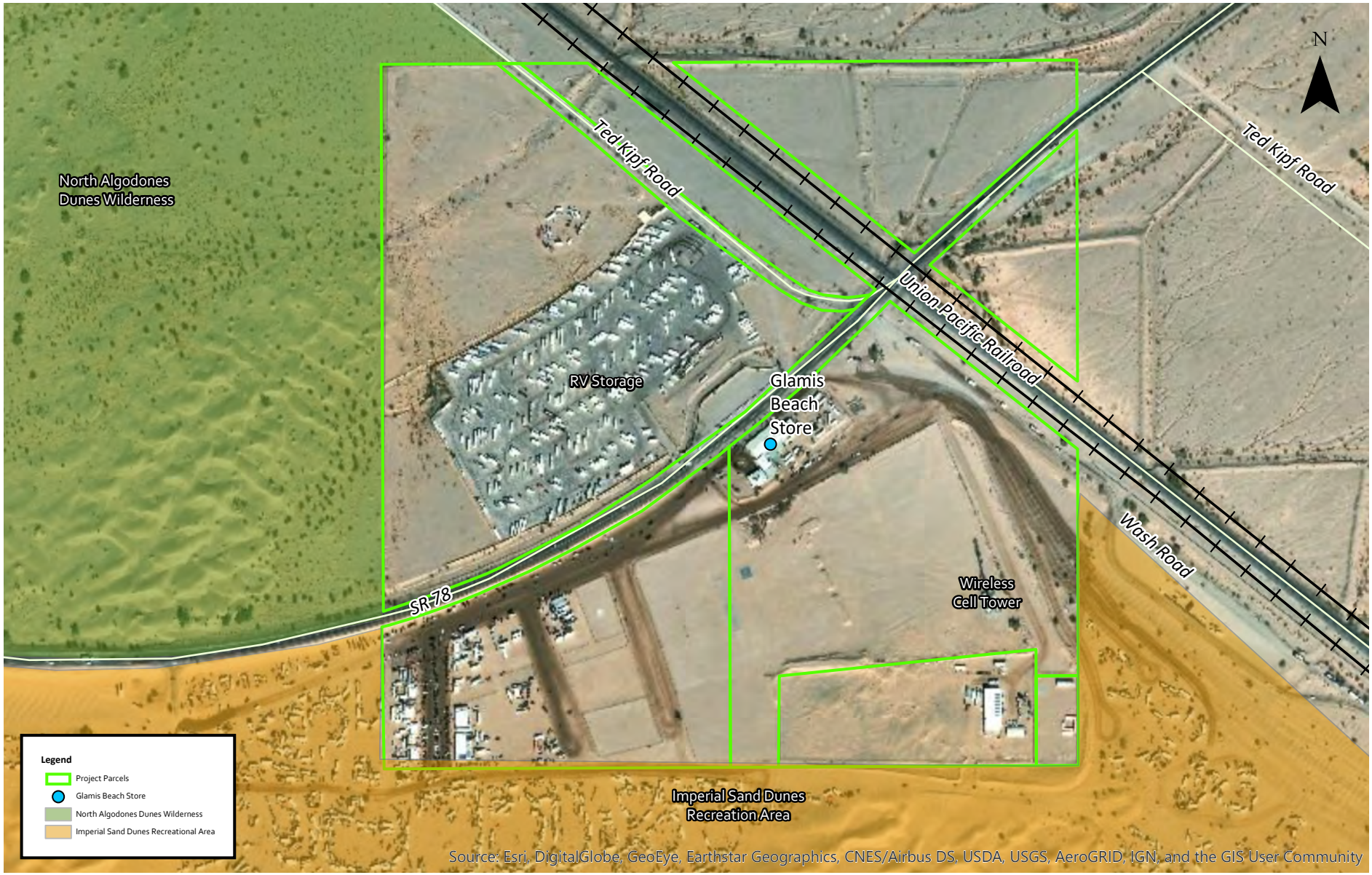
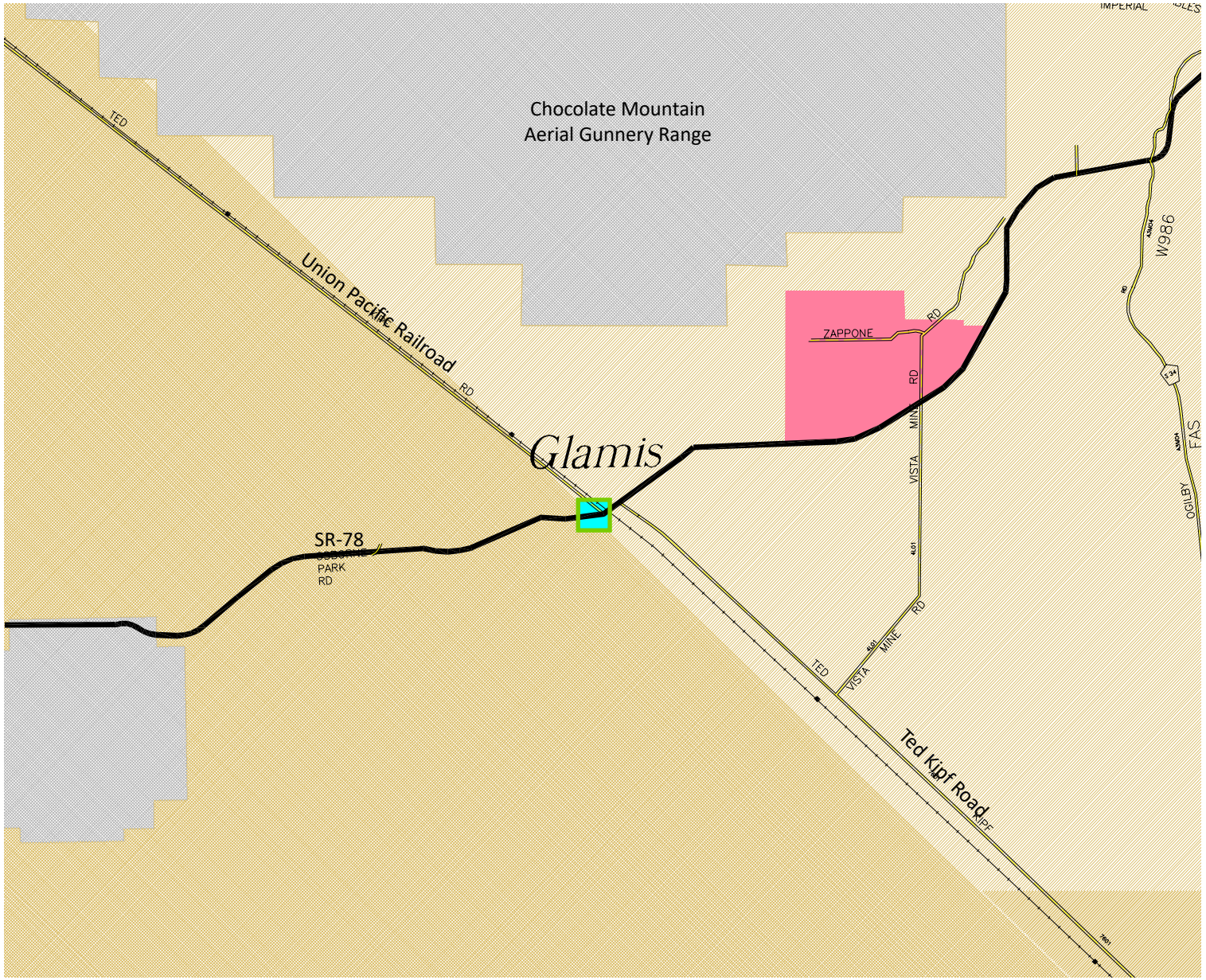


Exhibit 4 - Existing Imperial County General Plan Designations



Legend

- Agriculture
- Community Area
- Government/Special Public
- Industry
- Recreation/Open Space
- Special Purpose Facility
- Specific Plan Area
- Urban Area
- Project Site

Exhibit 5 - Current Imperial County Zoning Project Site and Vicinity

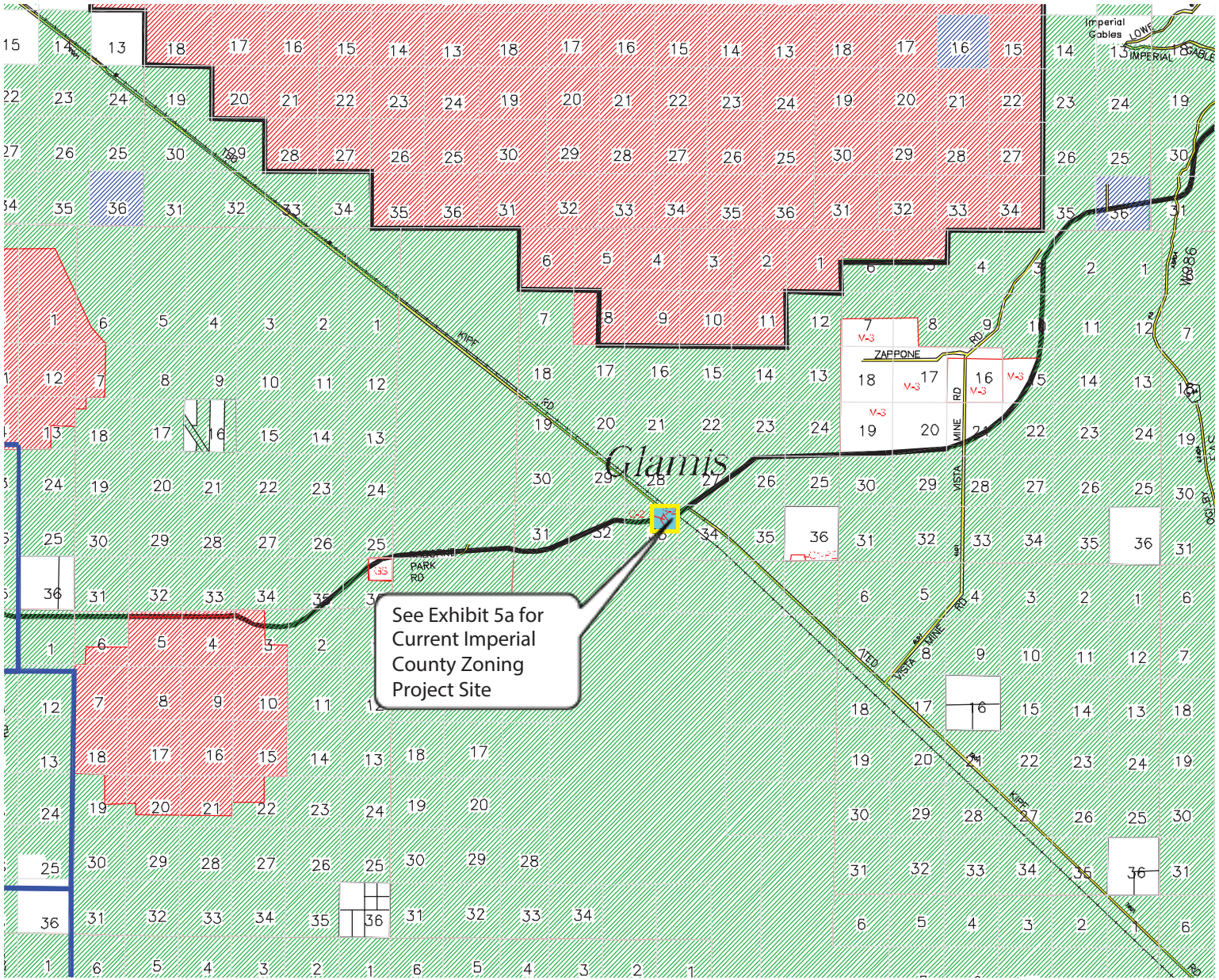
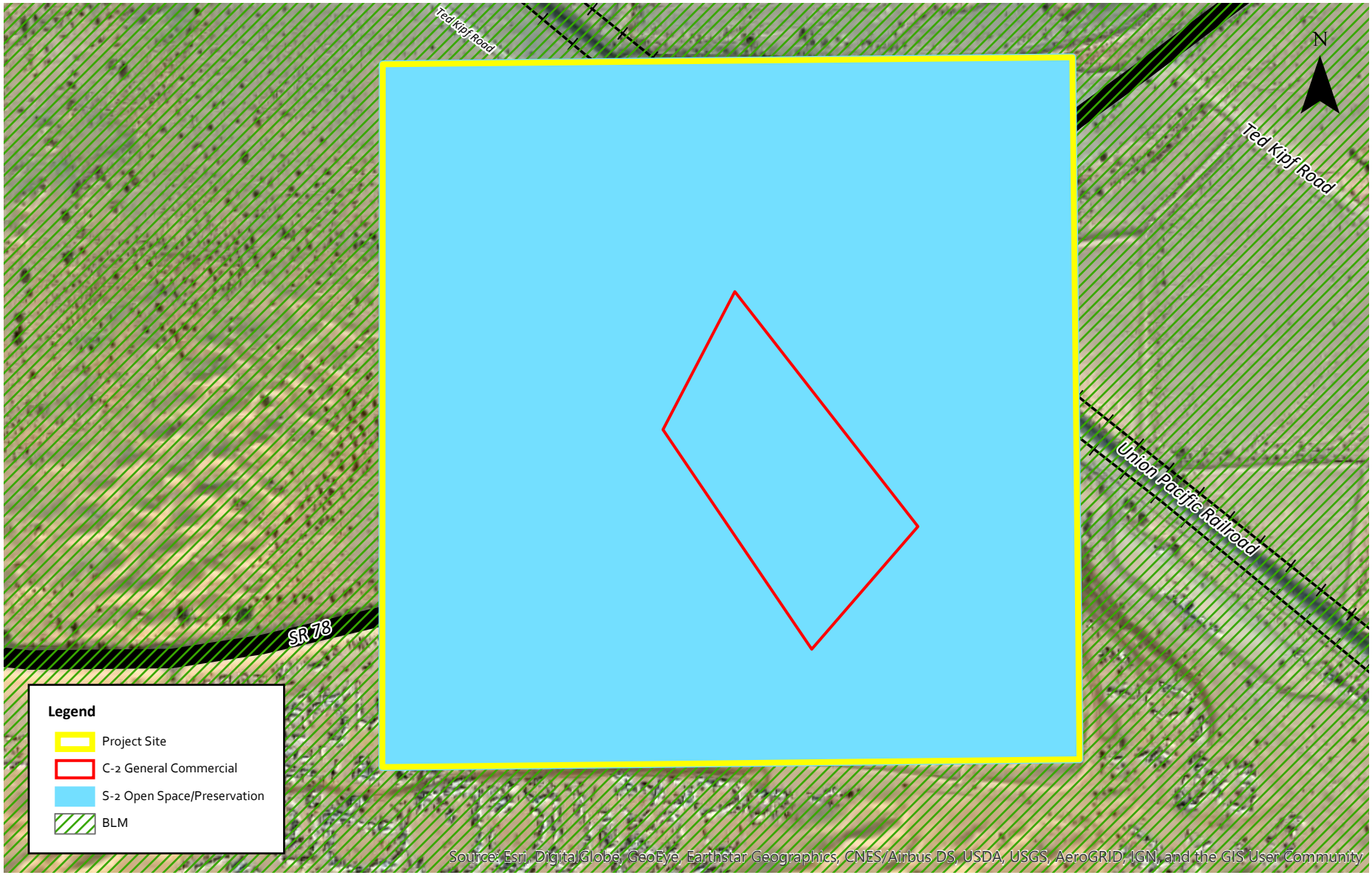
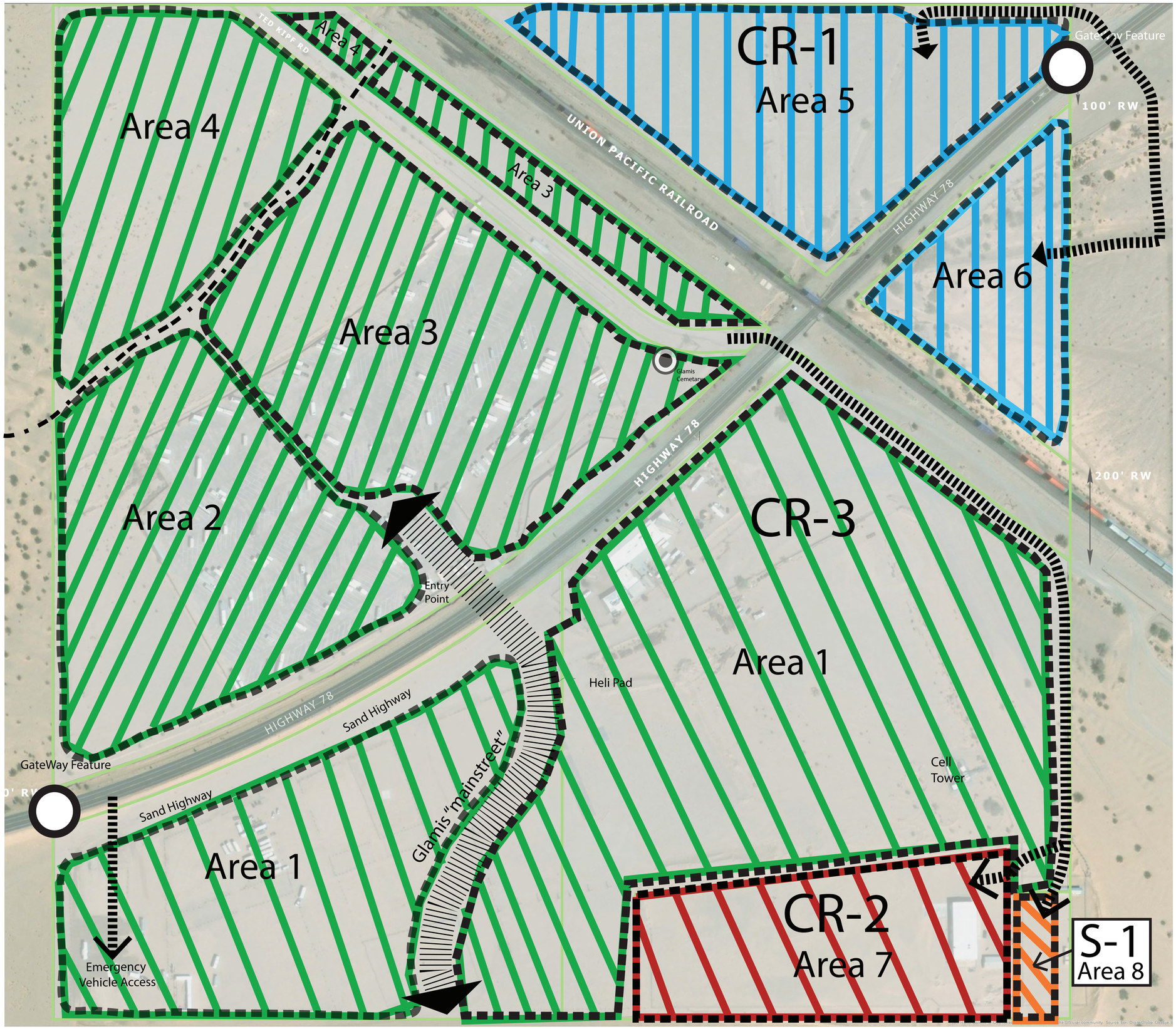


Exhibit 5a - Current Imperial County Zoning Project Site





Zoning Designation

CR-1
- -Area 5
- -Area 6

CR-2
- -Area 7

CR-3
- -Area 1
- -Area 2
- -Area 3
- -Area 4

S-1
- -Area 8

Exhibit 6 Glamis Specific Plan - Land Use Areas (Preferred)

19-11-04

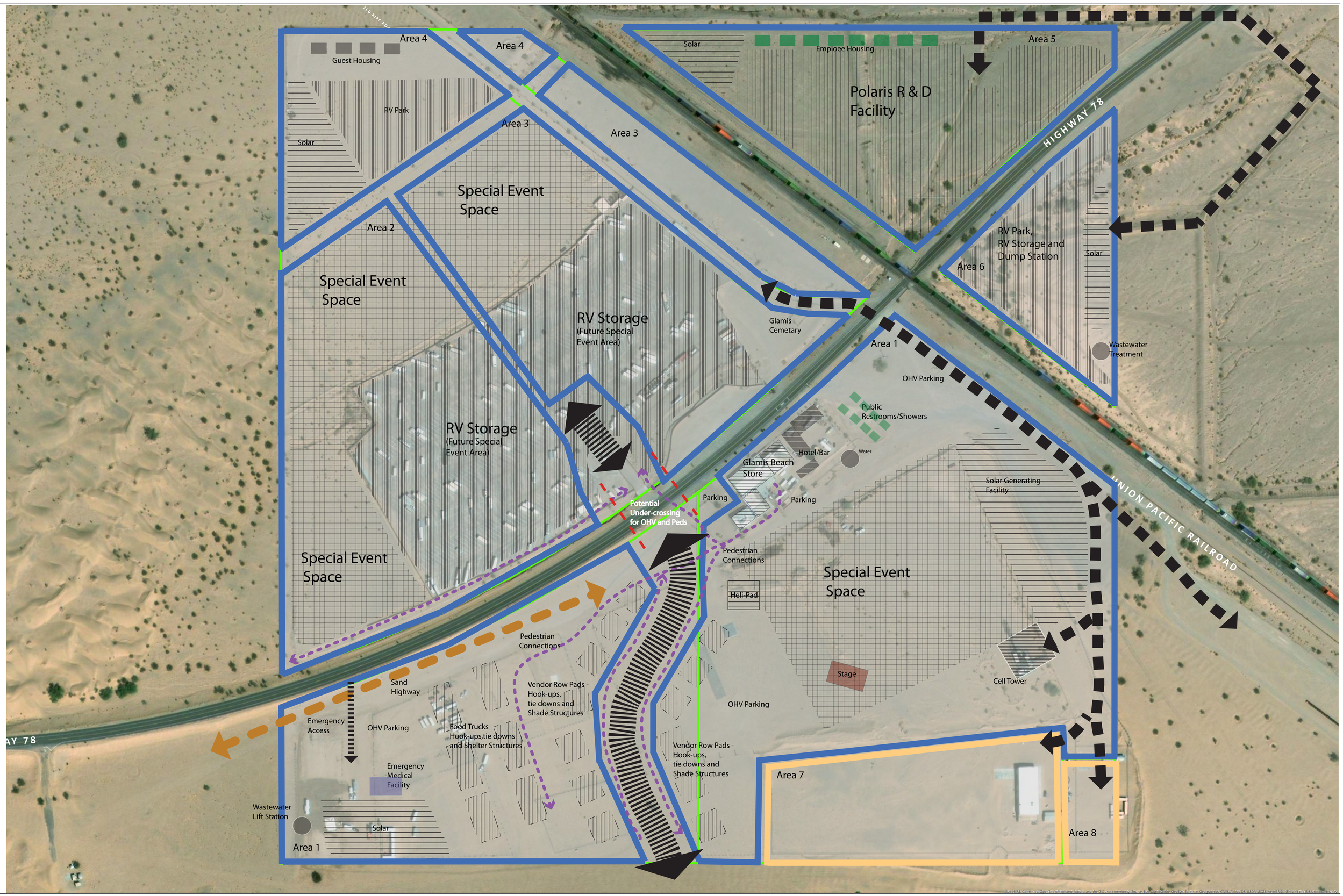
The Altum Group

Exhibit 7 -GLAMIS SPECIFIC PLAN PHASING

0 125 250 500 750 1,000 Feet

1 INCH = 100 FEET

* = CURRENTLY NOT UNDER POLARIS OWNERSHIP



The Altum Group

Exhibit 8

GLAMIS SPECIFIC PLAN

CONCEPTUAL SITE PLAN

Feet
0 125 250 500 750 1,000
1 INCH = 100 FEET

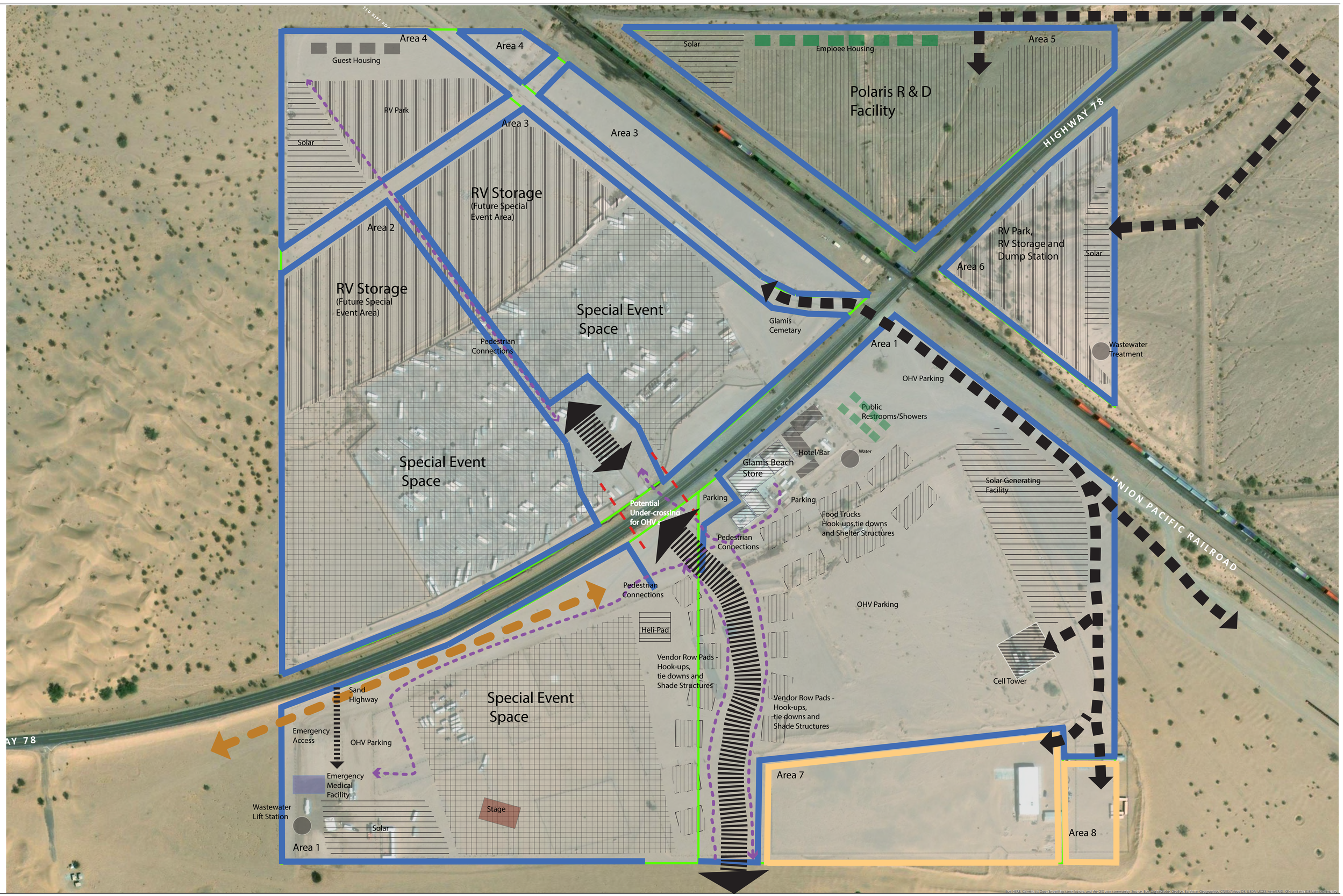


Exhibit 9

GLAMIS SPECIFIC PLAN
CONCEPTUAL SITE PLAN - ALTERNATIVE

0 125 250 500 750 1,000 Feet

1 INCH = 100 FEET

* = CURRENTLY NOT UNDER POLARIS OWNERSHIP

APPENDIX B

INTERSECTION & SEGMENT COUNT SHEETS, CALTRANS TRAFFIC DATA

National Data & Surveying Services

Intersection Turning Movement Count

Location: Old Hwy 111 & SR-78/Ben Hulse Hwy
City: Brawley
Control: Signalized

Project ID: 19-04408-001
Date: 2019-11-08

Total

NS/EW Streets:	Old Hwy 111				Old Hwy 111				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	9	10	7	0	10	20	10	0	8	41	18	0	2	29	8	0	172
5:15 PM	14	14	6	0	18	14	11	0	11	36	8	0	3	29	7	0	171
5:30 PM	10	15	3	0	8	15	10	0	5	37	15	0	3	34	7	0	162
5:45 PM	8	12	9	0	9	13	11	0	11	38	10	0	5	26	9	0	161
6:00 PM	5	9	6	0	7	12	10	0	11	37	8	0	7	20	4	0	136
6:15 PM	7	9	6	0	12	7	10	0	5	28	4	0	6	23	7	0	124
6:30 PM	5	7	9	0	8	10	10	0	3	28	6	0	3	21	3	0	113
6:45 PM	7	6	7	0	7	7	5	0	5	29	6	0	5	25	5	0	114
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	65	82	53	0	79	98	77	0	59	274	75	0	34	207	50	0	1153
APPROACH %'s :	32.50%	41.00%	26.50%	0.00%	31.10%	38.58%	30.31%	0.00%	14.46%	67.16%	18.38%	0.00%	11.68%	71.13%	17.18%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	41	51	25	0	45	62	42	0	35	152	51	0	13	118	31	0	666
PEAK HR FACTOR :	0.732	0.850	0.694	0.000	0.625	0.775	0.955	0.000	0.795	0.927	0.708	0.000	0.650	0.868	0.861	0.000	0.968
	0.860				0.866				0.888				0.920				

Prepared by National Data & Surveying Services

Old Hwy 111 & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-001
City: Brawley

Day: Friday
Date: 11/08/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	05:00 PM - 07:00 PM

Old Hwy 111 — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	42	62	45	0	117	PM

SR-78/Ben Hulse Hwy — EASTBOUND

AM	NOON	PM	
0	0	201	
0	0	0	0
0	0	35	1
0	0	152	1
0	0	51	1
AM	NOON	PM	

SR-78/Ben Hulse Hwy — WESTBOUND

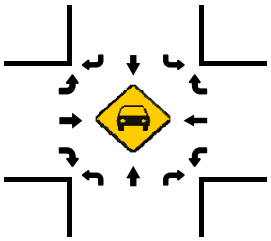
PM	NOON	AM	
31	0	0	0
118	0	0	1
13	0	0	1
0	0	0	0
222	0	0	
PM	NOON	AM	

CONTROL			
Signalized			
TEV	0 AM	0 NOON	666 PM
PHF			0.97

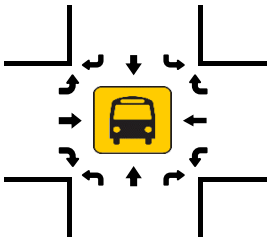
Old Hwy 111 — NORTHBOUND

PM	126	0	41	51	25	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

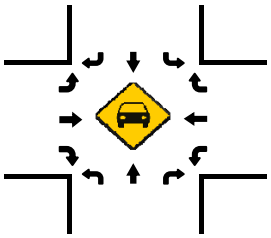
Total Vehicles (AM)



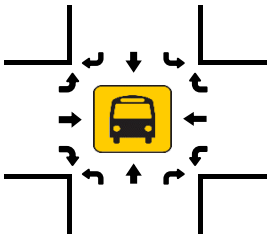
Total Vehicles (AM)



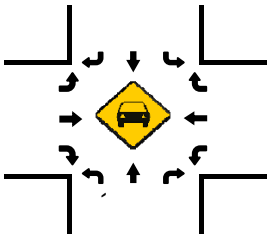
Total Vehicles (NOON)



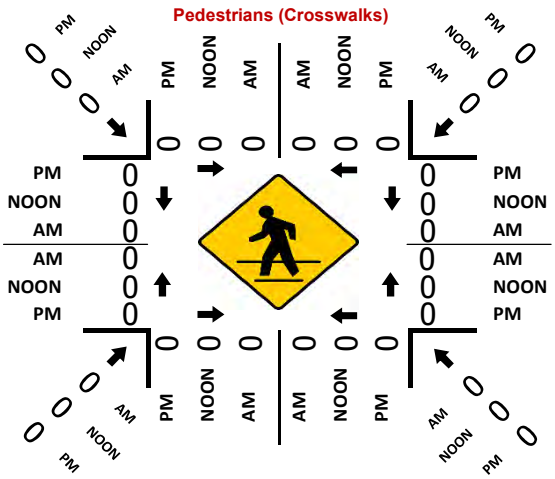
Total Vehicles (NOON)



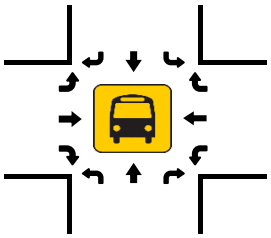
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

p SR-111 & SR-78/Ben Hulse Hwy
City: Brawley
Control: Signalized

Project ID: 19-04408-002
Date: 2019-11-08

Total

NS/EW Streets:	SR-111				SR-111				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	1	2	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	14	66	6	0	27	111	5	1	3	22	35	0	7	23	12	0	332
5:15 PM	16	92	5	0	13	141	2	0	10	15	32	0	6	16	7	0	355
5:30 PM	18	68	6	0	24	113	10	0	11	16	35	0	7	26	12	0	346
5:45 PM	22	63	5	0	22	122	15	0	8	15	40	0	6	19	7	0	344
6:00 PM	18	66	7	0	17	102	6	0	4	22	38	0	5	9	6	0	300
6:15 PM	14	64	4	0	16	106	6	0	5	15	21	0	14	15	11	0	291
6:30 PM	11	59	7	0	19	107	6	0	5	20	20	0	7	17	10	0	288
6:45 PM	18	42	1	0	20	113	5	0	11	9	26	0	4	13	5	0	267
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	131	520	41	0	158	915	55	1	57	134	247	0	56	138	70	0	2523
APPROACH %'s :	18.93%	75.14%	5.92%	0.00%	13.99%	81.05%	4.87%	0.09%	13.01%	30.59%	56.39%	0.00%	21.21%	52.27%	26.52%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	70	289	22	0	86	487	32	1	32	68	142	0	26	84	38	0	1377
PEAK HR FACTOR :	0.795	0.785	0.917	0.000	0.796	0.863	0.533	0.250	0.727	0.773	0.888	0.000	0.929	0.808	0.792	0.000	0.970
	0.843				0.953				0.960				0.822				

Prepared by National Data & Surveying Services

p

SR-111 & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-002
City: Brawley

Day: Friday
Date: 11/08/2019

PEAK HOURS	
AM	NONE
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS	
AM	NONE
NOON	NONE
PM	05:00 PM - 07:00 PM

SR-111 SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	32	487	86	1	360	PM
	1	2	1	0		

SR-78/Ben Hulse Hwy EASTBOUND

AM	NOON	PM	
0	0	186	
0	0	0	0
0	0	32	1
0	0	68	1
0	0	142	1
AM	NOON	PM	

CONTROL

Signalized

	AM	NOON	PM
TEV	0	0	1377
PHF			0.97

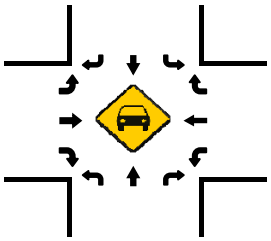
SR-78/Ben Hulse Hwy WESTBOUND

PM	NOON	AM	
38	0	0	1
84	0	0	1
26	0	0	1
0	0	0	0
176	0	0	
PM	NOON	AM	

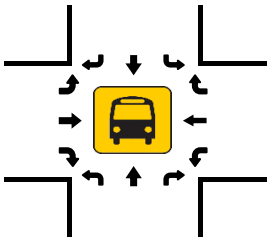
SR-111 NORTHBOUND

PM	655	0	70	289	22	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
		0	2	2	1	

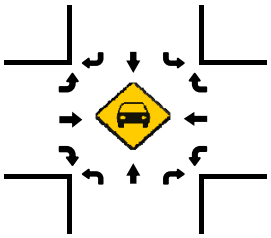
Total Vehicles (AM)



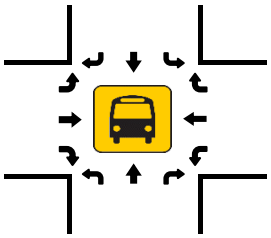
Total Vehicles (AM)



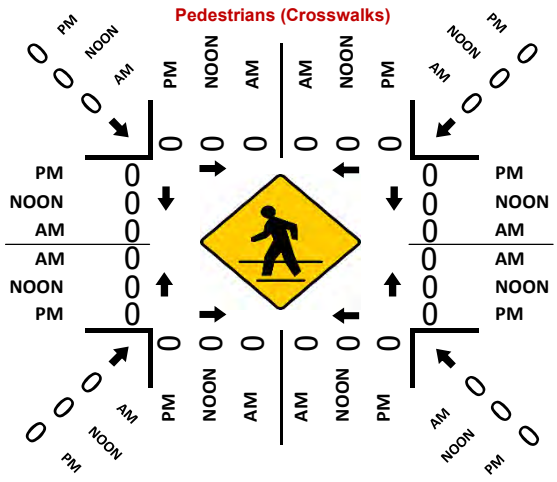
Total Vehicles (NOON)



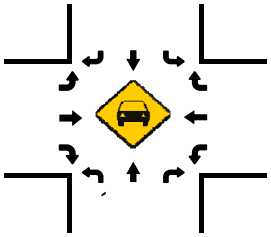
Total Vehicles (NOON)



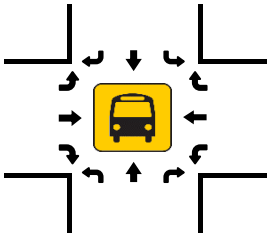
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Wiest Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 2-Way Stop (NB/SB)

Project ID: 19-04408-003
Date: 2019-11-08

Total

NS/EW Streets:	Wiest Rd				Wiest Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0.5	0.5	0	0	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	0	0	0	0	2	1	1	0	3	55	0	0	0	33	4	0	99
5:15 PM	0	0	0	0	8	1	1	0	1	32	0	0	0	26	5	0	74
5:30 PM	0	0	0	0	4	1	0	0	2	42	0	0	0	29	6	0	84
5:45 PM	0	0	0	0	4	2	4	0	0	31	0	0	0	14	0	0	55
6:00 PM	0	0	0	0	4	0	1	0	0	43	0	0	0	23	2	0	73
6:15 PM	0	0	0	0	1	1	2	0	1	34	0	0	0	28	3	0	70
6:30 PM	0	0	0	0	4	0	0	0	1	45	0	0	0	25	1	0	76
6:45 PM	0	0	0	0	4	1	1	0	0	31	1	0	0	15	1	0	54
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	31	7	10	0	8	313	1	0	0	193	22	0	585
APPROACH %'s :					64.58%	14.58%	20.83%	0.00%	2.48%	97.20%	0.31%	0.00%	0.00%	89.77%	10.23%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	18	5	6	0	6	160	0	0	0	102	15	0	312
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.563	0.625	0.375	0.000	0.500	0.727	0.000	0.000	0.000	0.773	0.625	0.000	0.788
					0.725				0.716				0.791				

Prepared by National Data & Surveying Services

Wiest Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-003
City: Brawley

Day: Friday
Date: 11/08/2019

PEAK HOURS	
AM	NONE
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS	
AM	NONE
NOON	NONE
PM	05:00 PM - 07:00 PM

SOUTHBOUND — Wiest Rd

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	6	5	18	0	21	PM
	0.5	0.5	0	0		

EASTBOUND — SR-78/Ben Hulse Hwy

AM	NOON	PM	
0	0	108	
0	0	0	0
0	0	6	0
0	0	160	1
0	0	0	0

WESTBOUND — SR-78/Ben Hulse Hwy

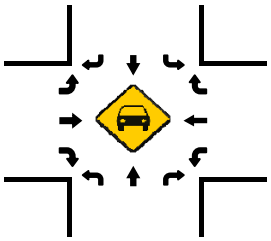
PM	NOON	AM	
15	0	0	1
102	0	0	1
0	0	0	0
0	0	0	0
178	0	0	

NORTHBOUND — Wiest Rd

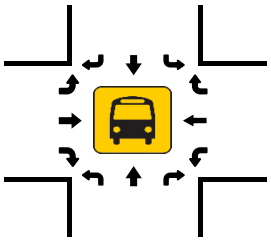
PM	5	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
		0	0	0.5	0.5	

CONTROL			
2-Way Stop (NB/SB)			
TEV	0 AM	0 NOON	312 PM
PHF			0.79

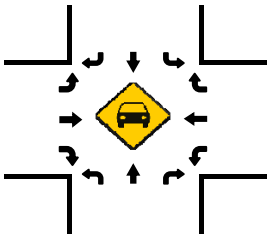
Total Vehicles (AM)



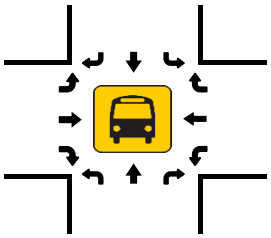
Total Vehicles (AM)



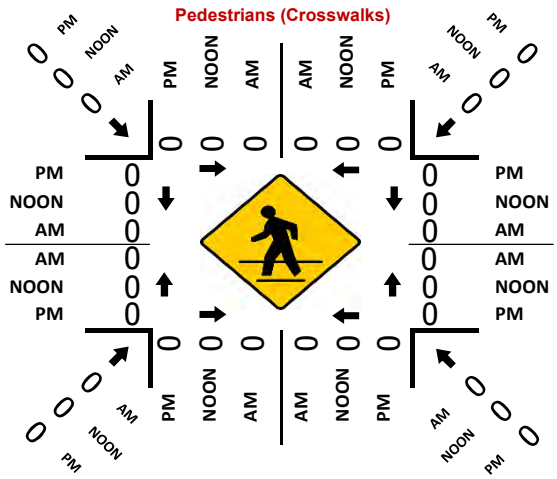
Total Vehicles (NOON)



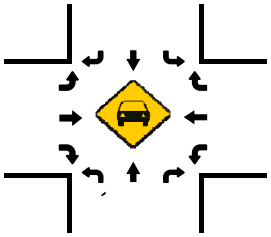
Total Vehicles (NOON)



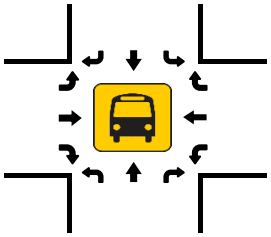
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-115 & SR-78 Interchange/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (WB)

Project ID: 19-04408-004
Date: 2019-11-08

Total

NS/EW Streets:	SR-115				SR-115				SR-78 Interchange/Ben Hulse Hwy				SR-78 Interchange/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	14	0	4	0	0	0	0	0	0	40	23	0	8	21	0	0	110
5:15 PM	9	0	0	0	0	0	0	0	0	22	16	0	7	20	0	0	74
5:30 PM	17	0	3	0	0	0	0	0	0	24	17	0	4	14	0	0	79
5:45 PM	8	0	3	0	0	0	0	0	0	25	14	0	2	4	0	0	56
6:00 PM	9	0	0	0	0	0	0	0	0	42	13	0	5	16	0	0	85
6:15 PM	13	0	3	0	0	0	0	0	0	24	7	0	7	21	0	0	75
6:30 PM	8	0	4	0	0	0	0	0	0	32	12	0	0	12	0	0	68
6:45 PM	8	0	4	0	0	0	0	0	0	25	12	0	5	9	0	0	63
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	86	0	21	0	0	0	0	0	0	234	114	0	38	117	0	0	610
APPROACH %'s :	80.37%	0.00%	19.63%	0.00%					0.00%	67.24%	32.76%	0.00%	24.52%	75.48%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	48	0	10	0	0	0	0	0	0	111	70	0	21	59	0	0	319
PEAK HR FACTOR :	0.706	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.694	0.761	0.000	0.656	0.702	0.000	0.000	0.725
	0.725								0.718				0.690				

Prepared by National Data & Surveying Services

SR-115 & SR-78 Interchange/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-004
City: Brawley

Day: Friday
Date: 11/08/2019

PEAK HOURS

AM: NONE
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: NONE
NOON: NONE
PM: 05:00 PM - 07:00 PM

SR-115 SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

SR-78 Interchange/Ben Hulse Hwy EASTBOUND

AM	NOON	PM	
0	0	107	
0	0	0	0
0	0	0	0
0	0	111	1
0	0	70	1
AM	NOON	PM	

SR-78 Interchange/Ben Hulse Hwy WESTBOUND

PM	NOON	AM	
0	0	0	0
59	0	0	1
21	0	0	1
0	0	0	0
121	0	0	
PM	NOON	AM	

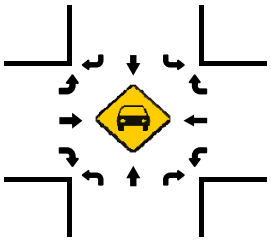
CONTROL: 1-Way Stop (WB)

	AM	NOON	PM
TEV	0	0	319
PHF			0.73

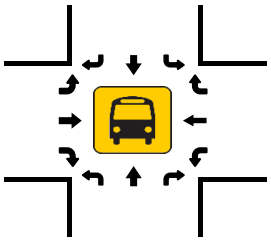
			0	0	1	0
PM	91	0	48	0	10	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

SR-115 NORTHBOUND

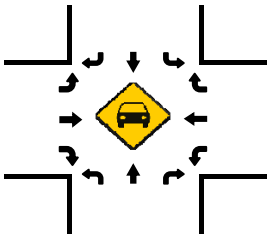
Total Vehicles (AM)



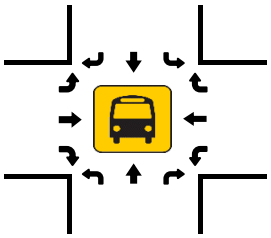
Total Vehicles (AM)



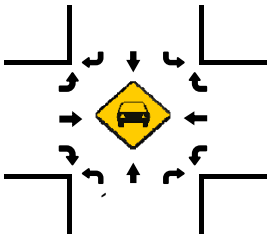
Total Vehicles (NOON)



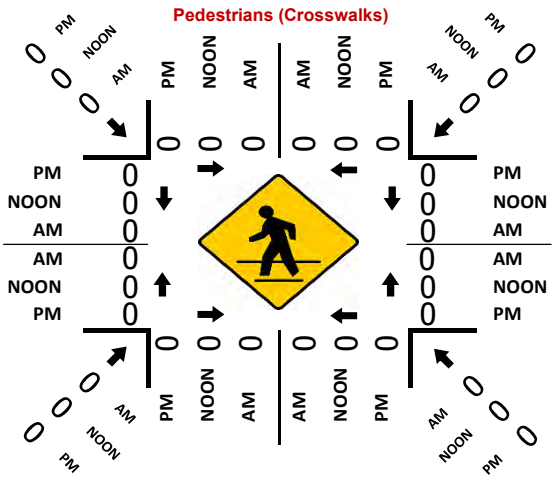
Total Vehicles (NOON)



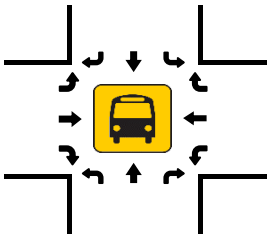
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Gecko Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (NB)

Project ID: 19-04408-005
Date: 2019-10-31

Total

NS/EW Streets:	Gecko Rd				Gecko Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	1	0	0	0	0	0	0	0	0	27	0	0	1	29	0	0	58
5:15 PM	0	0	0	0	0	0	0	0	0	16	3	0	1	17	0	0	37
5:30 PM	3	0	1	0	0	0	0	0	0	10	1	0	0	17	0	0	32
5:45 PM	2	0	0	0	0	0	0	0	0	10	3	0	0	18	0	0	33
6:00 PM	2	0	0	0	0	0	0	0	0	11	3	0	2	23	0	0	41
6:15 PM	3	0	0	0	0	0	0	0	0	8	3	0	0	20	0	0	34
6:30 PM	1	0	0	0	0	0	0	0	0	12	1	0	4	6	0	0	24
6:45 PM	0	0	0	0	0	0	0	0	0	12	1	0	1	6	0	0	20
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	12	0	1	0	0	0	0	0	0	106	15	0	9	136	0	0	279
APPROACH %'s :	92.31%	0.00%	7.69%	0.00%					0.00%	87.60%	12.40%	0.00%	6.21%	93.79%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	6	0	1	0	0	0	0	0	0	63	7	0	2	81	0	0	160
PEAK HR FACTOR :	0.500	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.583	0.000	0.500	0.698	0.000	0.000	0.690
	0.438								0.648				0.692				

Prepared by National Data & Surveying Services

Gecko Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-005
City: Brawley

Day: Thursday
Date: 10/31/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	05:00 PM - 07:00 PM

Gecko Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

SR-78/Ben Hulse Hwy — EASTBOUND

AM	NOON	PM	
0	0	87	
0	0	0	0
0	0	0	0
0	0	63	1
0	0	7	0
AM	NOON	PM	

SR-78/Ben Hulse Hwy — WESTBOUND

PM	NOON	AM	
0	0	0	0
81	0	0	1
2	0	0	1
0	0	0	0
64	0	0	
PM	NOON	AM	

CONTROL: 1-Way Stop (NB)

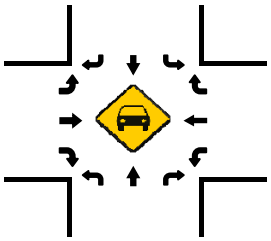
	AM	NOON	PM
TEV	0	0	160
PHF			0.69

Gecko Rd — NORTHBOUND

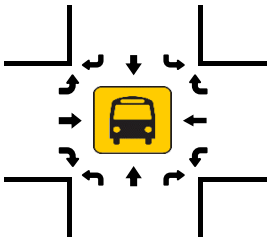
PM	9	0	6	0	1	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

0 0 0 0 — 0 1 1 0 — 0 0 0.5 0.5

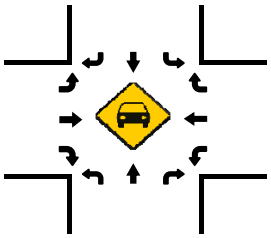
Total Vehicles (AM)



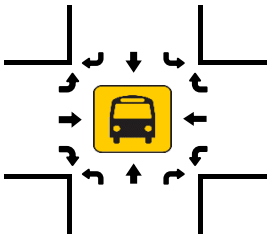
Total Vehicles (AM)



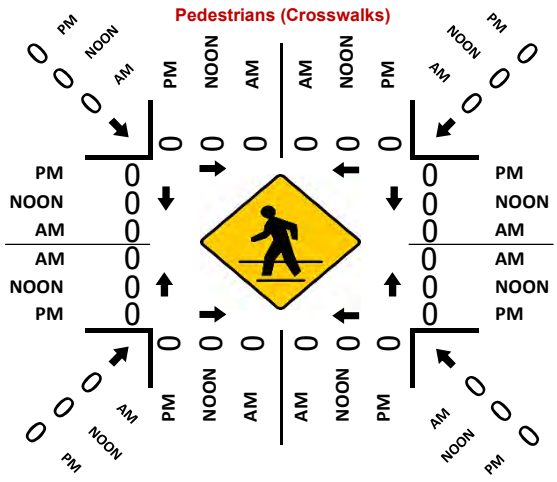
Total Vehicles (NOON)



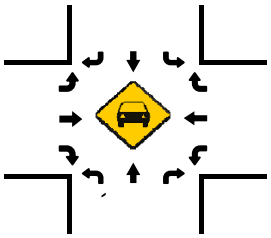
Total Vehicles (NOON)



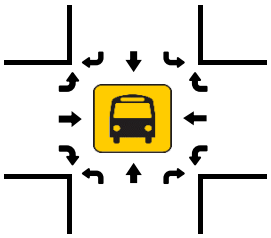
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Osborne Park Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (NB)

Project ID: 19-04408-006
Date: 2019-10-31

Total

NS/EW Streets:	Osborne Park Rd				Osborne Park Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	1	0	0	0	0	0	0	0	0	20	0	0	1	29	0	0	51
5:15 PM	2	0	0	0	0	0	0	0	0	20	0	0	1	17	0	0	40
5:30 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	16	0	0	29
5:45 PM	0	0	1	0	0	0	0	0	0	10	1	0	0	16	0	0	28
6:00 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	28	0	0	39
6:15 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	16	0	0	25
6:30 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	15	0	0	25
6:45 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	6	0	0	17
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	1	0	0	0	0	0	0	104	1	0	2	143	0	0	254
APPROACH %'s :	75.00%	0.00%	25.00%	0.00%					0.00%	99.05%	0.95%	0.00%	1.38%	98.62%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	3	0	1	0	0	0	0	0	0	63	1	0	2	78	0	0	148
PEAK HR FACTOR :	0.375	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.788	0.250	0.000	0.500	0.672	0.000	0.000	0.725
	0.500								0.800				0.667				

Prepared by National Data & Surveying Services

Osborne Park Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-006
City: Brawley

Day: Thursday
Date: 10/31/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	05:00 PM - 07:00 PM

Osborne Park Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

SR-78/Ben Hulse Hwy — EASTBOUND

AM	NOON	PM	
0	0	81	
0	0	0	0
0	0	0	0
0	0	63	1
0	0	1	0

SR-78/Ben Hulse Hwy — WESTBOUND

PM	NOON	AM	
0	0	0	0
78	0	0	1
2	0	0	0
0	0	0	0
64	0	0	

CONTROL

1-Way Stop (NB)

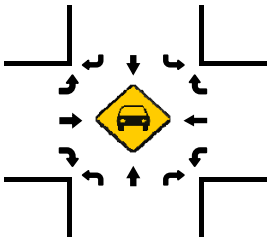
TEV	AM	NOON	PM
	0	0	148
PHF			0.73

Osborne Park Rd — NORTHBOUND

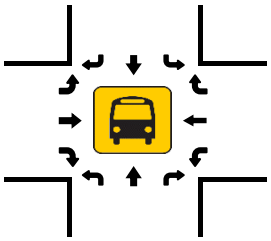
PM	3	0	3	0	1	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

0 0 0 0 — 0 0 0.5 0.5

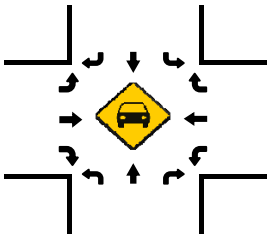
Total Vehicles (AM)



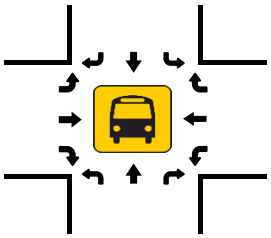
Total Vehicles (AM)



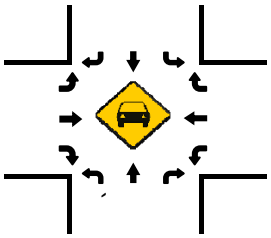
Total Vehicles (NOON)



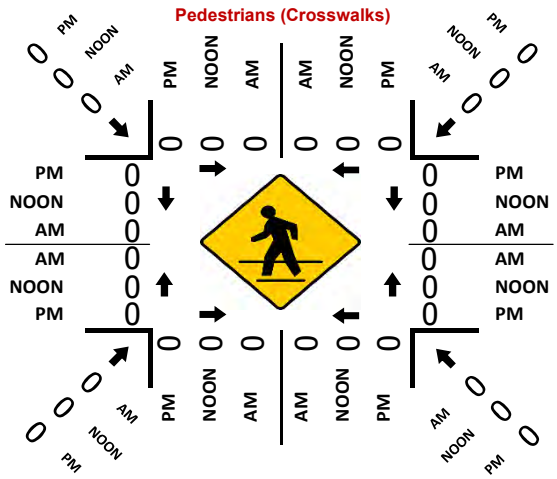
Total Vehicles (NOON)



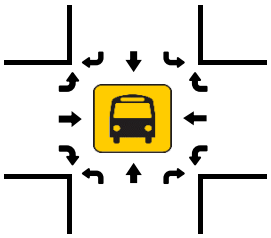
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Glamis Flats Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (NB)

Project ID: 19-04408-007
Date: 2019-10-31

Total

NS/EW Streets:	Glamis Flats Rd				Glamis Flats Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	0	0	1	0	0	0	0	0	0	17	2	0	0	31	0	0	51
5:15 PM	3	0	0	0	0	0	0	0	0	15	4	0	0	12	0	0	34
5:30 PM	0	0	0	0	0	0	0	0	0	13	1	0	0	14	0	0	28
5:45 PM	2	0	0	0	0	0	0	0	0	10	1	0	2	19	0	0	34
6:00 PM	0	0	0	0	0	0	0	0	0	12	3	0	0	26	0	0	41
6:15 PM	0	0	1	0	0	0	0	0	0	5	3	0	2	16	0	0	27
6:30 PM	2	0	0	0	0	0	0	0	0	10	1	0	0	11	0	0	24
6:45 PM	0	0	0	0	0	0	0	0	0	10	0	0	1	6	0	0	17
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	7	0	2	0	0	0	0	0	0	92	15	0	5	135	0	0	256
APPROACH %'s :	77.78%	0.00%	22.22%	0.00%					0.00%	85.98%	14.02%	0.00%	3.57%	96.43%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	5	0	1	0	0	0	0	0	0	55	8	0	2	76	0	0	147
PEAK HR FACTOR :	0.417	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.809	0.500	0.000	0.250	0.613	0.000	0.000	0.721
	0.500								0.829				0.629				

Prepared by National Data & Surveying Services

Glamis Flats Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-007
City: Brawley

Day: Thursday
Date: 10/31/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	05:00 PM - 07:00 PM

Glamis Flats Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

SR-78/Ben Hulse Hwy — EASTBOUND

AM	NOON	PM	
0	0	81	
0	0	0	0
0	0	0	0
0	0	55	1
0	0	8	0
AM	NOON	PM	

SR-78/Ben Hulse Hwy — WESTBOUND

PM	NOON	AM	
0	0	0	0
76	0	0	1
2	0	0	0
0	0	0	0
56	0	0	
PM	NOON	AM	

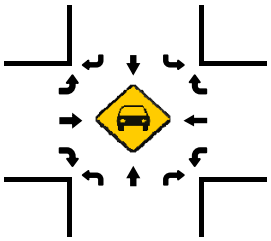
CONTROL			
1-Way Stop (NB)			
TEV	0 AM	0 NOON	147 PM
PHF			0.72

Glamis Flats Rd — NORTHBOUND

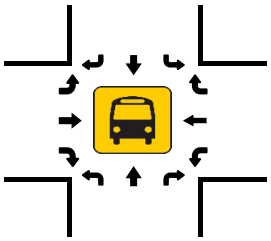
PM	10	0	5	0	1	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

0 0 0 0 — 0 0 0.5 0.5

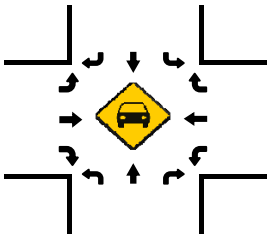
Total Vehicles (AM)



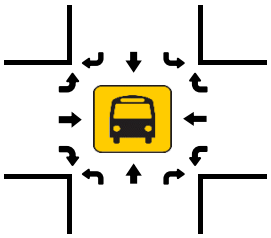
Total Vehicles (AM)



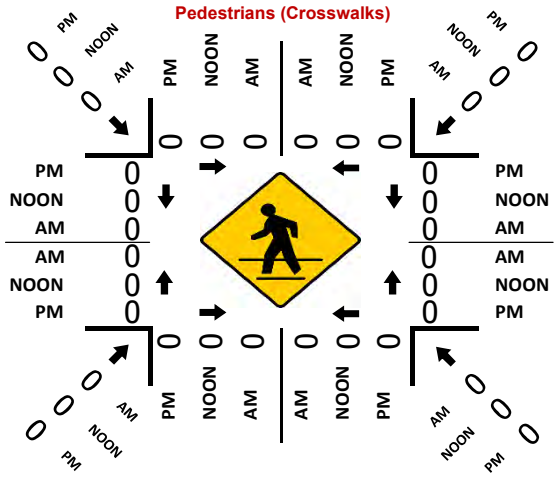
Total Vehicles (NOON)



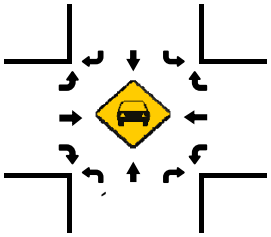
Total Vehicles (NOON)



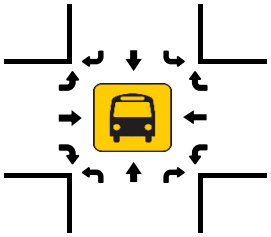
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Wash Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (SB)

Project ID: 19-04408-008
Date: 2019-10-31

Total

NS/EW Streets:	Wash Rd				Wash Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	1	0	0	0	0	0	0	0	0	16	1	0	0	32	0	0	50
5:15 PM	0	0	0	0	0	0	0	0	0	12	2	0	1	10	0	0	25
5:30 PM	0	0	0	0	0	0	0	0	0	11	1	0	1	16	0	0	29
5:45 PM	0	0	0	0	0	0	0	0	0	10	2	0	0	19	0	0	31
6:00 PM	1	0	0	0	0	0	0	0	0	6	3	0	2	26	0	0	38
6:15 PM	0	0	0	0	0	0	0	0	0	5	0	0	3	16	0	0	24
6:30 PM	0	0	0	0	0	0	0	0	0	7	1	0	2	10	0	0	20
6:45 PM	0	0	1	0	0	0	0	0	0	4	4	0	0	6	0	0	15
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	0	1	0	0	0	0	0	0	71	14	0	9	135	0	0	232
APPROACH %'s :	66.67%	0.00%	33.33%	0.00%					0.00%	83.53%	16.47%	0.00%	6.25%	93.75%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	0	0	49	6	0	2	77	0	0	135
PEAK HR FACTOR :	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.766	0.750	0.000	0.500	0.602	0.000	0.000	0.675
	0.250								0.809				0.617				

Prepared by National Data & Surveying Services

Wash Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-008
City: Brawley

Day: Thursday
Date: 10/31/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	05:00 PM - 07:00 PM

CONTROL: 1-Way Stop (SB)

	AM	NOON	PM
TEV	0	0	135
PHF			0.68

Wash Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

SR-78/Ben Hulse Hwy — EASTBOUND

AM	NOON	PM	
0	0	78	
0	0	0	0
0	0	0	0
0	0	49	1
0	0	6	0
AM	NOON	PM	

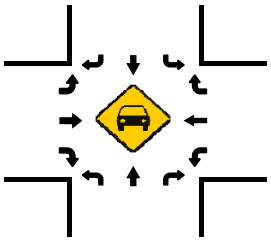
SR-78/Ben Hulse Hwy — WESTBOUND

PM	NOON	AM	
0	0	0	0
77	0	0	1
2	0	0	0
0	0	0	0
49	0	0	
PM	NOON	AM	

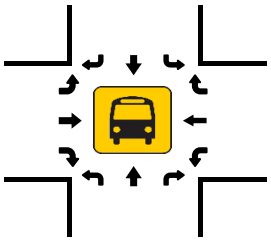
Wash Rd — NORTHBOUND

PM	8	0	1	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

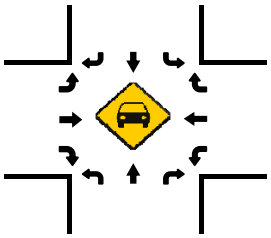
Total Vehicles (AM)



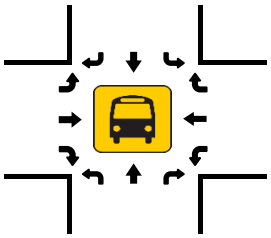
Total Vehicles (AM)



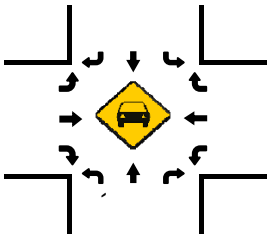
Total Vehicles (NOON)



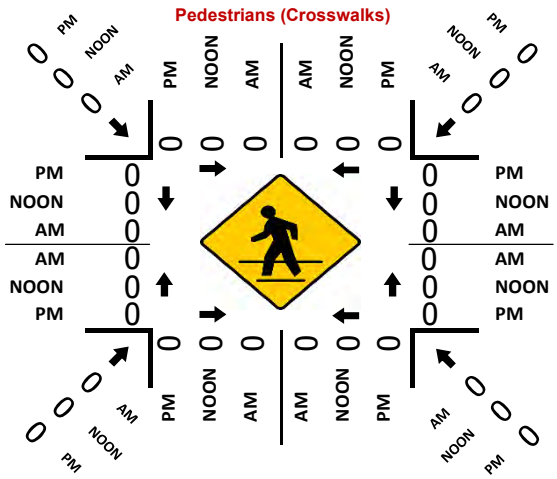
Total Vehicles (NOON)



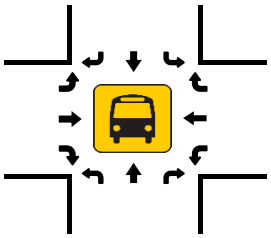
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Old Hwy 111 & SR-78/Ben Hulse Hwy
City: Brawley
Control: Signalized

Project ID: 19-04408-001
Date: 2019-11-02

Total

NS/EW Streets:	Old Hwy 111				Old Hwy 111				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	8	3	4	0	5	5	6	0	7	26	4	0	4	19	7	0	98
5:15 PM	7	15	5	0	9	10	4	0	5	16	7	0	1	23	5	0	107
5:30 PM	13	3	4	0	2	11	8	0	5	8	9	0	3	13	6	0	85
5:45 PM	7	6	3	0	5	7	7	0	4	12	4	0	2	16	1	0	74
6:00 PM	6	8	6	0	10	11	4	0	4	24	6	0	4	12	5	0	100
6:15 PM	5	5	4	0	4	3	7	0	4	20	9	0	7	28	2	0	98
6:30 PM	7	8	2	0	6	4	3	0	7	23	3	0	3	25	5	0	96
6:45 PM	3	8	3	0	6	10	8	0	7	9	4	0	2	25	6	0	91
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	56	56	31	0	47	61	47	0	43	138	46	0	26	161	37	0	749
APPROACH %'s :	39.16%	39.16%	21.68%	0.00%	30.32%	39.35%	30.32%	0.00%	18.94%	60.79%	20.26%	0.00%	11.61%	71.88%	16.52%	0.00%	
PEAK HR :	06:00 PM - 07:00 PM																TOTAL
PEAK HR VOL :	21	29	15	0	26	28	22	0	22	76	22	0	16	90	18	0	385
PEAK HR FACTOR :	0.750	0.906	0.625	0.000	0.650	0.636	0.688	0.000	0.786	0.792	0.611	0.000	0.571	0.804	0.750	0.000	0.963
	0.813				0.760				0.882				0.838				

Prepared by National Data & Surveying Services

Old Hwy 111 & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-001
City: Brawley

Day: Saturday
Date: 11/02/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
06:00 PM - 07:00 PM	05:00 PM - 07:00 PM

Old Hwy 111 — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	22	28	26	0	69	PM

SR-78/Ben Hulse Hwy — EASTBOUND

AM	NOON	PM	
0	0	133	
0	0	0	0
0	0	22	1
0	0	76	1
0	0	22	1
AM	NOON	PM	

SR-78/Ben Hulse Hwy — WESTBOUND

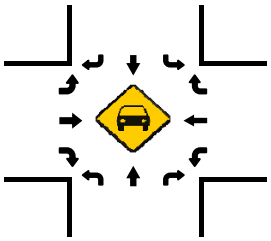
PM	NOON	AM	
18	0	0	0
90	0	0	1
16	0	0	1
0	0	0	0
117	0	0	
PM	NOON	AM	

Old Hwy 111 — NORTHBOUND

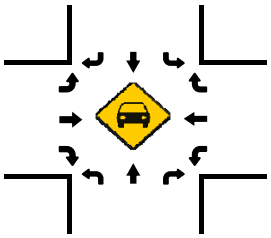
PM	66	0	21	29	15	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
		0	1	1	0	

CONTROL			
Signalized			
TEV	0 AM	0 NOON	385 PM
PHF			0.96

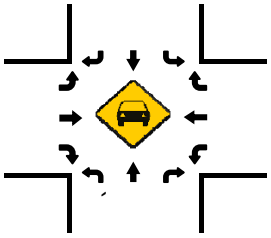
Total Vehicles (AM)



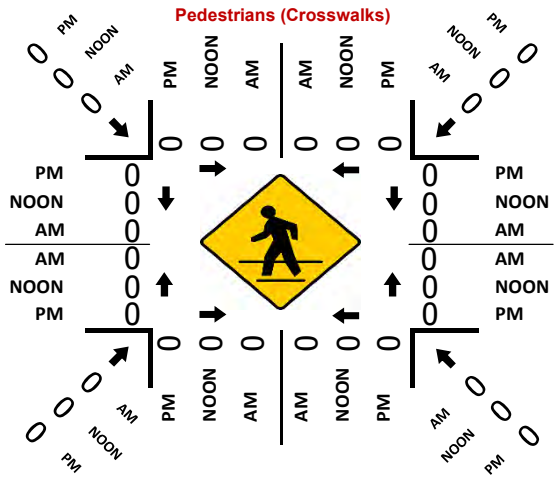
Total Vehicles (NOON)



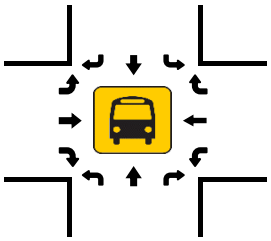
Total Vehicles (PM)



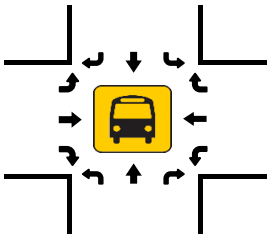
Pedestrians (Crosswalks)



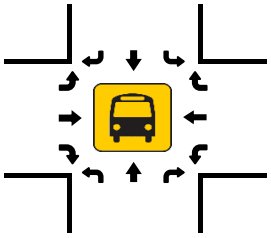
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-111 & SR-78/Ben Hulse Hwy
City: Brawley
Control: Signalized

Project ID: 19-04408-002
Date: 2019-11-02

Total

NS/EW Streets:	SR-111				SR-111				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	1	2	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	11	63	3	0	10	60	12	1	8	7	14	0	5	8	4	0	206
5:15 PM	12	52	4	0	4	63	1	0	2	3	33	0	4	17	6	0	201
5:30 PM	16	59	0	0	10	54	0	0	8	7	14	0	3	10	6	0	187
5:45 PM	9	65	3	0	3	77	4	0	3	4	8	0	3	6	0	0	185
6:00 PM	13	53	0	0	7	53	3	0	7	9	20	0	6	11	4	0	186
6:15 PM	15	41	4	0	3	56	6	0	10	5	21	0	8	22	6	0	197
6:30 PM	14	56	1	0	9	56	7	0	2	11	20	0	4	15	6	0	201
6:45 PM	19	73	3	0	10	56	5	0	5	3	16	0	8	16	6	0	220
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	109	462	18	0	56	475	38	1	45	49	146	0	41	105	38	0	1583
APPROACH %'s :	18.51%	78.44%	3.06%	0.00%	9.82%	83.33%	6.67%	0.18%	18.75%	20.42%	60.83%	0.00%	22.28%	57.07%	20.65%	0.00%	
PEAK HR :	06:00 PM - 07:00 PM																TOTAL
PEAK HR VOL :	61	223	8	0	29	221	21	0	24	28	77	0	26	64	22	0	804
PEAK HR FACTOR :	0.803	0.764	0.500	0.000	0.725	0.987	0.750	0.000	0.600	0.636	0.917	0.000	0.813	0.727	0.917	0.000	0.914
	0.768				0.941				0.896				0.778				

Prepared by National Data & Surveying Services

SR-111 & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-002
City: Brawley

Day: Saturday
Date: 11/02/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
06:00 PM - 07:00 PM	05:00 PM - 07:00 PM

SR-111 SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	21	221	29	0	269	PM
	1	2	1	0		

SR-78/Ben Hulse Hwy EASTBOUND

AM	NOON	PM	
0	0	146	
0	0	0	0
0	0	24	1
0	0	28	1
0	0	77	1
AM	NOON	PM	

CONTROL

Signalized

TEV	0 AM	0 NOON	804 PM
PHF			0.91

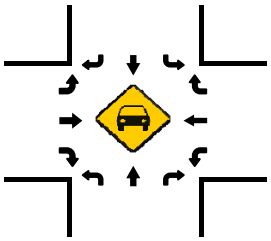
SR-78/Ben Hulse Hwy WESTBOUND

	PM	NOON	AM
1	22	0	0
1	64	0	0
1	26	0	0
0	0	0	0
	65	0	0
	PM	NOON	AM

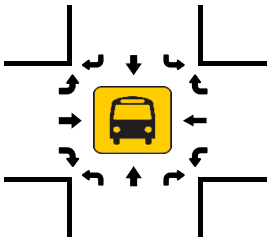
SR-111 NORTHBOUND

	0	2	2	1		
PM	324	0	61	223	8	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

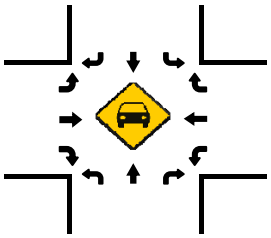
Total Vehicles (AM)



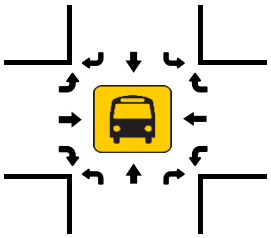
Total Vehicles (AM)



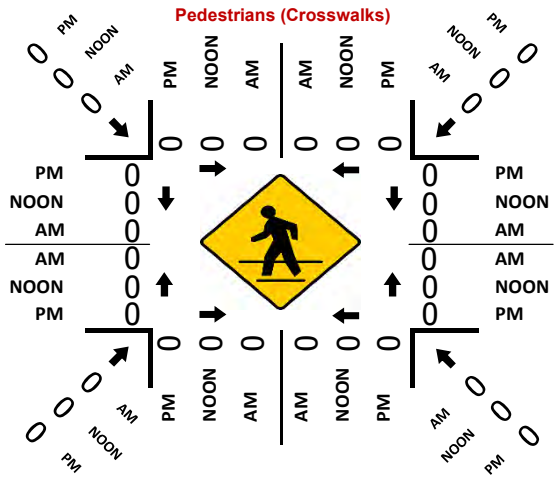
Total Vehicles (NOON)



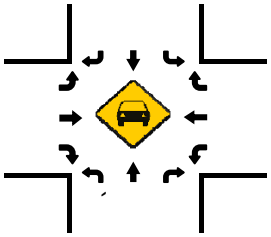
Total Vehicles (NOON)



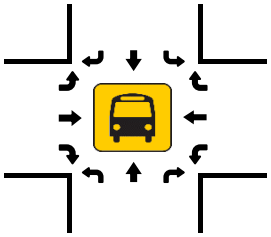
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Wiest Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 2-Way Stop (NB/SB)

Project ID: 19-04408-003
Date: 2019-11-02

Total

NS/EW Streets:	Wiest Rd				Wiest Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0.5	0.5	0	0	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	0	0	0	0	5	0	1	0	0	19	0	0	1	20	1	0	47
5:15 PM	0	1	0	0	2	0	1	0	1	12	0	0	0	19	1	1	38
5:30 PM	0	0	0	0	0	0	2	0	3	9	0	0	0	14	0	0	28
5:45 PM	0	0	0	0	3	0	3	0	0	11	0	0	0	8	2	0	27
6:00 PM	0	0	0	0	4	0	4	0	0	13	0	0	0	24	0	0	45
6:15 PM	0	0	0	0	5	0	0	0	0	9	0	0	0	32	1	0	47
6:30 PM	0	0	0	0	3	0	1	0	2	18	0	0	0	13	2	0	39
6:45 PM	0	0	0	0	1	0	3	0	0	12	0	0	0	21	2	0	39
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	23	0	15	0	6	103	0	0	1	151	9	1	310
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	60.53%	0.00%	39.47%	0.00%	5.50%	94.50%	0.00%	0.00%	0.62%	93.21%	5.56%	0.62%	
PEAK HR :	06:00 PM - 07:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	13	0	8	0	2	52	0	0	0	90	5	0	170
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.650	0.000	0.500	0.000	0.250	0.722	0.000	0.000	0.000	0.703	0.625	0.000	0.904
					0.656				0.675				0.720				

Prepared by National Data & Surveying Services

Wiest Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-003
City: Brawley

Day: Saturday
Date: 11/02/2019

PEAK HOURS		COUNT PERIODS
AM	NONE	AM
NOON	NONE	NOON
PM	06:00 PM - 07:00 PM	PM

			Wiest Rd			
			SOUTHBOUND			
AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	8	0	13	0	7	PM
	0.5	0.5	0	0		

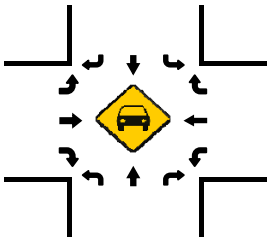
SR-78/Ben Hulse Hwy	EASTBOUND					WESTBOUND			SR-78/Ben Hulse Hwy
	AM	NOON	PM			PM	NOON	AM	
	0	0	98		1	5	0	0	
	0	0	0	0	1	90	0	0	
	0	0	2	0	0	0	0	0	
	0	0	52	1	0	0	0	0	
	0	0	0	0		65	0	0	
	AM	NOON	PM			PM	NOON	AM	

CONTROL
2-Way Stop (NB/SB)

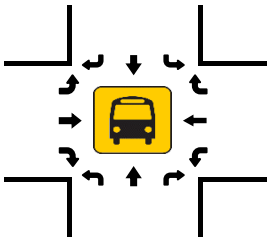
	AM	NOON	PM
TEV	0	0	170
PHF			0.90

			0	0	0.5	0.5
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
			NORTHBOUND			
			Wiest Rd			

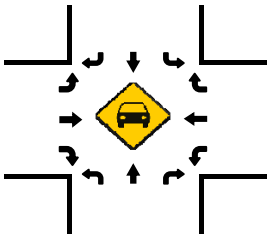
Total Vehicles (AM)



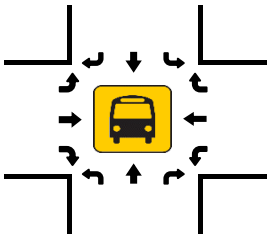
Total Vehicles (AM)



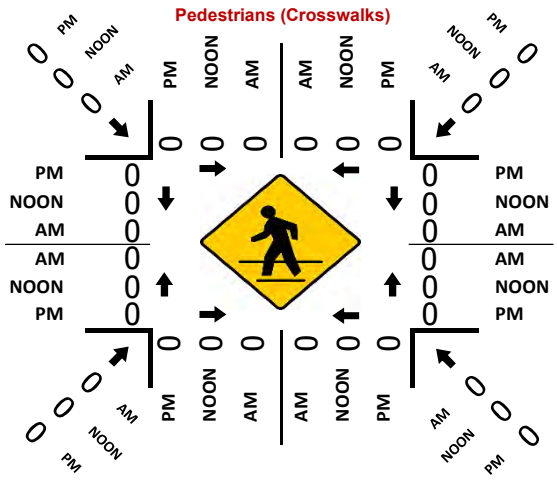
Total Vehicles (NOON)



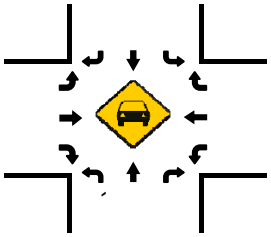
Total Vehicles (NOON)



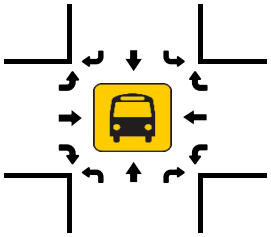
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-115 & SR-78 Interchange/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (WB)

Project ID: 19-04408-004
Date: 2019-11-02

Total

NS/EW Streets:	SR-115				SR-115				SR-78 Interchange/Ben Hulse Hwy				SR-78 Interchange/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	9	0	1	0	0	0	0	0	0	10	11	0	2	17	0	0	50
5:15 PM	9	0	0	0	0	0	0	0	0	7	7	0	0	10	0	0	33
5:30 PM	6	0	0	0	0	0	0	0	0	7	8	0	1	5	0	0	27
5:45 PM	4	0	0	0	0	0	0	0	0	2	10	0	2	4	0	0	22
6:00 PM	4	0	0	0	0	0	0	0	0	6	12	0	2	18	0	0	42
6:15 PM	7	0	0	0	0	0	0	0	0	4	10	0	3	26	0	0	50
6:30 PM	7	0	1	0	0	0	0	0	0	6	10	0	2	11	0	0	37
6:45 PM	6	0	0	0	0	0	0	0	0	9	7	0	5	14	0	0	41
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	52	0	2	0	0	0	0	0	0	51	75	0	17	105	0	0	302
APPROACH %'s :	96.30%	0.00%	3.70%	0.00%					0.00%	40.48%	59.52%	0.00%	13.93%	86.07%	0.00%	0.00%	
PEAK HR :	06:00 PM - 07:00 PM																TOTAL
PEAK HR VOL :	24	0	1	0	0	0	0	0	0	25	39	0	12	69	0	0	170
PEAK HR FACTOR :	0.857	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.694	0.813	0.000	0.600	0.663	0.000	0.000	0.850
	0.781								0.889				0.698				

Prepared by National Data & Surveying Services

SR-115 & SR-78 Interchange/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-004
City: Brawley

Day: Saturday
Date: 11/02/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
06:00 PM - 07:00 PM	05:00 PM - 07:00 PM

SR-115 SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

SR-78 Interchange/Ben Hulse Hwy EASTBOUND

AM	NOON	PM	
0	0	93	
0	0	0	0
0	0	0	0
0	0	25	1
0	0	39	1
AM	NOON	PM	

SR-78 Interchange/Ben Hulse Hwy WESTBOUND

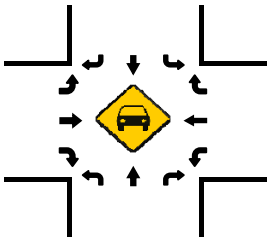
PM	NOON	AM	
0	0	0	0
69	0	0	1
12	0	0	1
0	0	0	0
26	0	0	
PM	NOON	AM	

CONTROL			
1-Way Stop (WB)			
TEV	0 AM	0 NOON	170 PM
PHF			0.85

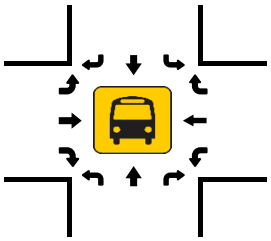
SR-115 NORTHBOUND

PM	51	0	24	0	1	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

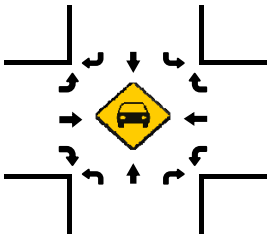
Total Vehicles (AM)



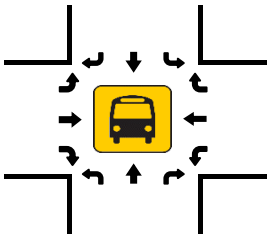
Total Vehicles (AM)



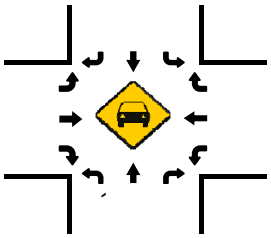
Total Vehicles (NOON)



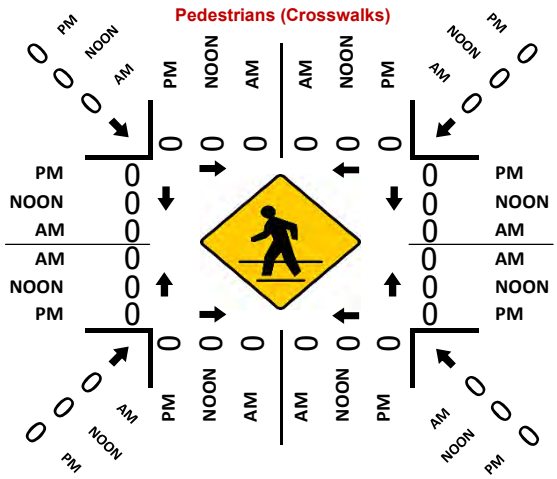
Total Vehicles (NOON)



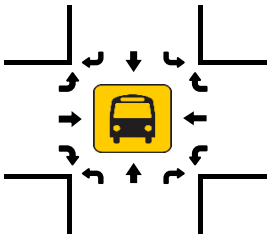
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Gecko Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (NB)

Project ID: 19-04408-005
Date: 2019-11-02

Total

NS/EW Streets:	Gecko Rd				Gecko Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	1	0	1	0	0	0	0	0	0	8	3	0	9	19	0	0	41
5:15 PM	1	0	8	0	0	0	0	0	0	18	1	0	6	10	0	0	44
5:30 PM	2	0	7	0	0	0	0	0	0	6	1	0	8	9	0	0	33
5:45 PM	2	0	7	0	0	0	0	0	0	5	1	0	1	19	0	0	35
6:00 PM	10	0	11	0	0	0	0	0	0	2	2	0	2	24	0	0	51
6:15 PM	2	0	11	0	0	0	0	0	0	5	0	0	5	15	0	0	38
6:30 PM	5	0	3	0	0	0	0	0	0	3	0	0	3	16	0	0	30
6:45 PM	3	0	4	0	0	0	0	0	0	7	2	0	0	11	0	0	27
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	26	0	52	0	0	0	0	0	0	54	10	0	34	123	0	0	299
APPROACH %'s :	33.33%	0.00%	66.67%	0.00%					0.00%	84.38%	15.63%	0.00%	21.66%	78.34%	0.00%	0.00%	
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	15	0	33	0	0	0	0	0	0	31	5	0	17	62	0	0	163
PEAK HR FACTOR :	0.375	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.431	0.625	0.000	0.531	0.646	0.000	0.000	0.799
	0.571								0.474				0.760				

Prepared by National Data & Surveying Services

Gecko Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-005
City: Brawley

Day: Saturday
Date: 11/02/2019

PEAK HOURS	
AM	NONE
NOON	NONE
PM	05:15 PM - 06:15 PM

COUNT PERIODS	
AM	NONE
NOON	NONE
PM	05:00 PM - 07:00 PM

Gecko Rd — SOUTHBOUND

	Left	Thru	Right	U-Turn	
AM	0	0	0	0	0 AM
NOON	0	0	0	0	0 NOON
PM	0	0	0	0	0 PM

SR-78/Ben Hulse Hwy — EASTBOUND

	Left	Thru	Right	U-Turn	
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	77	0	0

SR-78/Ben Hulse Hwy — WESTBOUND

	Left	Thru	Right	U-Turn	
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	62	17	0	64

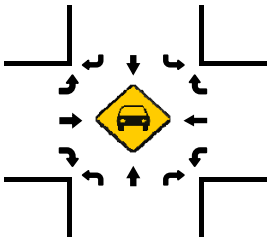
Gecko Rd — NORTHBOUND

	Left	Thru	Right	U-Turn	
AM	0	0	0	0	0 AM
NOON	0	0	0	0	0 NOON
PM	22	0	15	0	33 PM

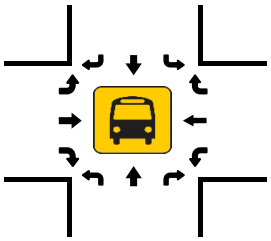
CONTROL	
1-Way Stop (NB)	

	AM	NOON	PM
TEV	0	0	163
PHF			0.80

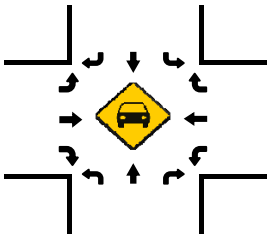
Total Vehicles (AM)



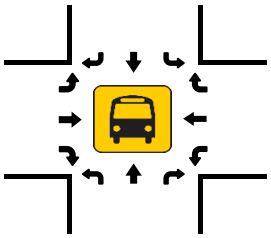
Total Vehicles (AM)



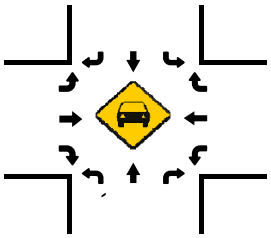
Total Vehicles (NOON)



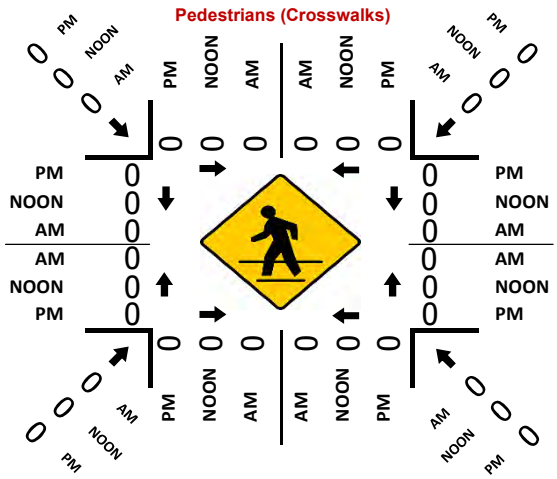
Total Vehicles (NOON)



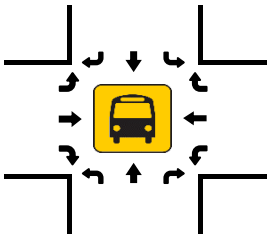
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Osborne Park Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (NB)

Project ID: 19-04408-006
Date: 2019-11-02

Total

NS/EW Streets:	Osborne Park Rd				Osborne Park Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	3	0	0	0	0	0	0	0	0	9	0	0	3	20	0	0	35
5:15 PM	2	0	1	0	0	0	0	0	0	23	1	0	2	16	0	0	45
5:30 PM	0	0	0	0	0	0	0	0	0	14	0	0	2	17	0	0	33
5:45 PM	0	0	2	0	0	0	0	0	0	10	0	0	0	17	0	0	29
6:00 PM	4	0	2	0	0	0	0	0	0	14	0	0	0	28	0	0	48
6:15 PM	5	0	0	0	0	0	0	0	0	14	1	0	0	15	0	0	35
6:30 PM	0	0	1	0	0	0	0	0	0	6	0	0	0	15	0	0	22
6:45 PM	0	0	0	0	0	0	0	0	0	12	0	0	1	9	0	0	22
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	14	0	6	0	0	0	0	0	0	102	2	0	8	137	0	0	269
APPROACH %'s :	70.00%	0.00%	30.00%	0.00%					0.00%	98.08%	1.92%	0.00%	5.52%	94.48%	0.00%	0.00%	
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	6	0	5	0	0	0	0	0	0	61	1	0	4	78	0	0	155
PEAK HR FACTOR :	0.375	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.663	0.250	0.000	0.500	0.696	0.000	0.000	0.807
	0.458								0.646				0.732				

Prepared by National Data & Surveying Services

Osborne Park Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-006
City: Brawley

Day: Saturday
Date: 11/02/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:15 PM - 06:15 PM	05:00 PM - 07:00 PM

Osborne Park Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

SR-78/Ben Hulse Hwy — EASTBOUND

AM	NOON	PM	
0	0	84	
0	0	0	0
0	0	0	0
0	0	61	1
0	0	1	0
AM	NOON	PM	

SR-78/Ben Hulse Hwy — WESTBOUND

PM	NOON	AM	
0	0	0	0
78	0	0	1
4	0	0	0
0	0	0	0
66	0	0	
PM	NOON	AM	

CONTROL: 1-Way Stop (NB)

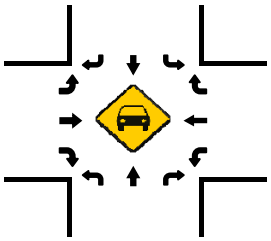
	AM	NOON	PM
TEV	0	0	155
PHF			0.81

Osborne Park Rd — NORTHBOUND

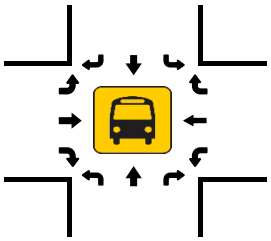
PM	5	0	6	0	5	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

0 0 0 0 (EB turning movements) — 0 0 0.5 0.5 (NB turning movements)

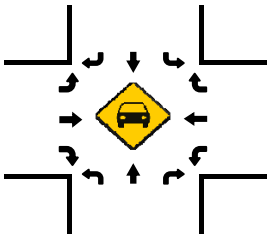
Total Vehicles (AM)



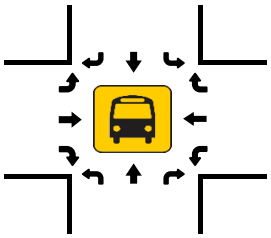
Total Vehicles (AM)



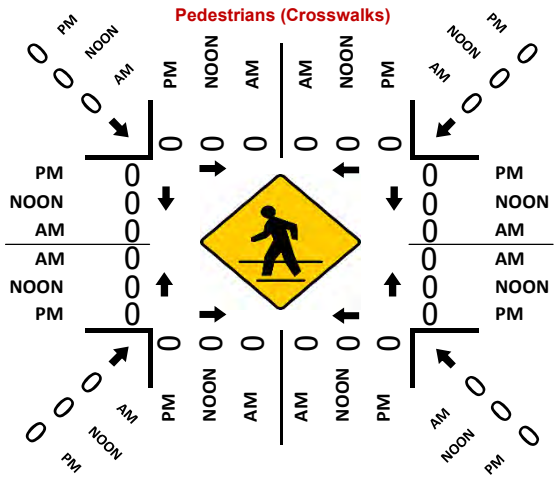
Total Vehicles (NOON)



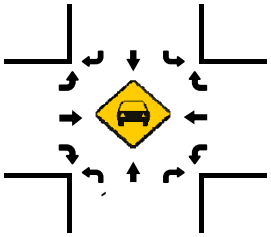
Total Vehicles (NOON)



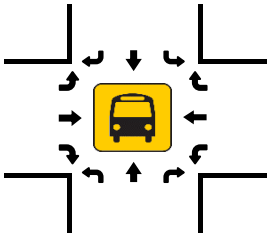
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Glamis Flats Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (NB)

Project ID: 19-04408-007
Date: 2019-11-02

Total

NS/EW Streets:	Glamis Flats Rd				Glamis Flats Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	3	0	0	1	0	0	0	0	0	5	0	0	0	20	0	0	29
5:15 PM	2	0	1	0	0	0	0	0	0	19	1	0	1	20	0	0	44
5:30 PM	4	0	1	0	0	0	0	0	0	21	1	0	0	10	0	0	37
5:45 PM	4	0	0	0	0	0	0	0	0	10	2	0	0	14	0	0	30
6:00 PM	1	0	1	0	0	0	0	0	0	14	4	0	0	28	0	0	48
6:15 PM	2	0	0	0	0	0	0	0	0	11	4	0	1	17	0	0	35
6:30 PM	4	0	0	0	0	0	0	0	0	7	2	0	1	5	0	0	19
6:45 PM	4	0	1	0	0	0	0	0	0	6	2	0	1	7	0	0	21
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	24	0	4	1	0	0	0	0	0	93	16	0	4	121	0	0	263
APPROACH %'s :	82.76%	0.00%	13.79%	3.45%					0.00%	85.32%	14.68%	0.00%	3.20%	96.80%	0.00%	0.00%	
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	11	0	3	0	0	0	0	0	0	64	8	0	1	72	0	0	159
PEAK HR FACTOR :	0.688	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.762	0.500	0.000	0.250	0.643	0.000	0.000	0.828
	0.700								0.818				0.652				

Prepared by National Data & Surveying Services

Glamis Flats Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-007
City: Brawley

Day: Saturday
Date: 11/02/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:15 PM - 06:15 PM	05:00 PM - 07:00 PM

Glamis Flats Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

SR-78/Ben Hulse Hwy — EASTBOUND

AM	NOON	PM	
0	0	83	
0	0	0	0
0	0	0	0
0	0	64	1
0	0	8	0
AM	NOON	PM	

SR-78/Ben Hulse Hwy — WESTBOUND

PM	NOON	AM	
0	0	0	0
72	0	0	1
1	0	0	0
0	0	0	0
67	0	0	
PM	NOON	AM	

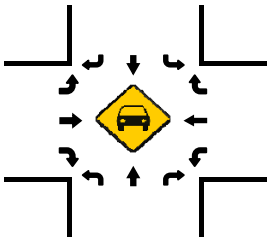
CONTROL: 1-Way Stop (NB)

	AM	NOON	PM
TEV	0	0	159
PHF			0.83

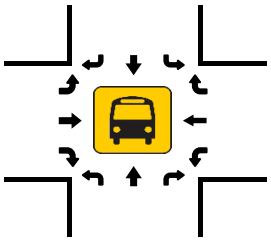
Glamis Flats Rd — NORTHBOUND

PM	9	0	11	0	3	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

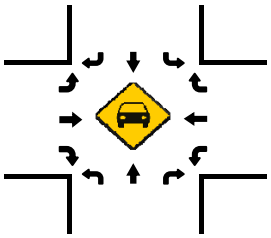
Total Vehicles (AM)



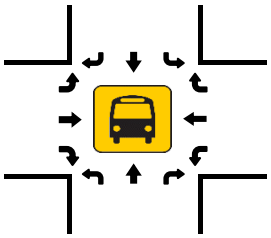
Total Vehicles (AM)



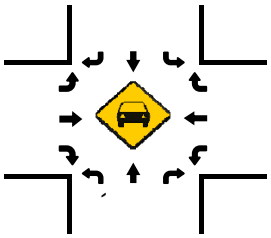
Total Vehicles (NOON)



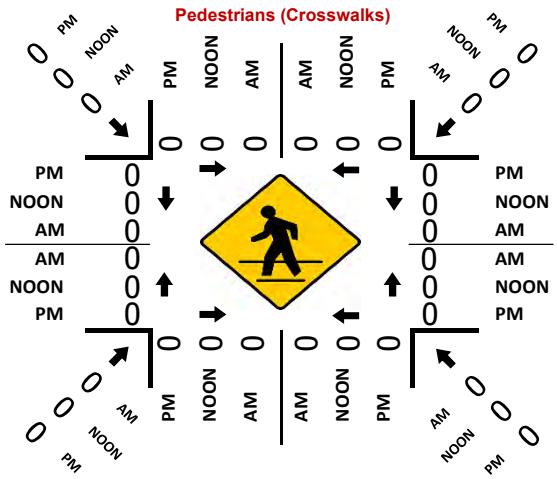
Total Vehicles (NOON)



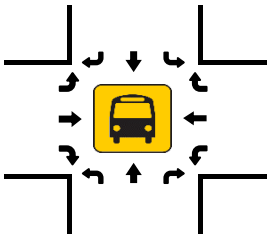
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Wash Rd & SR-78/Ben Hulse Hwy
City: Brawley
Control: 1-Way Stop (SB)

Project ID: 19-04408-008
Date: 2019-11-02

Total

NS/EW Streets:	Wash Rd				Wash Rd				SR-78/Ben Hulse Hwy				SR-78/Ben Hulse Hwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
5:00 PM	2	0	1	0	0	0	0	0	0	4	0	0	4	14	0	0	25
5:15 PM	7	0	4	0	0	0	0	0	0	9	3	0	2	15	0	0	40
5:30 PM	2	0	1	0	0	0	0	0	0	16	3	0	0	6	0	0	28
5:45 PM	1	0	2	0	0	0	0	0	0	10	0	0	0	4	0	0	17
6:00 PM	0	0	0	0	0	0	0	0	0	6	5	0	1	26	0	0	38
6:15 PM	2	0	2	0	0	0	0	0	0	8	2	0	1	13	0	0	28
6:30 PM	3	0	2	0	0	0	0	0	0	4	2	0	4	4	0	0	19
6:45 PM	2	2	4	0	0	2	0	0	0	4	1	0	1	4	0	0	20
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	19	2	16	0	0	2	0	0	0	61	16	0	13	86	0	0	215
APPROACH %'s :	51.35%	5.41%	43.24%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	79.22%	20.78%	0.00%	13.13%	86.87%	0.00%	0.00%	
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	10	0	7	0	0	0	0	0	0	41	11	0	3	51	0	0	123
PEAK HR FACTOR :	0.357	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.641	0.550	0.000	0.375	0.490	0.000	0.000	0.769
	0.386								0.684				0.500				

Prepared by National Data & Surveying Services

Wash Rd & SR-78/Ben Hulse Hwy

Peak Hour Turning Movement Count

ID: 19-04408-008
City: Brawley

Day: Saturday
Date: 11/02/2019

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:15 PM - 06:15 PM	05:00 PM - 07:00 PM

Wash Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

SR-78/Ben Hulse Hwy — EASTBOUND

AM	NOON	PM	
0	0	61	
0	0	0	0
0	0	0	0
0	0	41	1
0	0	11	0
AM	NOON	PM	

SR-78/Ben Hulse Hwy — WESTBOUND

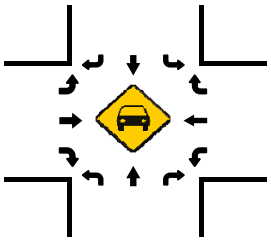
PM	NOON	AM	
0	0	0	0
51	0	0	1
3	0	0	0
0	0	0	0
48	0	0	
PM	NOON	AM	

CONTROL			
1-Way Stop (SB)			
TEV	0 AM	0 NOON	123 PM
PHF			0.77

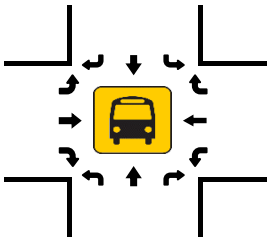
Wash Rd — NORTHBOUND

PM	14	0	10	0	7	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

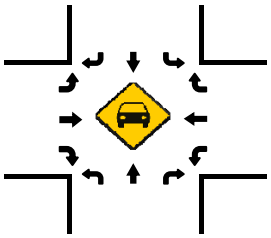
Total Vehicles (AM)



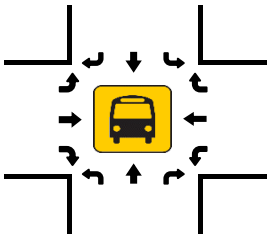
Total Vehicles (AM)



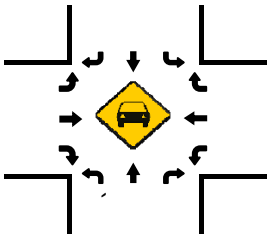
Total Vehicles (NOON)



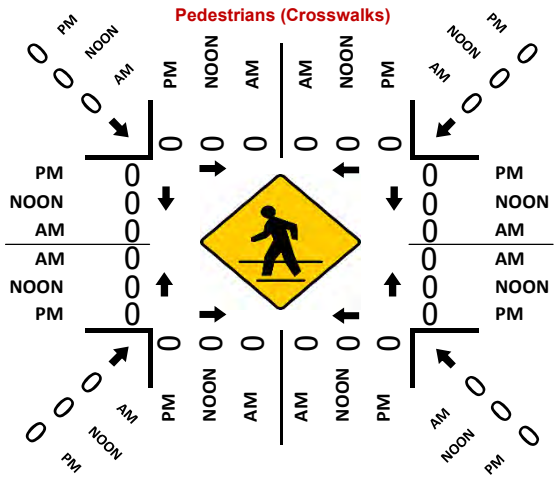
Total Vehicles (NOON)



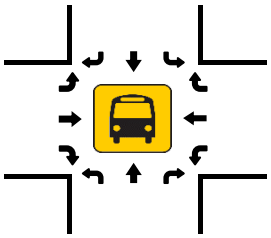
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

VOLUME

Gecko Rd S/O SR-78

Day: Thursday
Date: 10/31/2019

City: Brawley
Project #: CA19_4407_001

DAILY TOTALS	NB	SB	EB	WB	Total
	102	284	0	0	386

AM Period	NB		SB		EB		WB		TOTAL	
0:00	0		0						0	
0:15	0		2						2	
0:30	0		0						0	
0:45	0		3	5					3	5
1:00	0		7						7	
1:15	0		4						4	
1:30	0		1						1	
1:45	0		1	13					1	13
2:00	0		2						2	
2:15	0		1						1	
2:30	0		0						0	
2:45	1	1	0	3					1	4
3:00	0		0						0	
3:15	0		0						0	
3:30	0		1						1	
3:45	0		1	2					1	2
4:00	0		0						0	
4:15	0		0						0	
4:30	0		0						0	
4:45	0		0						0	
5:00	0		0						0	
5:15	0		0						0	
5:30	1		1						2	
5:45	0	1	1	2					1	3
6:00	0		0						0	
6:15	0		0						0	
6:30	1		0						1	
6:45	0	1	0						0	1
7:00	1		1						2	
7:15	0		1						1	
7:30	0		1						1	
7:45	0	1	1	4					1	5
8:00	0		3						3	
8:15	2		3						5	
8:30	2		3						5	
8:45	1	5	3	12					4	17
9:00	1		4						5	
9:15	1		5						6	
9:30	3		8						11	
9:45	4	9	3	20					7	29
10:00	3		4						7	
10:15	4		5						9	
10:30	2		1						3	
10:45	1	10	2	12					3	22
11:00	1		2						3	
11:15	3		1						4	
11:30	4		5						9	
11:45	3	11	4	12					7	23
TOTALS		39		85						**124**
SPLIT %		31.5%		68.5%						**32.1%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	3		6						9	
12:15	1		2						3	
12:30	4		6						10	
12:45	1	9	7	21					8	30
13:00	2		4						6	
13:15	6		5						11	
13:30	1		4						5	
13:45	0	9	5	18					5	27
14:00	1		4						5	
14:15	2		2						4	
14:30	4		8						12	
14:45	1	8	6	20					7	28
15:00	5		5						10	
15:15	4		6						10	
15:30	3		5						8	
15:45	1	13	4	20					5	33
16:00	2		8						10	
16:15	1		5						6	
16:30	1		5						6	
16:45	0	4	5	23					5	27
17:00	1		1						2	
17:15	0		4						4	
17:30	4		1						5	
17:45	2	7	3	9					5	16
18:00	2		5						7	
18:15	3		3						6	
18:30	1		5						6	
18:45	0	6	2	15					2	21
19:00	0		1						1	
19:15	1		2						3	
19:30	0		5						5	
19:45	0	1	5	13					5	14
20:00	1		1						2	
20:15	1		3						4	
20:30	1		2						3	
20:45	0	3	1	7					1	10
21:00	0		6						6	
21:15	1		2						3	
21:30	0		4						4	
21:45	0	1	2	14					2	15
22:00	0		4						4	
22:15	0		1						1	
22:30	0		12						12	
22:45	0		6	23					6	23
23:00	1		5						6	
23:15	1		3						4	
23:30	0		5						5	
23:45	0	2	3	16					3	18
TOTALS		63		199						**262**
SPLIT %		24.0%		76.0%						**67.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	102	284	0	0	386

AM Peak Hour	9:30	8:45			**9:30**
AM Pk Volume	14	20			**34**
Pk Hr Factor	0.875	0.625			**0.773**
7 - 9 Volume	6	16	0	0	**22**
7 - 9 Peak Hour	8:00	8:00			**8:00**
7 - 9 Pk Volume	5	12	0	0	**17**
Pk Hr Factor	0.625	1.000	0.000	0.000	**0.850**

PM Peak Hour	14:30	22:30			**14:30**
PM Pk Volume	14	26			**39**
Pk Hr Factor	0.700	0.542			**0.813**
4 - 6 Volume	11	32	0	0	**43**
4 - 6 Peak Hour	17:00	16:00			**16:00**
4 - 6 Pk Volume	7	23	0	0	**27**
Pk Hr Factor	0.438	0.719	0.000	0.000	**0.675**

Prepared by National Data & Surveying Services

VOLUME

Gecko Rd S/O SR-78

Day: Saturday
Date: 11/2/2019

City: Brawley
Project #: CA19_4407_001

DAILY TOTALS	NB	SB	EB	WB	Total
	380	398	0	0	778

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
0:00	0		3						3		12:00	13		7						20	
0:15	1		1						2		12:15	8		5						13	
0:30	1		2						3		12:30	4		9						13	
0:45	0	2	2	8					2	10	12:45	5	30	6	27					11	57
1:00	1		4						5		13:00	11		8						19	
1:15	0		5						5		13:15	10		3						13	
1:30	0		1						1		13:30	5		11						16	
1:45	0	1	2	12					2	13	13:45	7	33	6	28					13	61
2:00	0		3						3		14:00	6		6						12	
2:15	0		1						1		14:15	10		12						22	
2:30	0		1						1		14:30	7		8						15	
2:45	0		2	7					2	7	14:45	9	32	7	33					16	65
3:00	0		1						1		15:00	9		4						13	
3:15	1		0						1		15:15	2		9						11	
3:30	2		0						2		15:30	2		7						9	
3:45	0	3	0	1					0	4	15:45	5	18	11	31					16	49
4:00	1		0						1		16:00	5		12						17	
4:15	0		4						4		16:15	3		14						17	
4:30	0		0						0		16:30	8		4						12	
4:45	0	1	0	4					0	5	16:45	7	23	9	39					16	62
5:00	0		0						0		17:00	2		12						14	
5:15	1		0						1		17:15	9		7						16	
5:30	1		0						1		17:30	9		9						18	
5:45	0	2	0						0	2	17:45	9	29	2	30					11	59
6:00	0		2						2		18:00	21		4						25	
6:15	0		0						0		18:15	13		5						18	
6:30	0		1						1		18:30	8		3						11	
6:45	0		1	4					1	4	18:45	7	49	2	14					9	63
7:00	1		1						2		19:00	8		5						13	
7:15	1		0						1		19:15	3		3						6	
7:30	3		3						6		19:30	6		3						9	
7:45	7	12	7	11					14	23	19:45	5	22	0	11					5	33
8:00	1		4						5		20:00	8		3						11	
8:15	5		7						12		20:15	8		3						11	
8:30	7		6						13		20:30	6		3						9	
8:45	1	14	6	23					7	37	20:45	3	25	1	10					4	35
9:00	1		9						10		21:00	2		1						3	
9:15	6		7						13		21:15	4		3						7	
9:30	6		5						11		21:30	1		1						2	
9:45	10	23	6	27					16	50	21:45	3	10	1	6					4	16
10:00	4		7						11		22:00	1		2						3	
10:15	1		6						7		22:15	1		1						2	
10:30	6		13						19		22:30	1		0						1	
10:45	6	17	4	30					10	47	22:45	0	3	1	4					1	7
11:00	3		7						10		23:00	1		1						2	
11:15	5		6						11		23:15	0		4						4	
11:30	8		10						18		23:30	1		0						1	
11:45	11	27	9	32					20	59	23:45	2	4	1	6					3	10
TOTALS		102		159						261	TOTALS		278		239						517
SPLIT %		39.1%		60.9%						33.5%	SPLIT %		53.8%		46.2%						66.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	380	398	0	0	778

AM Peak Hour	11:30	9:45			11:30	PM Peak Hour	17:30	15:30			17:30
AM Pk Volume	40	32			71	PM Pk Volume	52	44			72
Pk Hr Factor	0.769	0.615			0.888	Pk Hr Factor	0.619	0.786			0.720
7 - 9 Volume	26	34	0	0	60	4 - 6 Volume	52	69	0	0	121
7 - 9 Peak Hour	7:45	7:45			7:45	4 - 6 Peak Hour	17:00	16:00			16:45
7 - 9 Pk Volume	20	24	0	0	44	4 - 6 Pk Volume	29	39	0	0	64
Pk Hr Factor	0.714	0.857	0.000	0.000	0.786	Pk Hr Factor	0.806	0.696	0.000	0.000	0.889

Prepared by National Data & Surveying Services

VOLUME

Glamis Flats Rd S/O SR-78

Day: Thursday
Date: 10/31/2019

City: Brawley
Project #: CA19_4407_003

DAILY TOTALS	NB	SB	EB	WB	Total
	51	90	0	0	141

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
0:00	0		0						0		12:00	0		1						1	
0:15	0		0						0		12:15	0		0						0	
0:30	0		3						3		12:30	1		0						1	
0:45	0		0	3					0	3	12:45	0	1	0	1					0	2
1:00	0		0						0		13:00	2		1						3	
1:15	0		0						0		13:15	0		1						1	
1:30	0		0						0		13:30	0		3						3	
1:45	0		0						0		13:45	1	3	3	8					4	11
2:00	0		6						6		14:00	0		0						0	
2:15	0		3						3		14:15	1		0						1	
2:30	0		0						0		14:30	2		2						4	
2:45	0		0	9					0	9	14:45	2	5	2	4					4	9
3:00	0		0						0		15:00	0		0						0	
3:15	0		2						2		15:15	0		2						2	
3:30	0		0						0		15:30	2		1						3	
3:45	0		0	2					0	2	15:45	4	6	4	7					8	13
4:00	0		0						0		16:00	1		0						1	
4:15	0		0						0		16:15	2		0						2	
4:30	2		0						2		16:30	1		3						4	
4:45	0	2	0						0	2	16:45	2	6	3	6					5	12
5:00	0		0						0		17:00	1		2						3	
5:15	1		1						2		17:15	3		4						7	
5:30	0		0						0		17:30	0		1						1	
5:45	0	1	0	1					0	2	17:45	2	6	3	10					5	16
6:00	0		0						0		18:00	0		3						3	
6:15	0		0						0		18:15	1		5						6	
6:30	0		0						0		18:30	2		1						3	
6:45	0		0						0		18:45	0	3	1	10					1	13
7:00	0		0						0		19:00	0		1						1	
7:15	0		0						0		19:15	0		0						0	
7:30	0		1						1		19:30	0		0						0	
7:45	1	1	1	2					2	3	19:45	1	1	1	2					2	3
8:00	1		0						1		20:00	0		2						2	
8:15	0		1						1		20:15	0		0						0	
8:30	2		1						3		20:30	0		1						1	
8:45	0	3	2	4					2	7	20:45	2	2	1	4					3	6
9:00	1		0						1		21:00	0		1						1	
9:15	0		0						0		21:15	0		0						0	
9:30	0		0						0		21:30	0		1						1	
9:45	1	2	0						1	2	21:45	0		0	2					0	2
10:00	1		1						2		22:00	0		0						0	
10:15	0		2						2		22:15	0		1						1	
10:30	1		0						1		22:30	0		0						0	
10:45	3	5	2	5					5	10	22:45	0		0	1					0	1
11:00	0		2						2		23:00	0		0						0	
11:15	1		2						3		23:15	0		1						1	
11:30	3		0						3		23:30	0		3						3	
11:45	0	4	0	4					0	8	23:45	0		1	5					1	5
TOTALS	18		30							48	TOTALS	33		60							93
SPLIT %	37.5%		62.5%							34.0%	SPLIT %	35.5%		64.5%							66.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	51	90	0	0	141

AM Peak Hour	10:45	1:30			10:45	PM Peak Hour	15:30	16:30			16:30
AM Pk Volume	7	9			13	PM Pk Volume	9	12			19
Pk Hr Factor	0.583	0.375			0.650	Pk Hr Factor	0.563	0.750			0.679
7 - 9 Volume	4	6	0	0	10	4 - 6 Volume	12	16	0	0	28
7 - 9 Peak Hour	7:45	8:00			7:45	4 - 6 Peak Hour	16:30	16:30			16:30
7 - 9 Pk Volume	4	4	0	0	7	4 - 6 Pk Volume	7	12	0	0	19
Pk Hr Factor	0.500	0.500	0.000	0.000	0.583	Pk Hr Factor	0.583	0.750	0.000	0.000	0.679

Prepared by National Data & Surveying Services

VOLUME

Glamis Flats Rd S/O SR-78

Day: Saturday
Date: 11/2/2019

City: Brawley
Project #: CA19_4407_003

DAILY TOTALS	NB	SB	EB	WB	Total
	157	202	0	0	359

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
0:00	0		1						1		12:00	1		10						11	
0:15	0		0						0		12:15	1		3						4	
0:30	0		4						4		12:30	1		3						4	
0:45	2	2	3	8					5	10	12:45	4	7	2	18					6	25
1:00	0		1						1		13:00	4		5						9	
1:15	1		2						3		13:15	1		10						11	
1:30	2		0						2		13:30	8		6						14	
1:45	0	3	0	3					0	6	13:45	2	15	2	23					4	38
2:00	0		0						0		14:00	3		7						10	
2:15	0		0						0		14:15	7		5						12	
2:30	1		2						3		14:30	4		5						9	
2:45	0	1	0	2					0	3	14:45	2	16	2	19					4	35
3:00	0		0						0		15:00	2		2						4	
3:15	0		0						0		15:15	7		10						17	
3:30	0		0						0		15:30	4		3						7	
3:45	0		1	1					1	1	15:45	7	20	5	20					12	40
4:00	2		1						3		16:00	7		1						8	
4:15	0		0						0		16:15	3		2						5	
4:30	0		0						0		16:30	2		0						2	
4:45	0	2	0	1					0	3	16:45	2	14	3	6					5	20
5:00	0		0						0		17:00	3		0						3	
5:15	0		0						0		17:15	3		2						5	
5:30	0		0						0		17:30	5		1						6	
5:45	0		0						0		17:45	4	15	2	5					6	20
6:00	0		0						0		18:00	2		4						6	
6:15	0		0						0		18:15	2		5						7	
6:30	0		0						0		18:30	4		3						7	
6:45	1	1	0						1	1	18:45	5	13	3	15					8	28
7:00	0		0						0		19:00	3		0						3	
7:15	2		0						2		19:15	1		1						2	
7:30	0		0						0		19:30	0		1						1	
7:45	0	2	1	1					1	3	19:45	0	4	3	5					3	9
8:00	0		2						2		20:00	3		0						3	
8:15	2		2						4		20:15	2		2						4	
8:30	0		4						4		20:30	1		3						4	
8:45	1	3	5	13					6	16	20:45	1	7	3	8					4	15
9:00	4		3						7		21:00	0		1						1	
9:15	0		4						4		21:15	0		1						1	
9:30	0		1						1		21:30	1		2						3	
9:45	1	5	5	13					6	18	21:45	2	3	0	4					2	7
10:00	0		3						3		22:00	0		0						0	
10:15	1		2						3		22:15	0		0						0	
10:30	4		6						10		22:30	1		0						1	
10:45	3	8	2	13					5	21	22:45	1	2	0						1	2
11:00	2		3						5		23:00	2		0						2	
11:15	4		7						11		23:15	3		0						3	
11:30	0		5						5		23:30	0		0						0	
11:45	3	9	9	24					12	33	23:45	0	5	0						0	5
TOTALS		36		79						**115**	**TOTALS**		121		123						**244**
SPLIT %		31.3%		68.7%						**32.0%**	**SPLIT %**		49.6%		50.4%						**68.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	157	202	0	0	359

AM Peak Hour	10:30	11:15			**11:15**	**PM Peak Hour**	15:15	13:15			**15:15**
AM Pk Volume	13	31			**39**	**PM Pk Volume**	25	25			**44**
Pk Hr Factor	0.813	0.775			**0.813**	**Pk Hr Factor**	0.893	0.625			**0.647**
7 - 9 Volume	5	14	0	0	**19**	**4 - 6 Volume**	29	11	0	0	**40**
7 - 9 Peak Hour	8:00	8:00			**8:00**	**4 - 6 Peak Hour**	17:00	16:00			**16:00**
7 - 9 Pk Volume	3	13	0	0	**16**	**4 - 6 Pk Volume**	15	6	0	0	**20**
Pk Hr Factor	0.375	0.650	0.000	0.000	**0.667**	**Pk Hr Factor**	0.750	0.500	0.000	0.000	**0.625**

Prepared by National Data & Surveying Services

VOLUME

Osborne Park Rd S/O SR-78

Day: Thursday
Date: 10/31/2019

City: Brawley
Project #: CA19_4407_002

DAILY TOTALS	NB	SB	EB	WB	Total
	46	50	0	0	96

AM Period	NB		SB		EB		WB		TOTAL	
0:00	0		0						0	
0:15	0		0						0	
0:30	0		0						0	
0:45	0		1	1					1	1
1:00	1		0						1	
1:15	0		0						0	
1:30	0		0						0	
1:45	0	1	0						0	1
2:00	0		0						0	
2:15	0		0						0	
2:30	0		0						0	
2:45	0		0						0	
3:00	0		0						0	
3:15	0		0						0	
3:30	0		0						0	
3:45	0		0						0	
4:00	0		0						0	
4:15	0		0						0	
4:30	0		0						0	
4:45	0		0						0	
5:00	0		0						0	
5:15	0		0						0	
5:30	0		0						0	
5:45	0		0						0	
6:00	0		0						0	
6:15	0		0						0	
6:30	0		0						0	
6:45	0		0						0	
7:00	0		0						0	
7:15	0		0						0	
7:30	0		0						0	
7:45	0		0						0	
8:00	0		0						0	
8:15	0		0						0	
8:30	3		3						6	
8:45	0	3	1	4					1	7
9:00	1		0						1	
9:15	1		3						4	
9:30	2		1						3	
9:45	2	6	3	7					5	13
10:00	2		3						5	
10:15	2		0						2	
10:30	0		0						0	
10:45	0	4	1	4					1	8
11:00	2		1						3	
11:15	0		1						1	
11:30	3		3						6	
11:45	1	6	2	7					3	13
TOTALS		20		23						**43**
SPLIT %		46.5%		53.5%						**44.8%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	2		1						3	
12:15	2		2						4	
12:30	1		1						2	
12:45	2	7	2	6					4	13
13:00	0		1						1	
13:15	0		1						1	
13:30	0		1						1	
13:45	2	2	3	6					5	8
14:00	3		0						3	
14:15	1		1						2	
14:30	0		1						1	
14:45	4	8	4	6					8	14
15:00	1		0						1	
15:15	0		0						0	
15:30	0		0						0	
15:45	0	1	1	1					1	2
16:00	0		2						2	
16:15	1		1						2	
16:30	2		0						2	
16:45	0	3	0	3					0	6
17:00	1		1						2	
17:15	2		1						3	
17:30	0		0						0	
17:45	1	4	1	3					2	7
18:00	0		0						0	
18:15	0		0						0	
18:30	0		0						0	
18:45	0		0						0	
19:00	0		0						0	
19:15	0		0						0	
19:30	0		0						0	
19:45	0		0						0	
20:00	0		0						0	
20:15	0		0						0	
20:30	0		0						0	
20:45	0		0						0	
21:00	0		0						0	
21:15	0		0						0	
21:30	0		0						0	
21:45	0		0						0	
22:00	1		2						3	
22:15	0		0						0	
22:30	0		0						0	
22:45	0	1	0	2					0	3
23:00	0		0						0	
23:15	0		0						0	
23:30	0		0						0	
23:45	0		0						0	
TOTALS		26		27						**53**
SPLIT %		49.1%		50.9%						**55.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	46	50	0	0	96

AM Peak Hour	9:30	9:15			**9:15**	**PM Peak Hour**	14:00	12:00			**14:00**
AM Pk Volume	8	10			**17**	**PM Pk Volume**	8	6			**14**
Pk Hr Factor	1.000	0.833			**0.850**	**Pk Hr Factor**	0.500	0.750			**0.438**
7 - 9 Volume	3	4	0	0	**7**	**4 - 6 Volume**	7	6	0	0	**13**
7 - 9 Peak Hour	7:45	8:00			**8:00**	**4 - 6 Peak Hour**	16:30	16:00			**16:30**
7 - 9 Pk Volume	3	4	0	0	**7**	**4 - 6 Pk Volume**	5	3	0	0	**7**
Pk Hr Factor	0.250	0.333	0.000	0.000	**0.292**	**Pk Hr Factor**	0.625	0.375	0.000	0.000	**0.583**

Prepared by National Data & Surveying Services

VOLUME

Osborne Park Rd S/O SR-78

Day: Saturday
Date: 11/2/2019

City: Brawley
Project #: CA19_4407_002

DAILY TOTALS	NB	SB	EB	WB	Total
	117	117	0	0	234

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
0:00	0		0						0		12:00	1		1						2	
0:15	0		0						0		12:15	3		2						5	
0:30	0		0						0		12:30	2		3						5	
0:45	0		0						0		12:45	3	9	2	8					5	17
1:00	1		2						3		13:00	1		4						5	
1:15	0		0						0		13:15	0		3						3	
1:30	1		0						1		13:30	3		2						5	
1:45	0	2	0	2					0	4	13:45	1	5	2	11					3	16
2:00	0		0						0		14:00	5		3						8	
2:15	1		0						1		14:15	5		4						9	
2:30	0		0						0		14:30	4		3						7	
2:45	0	1	0						0	1	14:45	2	16	3	13					5	29
3:00	0		0						0		15:00	0		4						4	
3:15	0		0						0		15:15	3		4						7	
3:30	0		0						0		15:30	3		2						5	
3:45	0		0						0		15:45	6	12	5	15					11	27
4:00	0		0						0		16:00	2		4						6	
4:15	0		0						0		16:15	4		5						9	
4:30	0		0						0		16:30	3		3						6	
4:45	0		0						0		16:45	0	9	4	16					4	25
5:00	0		0						0		17:00	3		3						6	
5:15	0		0						0		17:15	3		3						6	
5:30	0		0						0		17:30	0		2						2	
5:45	0		0						0		17:45	2	8	0	8					2	16
6:00	0		0						0		18:00	6		0						6	
6:15	0		1						1		18:15	5		1						6	
6:30	0		0						0		18:30	1		0						1	
6:45	1	1	1	2					2	3	18:45	0	12	1	2					1	14
7:00	0		1						1		19:00	1		1						2	
7:15	0		1						1		19:15	2		0						2	
7:30	0		0						0		19:30	0		0						0	
7:45	1	1	1	3					2	4	19:45	0	3	0	1					0	4
8:00	0		0						0		20:00	2		0						2	
8:15	0		0						0		20:15	0		0						0	
8:30	1		1						2		20:30	1		0						1	
8:45	1	2	1	2					2	4	20:45	0	3	0						0	3
9:00	1		0						1		21:00	0		0						0	
9:15	2		1						3		21:15	0		0						0	
9:30	0		1						1		21:30	0		0						0	
9:45	2	5	3	5					5	10	21:45	0		0						0	
10:00	4		15						19		22:00	0		1						1	
10:15	1		2						3		22:15	0		0						0	
10:30	17		2						19		22:30	0		0						0	
10:45	1	23	2	21					3	44	22:45	0		0	1					0	1
11:00	0		1						1		23:00	0		0						0	
11:15	0		2						2		23:15	0		0						0	
11:30	3		0						3		23:30	0		1						1	
11:45	2	5	3	6					5	11	23:45	0		0	1					0	1
TOTALS		40		41						**81**	**TOTALS**		77		76						**153**
SPLIT %		49.4%		50.6%						**34.6%**	**SPLIT %**		50.3%		49.7%						**65.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	117	117	0	0	234

AM Peak Hour	9:45	9:45			**9:45**	**PM Peak Hour**	14:00	15:45			**15:45**
AM Pk Volume	24	22			**46**	**PM Pk Volume**	16	17			**32**
Pk Hr Factor	0.353	0.367			**0.605**	**Pk Hr Factor**	0.800	0.850			**0.727**
7 - 9 Volume	3	5	0	0	**8**	**4 - 6 Volume**	17	24	0	0	**41**
7 - 9 Peak Hour	7:45	7:00			**7:00**	**4 - 6 Peak Hour**	16:15	16:00			**16:00**
7 - 9 Pk Volume	2	3	0	0	**4**	**4 - 6 Pk Volume**	10	16	0	0	**25**
Pk Hr Factor	0.500	0.750	0.000	0.000	**0.500**	**Pk Hr Factor**	0.625	0.800	0.000	0.000	**0.694**

Prepared by National Data & Surveying Services

VOLUME

Wash Rd S/O SR-78

Day: Thursday
Date: 10/31/2019

City: Brawley
Project #: CA19_4407_004

DAILY TOTALS	NB	SB	EB	WB	Total
	49	197	0	0	246

AM Period	NB		SB		EB		WB		TOTAL	
0:00	0		9						9	
0:15	0		5						5	
0:30	2		3						5	
0:45	0	2	2	19					2	21
1:00	0		1						1	
1:15	0		0						0	
1:30	0		0						0	
1:45	0		2	3					2	3
2:00	0		2						2	
2:15	0		3						3	
2:30	0		0						0	
2:45	0		1	6					1	6
3:00	0		1						1	
3:15	0		0						0	
3:30	0		0						0	
3:45	0		1	2					1	2
4:00	0		1						1	
4:15	0		2						2	
4:30	0		1						1	
4:45	0		0	4					0	4
5:00	0		0						0	
5:15	0		0						0	
5:30	0		0						0	
5:45	0		0						0	
6:00	0		0						0	
6:15	0		0						0	
6:30	0		0						0	
6:45	0		1	1					1	1
7:00	0		0						0	
7:15	0		1						1	
7:30	3		0						3	
7:45	0	3	2	3					2	6
8:00	0		0						0	
8:15	0		2						2	
8:30	0		0						0	
8:45	1	1	3	5					4	6
9:00	0		3						3	
9:15	2		1						3	
9:30	3		6						9	
9:45	0	5	1	11					1	16
10:00	2		0						2	
10:15	1		6						7	
10:30	5		3						8	
10:45	0	8	2	11					2	19
11:00	2		3						5	
11:15	1		4						5	
11:30	1		4						5	
11:45	1	5	3	14					4	19
TOTALS		24		79						**103**
SPLIT %		23.3%		76.7%						**41.9%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	3		4						7	
12:15	5		3						8	
12:30	1		2						3	
12:45	1	10	5	14					6	24
13:00	0		2						2	
13:15	1		2						3	
13:30	0		4						4	
13:45	0	1	0	8					0	9
14:00	2		1						3	
14:15	0		4						4	
14:30	0		3						3	
14:45	1	3	2	10					3	13
15:00	3		4						7	
15:15	0		1						1	
15:30	0		4						4	
15:45	0	3	0	9					0	12
16:00	2		2						4	
16:15	0		2						2	
16:30	1		4						5	
16:45	0	3	1	9					1	12
17:00	1		1						2	
17:15	0		3						3	
17:30	0		2						2	
17:45	0	1	2	8					2	9
18:00	1		5						6	
18:15	0		3						3	
18:30	0		3						3	
18:45	1	2	4	15					5	17
19:00	0		2						2	
19:15	0		2						2	
19:30	0		3						3	
19:45	0		0	7					0	7
20:00	0		1						1	
20:15	0		3						3	
20:30	0		3						3	
20:45	0		2	9					2	9
21:00	0		0						0	
21:15	1		0						1	
21:30	0		2						2	
21:45	0	1	2	4					2	5
22:00	0		2						2	
22:15	0		5						5	
22:30	0		1						1	
22:45	0		4	12					4	12
23:00	1		2						3	
23:15	0		3						3	
23:30	0		5						5	
23:45	0	1	3	13					3	14
TOTALS		25		118						**143**
SPLIT %		17.5%		82.5%						**58.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	49	197	0	0	246

AM Peak Hour	11:30				**11:30**	**PM Peak Hour**	12:00	18:00			**12:00**
AM Pk Volume	10	19			**24**	**PM Pk Volume**	10	15			**24**
Pk Hr Factor	0.500	0.528			**0.750**	**Pk Hr Factor**	0.500	0.750			**0.750**
7 - 9 Volume	4	8	0	0	**12**	**4 - 6 Volume**	4	17	0	0	**21**
7 - 9 Peak Hour	7:00	8:00			**7:30**	**4 - 6 Peak Hour**	16:00	16:00			**16:00**
7 - 9 Pk Volume	3	5	0	0	**7**	**4 - 6 Pk Volume**	3	9	0	0	**12**
Pk Hr Factor	0.250	0.417	0.000	0.000	**0.583**	**Pk Hr Factor**	0.375	0.563	0.000	0.000	**0.600**

Prepared by National Data & Surveying Services

VOLUME

Wash Rd S/O SR-78

Day: Saturday
Date: 11/2/2019

City: Brawley
Project #: CA19_4407_004

DAILY TOTALS	NB	SB	EB	WB	Total
	164	155	0	0	319

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
0:00	1		0				1		12:00	2		6				8	
0:15	0		0				0		12:15	3		2				5	
0:30	1		1				2		12:30	0		0				0	
0:45	0	2	4	5			4	7	12:45	6	11	2	10			8	21
1:00	1		4				5		13:00	3		1				4	
1:15	0		0				0		13:15	1		1				2	
1:30	1		5				6		13:30	4		2				6	
1:45	0	2	0	9			0	11	13:45	0	8	1	5			1	13
2:00	0		1				1		14:00	2		4				6	
2:15	1		1				2		14:15	0		0				0	
2:30	0		1				1		14:30	4		2				6	
2:45	0	1	1	4			1	5	14:45	1	7	0	6			1	13
3:00	0		1				1		15:00	3		0				3	
3:15	0		0				0		15:15	5		3				8	
3:30	0		0				0		15:30	3		2				5	
3:45	0		2	3			2	3	15:45	8	19	0	5			8	24
4:00	0		0				0		16:00	4		2				6	
4:15	0		0				0		16:15	3		2				5	
4:30	0		0				0		16:30	5		3				8	
4:45	0		0				0		16:45	4	16	0	7			4	23
5:00	0		0				0		17:00	3		4				7	
5:15	0		0				0		17:15	11		5				16	
5:30	0		0				0		17:30	3		3				6	
5:45	0		1	1			1	1	17:45	3	20	0	12			3	32
6:00	0		0				0		18:00	0		6				6	
6:15	0		0				0		18:15	4		3				7	
6:30	1		0				1		18:30	5		6				11	
6:45	0	1	0				0	1	18:45	8	17	4	19			12	36
7:00	0		0				0		19:00	3		0				3	
7:15	0		1				1		19:15	1		4				5	
7:30	1		2				3		19:30	4		1				5	
7:45	2	3	3	6			5	9	19:45	3	11	0	5			3	16
8:00	0		2				2		20:00	1		1				2	
8:15	1		3				4		20:15	1		1				2	
8:30	1		2				3		20:30	3		2				5	
8:45	2	4	4	11			6	15	20:45	1	6	1	5			2	11
9:00	3		0				3		21:00	3		2				5	
9:15	2		2				4		21:15	1		0				1	
9:30	0		2				2		21:30	0		1				1	
9:45	2	7	4	8			6	15	21:45	0	4	1	4			1	8
10:00	3		2				5		22:00	1		4				5	
10:15	1		2				3		22:15	2		1				3	
10:30	1		2				3		22:30	0		1				1	
10:45	2	7	5	11			7	18	22:45	0	3	0	6			0	9
11:00	5		7				12		23:00	0		1				1	
11:15	2		3				5		23:15	0		0				0	
11:30	5		1				6		23:30	0		0				0	
11:45	1	13	1	12			2	25	23:45	2	2	0	1			2	3
TOTALS		40		70				**110**	**TOTALS**		124		85				**209**
SPLIT %		36.4%		63.6%				**34.5%**	**SPLIT %**		59.3%		40.7%				**65.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	164	155	0	0	319

AM Peak Hour	10:45	10:30			**10:45**	**PM Peak Hour**	16:30	18:00			**18:00**
AM Pk Volume	14	17			**30**	**PM Pk Volume**	23	19			**36**
Pk Hr Factor	0.700	0.607			**0.625**	**Pk Hr Factor**	0.523	0.792			**0.750**
7 - 9 Volume	7	17	0	0	**24**	**4 - 6 Volume**	36	19	0	0	**55**
7 - 9 Peak Hour	7:30	8:00			**8:00**	**4 - 6 Peak Hour**	16:30	16:30			**16:30**
7 - 9 Pk Volume	4	11	0	0	**15**	**4 - 6 Pk Volume**	23	12	0	0	**35**
Pk Hr Factor	0.500	0.688	0.000	0.000	**0.625**	**Pk Hr Factor**	0.523	0.600	0.000	0.000	**0.547**

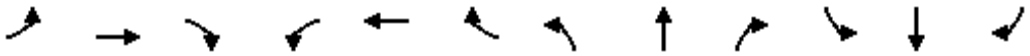
DIST	RTE	RTE	CNTY	PM_	PM	PM	DESCRIPTION	BACK_AADT	AHEAD_AADT
11	078		IMP		0.000		SAN DIEGO/IMPERIAL COUNTY LINE		810
11	078		IMP		13.169		NORTH JCT. RTE 86	810	
11	078		IMP	R	9.203		SOUTH JCT. RTE. 86		8200
11	078		IMP	R	10.809		BRANDT RD	8200	9000
11	078		IMP	R	12.891		JCT. RTE. 111- WEST	9000	9600
11	078		IMP	R	13.897		BEST ROAD	9600	9400
11	078		IMP		15.499		JCT. RTE. 111- EAST	9400	4150
11	078		IMP		18.651		WEST JCT. RTE. 115	4150	3150
11	078		IMP		21.023		EAST JCT. RTE. 115	3150	1800
11	078		IMP		25.927		GREEN ROAD	1800	1550
11	078		IMP		41.004		GLAMIS	1550	1650
11	078		IMP		52.348		OGILBY ROAD	1650	1800
11	078		IMP		80.442		PALO VERDE, FOURTH/MAIN STREET	1900	1650
11	078		IMP		80.743		PALO VERDE, IMPERIAL/RIVERSIDE COUNTY LINE	1650	
08	078		RIV		0.000		PALO VERDE, IMPERIAL/RIVERSIDE COUNTY LINE		1500
08	078		RIV		3.060		32ND AVENUE/PALO VERDE BOULEVARD	1500	1800
08	078		RIV		6.350		CRANNELLS BOULEVARD/28TH AVENUE	1800	1700
08	078		RIV		9.352		28TH AVENUE/NEIGHBORS BOULEVARD	1700	1900
08	078		RIV		10.620		RIPLEY, BROADWAY STREET	1900	2800
08	078		RIV		16.169		JCT. RTE. 10	2800	2800
08	078		RIV		16.411		HOBSON WAY F-OLD RTE 10	2800	
11	079		SD	L	0.044		JCT. RTE. 8		5600
11	079		SD	L	1.297		DESCANSO, RIVERSIDE DRIVE	5600	3200
11	079		SD	L	2.747		GUTAY AND PINE VALLEY HIGHWAY	3550	2750
11	079		SD		9.270		PASO PICACHO CAMP GROUND	1650	1650
11	079		SD		14.440		SUNRISE HIGHWAY	1650	1900
11	079		SD		20.230		JCT. RTE. 78	3150	3150
11	079		SD		27.370		JCT. RTE. 76 WEST	2650	3400
11	079		SD		31.700		SAN FELIPE ROAD	3400	1550
11	079		SD		35.070		WARNER SPRINGS, LOS TULES ROAD	1400	1400
11	079		SD		44.090		SUNSHINE SUMMIT	1250	1700
11	079		SD		49.298		OAK GROVE	1500	1900
11	079		SD		53.035		SAN DIEGO/RIVERSIDE COUNTY LINE	2000	
08	079		RIV		0.000		SAN DIEGO/RIVERSIDE COUNTY LINE		2000
08	079		RIV		2.270		JCT. RTE. 371 EAST	3200	8700
08	079		RIV		5.802		SAGE ROAD	8700	9100
08	079		RIV	R	4.777		MURRIETA HOT SPRINGS RD	34000	28000
08	079		RIV	M	7.630		BENTON RD	28000	25000
08	079		RIV	R	16.670		SIMPSON AVENUE	16000	11000
08	079		RIV	R	19.160		JCT. RTE. 74	10000	16500

APPENDIX C

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – EXISTING

HCM 6th Signalized Intersection Summary
1: Old Hwy 111/N. Best Ave & SR 78

05/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	152	51	13	118	31	41	51	25	45	62	42
Future Volume (veh/h)	35	152	51	13	118	31	41	51	25	45	62	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	36	157	53	13	122	32	42	53	26	46	64	43
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	59	302	316	23	203	53	67	143	70	72	129	87
Arrive On Green	0.04	0.21	0.21	0.02	0.18	0.18	0.05	0.16	0.16	0.05	0.16	0.16
Sat Flow, veh/h	1372	1441	1221	1372	1100	289	1372	912	448	1372	804	540
Grp Volume(v), veh/h	36	157	53	13	0	154	42	0	79	46	0	107
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	0	1389	1372	0	1360	1372	0	1343
Q Serve(g_s), s	0.8	3.1	1.1	0.3	0.0	3.2	1.0	0.0	1.7	1.0	0.0	2.3
Cycle Q Clear(g_c), s	0.8	3.1	1.1	0.3	0.0	3.2	1.0	0.0	1.7	1.0	0.0	2.3
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.33	1.00		0.40
Lane Grp Cap(c), veh/h	59	302	316	23	0	256	67	0	213	72	0	215
V/C Ratio(X)	0.61	0.52	0.17	0.56	0.00	0.60	0.63	0.00	0.37	0.64	0.00	0.50
Avail Cap(c_a), veh/h	817	1986	1742	817	0	1914	817	0	2130	817	0	2104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.0	11.2	9.2	15.6	0.0	11.9	14.9	0.0	12.1	14.8	0.0	12.2
Incr Delay (d2), s/veh	9.9	1.4	0.2	19.0	0.0	2.3	9.3	0.0	1.1	9.1	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.7	0.2	0.2	0.0	0.8	0.4	0.0	0.4	0.4	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	12.6	9.4	34.5	0.0	14.2	24.2	0.0	13.1	23.9	0.0	14.0
LnGrp LOS	C	B	A	C	A	B	C	A	B	C	A	B
Approach Vol, veh/h		246			167			121			153	
Approach Delay, s/veh		13.7			15.8			17.0			17.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	9.5	5.0	11.2	6.1	9.6	5.9	10.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.0	50.0	19.0	44.0	19.0	50.0	19.0	44.0
Max Q Clear Time (g_c+I1), s	3.0	3.7	2.3	5.1	3.0	4.3	2.8	5.2
Green Ext Time (p_c), s	0.1	0.5	0.0	1.0	0.1	0.6	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	68	142	26	84	38	70	289	22	86	487	32
Future Volume (veh/h)	32	68	142	26	84	38	70	289	22	86	487	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	33	70	146	27	87	39	72	298	23	89	502	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	106	399	338	106	399	338	205	758	338	127	800	357
Arrive On Green	0.08	0.28	0.28	0.08	0.28	0.28	0.08	0.28	0.28	0.09	0.29	0.29
Sat Flow, veh/h	1372	1441	1221	1372	1441	1221	2662	2737	1221	1372	2737	1221
Grp Volume(v), veh/h	33	70	146	27	87	39	72	298	23	89	502	33
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	1441	1221	1331	1369	1221	1372	1369	1221
Q Serve(g_s), s	1.5	2.4	6.4	1.2	3.0	1.6	1.7	5.7	0.9	4.1	10.3	1.3
Cycle Q Clear(g_c), s	1.5	2.4	6.4	1.2	3.0	1.6	1.7	5.7	0.9	4.1	10.3	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	399	338	106	399	338	205	758	338	127	800	357
V/C Ratio(X)	0.31	0.18	0.43	0.26	0.22	0.12	0.35	0.39	0.07	0.70	0.63	0.09
Avail Cap(c_a), veh/h	106	399	338	106	399	338	205	758	338	127	800	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	17.9	19.3	28.2	18.1	17.6	28.5	19.1	17.3	28.6	19.9	16.7
Incr Delay (d2), s/veh	7.6	1.0	4.0	5.8	1.3	0.7	4.7	0.3	0.1	27.8	3.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.8	1.9	0.5	1.0	0.4	0.6	1.7	0.2	2.3	3.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	18.8	23.3	34.0	19.3	18.2	33.2	19.4	17.4	56.5	23.6	17.2
LnGrp LOS	D	B	C	C	B	B	C	B	B	E	C	B
Approach Vol, veh/h		249			153			393			624	
Approach Delay, s/veh		23.7			21.6			21.8			28.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	22.5	9.5	22.5	9.5	23.5	9.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.0	18.0	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	10.1	7.7	3.2	8.4	3.7	12.3	3.5	5.0
Green Ext Time (p_c), s	0.0	1.4	0.0	0.5	0.0	1.9	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	160	0	0	102	5	0	0	0	18	0	6
Future Vol, veh/h	6	160	0	0	102	5	0	0	0	18	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	8	203	0	0	129	6	0	0	0	23	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	129	0	0	203	0	0	352	348	203	348	348	129
Stage 1	-	-	-	-	-	-	219	219	-	129	129	-
Stage 2	-	-	-	-	-	-	133	129	-	219	219	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1296	-	-	1213	-	0	552	532	769	556	532	849
Stage 1	-	-	-	-	-	0	722	671	-	810	737	-
Stage 2	-	-	-	-	-	0	805	737	-	722	671	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1296	-	-	1213	-	-	544	528	769	553	528	849
Mov Cap-2 Maneuver	-	-	-	-	-	-	544	528	-	553	528	-
Stage 1	-	-	-	-	-	-	717	666	-	804	737	-
Stage 2	-	-	-	-	-	-	798	737	-	717	666	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	0	11.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1296	-	-	1213	-	553	849
HCM Lane V/C Ratio	-	-	0.006	-	-	-	-	0.041	0.009
HCM Control Delay (s)	0	0	7.8	0	-	0	-	11.8	9.3
HCM Lane LOS	A	A	A	A	-	A	-	B	A
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	0.1	0

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	70	111	48	10	21	59
Future Vol, veh/h	70	111	48	10	21	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	96	152	66	14	29	81

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	80	0	-	0	417	73
Stage 1	-	-	-	-	73	-
Stage 2	-	-	-	-	344	-
Critical Hdwy	4.41	-	-	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	2.479	-	-	-	3.779	3.579
Pot Cap-1 Maneuver	1353	-	-	-	541	914
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	658	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1353	-	-	-	503	914
Mov Cap-2 Maneuver	-	-	-	-	503	-
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	658	-

Approach	EB	WB	SB
HCM Control Delay, s	3	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1353	-	-	-	753
HCM Lane V/C Ratio	0.071	-	-	-	0.146
HCM Control Delay (s)	7.9	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	63	7	2	81	6	1
Future Vol, veh/h	63	7	2	81	6	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	91	10	3	117	9	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	101	0	219	96
Stage 1	-	-	-	-	96	-
Stage 2	-	-	-	-	123	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1328	-	709	887
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	835	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1328	-	708	887
Mov Cap-2 Maneuver	-	-	-	-	708	-
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	833	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	729	-	-	1328	-
HCM Lane V/C Ratio	0.014	-	-	0.002	-
HCM Control Delay (s)	10	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	63	1	2	78	3	1
Future Vol, veh/h	63	1	2	78	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	86	1	3	107	4	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	87	0	200	87
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	113	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1345	-	727	897
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	844	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1345	-	726	897
Mov Cap-2 Maneuver	-	-	-	-	726	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	842	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	762	-	-	1345	-
HCM Lane V/C Ratio	0.007	-	-	0.002	-
HCM Control Delay (s)	9.8	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	55	8	2	76	5	1
Future Vol, veh/h	55	8	2	76	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	76	11	3	106	7	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	87	0	194	82
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	112	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1345	-	733	903
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	845	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1345	-	732	903
Mov Cap-2 Maneuver	-	-	-	-	732	-
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	843	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	756	-	-	1345	-
HCM Lane V/C Ratio	0.011	-	-	0.002	-
HCM Control Delay (s)	9.8	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	56	0	0	78	0	0	0	0	0	0	0
Future Vol, veh/h	0	56	0	0	78	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	0	61	0	0	85	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	85	0	0	61	0	0	146	146	61	146	146	85
Stage 1	-	-	-	-	-	-	61	61	-	85	85	-
Stage 2	-	-	-	-	-	-	85	85	-	61	61	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1347	-	-	1376	-	-	761	695	928	761	695	900
Stage 1	-	-	-	-	-	-	882	790	-	856	771	-
Stage 2	-	-	-	-	-	-	856	771	-	882	790	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1347	-	-	1376	-	-	761	695	928	761	695	900
Mov Cap-2 Maneuver	-	-	-	-	-	-	761	695	-	761	695	-
Stage 1	-	-	-	-	-	-	882	790	-	856	771	-
Stage 2	-	-	-	-	-	-	856	771	-	882	790	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	1347	-	-	1376	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	0	-	-	0	-	-	0	0
HCM Lane LOS	A	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	6	2	77	1	0
Future Vol, veh/h	49	6	2	77	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	72	9	3	113	1	0

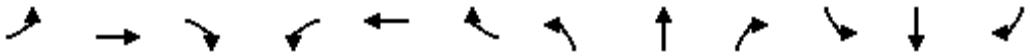
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	81	0	196	77
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	119	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1352	-	731	909
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	839	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1352	-	730	909
Mov Cap-2 Maneuver	-	-	-	-	730	-
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	837	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	730	-	-	1352	-
HCM Lane V/C Ratio	0.002	-	-	0.002	-
HCM Control Delay (s)	9.9	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Old Hwy 111/N. Best Ave & SR 78

05/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	76	22	16	90	18	21	29	15	26	28	22
Future Volume (veh/h)	22	76	22	16	90	18	21	29	15	26	28	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	23	79	23	17	94	19	22	30	16	27	29	23
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	40	220	221	30	169	34	38	152	81	46	132	105
Arrive On Green	0.03	0.15	0.15	0.02	0.15	0.15	0.03	0.17	0.17	0.03	0.18	0.18
Sat Flow, veh/h	1372	1441	1221	1372	1163	235	1372	884	472	1372	744	590
Grp Volume(v), veh/h	23	79	23	17	0	113	22	0	46	27	0	52
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	0	1398	1372	0	1356	1372	0	1334
Q Serve(g_s), s	0.5	1.4	0.5	0.4	0.0	2.2	0.5	0.0	0.8	0.6	0.0	1.0
Cycle Q Clear(g_c), s	0.5	1.4	0.5	0.4	0.0	2.2	0.5	0.0	0.8	0.6	0.0	1.0
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.35	1.00		0.44
Lane Grp Cap(c), veh/h	40	220	221	30	0	204	38	0	233	46	0	237
V/C Ratio(X)	0.58	0.36	0.10	0.56	0.00	0.55	0.57	0.00	0.20	0.58	0.00	0.22
Avail Cap(c_a), veh/h	897	2181	1883	897	0	2117	897	0	2333	897	0	2296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	11.0	9.9	14.1	0.0	11.5	14.0	0.0	10.3	13.8	0.0	10.2
Incr Delay (d2), s/veh	12.4	1.0	0.2	15.3	0.0	2.4	12.7	0.0	0.4	11.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.1	0.2	0.0	0.5	0.2	0.0	0.2	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	12.0	10.1	29.3	0.0	13.9	26.7	0.0	10.7	25.0	0.0	10.7
LnGrp LOS	C	B	B	C	A	B	C	A	B	C	A	B
Approach Vol, veh/h		125			130			68			79	
Approach Delay, s/veh		14.3			15.9			15.9			15.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	9.5	5.1	8.9	5.3	9.7	5.3	8.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.0	50.0	19.0	44.0	19.0	50.0	19.0	44.0
Max Q Clear Time (g_c+I1), s	2.6	2.8	2.4	3.4	2.5	3.0	2.5	4.2
Green Ext Time (p_c), s	0.0	0.2	0.0	0.5	0.0	0.3	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	28	77	26	64	22	61	223	8	29	221	21
Future Volume (veh/h)	24	28	77	26	64	22	61	223	8	29	221	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	26	31	85	29	70	24	67	245	9	32	243	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	106	399	338	106	399	338	205	800	357	106	800	357
Arrive On Green	0.08	0.28	0.28	0.08	0.28	0.28	0.08	0.29	0.29	0.08	0.29	0.29
Sat Flow, veh/h	1372	1441	1221	1372	1441	1221	2662	2737	1221	1372	2737	1221
Grp Volume(v), veh/h	26	31	85	29	70	24	67	245	9	32	243	23
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	1441	1221	1331	1369	1221	1372	1369	1221
Q Serve(g_s), s	1.2	1.0	3.5	1.3	2.4	0.9	1.5	4.5	0.3	1.4	4.5	0.9
Cycle Q Clear(g_c), s	1.2	1.0	3.5	1.3	2.4	0.9	1.5	4.5	0.3	1.4	4.5	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
V/C Ratio(X)	0.25	0.08	0.25	0.27	0.18	0.07	0.33	0.31	0.03	0.30	0.30	0.06
Avail Cap(c_a), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	17.4	18.3	28.3	17.9	17.3	28.4	17.9	16.4	28.4	17.9	16.6
Incr Delay (d2), s/veh	5.5	0.4	1.8	6.3	1.0	0.4	4.2	0.2	0.0	7.3	1.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.3	1.0	0.6	0.8	0.3	0.6	1.4	0.1	0.7	1.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	17.7	20.0	34.6	18.8	17.7	32.6	18.1	16.4	35.6	18.8	16.9
LnGrp LOS	C	B	C	C	B	B	C	B	B	D	B	B
Approach Vol, veh/h		142			123			321			298	
Approach Delay, s/veh		22.0			22.3			21.1			20.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	23.5	9.5	22.5	9.5	23.5	9.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	3.4	6.5	3.3	5.5	3.5	6.5	3.2	4.4
Green Ext Time (p_c), s	0.0	1.2	0.0	0.3	0.0	1.3	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	52	0	0	90	5	0	0	0	13	0	8
Future Vol, veh/h	2	52	0	0	90	5	0	0	0	13	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	2	58	0	0	100	6	0	0	0	14	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	100	0	0	58	0	0	167	162	58	162	162	100
Stage 1	-	-	-	-	-	-	62	62	-	100	100	-
Stage 2	-	-	-	-	-	-	105	100	-	62	62	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1330	-	-	1380	-	0	736	681	932	742	681	882
Stage 1	-	-	-	-	-	0	881	790	-	840	759	-
Stage 2	-	-	-	-	-	0	835	759	-	881	790	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1330	-	-	1380	-	-	727	680	932	741	680	882
Mov Cap-2 Maneuver	-	-	-	-	-	-	727	680	-	741	680	-
Stage 1	-	-	-	-	-	-	879	788	-	838	759	-
Stage 2	-	-	-	-	-	-	827	759	-	879	788	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	0	9.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1330	-	-	1380	-	741	882
HCM Lane V/C Ratio	-	-	0.002	-	-	-	-	0.019	0.01
HCM Control Delay (s)	0	0	7.7	0	-	0	-	10	9.1
HCM Lane LOS	A	A	A	A	-	A	-	B	A
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	0.1	0

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	39	25	24	1	12	69
Future Vol, veh/h	39	25	24	1	12	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	42	27	26	1	13	75

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	27	0	-	0	138	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	111	-
Critical Hdwy	4.41	-	-	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	2.479	-	-	-	3.779	3.579
Pot Cap-1 Maneuver	1418	-	-	-	791	971
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	846	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1418	-	-	-	767	971
Mov Cap-2 Maneuver	-	-	-	-	767	-
Stage 1	-	-	-	-	898	-
Stage 2	-	-	-	-	846	-

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1418	-	-	-	934
HCM Lane V/C Ratio	0.03	-	-	-	0.094
HCM Control Delay (s)	7.6	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	31	5	17	62	15	33
Future Vol, veh/h	31	5	17	62	15	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	39	6	21	78	19	41

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	45	0	162	42
Stage 1	-	-	-	-	42	-
Stage 2	-	-	-	-	120	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1396	-	766	952
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	838	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1396	-	755	952
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	825	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	880	-	-	1396	-
HCM Lane V/C Ratio	0.068	-	-	0.015	-
HCM Control Delay (s)	9.4	-	-	7.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	61	1	4	78	6	5
Future Vol, veh/h	61	1	4	78	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	66	1	4	85	7	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	67	0	160	67
Stage 1	-	-	-	-	67	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1369	-	768	921
Stage 1	-	-	-	-	887	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1369	-	766	921
Mov Cap-2 Maneuver	-	-	-	-	766	-
Stage 1	-	-	-	-	887	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	829	-	-	1369	-
HCM Lane V/C Ratio	0.014	-	-	0.003	-
HCM Control Delay (s)	9.4	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	64	8	1	72	11	3
Future Vol, veh/h	64	8	1	72	11	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	77	10	1	87	13	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	87	0	171	82
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	89	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1345	-	757	903
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	866	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1345	-	756	903
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	865	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	783	-	-	1345	-
HCM Lane V/C Ratio	0.022	-	-	0.001	-
HCM Control Delay (s)	9.7	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	67	0	0	61	0	0	0	0	0	0	0
Future Vol, veh/h	0	67	0	0	61	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	0	73	0	0	66	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	66	0	0	73	0	0	139	139	73	139	139	66
Stage 1	-	-	-	-	-	-	73	73	-	66	66	-
Stage 2	-	-	-	-	-	-	66	66	-	73	73	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1370	-	-	1362	-	-	769	702	914	769	702	922
Stage 1	-	-	-	-	-	-	869	781	-	877	786	-
Stage 2	-	-	-	-	-	-	877	786	-	869	781	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1370	-	-	1362	-	-	769	702	914	769	702	922
Mov Cap-2 Maneuver	-	-	-	-	-	-	769	702	-	769	702	-
Stage 1	-	-	-	-	-	-	869	781	-	877	786	-
Stage 2	-	-	-	-	-	-	877	786	-	869	781	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	1370	-	-	1362	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	0	-	-	0	-	-	0	0
HCM Lane LOS	A	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	41	11	3	51	10	7
Future Vol, veh/h	41	11	3	51	10	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	53	14	4	66	13	9

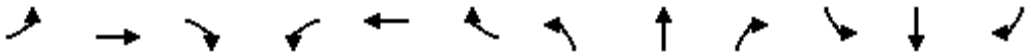
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	67	0	134	60
Stage 1	-	-	-	-	60	-
Stage 2	-	-	-	-	74	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1369	-	796	930
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1369	-	794	930
Mov Cap-2 Maneuver	-	-	-	-	794	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	877	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	845	-	-	1369	-
HCM Lane V/C Ratio	0.026	-	-	0.003	-
HCM Control Delay (s)	9.4	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

APPENDIX D

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – EXISTING + PROJECT



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	169	51	13	132	31	41	51	25	45	62	42
Future Volume (veh/h)	35	169	51	13	132	31	41	51	25	45	62	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	36	174	53	13	136	32	42	53	26	46	64	43
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	59	319	329	23	221	52	67	141	69	72	127	85
Arrive On Green	0.04	0.22	0.22	0.02	0.20	0.20	0.05	0.15	0.15	0.05	0.16	0.16
Sat Flow, veh/h	1372	1441	1221	1372	1128	265	1372	912	448	1372	804	540
Grp Volume(v), veh/h	36	174	53	13	0	168	42	0	79	46	0	107
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	0	1393	1372	0	1360	1372	0	1343
Q Serve(g_s), s	0.8	3.5	1.1	0.3	0.0	3.6	1.0	0.0	1.7	1.1	0.0	2.4
Cycle Q Clear(g_c), s	0.8	3.5	1.1	0.3	0.0	3.6	1.0	0.0	1.7	1.1	0.0	2.4
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.33	1.00		0.40
Lane Grp Cap(c), veh/h	59	319	329	23	0	272	67	0	210	72	0	212
V/C Ratio(X)	0.61	0.55	0.16	0.56	0.00	0.62	0.63	0.00	0.38	0.64	0.00	0.50
Avail Cap(c_a), veh/h	804	1955	1716	804	0	1890	804	0	2097	804	0	2072
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.3	11.2	9.0	15.8	0.0	11.9	15.1	0.0	12.3	15.1	0.0	12.5
Incr Delay (d2), s/veh	10.0	1.5	0.2	19.0	0.0	2.3	9.4	0.0	1.1	9.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	0.2	0.2	0.0	0.9	0.4	0.0	0.4	0.4	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	12.6	9.3	34.8	0.0	14.2	24.6	0.0	13.4	24.2	0.0	14.3
LnGrp LOS	C	B	A	C	A	B	C	A	B	C	A	B
Approach Vol, veh/h		263			181			121			153	
Approach Delay, s/veh		13.7			15.7			17.3			17.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	9.5	5.1	11.7	6.1	9.6	5.9	10.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.0	50.0	19.0	44.0	19.0	50.0	19.0	44.0
Max Q Clear Time (g_c+I1), s	3.1	3.7	2.3	5.5	3.0	4.4	2.8	5.6
Green Ext Time (p_c), s	0.1	0.5	0.0	1.1	0.1	0.6	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	85	142	32	98	46	70	289	29	96	487	32
Future Volume (veh/h)	32	85	142	32	98	46	70	289	29	96	487	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	33	88	146	33	101	47	72	298	30	99	502	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	106	399	338	106	399	338	205	800	357	106	800	357
Arrive On Green	0.08	0.28	0.28	0.08	0.28	0.28	0.08	0.29	0.29	0.08	0.29	0.29
Sat Flow, veh/h	1372	1441	1221	1372	1441	1221	2662	2737	1221	1372	2737	1221
Grp Volume(v), veh/h	33	88	146	33	101	47	72	298	30	99	502	33
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	1441	1221	1331	1369	1221	1372	1369	1221
Q Serve(g_s), s	1.5	3.1	6.4	1.5	3.5	1.9	1.7	5.6	1.2	4.7	10.3	1.3
Cycle Q Clear(g_c), s	1.5	3.1	6.4	1.5	3.5	1.9	1.7	5.6	1.2	4.7	10.3	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
V/C Ratio(X)	0.31	0.22	0.43	0.31	0.25	0.14	0.35	0.37	0.08	0.94	0.63	0.09
Avail Cap(c_a), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	18.1	19.3	28.4	18.3	17.7	28.5	18.3	16.7	29.8	19.9	16.7
Incr Delay (d2), s/veh	7.6	1.3	4.0	7.6	1.5	0.9	4.7	0.3	0.1	72.1	3.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.0	1.9	0.6	1.2	0.5	0.6	1.7	0.3	3.6	3.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	19.4	23.3	35.9	19.8	18.5	33.2	18.6	16.8	101.9	23.6	17.2
LnGrp LOS	D	B	C	D	B	B	C	B	B	F	C	B
Approach Vol, veh/h		267			181			400			634	
Approach Delay, s/veh		23.6			22.4			21.0			35.5	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	23.5	9.5	22.5	9.5	23.5	9.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	10.7	7.6	3.5	8.4	3.7	12.3	3.5	5.5
Green Ext Time (p_c), s	0.0	1.5	0.0	0.6	0.0	1.9	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	194	0	0	131	9	0	0	0	23	0	6
Future Vol, veh/h	6	194	0	0	131	9	0	0	0	23	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	8	246	0	0	166	11	0	0	0	29	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	166	0	0	246	0	0	432	428	246	428	428	166
Stage 1	-	-	-	-	-	-	262	262	-	166	166	-
Stage 2	-	-	-	-	-	-	170	166	-	262	262	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1254	-	-	1168	-	0	487	478	727	490	478	808
Stage 1	-	-	-	-	-	0	683	641	-	772	709	-
Stage 2	-	-	-	-	-	0	768	709	-	683	641	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1254	-	-	1168	-	-	480	475	727	488	475	808
Mov Cap-2 Maneuver	-	-	-	-	-	-	480	475	-	488	475	-
Stage 1	-	-	-	-	-	-	678	637	-	767	709	-
Stage 2	-	-	-	-	-	-	761	709	-	678	637	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	12.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1254	-	-	1168	-	488	808
HCM Lane V/C Ratio	-	-	0.006	-	-	-	-	0.06	0.009
HCM Control Delay (s)	0	0	7.9	0	-	0	-	12.8	9.5
HCM Lane LOS	A	A	A	A	-	A	-	B	A
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	0.2	0

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	109	111	48	15	25	92
Future Vol, veh/h	109	111	48	15	25	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	149	152	66	21	34	126

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	87	0	-	0	527	77
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	450	-
Critical Hdwy	4.41	-	-	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	2.479	-	-	-	3.779	3.579
Pot Cap-1 Maneuver	1345	-	-	-	464	909
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1345	-	-	-	412	909
Mov Cap-2 Maneuver	-	-	-	-	412	-
Stage 1	-	-	-	-	781	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	SB
HCM Control Delay, s	4	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1345	-	-	-	723
HCM Lane V/C Ratio	0.111	-	-	-	0.222
HCM Control Delay (s)	8	-	-	-	11.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	103	11	3	115	9	2
Future Vol, veh/h	103	11	3	115	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	149	16	4	167	13	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	165	0	332	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1255	-	608	818
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	790	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1255	-	606	818
Mov Cap-2 Maneuver	-	-	-	-	606	-
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	788	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	636	-	-	1255	-
HCM Lane V/C Ratio	0.025	-	-	0.003	-
HCM Control Delay (s)	10.8	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	100	5	2	109	7	1
Future Vol, veh/h	100	5	2	109	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	137	7	3	149	10	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	144	0	296	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	155	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1279	-	638	835
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	807	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1279	-	636	835
Mov Cap-2 Maneuver	-	-	-	-	636	-
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	805	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	656	-	-	1279	-
HCM Lane V/C Ratio	0.017	-	-	0.002	-
HCM Control Delay (s)	10.6	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	88	12	3	104	8	2
Future Vol, veh/h	88	12	3	104	8	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	122	17	4	144	11	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	139	0	283	131
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	152	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1284	-	650	847
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1284	-	648	847
Mov Cap-2 Maneuver	-	-	-	-	648	-
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	808	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	680	-	-	1284	-
HCM Lane V/C Ratio	0.02	-	-	0.003	-
HCM Control Delay (s)	10.4	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	62	21	4	83	0	18	0	1	0	0	6
Future Vol, veh/h	7	62	21	4	83	0	18	0	1	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	8	67	23	4	90	0	20	0	1	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	90	0	0	90	0	0	185	181	67	193	204	90
Stage 1	-	-	-	-	-	-	83	83	-	98	98	-
Stage 2	-	-	-	-	-	-	102	98	-	95	106	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1341	-	-	1341	-	-	716	664	921	707	644	894
Stage 1	-	-	-	-	-	-	858	773	-	842	761	-
Stage 2	-	-	-	-	-	-	838	761	-	845	755	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1341	-	-	1341	-	-	706	658	921	701	638	894
Mov Cap-2 Maneuver	-	-	-	-	-	-	706	658	-	701	638	-
Stage 1	-	-	-	-	-	-	853	768	-	837	759	-
Stage 2	-	-	-	-	-	-	829	759	-	839	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.4	10.1	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	706	921	1341	-	-	1341	-	-	-	894
HCM Lane V/C Ratio	0.028	0.001	0.006	-	-	0.003	-	-	-	0.007
HCM Control Delay (s)	10.2	8.9	7.7	-	-	7.7	-	-	0	9.1
HCM Lane LOS	B	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	52	10	3	81	4	1
Future Vol, veh/h	52	10	3	81	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	76	15	4	119	6	1

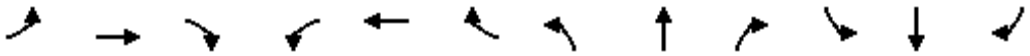
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	91	0	211	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	127	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1340	-	717	901
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1340	-	715	901
Mov Cap-2 Maneuver	-	-	-	-	715	-
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	830	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	746	-	-	1340	-
HCM Lane V/C Ratio	0.01	-	-	0.003	-
HCM Control Delay (s)	9.9	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Old Hwy 111/N. Best Ave & SR 78

05/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	96	22	16	108	18	21	29	15	26	28	22
Future Volume (veh/h)	22	96	22	16	108	18	21	29	15	26	28	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	23	100	23	17	112	19	22	30	16	27	29	23
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	40	239	236	30	190	32	38	150	80	46	130	103
Arrive On Green	0.03	0.17	0.17	0.02	0.16	0.16	0.03	0.17	0.17	0.03	0.17	0.17
Sat Flow, veh/h	1372	1441	1221	1372	1200	204	1372	884	472	1372	744	590
Grp Volume(v), veh/h	23	100	23	17	0	131	22	0	46	27	0	52
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	0	1404	1372	0	1356	1372	0	1334
Q Serve(g_s), s	0.5	1.8	0.5	0.4	0.0	2.6	0.5	0.0	0.9	0.6	0.0	1.0
Cycle Q Clear(g_c), s	0.5	1.8	0.5	0.4	0.0	2.6	0.5	0.0	0.9	0.6	0.0	1.0
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.35	1.00		0.44
Lane Grp Cap(c), veh/h	40	239	236	30	0	223	38	0	229	46	0	233
V/C Ratio(X)	0.58	0.42	0.10	0.56	0.00	0.59	0.57	0.00	0.20	0.59	0.00	0.22
Avail Cap(c_a), veh/h	882	2146	1853	882	0	2091	882	0	2295	882	0	2258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	11.0	9.8	14.3	0.0	11.5	14.2	0.0	10.6	14.1	0.0	10.5
Incr Delay (d2), s/veh	12.4	1.2	0.2	15.3	0.0	2.5	12.8	0.0	0.4	11.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.1	0.2	0.0	0.6	0.2	0.0	0.2	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	12.2	10.0	29.6	0.0	14.0	27.0	0.0	11.0	25.3	0.0	10.9
LnGrp LOS	C	B	A	C	A	B	C	A	B	C	A	B
Approach Vol, veh/h		146			148			68			79	
Approach Delay, s/veh		14.1			15.8			16.2			15.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	9.5	5.2	9.4	5.3	9.7	5.4	9.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.0	50.0	19.0	44.0	19.0	50.0	19.0	44.0
Max Q Clear Time (g_c+I1), s	2.6	2.9	2.4	3.8	2.5	3.0	2.5	4.6
Green Ext Time (p_c), s	0.0	0.2	0.0	0.6	0.0	0.3	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	48	77	34	82	32	61	223	16	40	221	21
Future Volume (veh/h)	24	48	77	34	82	32	61	223	16	40	221	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	26	53	85	37	90	35	67	245	18	44	243	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	106	399	338	106	399	338	205	800	357	106	800	357
Arrive On Green	0.08	0.28	0.28	0.08	0.28	0.28	0.08	0.29	0.29	0.08	0.29	0.29
Sat Flow, veh/h	1372	1441	1221	1372	1441	1221	2662	2737	1221	1372	2737	1221
Grp Volume(v), veh/h	26	53	85	37	90	35	67	245	18	44	243	23
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	1441	1221	1331	1369	1221	1372	1369	1221
Q Serve(g_s), s	1.2	1.8	3.5	1.7	3.1	1.4	1.5	4.5	0.7	2.0	4.5	0.9
Cycle Q Clear(g_c), s	1.2	1.8	3.5	1.7	3.1	1.4	1.5	4.5	0.7	2.0	4.5	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
V/C Ratio(X)	0.25	0.13	0.25	0.35	0.23	0.10	0.33	0.31	0.05	0.42	0.30	0.06
Avail Cap(c_a), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	17.6	18.3	28.5	18.1	17.5	28.4	17.9	16.5	28.6	17.9	16.6
Incr Delay (d2), s/veh	5.5	0.7	1.8	8.9	1.3	0.6	4.2	0.2	0.1	11.7	1.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	1.0	0.7	1.0	0.4	0.6	1.4	0.2	1.0	1.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	18.3	20.0	37.4	19.4	18.1	32.6	18.1	16.6	40.3	18.8	16.9
LnGrp LOS	C	B	C	D	B	B	C	B	B	D	B	B
Approach Vol, veh/h		164			162			330			310	
Approach Delay, s/veh		21.7			23.2			21.0			21.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	23.5	9.5	22.5	9.5	23.5	9.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	4.0	6.5	3.7	5.5	3.5	6.5	3.2	5.1
Green Ext Time (p_c), s	0.0	1.2	0.0	0.3	0.0	1.3	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	91	0	0	125	10	0	0	0	19	0	8
Future Vol, veh/h	2	91	0	0	125	10	0	0	0	19	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	2	101	0	0	139	11	0	0	0	21	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	139	0	0	101	0	0	249	244	101	244	244	139
Stage 1	-	-	-	-	-	-	105	105	-	139	139	-
Stage 2	-	-	-	-	-	-	144	139	-	105	105	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1284	-	-	1328	-	0	648	611	881	653	611	838
Stage 1	-	-	-	-	-	0	835	755	-	799	729	-
Stage 2	-	-	-	-	-	0	794	729	-	835	755	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1284	-	-	1328	-	-	640	610	881	652	610	838
Mov Cap-2 Maneuver	-	-	-	-	-	-	640	610	-	652	610	-
Stage 1	-	-	-	-	-	-	833	753	-	797	729	-
Stage 2	-	-	-	-	-	-	786	729	-	833	753	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1284	-	-	1328	-	652	838
HCM Lane V/C Ratio	-	-	0.002	-	-	-	-	0.032	0.011
HCM Control Delay (s)	0	0	7.8	0	-	0	-	10.7	9.3
HCM Lane LOS	A	A	A	A	-	A	-	B	A
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	0.1	0

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	84	25	24	7	17	109
Future Vol, veh/h	84	25	24	7	17	109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	91	27	26	8	18	118

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	34	0	-	0	239	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	209	-
Critical Hdwy	4.41	-	-	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	2.479	-	-	-	3.779	3.579
Pot Cap-1 Maneuver	1409	-	-	-	690	967
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	762	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1409	-	-	-	645	967
Mov Cap-2 Maneuver	-	-	-	-	645	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	762	-

Approach	EB	WB	SB
HCM Control Delay, s	6	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1409	-	-	-	906
HCM Lane V/C Ratio	0.065	-	-	-	0.151
HCM Control Delay (s)	7.7	-	-	-	9.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	9	18	103	19	34
Future Vol, veh/h	77	9	18	103	19	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	96	11	23	129	24	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	107	0	277	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1321	-	655	880
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	790	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1321	-	644	880
Mov Cap-2 Maneuver	-	-	-	-	644	-
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	777	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	778	-	-	1321	-
HCM Lane V/C Ratio	0.085	-	-	0.017	-
HCM Control Delay (s)	10.1	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	103	6	5	115	11	6
Future Vol, veh/h	103	6	5	115	11	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	112	7	5	125	12	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	119	0	251	116
Stage 1	-	-	-	-	116	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1307	-	679	863
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	825	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1307	-	676	863
Mov Cap-2 Maneuver	-	-	-	-	676	-
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	822	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	732	-	-	1307	-
HCM Lane V/C Ratio	0.025	-	-	0.004	-
HCM Control Delay (s)	10	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	102	12	2	106	15	4
Future Vol, veh/h	102	12	2	106	15	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	123	14	2	128	18	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	137	0	262	130
Stage 1	-	-	-	-	130	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1287	-	669	848
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	827	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1287	-	668	848
Mov Cap-2 Maneuver	-	-	-	-	668	-
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	825	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	699	-	-	1287	-
HCM Lane V/C Ratio	0.033	-	-	0.002	-
HCM Control Delay (s)	10.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	74	24	1	67	1	22	0	1	1	0	7
Future Vol, veh/h	8	74	24	1	67	1	22	0	1	1	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	9	80	26	1	73	1	24	0	1	1	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	74	0	0	106	0	0	178	174	80	187	199	73
Stage 1	-	-	-	-	-	-	98	98	-	75	75	-
Stage 2	-	-	-	-	-	-	80	76	-	112	124	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1360	-	-	1322	-	-	724	670	905	714	648	914
Stage 1	-	-	-	-	-	-	842	761	-	867	779	-
Stage 2	-	-	-	-	-	-	861	778	-	827	741	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1360	-	-	1322	-	-	714	665	905	709	643	914
Mov Cap-2 Maneuver	-	-	-	-	-	-	714	665	-	709	643	-
Stage 1	-	-	-	-	-	-	836	756	-	861	778	-
Stage 2	-	-	-	-	-	-	853	777	-	821	736	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	10.1	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	714	905	1360	-	-	1322	-	-	709	914
HCM Lane V/C Ratio	0.033	0.001	0.006	-	-	0.001	-	-	0.002	0.008
HCM Control Delay (s)	10.2	9	7.7	-	-	7.7	-	-	10.1	9
HCM Lane LOS	B	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0	0

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	46	15	4	55	14	8
Future Vol, veh/h	46	15	4	55	14	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	60	19	5	71	18	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	79	0	151	70
Stage 1	-	-	-	-	70	-
Stage 2	-	-	-	-	81	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1354	-	777	917
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	874	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1354	-	774	917
Mov Cap-2 Maneuver	-	-	-	-	774	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.5
HCM LOS			A

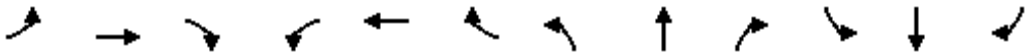
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	821	-	-	1354	-
HCM Lane V/C Ratio	0.035	-	-	0.004	-
HCM Control Delay (s)	9.5	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

APPENDIX E

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – EXISTING + PROJECT + CUMULATIVE PROJECTS

HCM 6th Signalized Intersection Summary
1: Old Hwy 111/N. Best Ave & SR 78

05/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	187	57	15	146	35	46	57	28	50	69	47
Future Volume (veh/h)	39	187	57	15	146	35	46	57	28	50	69	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	40	193	59	15	151	36	47	59	29	52	71	48
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	63	340	353	27	235	56	72	144	71	78	130	88
Arrive On Green	0.05	0.24	0.24	0.02	0.21	0.21	0.05	0.16	0.16	0.06	0.16	0.16
Sat Flow, veh/h	1372	1441	1221	1372	1124	268	1372	912	448	1372	801	542
Grp Volume(v), veh/h	40	193	59	15	0	187	47	0	88	52	0	119
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	0	1392	1372	0	1360	1372	0	1343
Q Serve(g_s), s	1.0	4.0	1.2	0.4	0.0	4.2	1.1	0.0	2.0	1.3	0.0	2.8
Cycle Q Clear(g_c), s	1.0	4.0	1.2	0.4	0.0	4.2	1.1	0.0	2.0	1.3	0.0	2.8
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.33	1.00		0.40
Lane Grp Cap(c), veh/h	63	340	353	27	0	292	72	0	214	78	0	217
V/C Ratio(X)	0.63	0.57	0.17	0.56	0.00	0.64	0.65	0.00	0.41	0.66	0.00	0.55
Avail Cap(c_a), veh/h	767	1866	1645	767	0	1803	767	0	2001	767	0	1976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.9	11.4	9.0	16.5	0.0	12.3	15.8	0.0	12.9	15.7	0.0	13.1
Incr Delay (d2), s/veh	9.9	1.5	0.2	17.3	0.0	2.4	9.4	0.0	1.3	9.3	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	0.2	0.2	0.0	1.0	0.5	0.0	0.5	0.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	12.9	9.2	33.8	0.0	14.6	25.2	0.0	14.2	25.0	0.0	15.2
LnGrp LOS	C	B	A	C	A	B	C	A	B	C	A	B
Approach Vol, veh/h		292			202			135			171	
Approach Delay, s/veh		13.9			16.0			18.0			18.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	9.9	5.2	12.5	6.3	10.0	6.1	11.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.0	50.0	19.0	44.0	19.0	50.0	19.0	44.0
Max Q Clear Time (g_c+I1), s	3.3	4.0	2.4	6.0	3.1	4.8	3.0	6.2
Green Ext Time (p_c), s	0.1	0.5	0.0	1.3	0.1	0.7	0.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	93	159	35	108	51	78	324	32	106	545	36
Future Volume (veh/h)	36	93	159	35	108	51	78	324	32	106	545	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	37	96	164	36	111	53	80	334	33	109	562	37
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	106	399	338	106	399	338	205	800	357	106	800	357
Arrive On Green	0.08	0.28	0.28	0.08	0.28	0.28	0.08	0.29	0.29	0.08	0.29	0.29
Sat Flow, veh/h	1372	1441	1221	1372	1441	1221	2662	2737	1221	1372	2737	1221
Grp Volume(v), veh/h	37	96	164	36	111	53	80	334	33	109	562	37
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	1441	1221	1331	1369	1221	1372	1369	1221
Q Serve(g_s), s	1.7	3.4	7.3	1.6	3.9	2.1	1.9	6.4	1.3	5.0	11.9	1.4
Cycle Q Clear(g_c), s	1.7	3.4	7.3	1.6	3.9	2.1	1.9	6.4	1.3	5.0	11.9	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
V/C Ratio(X)	0.35	0.24	0.49	0.34	0.28	0.16	0.39	0.42	0.09	1.03	0.70	0.10
Avail Cap(c_a), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	18.2	19.6	28.4	18.4	17.8	28.6	18.5	16.7	30.0	20.5	16.8
Incr Delay (d2), s/veh	8.9	1.4	4.9	8.6	1.7	1.0	5.5	0.3	0.1	96.7	5.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.1	2.2	0.7	1.3	0.6	0.7	1.9	0.3	4.4	4.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	19.6	24.5	37.0	20.1	18.8	34.1	18.9	16.8	126.7	25.6	17.4
LnGrp LOS	D	B	C	D	C	B	C	B	B	F	C	B
Approach Vol, veh/h		297			200			447			708	
Approach Delay, s/veh		24.6			22.8			21.5			40.7	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	23.5	9.5	22.5	9.5	23.5	9.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	7.0	8.4	3.6	9.3	3.9	13.9	3.7	5.9
Green Ext Time (p_c), s	0.0	1.7	0.0	0.6	0.0	1.8	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	213	0	0	143	10	0	0	0	25	0	7
Future Vol, veh/h	7	213	0	0	143	10	0	0	0	25	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	9	270	0	0	181	13	0	0	0	32	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	181	0	0	270	0	0	474	469	270	469	469	181
Stage 1	-	-	-	-	-	-	288	288	-	181	181	-
Stage 2	-	-	-	-	-	-	186	181	-	288	288	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1237	-	-	1143	-	0	456	452	704	459	452	792
Stage 1	-	-	-	-	-	0	661	624	-	758	698	-
Stage 2	-	-	-	-	-	0	753	698	-	661	624	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1237	-	-	1143	-	-	448	448	704	456	448	792
Mov Cap-2 Maneuver	-	-	-	-	-	-	448	448	-	456	448	-
Stage 1	-	-	-	-	-	-	655	618	-	751	698	-
Stage 2	-	-	-	-	-	-	745	698	-	655	618	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	0	12.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1237	-	-	1143	-	456	792
HCM Lane V/C Ratio	-	-	0.007	-	-	-	-	0.069	0.011
HCM Control Delay (s)	0	0	7.9	0	-	0	-	13.5	9.6
HCM Lane LOS	A	A	A	A	-	A	-	B	A
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	0.2	0

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	117	124	54	16	28	99
Future Vol, veh/h	117	124	54	16	28	99
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	160	170	74	22	38	136

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	96	0	-	0	575	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	490	-
Critical Hdwy	4.41	-	-	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	2.479	-	-	-	3.779	3.579
Pot Cap-1 Maneuver	1334	-	-	-	434	900
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	560	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1334	-	-	-	382	900
Mov Cap-2 Maneuver	-	-	-	-	382	-
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	SB
HCM Control Delay, s	3.9	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1334	-	-	-	693
HCM Lane V/C Ratio	0.12	-	-	-	0.251
HCM Control Delay (s)	8.1	-	-	-	11.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	111	12	3	125	10	2
Future Vol, veh/h	111	12	3	125	10	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	161	17	4	181	14	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	178	0	359	170
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	189	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1241	-	586	804
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	778	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1241	-	584	804
Mov Cap-2 Maneuver	-	-	-	-	584	-
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	776	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	612	-	-	1241	-
HCM Lane V/C Ratio	0.028	-	-	0.004	-
HCM Control Delay (s)	11.1	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	108	5	2	118	7	1
Future Vol, veh/h	108	5	2	118	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	148	7	3	162	10	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	155	0	320	152
Stage 1	-	-	-	-	152	-
Stage 2	-	-	-	-	168	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1266	-	618	823
Stage 1	-	-	-	-	810	-
Stage 2	-	-	-	-	796	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1266	-	616	823
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	810	-
Stage 2	-	-	-	-	794	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	636	-	-	1266	-
HCM Lane V/C Ratio	0.017	-	-	0.002	-
HCM Control Delay (s)	10.8	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	13	3	113	9	2
Future Vol, veh/h	95	13	3	113	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	132	18	4	157	13	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	150	0	306	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	165	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1272	-	630	835
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	799	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1272	-	628	835
Mov Cap-2 Maneuver	-	-	-	-	628	-
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	797	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	658	-	-	1272	-
HCM Lane V/C Ratio	0.023	-	-	0.003	-
HCM Control Delay (s)	10.6	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	69	21	4	92	0	18	0	1	0	0	6
Future Vol, veh/h	7	69	21	4	92	0	18	0	1	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	8	75	23	4	100	0	20	0	1	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	100	0	0	98	0	0	203	199	75	211	222	100
Stage 1	-	-	-	-	-	-	91	91	-	108	108	-
Stage 2	-	-	-	-	-	-	112	108	-	103	114	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1330	-	-	1332	-	-	696	648	911	688	629	882
Stage 1	-	-	-	-	-	-	849	766	-	831	753	-
Stage 2	-	-	-	-	-	-	827	753	-	837	748	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1330	-	-	1332	-	-	686	642	911	682	623	882
Mov Cap-2 Maneuver	-	-	-	-	-	-	686	642	-	682	623	-
Stage 1	-	-	-	-	-	-	844	761	-	826	751	-
Stage 2	-	-	-	-	-	-	818	751	-	831	744	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	10.3	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	686	911	1330	-	-	1332	-	-	-	882
HCM Lane V/C Ratio	0.029	0.001	0.006	-	-	0.003	-	-	-	0.007
HCM Control Delay (s)	10.4	9	7.7	-	-	7.7	-	-	0	9.1
HCM Lane LOS	B	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	58	11	3	90	4	1
Future Vol, veh/h	58	11	3	90	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	85	16	4	132	6	1

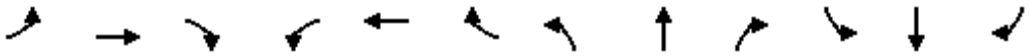
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	101	0	233	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1328	-	696	890
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	820	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1328	-	694	890
Mov Cap-2 Maneuver	-	-	-	-	694	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	818	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	726	-	-	1328	-
HCM Lane V/C Ratio	0.01	-	-	0.003	-
HCM Control Delay (s)	10	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Old Hwy 111/N. Best Ave & SR 78

05/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	105	25	18	119	20	24	32	17	29	31	25
Future Volume (veh/h)	25	105	25	18	119	20	24	32	17	29	31	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	26	109	26	19	124	21	25	33	18	30	32	26
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	44	259	258	33	207	35	43	145	79	51	125	102
Arrive On Green	0.03	0.18	0.18	0.02	0.17	0.17	0.03	0.16	0.16	0.04	0.17	0.17
Sat Flow, veh/h	1372	1441	1221	1372	1201	203	1372	876	478	1372	735	598
Grp Volume(v), veh/h	26	109	26	19	0	145	25	0	51	30	0	58
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	0	1404	1372	0	1355	1372	0	1333
Q Serve(g_s), s	0.6	2.0	0.5	0.4	0.0	2.9	0.5	0.0	1.0	0.7	0.0	1.1
Cycle Q Clear(g_c), s	0.6	2.0	0.5	0.4	0.0	2.9	0.5	0.0	1.0	0.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.35	1.00		0.45
Lane Grp Cap(c), veh/h	44	259	258	33	0	242	43	0	223	51	0	227
V/C Ratio(X)	0.58	0.42	0.10	0.57	0.00	0.60	0.58	0.00	0.23	0.59	0.00	0.26
Avail Cap(c_a), veh/h	860	2091	1810	860	0	2038	860	0	2234	860	0	2199
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.5	11.0	9.6	14.6	0.0	11.6	14.5	0.0	11.0	14.4	0.0	10.9
Incr Delay (d2), s/veh	11.6	1.1	0.2	14.2	0.0	2.4	11.9	0.0	0.5	10.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.5	0.1	0.2	0.0	0.7	0.3	0.0	0.2	0.3	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	12.1	9.8	28.9	0.0	14.0	26.3	0.0	11.5	25.0	0.0	11.5
LnGrp LOS	C	B	A	C	A	B	C	A	B	C	A	B
Approach Vol, veh/h		161			164			76			88	
Approach Delay, s/veh		14.0			15.7			16.4			16.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	9.5	5.2	10.0	5.4	9.7	5.5	9.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.0	50.0	19.0	44.0	19.0	50.0	19.0	44.0
Max Q Clear Time (g_c+I1), s	2.7	3.0	2.4	4.0	2.5	3.1	2.6	4.9
Green Ext Time (p_c), s	0.0	0.3	0.0	0.6	0.0	0.3	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	51	86	37	90	35	68	250	17	43	248	24
Future Volume (veh/h)	27	51	86	37	90	35	68	250	17	43	248	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
Adj Flow Rate, veh/h	30	56	95	41	99	38	75	275	19	47	273	26
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	31	31	31	31	31	31	31	31	31	31	31	31
Cap, veh/h	106	399	338	106	399	338	205	800	357	106	800	357
Arrive On Green	0.08	0.28	0.28	0.08	0.28	0.28	0.08	0.29	0.29	0.08	0.29	0.29
Sat Flow, veh/h	1372	1441	1221	1372	1441	1221	2662	2737	1221	1372	2737	1221
Grp Volume(v), veh/h	30	56	95	41	99	38	75	275	19	47	273	26
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1372	1441	1221	1331	1369	1221	1372	1369	1221
Q Serve(g_s), s	1.3	1.9	4.0	1.8	3.5	1.5	1.7	5.1	0.7	2.1	5.1	1.0
Cycle Q Clear(g_c), s	1.3	1.9	4.0	1.8	3.5	1.5	1.7	5.1	0.7	2.1	5.1	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
V/C Ratio(X)	0.28	0.14	0.28	0.39	0.25	0.11	0.37	0.34	0.05	0.45	0.34	0.07
Avail Cap(c_a), veh/h	106	399	338	106	399	338	205	800	357	106	800	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	17.7	18.4	28.5	18.2	17.5	28.5	18.1	16.5	28.7	18.1	16.6
Incr Delay (d2), s/veh	6.6	0.7	2.1	10.4	1.5	0.7	5.0	0.3	0.1	13.0	1.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	1.1	0.8	1.1	0.4	0.7	1.5	0.2	1.1	1.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	18.4	20.5	39.0	19.7	18.2	33.5	18.3	16.6	41.7	19.2	17.0
LnGrp LOS	C	B	C	D	B	B	C	B	B	D	B	B
Approach Vol, veh/h		181			178			369			346	
Approach Delay, s/veh		22.2			23.8			21.3			22.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	23.5	9.5	22.5	9.5	23.5	9.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	4.1	7.1	3.8	6.0	3.7	7.1	3.3	5.5
Green Ext Time (p_c), s	0.0	1.4	0.0	0.4	0.0	1.4	0.0	0.4

Intersection Summary		
HCM 6th Ctrl Delay		22.2
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	97	0	0	136	11	0	0	0	21	0	9
Future Vol, veh/h	2	97	0	0	136	11	0	0	0	21	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	2	108	0	0	151	12	0	0	0	23	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	151	0	0	108	0	0	268	263	108	263	263	151
Stage 1	-	-	-	-	-	-	112	112	-	151	151	-
Stage 2	-	-	-	-	-	-	156	151	-	112	112	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1271	-	-	1320	-	0	630	596	873	634	596	824
Stage 1	-	-	-	-	-	0	827	750	-	787	720	-
Stage 2	-	-	-	-	-	0	782	720	-	827	750	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1271	-	-	1320	-	-	621	595	873	633	595	824
Mov Cap-2 Maneuver	-	-	-	-	-	-	621	595	-	633	595	-
Stage 1	-	-	-	-	-	-	825	749	-	785	720	-
Stage 2	-	-	-	-	-	-	773	720	-	825	749	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	10.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1271	-	-	1320	-	633	824
HCM Lane V/C Ratio	-	-	0.002	-	-	-	-	0.037	0.012
HCM Control Delay (s)	0	0	7.8	0	-	0	-	10.9	9.4
HCM Lane LOS	A	A	A	A	-	A	-	B	A
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	0.1	0

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	89	28	27	7	18	117
Future Vol, veh/h	89	28	27	7	18	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	97	30	29	8	20	127

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	37	0	-	0	257	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	224	-
Critical Hdwy	4.41	-	-	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	2.479	-	-	-	3.779	3.579
Pot Cap-1 Maneuver	1406	-	-	-	673	963
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	749	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1406	-	-	-	627	963
Mov Cap-2 Maneuver	-	-	-	-	627	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	749	-

Approach	EB	WB	SB
HCM Control Delay, s	5.9	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1406	-	-	-	899
HCM Lane V/C Ratio	0.069	-	-	-	0.163
HCM Control Delay (s)	7.8	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	81	10	20	110	21	38
Future Vol, veh/h	81	10	20	110	21	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	101	13	25	138	26	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	114	0	296	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	188	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1313	-	638	873
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	779	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1313	-	626	873
Mov Cap-2 Maneuver	-	-	-	-	626	-
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	764	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	765	-	-	1313	-
HCM Lane V/C Ratio	0.096	-	-	0.019	-
HCM Control Delay (s)	10.2	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	110	6	5	124	12	7
Future Vol, veh/h	110	6	5	124	12	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	120	7	5	135	13	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	127	0	269	124
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	145	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1298	-	662	854
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	816	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1298	-	659	854
Mov Cap-2 Maneuver	-	-	-	-	659	-
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	813	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	720	-	-	1298	-
HCM Lane V/C Ratio	0.029	-	-	0.004	-
HCM Control Delay (s)	10.1	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	110	13	2	115	16	4
Future Vol, veh/h	110	13	2	115	16	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	133	16	2	139	19	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	149	0	284	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1273	-	649	835
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	818	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1273	-	648	835
Mov Cap-2 Maneuver	-	-	-	-	648	-
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	816	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	678	-	-	1273	-
HCM Lane V/C Ratio	0.036	-	-	0.002	-
HCM Control Delay (s)	10.5	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	82	24	1	74	1	22	0	1	1	0	7
Future Vol, veh/h	8	82	24	1	74	1	22	0	1	1	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	31	31	31	31	31	31	31	31	31	31	31	31
Mvmt Flow	9	89	26	1	80	1	24	0	1	1	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	81	0	0	115	0	0	194	190	89	203	215	80
Stage 1	-	-	-	-	-	-	107	107	-	82	82	-
Stage 2	-	-	-	-	-	-	87	83	-	121	133	-
Critical Hdwy	4.41	-	-	4.41	-	-	7.41	6.81	6.51	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.41	5.81	-	6.41	5.81	-
Follow-up Hdwy	2.479	-	-	2.479	-	-	3.779	4.279	3.579	3.779	4.279	3.579
Pot Cap-1 Maneuver	1352	-	-	1312	-	-	706	656	895	696	635	905
Stage 1	-	-	-	-	-	-	832	754	-	859	774	-
Stage 2	-	-	-	-	-	-	854	773	-	818	734	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1352	-	-	1312	-	-	696	651	895	691	630	905
Mov Cap-2 Maneuver	-	-	-	-	-	-	696	651	-	691	630	-
Stage 1	-	-	-	-	-	-	826	749	-	853	773	-
Stage 2	-	-	-	-	-	-	846	772	-	812	729	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	10.3	9.2
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	696	895	1352	-	-	1312	-	-	691	905
HCM Lane V/C Ratio	0.034	0.001	0.006	-	-	0.001	-	-	0.002	0.008
HCM Control Delay (s)	10.4	9	7.7	-	-	7.7	-	-	10.2	9
HCM Lane LOS	B	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0	0

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	51	16	4	61	15	9
Future Vol, veh/h	51	16	4	61	15	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	31	31	31	31	31	31
Mvmt Flow	66	21	5	79	19	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	87	0	166	77
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	89	-
Critical Hdwy	-	-	4.41	-	6.71	6.51
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.479	-	3.779	3.579
Pot Cap-1 Maneuver	-	-	1345	-	762	909
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	866	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1345	-	759	909
Mov Cap-2 Maneuver	-	-	-	-	759	-
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	863	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	809	-	-	1345	-
HCM Lane V/C Ratio	0.039	-	-	0.004	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

APPENDIX **F**

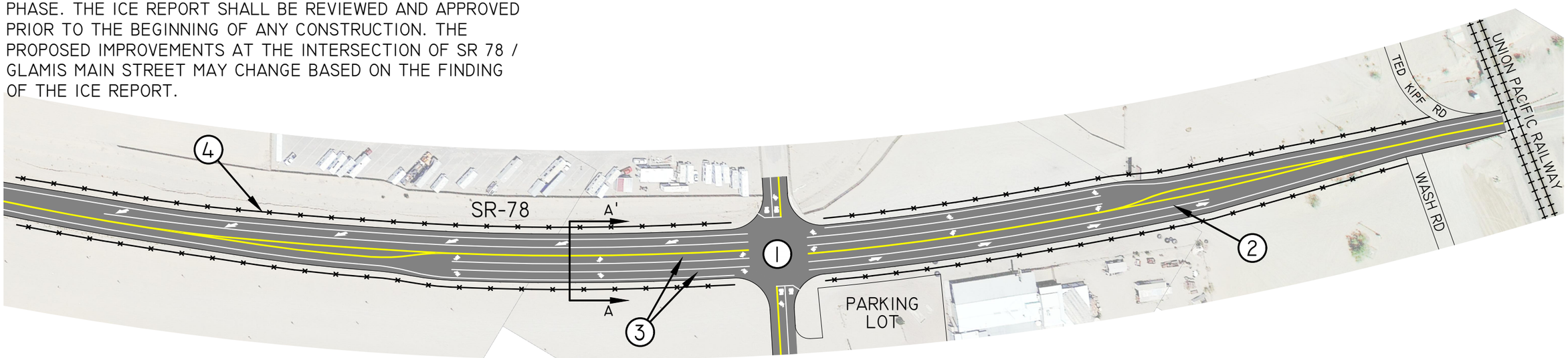
CONCEPTUAL SR 78 / GLAMIS MAINSTREET DESIGN

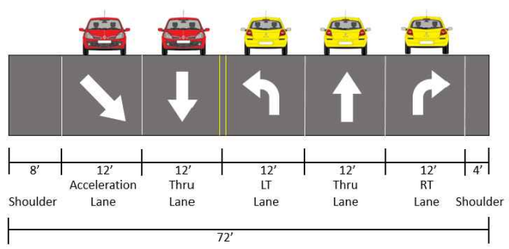
GENERAL NOTES:

- A TRAFFIC STUDY IS NEEDED TO DETERMINE SEVERAL DESIGN ELEMENTS
- EXTENSIVE COORDINATION WITH CALTRANS AND THE COUNTY IS NEEDED TO DETERMINE THE FINAL DESIGN ELEMENTS
- ANY DEVIATIONS TO DESIGN STANDARDS REQUIRE PROCESSING AND APPROVAL BY CALTRANS HEADQUATERS
- TRAFFIC MANAGEMENT PLAN IS NEEDED DURING LARGE SPECIAL EVENTS (I.E. CAMP RZR)
- ALL DRIVEWAYS CONNECTED TO SR 78 SHALL BE RECONSTRUCTED TO CURRENT CALTRANS STANDARDS.
- A FORMAL INTERSECTION CONTROL EVALUATION (ICE) REPORT SHOULD BE CONDUCTED AT A SUBSEQUENT ENGINEERING PHASE. THE ICE REPORT SHALL BE REVIEWED AND APPROVED PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE PROPOSED IMPROVEMENTS AT THE INTERSECTION OF SR 78 / GLAMIS MAIN STREET MAY CHANGE BASED ON THE FINDING OF THE ICE REPORT.

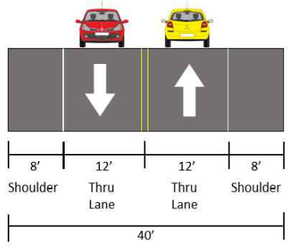
NOTES:

1. PROVIDE A TRAFFIC SIGNAL IF WARRANTED. IF A TRAFFIC SIGNAL IS WARRANTED, ACCELERATION LANES MAY NOT BE NEEDED.
2. 600 FEET OF ACCELERATION LANE LENGTH IS DEPICTED. TO PROVIDE THE RECOMMENDED 960 FEET OF ACCELERATION LANE LENGTH, COORDINATION IS NEEDED WITH THE UNION PACIFIC.
3. 100 FEET OF LEFT AND RIGHT TURN LANE STORAGE IS ASSUMED. THE ASSUMED STORAGE LENGTH PLUS 485 FEET OF DECELERATION LENGTH IS DEPICTED.
4. PHYSICAL BARRIER ALONG PROJECT FRONTAGE.





PROPOSED A'-A



EXISTING A'-A

NORTH

1" = 150'

CONCEPTUAL ONLY

LINSCOTT LAW & GREENSPAN engineers

REV. 2/4/2022
N:\3112 – Glamis SP\CAD\3112.CONCEPT PLAN.dwg

Figure 1

Concept Plan

GLAMIS SP

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M-1 Glamis Specific Plan

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Glamis Specific Plan

October 2022

Lead Agency:
Imperial County
Planning & Development Services Department
801 Main Street
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I. Introduction

A. Project Summary

The Glamis Specific Plan No. SP19-0001 provides for a flexible recreational master plan with a broad range of land uses ranging from recreational, commercial/retail, storage, entertainment, hospitality, residential, renewable energy, utility facilities, among other primary and complimentary land uses. Associated standards and protocols have been incorporated into the Glamis Specific Plan (GSP) to complement the broad range of land uses in order to safely enrich the activities that will enhance the Glamis experience.

The Glamis Specific Plan is located in the remote community of Glamis, an unincorporated area in the central portion of Imperial County. As illustrated in Exhibit I-1, *Regional Location Map* and Exhibit I-2, *Project Vicinity,* the project site is located approximately 27 miles east of the City of Brawley; approximately 32 miles northeast of the City of El Centro; approximately 20 miles north of Interstate 8; and approximately 35 miles southeast of the Salton Sea. Furthermore, Exhibit I-2, *Project Vicinity*, shows the relationship between the GSP area and surrounding vicinity with the Imperial Sand Dunes Recreation Area (ISDRA) located immediately to the southwest, the North Algodones Dunes Wilderness (NADW) immediately to the northwest, and the Chocolate Mountains and Chocolate Mountain Aerial Gunnery Range (CMAGR) located to the northeast.

With a total planning area of approximately 141 acres, the Glamis Specific Plan is designed to integrate seamlessly into the natural sand dunes environment and will have uniquely designated phased land use areas. The phased land use areas will be designed to allow for flexible configuration of land use opportunities that will provide appropriate responses to market demand, the needs of the Glamis community's recreational visitors and the goals of Polaris Inc. (Polaris). The Glamis Specific Plan also provides an opportunity for all ages and ability to enjoy the drifting sand dunes of Glamis. Whether it be riding through the dunes, lodging under the starry night sky, or enjoying a delicious meal with a cold beverage overlooking the stunning sand dunes environment, the Glamis Specific Plan will provide the accommodating land uses that will build upon the Glamis "experience" that has brought back thousands of visitors year after year.

B. Project Goals

The location and historical recreational use of the project site is key to planning the GSP. The Glamis Specific Plan Area designation of the County of Imperial General Plan overlaying the project site establishes the intended general land use character. However, the Glamis community is unique in that it has served and will continue to serve as the premiere locale for hundreds of thousands of OHV riders and recreational visitors from around the world. The project site's central location within Imperial County together with State Route 78 (SR-78) bisecting the project site, the close proximity to Interstate 8 and the State of Arizona due east, makes it a desirable location for recreational visitors to travel efficiently east or west. The GSP attempts to build off the historical Glamis-going experience by providing expanded recreational, commercial, entertainment, and hospitality experiences, yet meet County Planning goals, while addressing environmental, engineering, commercial, public safety, and aesthetic needs that have been identified during the planning process. Finally, the GSP will eliminate the need for special event-related annual Conditional Use Permits (CUPs) and/or discretionary temporary event permits through implementation of a Special Event Management Plan that will include standards and protocols in accordance with

regulatory requirements of the County and key stakeholder agencies for regulation of special events.

The development goals for the GSP are the following:

1) To provide a viable and flexible recreational-commercial development that responds to market conditions.
2) To establish land uses, circulation design treatments, site development standards which contribute to the preservation and enhancement of the Glamis OHV and recreational community.
3) To provide recreational facilities that serve the needs of the Glamis community and recreational visitors.
4) To create a project that adheres to the Guiding Principles of Polaris – "Best People, Best Team", "Safety and Ethics Always" and "Customer Loyalty".
5) To establish a project that is in accordance with the standards and requirements of the County of Imperial and key stakeholders, while achieving the vested interest in approval of the GSP.
6) To ensure that development and implementation of the GSP is coordinated with the planned and scheduled infrastructure needed to support the project site's growth.
7) To establish Special Event Management Plan standards and protocols to eliminate the need for annual discretionary permits.
8) To establish a specific set of standards applicable only to the GSP that will allow county staff more flexibility on a ministerial level to work with the project owner.

C. Document Purpose

The Glamis Specific Plan is intended to meet the Specific Plan requirements as set forth in California State Law (California Government Code (CGC) Section (§) 65450) through which the State authorizes cities and counties to adopt Specific Plans as appropriate tools in implementing their General Plans. Under the provision of this Statute the County of Imperial (also referred to as "County") has the authority to include detailed regulations, conditions, programs and all proposed legislation within the Specific Plan that is necessary for the systematic implementation of the General Plan. In concert with this Specific Plan, a change of Zone and a Conditional Use Permit (CUP) for modification to the existing water well CUP are also part of the approval process.

Imperial County has the discretion to decide who may prepare a specific plan. Specific plans may be a requirement of a project and prepared by a project proponent or by a consultant under contract to the project proponent. In this situation, The Altum Group was responsible for the preparation of this specific plan as part of a project application for Polaris, the landowner. The Imperial County Planning & Development Services Department has reviewed the Specific Plan for consistency with the County's General Plan and other regulations.

D. Format

Specific Plan No. SP19-0001 is divided into the following chapters:

I. Introduction/ Project Summary
II. Specific Plan
III. Planning Area Development Guidelines
IV. Zoning Ordinance
V. General Plan Consistency

Specific Plan No. SP19-0001 has been prepared in accordance with the provisions of California Government Code § 65451, which grants local government agencies the authority to prepare specific plans of development for any of the areas covered by a General Plan. According to § 65451, a Specific Plan shall include text and diagrams which specify all of the following topics:

- The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.
- The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.
- Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
- A program of implementation measures designed to carry out the items listed above.

Specific Plan No. SP19-0001 functions as a regulatory document, which is designed to implement the policies of the County of Imperial General Plan. All future development plans pertaining to the subject property shall be consistent with this Specific Plan and the regulations set forth in the County's General Plan. Specific Plan No. SP19-0001 addresses the following items related to the site:

- Building setbacks;
- Circulation and Utilities provisions;
- Assures that new development meets or exceeds County of Imperial standards of environmental safety; and
- Provides provisions for the maintenance of the aesthetic quality and community identity of the site.

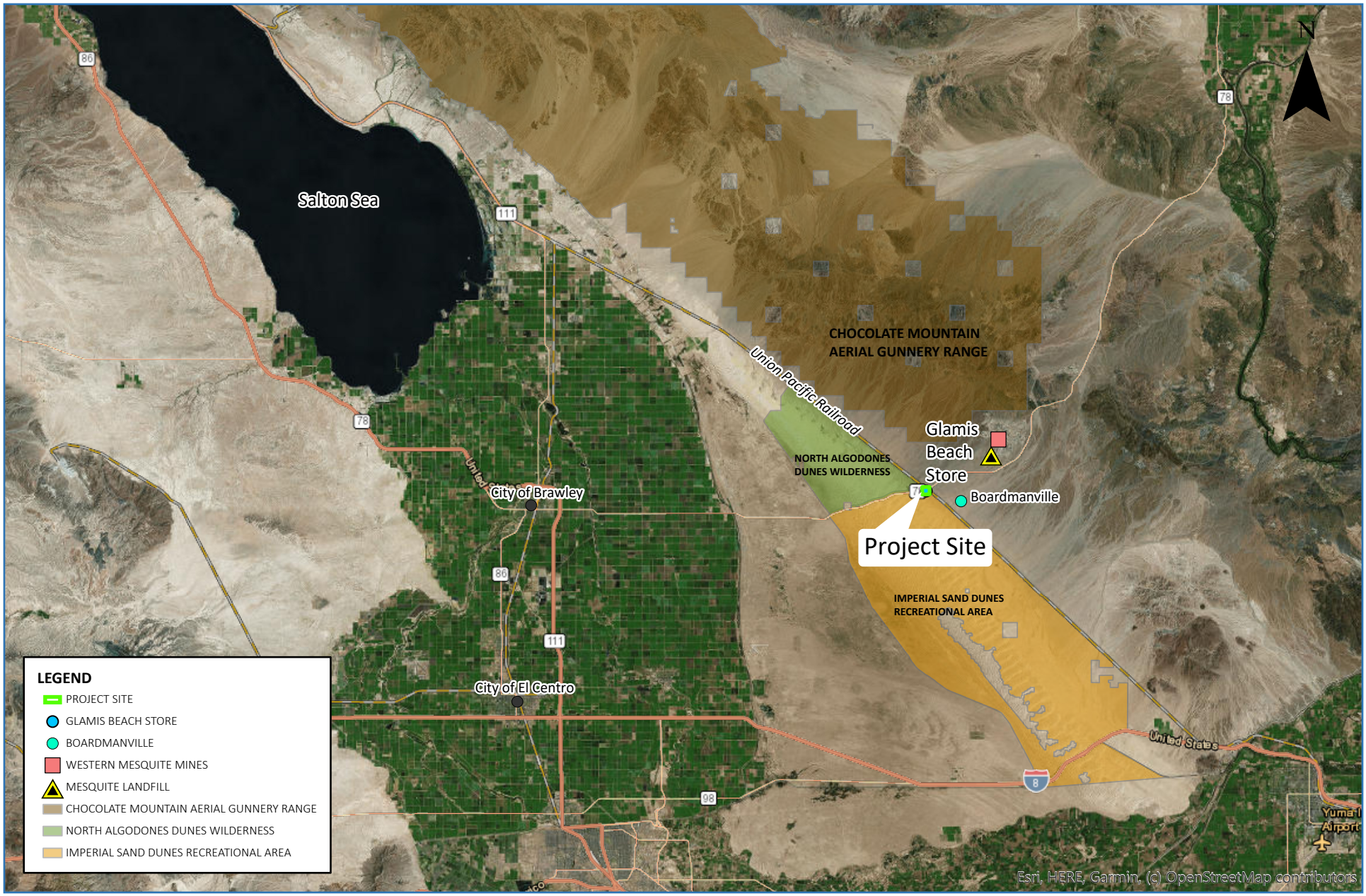
E. Project History

Historically, the GSP area and the ISDRA has been utilized for off-highway vehicle (OHV) recreational activities since the 1960s. Enthusiasm for dune buggies and other sand vehicles brought 30,000 people to Glamis area during the 1979 Thanksgiving weekend. By the 2010s, tens of thousands of off-road enthusiasts were visiting the Imperial Sand Dunes during the holidays in autumn, winter and early spring months, many of them camping in Recreational Vehicles (RVs) near Glamis. Glamis became known as the Sand Toy Capital of the World. As a result, events and activities such as "Camp RZR" started to occur within the GSP area that attracted as many as 20,000 visitors each year during Halloween weekend or the weekend before Halloween. With the advent of special events within the Glamis area discretionary temporary event permits and CUPs required by the County of Imperial were deemed necessary to allow for the continued provision of such events. Currently, special and temporary events are permitted under Conditional Use Permit #08-0025. Events such as "Camp RZR" are required to undergo review and approval of event operations and protocols with the County and key stakeholder agencies.

F. Project Setting

The GSP is located on private land that is adjacent to the ISDRA in the unincorporated area of Imperial County, approximately 27-miles east of Brawley, California. The Specific Plan contains the small unincorporated community of Glamis, comprised of fewer than 5 residents who manage and operate the Glamis Beach Store, which is considered as the central hub location of Glamis. Exhibit I-1 shows the regional location of the project site in context with eastern Imperial County and the nearby Cities of Brawley, Calipatria, Westmoreland, Imperial, El Centro, and Holtville. Exhibit I-2 shows the relationship between the GSP area and the surrounding vicinity.

Exhibit I-3, *Project Site Aerial*, shows an aerial view of the project site, including the boundaries of each of the seven project parcels, and in relationship to the Union Pacific Railroad (UPRR), and SR-78 (a.k.a. Ben Hulse Highway), Wash Road and Ted Kipf Road. The project site is regionally accessible via SR-78, which serves as the primary form of access for motorists. Ted Kipf Road, a county-maintained dirt road serves as a secondary form of access extending northwesterly for approximately 16.54 miles to Niland-Glamis Road from SR-78.

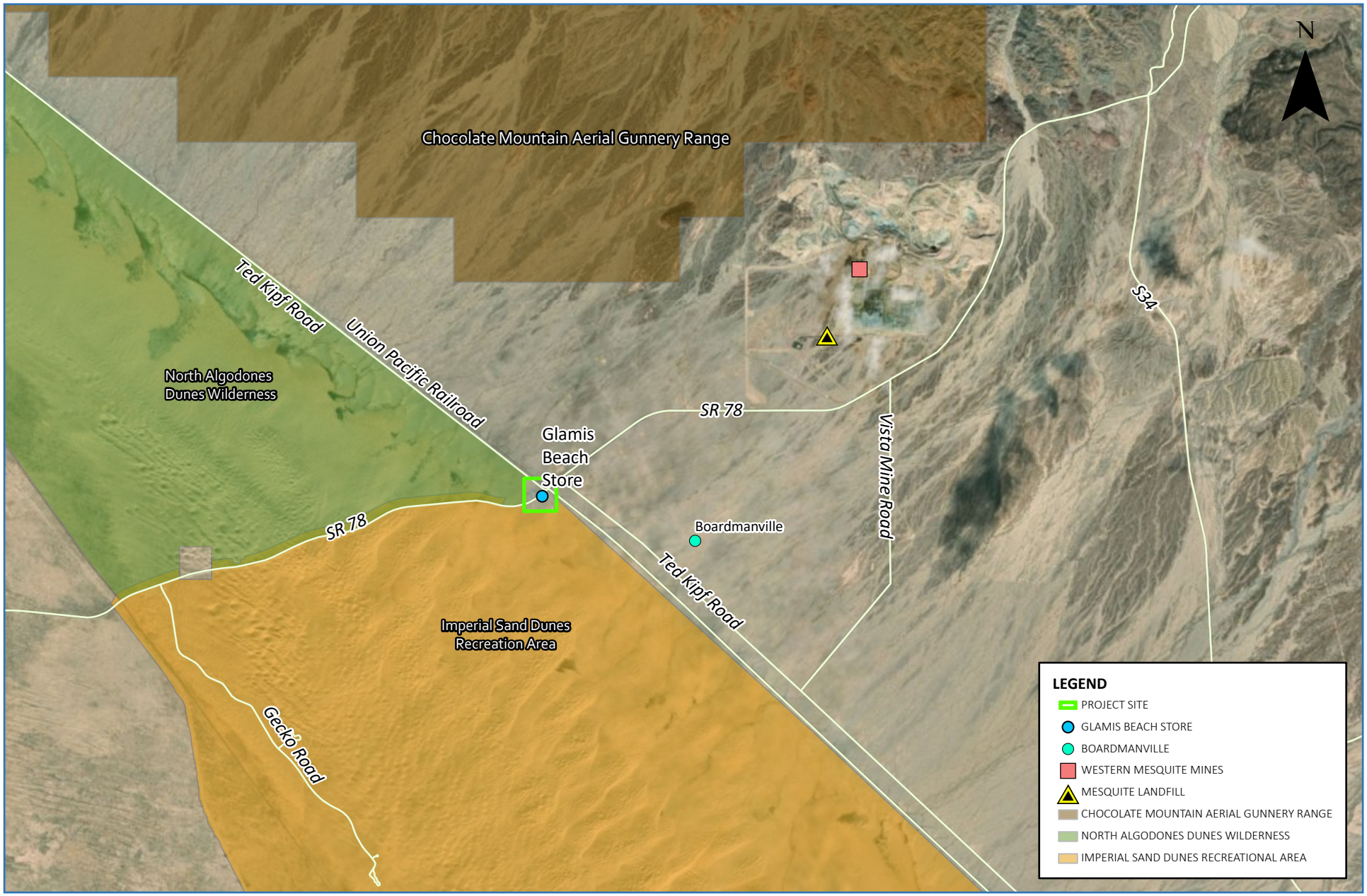


1 IN = 11 MI

Regional Location

Exhibit I-1

Glamis Specific Plan

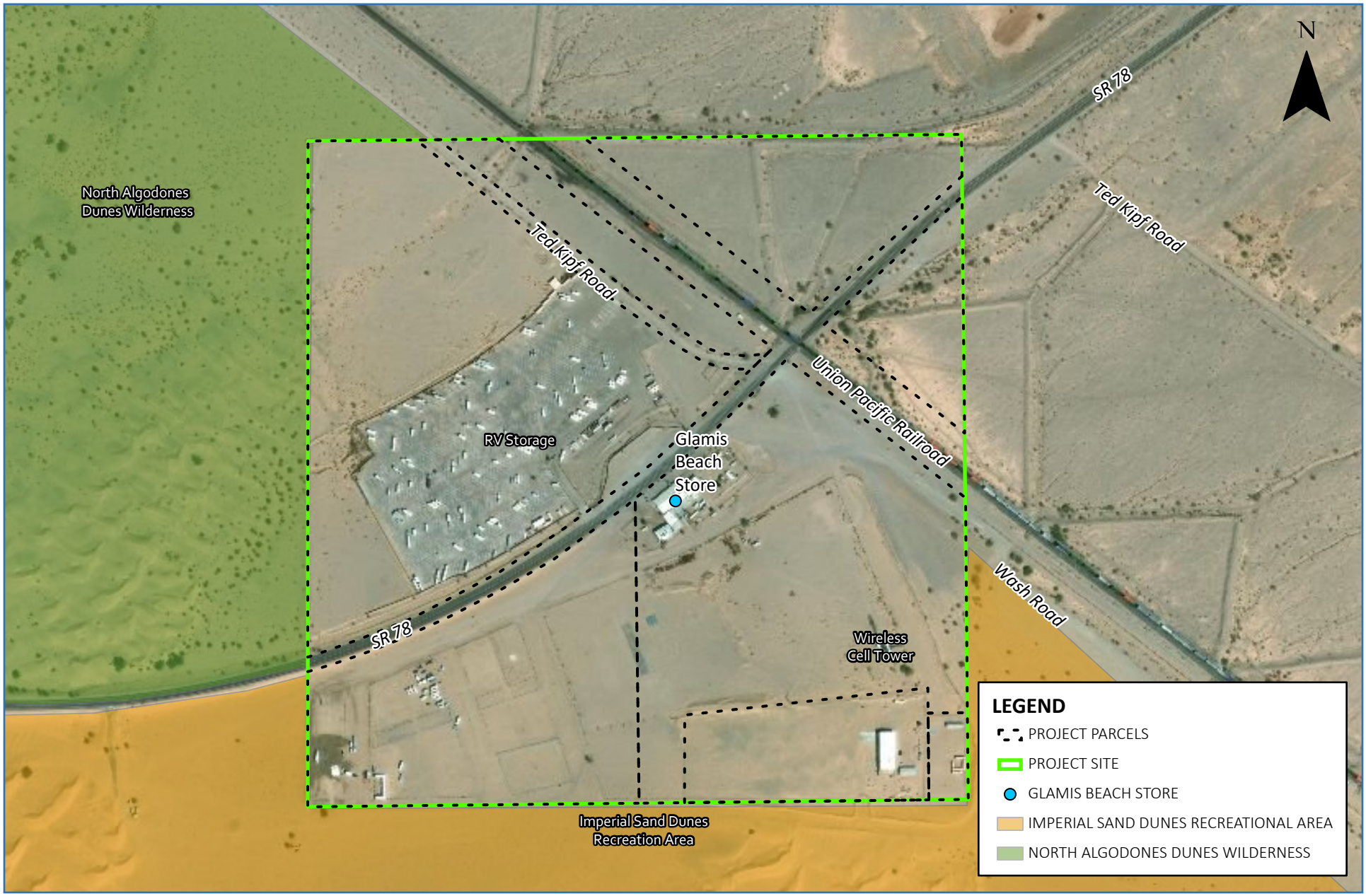


1 IN = 2.5 MI

Project Vicinity

Exhibit I-2

Glamis Specific Plan



1 IN = 650 FT

Project Site Aerial

Exhibit I-3

G. Existing Site Characteristics

Existing on-site land uses and other features are shown in Exhibit I-3. Project area features can be characterized as an area of open desert consisting of several adjoined one and two story metal building structures representing the Glamis Beach Store, and metal corrugated water tanks situated directly behind the store. Additionally, there is a separate seasonal OHV repair business connected to the Glamis Beach Store. A wood fence for delineated parking/vendor areas is located directly west of the store. A communications facility tower is located at the southeast portion of the property. Due south is a single family residence, large recreational vehicle storage garage, and other related equipment storage buildings. Additionally, a dilapidated pre-fabricated residential structure is located on the southeast corner of the project site. To the west, on the opposite side of the Glamis Beach Store, there is an existing RV storage area as well as vacant desert land. There is also an existing 20-acre paved RV storage area for Glamis Dunes Storage and Luv 2 Camp RV Trailer Rentals, and the existing historical cemetery located at the southwest corner of SR-78 and Ted Kipf Road. Lastly, on the northeast side of the GSP, crossing the Union Pacific Railroad, there are two triangular parcels that are currently vacant.

A majority of the topography for the existing site can be characterized as relatively flat. The only minor changes in topography are found along the northeast portion of the property (northeast side of the Union Pacific Railroad), which can be attributed to existing elevated flood control earthen dikes and a slight, gradual southwest to northeast trending slope contour. Overall, elevation contours of the project site range from 325 feet above mean sea level (msl) at the southwest corner of the property to 344 feet above msl at the northeast corner of the property. Areas of wind-blown sand dunes with sporadic native vegetation are found situated and encroaching upon the southeast corner of the project site.

Glamis Beach Store

Ted Kipf Road facing south

Vendor Row

Dilapidated pre-fabricated residential structure

Vacant Triangular Parcels

Historical Cemetery

H. Regional Characteristics

The GSP area is surrounded by open desert land that is managed by the BLM. To the North of the GSP is the Chocolate Mountain Aerial Gunnery Range (CMAGR) which is a live-fire training range used for developing and training Marine Corps and Navy aviators. The GSP is adjacent to the ISDRA, the largest sand dunes area in the State of California. Directly northwest of the project site, is the NADW; which consists of approximately 26,000 acres of land managed by the BLM as part of the National Wilderness Preservation System. The NADW is closed to all vehicles and mechanized use, however, camping is allowed throughout the area. Furthermore, as shown within Exhibit I-4, *BLM Recreation Management Zones*, within all the various BLM lands that surround the GSP, the BLM has designated Recreation Management Zones (RMZs).

The BLM RMZs provide an activity-level planning framework for BLM's recreation management. The RMZs dictate the allowable recreation activities within those areas and provide for BLM's management objective in those areas. The GSP is bordered by three RMZs: Open RMZ to the south, Limited RMZ to the northeast, and the NADW RMZ to the northwest. The Open RMZ allows for unrestricted OHV recreation, camping, commercial vending, hiking and wildlife viewing. The Limited RMZ allows for limited use OHV recreation (travel limited to designated routes of travel or areas with seasonal restrictions under specific conditions), camping, environmental education, and tourism opportunities. The NADW RMZ prohibits any motorized recreation opportunities and allows for non-motorized recreation, such as camping, hiking and educational opportunities.

Chocolate Mountains

Union Pacific Railroad

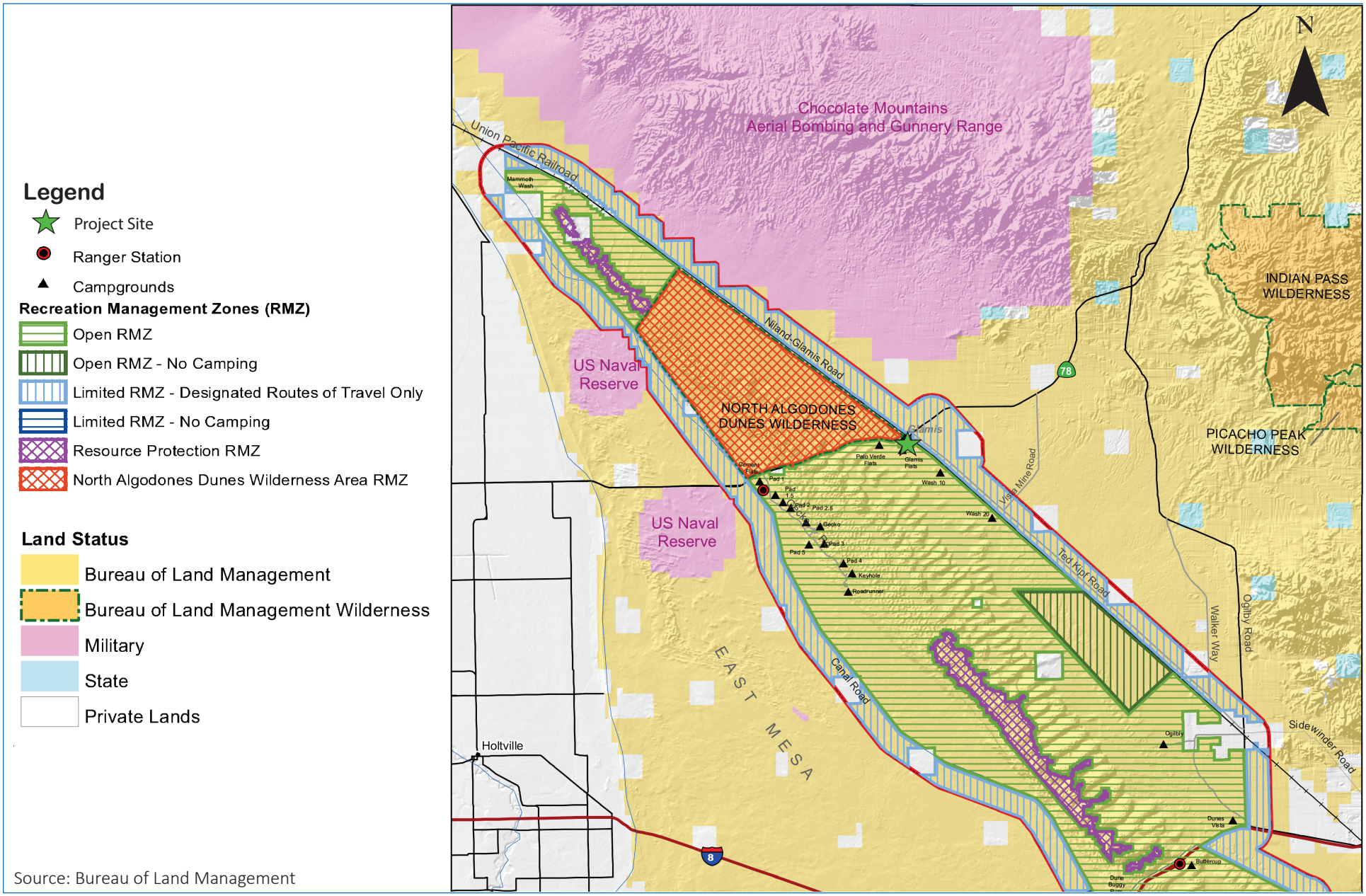
Communication Tower

Garage Storage

I. Existing and Proposed Land Uses

The location of the GSP is contained within the County's designated Glamis Specific Plan Area (GSPA). The GSPA allows for the development of a Specific Plan in accordance with the design criteria, objectives and policies that are consistent with the County's General Plan Land Use Element. Exhibit I-5, *Existing General Plan Designations*, shows the land use designations for the project site and surrounding area. As shown in Exhibit I-6, *Current Imperial County Zoning Classifications*, the existing zoning designation for the project site is Open Space/Preservation (S-2) and a very small area that is designated General Commercial (C-2). The general area of the Glamis Beach Store is zoned as C-2, while the remainder of the project site is zoned as S-2 as shown in Exhibit I-6a, *Current Imperial County Zoning - Project Site*.

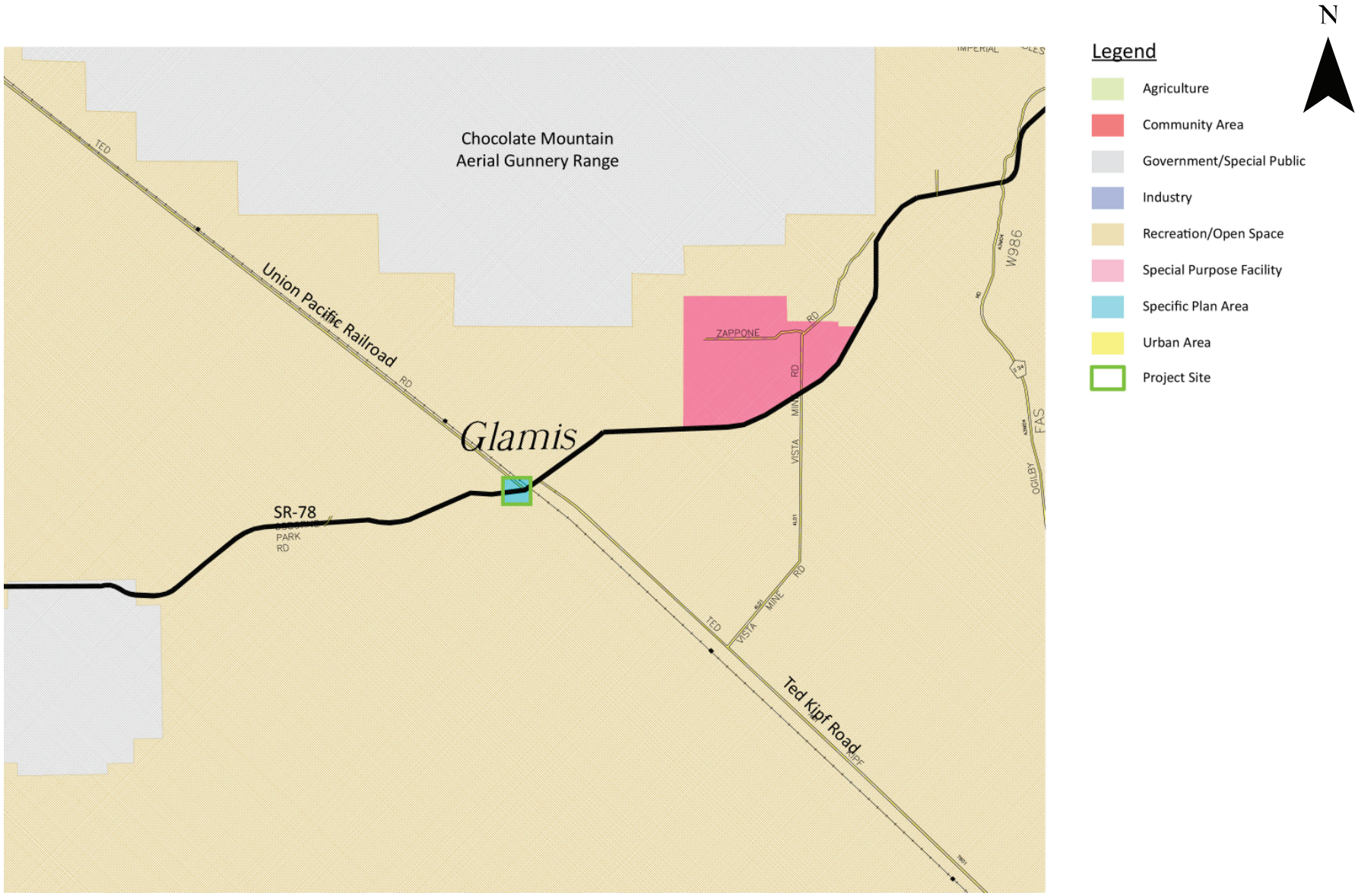
The GSP includes a General Plan Amendment (GPA) and Change of Zone (CZ) for County approval. The GSP proposes the establishment of Commercial/Recreational (CR) designated zoning which includes different levels of allowable land use intensity. Exhibit I-7, *Zoning Designations and Planning Areas,* the GSP proposes a Change of Zone for S-2 (Open Space/Preservation) to S-1 (Open Space/Recreation) for the approximate 1-acre parcel on the southeast side of the project site. The aforementioned zoning categories include a CR-1, CR-2, and CR-3 Zones, and an S-1 Zone. The three CR Zones consist of three different levels of land use intensity. The S-1 Zone is designated as a low intensity zone with small-scale recreation. In tandem with the proposed zoning for the GSP, Exhibit I-8, *Conceptual Site Plan*, presents a conceptual site plan for the GSP that depicts the arrangement of preferred land uses within the identified Land Use Areas at the time of full project build-out. The proposed zones, Conceptual Site Plan and land uses are further detailed in Section II of this Specific Plan.



BLM Recreation Management Zones

Exhibit I-4

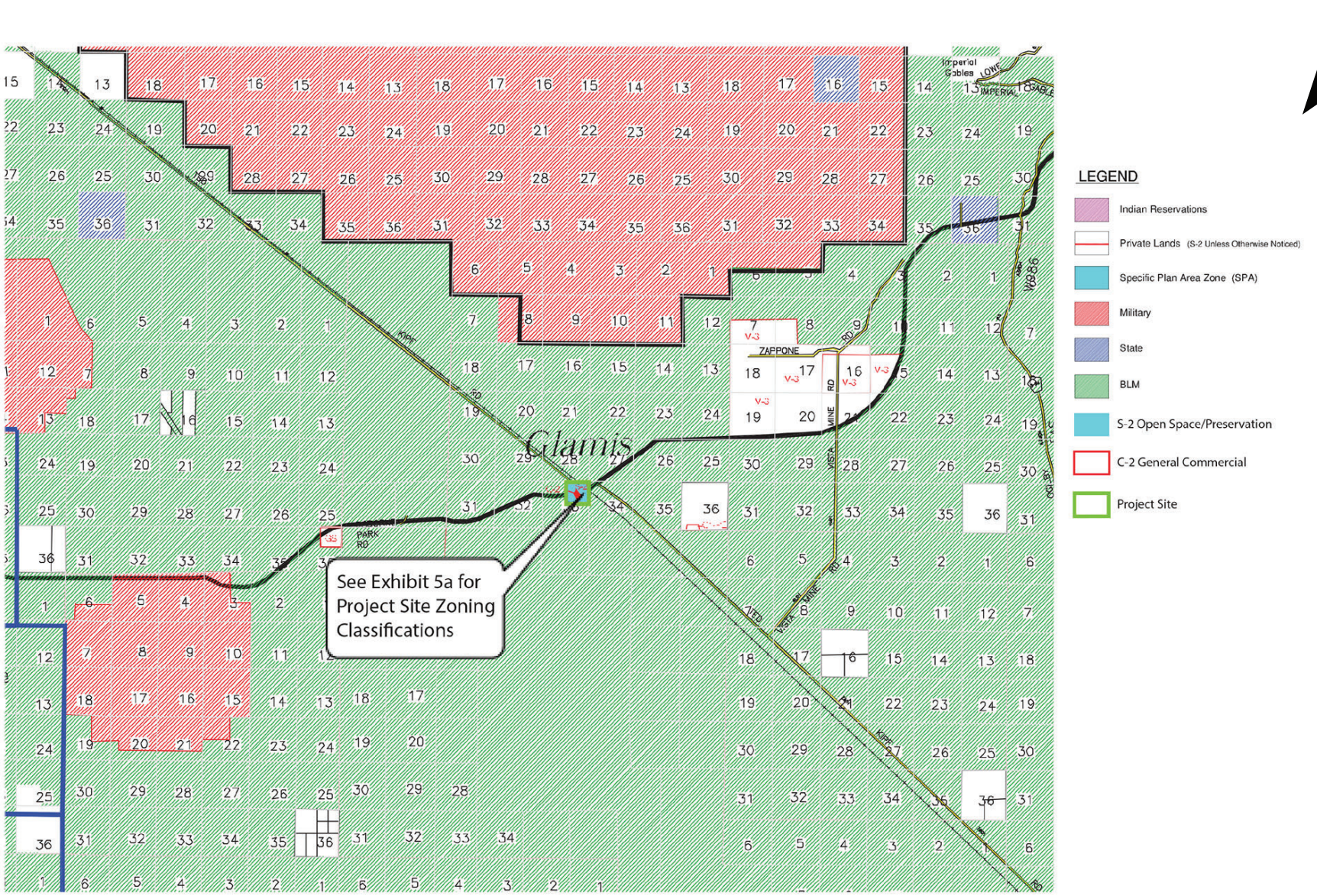
Glamis Specific Plan



Existing Imperial County General Plan Designations

Exhibit I-5

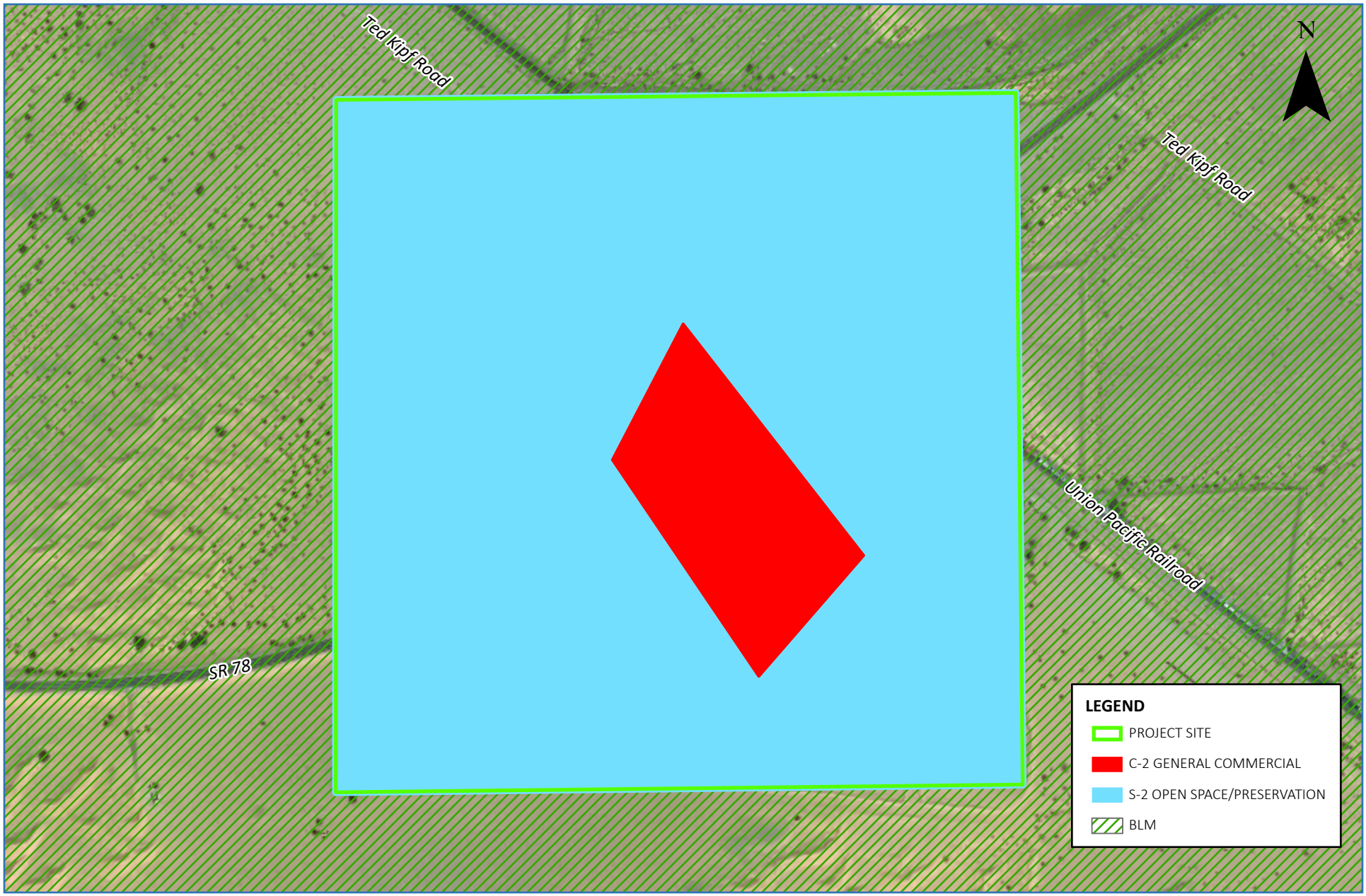
Glamis Specific Plan



Current Imperial County Zoning Classifications

Exhibit I-6

Glamis Specific Plan



1 IN = 625 FT

Current Imperial County Zoning - Project Site

Exhibit I-6a

Glamis Specific Plan

J. Planning Process

The Glamis Specific Plan has been prepared by a team of professionals with the specific intent of meeting the long-term goals of the Property Owner (Polaris), and addressing specific issues identified by the County of Imperial. A number of special studies (Biological Resources Assessment, Traffic Impact Analysis, Preliminary Geotechnical Investigation, Noise Impact Analysis, Air Quality and Greenhouse Gas Emissions Impact Analysis, Cultural Resources Assessment and Visual Impact Assessment) have been prepared to define the existing environmental setting to create a Specific Plan that is congruent with the unique natural resources of the site. The Specific Plan has been created to illustrate both physical land uses and operational protocols for future recreational activist that might occur within the project boundary.

Public participation is central to the development of a successful Specific Plan. As part of the planning process of this Specific Plan, Polaris and supporting professionals conducted multiple stakeholder outreach meetings to understand and address all concerns of the stakeholders and to coalesce the vested interests into a comprehensive Specific Plan approval. The stakeholder groups are:

County Agencies:

- Imperial County Public Works Department
- Imperial County Air Pollution Control District
- Imperial County Executive Office
- Imperial County Planning and Development Services
- Imperial County Transportation Commission
- Imperial County Environmental Health Department
- Imperial County Fire Department
- Imperial County Sheriff's Department

Utility Purveyor:

- Imperial Irrigation District

Other Agencies:

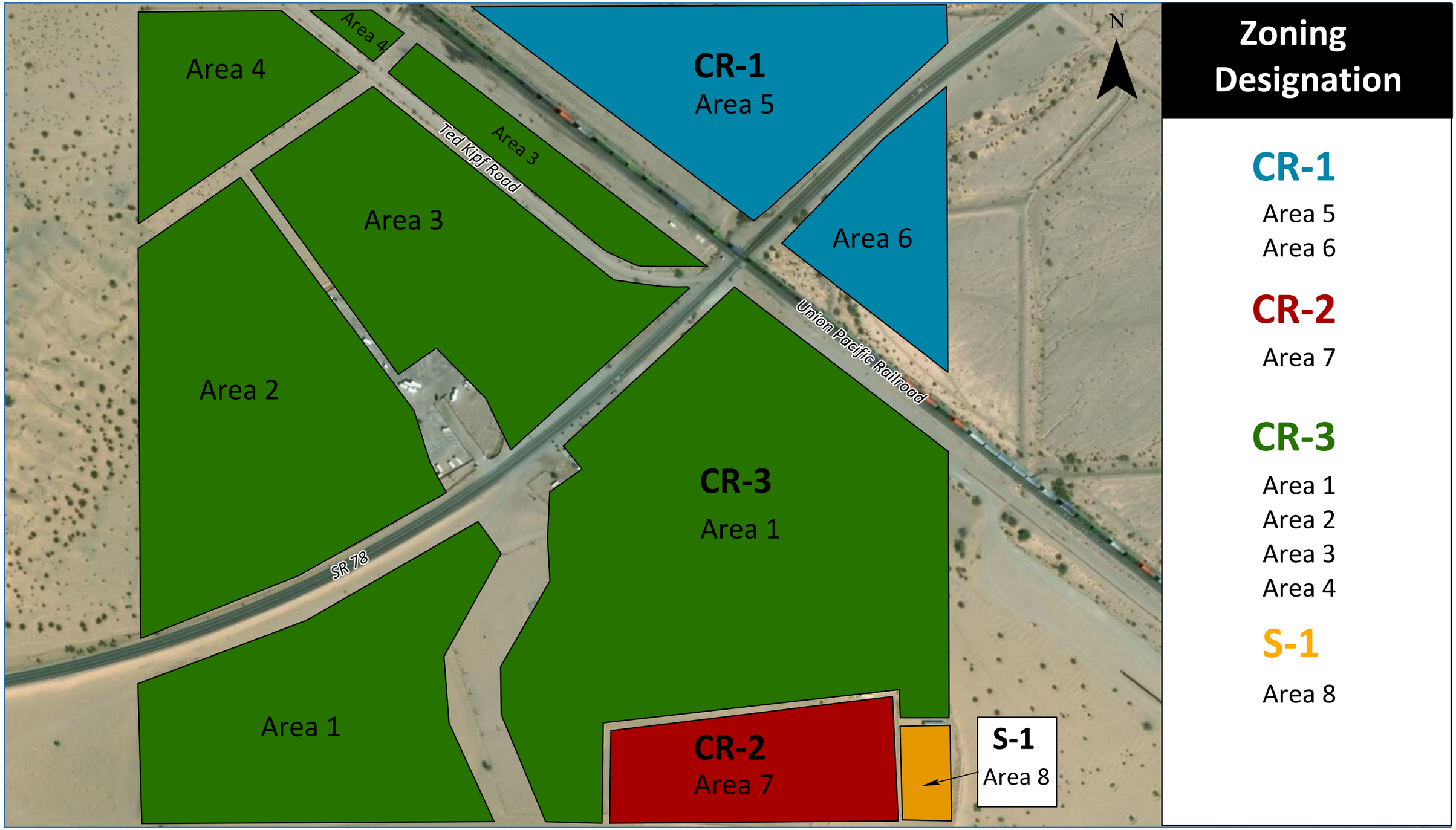
- Bureau of Land Management
- California Department of Transportation
- United States Navy

K. Discretionary Action

The Lead Agency for Specific Plan No. SP19-0001 is the County of Imperial. Approval of Specific Plan No. SP19-0001 rests with the Imperial County Board of Supervisors. In order for the GSP to be realized, the Imperial County Board of Supervisors will undertake the following initial actions:

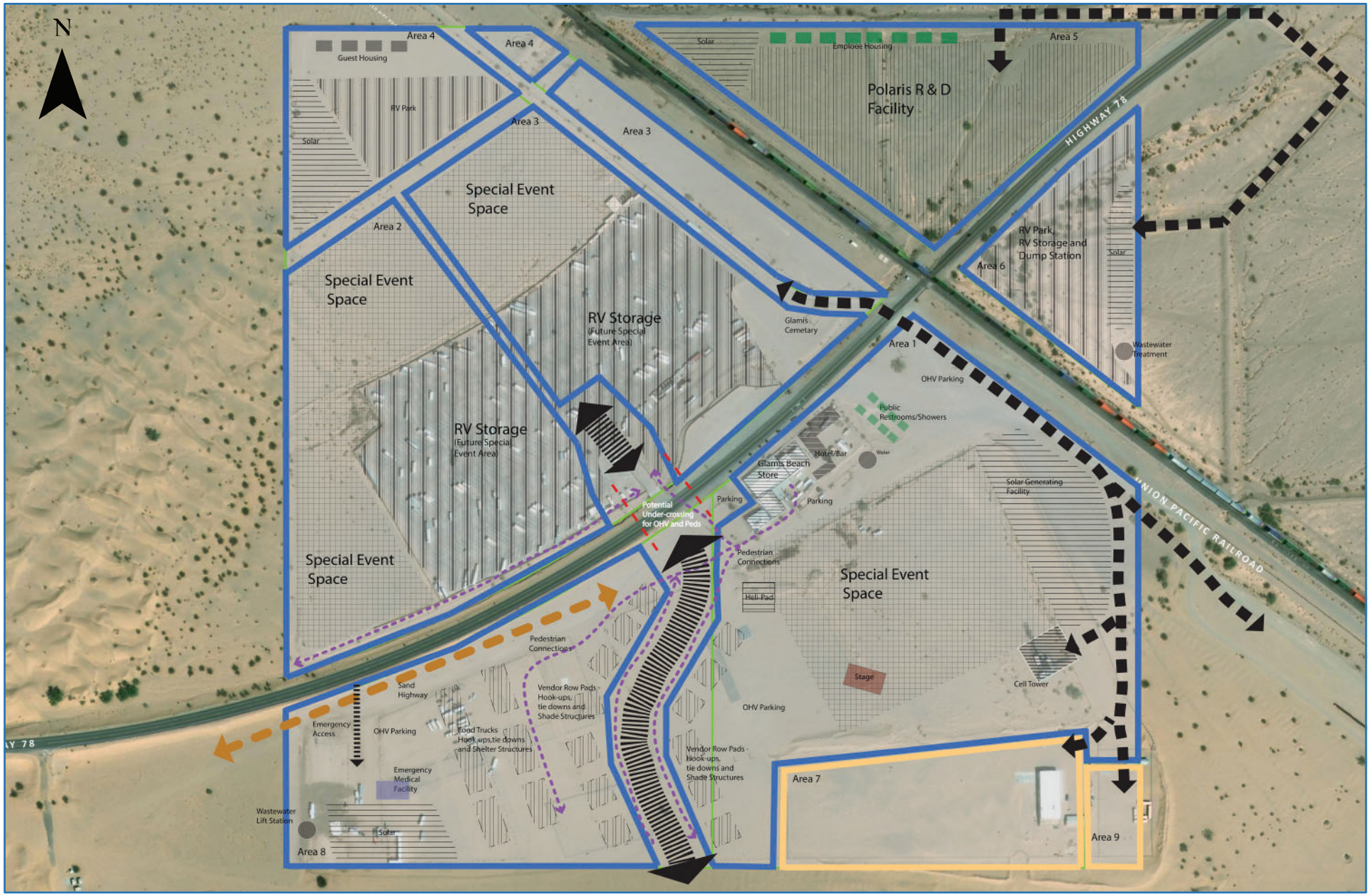
1) Adopt a resolution approving Specific Plan No. XXX and certifying the associated Environmental Impact Report;
2) Adopt the associated zoning ordinance for Specific Plan No. SP19-0001; and
3) Approve a Conditional Use Permit for the existing Water Well.

Subsequent approvals which may be required in order for the GSP to be implemented may include but are not necessarily limited to: parcel map, vesting tentative maps, tentative tract maps, final tract maps, plot plans, conditional use permits, water and sewer systems, building permits, and encroachment permits.



1 IN = 400 FT

Zoning Designations and Planning Areas



Conceptual Site Plan

Exhibit I-8

Glamis Specific Plan

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II. Specific Plan

A. Objective and Scope of Specific Plan

The Glamis Specific Plan (GSP) is a regulatory document that addresses the Glamis Specific Plan Area (GSPA) included in the General Plan for Imperial County (County). The County's General Plan requires a Specific Plan to be developed for the Glamis GPSA, in accordance with the GPSPA design criteria, objectives and policies as outlined in the County's General Plan Land Use Element. The GSP provides a planning framework which accommodates recreation-supporting land uses including retail and service commercial; hotel accommodations; recreational vehicles; RV parks and fuel stations and Special Events.

The GSP has been prepared to minimize changes to the natural topography of the project site, and to reduce intrusions upon the existing landscape and to any scenic views.

The California Government Code states that a "Specific Plan shall include a statement of the relationship of the Specific Plan to the General Plan, and further, that it may not be adopted or amended unless found to be consistent with the General Plan." Consistency of the GSP and the County General Plan is addressed in Chapter V (General Plan Consistency Analysis) of this document.

In response to government requirements, this document provides the basis for the build-out of the project site. Such buildout will be consistent with the County of Imperial and State policies and standards. The GSP functions as a bridge between the County's General Plan and the specific development of the identified project site.

B. Land Use Plan

The GSP creates a distinctive master-plan for recreation-serving land uses which are consistent with the historical use of the Glamis area. It provides for a great deal of flexibility as to the development of potential land uses within the GSP to promote the concept of an open desert playground that derives from the "Camp RZR" event, historically held in October of each year at the GSP area, and the surrounding Imperial Sand Dunes Recreation Area (ISDRA). This area attracts hundreds of thousands of off-road enthusiasts every Halloween, Thanksgiving, Christmas, New Years, and President's Day weekend.

As illustrated in Exhibit I-7 – *Zoning Designations and Planning Areas,* the GSP consists of 8 Planning Areas: Planning Areas 1, 2, 3, and 4 are designated Commercial-Recreation 3 (CR-3) Zone where the maximum range of recreational, commercial, resort, retail, medical, entertainment, and utility infrastructure land uses are allowed; Planning Areas 5 and 6 that are designated Commercial-Recreation 1 (CR-1) Zone, which provides the most restrictive range of commercial/recreational land uses; Planning Area 7 is designated Commercial-Recreation 2 (CR-2) Zone, which provides for a moderate-level of commercial/recreational land uses, and Planning Area 8 would be re-zoned to the County's existing S-1 (Open Space/Recreation) Zoning District. The S-1 zone is used to recognize areas that embody the unique Open Space and Recreational character of Imperial County including the deserts, mountains and waterfront areas. The S-1 Zone is primarily characterized by low intensity human utilization and small-scale recreation related uses. Any new subdivision in any of the zones will require all necessary infrastructure, including potable water, wastewater and roads that meet County standards. See Section D, Planning Area Development Standards that further details the land uses that will be included in the GSP.

As envisioned, the GSP will facilitate an entertainment enclave among the iconic dunes. This enclave will enhance the historic experiences that OHV riders and visitors expect when they visit the dunes.

1. Land Use Objectives

At the time of full build-out of the project site, implementation of the Land Use Plan will achieve the development goals of the GSP through fulfilling the following objectives:

- Create a man-made environment that is compatible with the natural environment, surrounding land uses, and the desert climate;
- Ensure that development within the GSP is consistent with the County of Imperial's General Plan; and will protect public health, safety and general welfare, while complementing surrounding land uses and zoning;
- Provide design criteria that will guide developer(s) and the County of Imperial in the development of proposed land uses by including descriptive text and illustrative exhibits setting forth the foundation of the overall development of the project site;
- Enable Special Events through implementation of a Special Event Management Plan;
- Adhere to the Zoning Ordinance for the Glamis Specific Plan in Section 3, Zoning Ordinance;
- Provide recreational and ancillary facilities that serve the needs of the Glamis community and recreational visitors;

The following is a brief description of the land uses within the GSP (see Exhibit I-8 – *Conceptual Site Plan*).

a. Recreational - The GSP provides an opportunity for a variety of recreational activities to complement the established "Glamis" sand dunes experience of the surrounding ISDRA. These include an Adventure Center (offers activities such as OHV training, OHV rentals, etc.), amusement facilities, Desert Tours (off road experience), racetrack, shooting range, park/playground/picnic area, and other recreational-based activities.

b. Commercial/Retail - The GSP will allow for a wide range of commercial and retail development, which include fuel stations, rental facilities, and sporting goods stores to accommodate the needs of visitors to the Glamis area. It may also provide for RV Park(s) to accommodate a small number of users that desire to have conveniences not found in open dry camping.

c. Storage - OHV and RV storage is an existing land use within the project site. The GSP will provide for storage for OHVs and RVs to allow visitors to store their vehicles at Glamis year around.

d. Entertainment - The Glamis area has long been known as the premier destination for OHV enthusiasts to enjoy their recreational activities within the world-renowned Imperial Sand Dunes. The GSP will allow for a range of entertainment land uses whose purpose is to enhance the visitors experience to the Glamis Area. Entertainment land uses could include an adventure center, amusement facilities, movie theater, obstacle courses, shooting range, fireworks display area, and racetrack.

e. Hospitality - With an average annual attendance of 200,000 visitors to the Glamis area, the GSP will provide for the development of various hospitality services to provide visitors with the accommodations they need to fully enjoy all that the Glamis area has to offer. Hospitality land uses may include medical services facility, mobile food trucks, tourist information center, public showers, public restrooms, and hotel/motel facilities.

f. **Residential -** The GSP will allow for limited residential development to accommodate those who require temporary housing in Glamis. Housing will be developed in the form of guest, employee housing, seasonal private residences and temporary use of RV's on Owner's property.

g. **Renewable Energy -** Due to the remote location of the GSP, renewable energy facilities will be developed in order to provide electricity to the Glamis area. The GSP will allow for the development of a solar energy generation facility (including battery storage) located throughout the GSP, shown on Exhibit I-8, *Conceptual Site Plan.*

h. **Infrastructure Improvements -** In order to properly accommodate the large volume of visitors to the Glamis Project area, existing water and wastewater facilities will need to be improved along with the development of additional infrastructure. The GSP will allow for the development of utility buildings, utility substation(s), and water/wastewater treatment facilities.

i. **Research & Development Facility -** The GSP provides for a research & development (R&D) facility that will take advantage of the close proximity of the ISDRA. This R&D facility will allow Polaris to test their equipment in a natural and private setting.

C. Project-Wide Development and Design Standards

This section of the Specific Plan presents the conceptual circulation plan, conceptual water and sewer plan, conceptual drainage plan, conceptual open space and recreation plan, conceptual grading plan, and discusses the public safety services and maintenance plan. These associated components define the overall master development concept for the Glamis planned mixed-use development and identifies the objectives, descriptions and applicable development standards for each.

1. Conceptual Circulation Plan

a. Development Concept

The primary objective of the Conceptual Circulation Plan for the GSP is to meet the vehicular/OHV traffic needs of the recreational visitors by providing safe, direct and convenient access to the project site and surrounding sand dunes. During the preparation of the GSP, stakeholder meetings were held (in June through August 2019) with Caltrans District 11, the Imperial County Transportation Commission, the County of Imperial - Public Works Department, the Bureau of Land Management (BLM) – El Centro Field Office, and other local governmental agencies, in order to receive input into the overall development and implementation of the GSP. These stakeholder meetings were intended to obtain input from these transportation agencies to make sure the circulation of the project site would be consistent with their requirements and general direction, and that the GSP would be properly integrated with the County Transportation System with the Regional Transportation System.

As shown in Exhibit II-1, *Conceptual Circulation Plan,* there are a total of six (6) proximate vehicular access points to the project site with a gateway feature on SR-78 at the east and west boundary of the project site. Primary accessibility to the project site will be via SR-78 which serves as the main transportation route for cars and trucks traveling between Brawley and Blythe. As shown in Exhibit II-1, the primary access point will be an intersection of "Glamis Mainstreet" and SR-78. This intersection may, in the future as traffic counts warrant, be signalized and will provide access to the Planning Areas north and south of SR-78. The "Glamis Mainstreet" will serve as the main thoroughfare for

circulation across Planning Areas 1, 2, 3, and 4 and currently serves as the main OHV access route to the BLM land directly to the south.

To accommodate the anticipated vehicular traffic flow, Exhibit II-2, *Conceptual Intersection Plan* shows a conceptual intersection plan with proposed cross-sections subject to final design and approval from Caltrans. Exhibit II-2 shows, in concept, the portion of SR-78 traversing through the GSP area being expanded from two thru lanes with an ultimate right-of-way (ROW) width of 40 feet to a total of five (5) lanes with an ultimate ROW width of 72 feet. Per Exhibit II-2, the segment of SR-78 west of the proposed intersection would have three easterly lanes – one thru lane, one left turn lane and one right turn lane – and two westerly lanes with one thru lane and an acceleration lane terminating approximately 1000 feet from the intersection. The segment of SR-78 east of the intersection is of a similar configuration of the western segment with the number of lanes in each direction reversed and the acceleration lane terminating approximately 600 feet from the intersection. The proposed lane configuration would accommodate anticipated turning movements from all directions in a manner that would prevent collisions and provide safe circulatory direction. As noted in Exhibit II-2, extensive coordination with Caltrans and the County of Imperial will be needed to determine the final design elements for SR-78 within the project area.

Access will also be provided along Wash Road (an unimproved road parallel to the UPRR) from SR-78 from which Planning Areas 1, 7 and 8 will be accessible. Wash Road, which is maintained by the BLM, will continue to function as a primary access road providing access in a southeasterly direction (parallel and west of the UPRR) to BLM land (and camping areas, etc.) located further southeast. Access to Planning Areas 5 and 6 will be provided east of the UPRR along SR-78 via dirt roads. Access to Planning Areas 5 and 6 will be restricted to passenger and service vehicles and RVs, this will prevent unsafe pedestrian and OHV crossing of the UPRR. Ted Kipf Road is a County-maintained dirt road which serves as access to BLM land (ISDRA) the NADW and other BLM lands to the north of the project site. Access will not be provided to Ted Kipf Road. Emergency vehicle access will be provided via the south side of SR-78 immediately due east of the western gateway feature for emergency access to Planning Area 1. The emergency access is primarily intended for use during special events when there is the possibility of large numbers of visitors being on the project site. This access will have minimal improvements and will generally be controlled with a gate when not needed.

The GSP will address the historical uncontrolled OHV and pedestrian movement through implementation of circulatory project design features to promote safe circulation. The GSP will have strategically placed signage for speed limits throughout the project site in order to prevent OHV/pedestrian/vehicular collisions as well as to assist with dust control measures. As shown in Exhibit II-1, an OHV and pedestrian undercrossing is a proposed alternative in the vicinity of the SR-78/Glamis Mainstreet intersection. This undercrossing would allow OHV's and pedestrians to cross underneath SR-78, providing for easy and safe access from Planning Area 1 to Planning Areas 2, 3, and 4. The potential undercrossing is intended to eliminate OHV's from crossing HWY 78. Furthermore, Exhibits I-8 and II-1 show proposed pedestrian connections throughout the project site. These pedestrian connections will provide for logical and safe movement throughout the project site. As shown in Exhibit II-1, the project site includes the Sand Highway that runs parallel to SR-78 the northern edge of Planning Area 1. The Sand Highway is an existing OHV thoroughfare providing access to the Glamis Beach Store from the adjacent BLM land located to the west of the project site. As such, the Sand Highway will remain as an OHV thoroughfare. OHV circulation will occur primarily via the "Glamis Mainstreet" for access to the open BLM lands to the south. While Pedestrian and OHV crossing of UPRR at various locations along the track has occurred for years, this plan attempts to discourage such crossing

from the project site and will require the posting of appropriate signage. Keeping the public from crossing the UPRR is beyond the ability of the project and with or without this project those crossings will continue. NOTE: At the preparation of this GSP, the CPUC has been working with all stakeholders, to develop a plan for a safe crossing of the UPRR for OHV and pedestrians at some location in this general area.

Permanent signs and circulatory elements will be implemented as necessary to support the phased build-out of permanent structures within the GSP. All future signs and circulation elements will be implemented in compliance with Federal, State, and local standards and be designed in concert with the designed connectivity of the Conceptual Circulation Plan. Urban hardscape (i.e., paved roads, curb and gutter, etc.) will be built in tandem with all proposed permanent structures. All such improvement will be subject to County of Imperial and Caltrans review and approval, as applicable.

As the GSP is built-out with permanent and/or temporary structures per the proposed phasing plan, driven by market conditions, special design elements (i.e., signage) will be developed with Caltrans during final design. Furthermore, build-out of permanent uses within the GSP will incorporate clearly marked areas designated only for OHVs and passenger vehicles to prevent collisions.

Special Events

Special events to be held within the GSP area, such as Camp RZR, that often include large assemblages of people and equipment, will benefit from the circulation improvements described herein, and will also be required to adhere to the traffic regulation standards set forth in Chapter III, *Zoning Ordinance,* including notification of Caltrans, the County, California Highway Patrol, Imperial County Sheriff, and other affected agencies, along with preparation of a Traffic Management Plan. In combination with the standards set forth in Section III, all special events will also be required to prepare a Special Events Management Plan (SEMP) notification that subjects special events to standard protocols and conditions, including circulation-related protocols and conditions, to allow for special events to occur. The SEMP is further discussed below.

b. Circulation Plan Objectives

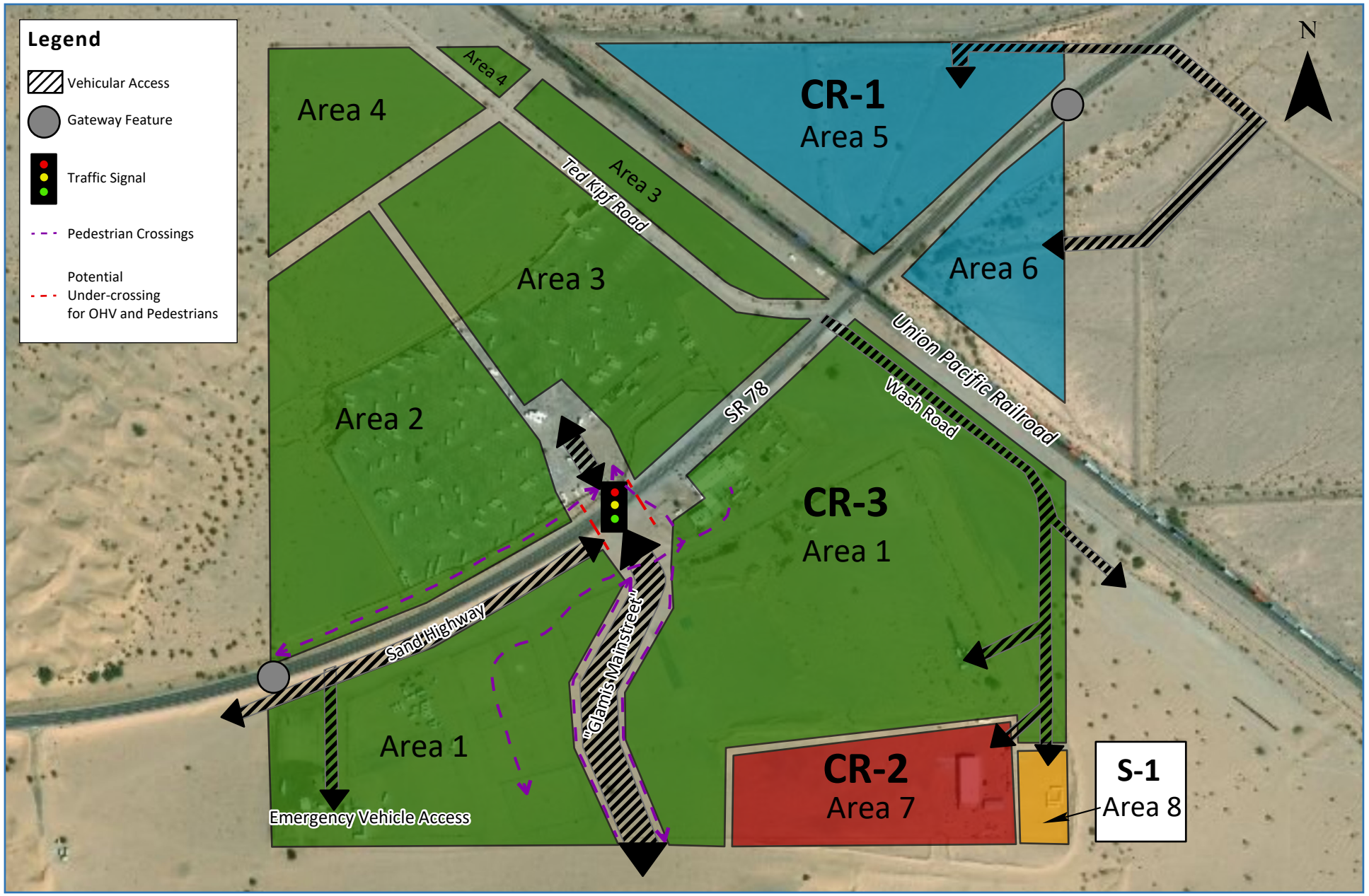
With each phase of development the following objectives will be implemented in order to achieve the goals of the GSP:

- Provide safe and appropriate vehicular access to all allowable developed areas within the project site;
- Provide internal clearly marked signage for both passenger vehicles and OHVs, including speed limits for dust control and lighted signage for nighttime circulation;
- Adhere to development standards that are consistent with the GSP, the County's General Plan Circulation Element, and Caltrans District 11 standards; and
- Promote public safety by discouraging and/or restricting unsafe pedestrian and OHV crossing of SR 78 and the UPRR.

2. Conceptual Water Plan and Sewer Plan

a. Development Concept

Current water service is provided by an existing water treatment system to service existing uses of the project site. The existing water treatment system is currently being upgraded and a water treatment plant complying with California standards is being constructed to meet the needs of the current uses and with room for expansion. As new development is implemented, this wastewater plant will be expanded as determined by the regulatory agencies. Likewise, the water system will be expanded to serve the various phases of development.



1 IN = 540 FT

Conceptual Circulation Plan

Exhibit II-1

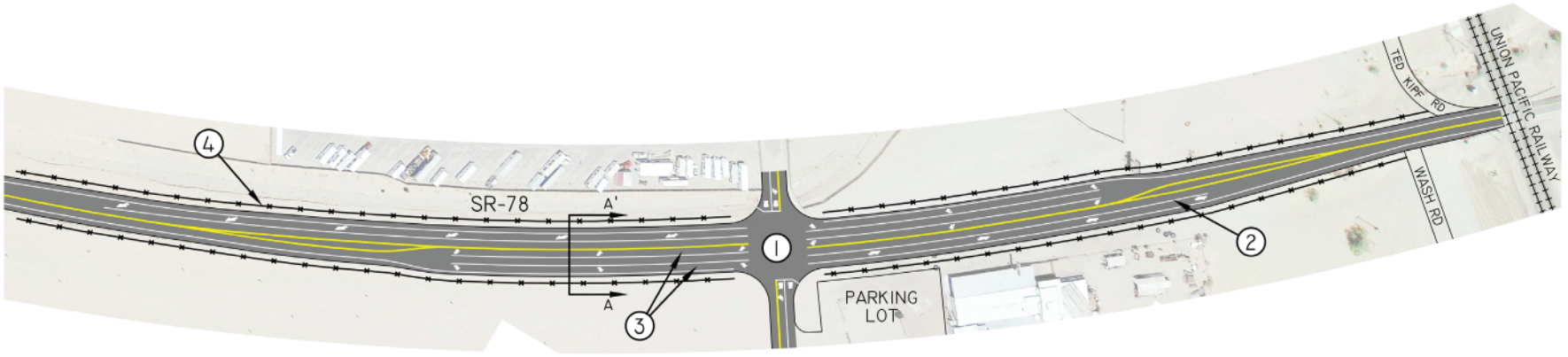
Glamis Specific Plan

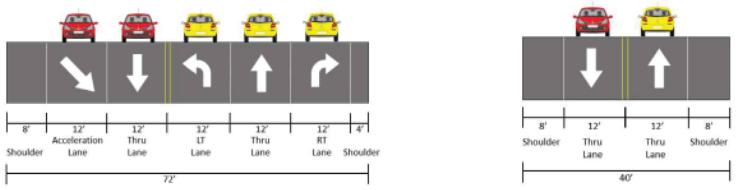
GENERAL NOTES:

- A TRAFFIC STUDY IS NEEDED TO DETERMINE SEVERAL DESIGN ELEMENTS
- EXTENSIVE COORDINATION WITH CALTRANS AND THE COUNTY IS NEEDED TO DETERMINE THE FINAL DESIGN ELEMENTS
- ANY DEVIATIONS TO DESIGN STANDARDS REQUIRE PROCESSING AND APPROVAL BY CALTRANS HEADQUATERS
- TRAFFIC MANAGEMENT PLAN IS NEEDED DURING LARGE SPECIAL EVENTS (I.E. CAMP RZR)

NOTES:

1. PROVIDE A TRAFFIC SIGNAL IF WARRANTED. IF A TRAFFIC SIGNAL IS WARRANTED, ACCELERATION LANES MAY NOT BE NEEDED.
2. 600 FEET OF ACCELERATION LANE LENGTH IS DEPICTED. TO PROVIDE THE RECOMMENDED 960 FEET OF ACCELERATION LANE LENGTH, COORDINATION IS NEEDED WITH THE UNION PACIFIC.
3. 100 FEET OF LEFT AND RIGHT TURN LANE STORAGE IS ASSUMED. THE ASSUMED STORAGE LENGTH PLUS 485 FEET OF DECELERATION LENGTH IS DEPICTED.
4. PHYSICAL BARRIER ALONG PROJECT FRONTAGE.





PROPOSED A'-A

EXISTING A'-A

Conceptual Intersection Plan

Exhibit II-2

Glamis Specific Plan

Wastewater generated by the Glamis Beach Store, restaurant and bar is currently being discharged into an existing septic tank located near to those buildings. Future wastewater treatment needed (i.e., secondary and tertiary treatment) will be determined by the amount of wastewater forecasted to be generated by each phase of structural improvement.

The GSP will implement water efficient appliances (i.e., sinks, toilets, showers, wash-down areas, etc.) that will minimize potential water waste and conserve water to the maximum extent possible.

Exhibit II-3, *Conceptual Water and Sewer Plan*, shows the location of the existing and proposed infrastructure within the GSP.

b. Water and Sewer Plan Objectives

The following objectives will be implemented with each phase of development to achieve the goals of the GSP:

- Provide adequate, clean and safe water to the project site and recreational visitors;
- Implement water efficient appliances and conservation measures (i.e., desert scape) to reduce water consumption to the maximum extent possible; and
- All interim and permanent water and sewer infrastructure will meet local, State and federal health and safety standards.

c. Conceptual Water and Sewer Plan Standards

- All water lines shall be placed underground in accordance with County of Imperial requirements.
- All domestic water and sewer facilities shall be designed per County of Imperial requirements. Facility sizing and location are conceptual and will be refined during final site plan development.
- Water and sewer facility shall be designed and installed in accordance with the requirements and specifications of the County of Imperial.
- Construction of domestic water and sewer facilities shall be timed to adequately serve the Planning Areas in each stage of development or as needed to ensure adequate service and public health.

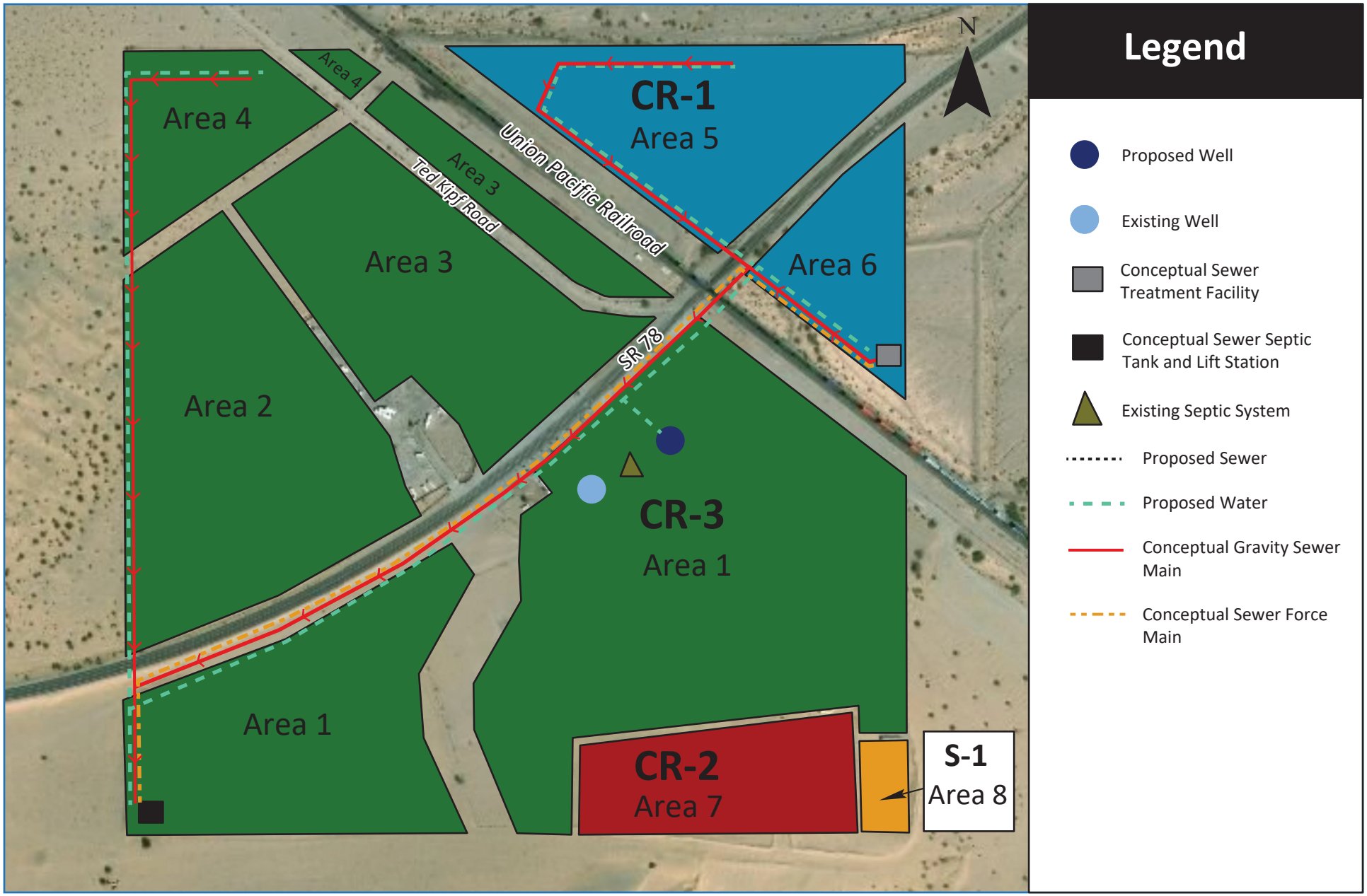
3. Conceptual Drainage Plan

a. Development Concept

As shown in Exhibit II-4, *Existing Drainage*, the existing topography and drainage of the project site generally drains from the northeast to the southwest via existing earthen channels and berms. The northeast portion of the project site (Planning Areas 5 & 6) are openly affected by offsite flows and are directed towards three existing concrete culverts that pass under the UPRR. The drainage flows from these three concrete culverts underneath the UPRR, flow through and/or around portions of the existing project site (Planning Areas 1, 2, 3, 4, 7 and 8) towards the southwest, which are located north and south of SR-78. All planning areas southwest of the UPRR, where future land uses are proposed, are protected by earthen channels and berms. The remaining open areas, throughout the entire site, have areas that are protected by existing earthen channels and berms.

As shown in Exhibit II-5, *Conceptual Drainage Plan,* the conceptual grading provides flood protection for future land uses within the entire project site and release the drainage to the southwest in an overall equivalent historical pattern of natural drainage courses consistent with California drainage law.

The on-site design northeast of the UPRR will provide flood protection (Planning Areas 5 and 6) by continuing the off-site flows with



1 IN = 550 FT

Conceptual Water and Sewer Plan

Exhibit II-3

II. Specific Plan

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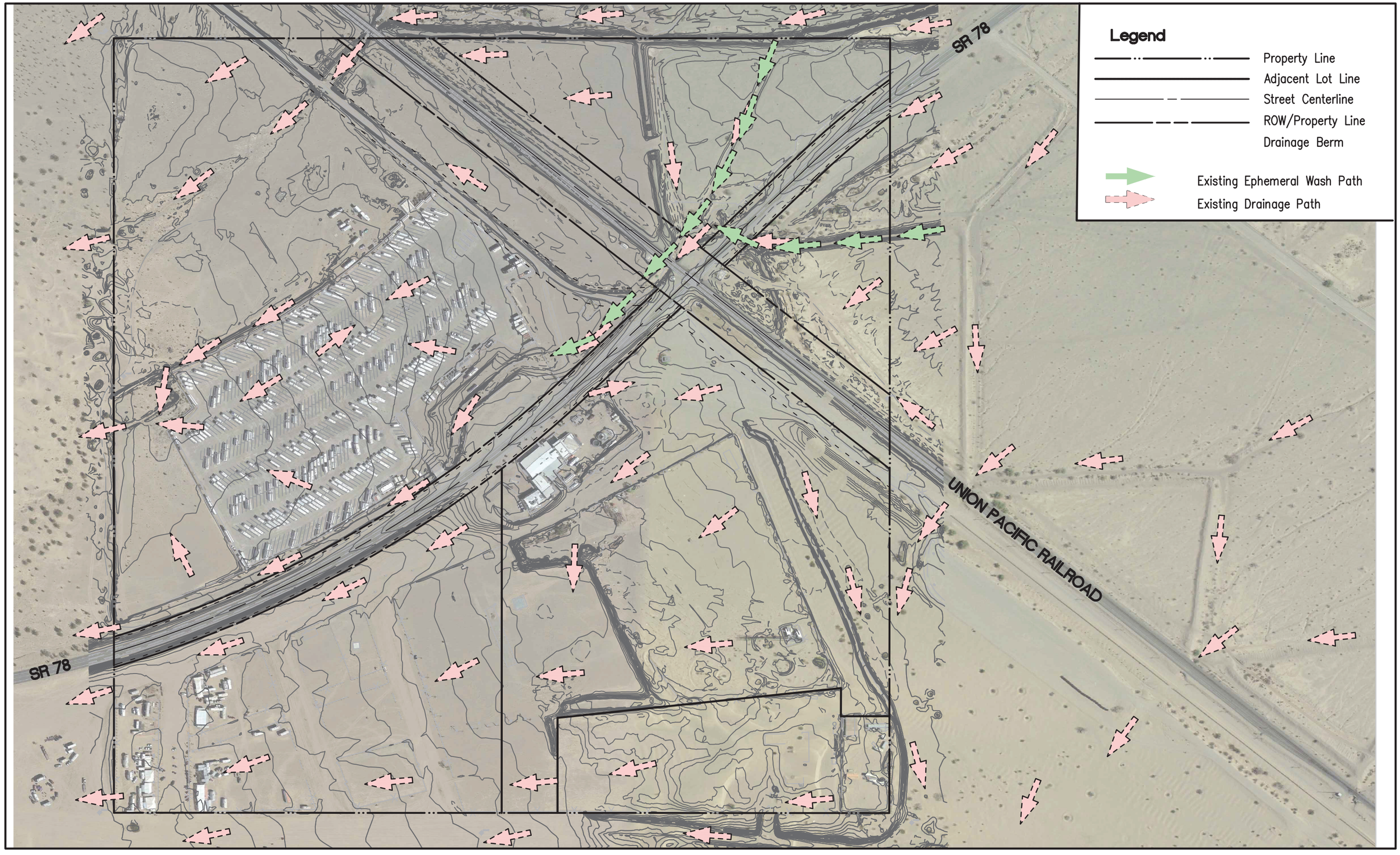
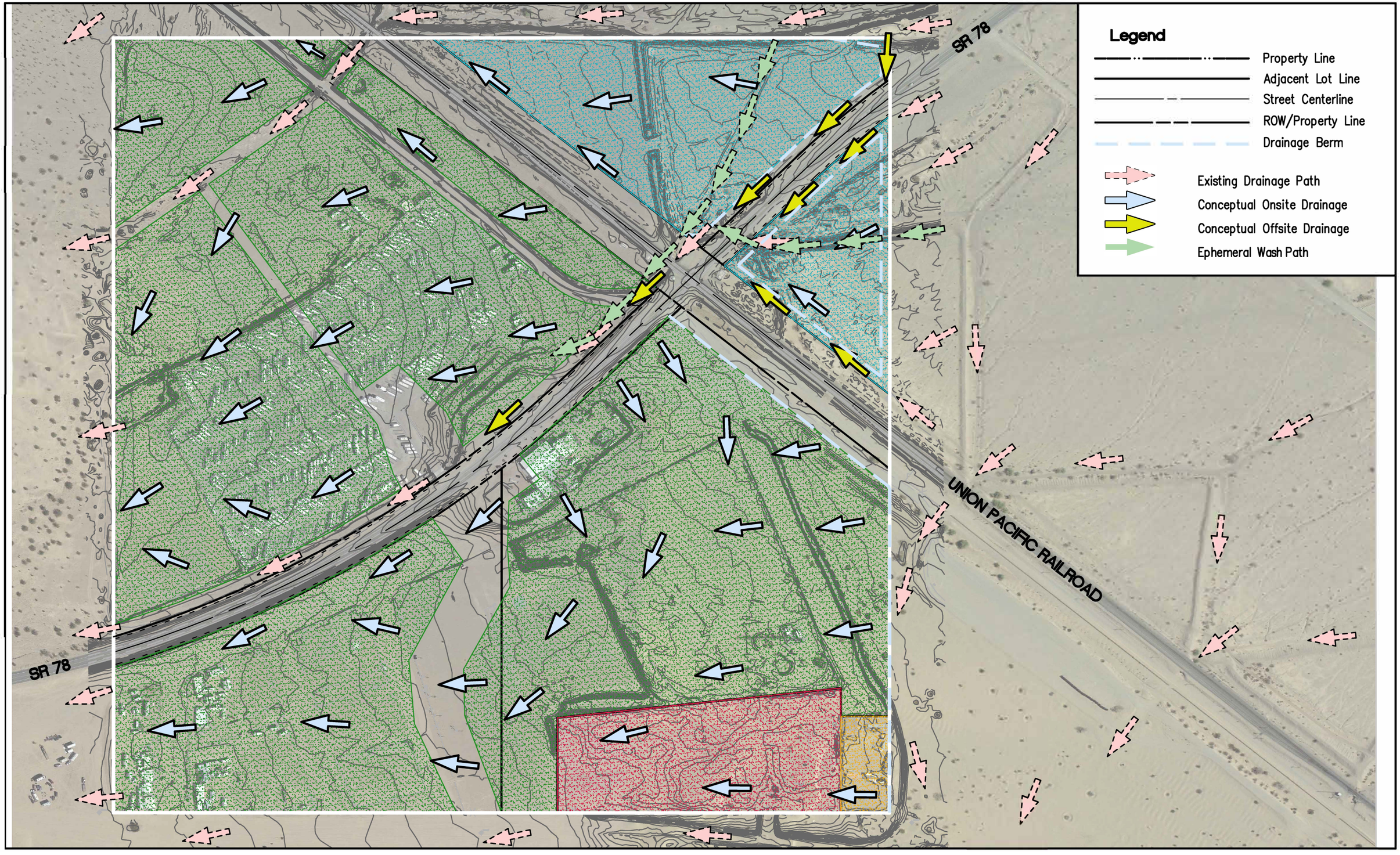


Existing Drainage



Conceptual Drainage

modifications to each of the earthen drainage berms and channels. These modifications will re-direct the drainage around each of the planning areas to the southwest towards the three existing concrete culverts that pass under the UPRR. The modified existing earthen berm north of Planning Area 5 will continue to redirect flows north and west as will a new earthen berm to the southeast for planning area 6, to the south and west. The remainder of the drainage will be directed into the modified existing earthen channels along each side of SR 78. Each of these earthen channels and berms will be constructed on-site and will re-direct the existing flows in a manner consistent with the surrounding drainage patterns and practices. The manner and release of the drainage flows will be equivalent to the existing capture, conveyance and release to the Southwest under the UPRR, via existing concrete culverts.

b. Conceptual Drainage Plan Objectives

The following objectives will be implemented with each phase of development to achieve the goals of the GSP:

- Provide safe and adequate drainage infrastructure to accommodate flood flows and protect recreational visitors and permanent/temporary structures; and
- Capture and treat all hazardous liquids as a result from vehicle repair or fueling stations to prevent groundwater pollution.

c. Conceptual Drainage Plan Standards

- Final drainage facilities shall be designed per County of Imperial requirements.
- Construction permits may require the applicant to prepare a Stormwater Prevention Pollution Plan (SWPPP) and a Water Quality Management Plan (WQMP) and implement source control and structural BMPs during and after construction activities.
- Proposed grading and drainage improvements shall conform to the latest building codes adopted by the governing agencies. Grading of the project site shall be designed so as to protect all building pads from the 100-year storm event and convey offsite flow in accordance with County of Imperial approval. Proposed permanent structures will be regulated in accordance with the Federal Emergency Management Agency (FEMA).
- Construction of drainage facilities shall be timed to adequately service each stage of development within affected Planning Areas.

4. Conceptual Open Space and Recreation Plan

a. Description

The Conceptual Open Space and Recreation Plan is intended to complement the existing and future recreational use of adjacent BLM land. In accordance with the policies listed in the County of Imperial General Plan Land Use Element, the GSP provides for adequate open space within the development areas that will complement and maintain the existing open space character of the area. Proposed permanent structures will be sited appropriately to allow views from SR-78 to the open space beyond and will consider the adjacent natural resources. As shown in Exhibit I-8 there are open space areas that have been identified within Planning Areas 1, 2 and 3 to preserve the existing open space character of the area while allowing for adequate space for temporary special events and activities to be held, such as service stations and mobile food trucks located within Vendor Row.

Recreational amenities of the GSP will build upon the existing Glamis Beach Store through development of a restaurant and bar. Additionally, recreational amenities will consist of an Adventure Center that will offer both off-site and on-site recreational activities that are conducive to the Glamis area. Among the activities that may be included are: off-site OHV

training; OHV rental; hiking and biking; on-site activities that could include a shooting range, sporting goods store; desert tours; and activities connected with the adjacent BLM lands. The GSP will also include an Amusement Center that is geared toward family-oriented activities that among other things may include: arcade games; batting cages; miniature golf; playgrounds; music and dancing activities; laser tag; and virtual reality games. Furthermore, both vehicular and pedestrian oriented desert tour excursions into certain portions of the desert will be provided to allow the public to see the natural resources of the area generally under the direction and control of a tour guide. These tours could be excursions through the sand hills via OHVs in a controlled tour environment either through vehicles driven by the tour operator or with vehicles driven by individuals that would follow the tour guide in a controlled manner. In concert with the OHV-oriented recreational activities, vehicle repair vendors will be located within Vendor Row. All vehicle repair vendors will be required to conduct all operations over raised impervious concrete pads, or an equivalent station in order to prevent accidental spillage of hazardous materials (i.e., brake fluids) as a result of vehicle repair activities.

With the NADW directly to the northwest of the project site, fencing will be installed along the north-western boundary of Planning Area 4 with interspersed signage to prevent OHV travel into the NADW as restricted by BLM. Prevention of OHV travel into the NADW will serve to preserve the natural resources present within the NADW. Interpretive signs describing the natural resources (i.e., Desert tortoise and other wildlife, as well as native plants) and history of Glamis will be strategically placed throughout the project site, with specific emphasis along the frontage abutting the NADW, for educational purposes. Interpretive signs will be collaboratively developed with BLM. Additionally, development of the GSP will incorporate avoidance and minimization measures to mitigate potential impacts to onsite and/or adjacent natural resources to the greatest extent. Such measures will include preconstruction surveys of sensitive wildlife species (i.e., Flat-tailed horned lizard), presence of a biological monitor for each area of active construction, removal of all invasive plant species, among other applicable measures.

The GSP will allow for the operation of multiple special events to enjoy the unique natural resources and elements provided by the Glamis area. Special events to be held within the GSP will allow for either public or private activity events allowing the assembly of a large numbers of people, including but not limited to; a concert, a trade show, an exhibition, a carnival, fireworks display, OHV activities including races, a stunt show, or exhibition, and similar uses. Proposed temporary special events will enhance and continue to build from the historical momentum of the Glamis area regarding past off-road events and the world-wide notoriety as the epicenter of the sand dunes OHV experience. Special events, such as Camp RZR, to be held at the GSP area will be subject to the standards set within Section III, *Zoning Ordinance*, and the standards/protocols listed within the SEMP (described further below in this Section). All proposed special events will implement adequate safety procedures and protocols to ensure safe OHV accessibility to surrounding BLM sand dune areas.

b. Conceptual Open Space and Recreation Plan Objectives

The following objectives will be implemented with each phase of development to achieve the goals of the GSP:

- Build upon and enhance the OHV experience that off-road desert enthusiasts know and love;
- Preserve and maintain the existing open space character of the area through strategic design and configuration of proposed permanent structures;
- Provide safe and fun recreational activities and amenities to recreational visitors; and

- Provide for preservation of the adjacent natural resources (i.e., NADW) through signage and educational initiatives.

c. Conceptual Open Space and Recreation Plan Guidelines

- All private recreational facilities and open spaces shall be maintained by the Applicant.
- Landscaping will be desert scape and minimal to be consistent with the existing nature of the project site and achieve reduced water consumption.
- Preservation operations and physical development will consider and protect the adjacent natural resources.

5. Conceptual Grading Plan

a. Development Concept

As shown in Exhibit II-6, *Conceptual Grading and Drainage*, the purpose of the conceptual grading plan promotes contours similar to existing conditions of the project site; however, it increases the area protected from flooding and provides for more flexibility in creating fluent layouts for each of the conceptual planning area needs.

The use of the existing and modified earthen channels and berms for the project assist in providing an environment similar and consistent with the surrounding drainage patterns and practices. The manner of capture, conveyance and release of the drainage flows around and/or through the projects planning areas also assists in preserving the historical pattern of natural drainage courses. Finally, the conceptual grading and drainage plan, helps the GSP to meet the site drainage requirements and County guidelines.

b. Conceptual Grading Plan Standards

Precise grading plans will be prepared for each phase of development of the GSP. Precise grading plan(s) will comply with the basic development standards and criteria described herein.

- All grading activities shall conform to Imperial County standards, shall be in substantial conformance with the Conceptual Grading Plan and shall implement any grading related mitigation measures.
- Prior to development within any Planning Area of this Specific Plan, an overall Conceptual Grading Plan for the site and the individual development area shall be submitted for Planning Department approval. The overall Conceptual Grading Plan shall be used as a guideline for subsequent detailed grading plans for individual stages of development within that Planning Area. Such plans shall include: techniques employed to prevent erosion and sedimentation as well as eliminate source pollutants during and after the grading process; approximate time frames for grading activity; identification of areas which may be graded during high probability rain months; and preliminary pad elevations. Grading work shall be balanced onsite wherever possible.
- A grading permit shall be obtained from Imperial County prior to the start of grading activity.
- If any historic or prehistoric resources are discovered during grading, a qualified archaeologist shall be consulted to ascertain their significance, as specified in the project environmental document.
- If human remains are discovered, work shall halt in that area and procedures set forth in California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be followed, including notification of the County Coroner. If Native American remains are present, the County Coroner shall

contact the Native American Heritage Commission to determine and designate a Most Likely Descendant.

- The GSP will comply with all National Pollutant Discharge Elimination System permit requirements prior to commencing grading activities.

6. Public Safety Services

a. Fire Protection

Fire protection services are provided to the project site by the County of Imperial Fire Department through the Brawley Fire Department Station, located in the City of Brawley approximately 25 miles east of the GSP planning area. There are existing Fire hydrant connections within the "Vendor Row" area. Additional connections will be implemented to meet the needs of the further build-out of the GSP. During Special Events, on-site fire protection will be provided with applicable fire protection services and apparatus.

b. Law Enforcement

The County of Imperial Sheriff's Department provides law enforcement to the GSP planning area. Sheriff's officers that patrol the area are based at the Brawley Police Department in the City of Brawley located approximately 27 miles east of the GSP planning area. During Special Events, on-site law enforcement will be provided with applicable services and apparatus.

c. Development Impact Fees

The County of Imperial has a Development Impact Fee (DIF) which is authorized by County of Imperial Ordinance No. 4.32. This fee is applied to all development projects in incorporated and unincorporated County of Imperial land. Payment of the DIF is required of developers to fund public facilities such as fire protection facilities and sheriff facilities. As the GSP is developed, DIF fees will be required to ensure that resources will be available for capital improvements to implement the County's capital and operational funding of future facilities.

The principal sponsor of maintenance of private improvements including streets, common recreation areas, and stormwater conveyance features within the GSP will be the landowner, Polaris. Caltrans District 11 is responsible for maintenance within the SR-78 ROW. The UPRR is responsible for maintenance within their ROW. Maintenance of Ted Kipf Road is the responsibility of the County of Imperial, and the BLM maintains all adjacent BLM lands. Special maintenance needs and resolutions will be determined during final design and processing of maps and land use/entitlement applications for the community.

7. Signs, Signage, Billboards, and Monument Signs

The purpose and intent of signage development standards is to provide and promote for the orderly and attractive construction, placement, and display of signs within the Specific Plan. It is the policy of the County of Imperial that the primary purpose of signs is for identification and public information. All signs shall be located on the property on which they are advertising unless otherwise specified. Signs that cause a distraction and present potential safety hazards, as well as, aesthetic problems or public nuisance problems are discouraged and/or prohibited.

Signage types permitted within the Specific Plan area are found below. Signage within the Glamis Specific Plan shall be designed and built in accordance with Imperial County's Signage Development standards found in Title 9 of the County of Imperial Zoning Ordinance. All temporary, on-site advertising signage can only be requested and applied for by the Property Owner.

1. Two Electronic Marquee Signs
2. Signs Attached to Buildings

SR 78

UNION PACIFIC RAILROAD

SR 78

Legend

- Property Line
- Adjacent Lot Line
- Street Centerline
- ROW/Property Line
- Drainage Berm

- Ephemeral Wash Path
- Existing Drainage Path
- Conceptual Onsite Drainage
- Conceptual Offsite Drainage

Earthworks

Proposed Concept Cut .....140,794 c.y.
Proposed Underpass Cut .....6,667 c.y.
Proposed Concept Fill .....146,439 c.y.
..... Total Concept to Balance ....

Conceptual Grading and Drainage

Exhibit II-6

3. Two Billboards
4. Special Signs – additional signage necessary for specific types of onsite advertising and operational instructions or directions.

D. Planning Area Development Standards

Development standards for the GSP have been established at two levels: (1) standards that apply universally to the overall project as set forth in Section C of this chapter, and (2) those standards found in this section that apply specifically to the individual planning areas and further reinforce the overall project standards. This chapter provides a list of design features/standards that are applicable to each planning area.

As illustrated in *Exhibit I-7 – Zoning Designations and Planning Areas*, and Exhibit I-8, *Conceptual Site Plan*, the Glamis Specific Plan consists of 8 Planning Areas. Primary access to the GSP is taken from SR 78.

Exhibit I-7 also illustrates zoning within each Planning Area. The applied zones include the Community Recreation (CR-1, CR-2, and CR-3) and the S-1 zones. Furthermore, it is anticipated that the Planning Areas will be developed in 4 phases (refer to Exhibit IV-1, *Glamis Specific Plan Phasing* and Section IV, *Implementation*, below). Six Planning Areas are located along SR-78. Circulation flow will be provided via the "Glamis Mainstreet", which will interconnect by crossing SR 78. A secondary and emergency only access point to/from the project site to SR-78 will be provided on the west side of the project site, immediately south of SR-78.

The GSP area and greater Imperial Sand Dunes area has been historically utilized for OHV recreational events and activities. The Glamis Beach Store has existed for 41 years and has served as a focal point for OHV activities. A special recreational event called "Camp RZR" has occurred since 2012 that hosts as many as 20,000 visitors each year. This event takes place primarily in Planning Area 1 and has been operating annually as a "seasonal event" during late October. The expanded development of Planning Areas 2 and 3 would allow for additional special events to be held in addition to the longstanding Camp RZR. These events may include concerts, races, social gatherings, sporting activities, educational activities, training activities, and may include pyrotechnics and other entertainment venues. A descriptive summary of each Planning Area comprising the Glamis Specific Plan is presented below. The Preferred/Permitted Land Uses of each CR Zone is provided in Chapter III, *Zoning Ordinance*.

1. Planning Area 1

a. Descriptive Summary

Special events such as Camp RZR have been historically hosted within Planning Area 1. Planning Area 1 is adjacent Open RMZ (within the ISDRA as discussed in Chapter 1) which provides for the greatest OHV accessibility of the entire project site. As such, this area is the most developable area of the GSP due to the fewest safety concerns such as pedestrian and OHV crossings along SR 78 and the UPRR, access to the adjacent BLM land, and existing infrastructure. Planning Area 1 is designed to offer unique passive and active recreational activities intended to meet the needs of all age groups and physical abilities where focused land uses and activities are anticipated. This planning area will be a central activity hub to include the following: adventure center and amusement facilities; convention area for entertainment events; desert tours and obstacle course; hotel/motel accommodations; a helipad; restaurant and bar; equipment storage; a medical service facility; space for mobile food trucks and vendor sales; public parking areas; public restrooms and showers; solar generating facilities; wastewater treatment facility; one cell tower; and the existing Glamis Beach Store.

The development of Planning Area 1 will occur in Phase One where the existing Glamis Beach Store, restaurant and bar, and OHV repair facility are located. Phase 1 will additionally include the development of Planning Area 5, which will provide for a Polaris R & D facility. Further discussion of Planning Area 5 can be found below in Chapter ll, Section 3 of Planning Area Development Standards of the Glamis Specific Plan. A pedestrian pathway would provide for pedestrian movement interconnecting to the special event space and other area activity nodes within Planning Area 1. Vendors and mobile food trucks with shade structures will be located in this area, as well as an emergency medical facility, solar facilities, and OHV parking. Primary access to Planning Area 1 would occur at the intersection of the "Glamis Main Street" and SR-78. Also, an OHV and pedestrian under-crossing of SR-78 could be located in the vicinity of that intersection (see Section C. 1. – Conceptual Circulation Plan for additional details). The Sand Highway follows the SR-78 and connects Planning Area 1 with BLM lands to the west. An emergency access entry is provided off SR 78, on the west side of Planning Area 1, allowing emergency vehicle access to the GSP.

b. Preferred/Permitted Land Uses

The CR-3 Zone, the most intense CR zone of the GSP, applies to Planning Area 1. The CR-3 Zone allows for a maximum range of recreational, commercial, resort, retail, medical, entertainment, and utility infrastructure land uses. Chapter III, *Zoning Ordinance,* specifies permitted and conditional land uses ibn the planning area.

Preferred land uses within Planning Area 1 include but are not limited to:

- Accessory storage buildings
- Adventure Center
- Amusement Facilities
- Bar(s)
- Billboards
- Bulk water sales
- Caretakers quarters
- Communications Facilities (i.e. towers)
- Condominiums
- Convention area
- Desert Tours (off road experience)
- Drive-in food facilities
- Employee Housing
- Entertainment Events
- Equipment Storage
- Film production / movie studio
- Fireworks display area (as permitted by fire department and other authorities)
- Fuel Station (gas/diesel)
- Fuel Station (Propane)
- Guest Housing
- Helipad (emergency/public)
- Hotel/Motel Accommodations
- Lighting or light shows
- Medical Services Facility
- Mobile food trucks
- Movie theater
- Obstacle Course / Technical driving area
- Oil, gas, geothermal exploration
- Off road driving school / Public workshops
- Park, Playground and Picnic area(s)
- Power Generation (on site use i.e. diesel/propane)
- Private Residence (s)
- Public Parking area(s)
- Public Restrooms
- Public showers
- Race track
- Rental Facilities (off road equipment/vehicles)

- Research and Development facilities
- Restaurant(s)
- Retail displays / entrance signage
- Retail sales
- RV Dump Station(s)
- RV Park
- RV Repair facility
- RV Storage
- Shooting range
- Solar Generating Facility including battery storage up to 30 MW for onsite and export
- Special Events in accordance with SEMP
- Sporting goods store(s)
- Stores (retail general)
- Stores (retail specialty)
- Temporary sales facilities
- Testing facilities (off road equipment)
- Tourist information center
- Training Facilities (off road vehicle use/safety)
- Utility buildings
- Utility Substation
- Vehicle parts sales
- Vehicle Repair and Service
- Vehicle Sale
- Vehicle storage
- Vehicle wash down area
- Vendor Sales Area(s) restricted by owner
- Viewing Deck or Tower
- Water/Wastewater treatment facilities
- Wedding Chapel
- Uses not listed that the Planning Director finds are consistent and similar to a permitted use.

c. *Development Standards*

To ensure the orderly and sensitive development of land uses within the GSP, the following general development standards are required for Planning Area 1:

1. Please refer to Section C, *Project-Wide Development and Design* Standards, above for the following standards that apply site-wide:

    a. II.C.1 – Conceptual Circulation Plan
    b. II.C2B – Conceptual Water Plan and Sewer Plan
    c. II.C.3 – Conceptual Drainage Plan
    d. II.C.4 - Conceptual Open Space and Recreation Plan
    e. II.C.5 – Conceptual Grading Plan
    f. II.C.6 – Public Safety Services

2. Planning Areas 2, 3 and 4

a. *Descriptive Summary*

As shown in Exhibit I-8, *Conceptual Site Plan,* Planning Areas 2, 3 and 4 provides for the expansion of the Special Event Area. The Special Events area will be expanded from Planning Area I in phases (see Chapter IV – *Implementation*, section F – Project Phasing Plan). This secondary recreational space will include the following: adventure centers and amusement facilities; convention area for entertainment events; public workshops; off road experience and obstacle course; a park equipped with a playground and picnic areas; and a training facility and rental facility. Planning Area 3 will mirror Planning Area 2 and will include the aforementioned amenities described for Planning Area 1 and 2. The potential under-crossing will be constructed at the south end of Planning Area 3. An existing historic cemetery located at the southeast corner of the parcel will be preserved. For purposes of ensuring that proposed construction will not impact the historic cemetery, an archaeological

monitor and one Native American monitor will be present for all construction activity within 50 feet of the historic cemetery.

Directly north of Planning Areas 2 and 3, Planning Area 4 is the farthest away from the central activity hub of Planning Area 1, making it an ideal location for the development of guest housing accommodations (i.e., glamping and seasonal residences). Adjacent from the NADW, Planning Area 4 will provide a remote and serene area to those staying in the proposed seasonal guest housing or RV Park as shown on Exhibit II-1, *Conceptual Site Plan*. A solar generating facility will also be developed along the eastern boundary of Planning Area 4. Furthermore, as part of the Conceptual Open Space and Recreation Plan, interpretive signage describing the natural resources included within the NADW and history of Glamis will be strategically placed along the frontage abutting the NADW, for educational purposes.

b. *Preferred/Permitted Land Uses*

The CR-3 Zone applies to Planning Areas 2, 3 and 4. Section 3, *Zoning Ordinance,* specifies permitted and conditional uses in these planning areas.

The preferred land uses within Planning Areas 2, 3 and 4 include but are not limited to:

- Accessory storage buildings
- Adventure Center
- Entertainment Events
- Equipment Storage
- Guest Housing
- Medical Services Facility
- Mobile food trucks
- Obstacle Course / Technical driving area
- Off road driving school / Public workshops
- Public Parking area(s)
- Public showers
- Public restrooms
- Racetrack
- RV Dump Station(s)
- RV Park
- RV Repair facility
- RV Storage
- Solar Generating Facility including battery storage up to 30 MW for onsite and export
- Special Events in accordance with SEMP
- Uses not listed that the Planning Director finds are consistent and similar to a permitted use.

c. *Development Standards*

To ensure the orderly and sensitive development of land uses within the GSP, the following general development standards are required for Planning Area 2, 3 and 4:

1. Please refer to Section C, *Project-Wide Development and Design* Standards, above for the following standards that apply site-wide:

    a. II.C.1 – Conceptual Circulation Plan
    b. II.C.2 – Conceptual Water Plan and Sewer Plan
    c. II.C.3 – Conceptual Drainage Plan
    d. II.C.4 - Conceptual Open Space and Recreation Plan
    e. II.C.5 – Conceptual Grading Plan
    f. II.C.6 – Public Safety Services

3. Planning Areas 5 and 6

a. Descriptive Summary

With the UPRR separating Planning Areas 5 and 6 from the rest of the Planning Areas of the GSP, the land uses within Planning Areas 5 and 6 are intended to restrict and discourage crossings of the UPRR. Planning Area 5 will provide for a Polaris R & D facility, which will only be accessible by Polaris employees. Planning Area 6 will include a RV park, RV storage, a wastewater treatment facility, and a dump station.

b. Permitted Land Use

CR-1 Zone applies to Planning Areas 5 and 6. The CR-1 Zone is proposed as the least intensive CR Zone of the GSP and allows for a limited range of land uses focused on research and development, employee housing and utility infrastructure uses. Section 3, *Zoning Ordinance,* specifies permitted and conditional land uses in these planning areas. These land uses are intended to restrict land uses that promote crossing of the UPRR.

The preferred land uses within Planning Areas 5 and 6 include but are not limited to:

- Accessory storage buildings
- Billboards
- Caretaker residence(s) maximum of 3 units
- Communication facilities i.e. towers
- Condominium housing
- Employee housing
- Equipment Storage
- Film Production/Movie Studio
- Fireworks display area provide it is approved by County Fire
- Fuel Station (gas/diesel/propane, including convenience mart)
- Guest housing
- Hotel/Motel Accommodations
- Lighting and light shows (none fireworks)
- Medical Service Facility
- Off road vehicle maintenance, repair, development, research by owner (no sales/leasing)
- Oil, gas, geothermal exploration
- Power Generation Facility
- Private Residences
- Research and Development Facility
- RV dump station provided it meets County requirements
- RV park
- RV & off-road vehicle storage
- RV repair facility
- Solar Generating Facility including battery storage up to 30 MW for onsite and export
- Special Events in accordance with SEMP
- Utility Buildings
- Utility Substation
- Vehicle Storage area
- Vehicle wash area
- Water &/or Wastewater treatment facilities
- Uses not listed that the Planning Director finds are consistent and similar to a permitted use.

c. Development Standards

To ensure the orderly and sensitive development of land uses within the GSP, the following general development standards are required for Planning Area 5 and 6:

1. Please refer to Section C, *Project-Wide Development and Design* Standards, above for the following standards that apply site-wide:
    a. II.C.1 – Conceptual Circulation Plan

b. II.C.2 – Conceptual Water Plan and Sewer Plan
c. II.C.3 – Conceptual Drainage Plan
d. II.C.4 - Conceptual Open Space and Recreation Plan
e. II.C.5 - Conceptual Grading Plan
f. II.C.6 – Public Safety Services

4. Planning Area 7

a. Descriptive Summary

The CR-2 Zone applies to Planning Area 7. Planning Area 7 is located on the southeast side of Planning Area 1 and has historically been used by a private landowner as a private residence and storage facility. The GSP will incorporate and expand on the existing land uses allowed in Planning Area 7, whose land uses will include: accessory storage buildings, communication facilities, condominiums, entertainment events, equipment storage, fuel station (gas/diesel/propane), off road vehicle maintenance/repair/development/research by owner (no sales or leasing), park/playground/picnic areas, power generation, and vehicle storage.

b. Preferred/Permitted Land Uses

Planning Area 7 is located within the CR-2 Zone. The CR-2 Zone is proposed as the moderate intensive CR Zone of the GSP and allows for a limited range of land uses focused on housing, equipment storage, power generation, and entertainment events. Section 3, *Zoning Ordinance,* specifies permitted and conditional land uses in these planning areas.

The preferred land uses within Planning Area 7 include but are not limited to:

- Accessory storage buildings
- Caretakers quarters not to exceed 3 units
- Communications Facilities (i.e. towers)
- Condominiums not to exceed 8 units
- Employee Housing not to exceed 4 units
- Entertainment Events (Private events not exceeding 30 people only)
- Equipment Storage
- Fuel dispensing (gas/diesel) for private on site use only, no commercial sales
- Guest Housing
- Off road vehicle repair, development, maintenance by owner (no sales or leasing)
- Park, Playground and Picnic area(s)
- Power Generation (on site use i.e. diesel/propane)
- Private Residence(s)
- Research and Development facilities
- RV Park (not to exceed 10 spaces)
- RV Storage
- Special Events in accordance with an approved SEMP
- Water/Wastewater treatment facilities

b. Development Standards

Please refer to Section C, *Project-Wide Development and Design* Standards, above for the following standards that apply site-wide:

a. II.C.1 – Conceptual Circulation Plan
b. II.C.2 – Conceptual Water Plan and Sewer Plan
c. II.C.3 – Conceptual Drainage Plan
d. II.C.4 - Conceptual Open Space and Recreation Plan
e. II.C.4 - Conceptual Grading Plan
f. II.C.5 – Public Safety Services

5. Planning Area 8

a. *Descriptive Summary*

The S-1 Zone applies to Planning Area 8. Planning Area 8 will be characterized by low intensity human utilization and small-scale recreation related uses. The intent is to designate this area for open space and recreational uses in concert with the existing OHV and recreational uses of the adjacent BLM land. The following are potential land uses: Accessory structures including cargo containers (provided an approved building permit and are subordinate to a primary building/use), crop and tree farming, directional signs, duck clubs, grazing, harvesting of any wild crop, hotels and motels, marinas, boat liveries and boat launching ramps, mobile home/RV park, residences (one per legal parcel), RV park, solar energy extraction generation (provided that it is for on-site consumption only), and home occupations per Division 4, Chapter 4 (home occupation permit required).

Planning Area 8 is located within the S-1 Zone and may be developed in Phase 2.

b. *Permitted Land Uses*

The GSP will provide for the following types of land uses to be developed within Planning Area 8:

- Accessory Structure including cargo container (provided they have an approved building permit and are subordinate to a primary building/use)
- Crop and tree farming
- Directional signs of not to exceed six (6) square feet in area but not including commercial advertising
- Duck clubs
- Fish farms
- Forest industries
- Grazing
- Harvesting of any wild crop
- Hotels and motels
- Marinas, boat liveries and boat launching ramps
- Mobile home/RV Park (provided 50% of the total use is for RV use)
- Residence (one per legal parcel)
- RV park
- Solar energy extraction generation (provided that it is for on-site consumption only)
- Home Occupation (per Division 4, Chapter 4; home occupation permit required)

c. *Development Standards*

Development standards of Planning Area 8 are consistent with the standards contained within the S-1 Zoning Ordinance of the County of Imperial Municipal Code.

E. Short Term Event Standards and Approval

The property covered by the GSP has hosted a number of exciting OHV and entertainment programs over the years that are open to the general public. The GSP provides for the continuation of such specialty events. To ensure proper health, safety and environmental management, the GSP requires the preparation of Special Event Management Plan (SEMP) that addresses protocols and topics contained herein. The SEMP and the SEMP Notification are included herein. The SEMP will be applicable to individual public events and includes standards and protocols to be implemented for each type of event based on the size of the attendance of that event. The SEMP will establish a distinctive set of Standard conditions to allow Special Events to occur without the need for an annual CUP or other discretionary approval by the County. These

Standards are intended to be adhered to by the event sponsor at each public event. The SEMP will be accompanied with an SEMP Notification which will act as a check-list by the agencies involved in each Event to ensure and convey compliance with the applicable protocols necessary to protect the public health and safety. As provided below, private events with limited attendance (300 or less attendees) and which are not open to the general public are not considered a Special Event and are exempted from submitting a SEMP notification.

Prior to each event, a SEMP addressing the following protocols shall be prepared and accompany the Special Event Management Plan notification to the Imperial County Planning and Development Services Department. The SEMP notification is subject to administrative approval outlined in the GSP Zoning Ordinance (Section III, chapter 5). If the applicant's SEMP Notification is approved by the County Planning and Development Services Director there will be no need to have a public hearing for the event. However, if there are Standards within the SEMP Notification that are not approved by the Director then the application can be forwarded to the Planning Commission and Board of Supervisors on appeal for their review.

Once approved by the County of Imperial, the SEMP will be disbursed to all involved agencies.

Special Events that are not open to the general public (defined here as Private Events) but held within the GSP boundary and that have no more than 300 participants are exempt from the SEMP.

Safety & Security Protocols

The SEMP will be organized to include detailed information for the implementation of the following at each Event.

Medical

Based upon the type of event, site layout and projected attendance the SEMP shall address the following:

- The specific number of medical personnel will be established based on the size of the Event.
- There shall be adequate medical staff onsite during all event operating hours.
- Locations of medical facilities based on event layout and projected attendance.
- Sample of appropriate signage to be used to direct event attendees to the medical facilities.
- A helipad is proposed on the property to allow for quick access. The helipad will be used for both general use as well as emergency use. A description of appropriate fencing and signage that will be placed to provide a safe and secure area for helicopters to land and take off.

Imperial County Sheriff's Department

Based upon the type of event, site layout and projected attendance the SEMP shall address the following:

- The specific number of law enforcement personnel will be established; and
- There shall be adequate law enforcement staff onsite during all event operating hours.

Imperial County Fire Department

Based upon the type of event, site layout and projected attendance the SEMP shall address the following:

- The specific number of fire department personnel will be established;
- There shall be adequate fire department staff onsite during all event operating hours; and

- An appropriate amount of fire apparatus will be provided.

California Highway Patrol

Based upon the type of event, site layout and projected attendance the SEMP shall address the following:

- The specific number of officers will be established; and
- If required, adequate California Highway Patrol personnel will be onsite during all event operating hours.

California Highway Patrol may be directing traffic on Hwy 78 and on/off the event parking lots. They will manage the highway traffic.

California Dept. of Transportation (CALTRANS)

Based on the type of event coordination with CALTRANS the SEMP shall address the following:

- An interim traffic management plan.

Imperial County Public Health Department

When an event has food vendors, the event and those food vendors will file for a "Community Event Organizer Permit" and Temporary Food Facility Permits as required by the Public Health Department.

Private Security

In order to supplement the efforts of law enforcement staff, additional private security will be contracted to help monitor all gates within the Event. The security contractor will be onsite beginning with the staging activities before the event. 24-hour security will be provided throughout the weekend.

Parking Attendants

Parking areas will be delineated for each Event. Attendants will be assigned to direct traffic to the parking areas. There will also be signage placed to efficiently direct travelers to the parking areas.

Trash & Recycling Attendants

There will be an appropriate number of dumpsters provided onsite for each Event. The number of dumpsters will be determined by the type of event, the time of day of the event, the projected number of attendees and the size of the designated area.

Venue Entry Points

Based upon the type of event and attendants the SEMP will provide an appropriate number of points of entry around the venue.

- These will be clearly marked as entry points with directional signage.
- Any secondary fenced-in entertainment areas inside the special event venue that requires a ticket for entry will have two security guards at each entrance.
- If tickets are required, staff will be checking tickets upon entry and there will be a minimum of two security guards at each entrance.
- All attendees that enter a Special Event requiring a ticket must have a ticket

Special Event Lighting

All on-site lighting shall comply with Title 9 of the Land Use Ordinance of the County of Imperial and the following:

- Lighting within the project area shall be low intensity and shielded to prevent spillover to adjacent properties.
- All lighting at the property line shall have back-flow screens to prevent spillover to the adjacent properties.
- All building mounted lighting shall also be focused down directly on the ground so to avoid spillover to adjacent properties.
- All lighting on the project site shall follow the guidelines listed above, except that:
    - Both private events and large special events with 100 or more attendants expected are allowed to use higher

intensity lighting for the duration of the event in order to create a safe environment for all attendees.

Emergency Evacuation Plan

An emergency evacuation plan will be included in the SEMP that indicates escape routes to vacate the site. These will be posted on several placards throughout the site, as indicated in the SEMP.

Service Areas

The SEMP will also include the following:

Temporary RV and Trailer Parking

The SEMP may provide for temporary RV and trailer parking for Event sponsors, staff, participants and attendees, within the Special Event area. Temporary RV and trailer parking guidelines will include general requirements for site access, layout, temporary services (if any) and emergency access. The Temporary RV and trailer parking will have time limits on the length of stay for all event staff. Event sponsors, staff, participants, and attendees shall be limited to entering the RV and trailer parking area no more than ten days prior to the event for event set up and must leave the RV and trailer parking area no more than seven days following the event, for the purpose of event tear down.

Handicap Parking

Handicap parking will be available at the venue. The number of handicapped spaces will be determined by the number of anticipated event attendees. These areas will be clearly marked with signage for each space.

Portable Toilets and Hand Wash Stations

The number of portable toilets and hand wash stations based on the size of the event, that will be located throughout the venue as indicated on the site layout

Drinking Fountains

An appropriate amount of drinking fountains will be placed throughout the venue. If drinking fountains are not to be used, the SEMP shall include alternative sources for drinking water.

Temporary structures/stages

Any temporary structures or stages shall comply with the California Building Code and be reviewed and approved by the Imperial County Building and Safety Department as applicable.

III. Zoning Ordinance

Chapter 1: General Provisions

§ 93301.00 Title
§ 93301.01 Purpose and Intent
§ 93301.02 Definitions
§ 93301.03 Planning Director Authority
§ 93301.04 Procedure to Request A Development Approval
§ 93301.05 Procedure to Allow for a Minor Change by Planning Director
§ 93301.06 Purpose and Applicability of Zones
§ 93301.07 Zoning Map
§ 93301.08 Zoning Categories

§ 93301.00 TITLE

This Division shall be known as the "Glamis Specific Plan Land Use Ordinance".

§ 93301.01 PURPOSE AND INTENT

The purpose of this ordinance is to implement the **Glamis Specific Plan, more specifically** the development, improvements and permitting of recreational commercial uses within the Glamis Specific Plan. The provisions stated within this Division supersede any requirements and procedures contained in other Divisions of Title 9 that might otherwise be applicable.

§ 93301.02 DEFINITIONS

A. **Accessory Structure:** Accessory Structure: An "Accessory Structure" is a detached structure that is incidental and subordinate to the primary use, which is located on the same lot/parcel. It may include carport, patio, sunshade, workshop, hobby room, garage, greenhouses, storage building or similar structure. Cargo containers may be used as an accessory storage structure with an approved building permit, if so required.

B. **Adventure Center:** An adventure center is a business and/or facility that offers a variety of indoor and outdoor activities, events and meetings available for public and private use that is conducive and of interest for the area. Activities that among other things may be included are off-road vehicle training or racing; off-road vehicle rental; hiking and bicycling; on site product events or meetings; mineral and gem exploration; nature tours; and activities connected with the BLM.

C. **Amusement Center**: An amusement center may be an indoor or outdoor area that is geared toward family-oriented activities that among other things may include: arcade games; batting cages, miniature golf; playgrounds; music and dancing activities; laser tag; virtual reality games; virtual training, and specialty shops including food courts.

D. **Cargo Container:** Also known or described as Storage Containers, or Shipping Containers or Intermodal Containers, are generally prefabricated metal containers typically associated with the transportation of goods by ship or truck.

E. **Desert Tours:** Desert tours would be both vehicular and pedestrian oriented excursions into certain portions of the desert to allow the

public to see the natural resources of the area generally under the direction and control of a tour guide. These tours could be excursions through the sand hills via off road vehicles in a controlled tour environment either through vehicles driven by the tour operator or with vehicles driven by individuals that would follow the tour guide in a controlled manner.

F. **Development Permit/Approval:** The construction or development of any allowed use listed in the plan/ordinance which requires a permit or approval from the County.

G. **Employee Housing**: Any dwelling including a single-family residence, condominium, manufactured home or park model, that is developed or installed on site for the exclusive use of persons employed at the site. RVs, "tiny homes", may be used as temporary housing by employees so long as they are not occupied for more than 90 consecutive days at one time. This housing may accommodate long and short-term occupancy. Employee housing may also include temporary housing for Owners, Employees and Special Event Staff as provided in the SEMP.

H. **Equipment Storage:** This includes equipment, including vehicles, parts and supplies that are used in the operation and maintenance of the facilities and properties within the Specific Plan area.

I. **Guest Housing:** Guest housing is defined as residential units either individual or connected that would accommodate visitors in a transient mode with a duration of less than 180 days per year. These units could be hotel or motel, or individual units. Guest housing includes both rental and free accommodations.

J. **Recreational Commercial:** The Recreational Commercial zone designation is only applicable to the Glamis Specific Plan. It is a land use zone that is intended to provide for commercial land uses that predominately but not exclusively relate to the recreational character and services envisioned and needed for the Glamis area. This zone allows for all types of commercial uses that are listed within this Division either as outright uses or as conditional uses.

K. **Vehicle:** A Vehicle is something that is used to transport people or goods that is either self-propelled or moved through a secondary means. It includes all types of mechanical based equipment such as cars, trucks, wagons, carts, buggies, etc.

L. **Vehicle, Off Road:** These are vehicles that are intended to be operated off state highways or local public roads. They are generally operated as recreational vehicles, many of which are four-wheel drive and can operate in the sand hills surrounding the Specific Plan. There are numerous manufacturers and Polaris is a major manufacturer of this type of vehicle.

M. **Vehicle Storage area:** For the purpose of this Specific Plan area, a Vehicle Storage area includes an area either indoor or outdoor that is used to store Recreational Vehicles (Travel Trailers/Motor Homes); off road vehicles (ORVs); vehicles used in the operation and maintenance of the facilities, such as tractors, dozers; provided all vehicles are operational. These areas are not intended to store vehicles that are not movable, or operational.

N. **Vendor Area:** Within the Specific Plan, an area may be designated for retail sales by individual vendors. Historically an area was used to allow up to 30 or more vendors that would occupy designated sites, typically 60 x 100 ft in size. Under the Specific Plan an area where individual vendors will be designated and this ordinance as well as the lease from the Owner will govern the use of these sites. These vendor sites may have temporary or permanent structures provided they have appropriate or required permits.

§ 93301.03 PLANNING DIRECTOR AUTHORITY

The Glamis Specific Plan is intended to comply with county regulations; however, a key difference is that because of the flexibility incorporated into the Specific Plan, the Planning Director needs to have the authority to make administrative decisions to implement the Specific Plan without burdening the project or County Staff with repetitive discretionary reviews and hearings.

The Planning Director therefore shall have the following administrative authority:

a) Approve the development of any of the allowed uses listed within the plan/ordinance at any location within the designated planning area provided the uses have been environmentally assessed and provided further that the use contemplated is within the scope of the Specific Plan, and is within any limitations, standards or requirements outlined in the plan.

b) Make minor changes to any of the allowed use standards to accommodate their development provided he/she can make the following findings and do not create a significant expansion of a use or cause an environmental concern;

    a. Increase the density of any use by no more than 10% if a density limit is shown in the plan.

    b. Increase the size, i.e. footprint of a use if such is designated within the plan by no more that 20%.

    c. Increase the capacity of an event by 20% if such is shown in the plan and provided that the increase is also approved by other county agencies that have jurisdiction, such as Fire, Environmental Health, and Law Enforcement among others.

c) As part of the authority by the Planning Director to make changes or modifications as outlined above the Director shall however also have the ability to impose reasonable standards or requirements to protect the environment, and safety of the public. [The intent here is to give the Director the ability to accommodate changes and have the flexibility envisioned in the plan, yet still allow the Director to impose requirements that he/she in exercising a reasonable review determines are necessary and justified to protect the public.

d) Appeal of an administrative decision by the Director may be filed to the Imperial County Planning Commission, provided a written appeal is filed with the department within 15 days of the decision and is accompanied by a filing fee as required by the County. The appeal shall state the specific reason for the appeal, and the applicable section of the Specific Plan, Ordinance or other regulation that the appellant feels warrants consideration by the Planning Commission, along with supporting documentation that may be required by the department.

§ 93301.04 PROCEDURE TO REQUEST A DEVELOPMENT APPROVAL

The applicant for any development permit/approval within the Specific Plan area(s) shall file an application with the Imperial County Planning & Development Services Department. At a minimum this will require a site plan clearly showing the planned development, an application on a form or forms to be provided by the County, a detailed description of the proposed development, and an explanation of how the proposed permit/approval conforms to the standards/requirements of the Specific Plan and this Ordinance. The application shall be reviewed for conformity with the Specific Plan, this Ordinance, and if the application includes a building permit with applicable codes in effect at the time of application.

No development permit shall be approved unless it meets the standards specified in the plan/ordinance. If a minor change is necessary and the Director can make an administrative decision under section 93301.03, an approval may be granted.

In no event shall any development approval be granted, or a conditional use permit be approved, or a building permit issued to any tenant, or lessee unless the owner of the land has signed an approval via a letter stating the approval and any restrictions that the owner has placed on the application. In the event the owner has required any surety, such as a performance bond, restoration bond or similar, the County shall not issue any approval to a tenant or lessee until a copy of such surety has been provided to the County.

§ 93301.05 PROCEDURE TO ALLOW A MINOR CHANGE BY THE PLANNING DIRECTOR

Pursuant to section 93301.03, the Planning Director shall consider a minor change to the plan if a request in writing has been filed by the owner. At a minimum, the request shall include a site plan, a written request detailing the minor change necessary to allow the intended development, a statement as to why the minor change is needed, and any applicable fee.

The Director shall review and decide within 30 days whether the change falls within his/her authority and whether the change meets the requirements of the plan/ordinance.

The Director shall notify applicable county departments of his tentative decision and shall not issue a final approval if other department's requirements have not been met. An approval or denial shall be made within 30 days of the request being filed and be in writing and state the reasons or findings.

§ 93301.06 PURPOSE AND APPLICABILITY OF ZONES

The purpose of the three (3) defined zones within the Specific Plan area and this Division, is to implement the allowed uses consistent with the plan and the defined land use standards defined within this Division. Since this Specific Plan envisions and allows uses and flexibly that are not necessarily compatible or allowed in other areas of the county, the zoning delineated within this Division 33 provide for the ability of the County to review and approve or deny proposed developments under a ministerial process wherein staff has the ability and the authority to make determinations.

§ 93301.07 ZONING MAP

The Glamis Specific Plan creates a distinctive master-plan for recreation-serving land uses which are consistent with the Glamis area. The map does show the three zoning designations for the areas which are coincident with the parcels of land covered by the Plan. Development of any of the areas is predicated upon specific standards and requirements being met, which are further specified within this section.

§ 93301.08 ZONING CATEGORIES

There are (3) three zoning designations as follows:

CR-1 Small Commercial Recreation– this zoning is intended to allow small scale, low density development of projects that will not enhance or contribute to the use of off-road vehicles on public highways or roads. Specific uses are further defined and explained within the zoning section below. By way of example this could include employee housing, R & D facilities, RV park with restrictions and alike.

CR-2 Medium Commercial Recreation – this zoning is intended to accommodate recreational related commercial opportunities and projects that will support the off-road and recreational uses of the area at a higher density and allowable uses than the CR-1 but still be limited to specific uses that are less intense and more occasional than those allowed in the CR-3 zone. By way of example this could include small repair shops, limited housing, RV park with restrictions and alike.

CR-3 Large Commercial Recreation – this zoning is intended to accommodate a large variety of commercial uses that are generally supportive of off-road activities and provide for large scale events to be held both on private property as well as adjoining federal lands. Specific

uses as well as conditional uses are further defined in the zoning section below.

Chapter 2: Land Uses for CR-1 Zones

Section 1: CR-1 - Allowed/Permitted Uses
Section 2: Uses Permitted with Conditional Use Permit Only
Section 3: Prohibited Uses
Section 4: Minimum Parcel Size
Section 5: Minimum Lot Area
Section 6; Yards and Setbacks
Section 7: Height
Section 8: Minimum Distance Between Structures
Section 9: Parking
Section 10: Landscaping
Section 11 Signs
Section 12: Yard and Property Maintenance
Section 13: Special Procedures/Development Standards

§ 93302.01 CR1 – ALLOWED/PERMITTED USES

The following land uses shall be allowed within the boundary of and subject to the Specific Plan;*

- Accessory storage buildings
- Billboards, provided they are for site related advertising with max. of two (2)
- Caretaker residence(s) maximum of 5
- Communication facilities i.e. towers
- Condominium housing
- Employee housing
- Equipment Storage
- Film Production/Movie Studio
- Fuel Station (gas/diesel/propane, including convenience mart)
- Guest housing
- Hotel/Motel Accommodations
- Lighting and light shows (no fireworks or explosives)
- Medical Service Facility
- Off road vehicle maintenance, repair, development, and/or research
- Power Generation Facility
- Private Residence(s)
- Research and Development Facility(s)
- RV dump station provided it meets County/State requirements
- RV park(s)
- RV & off-road vehicle storage (indoor or outdoor)
- RV repair facility
- Solar Generating Facility including battery storage up to 30 MW for onsite and export
- Special Events in accordance with SEMP
- Utility Buildings
- Utility Substation
- Vehicle Storage area
- Vehicle wash area
- Water &/or Wastewater treatment facilities
- The Planning Director may approve any use that is not specifically listed, so long as that use is consistent and similar to a permitted use.

** Within this zone there will be restrictions on the use of off-road vehicles accessing the highway. The unloading of off-road vehicles from an RV, or trailer or another vehicle, that will then necessitate the off-road vehicle crossing SR 78 and or the UPRR will be restricted and not allowed.*

§ 93302.02 USES PERMITTED WITH CONDITIONAL USE PERMIT ONLY

The following uses require a Conditional Use Permit:

- Oil, Gas or Geothermal production facility
- Oil, gas, geothermal exploration
- Water Well(s)

§ 93302.03 PROHIBITED USES

Any use not listed under 93302.01 or 93302.02 are prohibited.

§ 93302.04 MINIMUM PARCEL SIZE

Minimum parcel size is 20,000 sq. ft. unless otherwise required for health and safety reasons.

§ 93302.05 MINIMUM LOT AREA

There shall be a minimum lot area of 1500 sq. ft. per residential unit where residences are allowed.

§ 93302.06 YARDS AND SETBACKS

Unless otherwise required by fire code or other safety requirements the minimum setbacks for any structure, not including parking areas, or billboards, shall be as follows:

- Front yard setback (street side) shall be 20 ft. from edge of any ROW or easement.
- Side yard setback shall be 5 ft.
- Rear yard setback shall be 5 ft.

§ 93302.07 HEIGHT

Height of any structure shall not exceed 80 ft.

§ 93302.8 MINIMUM DISTANCE BETWEEN STRUCTURES

None required provided all other codes such as fire regulations are met, except for the separation between detached residential structures and commercial structures which shall be a minimum of 20 ft.

§ 93302.9 PARKING

The following parking spaces shall be provided for each use listed:

- Caretaker residence 2
- Condominium 2/unit
- Employee housing 2/unit
- Hotel/Motel 1 per unit, plus 3
- Medical Service Facility 4
- Research and Development Facility 6
- RV park 5 for office area
- RV & off-road vehicle storage 4
- Utility Buildings 2
- Water &/or Wastewater treatment facilities 2

§ 93302.10 LANDSCAPING

Given the location and lack of water landscaping shall be desert scape and minimal.

§ 93302.11 SIGNS

On site facility signs and billboards are allowed, provided they are permitted if so required by County Ordinance, and provided they meet design standards of the plan. Large billboards are only allowed for onsite advertising. Billboards shall be a minimum of 50 ft. from edge of road right-of-way.

§ 93302.12 YARD AND PROPERTY MAINTENANCE

Yards and property in general shall be maintained in an organized, clean and visually appropriate manner. Areas that are used for storage of equipment and vehicles shall have visual fencing or other approved screening.

§ 93302.13 SPECIAL PROCEDURES/DEVELOPMENT STANDARDS

Any development within the Specific Plan shall follow the procedures and standards shown in Chapter 5, and shall meet the requirements.

Chapter 3: Land Uses for CR-2 Zones

Section 1: CR-2 – Allowed/Permitted Uses
Section 2: Prohibited Uses
Section 3: Minimum Parcel Size
Section 4: Minimum Lot Area
Section 5: Yards and Setbacks
Section 6; Height
Section 7: Minimum Distance Between Structures
Section 8: Parking
Section 9: Landscaping
Section 10: Signs
Section 11 Yard and Property Maintenance
Section 12: Special Procedures/Development Standards

§ 93303.01 CR 2 - ALLOWED/PERMITTED USES

The following land uses shall be allowed within the boundary of and subject to the Specific Plan;

- Accessory storage buildings
- Caretakers quarters not to exceed 5
- Communications Facilities (i.e. towers)
- Condominiums not to exceed 16 units
- Employee Housing
- Entertainment Events (Private events not exceeding 30 people only)
- Equipment Storage
- Fuel dispensing (gas/diesel) for private on site use only, no commercial sales
- Guest Housing
- Off road vehicle repair, development, maintenance; no sale or leasing
- Park, Playground and Picnic area(s)
- Power Generation (i.e. diesel/propane/solar)
- Private Residence(s)
- Rental Facilities (off road equipment/vehicles)
- Research and Development facilities
- RV Park
- RV Storage
- Solar Generating Facility including battery storage up to 30 MW for onsite and export
- Special Events in accordance with SEMP
- Testing facilities (off road equipment)
- Training Facilities (off road vehicle use/safety)
- Utility buildings
- Utility Substation
- Vehicle Repair and Service, no sale or leasing
- Vehicle storage
- Water/Wastewater treatment facilities
- The Planning Director may approve any use that is not specifically listed, so long as that use is consistent and similar to a permitted use.

§ 93303.02 PROHIBITED USES

Any use not listed under 93303.01 are prohibited.

§ 93303.03 MINIMUM PARCEL SIZE

Minimum parcel size shall be 25,000 Sq. Ft.

§ 93303.04 MINIMUM LOT AREA

There shall be a minimum lot area of 1500 sq. ft. per residential unit where residences are allowed.

§ 93303.05 YARDS AND SETBACKS

Unless otherwise required by fire code or other safety requirements the minimum setbacks for any structure, not including parking areas, or billboards, shall be as follows:

- Front yard setback (street side) shall be 20 ft. from edge of any ROW or easement.
- Side yard setback shall be 5 ft.
- Rear yard setback shall be 5 ft.

§ 93303.06 HEIGHT

Height of any structure shall not exceed 80 ft.

§ 93303.07 MINIMUM DISTANCE BETWEEN STRUCTURES

None required provided all other codes such as fire regulations are met, except for the separation between detached residential structures and commercial structures which shall be a minimum of 20 ft.

§ 93303.08 PARKING

The following parking spaces shall be provided for each use listed:

Caretaker residence	2
Condominium	2
Employee housing	2
Hotel/Motel	1 per unit plus 3
Medical Service Facility	4
Private event parking	15
Research and Development Facility	6
RV park	5
RV & off-road vehicle storage	2
Utility Buildings	2
Water &/or Wastewater treatment facilities	2

§ 93303.9 LANDSCAPING

Landscaping shall be desert scape and minimal.

§ 93303.10 SIGNS

On site facility signs and billboards are allowed, provided they are permitted if required by County Ordinance. Large billboards are only allowed for onsite advertising. Billboards shall be a minimum of 50 ft. from edge of road right-of-way.

§ 93303.11 YARD AND PROPERTY MAINTENANCE

Yards and property in general shall be maintained in an organized, clean and visually appropriate manner.

§ 93303.12 SPECIAL PROCEDURES/DEVELOPMENT STANDARDS

Any development within the Specific Plan shall follow the procedures and standards shown in Chapter 5 and shall meet the requirements of the Specific Plan.

Chapter 4: Land Uses for CR-3 Zones

Section 1: CR-3 – Allowed/Permitted Uses
Section 2: Prohibited Uses
Section 3: Minimum Parcel Size
Section 4: Minimum Lot Area
Section 5: Yards and Setbacks
Section 6: Height
Section 7: Minimum Distance Between Structures
Section 8: Parking
Section 9: Landscaping
Section 10: Signs
Section 11 Yard and Property Maintenance
Section 12: Special Procedures/Development Standards

§ 93304.01 CR 3 - ALLOWED/PERMITTED USES

- Accessory storage buildings
- Adventure Center
- Amusement Facilities

- Bar(s)
- Billboards for on site advertising
- Bulk water sales
- Caretakers quarters
- Communications Facilities (i.e. towers)
- Condominiums
- Convention area
- Desert Tours (off road experience)
- Drive-in food facilities
- Employee Housing
- Entertainment Events
- Equipment Storage
- Film production / movie studio
- Fuel Station (gas/diesel)
- Fuel Station (Propane)
- Guest Housing
- Helipad (emergency/public)
- Hotel/Motel Accommodations
- Lighting or light shows (none-firework or explosives)
- Medical Services Facility
- Mobile food trucks
- Movie theater
- Obstacle Course / Technical driving area
- Oil, gas, geothermal exploration
- Off road driving school / Public workshops
- Park, Playground and Picnic area(s)
- Power Generation (on site use i.e. diesel/propane/solar)
- Private Residence(s)
- Public Parking area(s)
- Public Restrooms
- Public showers
- Race track
- Rental Facilities (off road equipment/vehicles)
- Research and Development facilities
- Restaurant(s)
- Retail displays / entrance signage
- RV Dump Station(s)
- RV Park(s)
- RV Repair facility(s)
- RV Storage
- Solar
- Special Events in accordance with SEMP
- Sporting goods store(s)
- Stores (retail general)
- Stores (retail specialty)
- Temporary sales facilities
- Testing facilities (off road equipment)
- Tourist information center
- Training Facilities (off road vehicle use/safety)
- Utility buildings
- Utility Substation
- Vehicle parts sales
- Vehicle Repair and Service
- Vehicle Sale
- Vehicle storage
- Vehicle wash down area
- Vendor Sales Area(s)
- Viewing Deck or Tower
- Water/Wastewater treatment facilities
- Wedding Chapel
- The Planning Director may approve any use that is not specifically listed, so long as that use is consistent and similar to a permitted use.

§ 93304.02 PROHIBITED USES

Any use not listed under 93304.01 are prohibited.

§ 93304.03 MINIMUM PARCEL SIZE

Minimum parcel size shall be 25000 Sq. Ft.

§ 93304.04 MINIMUM LOT AREA

1500 Sq. Ft. per residence.

§ 93304.05 YARDS AND SETBACKS

Unless otherwise required by fire code or other safety requirements the minimum setbacks for any structure, not including parking areas, or billboards, shall be as follows:

- Front yard setback (street side) shall be 20 ft. from edge of any ROW or easement.
- Side yard setback shall be 5 ft.
- Rear yard setback shall be 5 ft.

§ 93304.06 HEIGHT

Height of any structure shall not exceed 80 ft.

§ 93304.07 MINIMUM DISTANCE BETWEEN STRUCTURES

None required provided all other codes such as fire regulations are met.

§ 93304.08 PARKING

The following parking spaces shall be provided for each use listed:

- Caretaker residence 2
- Condominium 2
- Employee housing 2
- Hotel/Motel 1 per unit plus 3
- Medical Service Facility 4
- Research and Development Facility 6
- RV park 5
- RV & off-road vehicle storage 2
- Utility Buildings 1
- Water &/or Wastewater treatment facilities 1

§ 93304.09 LANDSCAPING

All landscaping shall be of the desert scape and minimal.

§ 93304.10 SIGNS

On site facility signs and billboards are allowed, provided they are permitted if required by County Ordinance. Large billboards are only allowed for onsite advertising. Billboards shall be a minimum of 20 ft. from edge of road right-of-way.

§ 93304.11 YARD AND PROPERTY MAINTENANCE

Yards and property in general shall be maintained in an organized, clean and visually appropriate manner.

§ 93304.12 SPECIAL PROCEDURES/DEVELOPMENT STANDARDS

Any development within the Specific Plan shall follow the procedures and standards shown in Chapter 5 and shall meet the requirements of the Specific Plan.

Chapter 5: Phasing

§ 93305.01 PHASING DEFINED

For the purpose of this Specific Plan, Phasing is defined as the sequence that development may follow, subject to certain standards and regulatory requirements first being met, as enumerated herein and in the Specific Plan. This Specific Plan established “areas” which are not to be confused with parcels nor with any specific land uses allowed, nor shall the numeric on any drawing within the plan, be construed as the sequence that development will occur, only that it may occur. By way of example, development may start in area (one) 1 then move to area (three) 3, then to area (five) 5.

Infrastructure requirements, public safety and legal as well as safe vehicular as well as pedestrian travel on and off the site shall always be carefully considered and to the extent that there are regulatory requirements, or industry standards where available and applicable, they shall be met. Of highest consideration shall be off road vehicle access to HWY 78.

Pursuant to the traffic analysis prepared for the Specific Plan, and to maintain public safety, the intent of the Specific Plan and this ordinance is not to encourage, or where possible prohibit off-road vehicles from crossing the UPRR and/or HWY 78, unless and until the public agency that has control of these systems has provided their approval for a crossing, on a case by case basis for each development proposed.

§ 93305.02 INFRASTRUCTURE

Prior to any development being allowed in any of the "areas" as shown on the Specific Plan, infrastructure as listed and/or required below shall be provided.

a. **Electrical** – unless the proposed use/development does not require electrical services of any type meeting regulatory requirements, a new development or an expansion of an existing development shall not be allowed until electrical service can or has been provided.

NOTE: *Electrical service to this site may be provided by a public utility, a private utility or by a private service provider.*

If electrical service is provided by a private entity, no extension of any electrical system shall be allowed without the written consent of the private entity. The County shall not allow such an extension without such written consent being provided as part of the application.

b. **Water (potable)** – no new development or expansion of an existing use that is mandated by regulatory requirements to have or provide potable water, shall be allowed until potable water and if applicable fire protection water is or can be provided. Prior to the issuance of any development, the applicant shall provide evidence that the system has the capacity to provide such service demand.

c. **Wastewater** – no development or expansion of an existing use shall be allowed until provisions have or will be made to provide for the treatment of all wastewater, meeting applicable regulatory requirements. If allowed by regulations, septic systems may be considered, however if a central treatment system is constructed, all new development shall connect to this system. Any application for development shall include evidence that such system has the adequate capacity.

d. **Access** – if the proposed new development or the expansion or alteration of an existing development requires direct access to/from HWY 78, or contributes new or increased traffic to an existing access point, no development shall be allowed unless the necessary approval and improvements as required have been secured from the appropriate regulatory agency. If access to a parcel from HWY 78 serves off-road vehicles, or encourages off-road vehicles to cross HWY 78, no development shall be allowed until a safe means of access has received the appropriate permits and the improvements constructed to meet the regulatory agencies requirements.

e. **Minimum requirements** – not-withstanding any other provisions, no new development or expansion of an existing development shall be allowed until all the requirements of this ordinance and the Specific Plan are met. This requirement for utilities does not apply to Special Events.

§ 93305.03 LEASED AREAS – APPLICATION BY LESSEE

In the event a Lessee applies to secure a land use permit, a development approval for any use, or a Special Event, the County shall not process nor

issue such an approval unless the land owner has provided a written statement that said owner has reviewed the application and plans and has determined that the proposed use is consistent with the provisions of the Specific Plan and this Ordinance. This may include assurance that any infrastructure provided or serviced by the landowner has the capacity to service this new or expanded development.

§ 93305.04 LEASED AREAS – PROCESSING OF APPLICATIONS

The County may process an application (ministerial or discretionary) from a lessee only if section 93305.03 has been met. In the case where a discretionary permit application is filed it shall have the written consent of the landowner

With regard to any fees, cost or on-going potential costs the Owner shall not be held responsible for same and shall be the full obligation of the applicant. Any insurance that the County may require shall also name the Owner as an additional insured as appropriate. If any bond is required by the County, it shall not include a provision that obligates the landowner or ties the bond to the property.

Under no conditions shall any mitigation measures become the responsibility of the owner either in cost or in compliance. Where mitigation requires physical improvements to the property, the County shall require a performance bond to assure that the improvements are made and result in no obligation to the landowner. In the event a mitigation measure or a condition required by any agency is not met or complied with by the permittee the County following its standard notifications and enforcement actions shall terminate such a permit or approval as soon as possible and enforce the cessation of the use that was under permit/approval.

§ 93305.05 LEASED AREAS – VARIANCES

No variance from the provisions of this Division shall be allowed unless requested by the landowner. The following variances may be considered by the County.

Height variance

Setback variance

Infrastructure variance (the intent by way of example would be if there is a wastewater plant but due to the planned development being to far from that plant until intervening areas are developed, a septic tank may be allowed if approved by appropriate regulatory agencies)

Chapter 6: Special Event Management Plan

A Special Event Management Plan (SEMP) Notification, as described in Section II of this GSP, is considered a ministerial process and shall be subject to an Administrative Review process and approved by the Community Development Director in accordance with the following procedures. Due to the nature of special events, the following review and approval process shall be completed in the timeframes listed below. The SEMP Notification may be filed at any time prior to the event and must be approved no less than 15 days prior to the Event.

A. The Special Event Sponsor shall file a SEMP Notification with the Planning Department at least 60 days prior to the special event. Concurrently the applicant shall provide the same notification information to each agency or department that has the ability to approve or impose additional requirements. Where the Special Event Sponsor is not the Property Owner, the SEMP Notification shall be signed by both Sponsor and Property Owner.

B. Within ten (10) days from receipt of the SEMP Notification, the Planning Department shall provide a copy of the SEMP Notification to and consult with the applicable Departments, including but not limited: Director of Public Works, Chief Building Official, Director of EHS, Director of Public Health, Sheriff, Director of Fire/OES, CalTrans regarding their approval.

C. Within 20 days of their receipt of the SEMP Notification, the Department's shall approve the SEMP Notification if it conforms to the SEMP. In the event additionally information or requirements are necessary, the Departments shall notify the applicant and the Imperial County Planning and Development Services Department (ICPDSD). The Departments shall work directly with the Owner during this time period regarding questions or changes they have to the SEMP Notification. The applicant will have 10 days to make any required changes to their SEMP and resubmit their plans to the ICPDSD. If a Department does not respond within this period, that Department's approval shall be deemed given.

D. Within 5 days of completion of the process in clause "C" above, the Director shall approve the SEMP Notification.

    a. The SEMP Notification process is intended to be concluded no more than 60 days from the date the Notification is submitted to County Planning. This review time is necessary for Sponsors to finalize their planning of the special event and to provide both the County and Sponsor with a timeline from which to review and conclude the SEMP Notification process.

E. The SEMP and SEMP Notification must be approved at least 15 days prior to the event.

F. Amendments – If there are any changes to the SEMP Notification, the Sponsor shall notify Planning and the Department that has responsibility over the change within at least 5 days of the event. The Planning and Development Department shall review the change within 3 days of receipt of the notification of change.

9Special Event – By Owner – Requirements

§ 93306.01 SPECIAL EVENTS DEFINED

A special event is defined as a private sponsored event for a public activity or event allowing the assembly of large numbers of people, including but not limited to; a concert, a trade show, an exhibition, a carnival, fireworks displays, off road vehicle activities including races, a stunt show, performance or exhibition, or other similar uses.

A special event may be held on the landowner's property in conjunction with off-site components provided the event sponsor has obtained the approval from the off-site landowner and has provided evidence to the landowner and if appropriate the County.

§ 93306.02 SPECIAL EVENTS PROHIBITED

Special Events within the specific plan area, unless sponsored by the landowner or by an entity that has obtained approval from the landowner shall be prohibited.

Special Events that pose a serious health or safety concern as determined by Law Enforcement or the Fire Department upon findings, may not be allowed. In the event that an event is of concern to Law Enforcement, proponent shall have the opportunity to revise the proposed event in an effort to gain approval

§ 93306.03 SPECIAL EVENTS SCHEDULE/NOTIFICATION

There is no limit on the number of events that may be held on an annual basis. No special use permit or other land use related permit shall be required provided the event sponsor has given adequate notice as required and has provided to the public agencies evidence of compliance with the standards required herein.

Notification to the County and/or BLM or both, shall be submitted at least 60 days in advance of an event being held. The purpose of this advanced notification is to allow the public agencies to review the proposed event and determine if applicable conditions have been or will be complied with. Notification method is by email to the County of Imperial Planning Director.

If the 60-day notice is not provided to the agencies, or if compliance with the general and specific standards is not shown, the County may prohibit the event.

If the event includes off-site components, and approval from BLM is not obtained at least 30 days prior to the event, the County may restrict the event to on-site activities only.

§ 93306.04 SPECIAL EVENTS SCHEDULE - TRAFFIC

Because special events may include large assemblage of people and equipment and because access to the site is from a single state highway whose speed limits as regulated by state requirements, any special event shall be required to adhere to the following procedures/standards:

1) The County of Imperial Planning Department must notify CALTRANS, California Highway Patrol, Imperial County Sheriff, and the County Public Works Department, of the event within 10 days of receiving the SEMP and SEMP Notification and at least 50 days prior to the event.
2) Provide a traffic management plan if so required by CALTRANS.
3) Provide onsite traffic control either through the services of the Highway Patrol or private contractors as required or approved by CALTRANS.
4) Provide access control to the site as required by any of the agencies noted in item # 1.
5) Provide traffic signage along HWY 78 as necessary and/or required by the agencies.

§ 93306.05 SPECIAL EVENTS – FIRE PROTECTION

Due to the remote location fire protection service for special events pose special challenges. For adequate fire protection and emergency services to be available any special event shall adhere to the following;

1) The County of Imperial Planning Department must notify Imperial County Fire Department within 10 days of receiving the SEMP and SEMP Notification, and at least 50 days prior to the event.
2) Provide a detailed site plan along with a detailed description of the event, including estimated attendance.
3) Provide any technical information on special activities that use pyrotechnics, or use vehicle racing or stunts.
4) Provide details on any use of fuels or other flammables or hazardous materials, including storage.
5) Provide details on location of fire protection equipment available and connection capacity for the fire department.
6) Provide an emergency response plan that clearly describes service being provided by sponsor such as standby ambulance service, helipad availability, and on-site medical services if any.

§ 93306.06 SPECIAL EVENTS – GENERAL STANDARDS

Prior to any special event being held on the site the following procedures/standards shall be adhered to;

1) Provide a minimum of 60 days' notice of the pending event using the form provided by the County, to the following;

    a. Imperial County Planning & Development Services Department. The Planning Department will then notify the following departments or agencies within 10 days of receiving the application:
        a. Imperial County Public Works Department
        b. Imperial County Environmental Health Department

c. Imperial County Sheriff's Office
d. Imperial County Fire/Office of Emergency Services Department
e. Bureau of Land Management
f. California Highway Patrol (CHP)
g. California Department of Transportation (CALTRANS)

b. The agencies notified will have 20 days to review the required submitted materials.

2) Provide a detailed site plan of the proposed event, showing location of all activities, including but not limited to; seating, staging, vendors, emergency services, restricted area, access control.
3) Provide a detailed emergency response plan
4) Provide a detailed description of activities to be held during the event, the approximate times and amount of people expected to attend.
5) Provide a security plan
6) Provide how public services, including restrooms, portable toilets, wash stations, and emergency contacts will be provided.
7) Provide certificates of insurance as required by the County, and where required such insurance shall name the County as an additional insured. These certificates of insurance shall be provided to the County at least 30 days prior to the event.
8) After the review has been completed, if there are any required changes to the plan, the applicant will have 10 days to revise and then submit to the Imperial County Planning and Development Services Department.
9) The SEMP and SEMP Notification must be approved 15 days before the event.
10) Any minor modifications or changes must be submitted to the County of Imperial Planning and Development Services Department at least 5 days before the special event.

§ 93306.07 SPECIAL EVENTS – PRE-MEETING

County and/or proponent may request a "pre-meeting" with the agencies affected by the proposed event in order to discuss issues of concern. This process is entirely optional but available. If so requested by applicant, County Planning & Development Services shall act as the coordinator of the meeting.

Chapter 7: Vendor Area/Sales Area

§ 93307.01 VENDOR AREA/SALES AREA DEFINED

Within the Specific Plan there are provisions for a "Vendor Area or Sales Area" where individuals can lease a space and operate a business. (NOTE: leased space areas are not to be considered parcels under the Map Act). While these businesses may operate seasonally the intent of this area is to establish spaces where individual vendor sales units can remain for the duration of their lease. The units within this area may include vehicles, trucks, R.V., tents, cargo containers, pre-manufactured units, food trucks, repair vehicles and fuel dispensing vehicles, all of which if owned by lessee, are temporary and portable.

§ 93307.02 VENDOR AREA LAYOUT

Prior to the development of the Vendor Area/Vendor Sales Area, the Property Owner shall submit a permit application along with a plan, and with any required engineering to show the; (a) layout, (b) location on site, (c) size and location of individual spaces, (d) space numbering, (e) infrastructure to be provided, if any, (f) fire protection infrastructure, (g) access and parking, (h) fencing, (i) along with any permanent structures. Permanent structures are considered owned by landowner.

Spaces shall be clearly identified be means of fencing or other County approved systems.

If spaces are provided with connections to water, sewer or electricity, the plans shall indicate the type of material and sizes for each utility service provided.

Fire hydrants if required by the Fire Department shall meet fire code requirements

NOTE: nothing within this division shall be interpreted to mean that infrastructure such as water, sewer or electricity pursuant to §93305.02 is required unless so required by another code or law.

§ 93307.03 VENDOR AREA/SALES LEASE REQUIREMENTS

Owner/operator of the Vendor Area/Sales Area shall provide a copy of the terms and conditions/lease to County Planning that clearly state what uses are allowed for each Vendor space leased.

Each Vendor space shall have no more than three R.V. (living) units. Each Vendor space may have multiple sales units including tents provided they meet all applicable codes.

If a space provides fuels or other hazardous materials or repairs that include use of fuels or hazardous materials, the operator of that Vendor space shall secure, in addition to any building permits that may be required, the approval from the Fire Department and shall meet all such regulations that may apply to their services. All fuel or other operations that handle similar liquids shall be on approved concrete or other surfaces designed to retain any spills.

Open flame repairs, such as welding, brazing or alike shall only be done in an enclosed structure that meets Fire Department regulations.

§ 93307.04 VENDOR AREA/SALES AREA – PERMITTING BY TENANT OR LESSEE

Any structure that requires a building permit under the California Building Code shall be permitted prior to occupancy. If the structure is removed and replaced on a regular or yearly basis, the owner/operator may apply for a permit that allows multi-year use provided the structure is the original permitted structure, with a onetime fee. Such a multi-year permit application shall clearly describe the structure, provide applicable engineering if required, and be for the same use each successive year. A new permit shall only be required if (a) the use for which the structure was originally approved changes, or (b) if a new code adoption imposes new conditions on such a structure., or (c) if the owner/operator changes.

Each time a unit/structure is removed and replaced the owner/operator shall notify the county and be subject to are-inspection and are-inspection fee if required. If an owner/operator removes a structure and fails to notify the County, and then replaces the unit at a later date it may be subject to a new permit, even if it had originally secured a multi-year permit.

If an owner/operator has a history of non-compliance with County requirements the County may revoke a multiyear permit and/or refuse to issue a new permit to said owner/operator.

§ 93307.05 COMPLIANCE WITH CCR 25

If it is the determination of ICPDS that the use of multiple RV's within a Vendor Space constitutes a RV Park under the provisions of CCR 25, landowner shall secure the appropriate approvals. Unless those RV's are included in the Vendor Permit and used on a temporary basis.

IV. Administration and Implementation

The implementation section of this document is provided herein to further define the relationship between the Glamis Specific Plan, County of Imperial development codes and standards, and the process by which the Glamis Specific Plan will obtain additional discretionary approvals as the project proceeds through the remaining phases of the development process.

A. Administration Plan

1. Glamis Specific Plan

Upon its approval/adoption, the GSP, as filed with the County of Imperial Planning & Development Services (P&DS) department, will become the primary document governing land use regulations pertaining to the GSP area.

2. Interpretation

Unless otherwise provided, should ambiguities occur concerning the content and appropriate application of the GSP, said ambiguities shall be resolved by the County of Imperial P&DS Director or his/her designee. The decision will be based upon consistency with the intent, goals and policies set forth in the GSP. The Director's decision will be appealable to the County's Planning Commission and County Board of Supervisors in accordance with County of Imperial Code.

a. Types of Approvals and Permits

Subsequent to approval of the GSP, site specific project proposals and permit request will be processed pursuant to the guidelines outlined herein.

b. Implementation Program

According to Government Code 65451 of the California Planning Law, the GSP shall include a program for implementation including regulations, conditions, programs and additional measures as necessary to carry out the plan. In response to this requirement, the Implementation Program for the GSP and Environmental Impact Report (EIR) consists of the following:

- Adoption (by ordinance) and Administration of the SP
- Environmental Review and Mitigation Monitoring and Reporting Program
- Grading and Improvement Plans (at such time that actual development commences)
- Development Permit(s)
  - Plot Plans (at time that development commences)
  - Conditional Use Permit(s) for water well
  - Water and Sewer System Permits
  - Encroachment Permits
- Financing Mechanisms
- Project Maintenance
- Special Event Management Plan

3. Environmental Review and Mitigation Monitoring and Reporting Program

This Specific Plan has been subjected to Environmental Review pursuant to the provisions of CEQA. Per Resolution No. {*To Be Added at a Later*

Date} an EIR was certified. The Mitigation Monitoring and Reporting Program (MMRP) is provided herein as Appendix {*To Be Added at a Later Date*}.

4. Grading and Improvements Plans

Grading plan(s) will be submitted to the County of Imperial for approval with all applications for entitlement of future projects, as described in Section II, Specific Plan. A Storm Water Pollution Prevention Plan (SWPPP) in accordance with the National Pollution Discharge Elimination System (NPDES) submittal may be required prior to approval of grading plan(s). Improvement plans such as street, water, sewer and drainage plans are required to be submitted to the County of Imperial and all affected agencies for review and approval prior to issuance of a grading permit(s).

5. Financing Mechanisms

The project will be implemented in phases as described in Section II Specific Plan. The major infrastructure and facilities within the GSP and offsite areas will be financed through appropriate funding mechanisms acceptable to the County of Imperial, which may include, but necessarily be limited to: private and/or developer(s) financing; the formation of one or more assessment district(s); and/or the application of funds from County, State and other agency programs.

6. Project Maintenance

During construction, maintenance of all on-site facilities will be the responsibility of the developer. After the project has been constructed and landscaping established, ongoing maintenance of private facilities including streets, landscaping, entry monumentation and similar items will be the responsibility of Polaris The Property owner will be responsible for enforcement of any Codes, Covenants and Restrictions (CC&Rs) and for remedy and upkeep/maintenance issues regarding structures or landscaping on private lots. Utilities such as sewer, water, recycled water mains, water tanks and similar items will be the responsibility of Polaris. Maintenance of SR 78 will continue to be the responsibility of Caltrans and maintenance of Ted Kipf Road will continue to be the responsibility of the County of Imperial. Maintenance of Wash Road will continue to be BLM's responsibility.

7. Special Event Management Plan

All Special Events are subject to compliance with the approved Special Event Management Plan (SEMP) (as described in Section II, subsection E – Short-Term Event Standards and Approval). A SEMP is intended to be the guide for establishing operational conditions and requirements for the various special events that are anticipated to occur on the GSP area. The purpose of the SEMP is to provide the services, protocols and requirements that must be in place prior to the start of each event, during each event and the clean-up after each event necessary to protect the health and safety of all event participants. Topics that will be included in the SEMP include, but are not limited to hours of operation, providing police and fire protection, adequate parking controls, traffic management, food vendor approvals, insurance, staff lodging and provide for the appropriate number of sanitary facilities as detailed in Section II of this Specific Plan.

c. *Design Review*

Site-specific development of each GSP Planning Area shall be subject to Design Review and approval by the County of Imperial Planning Department at a ministerial level to the extent possible. Design review encompasses, but is not limited to, architectural design, parking and circulation, and landscaping, etc. for construction of new permanent buildings.

d. *Amendments to the Specific Plan*

It is the intent of this section to set criteria for interpretation of the GSP, and to define types of changes that constitute only Minor Amendments

and thus require only administrative approvals in order to be implemented. Such Minor Amendments to the approved GSP are subject to approval by the County's P&DS Director.

1. Minor Amendments to the GSP shall be limited to development standards and regulations, planning area standards, unit or density transfers between planning areas, floor area ratio standards, planning area boundaries, and development phase boundaries. Minor Amendments shall not increase the total number of dwelling units, allowable building height, the total allowable square footage of the project site, or substantially alter the GSP.
2. Minor Amendments that do not exceed twenty percent (20%) of a quantifiable standard shall require approval by the County's P&DS Director. The Director may approve Minor Amendments for nonquantifiable standards that do not substantially alter the GSP. Additionally, the Director shall have the right to require any Minor Amendment request be considered by the Planning Commission and/or Board of Supervisors, when deemed appropriate.
3. Requests for Minor Amendments shall be made in writing to the Director. Minor Amendments are subject to fee(s) related to the cost of processing such request. No public hearing shall be required for Minor Amendments, unless otherwise required by law.
4. Approval of Minor Amendments shall be based upon the Director's ability to make the following findings:
    a. The Minor Amendment request is consistent with overall vision and objectives of the GSP and does not substantially alter the GSP.
    b. The Minor Amendment request is limited to development standards and regulations, planning area standards, unit or density transfers between planning areas, floor area ratio standards, planning area boundaries, and development phase boundaries. Minor Amendments shall not include an increase to the total number of dwelling units allowed, or the total allowable building height, or the total allowable square footage of the project site in the SP.
    c. The Minor Amendment request is consistent with the County's General Plan.
    d. The Minor Amendment request does not conflict with applicable Federal, State, or local laws or regulations.
    e. Minor amendments do not create impacts that were not addressed or considered in the CEQA reviews for the original GSP approval.
5. Minor Amendment requests exceeding twenty percent (20%) of a quantifiable standard or any other amendments to the GSP that the Director determines to be substantial due to the nature and scope of the request are not considered minor and shall require a formal amendment to the GSP processed in the manner required by law.

e. *Project Phasing Plan*

For the purpose of the Specific Plan, Phasing is defined as the sequence that development may follow, subject to certain standards and regulatory requirements first being met, as enumerated in the Chapter III, Zoning Ordinance, and in the GSP. It should be noted that market conditions will be the primary determinant of project phasing. The project phasing is recommended to be completed in the order outlined below, but phases may need to be adjusted due to unforeseen circumstances, and therefore development within the GSP is not required to follow the phasing plan outlined in the GSP. The GSP establishes "areas" which are not to be confused with parcels nor with any specific land uses allowed. The Phasing Plan for the GSP is displayed in Exhibit IV-1, Phasing Plan. The incremental development of the GSP is anticipated to be accomplished pursuant to the provisions of the GSP. As detailed in the Zoning Ordinance (GSP Chapter III) the numeric sequencing shall not be construed as the

sequence that development will occur. The approach to Phasing is driven by a number of factors, including, but not necessarily limited to: 1) market conditions; 2) connectivity with and proximity to access; 3) the logical extension of key utility and infrastructure facilities; 4) efficient grading progression; and, 5) Polaris goals and objectives prioritization of projects.

Additionally, infrastructure requirements, public safety including legal and safe vehicular and pedestrian travel on and off the project site shall always be carefully considered and to the extent that there are regulatory requirements, or industry standards where available and applicable, they shall be met. The Phasing Plan of the GSP is based upon project phases One through Four as detailed below. The Phasing Plan does not apply to short term special events, only permanent development within the GSP.

Phase One

As shown in Exhibit IV-2, *Phase I*, the initial phase of development is planned in the southern portion of the project site. As shown on the exhibit, development of Phase One will occur where the existing Glamis Beach Store, Restaurant and Bar, and OHV repair facility are located as contained within APN 039-310-029 (Planning Area 1, 34-acre parcel). Also, APN 039-310-030 (Planning Area 7, 8-acre parcel) and APN 039-310-017 (Planning Area 8, 1-acre parcel) are included as part of Phase One. This area also represents the closest point of access to surrounding public roadways, most notably SR 78 and Ted Kipf Road, both of which will continue to be travelled by visitors to the area.

Before certain significant permanent structural improvements are made to this area, required and necessary infrastructure improvements will need to be made. Potable water, wastewater treatment and electrical service may need to be developed in order to accommodate the projected demand from the specific improvements and visitors. There may be some improvements made within this parcel that are not dependent on such services and therefore could be implemented ahead of the infrastructure.

The first required infrastructure improvement would be the development of a water treatment system, which would treat ground water extracted from existing onsite wells. This is currently in progress and a water treatment plant complying with California standards is being constructed to meet the needs of the current uses and with room for expansion. As new development is implemented, this water plant may need to be expanded as determined by the regulatory agencies.

The second required infrastructure improvement may be the development of a wastewater treatment system. Currently, wastewater generated by the Glamis Beach Store, restaurant and bar is discharged into an existing septic tank located near those buildings. For some initial development(s) septic system(s) may be possible and allowed. However, this decision relies entirely upon regulatory requirements. If and when a development is proposed, and a wastewater treatment system is required, that project will implement the required system(s).

The amount of wastewater treatment infrastructure needed (i.e., secondary and tertiary treatment) would be determined by the amount and intensity of each structural improvement envisioned, and the amount of wastewater forecasted to be generated by each structural improvement. To assure wastewater does not exceed the treatment capacity at any given time during development of Phase One (and for all other subsequent phases), a wastewater generation analysis will be required for each structural improvement to determine whether existing wastewater infrastructure would or would not need upgraded improvements in order to maintain wastewater treatment capacity.

The third system of infrastructure improvement would be electrical service upgrades. The project site currently relies on diesel generators for all of its electrical power demand needs. It may not be a feasible option for significant new development to be reliant upon diesel generators in the future, since air quality and greenhouse gas (GHG) emissions regulations are likely to become more restrictive over time. With this in mind, two options are being evaluated to determine which available source of power supply would best fit as the preferred option for the GSP.

The first option would to be for Imperial Irrigation District (IID) to construct and install a power line (transmission line and/or distribution line) to extend from the nearest substation (approximately 7.2 miles to the northeast). A second and potentially more viable option would be to develop a small commercial solar photovoltaic (PV) system, with a back-up battery storage component or another green power system. The option applied will be determined/implemented with subsequent development plans.

As shown in Section II, Table 1, *Detailed Land Use Summary*, uses permitted within Phase One could include restaurant(s), bar(s), repair shop(s), a vendor row area and event area, and similar uses.

Phase One would be contained within Planning Area 1 as shown in Exhibit IV-1 and Exhibit I-6, with the exception of possible development of a research and development (R&D) facility to occur either within Planning Area 5 or 6, and an RV park or employee housing in Planning Areas 2, 3, and/or 4. Part of Planning Area 8 (APN 039-310-017) could be developed during Phase One as it slightly overlaps onto current land used for Camp RZR. Exhibit IV-2.1, *Phase One with Conceptual Land Uses*, demonstrates a conceptual layout of what the Phase One area could resemble at full build out.

Phase Two

Phase Two would most likely be within Planning Area 1, immediately west of Phase One as shown in Exhibit IV-3, *Phase Two.* Phase Two development would serve as an extension to development occurring within Phase One by incorporating land uses permitted under the CR Zone similar to those permitted in Phase One. Phase Two would also incorporate the Glamis Mainstreet to serve as a circulation corridor for OHV traffic to and from the dunes and to Phase Four (Planning Areas 2, 3, and 4) located directly north of SR 78. Exhibit IV-3.1, *Phase Two with Conceptual Land Uses,* conceptually shows the layout for this phase.

Phase Three

As seen in Exhibit IV-4, *Phase Three*, Phase Three is located on the northeast side of the UPRR and bisected by SR 78. Phase Three is located within Land Use Areas 2, 3, and 4 as seen in Exhibit I-6. No major public use facilities would be considered for development within these two APN's (APN: 039-310-022 & 039-310-023) to discourage OHV traffic from crossing the UPPR lines to access these areas. Phase Three however, would serve for the development of uses relevant to RV parking, employee housing, and/or a research and development (R&D) facility, and possible PV Solar array system as seen in the conceptual layout, Exhibit IV-4.1, *Phase Three with Conceptual Land Uses*.

Phase Four

Phase Four, located on the north side of SR 78 (see Exhibit IV-5, *Phase Four*, would be located within Planning Areas 2, 3 and 4 as shown in Exhibit I-6. Most of the infrastructure improvements for this phase will be based on regulatory, safety and liability concerns, and consequently, will require specific infrastructure improvements to be in place prior to development. This is further illustrated in the conceptual layout in Exhibits IV-5.1, *Phase Four with Conceptual Land Uses)*.

The Glamis Mainstreet corridor is proposed to provide an optional circulation interconnection between Phase One and Phase Four. The project applicant will first need to work with and create a nexus as well as approvals between State, County of Imperial, and other agencies as to the appropriate safe type of highway crossing (undercrossing or overcrossing) to be constructed across SR 78 or some other appropriate location. This process will ensure that the crossing is designed to incorporate all required safety measures to the fullest extent possible.

All Phasing as proposed will be impacted by possible requirements that Caltrans may impose along SR 78 and for crossing the UPRR. The Imperial County Transportation Commission (ICTC) is currently conducting a feasibility study for a safe crossing over the UPRR lines for off road vehicles either at SR 78 or Wash 10 or some other location, and additional

information will be available once the feasibility study is complete and used as applicable to future site specific plan reviews within the GSP area. The GSP does not encourage or desire to have off road vehicles cross the UPRR lines, therefore the parcels of land on the northeast side of the UPRR are proposed to have very restricted uses.

1 IN = 458 FT

Phasing Plan

Exhibit IV-1

1 IN = 340 FT

Phase One

Exhibit IV-2

Glamis Specific Plan

1 IN = 340 FT

Phase One with Conceptual Land Uses

Exhibit IV-2.1

1 IN = 250 FT

Phase Two

Exhibit IV-3

Glamis Specific Plan

1 IN = 250 FT

Phase Two with Conceptual Land Uses

Exhibit IV-3.1

Glamis Specific Plan

1 IN = 250 FT

Phase Three

Exhibit IV-4

1 IN = 250 FT

Phase Three with Conceptual Land Uses

Exhibit IV-4.1

1 IN = 425 FT

Phase Four

Exhibit IV-5

Glamis Specific Plan

1 IN = 425 FT

Phase Four with Conceptual Land Uses

Exhibit IV-5.1

Glamis Specific Plan

IV. Administration and Implementation

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V. General Plan Consistency Analysis

A. Purpose and Intent

The County of Imperial General Plan serves as a comprehensive guide for land development patterns within the County of Imperial and provides mechanisms to achieve desired community goals and objectives through a coordinated implementation program. The General Plan was completed and approved by the County of Imperial Board of Supervisors in 1993, with subsequent updates to certain chapters as described in the following analysis. The General Plan consists of the following ten Elements:: 1) Land Use: 2) Housing: 3) Circulation and Scenic Highways; 4) Noise: 5) Seismic and Public Safety: 6) Agricultural: 7) Conservation and Open Space: 8) Renewable Energy and Transmission: 9) Water; and 10) Parks and Recreation. The purpose of each element is to adhere to the County's long-term land development goals by implementing policies that guide the course of action in achieving the County's vision for future development.

The GSP seeks to establish a well-defined planning framework that implements the goals, policies and objectives of the County of Imperial General Plan. As a comprehensive development plan, the GSP ensures a cohesive, integrated framework for the development of commercial, recreational, and related land uses with the provision of adequate infrastructure improvements to serve the GSP development. This chapter provides a summary discussion to demonstrate that the GSP is consistent with the County of Imperial General Plan and results in the implementation of applicable goals and policies of the County of Imperial General Plan.

B. Land Use Element

In the County of Imperial's Land Use Element, which was last updated October 6, 2015, proposed Specific Plans are required to demonstrate fiscal, economic, social, public facility, or other local public benefit. There are currently seven designated Specific Plan Areas described in the County of Imperial General Plan including: Wonderstone, Rio Bend, Mesquite Lake, Heber, Gateway, Holtville Airstrip, and Glamis.

The GSP is approximately 141 acres and located within the Glamis Specific Plan Area that is bisected by SR-78 and located approximately 27 miles east of the City of Brawley. The Union Pacific Railroad (UPRR) crosses the Glamis Specific Plan Area, intersecting SR-78, to the east of the Glamis Beach Store. Glamis is a supporting destination for off-highway vehicle (OHV) recreational users who seasonally visit the Imperial Sand Dunes Recreation Area (ISDRA) for camping, OHV riding, and related activities (refer to Chapter 1, *Introduction*).

The objectives specified in the County of Imperial's Land Use Element for the Glamis Specific Plan Area are intended to accommodate recreational-supporting land uses including but not limited to retail and service commercial, lodging, recreational vehicle-use, RV parks and other related uses. Additionally, coordination with the BLM and affected local agencies is required for development of a specific plan within the Glamis Specific Plan Area. During the development of the GSP, coordination with the BLM and other stakeholder agencies occurred as outlined in Chapter 1.J of this GSP. The BLM's and stakeholder agency input were utilized to develop the GSP. As phases of the project occur, the development would be required to provide supporting infrastructure

and public services in accordance with GSP Chapter 2. These infrastructure and public services are to be implemented as needed to support each phase of the project are built out.

The GSP adheres to the policies specified in the Imperial County General Plan, including the Land Use Element objectives and policies defined for the Glamis Specific Plan Area, as detailed in the following table.

County of Imperial General Plan – Land Use Element – Section D.3. – Designated Specific Plan Areas - Glamis Specific Plan Area Policies	GSP – General Plan Consistency Analysis
The Specific Plan shall focus on visitor-serving facilities and accommodations. Residential uses shall not be intended for permanent occupancy except as needed for on-site employees.	As detailed in Chapter II, Section B, the GSP provides visitor-serving facilities and accommodations to visitors to the Glamis Specific Plan Area. Proposed residential uses and employee housing are intended solely as seasonal uses.
The Specific Plan shall include design guidelines for the physical arrangement of land uses and open space/recreation areas. Adequate open space shall be provided within the developed areas to complement the open space character of the area. Buildings should be sited to allow through views from Highway 78 to scenic vistas surrounding the site.	As detailed in Chapter II, Section C, the GSP includes design guidelines for the physical arrangement of proposed land uses and open space/recreation areas. Adequate open space is provided within Planning Areas of the GSP. These Planning Areas will be seasonally occupied and be left as open space the majority of the year. This is shown within *Exhibit I-8* – Conceptual Site Plan (showing preferred future land uses), and as allowed for within (particularly) Commercial-Recreational Zone CR-3.
The Specific Plan shall include a public facilities financing plan outlining capital improvements needed for the project, feasible financing mechanisms and timing for their construction. This includes sewer, water, and fire and police protection.	The GSP includes a public facilities financing plan (see Chapter IV, Section C) that addresses public facilities including sewer, water, and fire and police protection needed to serve the proposed uses and activities described in the GSP.
The Specific Plan shall be accompanied by an Environmental Impact Report (EIR) which includes an analysis of project impacts to include the following: Air and water quality, biology, noise, traffic, visual/aesthetics, and such other issues as required by the County of Imperial and other agencies.	The GSP will have a corresponding Environmental Impact Report (EIR) that will analyze project impacts such as air and water quality, biology, noise, traffic, visual/aesthetics and such other issues as required by the County of Imperial and other agencies.

C. Circulation and Scenic Highways Element

The County of Imperial's Circulation and Scenic Highway Element was last updated January 29, 2008. The primary function, of this element of

the General Plan, is to provide for the movement of goods and people, including pedestrians, bicycles, transit, train, air, and automobile traffic flows within and through the community. It is intended to provide a plan to accommodate a pattern of concentrated and coordinated growth, providing both regional and local linkage systems between unique communities and its neighboring metropolitan regions. The County, through the Department of Public Works (DPW), administers and coordinates the development of local transportation resources, financing and road maintenance in a manner compatible with local land use planning, development patterns and the environment.

A discussion of the key Circulation and Scenic Highways Element policies that apply to the GSP is provided below.

County of Imperial General Plan – Circulation and Scenic Highways Element – Section III.B. – Goals and Objectives	GSP – General Plan Consistency Analysis
Safe, Convenient, and Efficient Transportation System Goal 1: *The County will provide and require an integrated transportation system for the safe and efficient movement of people and goods within and through the County of Imperial with minimum disruption to the environment.*	As detailed in Chapter II, section C, subsection A – Conceptual Circulation Plan (as shown in Exhibit II-1), the GSP contains a Conceptual Circulation Plan that describes how motor vehicles, OHVs and pedestrians would access the project site. This section of the Specific Plan demonstrates how development of the GSP would not interfere vehicular transportation along SR-78 and other area roadways, and would accommodate the County's goal of providing a safe and efficient transportation system with minimal disruption
	to the environment for incoming visitors to the GSP Area. Therefore, the GSP is consistent with this goal.
Multiple Modes of Transportation Goal 2: *Consider all modes of transportation including motor vehicle, rail, transit, air transportation and non-motorized transportation.*	As detailed in Chapter II, Section C, subsection A – the Conceptual Circulation Plan considers all modes of transportation including motor vehicle, rail, transit, air transportation and non-motorized transportation regarding access to the GSP. Due to the GSP being a remote recreational enclave, the only feasible forms of transportation to/from the GSP Area and surrounding BLM lands is via car/truck, OHV, and pedestrian access. The GSP is not located within an urban area where public transit is proximately available.
Scenic Highways Goal 4: *The County shall make every effort to develop a circulation system that highlights and preserves the environmental and scenic amenities of the area.*	As detailed within Appendix I, *Visual Impact Assessment,* permanent structures proposed as part of development of the GSP are sited to allow through views from SR-78 to open space beyond. The GSP accommodates a circulation system, as discussed

County of Imperial General Plan – Circulation and Scenic Highways Element – Section III.B. – Goals and Objectives	GSP – General Plan Consistency Analysis
	in Chapter II, section C, subsections 1 and 4, that highlights and preserves the environmental and scenic amenities of the area. Therefore, the GSP is consistent with this goal.
Regional Transportation System Goal 5: *Participate in and assist with coordinating regional efforts which integrate the County Transportation System with the Regional Transportation System.*	As detailed within Chapter II, Section C, subsection A – Conceptual Circulation Plan, during the development of the GSP, stakeholder meetings were held with Caltrans District 11, and the Imperial County Transportation Commission in order obtain their input into the development of the GSP, and to accommodate the County's goal of participating and coordinating with regional efforts to integrate the County Transportation System with the Regional Transportation System. Therefore, the GSP is consistent with this goal.

D. Agricultural Element

The County of Imperial's General Plan Agricultural Element, last updated October 6, 2015, function is to demonstrate the long-term commitment by the County to the full promotion, management, use, and development and protection of agricultural production. Agriculture has been the single most important economic activity of Imperial County for the past decade and is expected to play a major economic role in the foreseeable future. An overall purpose of the Agricultural Element is to describe the status and trends of agricultural resources in the planning area and to identify the goals, objectives, policies and measures to conserve agricultural lands while minimizing or avoiding conflicts with urban and other land uses.

A discussion of the key Agricultural Element policies that apply to the GSP is provided below.

County of Imperial General Plan – Agricultural Element Section III.B. – Goals and Objectives	GSP – General Plan Consistency Analysis
Goal 4: Water Availability and Conservation *Maximize the inherent productivity of Imperial County's agricultural resources by ensuring future availability of adequate and affordable irrigation water and by managing water such that it is used effectively and not wasted.*	As detailed within Chapter II, Section B – *Conceptual Water and Sewer* Plan, and Chapter III, Zoning Ordinance, the GSP utilizes well water from an expanded on-site well to provide water to the proposed facilities. The GSP does not rely on any irrigation water, and therefore, would not affect the availability of irrigation water for agricultural use. As discussed in

County of Imperial General Plan – Agricultural Element Section III.B. – Goals and Objectives	GSP – General Plan Consistency Analysis
	Chapter II, section C, subsection 2, the GSP implements water efficient appliances and other water conservation measures (e.g. xeriscape landscaping) that would reduce water use to the maximum extent possible. Therefore, the GSP is consistent with this goal.

E. Conservation and Open Space Element

The County of Imperial's General Plan Conservation & Open Space Element, adopted March 8, 2016, is intended to protect and preserve the rich natural and cultural resources in Imperial County. The Conservation and Open Space Element focuses on the following environmental resources:

- Biological Resources
- Cultural Resources
- Geology and Soils
- Mineral Resources
- Regional Aesthetics
- Air Quality and Climate Change
- Open Space and Recreation

A discussion of the key Conservation & Open Space Element policies that apply to the GSP is provided below.

County of Imperial General Plan – Conservation and Open Space Element – Section III.B. - Goals and Objectives	GSP – General Plan Consistency Analysis
Conservation of Environmental Resources for Future Generations Goal 1: *Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.*	The GSP conserves environmental resources by avoiding, minimizing, and/or mitigating environmental impacts that may occur within the project site and will comply with the Mitigation Monitoring and Reporting program included in the EIR prepared for the GSP. Therefore, the GSP is consistent with this goal.
Conservation of Biological Resources Goal 2: *The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity and long-term viability.*	The GSP integrates programmatic strategies in order to promote the conservation of critical habitats to manage their integrity, function, productivity and long-term viability. As discussed in Chapter II, section C, subsection 4, the NADW is located northwest of the project site which prompts the development of the GSP to incorporate avoidance and minimization measures to mitigate potential impacts to on-site and/or adjacent natural

County of Imperial General Plan – Conservation and Open Space Element – Section III.B. - Goals and Objectives	GSP – General Plan Consistency Analysis
	resources to the greatest extent. Restricted access to OHV travel is enforced by the fencing installation on the north-western boundary of Planning Area 4. Additionally, interspersed signage will be located throughout the project site. By incorporating such measures, the GSP remains consistent with this goal.
Preservation of Cultural Resources Goal 3: *Preserve the spiritual and cultural heritage of the diverse communities of Imperial County.*	The GSP preserves the spiritual and cultural heritage of the diverse communities of Imperial County by preserving the Glamis Beach Store, existing historical cemetery and avoiding impacts to the UPRR. The GSP preserves such resources by avoiding, minimizing, and/or mitigating impacts to such resources and will comply with the Mitigation Monitoring and Reporting Program included in the EIR for the GSP. Therefore, the GSP is consistent with this goal.

County of Imperial General Plan – Conservation and Open Space Element – Section III.B. - Goals and Objectives	GSP – General Plan Consistency Analysis
Conservation of Visual Resources Goal 4: *The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational and tourist activity.*	As described in Appendix I, *Visual Resource Assessment*, the GSP avoids and/or reduces, potential impacts to the surrounding aesthetic character by positioning the proposed land uses to allow through views along SR-78, and preserving views of mountains and sand dunes and other features. Also large areas of the GSP will be left open when special events are not occurring. Therefore, the GSP is consistent with this goal.
Conservation of Water Resources Goal 5: *The County will conserve, protect and enhance water resources in the County.*	As detailed in Chapter II, Section C, Subsection 2, the GSP conserves, protects and enhances water resources in the County through implementation of water efficient appliances and other water conservation measures (e.g. xeriscape landscaping) that would reduce water use to the maximum extent possible. Therefore, the GSP is consistent with this goal.

County of Imperial General Plan – Conservation and Open Space Element – Section III.B. - Goals and Objectives	GSP – General Plan Consistency Analysis
Protection of Air Quality and Addressing Climate Change Goal 6: *The County shall actively seek to improve the quality of air in the region.*	As detailed in Chapter II, Section C, Subsection 1, the GSP focuses on providing internal clearly marked signage for both passenger vehicles and OHVs, including speed limits for dust control and lighted signage for nighttime circulation. Activities and development of the GSP will comply with the Mitigation Monitoring and Reporting Program in the EIR for the GSP. Therefore, the GSP is consistent with this goal. Therefore, the GSP is consistent with this goal.
Protection of Open Space and Recreational Opportunities Goal 7: *Open space shall be maintained to protect the aesthetic character of the region, protect natural resources, provide recreational opportunities and minimize hazards to human activity.*	As detailed in the Chapter III, the Zoning Ordinance allows for and accommodates for open space and recreational uses to maintain the aesthetic character of the region, protect natural resources, provide recreational opportunities and minimize hazards to human activity. Signage prohibiting OHV use to adjacent areas such as the NADW will be strategically located to protect natural resources. Additionally, as seen in the Conceptual Site Plan it delineates preferred land uses, which includes open space/recreational areas. . Therefore, the GSP is consistent with this goal.

F. Renewable Energy and Transmission Element

The County of Imperial's General Plan Renewable Energy and Transmission Element, updated October 6, 2015, provides a framework for the review and approval of renewable energy projects in the County. The development projections in the Renewable Energy and Transmission Element function are based on forecasts obtained from the renewable energy industry, regional utilities and the Desert Renewable Energy Conservation Plan (DRECP). It is not the intent of the Element to provide zoning, regulation, permitting or taxation.

A discussion of key Renewable Energy and Transmission Element goals and policies that apply to the GSP is provided below.

County of Imperial General Plan – Renewable Energy and Transmission Element – Section III.B. - Goals and Objectives	GSP – General Plan Consistency Analysis
Goal 1: *Support the safe and orderly development of renewable energy while providing for the protection of environmental resources.*	As detailed in Chapter II, Section B, the GSP supports the safe and orderly development of renewable energy (solar). The proposed zoning ordinance allows for on-site solar panels and are a preferred use as shown in Exhibit I-8, *Conceptual Site Plan.* Therefore, the GSP remains consistent with this goal.
Goal 3: *Support development of renewable energy resources that will contribute to and enhance the economic vitality of Imperial County.*	As described in Chapter II, Section B, the development of a small commercial solar PV system generation facilities are supported by the GSP and are allowed through the zoning ordinance in CR1, CR2, and CR3 zones. This is a viable option to provide the GSP with efficient renewable energy. Therefore, the GSP is consistent with this goal.

G. Housing Element

The County of Imperial's General Plan Housing Element, adopted September 17, 2013, evaluates the current and future housing needs in Imperial County. The purpose of the Housing Element is to establish specific goals and policies that facilitate the provision of housing to meet the County's needs for households of all income levels. The focus is to create a balance between necessities and desires of the community as a whole while maintaining neighborhood character, manage traffic, and minimize visual and environmental impacts of new development.

A discussion of key Housing Element policies that apply to the GSP is provided below:

County of Imperial General Plan – Housing Element – Section III - Goals, Policies, And Programs	GSP – General Plan Consistency Analysis
Policy 6.1 Promote architectural design and orientation of residential developments in a way that promotes energy conservation.	The GSP does allow for some limited permanent residential land uses within the project site, which consist mostly of employee housing. In addition, the proposed zoning ordinance as well as Exhibit I-8, *Conceptual Site Plan,* allows for solar generating facilities and are preferred land uses within the Conceptual Site Plan. The GSP includes small commercial solar photovoltaic that could power residential development and could be used to meet future

County of Imperial General Plan – Housing Element – Section III - Goals, Policies, And Programs	GSP – General Plan Consistency Analysis
	GHG emission reduction regulations. Therefore, the GSP is consistent with and results in the implementation of, this policy of the General Plan.

H. Noise Element

The County of Imperial's General Plan Noise Element, updated October 6, 2015, provides a program for incorporating noise issues into the land use planning process, with a goal of minimizing adverse noise impacts to receptors which are sensitive to noise. The Noise Element establishes goals, objectives and procedures to protect the public from noise intrusion. Implementation of these guidelines and procedures promote the development of noise sensitive land uses outside of noise impact zones and discourage the development of noise generating activities near noise-sensitive land uses.

A discussion of key Noise Element goals and policies that apply to the GSP is provided below:

County of Imperial General Plan – Noise Element – Section III.B. – Goals and Objectives	GSP – General Plan Consistency Analysis
Goal 1: Noise Environment	As shown in Chapter I, Exhibit I-2, *Project Vicinity*, the GSP is surrounded by open desert land managed by the BLM. There are no residential uses (and therefore no sensitive noise receptors) within close proximity to the project site All various BLM lands surrounding the GSP are designated RMZs which do not include any residential areas or other sensitive noise receptors in close proximity to the GSP. Therefore, the GSP is consistent with and results in the implementation of, this policy of the General Plan.
Provide an acceptable noise environment for existing and future residents in Imperial County.	
Goal 2: Project/Land Use Planning *Review proposed projects for noise impacts and require design which will provide acceptable indoor and outdoor noise environments*	During construction activities the GSP will comply with the County of Imperial's Noise Ordinance to minimize disturbance to surrounding areas. Furthermore, the GSP is consistent with varying policies established in the Noise Element in which goals, objectives and procedures will be taken into careful consideration to minimize adverse impacts to sensitive noise receptors. This includes consideration of design

County of Imperial General Plan – Noise Element – Section III.B. – Goals and Objectives	GSP – General Plan Consistency Analysis
	to provide adequate noise mitigation to provide acceptable indoor and outdoor noise standards.

I. Seismic and Public Safety Element

The County of Imperial's Seismic and Public Safety Element identifies potential natural and human-induced hazards and provide policy to avoid or minimize the risk associated with hazards. The goals and policies of the Seismic and Public Safety Element is focused on reducing the loss of life, injury and property damage that might result from a disaster or accident.

A discussion of key Seismic and Public Safety Element goals and policies that apply to the GSP is provided below:

County of Imperial General Plan – Seismic and Public Safety – Section III.B. –Goals and Objectives	GSP – General Plan Consistency Analysis
Land Use Planning and Public Safety Goal 1: *Include public health and safety considerations in land use planning.*	The GSP is committed to protecting public health and safety by providing proposed zoning with compatible allowable uses, a Conceptual Site plan showing preferred land uses within a compatible physical arrangement. Future development within the project site will be required to comply with California and County building codes, and seismic standards. Proposed development will be regulated within flood-way areas in accordance with the Federal Emergency Management Agency (FEMA). Avoidable seismic risks will be avoided. The GSP implements measures, commensurate with risks, to reduce injury, loss of life, destruction of property and disruption of service. Environmental hazards will be considered when siting critical proposed facilities within the GSP. Therefore, the GSP is consistent with this goal.
Emergency Preparedness Goal 2: *Minimize potential hazards to public health, safety and welfare and prevent loss of life and damage to health and property resulting from both natural and human-related phenomena.*	The GSP ensures that adequate emergency preparedness and evacuation plans to respond to identified hazards and potential emergencies by implementing additional hydrant connections within Vendor Row as well as,

County of Imperial General Plan – Seismic and Public Safety – Section III.B. –Goals and Objectives	GSP – General Plan Consistency Analysis
	during Special Events, on-site law enforcement and fire protection will be provided with applicable services and apparatus (refer to Chapter II. Specific Plan, F. Public Safety Services). The GSP is appropriately regulated with applicable provisions including the Alquist – Priolo Special Studies Zone Act, California Building Code and Title 9 Division 15 of the County Land Use Ordinance. Furthermore, the GSP implements all site-specific recommendations set-forth in the Geotechnical Report prepared for the project. Additionally, signage will be strategically located throughout the GSP to prevent unsafe crossings of SR-78 and UPRR. A proposed OHV and pedestrian under-crossing in the vicinity of SR-78 and the Glamis Mainstreet will be built in concert with the build-out of the project.
Control Hazardous Materials Goal 3: *Protect the public from*	Vehicle repair within the GSP may result in accidental spillage

County of Imperial General Plan – Seismic and Public Safety – Section III.B. –Goals and Objectives	GSP – General Plan Consistency Analysis
exposure to hazardous materials and wastes.	and public exposure of hazardous materials and waste. Vehicle repair uses will be on raised impervious concrete pads to prevent public exposure and groundwater contamination of hazardous materials (as described in Chapter II, Section C, Subsection 4). If a use provides fuels or other hazardous material or repairs that include such fuels or material, the operator of such a space shall secure, in addition to any building permits that may be required the approval from the Fire Department and shall meet all such regulations that may apply to such services (see Chapter. III, Section 93308.03).
Seismic/Geologic Hazards Policy 4: *Ensure that no structure for human occupancy, other than one-story wood frame structures, shall be permitted within fifty feet of an active fault trace as designated on maps compiled by the State Geologist*	In the Geotechnical Engineering Feasibility Report, included-as Appendix E, it is found that there are no active faults within the project limits. The nearest mapped active fault is the Brawley seismic zone which is located 24 miles west of the site,

County of Imperial General Plan – Seismic and Public Safety – Section III.B. –Goals and Objectives	GSP – General Plan Consistency Analysis
under the Alquist – Priolo Special Studies Zone Act.	and the Imperial fault located 27 miles west-southwest of the site. As a result, future development within the GSP is not located within fifty feet of an active fault trace as designated on maps compiled by the State Geologist under the Alquist-Priolo Special Studies Zone Act.
Flood Hazards Policy 2: *Regulate and restrict development near major water courses and floodplains through application of appropriate land use measures.*	The GSP adheres to the regulations and restrictions proposed in the Seismic and Public Safety Element to implement procedures that avoids development near major water courses and floodplains.
Flood Hazards Policy 3: *Both the ground floor elevation of any building for human occupancy and the driving surface, if designated evacuation routes within the 100-year floodplain, shall be constructed above the projected profile of a 100-year flood event.*	As shown in Exhibit II-5, Conceptual Drainage Plan, Chapter II. Specific Plan, the conceptual grading is designed to meet the County of Imperial's drainage requirements, provide flood protection for future land uses within the entire project site and release the drainage to the southwest in an overall equivalent historical pattern of natural drainage courses
	consistent with State drainage law. The project site will be graded so as to protect all building pads from the 100-year storm event and convey offsite flow in accordance with County of Imperial approval.
Flood Hazards Policy 4: *Require all new development for human occupancy within the 100-year floodplain to be adequately flood-proofed.*	All new permanent development within the GSP is adequately flood-proofed.
Flood Hazards Policy 5: *Establish technical design criteria which minimizes or mitigates impacts associated with crossing of floodplains by development. Unless such engineering alternatives are implemented, development in floodplains is to be restricted or prohibited.*	The GSP follows technical design criteria that either minimizes or mitigates impacts associated with crossing of floodplains by development. Future development of structures in floodplains is to be avoided.

J. Water Element

The County of Imperial's Water Element function is to identify and analyze the types of water resources within Imperial County and to assure that goals and policies are adopted that preserve and enhance resource availability and quality.

A discussion of key Water Element goals and policies that apply to the GSP is provided below:

County of Imperial General Plan – Water Element – Section III.B. – Goals and Objectives	GSP – General Plan Consistency Analysis
Adequate Domestic Water Supply Goal 1: *The County will secure the provision of safe and healthful sources and supplies of domestic water adequate to assure the implementation of the County General Plan and the long-term continued availability of this essential resource.*	The development of a water treatment system (*discussed in Chapter II, Section B, Subsection 2 Conceptual Water Plan and Sewer Plan*) which would treat ground water that is extracted from existing onsite wells is currently in progress. The water treatment plant will comply with California standards for drinking water and is being constructed to meet the needs of the current uses and with room for expansion. Therefore, the GSP is consistent with and results in the implementation of, this policy of the General Plan.
Adequate Domestic Water Supply Policy 1: *The efficient regulations of land uses that economizes on water consumption, enhances equivalent dwelling unit demand for domestic water resources, and that makes available affordable resources for continued urban growth and development.*	The development of a water treatment system which would treat ground water that is extracted from existing onsite wells is currently in progress. The water treatment plant complies with California standards and is being constructed to meet the needs of the current uses and with room for expansion. Therefore, the GSP is consistent with and results in the implementation of, this policy of the General Plan.
Protection of Water Resources from Hazardous Materials Goal 4: *The County will adopt and implement ordinances, policies and guidelines that assure the safety of County ground and surface waters from toxic or hazardous materials and wastes.*	The development and implementation of infrastructure abides by the ordinances, policies, and guidelines that reduce contamination and assure the safety of County ground and surface waters from toxic or hazardous materials and wastes. Therefore, the GSP is consistent with and results in the implementation of, this policy of the General Plan.
Protection of Water Resources from Hazardous Materials Policy 1: *Adoption and implementation of ordinances, policies and*	The development and implementation of infrastructure abides by the ordinances, policies, and guidelines that

County of Imperial General Plan – Water Element – Section III.B. – Goals and Objectives	GSP – General Plan Consistency Analysis
guidelines which assure the safety of County ground and surface waters from toxic or hazardous materials and/or wastes.	reduce contamination and assures the safety of County ground and surface waters from toxic or hazardous materials and wastes. Therefore, the GSP is consistent with and results in the implementation of, this policy of the General Plan.
Coordinated Water Management Goal 5: *Water Resources shall be managed effectively and efficiently through inter-agency and inter-jurisdictional coordination and cooperation.*	The GSP sets forth continued cooperation and coordination between Imperial County and other Local, State and Federal agencies, water resources can be conserved and managed effectively and efficiently for all approved beneficial purposes. Therefore, the GSP is consistent with and results in the implementation of, this policy of the General Plan.
Coordinated Water Management Policy 1: *Encourage and provide inter-agency and inter-jurisdictional coordination and cooperation for the management and wise use of water resources for contact and non-contact recreation, groundwater recharge, hydroelectric energy production, and wildlife habitat as well as for domestic and irrigation use.*	The GSP sets forth continued cooperation and coordination between Imperial County and other Local, State and Federal agencies involved in water resources conservation. Water resources are conserved and managed effectively and efficiently for all approved beneficial purposes. Therefore, the GSP is consistent with and results in the implementation of, this policy of the General Plan.

K. Parks and Recreation Element

The County of Imperial General Plan Parks and Recreation Element, approved on January 29, 2008, establishes a framework for the stewardship of County parks and other recreational amenities that enhance the quality of life of County residents and visitors.

A discussion of key Parks and Recreation Element goals and policies that apply to the GSP is provided below:

County of Imperial General Plan – Parks and Recreation Element – Section V.B. - Landscaping Policies	GSP – General Plan Consistency Analysis
Landscaping Policy: *To promote water conservation, all vegetation installed shall follow xeriscape principles for reduced total water consumption.*	Future development within the GSP adheres to careful and appropriate selection of a drought-tolerant plant palette in a xeriscape design, fit for the Imperial County desert environment, ensuring the reduction in total water consumption. Therefore, the GSP

County of Imperial General Plan – Parks and Recreation Element – Section V.B. - Landscaping Policies	GSP – General Plan Consistency Analysis
	is consistent with and results in the implementation of, this policy of the General Plan.
Funding Mechanisms Policy: *The County will encourage private sector development, operation and maintenance of recreation facilities.*	Future development within the GSP is pursuant to the Quimby Act whereas continual coordination with the County occurs in effort to provide consistent public access to recreational activities within the GSP. The GSP sets forth a Conceptual Open Space and Recreational Plan (see Chapter II, Section C, Subsection 4) that complements the existing and future recreational use of adjacent BLM land. Therefore, the GSP is consistent with and results in the implementation of this policy of the General Plan.

V. General Plan Consistency Analysis

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M-2 Zoning Ordinance

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Appendix A

Zoning Ordinance

Draft ordinance for Glamis

TITLE 9

DIVISION 33: Glamis Specific Plan a "Recreational Commercial" area!

CHAPTER 5: PHASING
CHAPTER 6: SPECIAL EVENTS – REQUIREMENTS – BY OWNER
CHAPTER 7: SPECIAL EVENTS – REQUIREMENTS – BY OTHERS
CHAPTER 8: VENDOR AREA

CHAPTER 5: PHASING PROCEDURE/STANDARDS

Section 1: PHASING DEFINED
Section 2: INFRASTRUCTURE
Section 3: LEASED AREAS – Applications by Lessee
Section 4: LEASED AREAS - Processing Applications

§ 93305.01 PHASING DEFINED

For the purpose of this Specific Plan, Phasing is defined as the sequence that development may follow, subject to certain standards and regulatory requirements first being met, as enumerated herein and in the Specific Plan. This Specific Plan established "areas" which are not to be confused with parcels nor with any specific land uses allowed, nor shall the numeric on any drawing within the plan, be construed as the sequence that development will occur, only that it may occur. By way of example, development may start in area (one) 1 then move to area (three) 3, then to area (five) 5.

Infrastructure requirements, public safety and legal as well as safe vehicular as well as pedestrian travel on and off the site shall always be carefully considered and to the extent that there are regulatory requirements, or industry standards where available and applicable, they shall be met. Of highest consideration shall be off road vehicle access to HWY 78.

Pursuant to the traffic analysis prepared for the SP, and to maintain public safety, the intent of the Specific Plan and this ordinance is not to encourage, or where possible prohibit off-road vehicles from crossing the UPRR and/or HWY 78, unless and until the public agency that has control of these systems has provided their approval for a crossing, on a case by case basis for each development proposed..

§ 93305.02 INFRASTRUCTURE

Prior to any development being allowed in any of the "areas" as shown on the Specific Plan, infrastructure as listed and/or required below shall be provided.

a) Electrical – unless the proposed use/development does not require electrical services of any type meeting regulatory requirements, a new development or an expansion of an existing development shall not be allowed until electrical service can or has been provided.

   NOTE: Electrical service to this site may be provided by a public utility, a private utility or by a private service provider.

   If electrical service is provided by a private entity, no extension of any electrical system shall be allowed without the written consent of the private entity. The County shall not allow such an extension without such written consent being provided as part of the application.

b) Water (potable)– no new development or expansion of an existing use that is mandated by

regulatory requirements to have or provide potable water, shall be allowed until potable water and if applicable fire protection water is or can be provided. Prior to the issuance of any development, the applicant shall provide evidence that the system has the capacity to provide such service demand.

c) Wastewater – no development or expansion of an existing use shall be allowed until provisions have or will be made to provide for the treatment of all wastewater, meeting applicable regulatory requirements. If allowed by regulations, septic systems may be considered, however if a central treatment system is constructed, all new development shall connect to this system. Any application for development shall include evidence that such system has the adequate capacity.

d) Access – if the proposed new development or the expansion or alteration of an existing development requires direct access to/from HWY 78, or contributes new or increased traffic to an existing access point, no development shall be allowed unless the necessary approval and improvements as required have been secured from the appropriate regulatory agency. If access to a parcel from HWY 78 serves off-road vehicles, or encourages off-road vehicles to cross HWY 78, no development shall be allowed until a safe means of access has received the appropriate permits and the improvements constructed to meet the regulatory agencies requirements.

e) Minimum requirements – not-withstanding any other provisions, no new development or expansion of an existing development shall be allowed until all the requirements of this ordinance and the Specific Plan are met. This requirement for utilities does not apply to Special Events.

§ 93305.03 LEASED AREAS – Applications by Lessee

In the event a Lessee applies to secure a land use permit, a development approval for any use, or a Special Event, the County shall not process nor issue such an approval unless the land owner has provided a written statement that said owner has reviewed the application and plans and has determined that the proposed use is consistent with the provisions of the Specific Plan and this Ordinance. This may include assurance that any infrastructure provided or serviced by the landowner has the capacity to service this new or expanded development.

§ 93305.04 LEASED AREAS - Processing of Applications

The County may process an application (ministerial or discretionary) from a lessee only if section 93304.03 has been met. In the case where a discretionary permit application is filed it shall have the written consent of the landowner

With regard to any fees, cost or on-going potential costs the Owner shall not be held responsible for same and shall be the full obligation of the applicant. Any insurance that the County may require shall also name the Owner as an additional insured as appropriate. If any bond is required by the County, it shall not include a provision that obligates the landowner or ties the bond to the property.

Under no conditions shall any mitigation measures become the responsibility of the owner either in cost or in compliance. Where mitigation requires physical improvements to the property, the County shall require a performance bond to assure that the improvements are made and result in no obligation to the landowner. In the event a mitigation measure or a condition required by any agency is not met or complied with by the permittee the County following its standard notifications and enforcement actions shall terminate such a permit or approval as soon as possible and enforce the cessation of the use that was under permit/approval.

§ 93305.05 LEASED AREAS – Variances

No variance from the provisions of this Division shall be allowed unless requested by the landowner. The following variances may be considered by the County with landowner consent;

Height variance
Setback variance
Infrastructure variance

CHAPTER 6: SPECIAL EVENTS – BY OWNER - REQUIREMENTS

Section 1: Special Events Defined
Section 2: Special Events Prohibited
Section 3: Special Events Schedule/Notification
Section 4: Special Events - traffic
Section 5: Special Events – fire protection
Section 6: Special Events – general standards
Section 7: Special Events – pre-meeting

§ 93306.01 Special Events Defined

A special event is defined as a private sponsored event for a public activity or event allowing the assembly of large numbers of people, including but not limited to; a concert, a trade show, an exhibition, a carnival, fireworks displays, off road vehicle activities including races, a stunt show or exhibition, or other similar uses.

A special event may be held on the landowner's property in conjunction with off-site components provided the event sponsor has obtained the approval from the off-site landowner and has provided evidence to the landowner and if appropriate the County.

§ 93306.02 Special Events Prohibited

Special Events within the SPA, unless sponsored by the landowner or by an entity that has obtained approval from the landowner shall be prohibited.

Special Events that pose a serious health or safety concern as determined by Law Enforcement or the Fire Department upon findings, may not be allowed. In the event that an event is of concern to Law Enforcement, proponent shall have the opportunity to revise the proposed event in an effort to gain approval.

§ 93306.03 Special Events Schedule/Notification

There is no limit on the number of events that may be held on an annual basis. No special use permit or other land use related permit shall be required provided the event sponsor has given adequate notice as required and has provided to the public agencies evidence of compliance with the standards required herein.

Notification to the County and/or BLM or both, shall be provided at least 60 days in advance of an event being held. The purpose of this advanced notification is to allow the public agencies to review the proposed event and determine if applicable conditions have been or will be complied with. Notification method is by email to the Planning Director.

If the 60-day notice is not provided to the agencies, or if compliance with the general and specific standards is not shown, the County may prohibit the event.

If the event includes off-site components, and approval from BLM is not obtained at least 30 days prior to the event, the County may restrict the event to on-site activities only.

Draft ordinance for Glamis

§ 93306.04 Special Events – Traffic

Because special events may include large assemblage of people and equipment and because access to the site is from a single state highway whose speed limits as regulated by state requirements, any special event shall be required to adhere to the following procedures/standards:

1) Notify CALTRANS, California Highway Patrol, Imperial County Sheriff, and the County Public Works Department, of the event at least 60 days prior to the event.
2) Provide a traffic management plan if so required by CALTRANS
3) Provide onsite traffic control either through the services of the Highway Patrol or private contractors as required or approved by CALTRANS.
4) Provide access control to the site as required by any of the agencies noted in item # 1.
5) Provide traffic signage along HWY 78 as necessary and/or required by the agencies.

§ 93306.05 Special Events – Fire Protection

Due to the remote location fire protection service for special events pose special challenges. For adequate fire protection and emergency services to be available any special event shall adhere to the following;

1) Notify Imperial County Fire Department at least 60 days prior to the event.
2) Provide a detailed site plan along with a detailed description of the event, including estimated attendance.
3) Provide any technical information on special activities that use pyrotechnics, or use vehicle racing or stunts.
4) Provide details on any use of fuels or other flammables or hazardous materials, including storage.
5) Provide details on location of fire protection equipment available and connection capacity for the fire department.
6) Provide an emergency response plan that clearly describes service being provided by sponsor such as standby ambulance service, helipad availability, and on-site medical services if any.

§ 93306.06 Special Events – General Standards

Prior to any special event being held on the site the following procedures/standards shall be adhered to;

1) Provide a minimum of 60 days' notice of the pending event using the form provided by the County, to the following;
    a. Imperial County Planning & Development Services Department
    b. Imperial County Public Works Department
    c. Imperial County Environmental Health Department
    d. Imperial County Sheriff's Office
    e. Imperial County Fire/Office of Emergency Services Department
    f. Bureau of Land Management
    g. California Highway Patrol (CHP)
    h. California Department of Transportation (CALTRANS)
    i.
2) Provide a detailed site plan of the proposed event, showing location of all activities, including but not limited to; seating, staging, vendors, emergency services, restricted area, access control.
3) Provide a detailed emergency response plan
4) Provide a detailed description of activities to be held during the event, the approximate times and amount of people expected to attend.
5) Provide a security plan
6) Provide how public services, including restrooms, portable toilets, wash stations, and emergency contacts will be provided.
7) Provide certificates of insurance as required by the County, and where required such insurance shall name the County as an additional insured. These certificates of insurance shall be provided to the County at least 30 days prior to the event.

§ 93306.07 Special Events - Pre-Meeting

County and/or proponent may request a "pre-meeting" with the agencies affected by the proposed event in

order to discuss issues of concern. This process is entirely optional but available. If so requested by applicant, County Planning & Development Services shall act as the coordinator of the meeting.

CHAPTER 7: SPECIAL EVENTS – BY OTHERS - REQUIREMENTS

Section 1: Special Event by "others" defined.
Section 2: Special Events – Specific requirements

§ 93307.01 Special Events by "others" defined.

For purpose of this Division the definition of a special event shall be the same as that under section 93306.01, however where the special event is not sponsored or controlled by the landowner(s), it shall be defined as "by others".

§ 93307.02 Special Events – Specific Requirements

Where the event organizer or sponsor is not the landowner, the event organizer/sponsor shall comply with all the requirements under section 93306.01 through 93306.07

In addition, the event organizer shall provide to the County the written approval by the landowner(s) that the specific event may be held on this site.

In the case of insurance that may be required by the County said insurance shall name the County and the landowner(s) as additional insured.

If the event organizer or sponsor does not comply with the provisions of this division the County shall notify the organizer that the event is prohibited and shall take appropriate action to stop the event.

CHAPTER 8: Vendor Area/Sales area

Section 1: Vendor Area/Sales Area defined
Section 2: Vendor Area - layout
Section 3: Vendor area - lease requirements
Section 4: Vendor Area/Sales Area - permitting
Section 5: Compliance with CCR 25

§ 93308.01 Vendor Area/Sales Area defined.

Within the Specific Plan there are provisions for a "Vendor Area or Sales Area" where individuals can lease a space and operate a business. (NOTE: leased space areas are not to be considered parcels under the Map Act). While these businesses may operate seasonally the intent of this area is to establish spaces where individual vendor sales units can remain for the duration of their lease. The units within this area may include vehicles, trucks, R.V., tents, cargo containers, pre-manufactured units, food trucks, repair vehicles and fuel dispensing vehicles, all of which if owned by lessee, are temporary and portable.

§ 93308.02 Vendor Area layout

Prior to the development of the Vendor Area/Vendor Sales Area, the Property Owner shall submit a permit application along with a plan, and with any required engineering to show the; (a) layout, (b) location on site, (c) size and location of individual spaces, (d) space numbering, (e) infrastructure to be provided, if any, (f) fire protection infrastructure, (g) access and parking, (h) fencing, (i) along with any permanent structures. Permanent structures are considered owned by landowner.
Spaces shall be clearly identified be means of fencing or other County approved systems.

If spaces are provided with connections to water, sewer or electricity, the plans shall indicate the type of material and sizes for each utility service provided

Fire hydrants if required by the Fire Department shall meet fire code requirements

NOTE: nothing within this division shall be interpreted to mean that infrastructure such as water, sewer

or electricity pursuant to §93305.02 is required unless so required by another code or law.

§ 93308.03 Vendor Area/Sales Area lease requirements

Owner/operator of the Vendor Area/Sales Area shall provide a copy of the terms and conditions/lease to County Planning that clearly state what uses are allowed for each Vendor space leased.

Each Vendor space shall have no more than three R.V. (living) units. Each Vendor space may have multiple sales units including tents provided they meet all applicable codes.

If a space provides fuels or other hazardous materials or repairs that include use of fuels or hazardous materials, the operator of that Vendor space shall secure, in addition to any building permits that may be required, the approval from the Fire Department and shall meet all such regulations that may apply to their services. All fuel or other operations that handle similar liquids shall be on approved concrete or other surfaces designed to retain any spills.

Open flame repairs, such as welding, brazing or alike shall only be done in an enclosed structure that meets Fire Department regulations.

§ 93308.04 Vendor Area/Sales Area – Permitting by tenant or lessee

Any structure that requires a building permit under the California Building Code shall be permitted prior to occupancy. If the structure is removed and replaced on a regular or yearly basis, the owner/operator may apply for a permit that allows multi-year use provided the structure is the original permitted structure, with a onetime fee. Such a multi-year permit application shall clearly describe the structure, provide applicable engineering if required, and be for the same use each successive year. A new permit shall only be required if (a) the use for which the structure was originally approved changes, or (b) if a new code adoption imposes new conditions on such a structure., or (c) if the owner/operator changes.

Each time a unit/structure is removed and replaced the owner/operator shall notify the county and be subject to are-inspection and are-inspection fee if required. If an owner/operator removes a structure and fails to notify the County, and then replaces the unit at a later date it may be subject to a new permit, even if it had originally secured a multi-year permit.

If an owner/operator has a history of non-compliance with County requirements the County may revoke a multiyear permit and/or refuse to issue a new permit to said owner/operator.

§ 93308.05 Compliance with CCR 25

If it is the determination of ICPDS that the use of multiple RV's within a Vendor Space constitutes a RV Park under the provisions of CCR 25, landowner shall secure the appropriate approvals. Unless those RV's are included in the Vendor Permit and used on a temporary basis.

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Conditional Use Permit Application – Water Well Modification

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To Be Provided

Appendix N - Water Well CUP Modification Application

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