

Final

TRIBAL ENVIRONMENTAL IMPACT REPORT
VIEJAS CASINO EAST GARAGE PROJECT

for the Viejas Band of Kumeyaay Indians

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SCH # 2022030743

September 2022

Prepared for:

VIEJAS®
BAND OF KUMEYAAY INDIANS

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Final

Tribal Environmental Impact Report

(TEIR)

for the

Viejas Casino East Garage Project

SCH # 2022030743

prepared for the

Viejas Band of Kumeyaay Indians

5000 Willows Road

Alpine, CA 91901

prepared by

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September 2022

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Prepared by Viejas Band of Kumeyaay Indians
Date March 25, 2022

B Air Quality Study
Prepared by Birdseye Planning Group
May 2022

C Noise Study
Prepared by Birdseye Planning Group
May 2022

D Transportation Assessment
Prepared by Linscott, Law & Greenspan Engineers
April 29, 2022

ACRONYMS

AM	morning
ADT	Average Daily Trips
AQIA	Air Quality Impact Assessment
AQMP	Air Quality Management Plan
AMSL	Above Mean Sea Level
BIA	Bureau of Indian Affairs
BPG	Birdseye Planning Group
CAAA	California Clean Air Act Amendments
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CalEEMod	California Emissions Estimator Model
CAA	Clean Air Act
CEQA	California Environmental Quality Act
CNEL	Community Noise Exposure Level
CO	Carbon monoxide
dBA	A-weighted decibels
DPM	Diesel Particulate Matter
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FCI	Forest Conservation Initiative
FCI GPA	Forest Conservation Initiative General Plan Amendment
FTA	Federal Transit Administration
GPA	General Plan Amendment
g/l	grams per liter
I-8	Interstate 8
Ldn	Day-night average sound level
Leq	Equivalent sound level
LLG	Linscott Law & Greenspan Engineers
Lmax	Maximum sound level
LOS	Level of Service (for traffic)
NAAQS	National Ambient Air Quality Standard
NO	Nitric Oxide
NOP	Notice of Preparation
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
PM	afternoon, evening
PM_{10}	Particulate Matter, 10 microns or smaller in size
$PM_{2.5}$	Particulate Matter, 2.5 microns or smaller in size
ppm	parts per million
PPV	Peak Particle Velocity

RAQS	Regional Air Quality Strategy
ROG	Reactive Organic Gases
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SIP	State Implementation Plan
SO_X	Sulfur Oxide
SWPPP	Stormwater Pollution Prevention Plan
TAC	Toxic Air Pollutant
TEIR	Tribal Environmental Impact Report
TOG	total organic gas
VCMU	Village Core Mixed Use
VdB	Vibration velocity level
VOC	Volatile Organic Compounds
VP	Viewpoint
VR-2	Village Residential 2
$\mu g/m^3$	micrograms per cubic meter

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FOREWORD

Public Review

The Viejas Casino East Garage Draft Tribal Environmental Impact Report (TEIR) was circulated for public review for a period of 45 days, from July 1, 2022 to August 15, 2022. On July 1, 2022, a copy of the Draft TEIR was filed with the State Clearinghouse, the State Gaming Agency, the County of San Diego, and the California Department of Justice, Office of the Attorney General. The Tribe also posted the Notice of Completion and a copy of the draft TEIR on its website. The County was asked to distribute copies of the Draft TEIR to other interested parties. The Notice of Completion and Notice of Availability of the Draft TEIR was published in the Alpine Sun on July 1, 2022. Viejas also provided an electronic and hard copy of the NOC and Draft TEIR to the Alpine Public Library.

Final TEIR Format

In accordance with the Viejas-State Compact (Amended 2016, Sec. 11.4), this Final TEIR contains the Draft TEIR; verbatim comments received on the Draft TEIR; a list of persons, organizations, and public agencies commenting on the Draft TEIR; and the responses of the Tribe to significant environmental points raised in the review and consultation process.

Comments and Responses to Comments

No comments were received on the Draft EIR during the 45-day public and agency review period. The County of San Diego sent an email indicating that the County had no comments, and the State Clearing House's (SCH's) CEQAnet web site was consulted to identify any comments submitted to SCH. No comments were submitted to SCH. A copy of the County email and a screen shot of SCH's CEQAnet web page follow this page. For this reason, no responses have been prepared by the Tribe.

Email from San Diego County

Tuesday, August 16, 2022 at 10:35:05 Pacific Daylight Time

Subject: RE: Viejas East Garage Draft TEIR
Date: Friday, August 12, 2022 at 2:42:17 PM Pacific Daylight Time
From: Christman, Scott
To: Erich Lathers
CC: Easland, Camila, De La Rosa, Michael

Good Afternoon Mr. Lathers,

Thank you for providing us an opportunity to review the Draft TEIR for this project. The County has completed its review and does not have any comments or suggestions to offer. Please let us know if you need anything from the County. Thank you and have a great weekend!

Scott Christman, Group Program Manager he / him / his
County of San Diego, Planning & Development Services
5510 Overland Avenue | Suite 310 | San Diego, CA 92123 | MS: O-650
3 (619) 613-5197 | Scott.Christman@sdcounty.ca.gov
Planning & Development Services Homepage: www.SDCPDS.org

For local information and daily updates on COVID-19, please visit www.sandiegocounty.gov/coronavirus.html. To receive updates via text, send COSD COVID19 to 468-311.

-----Original Message-----
From: Erich Lathers <Erich@brginc.net>
Sent: Thursday, July 7, 2022 10:53 AM
To: Christman, Scott <Scott.Christman@sdcounty.ca.gov>
Subject: [External] Viejas East Garage Draft TEIR

Please confirm your receipt of the 10 DTEIRs.

Also, note that we delivered a hard copy and CD to the Alpine Library.

Thank you,

Erich

Page 1 of 1

CEQAnet webpage for the Draft TEIR, page 1 of 3

Viejas Casino East Garage Project Draft TEIR

Summary

SCH Number
2022030743

Lead Agency
Viejas Band of Kumeyaay Indians

Document Title
Viejas Casino East Garage Project Draft TEIR

Document Type
TRI - Tribal Environmental Evaluation

Received
7/1/2022

Present Land Use
Paved Parking Lot

Document Description
The project is an approximately 2,450-parking space, 5-story parking garage, adjacent to the existing Viejas Casino. The expansion will occur on a currently developed and paved area north of the casino. This area is currently used for surface parking.

Contact Information

Name
erich Hans

Agency Name
Viejas Band of Kumeyaay indians

Job Title
Chief Financial Officer and Director of Treasury

Contact Types
Lead/Public Agency

Address
5000 Willows Road
Alpine, CA 92903

CEQAnet webpage for the Draft TEIR, page 2 of 3

Phone
(619) 445-5400

Email
erichehans@viejas-nsn.gov

Location

Coordinates
32°59'59"N 116°42'27"W

Counties
San Diego

Regions
Unincorporated

Cross Streets
Willows Road and Viejas View Lane

Zip
91903

Total Acres
3.7

Parcel #
NA

State Highways
Interstate 8

Railways
NA

Airports
NA

Schools
NA

Waterways
Vejas Creek

Township
15S

Range
2E

Section
29

CEQAnet webpage for the Draft TEIR, page 3 of 3

Base
Viejas M

Notice of Completion

State Review Period Start
7/1/2022

State Review Period End
8/15/2022

State Reviewing Agencies
California Air Resources Board (ARB), California Department of Conservation (DOC), California Department of Fish and Wildlife, South Coast Region 5 (CDFW), California Department of Forestry and Fire Protection (CAL FIRE), California Department of Justice, Attorney General's Office, California Department of Parks and Recreation, California Department of Transportation, District 11 (DOT), California Department of Water Resources (DWR), California Highway Patrol (CHP), California Native American Heritage Commission (NAHC), California Natural Resources Agency, California Regional Water Quality Control Board, San Diego Region 9 (RWQCB), Department of Toxic Substances Control, Office of Historic Preservation, State Water Resources Control Board, Division of Drinking Water

Development Types
Commercial (parking garage)(Sq. Ft. 150000, Acres 3.7, Employees 1)

Local Actions
Redevelopment

Project Issues
Aesthetics, Air Quality, Cumulative Effects, Noise, Transportation

Attachments

Draft Environmental Document [Draft IS, NOI_NOA_Public notices, OPR Summary Form, Appx,]

01-Viejas Casino East Garage Draft TEIR PDF 25505 K
03-SCH Summary Form - 0222030743 PDF 290 K
04-Viejas TEIR - East Garage NOA PDF 70 K

Notice of Completion [NOC] Transmittal form

02-Viejas Casino East Garage Draft TEIR NOC-signed PDF 1127 K

Disclaimer: The Governor's Office of Planning and Research (OPR) accepts no responsibility for the content or accessibility of these documents. To obtain an attachment in a different format, please contact the lead agency at the contact information listed above. You may also contact the OPR via email at state.clearinghouse@opr.ca.gov or via phone at (916) 445-0613. For more information, please visit OPR's Accessibility Site.

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SUMMARY

S.1 Project Synopsis

The Project is an approximately 2,600-parking space, 7-level East Garage, located adjacent to the existing Viejas Casino. The garage would have a base footprint of approximately 150,000 square feet. Approximately 397 parking spaces would be lost to the structure, resulting in a net increase of 2,203 spaces. The Project site is approximately 3.7 acres in size. The East Garage would be built on a currently developed and paved area north of the Casino. This area is currently used for surface parking.

The Casino currently offers approximately 133,000 square feet of gaming area in a 325,000 square feet casino. Three hotels were built in support of the Casino. They offer a total of approximately 450 rooms and suites. An existing parking garage of up to 1,000 parking spaces was addressed by the 2013 Viejas Parking Garage Tribal Environmental Impact Report (TEIR). No new gaming space will result from construction and operation of the East Garage.

No new infrastructure will be required for the East Garage or is proposed.

S.2 Summary of Significant Effects and Mitigations Measures that Reduce or Avoid the Significant Effects

If the proposed project is implemented, no significant off-Reservation environmental effects would occur. This conclusion has been reached after analysis presented in the project Initial Study, Appendix A, and subsequent technical studies prepared addressing air quality, noise, traffic, and visual resources. As a result, no impact mitigation measures are required.

S.3 Project Alternatives

Under the terms of the Compact, the Tribe "…need not address alternatives that would cause it to forgo its right to engage in Gaming Activities authorized by this Compact on its Indian lands." (Compact, Sec. 11.1 (a)(5)). The provision of convenient parking that would be added by the project is within the definition of "Gaming Activities authorized by (the) Compact," and therefore the Tribe need not address alternatives such as the No Project alternative, because that alternative would impair the Tribe's right to engage in the Gaming Activities authorized by the Compact.

Viejas considered a 5-level parking East Garage with a similar number of parking spaces as the proposed 7-level structure but with a larger footprint. This alternative was described in the NOP for the Viejas Casino East Garage. The Tribe has elected to go with the taller East Garage because there is no environmental advantage of the 5-level structure, and the 7-level structure

conserves approximately 0.3 acre of commercial-designated land south of Viejas Creek and in the vicinity of the Casino. In addition, the 7-level garage provides a greater benefit to guest experience by allowing more guests to park in closer proximity to the Casino.

Alternative East Garage sites on the Reservation would not increase or reduce project-related traffic on West Willows Road. The proposed parking garage is adjacent and to the east of the existing parking garage. The proposed garage, being east of the current garage, would have the potential to reduce trips on West willows Road. Other locations would be further away from the Hotels and Casino and so would not be as convenient relative to the existing Casino and Hotel and would be no more convenient than the existing surface parking lots that lie to the east of the Casino. The East Garage needs to be co-located with the Casino and Hotel to meet the needs of the gaming public and hotel guests. For these reasons, other East Garage alternatives are not a feasible alternative.

Visual impacts would depend on the location of the alternative site identified. Alternative East Garage sites, either at the eastern side of the Reservation, or outside the Reservation, would not provide the desired proximity of East Garage and casino.

Finally, a smaller East Garage than proposed would reduce the potential insignificant visual impacts in the area but would not meet the project purpose/object of providing convenient parking to hotel guests and Casino patrons. If the smaller East Garage were full, a potential guest might need to park in the existing surface parking areas to the east of the Casino after first searching for a spot in the East Garage. Such a scenario would result in additional trips on Willows Road, more vehicle miles traveled, increased energy usage, and increased air emissions of both criteria pollutants and greenhouse gases. No substantial environmental advantage has been identified for such an alternative.

1.0 PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING

1.1 Project Description and Location

1.1.1 Precise Location/Boundary

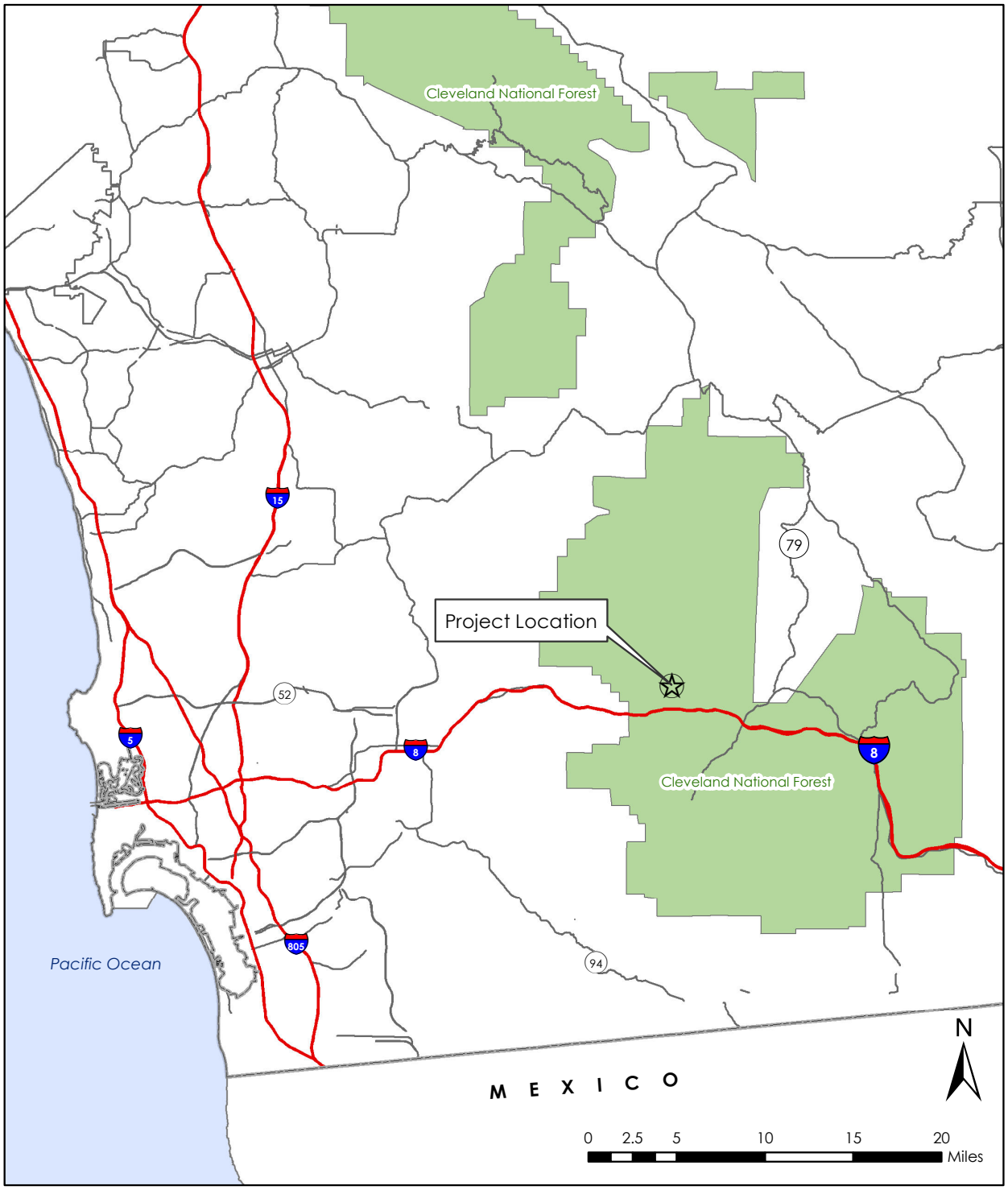
The Project site is located within the Viejas Indian Reservation, at 5000 Willows Road, in the unincorporated San Diego County Community of Alpine. The Project is located within the northeastern portion of Section 30 (Range 3 East, Township 15 South) of the San Bernardino Base and Meridian, USGS 7.5-Minute Viejas Mountain Quadrangle. The regional location of the proposed Project is shown in Figure 1-1. Figure 1-2 depicts the location of the proposed Project relative to the boundaries of Viejas Reservation. The Project site is mostly paved and is adjacent to the north-eastern area of the casino, as shown in Figure 1-3. This area is located north of Willows Road and south of Viejas Creek on the southwestern area of the Viejas Reservation. Access to the casino is via east and west Willows Road, immediately north of Interstate 8 (I-8).

1.1.2 Project's Component Parts

As depicted in Figure 1-4, the proposed Project is the construction of the East Garage located just to the north-east to the existing Viejas Casino (Casino). The East Garage would be a 7-story parking structure with approximately 2,600 parking spaces with a base footprint of approximately 150,000 square feet. Approximately 397 parking spaces would be lost to the structure, resulting in a net increase of 2,203 spaces. The Project site is approximately 3.7 acres in size.

The proposed Project includes the 7-level East Garage with an elevator tower, three stairwells, two automobile access roads, a pedestrian walkway connector, pavement areas, landscaping, and the necessary public utilities. The pedestrian walkway will connect the East Garage to the existing casino and hotel.

The East Garage would be built on a currently developed and paved area. The area is currently used for surface parking. The primary purpose of the East Garage is to support the Casino and hotels by providing more convenient parking to the patrons. In addition, the East Garage will be taking cars currently parking in remote lots and concentrating them in the East Garage, thus reducing the amount of existing operational vehicular emissions. Also, by providing parking within a closer proximity of the hotels and casino, the Project is eliminating the necessary shuttles that currently provide transportation from the existing parking lots to the Viejas Casino



SOURCE: SanGIS, 2012.

BRG CONSULTING INC.

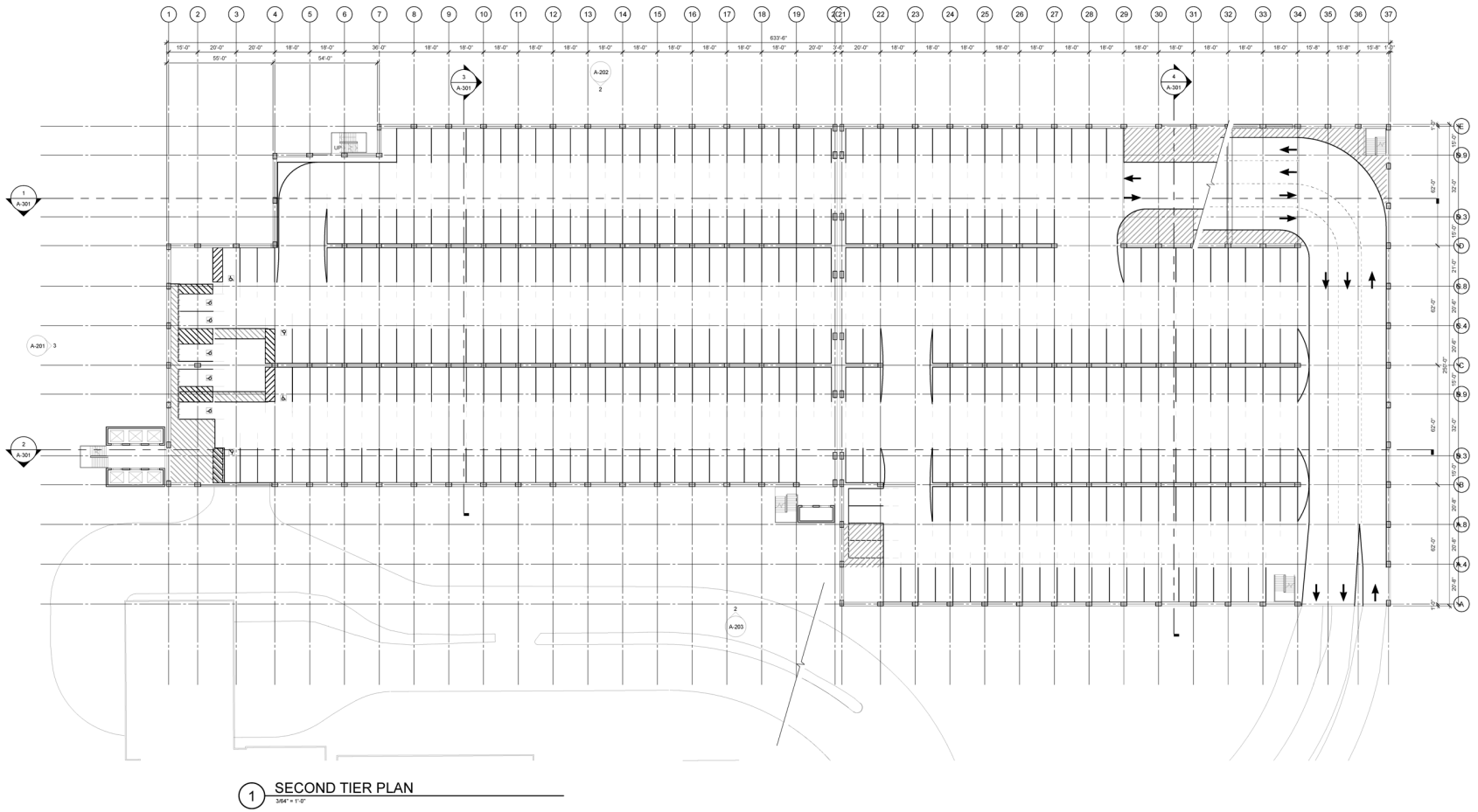
Regional Vicinity Map
Viejas Casino East Garage
Figure 1-1



SOURCE: BRG Consulting, 2022.

BRG CONSULTING INC.

Location Map with Topography
Viejas Casino East Garage
Figure 1-2



SOURCE: BRG Consulting, 2022.

BRG CONSULTING INC.

Viejas Casino East Garage Concept
Viejas Casino East Garage
Figure 1-3

and Hotel, thus reducing the amount of current operating emission levels. As such, the East Garage will result in environmental benefits such as reducing vehicle miles traveled, energy use, and greenhouse gas emissions because patrons would no longer need to search for parking in remote lots. The existing parking lots will remain for the use of employee or Viejas vehicle parking, guest overflow parking, and private tribal events.

Viejas may include a video display on the south side of the East Garage aligned with the East Casino Driveway. The display would provide guests with information on the Resort and parking opportunities. It is currently envisioned that the display would be on the order of 100 feet x 40 feet; however, that is subject to change.

The Casino currently offers approximately 133,000 square feet of gaming area in a 325,000 square feet casino. Current gaming offerings include 2,500 slot machines, approximately 85 gaming tables, and five restaurants. No new gaming space will result from construction and operation of the East Garage.

No new infrastructure will be required for the East Garage or is proposed.

1.1.3 Project Background Information

1.1.3.1 History of Gaming on the Viejas Indian Reservation

Gaming is one of the oldest forms of recreation, and Indian gaming predates European settlement in America. Large-scale tribal government gaming, mainly in the form of Bingo, began in the 1970s. In 1987, the United States Supreme Court recognized the right of American Indian tribal governments to run gaming, ruling that states had no Constitutional authority to prohibit or regulate gaming on Indian land if such gaming is permitted outside the reservation for any other purpose. Following the Supreme Court decision, Congress passed the Indian Gaming Regulatory Act (IGRA) to place some restriction on tribal government gaming. The IGRA separated gaming into three classes: Class I, traditional Indian social gaming; Class II, bingo, similar games and card games lawful in the state; and, Class III, all other forms of gaming. The IGRA also gave limited jurisdiction for joint regulation of tribal government gaming to the states in the case of Class III gaming. This was accomplished through the requirement that tribes negotiate compacts with states.

On September 10, 1999, 58 tribal governments executed compacts with the State of California. The new compacts limited the number of slot machines in the state to those already in operation and allowed 350 slot machines for each tribe that did not have gaming prior to September 1, 1999. There was also a maximum of 2,000 gaming devices per tribe, which included existing devices, plus those drawn from a pool of devices. The compacts called for strict tribal-state-federal regulation of gaming as provided by the federal IGRA and as detailed in the compacts. Additionally, the compacts used funds from gaming device licensing fees for a revenue-sharing fund to provide revenue distributions to non-gaming tribes. The compacts also called for the allocation of up to 13 percent of net win revenues to cover the state costs of gaming regulation,

funding impacts on local governments and a state problem gambling program, as well as appropriations as determined by the Legislature. Implementation of the compacts was subject to approval of Proposition 1A - the Indian Self-Reliance Initiative - which appeared on the March 2000 Ballot and was approved by the voters.

Subsequent amendments were executed and most recently the State of California and the Viejas Band of Kumeyaay Indians agreed to an amendment to the Tribal-State Compact Between the State of California and the Viejas Band of Kumeyaay Indians (Compact) in 2016. The East Garage serving the Casino falls within the definition of a "Project" under the Compact, and therefore, triggers the environmental review requirements of the Compact amendment. Attachment B of the Compact amendment identifies the specific off-reservation environmental considerations to be addressed in evaluation of such a Project.

Indian tribes are using gaming revenues to build houses, schools, roads and sewer and water systems; to fund the health care and education of their people; and to develop a strong, diverse economic base for future generations. As a direct result of tribal gaming, unemployment and welfare subsidies have been drastically reduced on gaming reservations and tribal governments have begun to raise the revenues they have lacked for decades to fund basic governmental services, such as police, fire, health care, education and other government-provided programs. Tribal governments are using gaming proceeds to diversify their economics by entering into other enterprises.

1.2 Project Objectives

The purpose and objective of the proposed Project is to support the Casino by providing convenient parking spaces for Casino and hotel guests. The Project is not expected to increase traffic to or from the Casino. The East Garage will facilitate tribal economic development and contribute to the economic viability of the tribe.

1.3 Need for the Project

The Project is needed because much of the current parking is provided in remote lots. Distance to the Casino from these remote lots, hot summers, cold winters, and frequently windy conditions make parking in these remote lots inconvenient. Viejas provides a shuttle service to and from the remote lots, but that is insufficient. The new garage will be adjacent to the Casino entrance substantially enhancing guest convenience.

1.4 Intended Uses of this TEIR

Preparation of this Tribal Environmental Impact Report (TEIR) is required by the Viejas Tribal-State Gaming Compact. The TEIR shall analyze the potentially significant off-Reservation environmental impacts of the Project. It shall also list ways in which the Significant effects on the environment might be minimized. (Compact Section 11.1 (a)). If significant impacts from a Project

are identified, the TEIR provides a basis for discussion with local governments about how best to minimize such impacts.

1.5 Environmental Setting

The Project site is located north of Willows Road and the existing casino, and south of Viejas Creek. The Project area is developed with commercial uses. The Viejas Outlet Center is located south of the casino and south of Willows Road. Interstate 8 lies to the south of the Outlet Center, with residential areas of the community of Alpine south of I-8. Non-Reservation residential areas are also found along Willows Road, both to the east and west of the Reservation.

Viejas Creek is a restored perennial stream that provides native riparian habitat. The Tribal residential area lies to the north of Viejas Creek, as does land used for cattle grazing. Coast live oak trees are common throughout this area. The Cleveland National Forest lies to the north, east and west of the Reservation. Various private residential in-holdings lie between the Reservation and Cleveland National Forest.

1.6 List of Past, Present and Reasonably Anticipated Future Projects in the Project Area

Past development projects on and off the Reservation that are considered in this analysis include the original Viejas Casino and Outlet Center and casino expansions resulting in approximately 133,000 square feet of gaming area in a 325,000 square feet casino. Three hotels were built in support of the Casino. They offer a total of approximately 450 rooms and suites. An existing parking garage of up to 1,000 parking spaces was addressed by the 2013 Viejas Parking Garage TEIR.

Information regarding reasonably anticipated future projects was obtained for the Forest Conservation Initiative (FCI) Lands General Plan Amendment (FCI GPA) and Supplemental EIR. An eastern expansion of the Alpine linear village is proposed along Alpine Boulevard and Willows Road east of Viejas from Semi-rural densities to Village Residential 2 (VR-2), Village Core Mixed Use (VCMU), and Rural Commercial (County of San Diego 2016 FCI GPA EIR). Within the Alpine Community Planning area, residential development potential increased by 961 units with the FCI GPA. However, the plan revisions state: “both imported water and sewer services are necessary to fully realize the land use intensities allowed by the Village land use designated areas along Willows Road east of Viejas and residential densities south of Alpine Boulevard between the Interstate 8 interchanges at West Willows Road and at the eastern end of Willows Road.”

1.7 Growth-Inducing Effects

The proposed Project is the addition of an approximately 2,600-space parking structure adjacent to the existing Viejas Casino. No utility or road infrastructure would be extended that could potentially induce nearby growth. No economic stimulus would occur such as that provided by

golf courses, shopping centers, industrial facilities or residential specific plans. Finally, the East Garage does not involve a revision to local land use policies, such as General Plan amendments, annexations or rezoning. The project would not be growth inducing.

2.0 SIGNIFICANT OFF-RESERVATION ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

There are no such environmental effects. No significant off-Reservation environmental effects would occur as a result of the Project. Topics reviewed in detail to determine if they might result in a significant project impact include those identified in the Viejas Tribal-State Gaming Compact, the Initial Study, and Notice of Preparation of a Tribal EIR for the East Garage. These topics are discussed in Chapter 4.0 of this TEIR, Environmental Effects Found Not To Be Significant.

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3.0 SIGNIFICANT OFF-RESERVATION ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT THAT CAN BE MITIGATED

No potential off-Reservation impacts have been found to result in significant impacts requiring mitigation, as demonstrated in Chapter 4.0, Environmental Effects Found Not To Be Significant.

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4.0 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

4.1 Effects Found Not Significant as Part of the TEIR Process

The Project Initial Study (Appendix A) found that air quality, noise and aesthetic changes associated with the Project might result in significant off-Reservation impacts. These environmental topics are addressed in this TEIR and the attached Technical Appendices B, C and D. Note that these studies specifically addressed a 5-level garage with a larger footprint but similar number of parking spaces. The authors of these Technical Appendices have stated that the change to a 7-level East Garage on a smaller footprint would not materially affect the analysis or conclusions of these reports. No other topics had effects found to be potentially significant in the Initial Study, thus requiring further TEIR review.

One timely comment letter was submitted in response to the Notice of Preparation (NOP). The Native American Heritage Commission submitted a comment letter to the State Clearing House (SCH). Viejas obtained the letter from the SCH website. The letter addressed the California Environmental Quality Act (CEQA) requirements related to Tribal Cultural Resources as set forth by AB 52 and SB 18; however, as a sovereign nation the Tribe is not subject to CEQA or the referenced legislation. Rather, the Tribe is subject to the requirements of the Compact. The Compact requires the Tribe to address off-Reservation cultural resources but does not require the Tribe to follow the requirements of AB 52 or SB 18 (Appendix A).

A second letter was received after the 30-day comment period from the County of San Diego. The letter provided information on water resources located downstream of the Reservation. In particular, Loveland Reservoir was identified as an impaired water body that is located downstream of the Reservation. The County requested that the TEIR analyze off-Reservation water quality impacts of the project (Appendix A).

Loveland Reservoir is listed as an impaired water body for the following pollutants: Aluminum, Manganese, Dissolved Oxygen, and PH (RWMG, 2021). The source of these pollutants is classified as unknown.

The project area has non-point sources of stormwater pollutants from currently graded, paved, and landscaped areas. Construction activities are also a potential source of off-reservation stormwater pollution. Viejas has retained the services of a stormwater specialist who will incorporate specific construction and operational stormwater best management practices into the project final design. Specific tasks to be performed include but are not limited to:

- Prepare storm drainage plan for parking garage

- Prepare drainage study for the project site in accordance with requirements of the County of San Diego.
- Prepare and process a Storm Water Pollution Prevention Plan (SWPPP) necessary to meet the Storm Water Pollution Prevention Program as required by the State Permit written for conformance with Section 402 of the federal Clean Water Act.
- Prepare a Storm Water Quality Management Plan per the Tentative Order R9-2013-0001.
- Perform a hydromodification analysis and develop basin sizing and outlet structures details.

As such, off-Reservation impacts will be below a level of significance as reported in the initial study prepared for the Viejas Casino East Garage Notice of Preparation.

4.2 Air Quality

An Air Quality Assessment was prepared for the proposed Project by Birdseye Planning Group (BPG), dated May 2022. This report is provided as Appendix B of this TEIR. The following is based upon this air quality assessment. Note that BPG's report specifically addresses the 5-level, 2,053 net parking space garage that was identified in the NOP. The current proposal is for a 7-level, 2,203 net parking space garage. Mr. Ryan Birdseye of Birdseye Planning Group confirmed that such a change would not have any meaningful effect on the analysis or conclusions presented in the Air Quality Assessment.

4.2.1 Existing Conditions

4.2.1.1 Regional Climate and Air Quality

The weather of San Diego County is profoundly influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average minimum temperature for January ranges from the mid-40s to the high-50s degrees Fahrenheit (4 to 15 degrees Celsius) across the county. July maximum temperatures average in the mid-80s to the high-90s degrees Fahrenheit (high-20s to the high-30s degrees Celsius). Most of the county's precipitation falls from November to April, with infrequent (approximately 10 percent) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches (254 millimeters); the amount increases with elevations as moist air is lifted over the mountains.

The interaction of ocean, land, and the Pacific High-Pressure Zone maintains clear skies for much of the year and drives the prevailing winds. Local terrain is often the dominant factor inland and winds in inland mountainous areas tend to blow upwards in the valleys during the day and down the hills and valleys at night.

In conjunction with the onshore/offshore wind patterns, there are two types of temperature inversions (reversals of the normal decrease of temperature with height), which occur within the region that affect atmospheric dispersive capability and that act to degrade local air quality. In the summer, an inversion at about 1,100 to 2,500 feet (335 to 765 meters) is formed over the entire coastal plain when the warm air mass over land is undercut by a shallow layer of cool marine air flowing onshore. The prevailing sunny days in this region further exacerbate the smog problem by inducing additional adverse photochemical reactions. During the winter, a nightly shallow inversion layer (usually at about 800 feet or 243 meters) forms between the cooled air at the ground and the warmer air above, which can trap vehicular pollutants. The days of highest Carbon Monoxide (CO) concentrations occur during the winter months.

The predominant onshore/offshore wind pattern is sometimes interrupted by so-called Santa Ana conditions, when high pressure over the Nevada-Utah region overcomes the prevailing westerly wind direction. This draws strong, steady, hot, and dry winds from the east over the mountains and out to sea. Strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or breakdown of these conditions or if the Santa Ana is weak, prevailing northwesterly winds are reestablished which send polluted air from the Los Angeles basin ashore in the San Diego Air Basin (SDAB). “Smog transport from the South Coast Air Basin (the metropolitan areas of Los Angeles, Orange, San Bernardino, and Riverside counties) is a key factor on more than half the days San Diego exceeds clean air standards” (San Diego Air Pollution Control District, 2010).

Pollutants

The San Diego Air Pollution Control District (SDAPCD) 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.” San Diego County is listed as a federal non-attainment area for ozone (eight hour) and a state non-attainment area for ozone (one hour and eight-hour standards), Particulate Matter, 10 microns or smaller (PM_{10}) and Particulate Matter, 2.5 microns or smaller ($PM_{2.5}$). As shown in Table 4.2.1, the SDAB is in attainment for the state and federal standards for nitrogen dioxide, carbon monoxide, sulfur dioxide and lead. Characteristics of ozone, carbon monoxide, nitrogen dioxide, and suspended particulates are described below.

TABLE 4.2-1: SAN DIEGO COUNTY ATTAINMENT STATUS

Criteria Pollutant	Federal Designation	State Designation
Ozone (one hour)	Attainment*	Non-Attainment
Ozone (eight hour)	Moderate Non-Attainment	Non-Attainment
Carbon Monoxide	Attainment	Attainment
PM_{10}	Unclassifiable**	Non-Attainment
$PM_{2.5}$	Attainment	Non-Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment

TABLE 4.2-1: SAN DIEGO COUNTY ATTAINMENT STATUS

Criteria Pollutant	Federal Designation	State Designation
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

* The federal 1-hour standard of 12 ppm was in effect from 1979 through June 1, 2005. The revoked standard is referenced here because it was used for such a long period and because this benchmark is addressed in State Implementation Plans (SIPs).

** At the time of designation, if the available data does not support a designation of attainment or non-attainment, the area is designated as unclassifiable.

Source: San Diego Air Pollution Control District. June 2016. http://www.sandiegocounty.gov/content/sdc/apcd/en/air-quality-planning/attainment-status.html

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG)[1]. Nitrogen oxides are formed during the combustion of fuels, while reactive organic compounds are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide. Carbon monoxide (CO) is a local pollutant that is found in high concentrations only near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile exhaust. Elevated CO concentrations; therefore, are usually only found near areas of high traffic volumes operating in congested conditions. Carbon monoxide health effects are related to blood hemoglobin. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light and causes a reddish-brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

[1] Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC).

Suspended Particulates. PM_{10} is particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM_{10} and $PM_{2.5}$ are by-products of fuel combustion and wind erosion of soil and unpaved roads and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern. Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$ described above.

Toxic Air Contaminants/Diesel Particulate Matter. Hazardous air pollutants, also known as toxic air pollutants (TACs) or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Examples of toxic air pollutants include:

- benzene, which is found in gasoline;
- perchloroethylene, which is emitted from some dry-cleaning facilities; and
- methylene chloride, which is used as a solvent.

Transportation related emissions are focused on particulate matter constituents within diesel exhaust and TAC constituents that comprise a portion of total organic gas (TOG) emissions from both diesel and gasoline fueled vehicles. Diesel engine emissions are comprised of exhaust particulate matter and TOGs which are collectively defined as Diesel Particulate Matter (DPM). DPM and TOG emissions from both diesel and gasoline fueled vehicles is typically composed of carbon particles and carcinogenic substances including polycyclic aromatic (i.e., odorous) hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and NO_x.

Sensitive Receptors

Land uses considered to be sensitive receptors include residential, school, childcare centers, acute care hospitals, and long-term health care facilities. Sensitive receptors are determined based upon special factors which may include the age of the users or occupants, the frequency and duration of the use or occupancy, continued exposure to hazardous substances as defined by federal and state regulations, and the user's ability to evacuate a specific site in the event of a hazardous incident. 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; the elderly; persons engaged in strenuous work or exercise and people with cardiovascular and chronic respiratory diseases. Recreational uses can be considered moderately sensitive to air pollution. Exercise can place a high demand on respiratory functions, which can be impaired by air pollution even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time.

The nearest sensitive receptors to the site are single-family residences. A residence is located approach 550 feet north of the site on the south side of Viejas Grade Road. The closest receiver

outside the reservation boundary is approximately 1,100 feet southeast of the site on the south side of Willows Road.

Monitored Air Quality

The SDAPCD monitors air quality conditions at locations throughout the SDAB. For the purpose of this analysis, data from the Alpine-2300 Victoria Drive monitoring station in east San Diego County were used to characterize existing ozone and $PM_{2.5}$ conditions in the vicinity of the Project site. Data from the El Cajon Lexington Avenue monitoring station are reported to characterize PM_{10} concentrations. The air quality data for 2018, 2019 and 2020 are reported in Table 4.2-2.

TABLE 4.2-2: MEASURED AIR QUALITY DATA

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2018	2019	2020	2018	2019	2020
Ozone (O_3) – Alpine, 2300 Victoria Drive									
Maximum 1-hour concentration	ppm	State	0.09	0.102	0.110	0.105	2	2	5
Maximum 8-hour concentration	ppm	State	0.070	0.082	0.084	0.089	20	16	24
		Federal	0.070	0.082	0.084	0.089	20	16	24
Nitrogen Dioxide (NO_2) – Alpine, 2300 Victoria Drive									
Maximum 1-hour concentration	ppm	State	0.18	0.031	0.029	0.021	0	0	0
		Federal	0.100	0.031	0.031	0.021	0	0	0
Coarse Particulate Matter (PM_{10}) – El Cajon – Lexington Elementary School, 533 First Street									
Maximum 24-hour concentration	µg/m^3	State	50	44.7	37.4	--	0	0	0
		Federal	150	43	38.7	_	0	0	0
Fine Particulate Matter ($PM_{2.5}$) – El Cajon – Lexington Elementary School, 533 First Street									
Maximum 24-hour concentration	µg/m^3	Federal	35	29.7	13.5	22.9	*	*	*

[1] – Federal O3 standard reduced from 75 ppm to 70 ppm in October 2015

*Insufficient data to determine number of exceedances

Ozone, Nitrogen Oxide and $PM_{2.5}$ data from the Alpine, 2300 Victoria Drive Monitoring Station. PM_{10} data from 533 First Street in El Cajon.

Source: California Air Resources Board, 2018, 2019, 2020 Air Quality Data Summaries available at: http://www.arb.ca.gov/adam/topfour/topfourdisplay.php Accessed April 21, 2022.

4.2.1.2 Applicable Rules, Regulations, Policies and Guidelines

The Project area resides entirely within a United States Federal Reservation under the auspices of the U.S. Bureau of Indian Affairs (BIA). The Environmental Protection Agency (EPA) is responsible for enforcing the Federal Clean Air Act of 1970 (United States Code, Title 42, Chapter 85) and subsequent amendments within all federally designated lands. The Clean Air Act (CAA) established the National Ambient Air Quality Standards (NAAQS) for the protection of human health and public welfare. The NAAQS represent the maximum levels of background pollution that provide an adequate margin of safety to protect the public health and welfare.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Clean Air Act of 1988 established California Ambient Air Quality Standards (CAAQS) for criteria pollutants and additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. California Air Resources Board (CARB) is the state regulatory agency with authority to enforce regulations to achieve and maintain the CAAQS, except in areas where the local air quality management district has been given authority over stationary source emissions. CARB required each air basin to develop its own strategy for achieving the NAAQS and CAAQS and still maintains regulatory authority over these strategies as well as mobile source emissions statewide.

The SDAPCD is the local agency for the administration and enforcement of air quality regulations; it adopted the Regional Air Quality Strategy (RAQS) to comply CARB requirements for developing this plan.

In 1979, the EPA required each state to prepare a State Implementation Plan (SIP), which describes how the state will achieve compliance with the NAAQS. A SIP is a compilation of goals, strategies, schedules, and enforcement actions that will lead the state (including areas within the San Diego Air Basin such as the Viejas Indian Reservation) into compliance with all federal air quality standards. Every change in a compliance schedule or plan must be incorporated into the SIP. The Clean Air Act Amendments (CAAA) established new deadlines for achievement of the NAAQS depending on the severity of nonattainment. The CAAA of 1990 also mandates states to develop an operating permit program that requires all major sources of pollutants to obtain an air permit, and contains programs designed to reduce mobile source emissions, and control emissions of hazardous air pollutants through establishing control technology guidelines for various classes of sources.

On November 30, 1993, the EPA instituted final rules for determining general conformity of state and federal air quality implementation plans. In order to demonstrate conformity with the Clean Air Act, a project must clearly demonstrate that it does not:

- Cause or contribute to any new violation of any standard in any area;
- Increase the frequency or severity of any existing violation of any standard in any area; or,
- Delay timely attainment of any standard, any required interim emission reductions, or other milestones in any area.

The conformity rule applies to all actions in areas that violate one or more of the federal air quality standards (nonattainment areas). A conformity analysis is required for each of the nonattainment pollutants or its precursor emissions. The EPA has developed specific procedures for conformity determinations, which include preparing an assessment of emissions associated with the action based on the most recent emission estimates.

Pursuant to SDAPCD, the California Health & Safety Code, jurisdiction for regulation of air emissions has been delegated to the SDAPCD. As part of its air quality permitting process, the

SDAPCD has established thresholds for the preparation of Air Quality Impact Assessments (AQIA's) and/or Air Quality Conformity Assessments. SDAPCD Rule 20.2, which outlines these screening level criteria, states that any project that results in an emission increase equal to or greater than any of these levels, must:

> *"… demonstrate through an AQIA . . . that the project will not (A) cause a violation of a State or national ambient air quality standard anywhere that does not already exceed such a standard, nor (B) cause additional violations of a national ambient air quality standard anywhere the standard is already being exceeded, nor (C) cause additional violations of a State ambient air quality standard anywhere the standard is already being exceeded, nor (D) prevent or interfere with the attainment or maintenance of any State or national ambient air quality standard."*

The construction emissions from the proposed Project were analyzed using URBEMIS and compared to SDAPCD's Rule 20.2. The applicable standards are shown in Table 4.2-3. For projects whose emissions are below these criteria, no AQIA is typically required, and Project level emissions are presumed to be less than significant. The EPA accepts the use of these "screening criteria" as "Thresholds of Significance" by projects for the purposes of environmental analysis pursuant to the CAA.

TABLE 4.2-3: SDAPCD AIR EMISSION SIGNIFICANCE THRESHOLDS

Construction Emissions			
Pollutant	**Total Emissions (Lbs. per day)**		
Reactive Organic Gas (ROG)	75		
Nitrogen Oxides (NOx)	250		
Carbon Monoxide (CO)	550		
Sulfur Oxides (SOx)	250		
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Operational Emissions			
	Total Emissions		
	Lbs. per Hour	**Lbs. per Day**	**Tons per Year**
Reactive Organic Gas (ROG)	--	75	13.7
Nitrogen Oxides (NOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Sulfur Oxides (SOx)	25	250	40
Respirable Particulate Matter (PM_{10})	--	100	15
Fine Particulate Matter ($PM_{2.5}$)	--	55	10
Lead and Lead Compounds	--	3.2	0.6

Source: BPG, 2022a.

4.2.2 Guidelines for Determination of Significance

Exhibit A of the Compact utilizes the following guidelines for determination of significance related to potential air quality impacts:

A. Would the Project conflict with or obstruct implementation of the applicable air quality plan?

B. Would the Project violate any air quality standard or contribute to an existing or projected air quality violation?

C. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

D. Would the Project expose off-Reservation sensitive receptors to substantial pollutant concentrations?

E. Would the Project create objectionable odors affecting a substantial number of people off-Reservation?

These guidelines were considered in the preparation of the Project's Environmental Initial Study, attached to this document as Appendix A to this TEIR.

4.2.3 Analysis of Project Effects and Determination of Significant Impact

4.2.3.1 Impact Analysis

Air quality modeling was performed in general accordance with the methodologies outlined in the SDAPCD 2009 RAQS to identify both construction and operational emissions associated with each phase and the cumulative total of all Project phases at build out. All emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0 which incorporates current air emission data, planning methods and protocol approved by CARB (BPG, 2022a).

A. Would the Project conflict with or obstruct implementation of the applicable air quality plan?

As stated, under state law, the SDAPCD is required to prepare an Air Quality Management Plan (AQMP) for pollutants for which the SDAB is designated non-attainment. Each iteration of the SDAPCD's AQMP is an update of the previous plan and has a 20-year horizon. A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP, the most recent AQMP adopted by the South Coast Air Quality Management District (SCAQMD), incorporates local city General Plans and the San Diego Association of Governments (SANDAG) socioeconomic forecast projections of regional population, housing and employment growth.

The proposed Project involves the construction of a new parking garage within the existing Viejas Casino Resort. The proposed Project would replace an existing asphalt parking lot and provide a net increase of approximately 2,203 parking spaces. The Project is intended to provide more convenient parking options for guests. As stated, it is not expected to generate an increase in vehicle trips.

The SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the basin—specifically, the SIP and RAQS. The federal O3 maintenance plan, which is part of the SIP, was adopted in 2012. The most recent O3 attainment plan was adopted in 2016. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the basin based on the NAAQS. The RAQS was initially adopted in 1991 and is updated on a triennial basis (most recently in 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O3. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions as well as information regarding projected growth in the County and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls.

CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends and land use plans developed by the County and the cities in the County as part of the General Plan development process. If a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the Project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality.

As stated, the Project would not generate population growth. Employment growth would be limited to temporary construction jobs. No long-term employment would be required to manage or maintain the East Garage. Therefore, the Project would not conflict with SANDAG's population or employment growth forecast; thus, would not conflict with the SIP and RAQS. The Project would be consistent with the AQMP and not cause an adverse impact. Impacts would be less than significant.

B. Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction Emissions

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction vehicles, work crew vehicle trips in addition to ROG that would be released during the drying phase upon application of paint and other architectural coatings. Construction would generally consist of demolition (debris removal), site preparation (clearing/grubbing), excavation/grading, construction of the proposed garage, architectural coating (i.e., paint) application and paving.

Emissions from the construction phase of the Project were estimated using CalEEMod 2020.4.0. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the Project applicant and CalEEMod default values when Project specifics were not known.

For purposes of estimating Project emissions, and based on information provided by the Project applicant, it is assumed that construction of the Project would occur five days per week and commence in January 2023 and would be complete by February 2024. If construction begins

earlier, it will not affect the emission calculations as they are based on daily maximum emissions. The schedule is an estimate calculated by CalEEMod 2020.4.0. The duration of phases are approximated:

- Demolition: 1.5 weeks
- Site Preparation: 1 weeks
- Grading: 1.5 weeks
- Building Construction: 46 weeks
- Paving: 3.5 weeks
- Architectural Coating: 3.5 weeks

Construction-worker and vendor trips estimates by construction phase were based on CalEEMod default data. Mass grading would include the entire Project site. Defaults for the construction equipment mix and vehicle trips used for estimating the Project-generated construction emissions, including removal of asphalt and demolition debris, were used (BPG, 2022a).

As discussed, the Project would implement dust control strategies as a project design feature. To reflect implementation of proposed dust control strategies, the following was used in CalEEMod:

- Water exposed area two times per day (55% reduction in PM_{10} and $PM_{2.5}$); and
- Limit vehicle travel on unpaved roads to 15 miles per hour.

Table 4.2.4 summarizes the estimated maximum daily emissions of pollutants occurring during construction.

TABLE 4.2.4: ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS SUMMARY (LBS/DAY)

Construction Phase		Maximum Emissions (lbs./day)				
	ROG	NO_x	CO	SOx	PM_{10}	$PM_{2.5}$
2023 Maximum lbs./day	2.9	27.5	28.7	0.09	10.2	5.7
2024 Maximum lbs./day	15.7	21.0	27.9	0.08	5.2	1.8
SDAPCD Regional Thresholds	75	250	550	250	100	55
Threshold Exceeded 2023	**No**	**No**	**No**	**No**	**No**	**No**
Threshold Exceeded 2023	**No**	**No**	**No**	**No**	**No**	**No**

Source: BPG, 2022a

As shown in Table 4.2.4, construction of the proposed Project would not exceed the SDAPCD daily thresholds. With SDAPCD Rule 55 compliance, no mitigation measures would be required to meet construction emission thresholds. Construction emissions would not result in a

cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard. Therefore, Project impacts will be less than significant.

Operational Impacts

Emissions from the operational phase of the Project were estimated using CalEEMod version 2020.4.0. Operational year 2024 was assumed consistent with completion of Project construction.

Area Sources. CalEEMod was used to estimate operational emissions from area sources, including emissions from architectural coatings and use of landscape maintenance equipment. Emissions associated with these uses are calculated in the building energy use module of CalEEMod.

Volatile Organic Compounds (VOC) off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. VOC emissions were estimated based on compliance with SDAPCD Rule 67.0.1, which provides VOC content limits for various coatings. The three general coatings categories are 50 grams per liter (g/L) VOC for flat coatings, 100 g/L VOC for non-flat coatings, and 150 g/L VOC for non-flat high gloss coatings. Consistent with typical construction practices, it is anticipated that interior and exterior paint would not exceed non-flat coating limits, exterior paint would not exceed non-flat coating limits, and a small portion of exterior paint and finishes (trim and other minor finishes) would not exceed non-flat high-gloss coatings limits. It was conservatively assumed that all residential (interior and exterior) architectural coating would be 150 g/L VOC.

Energy Sources. Energy sources include emissions associated with building electricity and natural gas use. Electricity use would contribute indirectly to criteria air pollutant emissions.

Mobile Sources. Parking garages do not generate vehicle trips. The trips are generated by other uses. The proposed Project would accommodate existing visitors and guests of the casino, hotel and other attractions. Emission factors for 2024 (the first full year of Project operation) were used to estimate emissions associated with full buildout of the Project and would be associated with building maintenance activities.

Table 4.2.5 summarizes area, energy and mobile source emissions associated with operation of the proposed Project. As shown in Table 64.2.5, daily emissions would not exceed the SDAPCD thresholds for ROG, NO_X, CO, SO_X, PM_{10} or $PM_{2.5}$. Therefore, the Project's operational air quality emissions (including impacts related to criteria pollutants, sensitive receptors and violations of air quality standards) would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment under an applicable federal or state ambient air quality standard. Therefore, Project impacts will be less than significant.

TABLE 4.2.5: ESTIMATED OPERATIONAL EMISSIONS

Proposed Project	Estimated Emissions (lbs./day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	0.45	0.01	0.2	0.01	0.01	0.01
Energy	0.0	0.0	0.0	0.0	0.0	0.0
Mobile	0.0	0.0	0.0	0.0	0.0	0.0
Maximum lbs./day	**0.45**	**0.01**	**0.2**	**0.01**	**0.01**	**0.01**
SCAQMD Thresholds	**75**	**250**	**550**	**250**	**100**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum lbs./hour[1]	**--**	**0.025**	**0.00125**	**0.00125**	**--**	**--**
SCAQMD Thresholds	**--**	**25**	**100**	**25**	**--**	**--**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum tons/year[2]	**0.088**	**0.0018**	**0.0365**	**0.0091**	**0.0018**	**0.0018**
SCAQMD Thresholds	**13.7**	**40**	**100**	**40**	**15**	**10**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See BPG 2022a Appendix for CalEEMod version. 2020.4.0 computer model output - summer emissions shown

C. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

As shown in Tables 4.2.4 and 4.2.5, the construction and operational emissions generated by the proposed Project would not exceed the thresholds; and thus, would have no adverse effect on air quality. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which region is in non-attainment under applicable federal or state ambient air quality standards. Impacts would be less than significant.

D. Would the Project expose off-Reservation sensitive receptors to substantial pollutant concentrations?

Construction-Related Toxic Air Contaminant Impacts

Certain construction projects can create the potential for toxic air contaminant emissions related to diesel particulate emissions associated with heavy equipment operations during construction. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". A cancer risk greater than 10 cases per 1,000,000 people exposed would be considered a significant impact. The California Office of Environmental Health Hazard Assessment health risk guidance states that a residential receptor should be evaluated based on a 30-year exposure period. "Individual Cancer Risk" is the likelihood that a

person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The construction schedule duration would be approximately 13 months; however, only a portion of the overall construction work would require the use of diesel-powered equipment. The proposed Project would not result in a long-term (i.e., 30 or 70 year) exposure to a substantial source of toxic air contaminant emissions; and thus, neighboring residents would not be exposed to the related individual cancer risk. Therefore, no significant toxic air contaminant impacts would occur during construction of the proposed Project**.**

Carbon Monoxide Hotspots

As discussed, carbon monoxide is a colorless, odorless, poisonous gas that may be found in high concentrations near areas of high traffic volumes. CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. The SDAB is in attainment of state and federal CO standards; thus, CO data is no longer collected and not all monitoring stations have CO data available. The 1110 Beardsley Street monitoring station in the Barrio Logan community is the closest monitoring station to the site that collected CO data. The maximum 8-hour average CO level recorded in 2012 (the last year data were recorded) was 1.81 parts per million (ppm). Concentrations are below the 9-ppm state and federal 8-hour standard.

Numerous factors are related to the formation of CO hotspots. The potential for CO hotspots in the SDAB is steadily decreasing because of the continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion and the already very low ambient CO concentrations. Furthermore, CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions; however, CO concentrations near a congested roadway or intersection may reach unhealthy levels.

Typically, high CO concentrations are associated with roadways or intersections operating under congested conditions. Projects contributing to adverse traffic conditions may contribute to the formation of CO hotspots. Guidance recommended by the County of San Diego was applied to evaluate the potential for CO hotspots to occur as a result of the Project. As indicated in the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements Air Quality (County of San Diego 2007), a site-specific CO hotspot analysis should be performed if a proposed development would cause road intersections to operate at or below a LOS E with intersection peak-hour trips exceeding 3,000 (DUDEK, 2019).

The proposed Project was evaluated for CO hotspots under 2024 build out conditions based on projected peak hour volumes provided in the Traffic Impact Assessment (LLG, 2022). While some traffic operations would shift between the West Casino Driveway and East Casino Driveway, the intersections volumes studied would remain less than 3,000 vehicles in the peak hour and the Project would not cause or contribute to a study intersection operating at or below LOS E. Therefore, the Project would not result in CO hot spots that could expose sensitive receptors off-Reservation to substantial pollutant concentrations. Impacts would be less than significant.

E. Would the Project create objectionable odors affecting a substantial number of people off-Reservation?

SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors. Odor issues are very subjective by the nature of odors themselves and due to the fact that their measurements are difficult to quantify. As a result, this guideline is qualitative and will focus on the existing and potential surrounding uses and location of sensitive receptors.

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints. Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the Project. Potential odors produced during construction would be attributable to exhaust emissions, architectural coatings, and asphalt pavement application. Such odors would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with other emissions (such as those leading to odors) adversely affecting a substantial number of people during construction would be less than significant.

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding facilities. The Project would provide a new parking garage and related infrastructure improvements. These uses are not associated with emissions (such as those leading to odors) adversely affecting a substantial number of people that could rise to the level of significance. Therefore, impacts would be less than significant.

4.2.3.2 Conclusions

Based upon the BPG findings as summarized above, no significant off-Reservation air quality impacts are anticipated during either the construction or operational phases of the Project, and the Project would be consistent with both the RAQS and with the SIP.

4.2.3.3 Mitigation Measures

With no significant off-Reservation air quality impacts identified for the Project, no mitigation measures are required.

4.3 Noise

A Noise Assessment was prepared for the proposed Project by BPG dated May 2022. This report is provided as Appendix C of this TEIR. The following is based upon this noise assessment. Note

that BPG's report specifically addresses the 5-level, 2,053 net parking space garage that was identified in the NOP. The current proposal is for a 7-level, 2,203 net parking space garage. Mr. Ryan Birdseye of BPG confirmed that such a change would not have any meaningful effect on the analysis or conclusions presented in the Noise Assessment.

4.3.1 Existing Conditions

4.3.1.1 Site Characterization

The proposed Viejas Casino East Garage is an approximately 2,600-parking space, 7-level Garage. north of and adjacent to the existing Viejas Casino. Regional access is obtained from Willows Road, via U.S. Interstate 8 (I-8). The proposed garage would be built on a developed and paved area northeast of the casino. This area is currently used for surface parking. The nearest occupied off-Reservation property line from the construction activities is located more than 1,100 feet to the southeast.

4.3.1.2 Applicable Rules, Regulations, Policies and Guidelines

The Tribe has not developed or adopted noise standards and no federal or local regulations are directly applicable to the proposed Project. However, federal and local agencies have developed standards for similar projects or that are applicable to off-Reservation receptors. The thresholds used in the noise assessment were primarily developed from the following County of San Diego noise standards and policies.

County of San Diego Code

Section 36.408: Hours of Operation of Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate or cause to be operated, construction equipment:

a. Between 7 p.m. and 7 a.m.

b. On a Sunday or a holiday. For purposes of this section, a holiday means January 1st, the last Monday in May, July 4th, the first Monday in September, December 25th and any day appointed by the President as a special national holiday or the Governor of the State as a special State holiday. A person may, however, operate construction equipment on a Sunday or holiday between the hours of 10 a.m. and 5 p.m. at the person's residence or for the purpose of constructing a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind and does not violate the limitations in sections 36.409 and 36.410.

Section 36.409: Sound Level Limitations on Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 decibels for an eight-hour period, between 7 a.m. and 7 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Operational Noise

Section 36.404: Non-Construction Noise

With respect to the proposed Project, the Viejas Tribe has not developed or adopted related noise standards nor are federal or local regulations directly applicable to the proposed Project. Thus, thresholds used in this analysis for impacts affecting off-reservation receptors are based on the County of San Diego noise standards and policies for stationary sources. Transportation related noise standards are based on the California State Office of Planning and Research 2017 updates to the General Plan Guidelines referenced above. As stated, exterior noise levels up to 60 A-weighted decibels (dBA) (Community Noise Level (CNEL) or day-night average sound level (Ldn)) are normally compatible for low density single-family residences, duplexes and mobile homes. Noise levels up to 70 dBA (CNEL or Ldn) are conditionally compatible in urban settings for multifamily residences.

Section 36.404 of the County of San Diego noise ordinance provides performance standards and noise control guidelines for determining and mitigating non-transportation, or stationary, noise source impacts. The County of San Diego Noise Ordinance prohibits any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property exceeds the applicable limits. Section 36.404 of the County of San Diego Code sets a most restrictive operational exterior noise limit for residential noise sensitive land uses of 50 dBA Equivalent sound level (Leq) for daytime hours of 7 a.m. to 10 p.m. and 45 dBA Leq during the noise sensitive nighttime hours of 10 p.m. to 7 a.m. Where existing noise levels exceed 50 dBA, the County of San Diego Guidelines for Determining Significance - Noise (January 2009) (hereafter referred to as Guidelines) state that an increase of 10 dBA CNEL is considered a significant impact. For the purpose of this review, Project-related noise that exceeds ambient conditions (as measured by Leq) by 10 dBA or more, when ambient conditions exceed 50 dBA, are considered a significant noise impact.

Impulse Noise. Section 36.410 of the San Diego County Code states that in addition to general limitations on sound levels in section 36.404 and 36.408, 36.409 referenced above, except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive (short-term, one second or less) noise (i.e., gunshot, explosion or noise from construction equipment) of more than 82 dBA. Impulse noise is typically related to construction where pile driving and use of explosives is required. Construction techniques that generate impulse noise are not required for the proposed Project nor would impulse noises be generated by the proposed Project.

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 peak particle velocity (PPV) in inches per second. Vibration impacts to buildings are generally discussed in terms of PPV which describes particle movement over time (in terms of physical displacement of mass). Vibration can impact people, structures, and sensitive equipment Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and other high impact demolition and excavation-related activities. Grading also has the potential to cause short-term vibration impacts if large bulldozers, loaded trucks, or other heavy equipment operate within proximity to sensitive land uses. Use of the PPV descriptor is common when addressing potential impacts to structures. The maximum vibration level standard used by the California Department of Transportation (Caltrans) for the prevention of structural damage to typical residential buildings is 0.2-inches/second PPV (Caltrans, 2020).

The vibration velocity level (VdB) is used to describe potential impacts to people. The 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 (Federal Transit Administration, 2018).

Construction activities referenced above that would generate significant vibration levels are not proposed (i.e., blasting, pile driving, jackhammering). However, to provide information for use in completing the TEIR evaluation, construction-related vibration impacts are evaluated using both PPV and associated VdB criteria.

4.3.2 Guidelines for Determination of Significance

Exhibit A of the Compact identifies the following guidelines for determination of significance related to potential noise impacts:

A. *Would the Project result in exposure of off-Reservation persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

B. *Would the Project result in exposure of off-Reservation persons to excessive groundborne vibration or groundborne noise levels?*

C. *Would the Project result in a permanent increase in ambient noise levels in the off-Reservation vicinity of the Project?*

D. *Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the off-Reservation vicinity of the Project?*

4.3.3 Analysis of Project Effects and Determination of Significant Impact

4.3.3.1 Impact Analysis

A. Would the Project expose off-reservation persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The primary noise sources during construction activities would include heavy machinery used in demolition, site preparation, grading/excavation, garage construction and paving. Table 4.3.1 provides typical noise levels associated with operation of mobile and stationary construction equipment. As shown, average noise levels associated with the use of heavy equipment can range from 86 to 94 dBA at 25 feet from the source, depending upon the types of equipment in operation at any given time and phase of construction.

TABLE 4.3-1: TYPICAL MAXIMUM CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment Onsite	Typical Maximum Level (dBA) 25 Feet from the Source	Typical Maximum Level (dBA) 50 Feet from the Source	Typical Maximum Level (dBA) 100 Feet from the Source
Air Compressor	86	80	74
Backhoe	86	80	74
Bobcat Tractor	86	80	74
Concrete Mixer	91	85	79
Loader	86	80	74
Bulldozer	91	85	79
Jack Hammer	94	88	82
Pavement Roller	91	85	79
Street Sweeper	88	82	76
Man Lift	81	75	69
Dump Truck	90	84	78
Mobile Crane	89	83	77
Excavator/Scraper	91	85	79

Source: Federal Transit Authority (FTA) Noise and Vibration Impact Assessment Manual (September 2018), Table 7-1.
Noise levels are based on actual maximum measured noise levels at 50 feet (Lmax).
Noise levels are based on a noise attenuation rate of 6 dBA per doubling of distance.

As stated, the nearest off-reservation receivers to the proposed Project site are located on the south side of Willows Road southeast of the East Casino Driveway intersection. The distance between the site and receivers are approximately 1,100 feet. The noise level used to estimate the maximum sustained noise level that could occur is based on use of a bulldozer as the mobile source reference sound level (Table 4.3.1) and a jackhammer as the stationary source reference sound level. Based on a standard noise attenuation rate of 6 dBA per doubling of distance.

Noise levels during mobile equipment operation would attenuate from a high of 85 dBA at 50 feet from the source to 58.2 dBA at 1,100 feet. For stationary equipment with a reference level of 95 dBA (i.e., jackhammer) would attenuate to 68.2 dBA at 1,100 feet. Combined, the two sources would be 68.6 dBA at 1,100 feet. Construction equipment noise would not exceed 75 dBA at the property line of the nearest off-Reservation receivers. The existing hotel buildings will provide some screening for construction noise to the west and south. Existing traffic operation on Willows Road will also mask construction noise. Actual construction noise levels will fluctuate throughout the day depending on the type and location of equipment used and whether multiple pieces of equipment are operating simultaneously in the same area.

Temporary construction noise levels would be less than significant; thus, no mitigation would be required.

B. Would the Project expose off-reservation persons to excessive ground borne vibration or groundborne noise levels?

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 for many people. As stated, 0.2 PPV (94 VdB) is the vibration level at which damage to residential structures can occur and considered annoying to most people exposed to the vibration energy (FTA, 2018).

Heavy impact construction methods that could generate enough vibration to damage buildings proximal to the Project site (i.e., pile driving, rock breaking, drilling, blasting) would not be required for the Project. However, both PPV and the related VdB are used to address construction vibration and related effects to people residing in adjacent residences. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible. The PPV and accompanying VdB level associated with common construction equipment is shown in Table 4.3.2.

Construction activity on the Project site would be temporary and vibration events would be transitory occurring only during equipment pass bys. Using vibration levels associated with a large bulldozer the piece of equipment with the highest vibration level, as a worst case scenario, typical groundborne vibration could reach 87 VdB at 25 feet, 81 VdB at 50 feet, and 75 VdB at 100 feet, based on the FTA *Transit Noise and Vibration Impact Assessment* (September 2018) as shown in Table 4.3.2. As stated, the closest residence off-Reservation residence is approximately 1,100 feet to the southeast. Vibration levels may reach 63 VdB (0.008 PPV) at 400 feet from the site. As stated, vibration levels in excess of 75 VdB may be perceptible. Vibration would not be perceptible at the nearest off-Reservation receivers. Thus, sustained equipment operation is not expected to occur proximal to this location nor would the PPV reach levels that may cause structural damage in the residential building. Thus, temporary vibration impacts would be less than significant.

TABLE 4.3-2: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, September 2018.

C. Would the Project cause a substantial permanent increase in ambient noise levels in the off-reservation vicinity of the Project?

Traffic Noise. Traffic is the primary noise source associated with the proposed Project post-construction. As stated, the proposed Project would not add to existing traffic volumes. Rather, the Project would shift volumes between the West Casino Driveway to the East Casino Driveway. The majority of visitor trips would continue to enter the site from west. The Project is expected to add approximately 38 weekend peak hour trips to westbound Willows Road west of the East Casino Driveway and 79 weekend peak hour trips to eastbound Willows Road west of the East Casino Driveway. The change in traffic volumes may cause or contribute to an increase in traffic-related noise on and adjacent to the Project site.

Noise levels at the nearest off-Reservation receiver (5301 Willows Road) were estimated using the Traffic Noise Model Version 2.5 (U.S. Department of Transportation, Federal Highway Administration [FHWA], April 2004) (see Appendix A). A Traffic Noise Model was calibrated to within 2 dBA of the noise measurements taken in the field using traffic volumes counted during noise monitoring. Roadway noise levels were estimated for a weekend day peak hour, the period of time when the heaviest volumes would occur. Average daily trips were obtained from traffic data provided by LLG (LLG, 2022). The stop control located at the intersection of Willows Road and East Casino Driveway was included in the modeling calculations to account for speeds approaching and departing the intersection. The closest off-Reservation receiver to the Project is located approximately 870 feet east of the Willows Road/East Casino Driveway intersection. The existing modeled noise level at this location is 62.8 dBA (BPG, 2022b, Appendix A).

The increased traffic volumes on the Willow Road segment fronting the casino/hotel gaming complex would be west of the nearest off-Reservation receiver. Therefore, increased volumes added to this segment would not affect traffic noise at the receiver to the east. Modeled noise levels with adjustments to traffic volumes would remain 62.8 dBA.

Further, off-Reservation volumes west of the Reservation boundary would not change from baseline conditions. Therefore, traffic noise associated with the proposed Project would have no impact to baseline noise levels at the nearest off-Reservation receivers. Impacts would be less than significant.

D. Would the Project cause a substantial temporary or periodic increase in ambient noise levels in the off-reservation vicinity of the Project?

As stated herein, temporary construction and vibration associated with the proposed Project would attenuate to below the County of San Diego standards at the northern property line of the nearest off-Reservation receiver located at 5301 Willows Road, southeast of the site. Thus, there would be no adverse effect associated with construction noise and vibration. With respect to operation, changes in traffic distribution associated with the proposed Project would increase peak hour trips on Willows Road west of the East Casino Driveway intersection. However, this would have no effect on traffic noise levels at off-Reservation receivers east of the intersection because of the distance between the Willows Road and East Casino Driveway intersection and the nearest receiver. Thus, the Project would not cause or contribute to a temporary or periodic increase in noise levels at off-Reservation vicinity of the Project. Impacts would be less than significant.

4.3.3.2 Conclusions

Based on the Noise Assessment prepared by BPG, no significant noise impacts are anticipated off-Reservation during either the construction or operational phases of the Project.

4.3.3.3 Mitigation Measures

With no significant off-Reservation noise impacts identified for the Project, no mitigation measures are required.

4.4 Aesthetics/Visual Resources

4.4.1 Existing Conditions

According to the current Alpine Community Plan (County of San Diego, August 2016), the plan area covers approximately 108 square miles, ranging from densely vegetated lower drainage ways of 1,500-foot elevation, to semi-arid hilly terrain, to the peaks of Viejas and El Cajon Mountains with elevations of over 4,100 feet. Interstate 8 bisects the community.

The 2010 SANDAG estimates for population and housing in the Alpine community planning area identify a population of 17,609 with a total of 6,551 housing units. The plan also encompasses the Viejas Indian Reservation and small settlements in Peutz Valley, Japatul Valley, Hidden Glen, Dunbar Lane, and Galloway Valley. Existing development has a rural character typified by light agricultural activities practiced in conjunction with residential uses. The Viejas Indian Reservation is located at the eastern edge of the Alpine Community Plan area. Common native vegetation habitats in the Viejas Reservation area include areas of Engelmann oak and coast live oak

woodland; chamise and southern mixed chaparral; Diegan coastal sage scrub; valley needle-grass grassland; and non-native grassland (Marquez & Associates, 2008).

The Alpine Community Plan indicates that the visual quality of the landscape is important, especially protection of scenic ridgelines and natural oak groves (Alpine Community Plan, p. 5). The plan also indicates that it is the community intent to keep residential and agricultural areas of Alpine free from industrial and major commercial encroachments. The Resource Conservation appendix of the plan (p. 40) indicates that lands at Viejas Mountain, Viejas Indian Reservation, and Poser Mountain, all in the vicinity of the proposed Project, should be conserved in order to protect valuable resources. According to the appendix, Viejas Mountain is valuable as a local "aesthetic landmark" with its undisturbed chaparral habitats, and as potential habitat for three specific rare plants. Poser Mountain has similar resources, although it is not named as an "aesthetic landmark." Finally, Viejas Indian Reservation is noted for its high concentration of known and yet unknown archaeological sites. Viejas Creek is described as a perennial stream with freshwater aquatic ecosystems adjacent to oak and riparian woodlands.

No state-designated scenic highways are located in the Alpine Community Plan area, but Interstate-8 (I-8), which bisects the plan area, is identified as a "second priority" scenic route. The Scenic Highways chapter goes on to identify the following "scenic view corridors" of the Community Plan:

- From I-8 toward El Capitan Reservoir;
- East and west views of Viejas Mountain from I-8; and,
- From I-8 south along the Sweetwater River.

The right-of-way of Viejas Grade Road is also used for the California Riding and Hiking Trail, a regional riding and hiking resource [pers. comm. Ms. Maryanne Vancio, County of San Diego Parks and Recreation Dept., Nov. 4, 2011]. Recreational users are typically considered more sensitive to potential visual impacts, and the slow pace at which riding and hiking is conducted is more conducive to an appreciation of scenic views.

4.4.2 Guidelines for Determination of Significance

Exhibit A of the Viejas-State Compact utilizes the following guidelines for determination of significance related to potential visual or aesthetic impacts:

A. *Would the Project have a substantial adverse effect on a scenic vista?*
B. *Would the Project substantially damage off-Reservation scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*
C. *Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views of historic buildings or views in the area?*

4.4.3 Analysis of Project Effects and Determination of Significant Impact

4.4.3.1 Impact Analysis

The location of the proposed East Garage is shown in Figures 1-1 and 1-2 of this TEIR. The proposed site plan is shown in Figure 1-3 of this TEIR.

The site for the East Garage is located immediately adjacent to the existing Viejas Casino and Resort, at an elevation of approximately 2,320 feet above mean sea level (AMSL). The garage height would be approximately 65 feet with an elevator tower at the southeast corner, which would not exceed 80 feet. The elevation of the top of the East Garage would be at approximately 2,385 feet AMSL, or 2,400 feet AMSL at the top of the elevator tower.

Figure 4.4-1 identifies potential public viewpoints (VPs) A through K from where a traveler could possibly see the East Garage from either I-8, Willows Road, or Viejas Grade Road (part of the California Riding and Hiking Trail). Figure 4.4-2 shows the potential viewsheds to the proposed Project considering intervening topography. Vegetation and buildings that may block views are not considered in the computer-generated viewsheds provided on Figure 4.4-2. Figures 4.4-3 through 4.4-8 accurately depict the existing viewsheds in the Project area from the identified public viewpoints.

The proposed East Garage potentially would be visible from VPs-C, F, G, H, I, and J (Figures 4.4-5, 4.4-6, 4.4-7, and 4.4-8). Due to the East Garage's position located behind the existing Casino, hotels and existing West Garage, as well as being blocked by the surrounding abundant land cover, the proposed East Garage would not be visible from VPs-A, B, D, or E as shown by the photos taken from each of these viewpoints toward the Project site (Figures 4.4-4, 4.4-5, and 4.4-6). VP-C and F (Figures 4.4-5 and 4.4-7) provide the most visibility to the proposed Project site, out of the potential VPs.

Views from VP-G (Figure 4.4-6) would be somewhat blocked by the existing West Garage. Three levels of the East Garage would rise above the existing West Garage; however, the elevation of the East Garage would be substantially less than the elevation of the existing hotel which is visible in the middle ground of Figure 4.4-6. The proposed East Garage would be visible to the left of the hotel and would be over 500 feet further away from a viewer at VP-G. The TEIR for the Viejas Casino and Resort (Viejas 2016) found as follows regarding visual impacts of the hotel that is visible in Figure 4.4-6: "Key View 3 (VP-G): The proposed hotel would be seen by Tribal-residential owners and their visitors as well as recreational users within the right of way of Viejas Grade. Local viewer response would be moderately affected because even though duration of view ranges from a few seconds to a few minutes and the hotel has high visibility because it is above the tree line, the nearest distance is about 1,500 feet distance from the viewer to the proposed hotel reducing the visual impact."

Due to the existing natural shrubbery, landscaping and curves in the road, the Project would only be slightly visible from Viejas Grade Road at VP-H, I, and J. The road in the areas from which the

East Garage would be visible are quite "curvy'" requiring some attention by the recreationist or motorist to remain on the road/trail. In addition, the proposed East Garage would be located between 1.5 and 3 miles from VPs-H, I and J, and would appear very small in the distance blending in with the existing development.

From VP-C, for travelers westbound on I-8, there would be a momentary view of both Viejas Mountain (clear view) and potentially the top levels of the East Garage; however, the East Garage would be mostly screened by the existing hotel and trees. The photo in Figure 4.4-5 shows the existing Viejas Resort located mostly in front of where the East Garage would be located, approximately 1,700 feet away. However, the traveler would need to turn to look approximately 60 degrees to the right of their travel direction to see the East Garage, and the top of the East Garage would potentially be visible as a "side view" for less than five seconds from a vehicle travelling at 65 mile per hour. Just past the Viejas sign visible in Figure 4.4-4 there is a momentary opportunity for a viewer to look generally to the north and up the Willows Road/Viejas East Driveway. Viejas may install a large video display on the side of the garage facing south. That display will be sited for visual access to occupants of vehicles using the east driveway. The display would be momentarily visible to occupants driving westbound of I-8, looking about 90 degrees from their direction of travel.

The proposed Project has the potential to be viewed from Willows Road (VP-F). The County of San Diego Forest Conservation Initiative General Plan Amendment Supplemental Environmental Impact Report (County of San Diego 2016) reported Willows Road average daily trips (ADT) from the Viejas Casino to East Willows Road I-8 on ramp to be 7,148 average trips per day, representing the majority of the potential viewers from VP-F. Views from VP-F would be of somewhat longer duration than the view from I-8. For this reason, a visual simulation of the East Garage has been prepared from this viewpoint. Figure 4.4-8 depicts the anticipated future views from this viewpoint including a simulation of the East Garage. Note that the video display cannot be seen from this vantage point. The top video display is expected to be in line with the East Driveway; therefore, it would not be readily visible above the tree line as seen from VP-F.

Figure 4.4-9 explains the combination of visual analytic factors used to determine the visual impact significance.

An analysis of the degree of viewer exposure to the East Garage is provided in Table 4.4-1. The degree of viewer exposure from Willows Road (VP-F) was rated as "moderately low" because the viewer would be viewing a site that is mostly obscured by trees (see Figure 4.4-8).

TABLE 4.4-1: VIEWER EXPOSURE ANALYSIS OF PROPOSED EAST GARAGE

Visual Analysis Factors	Description of Visual Factors Regarding Views of the Proposed East Garage from Willows Road, Viewpoint F	Qualitative Rating	Numerical Score
Project Visibility	High, if viewer is stationary; low if the viewer is in rapid motion (highway speeds).	M	3
Project proximity to viewer	The proposed East Garage would be within approximately 900 feet of Willows Road; this is typically considered a "foreground" view (< 0.5 mi.); however in this case, the white Fence and existing vegetation dominate the foreground.	F (MH)	4
Angle of view	The East Garage would be back-dropped by other landscape elements and terrain (Viejas Mountain) behind it, not silhouetted against the sky. In addition, the view of the East Garage would be off to the right side, not immediately in front of vehicle occupants, and almost all of the structure view would be blocked by the vegetation.	L	1
View open or obscured	The view from Willows Road mostly is obscured by trees.	L	1
Duration of view	The East Garage would be visible for approximately 10 seconds depending on the vehicle speed. This is considered a low duration.	L	1
Viewer Exposure Summary	This factor is a **composite of the five factors listed above.** Based on the numeric scores listed above, the sum of the factors would be 10, with an average score of 2 (10 divided by 5). In qualitative terms, viewer exposure would be characterized as "moderate low."	**ML**	**2**

Notes: Numerical Scores: Low = 1; ML = 2; Moderate = 3; MH = 4; High = 5
Source: BRG Consulting, Inc., 2022.

The analysis of level of visual sensitivity and the degree of visual change are provided in Table 4.4-2. The visual sensitivity for the Willows Road (VP-F) viewpoint was determined to be "moderately low to moderate." The degree of visual change for the Willows Road (VP-F) viewpoint was determined to be "low." When the visual sensitivity and visual change criteria are integrated, the visual significance of the Project at VP-F is "adverse, but less than significant" (Table 4.4-3). Therefore, no visual impact is identified with the implementation of the proposed Project.

TABLE 4.4-2: ANALYSIS OF VISUAL SENSITIVITY AND DEGREE OF VISUAL CHANGE, WILLOWS ROAD VP-F

Viewer Exposure Summary	From Table 1.	ML	2
Overall Visual Sensitivity	This factor is a **composite of the viewer exposure summary rating from above, plus the four factors listed immediately below; see summary below for the analysis results**.		
Visual quality of the setting	The setting is considered representative of the Project region, and is not considered "exceptional", which would rate an H rating or 5 score.	M	3
Viewer type or sensitivity	Activities associated with highway vehicular views are considered passive. Many of the viewers would be commuters, passing that spot every day for months or years on end. A small proportion of the viewers may be new Casino patrons, seeing the view for the first time. As a result, the viewer sensitivity has been rated, on a composite basis, as "moderately low."	ML	2
Number of viewers	The County of San Diego Forest Conservation Initiative General Plan Amendment Supplemental Environmental Impact Report reported Willows Road ADT from the Viejas Casino to East Willows Road I-8 on ramp to be 7,148 average trips per day.	M	3
Viewer Visual Expectations	Vehicular viewers from Willows Road would be of a rural community with modest homes on large lots. Relatively little of the environment is	ML - M	2.5

TABLE 4.4-2: ANALYSIS OF VISUAL SENSITIVITY AND DEGREE OF VISUAL CHANGE, WILLOWS ROAD VP-F

Viewer Exposure Summary	From Table 1.	ML	2
	"man-modified" until you come to the general area of VP-F. At that point, the foreground is of a white fence in front of paved parking lots and landscape vegetation and trees. These lots can be heavily used during peak periods but would be expected to be mostly empty with the proposed East Garage.		
Overall Visual Sensitivity Summary	This factor is a **composite of viewer exposure, plus the four factors listed above**. Based on the numeric scores listed above, the sum of the factors would be 10.5, with an average score of 2.625 (10.5 divided by 4). In qualitative terms, this would be characterized as "moderate+."	**ML - M**	**2.625**
Overall Degree of Visual Change	This factor is a **composite of the three factors listed below; see summary below for the analysis results**.		
Visual contrast	Visual contrast of the proposed East Garage is considered "low" due to its location behind the foreground vegetation and white fence.	L	1
Project dominance	The East Garage would be considered "dominant" if it were located alone, but only "low" when behind the foreground vegetation paved parking lot, and white fence.	L	1
View or vista blockage	None. The primary elements in the view of vehicular occupants would be the foreground white fence, and trees and background Viejas Mountain. The proposed East Garage would not block these views.	N-L	0.25
Overall Degree of Visual Change	This factor is a composite of the 3 factors listed above. Based on the numeric scores listed above, the sum of the factors would be 2.25, with an average score of 0.75 (2.25 divided by 3). In qualitative terms, this would be described as between "low."	**L**	**0.75**

Notes: Numerical Scores: Low = 1; ML = 2; Moderate = 3; MH = 4; High = 5
Source: BRG Consulting, Inc., 2022.

0.75 (from Table 2)

TABLE 4.4-3: DETERMINATION OF VISUAL IMPACT SIGNIFICANCE PROPOSED VIEJAS EAST GARAGE, VIEWED FROM WILLOWS ROAD

OVERALL VISUAL SENSITIVITY	*OVERALL DEGREE OF VISUAL CHANGE*				
	Low	**Low to Moderate**	**Moderate**	**Moderate to High**	**High**
LOW	Not significant	Not significant	Adverse but less than significant	Adverse but less than significant	Adverse but less than significant
LOW TO MODERATE	Not Significant	Adverse but less than significant	Adverse but less than significant	Adverse but less than significant	Adverse but less than significant
MODERATE	Adverse but less than significant	Adverse but less than significant	Adverse but less than significant	Adverse and potentially significant	Adverse and potentially significant
MODERATE TO HIGH	Adverse but less than significant	Adverse but less than significant	Adverse and potentially significant	Adverse and potentially significant	Significant
HIGH	Adverse but less than significant	Adverse and potentially significant	Adverse and potentially significant	Significant	Significant

2.625 (from Table 2)

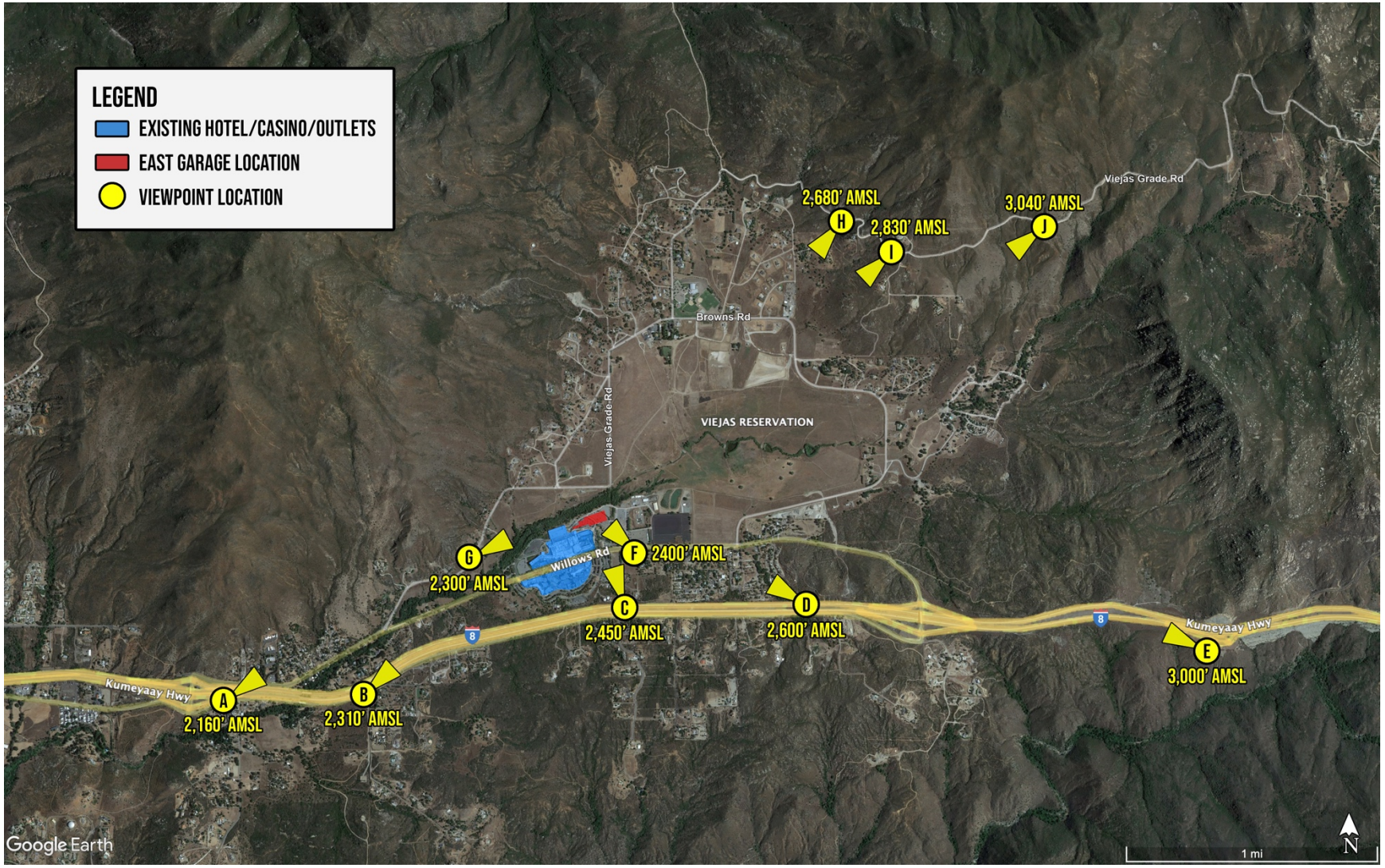
Source: BRG Consulting, Inc., April 2022. Miguel-Mission 230 kV #2 Project Draft EIR, CPUC, April 2004.

Notes: Not Significant – Impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.

Adverse but less than significant – Impacts are perceived as negative but do not exceed environmental thresholds.

Adverse and potentially significant – Impacts are perceived as negative and may exceed environmental thresholds depending on Project- and site-specific circumstances. Mitigation could reduce impacts to less than significant levels.

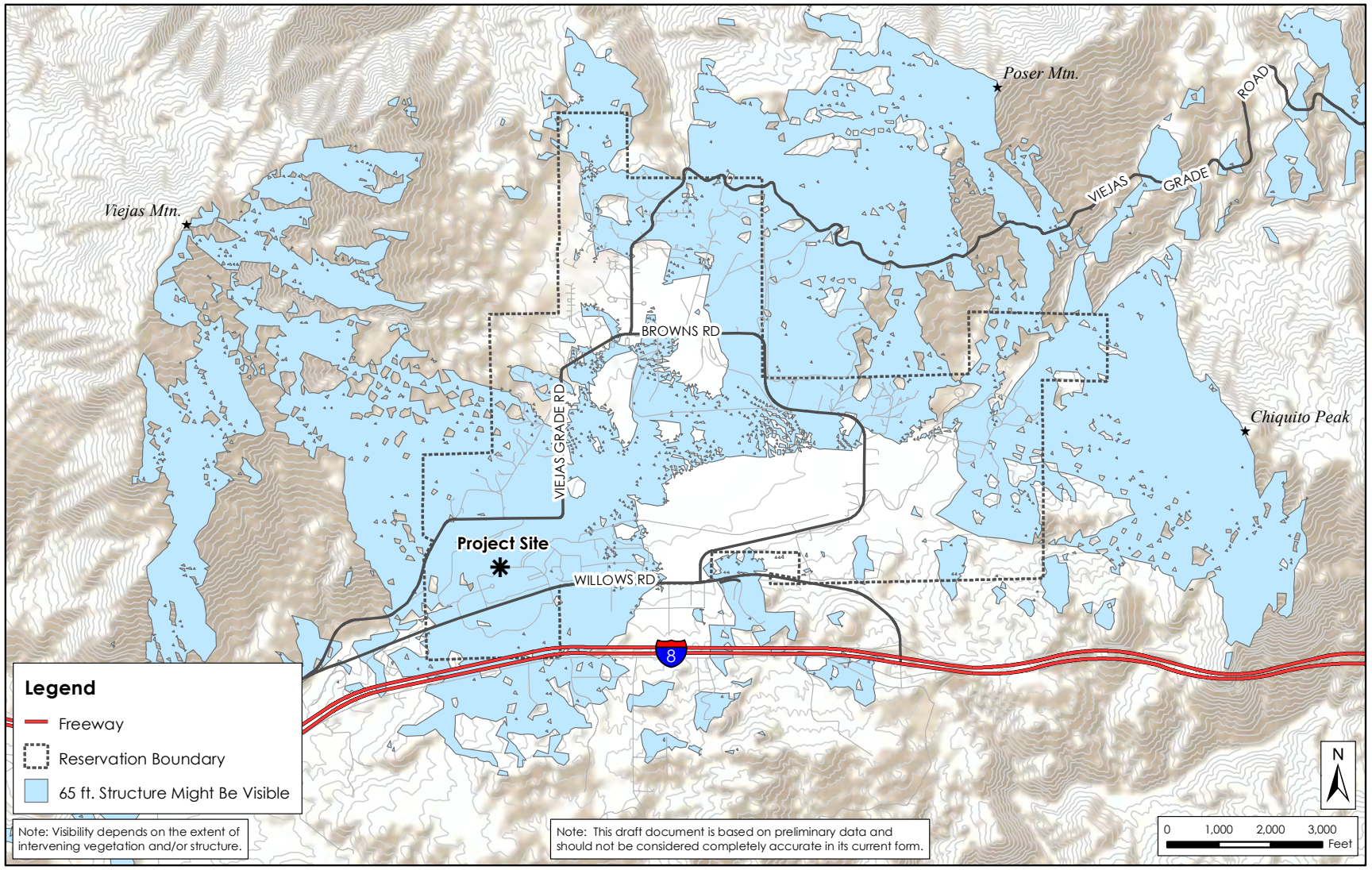
Significant – Impacts with feasible mitigation may be reduced to less than significant levels or avoided altogether. Without mitigation or avoidance measures, significant impacts would exceed environmental thresholds.



SOURCE: Firm, 2022.

BRG CONSULTING INC.

Proposed Location and Potential Viewpoints
Viejas Casino East Garage
Figure 4.4-1



SOURCE: BRG Consulting, Inc., 2022.

BRG CONSULTING INC.

Visibility Analysis
Viejas Casino East Garage
Figure 4.4-2





SOURCE: BRG Consulting, Inc, 2022.

BRG CONSULTING INC.

Photos From Viewpoints A & B
Viejas Casino East Garage
Figure 4.4-3





SOURCE: BRG Consulting, Inc, 2022.

BRG CONSULTING INC.

Photos From Viewpoints C & D
Viejas Casino East Garage
Figure 4.4-4





SOURCE: BRG Consulting, Inc, 2022.

Photos From Viewpoints E & F
Viejas Casino East Garage
Figure 4.4-5





SOURCE: BRG Consulting, Inc, 2022.

BRG CONSULTING INC.

Photos From Viewpoints G & H
Viejas Casino East Garage
Figure 4.4-6





SOURCE: BRG Consulting, Inc, 2022.

BRG CONSULTING INC.

Photos From Viewpoints I & J
Viejas Casino East Garage
Figure 4.4-7

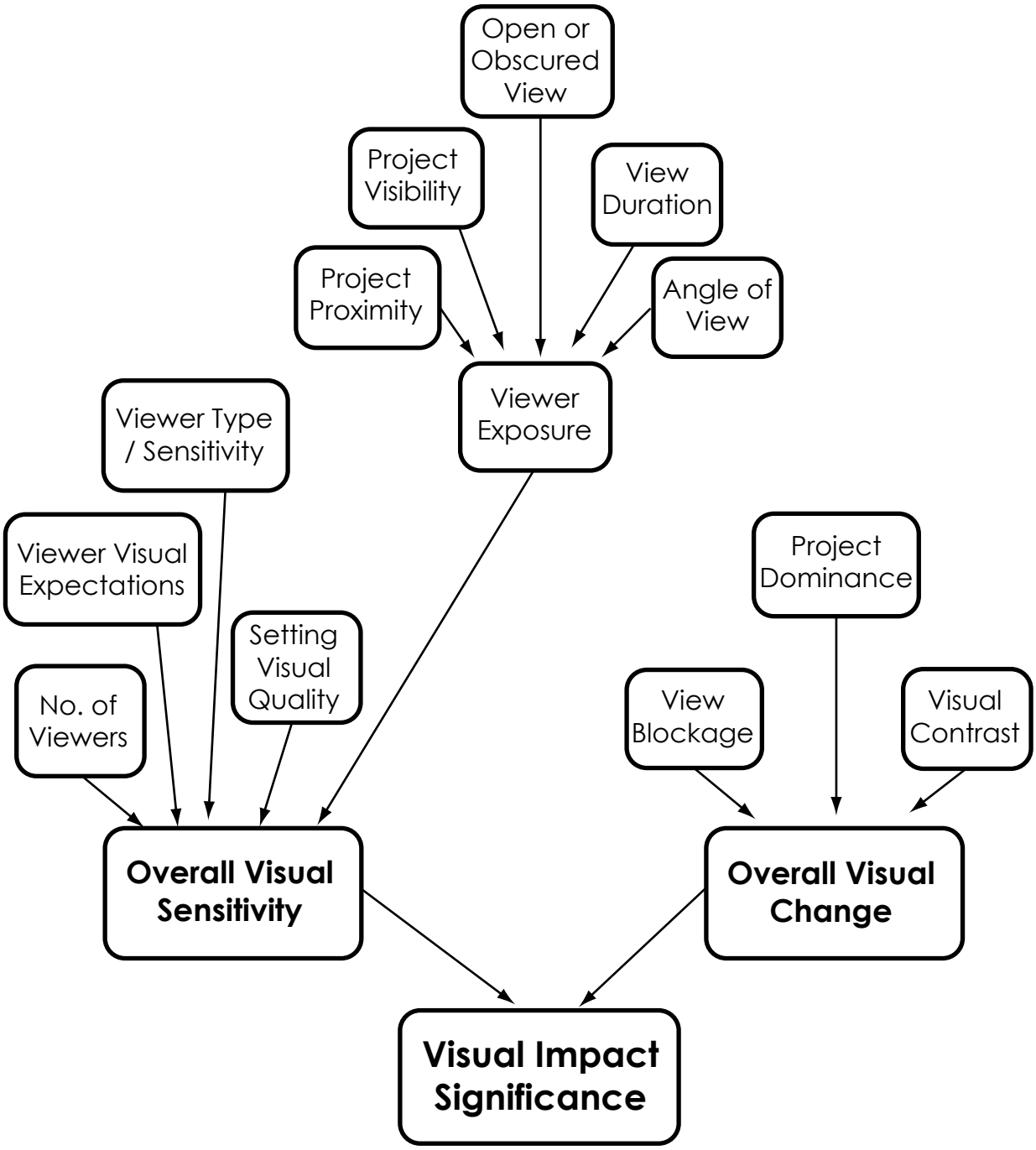




SOURCE: BRG Consulting, Inc, 2022.

BRG CONSULTING INC.

Visual Simulation from Viewpoint F
Viejas Casino East Garage
Figure 4.4-8



SOURCE: BRG Consulting, Inc, 2022.

Combination of Visual Analytic Factors
Viejas Casino East Garage
Figure 4.4-9

A. Would the Project have a substantial adverse effect on a [off-Reservation] scenic vista?

Based on the prior discussions, the proposed Project would be noticeably visible from only two public locations, the one from westbound I-8 and another from Willows Road. Neither of these views is characterized as a designated scenic vista in the Alpine Community Plan.

Interstate-8 View: At the I-8 location, the East Garage would be visible to west-bound highway travelers for five seconds or less, and it would be seen as an incremental addition to an existing commercial complex (Viejas Casino, Hotel and Outlet Center). The dominant visual elements in that view would be Viejas Mountain and the Viejas Casino sign (Figure 4.4-5). The top of the East Garage would be lower than the viewer's horizontal view, it would comprise a small portion of the view, it would be back-dropped by lower slopes of Viejas Mountain and residential developments in the Reservation, and partially screened from view by vegetation in the foreground. The color planned for the East Garage is an earth tone compatible with the existing Casino, Hotel, and Outlet Center colors. It would be consistent with colors seen in Viejas Mountain from this view. Approximately 12,750 vehicles per day passed by this point in 2010, according to Caltrans information, or about 6,375 vehicles in the westbound direction, from which the East Garage would be visible.

View from Willows: There would be approximately 7,148 vehicles per day whose passengers would experience this view, although east-bound travelers would have to look over their shoulders to the left rear to see the view. The dominant view elements would be the white fence, a paved parking lot, and landscaping consisting of native and non-native trees and shrubs in the foreground and Viejas Mountain in the background. (Figure 4.4-8). The East Garage would be visible over the existing landscaping, but would not be a dominant visual element to the viewer from Willows Road.

The Project would not have a substantial adverse effect on an off-Reservation scenic vista.

B. Would the Project substantially damage off-Reservation scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As discussed in TEIR Section 4.4.1, there is no designated state scenic highway present. The East Garage would be constructed in a paved area, adjacent to the Viejas Casino and Hotel, but would have no impact on any scenic resources such as trees, rock outcroppings or historic buildings. The Project is entirely located on the Reservation, and so would not physically damage any off-Reservation scenic resources.

The Project would not substantially damage off-Reservation scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Impacts would be less than significant.

C Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views of historic buildings or views in the area?

Regarding potential "glare", the East Garage would be designed to avoid reflective glare and avoid headlight glare spilling out of the East Garage at night. The East Garage would be made with concrete, which is non-reflective; therefore, posing no reflective glare during the daytime hours.

The Project may include a large video monitor mounted on the south side of the East Garage. As discussed previously, this video monitor would be mostly screened from off-Reservation public views.

Regarding Project lighting that may be visible after dark, it is anticipated that the proposed Project will include downward lighting and sidewalls to block headlights from glaring out of the East Garage. As with prior Viejas projects, the East Garage lighting would comply with the County's Light Pollution Code, Sec. 59.101 through 59.115. The Project site is located approximately 17 miles from Mt. Laguna Observatory, and so is categorized as within "Zone B" of the light pollution code. The lighting at the Reservation would continue to comply with the Light Pollution Code provisions.

The Project would not create a new source of substantial light or glare, which would adversely affect day or nighttime views of historic buildings or views in the area.

The photos taken at VP C, D, F, G, H, and I for the Visual Analysis, were taken in April 2022 with a 4.0 MP Canon Powershot G3 Digital Camera, with a 52 mm lens completely zoomed out, to approximate the view of the human eye most-closely. The photos taken at VP A, B, E, and J during the Visual Analysis (Appendix D), were taken in October and November 2011 with a 14 MP Panasonic Lumix camera, set at the 35-mm camera equivalent of a 55 mm lens, which is the view most-closely approximating the view of the human eye. Photographic views that appear to be "wide-angle" in this report were composited from several 55-mm photos using Photoshop software, providing a view that represents what the viewer would see if he or she turned their head to take in a wider view.

4.4.3.2 Conclusions

No significant visual or aesthetic impacts to off-Reservation public viewpoints or identified sensitive vistas would occur as a result of the proposed Project.

4.4.3.3 Mitigation Measures

No mitigation measures are required, since no significant visual or aesthetic impacts to identified off-Reservation public viewpoints were found.

4.5 Transportation/Traffic

4.5.1 Existing Conditions

Linscott Law & Greenspan Engineers (LLG) prepared a letter report addressing Transportation/Traffic, which is included as Appendix D to this TEIR. Note that LLG's report specifically addresses the 5-level, 2,053 net parking space garage that was identified in the NOP. The current proposal is for a 7-level, 2,203 net parking space garage. Mr. John Boarman of LLG confirmed that such a change would not have any meaningful effect on the analysis or conclusions presented in the Traffic/Transportation Letter Report.

LLG conducted traffic counts at the two main access driveways on Saturday, March 19, 2022 and Thursday, March 24, 2022 during the PM peak hours. The AM peak hour was omitted as traffic during that time frame is much less. Figure 4.5-1 shows the existing conditions at the two main access driveways. Figure 4.5-2 shows the existing Weekday PM and Weekend PM peak hour traffic volumes at the two main access driveways. Based on the existing traffic counts, the split among the two driveways is shown to be approximately 80/20 with 80% of vehicles entering/existing via the west driveway.

The East Garage will be more convenient than the current remote lots but it will not attract new patrons or generate new trips to the Casino. With the construction of the East Garage, the traffic at the two main access driveways is expected to redistribute. It is assumed that approximately 20% of the traffic at the west driveway will be redistributed to the east driveway due to the attraction of the East Garage.

To account for cumulatively generated traffic not associated with the Project, an ambient growth was derived and applied to the existing traffic volumes to obtain Opening Year conditions. Per discussion with the client, the East Garage is proposed to be complete by Year 2023. Therefore, a 2% growth from existing traffic volumes was deemed appropriate.

4.5.2 Guidelines for Determination of Significance

Exhibit A of the Compact utilizes the following guidelines for determination of significance related to potential visual or aesthetic impacts:

A. *Cause an increase in off-Reservation traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?*

B. *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated off-Reservation roads or highways?*

C. Substantially increase hazards due to an off-Reservation design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

D. Result in inadequate emergency access for off-Reservation responders?

4.5.3 Analysis of Project Effects and Determination of Significant Impact

4.5.3.1 Impact Analysis

Table 4.5-1 summarizes the operations at the two study area intersections. As shown in Table 4.5-1, both Project driveways are calculated to operate at LOS B or better during the Weekday and Weekend PM peak hours for all scenarios. In the Opening Year + Project scenarios, with redistribution of area traffic, the western driveway is calculated to slightly improve its operation and the eastern driveway is calculated to slightly worsen its operation due to the shift in traffic.

Appendix D contains the Existing, Opening Year and Opening Year + East Garage peak hour intersection analysis worksheets.

A. The first Transportation/Traffic impact criterion is: Would the Project cause an increase in off-Reservation traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

The East Garage will provide a more convenient parking opportunity to existing patrons of the Casino. It is not expected to increase visits to the Casino; and therefore, would not cause an increase in off-Reservation traffic. With the Project, it is expected that existing patrons will utilize the eastern Casino driveway to a greater extent than currently. This increase would result from a redistribution of trips from the western to the eastern driveway. Nevertheless, both driveway intersections with Willows Road (a County of San Diego Road) will continue to operate at an acceptable level of service (LOS A or B).

B. The second Transportation/Traffic impact criterion is: Would the Project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated off-Reservation roads or highways?

The East Garage will provide a more convenient parking opportunity to existing patrons of the Casino. It is not expected to increase visits to the Casino; and therefore, would not cause an increase in off-Reservation traffic. Because it would not cause any increase in traffic, it would not exceed any level of service standard established by the county congestion management agency for designated off-Reservation roads or highways.

C. The third Transportation/Traffic impact criterion is: Would the Project substantially increase hazards due to an off-Reservation design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No such design features are known to the Tribe. Impacts would be less than significant.

D. The fourth Transportation/Traffic impact criterion is: Would the Project result in inadequate emergency access for off-Reservation responders?

Viejas provides emergency services on the Reservation and to the local community. The Project is not served by a dead-end road and therefore has adequate emergency access for any off-Reservation responders. Impacts would be less than significant.

4.6 Cumulative Impacts

Information regarding potential cumulative impacts was obtained for the FCI GPA and Supplemental EIR. An eastern expansion of the Alpine linear village is proposed along Alpine Boulevard and Willows Road east of Viejas from Semi-rural densities to VR-2, VCMU, and Rural Commercial (County of San Diego, 2016, FCI GPA EIR). Within the Alpine Community Planning area, residential development potential increased by 961 units with the FCI GPA. However, the plan revisions state ”both imported water and sewer services are necessary to fully realize the land use intensities allowed by the Village land use designated areas along Willows Road east of Viejas and residential densities south of Alpine Boulevard between the Interstate 8 interchanges at West Willows Road and at the eastern end of Willows Road.”

The FCI GPA was found to result in significant cumulative impacts after mitigation was applied to the following resources:

- Agriculture and Forestry;
- Air Quality;
- Biological Resources;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Mineral Resources;
- Noise;
- Public Services;
- Transportation and Traffic;
- Utilities and Service Systems; and,
- Global Climate Change.

The proposed Project would not noticeably contribute to the impacts of the FCI GPA since the Project is not included in the FCI GPA and does not support or encourage the level of development made possible by the FCI GPA. The Project provides more convenient parking to

a current use, the Viejas Casino and Resort. No cumulative impacts associated with the Project have been identified.

4.7 Effects Found Not Significant During the Initial Study

The Project Initial Study (TEIR Appendix A) found that Project off-Reservation impacts other than aesthetics, air quality, noise, and traffic would be less than significant. These include agricultural resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, and utilities and service systems.

The change from a 5-level garage described and analyzed in the Project Initial Study to the currently proposed 7-level garage would not alter the impact/significance conclusions of the Project Initial Study.

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5.0 ALTERNATIVES TO THE PROPOSED PROJECT

5.1 Rationale for Alternative Selection

Compact Section 11.1 (b) requires that project alternatives be analyzed that would feasibly attain most of the objectives of the proposed project, while reducing or avoiding the project's significant impacts. In this project TEIR, no significant impacts were identified. The air quality, noise, traffic, and visual analyses indicate that project's air quality, noise, traffic and visual impacts would be less than significant. Therefore, no alternatives are required in order to avoid potential air quality, noise, traffic or visual impacts.

Under the terms of the Compact, the Tribe "…need not address alternatives that would cause it to forgo its right to engage in Gaming Activities authorized by this Compact on its Indian lands." (Compact, Sec. 11.1 (a)(5)). The provision of convenient parking that would be added by the project is within the definition of "Gaming Activities authorized by (the) Compact," and therefore the Tribe need not address alternatives such as the No Project alternative, because that alternative would impair the Tribe's right to engage in the Gaming Activities authorized by the Compact.

5.2 Other Alternatives Considered

Viejas considered a 5-level East Garage with a similar number of parking spaces as the proposed 7-level East Garage but with a larger footprint. This alternative was described in the NOP for the Viejas Casino East Garage. The Tribe has elected to go with the taller structure because there is no environmental advantage of the 5-level structure, and the 7-level structure conserves approximately 0.3 acre of commercial-designated land south of Viejas Creek and in the vicinity of the Casino. In addition, the 7-level garage provides a greater benefit to guest experience by allowing more guests to park in closer proximity to the Casino.

Alternative East Garage sites on the Reservation would not increase or reduce project-related traffic on West Willows Road. The East Garage is adjacent and to the east of the existing parking garage. The proposed garage, being east of the current garage, would have the potential to reduce trips on West willows Road. Other locations would be further away from the Hotels and Casino and so would not be as convenient relative to the existing Casino and Hotel and would be no more convenient than the existing surface parking lots that lie to the east of the Casino. The East Garage needs to be co-located with the Casino and Hotel to meet the needs of the gaming public and hotel guests. For these reasons, other East Garage alternatives are not a feasible alternative.

Visual impacts would depend on the location of the alternative site identified. Alternative East Garage sites, either at the eastern side of the Reservation, or outside the Reservation, would not provide the desired proximity of East Garage and Casino.

Finally, a smaller East Garage than proposed would reduce the potential insignificant visual impacts in the area but would not meet the project purpose/object of providing convenient parking to hotel guests and Casino patrons. If the smaller East Garage were full, a potential guest might need to park in the existing surface parking areas to the east of the Casino after first searching for a spot in the East Garage. Such a scenario would result in additional trips on Willows Road, more vehicle miles traveled, increased energy usage, and increased air emissions of both criteria pollutants and greenhouse gases. No substantial environmental advantage has been identified for such an alternative.

6.0 REFERENCES

Birdseye Planning Group, 2022a. *Viejas East Garage Air Quality Study*. May 2022.

Birdseye Planning Group, 2022b. *Viejas Parking Structure Project Noise Study*. May 2022.

County of San Diego, 2016. *Department of Planning and Land Use, Alpine Community Plan*. Adopted August 2016.

County of San Diego, 2016. *Forest Conservation Initiative General Plan Amendment Supplemental Environmental Impact Report.* December 2016.

California Air Resources Board, 2018, 2019, 2020 *Air Quality Data Summaries.* 2020.

Linscott, Law & Greenspan, 2022. *Viejas Casino and Resort Parking Structure Project Transportation Assessment Letter*. April 29, 2022.

Marquez & Associates, 2008. *Biological Resources Report, Red Oak Parcels*. August 2008.

Ms. Maryanne Vancio, 2011. County of San Diego Parks and Recreation Dept., pers. comm. November 4, 2011.

Regional Water Management Group (RWMG), 2021. *San Diego Integrated Water Management Plan*, Appendix 3-C, List of Impaired Waters in the San Diego IRMW Region, 2021 (http://www.sdirwmp.org/pdf/SDIRWM_Appendix_3C.pdf).

Viejas Band of Kumeyaay Indians and State of California, 2016. *Tribal-State Compact Between the State of California and the Viejas Band of Kumeyaay Indians*. June 2016.

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7.0 LIST OF TEIR PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

7.1 TEIR Preparers

7.1.1 Viejas Band of Kumeyaay Indians

John Christman, Tribal Chairman

7.1.2 Viejas Enterprises

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Jeff Bishop, Director of Construction, Quality Assurance, and Project Management

Eric Hans, Chief Financial Officer and Director of Treasury

Bob Phohl, Fire Chief

Jim Wild, General Manager

7.1.3 GAFCON, Inc.

Jack Fanning, Project Manager

Ron Takaki, Vice President, Project Operations

7.1.4 BRG Consulting, Inc.

John Addenbrooke, Environmental Planner

Edward Arcadia, Visual Simulation

Erich Lathers, Principal Panner and Principal in Charge

Christina Willis, President

7.1.5 Hunsaker & Associates

Frank Cooley, Senior Project Manager

7.2 Organizations and Persons Contacted

7.2.1 County of San Diego, Long Range Planning Division Planning & Development Services

Scott Christman, Group Program Manager

7.2.2 County of San Diego, Dept. of Public Works

Crystal Benham, LUEG Program Manager

8.0 LIST OF MITIGATION MEASURES

With no significant impacts identified in the various environmental topics, no mitigation measures are required.

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Appendix

Notice of Preparation
& Initial Study

A

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NOTICE OF PREPARATION

To: State Office of Planning and Research
PO BOX 3044
Sacramento, CA 95812-3044

From: Viejas Enterprises
5000 Willow Road
Alpine, CA 91903

To: County of San Diego
Clerk of the Board of Supervisors
1600 Pacific Highway, Room 402
San Diego, CA 92101

Subject: Notice of Preparation of a Draft Tribal Environmental Impact Report

The Viejas Band of Kumeyaay Indians is preparing a Draft Tribal Environmental Impact Report (TEIR) for the proposed project identified below. The TEIR is a requirement of the 2016 Tribal-State Compact Between the State of California and the Viejas Band of Kumeyaay Indians (Compact) and will identify off-reservation, gaming-related, significant, environmental effects. We need to know your views as to the scope and content of the off-Reservation environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Interested persons are requested to identify the off-Reservation environmental issues and reasonable mitigation measures that the Tribe should explore in the Draft TEIR.

The project description, location and the potential environmental effects are contained in the attached Tribal Initial Study.

Due to the time limits mandated by the Compact, your response must be sent at the earliest possible date, but no later than 30 days after receipt of this notice.

Please send your response to Erich Hans at the address shown above. We will need the name of a contact person in your agency.

Project Title: Viejas Casino East Garage

Date Mar 25, 2022 Signature Erich Hans (Mar 25, 2022 12:45 PDT)

Name Erich Hans

Title CFO

Phone 619-322-2120

OFF-RESERVATION ENVIRONMENTAL IMPACT ANALYSIS CHECKLIST AND DISCUSSION

1. Lead agency name and address:
   Viejas Band of Kumeyaay Indians
   5000 Willows Road
   Alpine, CA 91903

   a. Lead Agency Contact: Erich Hans
   b. Phone number: 619-659-2069

2. Project location:
   5000 Willows Road in the San Diego County Community of Alpine.

3. Project sponsor's name and address:
   Viejas Enterprises
   5000 Willows Road
   Alpine, CA 91903

4. Tribal Plan Designation
   Land Use Designation: Commercial

5. Description of project (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation):

6. The project is an approximately 2,450-parking space, 5-story parking garage, adjacent to the existing Viejas Casino. The expansion will occur on a currently developed and paved area north of the casino. This area is currently used for surface parking. Figure 1 provides the regional location within San Diego County. Figure 2 is a topo map of the project vicinity. Figure 3 is concept plan for the East Garage.

   The Casino currently offers approximately 133,000 square feet of gaming area in a 325,000 square foot casino. The purpose of the project is to provide more convenient parking for current patrons. It is not expected to increase traffic to or from the casino. Current gaming offerings include 2,500 slot machines, 85 gaming tables, and five restaurants. No new gaming space will result from construction and operation of the proposed garage.

   No new infrastructure will be required or proposed for the parking garage.

7. Surrounding land uses and setting (Briefly describe the project's surroundings):

   The project area is located north of Willows Road and south of Viejas Creek. It is extensively developed with commercial uses. The Viejas Outlet Center is located south of Willows Road. Interstate 8 (I-8) lies to the south of the Outlet Center, with residential areas of the community of Alpine south of I-8. Residential areas

also are found along Willows Road both to the east and west of the Viejas Indian Reservation.

Viejas Creek is a restored perennial stream that provides native riparian habitat. North of Viejas Creek is the Tribal residential area and land used for cattle grazing. Coast live oak trees are common throughout this area. North, east, and west of the Reservation is the Cleveland National Forest. There are residential in-holdings between the Reservation and the Forest.

I-8 and Willows Road (with two interchanges to I-8) provide access to the site.

8. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

There are no other public agencies with approval authority over the project.

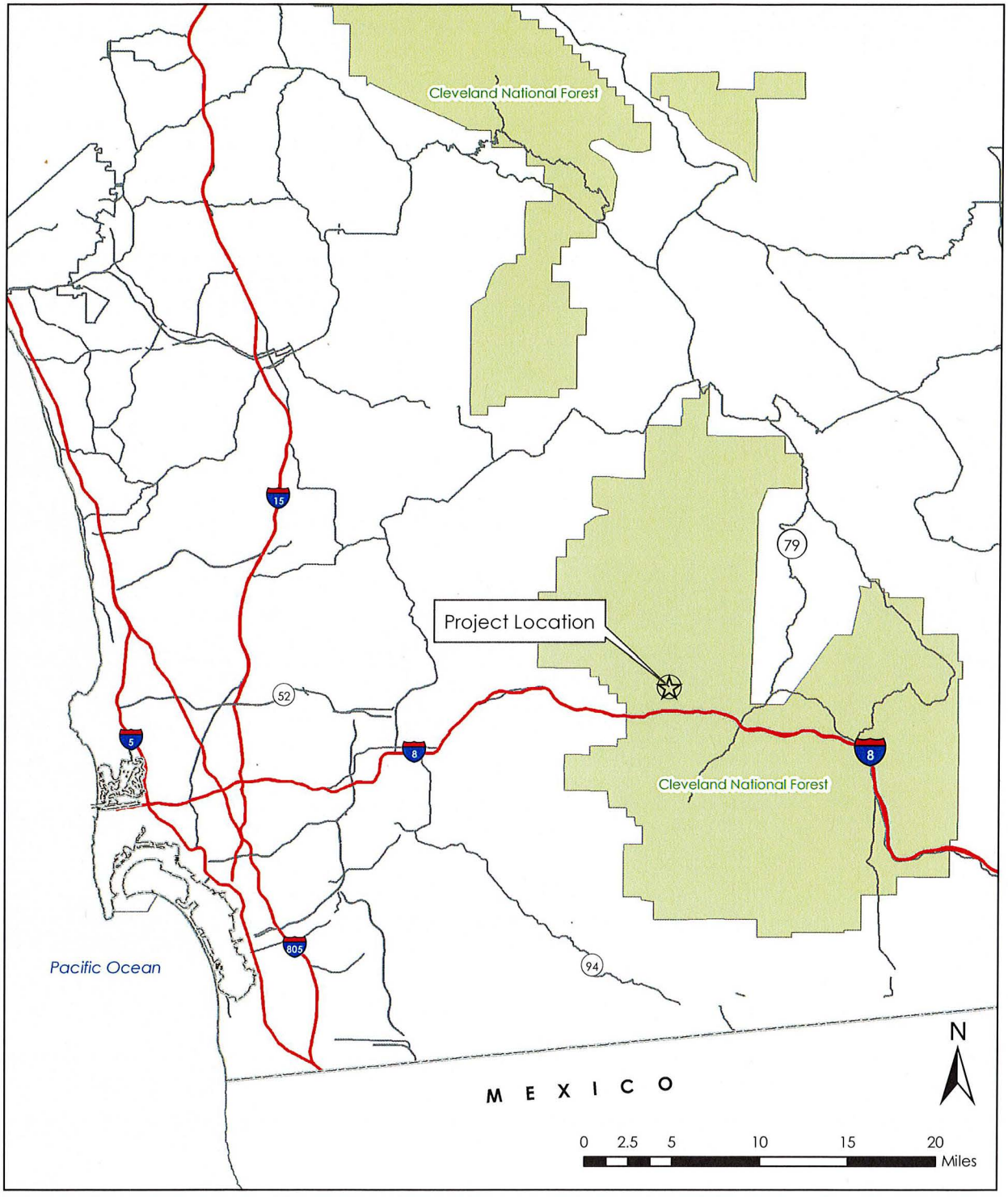
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist and on the following discussion pages.

■ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology & Soils
☐ Hazards & Haz. Materials	☐ Hydrology & Water Quality	☐ Land Use & Planning
☐ Mineral Resources	☐ Noise	☐ Population & Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities & Service Systems	☐ Cumulative Impacts	

DETERMINATION: (To be completed by the Lead Agency)
On the basis of this initial evaluation:

■ In order to fulfill the Tribe's Class III Gaming Compact with the State of California, a TRIBAL ENVIRONMENTAL IMPACT REPORT is required.

Erich Hans (Mar 25, 2022 12:45 PDT)	Mar 25, 2022
Signature	Date
Erich Hans	CFO
Printed Name	Title



SOURCE: SanGIS, 2012.

Regional Vicinity Map
Viejas Casino East Garage
Figure 1



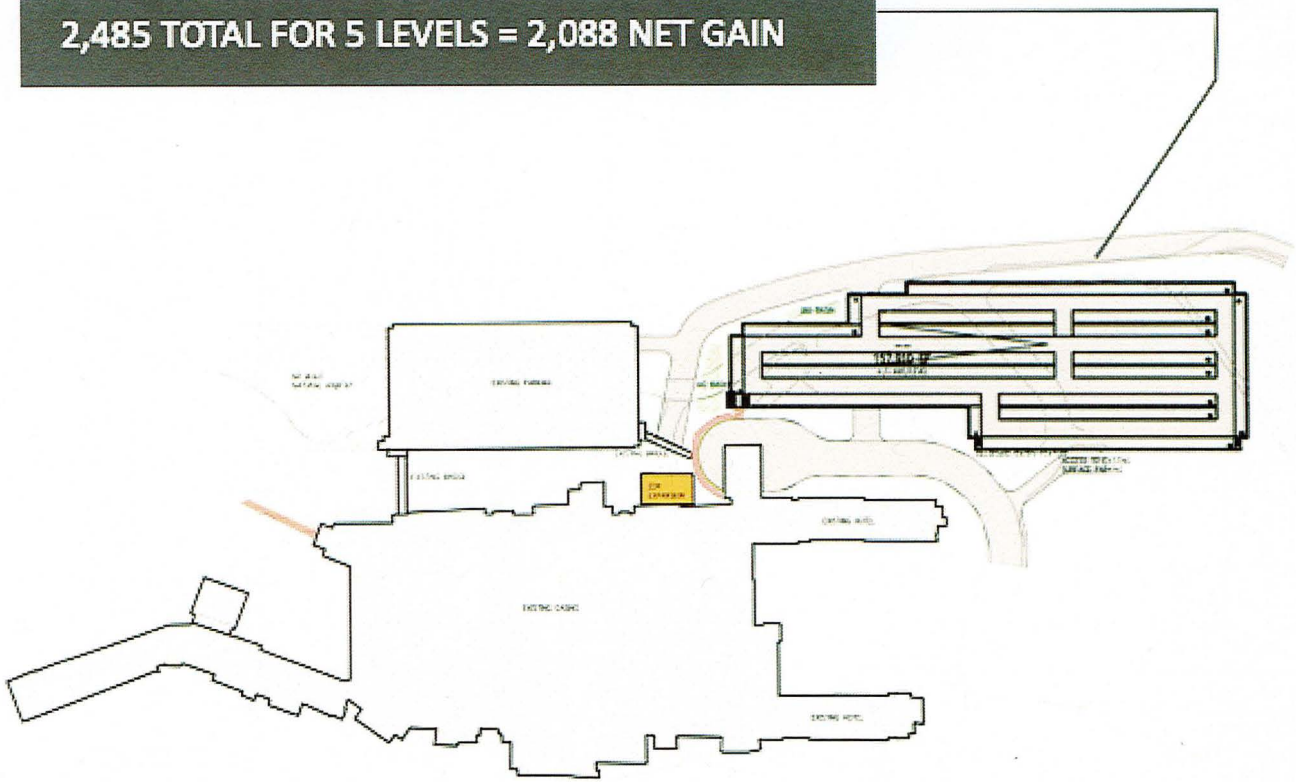
SOURCE: BRG Consulting, 2022.

BRG CONSULTING INC

Location Map with Topography
Viejas Casino East Garage
Figure 2

EAST GARAGE CONCEPT

2,485 TOTAL FOR 5 LEVELS = 2,088 NET GAIN



gafcon DEVELOPMENT

EAST GARAGE CONCEPT

3

SOURCE: BRG Consulting, 2022.

Viejas Casino East Garage Concept
Viejas Casino East Garage
Figure 3

INSTRUCTIONS ON 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.

4. "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.

5. 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

I. AESTHETICS -- Would the project:

a) Have a substantial adverse effect on a scenic vista?

- ■ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Potentially Significant Impact: Scenic vistas are singular vantage points that offer unobstructed views of valued viewsheds, including areas designated as official scenic vistas along major highways or County designated visual resources. The proposed project will be five stories in height, and may be visible from Interstate-8 or a scenic vista. Therefore, it is possible that the proposed project could result in a substantial adverse effect on a designated scenic vista. Whether there are any such vistas off-Reservation in the vicinity of the project will be addressed during TEIR preparation.

b) Substantially damage off-Reservation scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: State scenic highways refer to those highways that are officially designated. A scenic highway is officially designated as a State scenic highway when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation for scenic highway approval, and receives notification from Caltrans that the highway has been designated as an official Scenic Highway. There are no State Scenic Highways with views to the project area. Although nearby I-8 is eligible for scenic designation, the applicable local jurisdiction, the County of San Diego, has not adopted a scenic corridor protection program for it, and has not applied to Caltrans for designation. Therefore, the proposed project would not have any substantial adverse effect on a scenic resource within a State Scenic highway.

c) Create a new source of substantial light or glare, which would adversely affect day or nighttime views of historic buildings or views in the area?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ■ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Less than Significant Impact: The garage project does not propose any new use of outdoor lighting or building materials with highly reflective properties such as highly reflective glass or high-gloss surface colors. Therefore, it is not anticipated that the project would create new sources of light pollution that could contribute to skyglow, light trespass or glare that would adversely affect day or nighttime views in area.

The project would not contribute to significant cumulative impacts on nighttime views because the proposed project will conform to the San Diego County Light Pollution Code. The project site is over 15 miles from the observatories at Palomar Mountain and Mount Laguna.

In addition, the project's outdoor lighting is controlled by the Tribal Government, which limits outdoor lighting through strict controls. Therefore, conformance with the Code, in combination with the outdoor lighting controls listed above ensures that the project will not create a significant new source of substantial light or glare.

There are no designated historic buildings in proximity to the proposed garage site.

II. AGRICULTURE RESOURCES -- Would the project:

a) Involve changes in the existing environment, which, due to their location or nature, could result in conversion of off-Reservation farmland to non-agricultural use?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: The project site is located north of, and adjacent to, the existing Viejas Casino on paved parking lots and landscaped areas. The proposed expansion would not trigger any additional development that may result in conversion of farmland, to non-agricultural use.

III. AIR QUALITY -- Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ■ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Less than Significant Impact: Operation of the project will not result in emissions of noticeable quantities of criteria pollutants listed in the California Ambient Air Quality Standards or toxic air contaminants as identified by the California Air Resources Board. The garage is not a trip-attractor but is ancillary to the Casino and outlet center. The vehicles to be parked at the proposed parking garage would belong to persons who had already driven their vehicles to the Casino or Outlet Center. It is anticipated that there would be no new trips to the parking garage. Therefore, the project operation would not conflict with or obstruct implementation of the RAQS nor the SIP on a project or cumulative level. Minor construction-related air emissions would occur.

b) Violate any air quality standard or contribute to an existing or projected air quality violation?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
■ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Air quality impacts from the proposed parking garage would be the result of short-term construction activities associated with such projects. The project proposes a new approximately 2,450-space parking garage adjacent to the existing Casino. The site is already graded and paved. It is expected that emissions from the construction phase would be minimal and localized, resulting in pollutant emissions below the screening-level criteria established by SDAPCD Rule 20.2 and by the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook section 6.2 and 6.3. However, anticipated construction emissions will be addressed in the TEIR. There would be no new vehicle trips generated during garage operation. The garage is not a trip-attractor and would serve only to provide an alternative to surface parking for the existing Casino patrons.

c) 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 (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
■ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: San Diego County is presently in non-attainment for the 1-hour concentrations under the California Ambient Air Quality Standard (CAAQS) for

Ozone (O_3). San Diego County is also presently in non-attainment for the annual geometric mean and for the 24-hour concentrations of Particulate Matter less than or equal to 10 microns (PM_{10}) under the CAAQS. O_3 is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_x) react in the presence of sunlight. VOC sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil); solvents; petroleum processing and storage; and pesticides. Sources of PM_{10} in both urban and rural areas include: motor vehicles, wood burning stoves and fireplaces, dust from construction, landfills, agriculture, wildfires, brush/waste burning, and industrial sources of windblown dust from open lands.

Together, existing traffic including the Casino, Hotel, Outlet Center, West Parking Structure and other cumulative projects are calculated to amount to approximately 12,310 weekday ADT and 17,410 Saturday ADT in the vicinity of the project (LLG Traffic Analysis, December 2016). It is not likely that construction of the proposed garage would 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors). However, potential air quality impacts will be addressed in a technical study as part of the TEIR.

d) Expose off-Reservation sensitive receptors to substantial pollutant concentrations?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: Air quality regulators typically define sensitive receptors as schools (Preschool-12th Grade), hospitals, resident care facilities, or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Sensitive receptors have not been identified within a quarter-mile (the radius determined by the SCAQMD in which the dilution of pollutants is typically significant) of the proposed project. Furthermore, no point-source emissions of air pollutants (other than vehicle emissions) are associated with the project. As such, the project will not expose sensitive populations to excessive levels of air pollutants.

e) Create objectionable odors affecting a substantial number of people off-Reservation?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: No potential sources of objectionable odors have been identified in association with the proposed parking garage project. As such, no impact from odors is anticipated.

IV. BIOLOGICAL RESOURCES -- Would the project:

a) Have a substantial adverse impact, either directly or through habitat modifications, on any species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
■ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: The project site is graded, and paved or landscaped. Therefore, no species identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service would be expected to occur on-site. Assessment of off-reservation potential indirect noise impacts would be done outside the Reservation boundaries, or approximately 2,000 feet west of the proposed garage location. No significant garage construction noise impact to those biological resources is anticipated as a result of noise diminution with increasing distance, but the issue will be addressed in the noise technical report, and in the TEIR. No operational noise impacts to biological resources off the Reservation are expected from the garage due to low noise generation associated with cars driving and parking at low speeds.

b) Have a substantial adverse effect on any off-Reservation riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The proposed project site is limited to Reservation property and is not adjacent to any off-Reservation riparian habitats or other sensitive natural communities as defined by the County of San Diego Multiple Species Conservation Program, County

of San Diego Resource Protection Ordinance, Natural Community Conservation Plan, Fish and Game Code, Endangered Species Act, Clean Water Act, or any other local or regional plans, policies or regulations. The project site is graded, and paved or landscaped, and most of it is currently used for surface parking. See the response to Item IV.a related to potential indirect noise impacts.

c) Have a substantial adverse effect on federally protected off-Reservation wetlands as defined by Section 404 of the Clean Water Act?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The proposed project site is limited to Reservation property and is not near any off-Reservation wetlands as defined by Section 404 of the Clean Water Act. There will be no hydrologic interruption, diversion, or obstruction of Viejas Creek proposed. Viejas Creek is separated from the proposed garage site by a four-foot high earthen berm. Therefore, no impacts will occur to off-Reservation wetlands defined by Section 404 of the Clean Water Act over which the Army Corps of Engineers maintains jurisdiction.

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?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The site has been completely disturbed and contains no native vegetation or habitats. Therefore, impedance of the movement of any native resident or migratory fish or wildlife species, or established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites would not be expected as a result of the proposed project. Also see the response to Item IV.a.

e) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

☐ Potentially Significant Impact
☐ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

■ No Impact

Discussion/Explanation:

No Impact: The Tribe is not a party to any adopted Habitat Conservation Plan or Natural Communities Conservation Plan, nor is the Tribe subject to other approved local, regional or state habitat conservation plan or any other local policies or ordinances that protect biological resources. Lands that fall under such plans occur off-Reservation and would not be affected by the proposed project.

V. CULTURAL RESOURCES -- Would the project:

a) Cause a substantial adverse change in the significance of an off-Reservation historical or archaeological resource?

☐ Potentially Significant Impact

☐ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

■ No Impact

Discussion/Explanation:

No Impact: The project will not impact any off-Reservation historical or archaeological resources, because there would be no ground or structure disturbance off-Reservation.

b) Directly or indirectly destroy a unique off-Reservation paleontological resource or site or unique off-Reservation geologic feature?

☐ Potentially Significant Impact

☐ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

■ No Impact

Discussion/Explanation:

No Impact: The project will not destroy either a unique off-Reservation paleontological resource or site or unique off-Reservation geologic feature, because there will be no ground disturbance off-Reservation.

c) Disturb any off-Reservation human remains, including those interred outside of formal cemeteries?

☐ Potentially Significant Impact

☐ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

■ No Impact

Discussion/Explanation:

No Impact: The project will not disturb any off-Reservation human remains, including those interred outside of formal cemeteries, because there will be no ground disturbance off-Reservation.

VI. GEOLOGY AND SOILS -- Would the project:

a) Expose off-Reservation people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. 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.

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The project is not located in a fault rupture hazard zone identified by the Alquist-Priolo Earthquake Fault Zoning Act, Special Publication 42, Revised 1997, Fault-Rupture Hazards Zones in California. Therefore, off-Reservation people or structures could not be exposed to any project-related effects from rupture of a known earthquake fault.

ii. Strong seismic ground shaking?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: Viejas has adopted the Uniform Building Code (UBC) for Casino-related development in accordance with provisions of the 2016 Compact. The UBC classifies all San Diego County with the highest seismic zone criteria, Zone 4. However, the project is not located within 5 kilometers of the centerline of a known active-fault zone as defined within the Uniform Building Code's Maps of Known Active Fault Near-Source Zones in California. The project site is 17 miles southeast of the Elsinore Fault, the nearest known active fault. The project will conform to the Seismic Requirements of the UBC. Therefore, there would be no impact at the project site from the exposure of

people or structures to potential adverse effects from strong seismic ground shaking as a result of this project, and no potential off-Reservation impacts.

iii. Seismic-related ground failure, including liquefaction?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: A geotechnical report for the prior Casino expansion project concluded that the potential for seismic-related ground failure, including liquefaction, is low. There would be no seismic-related impacts off-Reservation.

iv. Landslides?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: The site is not located within a landslide susceptibility zone and thus there would be no off-Reservation landslide impact.

b) Result in substantial off-Reservation soil erosion or the loss of topsoil?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: The project would not create a substantial increase in impermeable surfaces. There would be no impact because the project does not involve any off-Reservation ground disturbance, or any changes to off-Reservation drainage patterns or velocities.

VII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:

a) Create a significant hazard to the off-Reservation public or the off-Reservation environment through the routine transport, use, or disposal of hazardous materials?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ■ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project proposes a new parking garage adjacent to the existing Casino. Building construction and on-going activities needed to run and maintain the garage involve the routine transport, use, and disposal of hazardous materials. These materials are typical of material used safely on a daily basis throughout the County and State of California in households and commercial uses. The project will not result in a significant hazard to the off-Reservation public or off-Reservation environment because all transport, use, and disposal of such hazardous substances will be in full compliance with the requirements of the 2016 State-Tribal Compact and with the State of California and federal regulations.

b) Create a significant hazard to the off-Reservation public or the off-Reservation environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ■ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: See VII.a, above. Materials transported, used and disposed of associated with the proposed project would be in such small quantities that any upset condition, such as a traffic accident involving a vehicle transporting such materials, would result in a minor spill requiring reporting and clean up in accordance with all applicable regulations. Such events happen routinely throughout San Diego County and the State of California, with no significant effect. Impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed off-Reservation school?

- ☐ Potentially Significant Impact
- ☐ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

■ No Impact

Discussion/Explanation:

No Impact: The project is not located within one-quarter mile of any existing or proposed school. Therefore, the project would not have any effect on an existing or proposed school.

d) Expose off-Reservation people or structures to a significant risk of loss, injury or death involving wildland fires?

☐ Potentially Significant Impact

☐ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

■ No Impact

Discussion/Explanation:

No Impact: The proposed project is completely surrounded by developed areas, including the Casino, paved parking lots, irrigated landscape, riparian growth in Viejas Creek, and streets. The Viejas Fire Department oversees wildland fire risk for the Casino and within the Reservation. There would be no off-Reservation impact.

VIII. WATER RESOURCES -- Would the project:

a) Violate any water quality standards or waste discharge requirements?

☐ Potentially Significant Impact

■ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project proposes a new parking garage adjacent to the existing Casino. The existing casino, proposed hotel, other commercial uses, residential and other uses on the Reservation rely on wastewater treatment at the Viejas water reclamation plant. This facility is permitted and monitored by the US Environmental Protection Agency for compliance with applicable sections of the Clean Water Act. The garage would not increase wastewater treatment demands at the existing water reclamation plant.

The project will implement site design measures and/or source control BMP's and/or treatment control BMP's to reduce potential construction pollutants to the maximum extent practicable from entering storm water runoff that could leave the Reservation. The project site is already developed, paved or landscaped; therefore, no additional runoff or changes in the character of the existing runoff is anticipated. In addition, the project site

is separated from the nearby Viejas Creek riparian area by a four-foot high earthen berm.

The project's BMPs and existing earthen berm will ensure that the project will not contribute to a cumulatively considerable impact to water quality from waste discharges.

b) Substantially deplete off-Reservation groundwater supplies or interfere substantially with groundwater recharge such that there should be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The parking garage would not increase water demand on the Reservation; therefore, the garage would not deplete off-Reservation ground water supplies. The existing site for the proposed parking garage is mostly paved, so that there would be no change in ground water recharge at the site.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation off-site.

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The project does not involve construction of new or expanded development that could alter the drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site. The project site is completely graded, and or landscaped, and the proposed parking garage would not alter the existing topography or drainage courses on-site or off-Reservation.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding off-site?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The project does not involve construction of new or expanded development that could alter the drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. The project site is completely graded, paved or landscaped, and the proposed project would not alter the existing topography or drainage courses on-site or off-Reservation.

e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff off-Reservation?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
■ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project will not introduce any substantial, new impervious surfaces since the project site is currently graded, paved, or landscaped. Construction BMPs will limit runoff of any construction-related stormwater pollution.

f) Place within a 100-year flood hazard area structures, which would impede or redirect off-Reservation flood flows?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: No 100-year flood hazard areas were identified or are expected to occur on the project site. The 100-year flood hazard area is totally contained within Viejas Creek, which is outside of the proposed project's footprint; therefore, no impact will occur.

g) Expose off-Reservation people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The project does not include any dam or levee or source of potential floodwaters. Therefore, the project will not expose people to a significant risk of loss, injury or death involving flooding.

IX. LAND USE AND PLANNING -- Would the project:

a) Conflict with any off-Reservation land use plan, policy, or regulation of an agency adopted for the purpose of avoiding or mitigating an environmental effect?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: As demonstrated elsewhere in the Initial Study Checklist, the project would not result in any significant off-Reservation land-use related effect.

b) Conflict with any habitat conservation plan, or natural communities conservation plan covering off-Reservation lands?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The Tribe is not a party to any habitat conservation plan, or natural communities conservation plan covering off-Reservation lands. Lands that fall under such plans occur off-Reservation and would not be affected by the proposed project. There would be no impact.

X. MINERAL RESOURCES -- Would the project:

a) Result in the loss of availability of a known off-Reservation mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The project would not affect any off-Reservation land. There would be no impact to mineral resources off the Reservation.

b) Result in the loss of availability of an off-Reservation locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The project would not affect any off-Reservation land. Thus, there would be no impact.

XI. NOISE -- Would the project result in:

a) Exposure of off-Reservation persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
■ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project site is far enough away from existing off-Reservation uses that noise levels associated with construction or operation of the new parking garage would not expose people to potentially significant noise levels that exceed the allowable limits of the County of San Diego General Plan, County of San Diego Noise Ordinance, and other applicable standards for the following reasons:

General Plan – Noise Element
The County of San Diego General Plan, Noise Element, Policy 4b addresses noise sensitive areas and requires an acoustical study to be prepared for any use that may expose noise sensitive areas to noise in excess of a Community Noise Equivalent Level

(CNEL) of 60 decibels (dBA). Noise sensitive areas include residences, hospitals, schools, libraries or similar facilities where quiet is an important attribute. Residences are the only noise sensitive uses near the project area. Project implementation is not expected to expose existing or planned noise sensitive areas to project-related noise in excess of the CNEL 60 dB(A) because of the distance of the project site and existing parking lots to such off-reservation uses. Therefore, it is expected that the project will not expose people to potentially significant noise levels that exceed the allowable limits of the County of San Diego General Plan, Noise Element. However, a noise study will be conducted as part of the TEIR in order to confirm that expectation.

Noise Ordinance – Section 36-404
Non-transportation noise generated by the project is not expected to exceed the standards of the County of San Diego Noise Ordinance (Section 36-404) off the Reservation. The adjacent properties are zoned for low density residential, and have one-hour average sound limit of 45 to 50 dBA. The project's operational noise levels are not anticipated to impact adjoining properties or exceed County Noise Standards because the project does not involve any noise producing equipment that would exceed applicable noise levels at the adjoining property line, and construction activities would be conducted in accordance with the County of San Diego's noise ordinance provisions. However, a noise study will be conducted as part of the TEIR in order to confirm that expectation.

Noise Ordinance – Section 36-410
The project will not generate construction noise that may exceed the standards of the County of San Diego Noise Ordinance (Section 36-410). Construction operations will occur only during permitted hours of operation pursuant to Section 36-410. Also, it is not anticipated that the project will operate construction equipment in excess of 75 dB for more than an 8 hours during a 24-hour period.

Cumulative noise effects would be less than significant because the project will be in compliance with General Plan Noise Element and Noise Ordinance as described above, and because of the distance, topography, and vegetation between the project site and off-Reservation residential uses. With regard to potential future traffic noise, the garage itself would generate no additional traffic beyond the traffic demand for the Casino, Outlet Center and Hotel discussed in the March 2016 TEIR for Viejas Casino and Resort Phase 3 Project. Therefore, there would be no additional noise impacts associated with vehicles parking in the garage.

b) Exposure of off-Reservation persons to excessive groundborne vibration or groundborne noise levels?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
■ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: The project does not propose any major, new or expanded infrastructure such as mass transit, highways or major roadways or intensive extractive industry that could generate excessive groundborne vibration or groundborne noise levels in the surrounding area. Construction of the proposed parking structure could result in temporary off-site vibration, but the 1,000-foot distance to the nearest off-Reservation residence makes it unlikely that significant vibration would occur there. Whether that vibration level would be considered significant at the nearest existing off-Reservation homes will be reviewed as part of the TEIR noise study.

c) A substantial permanent increase in ambient noise levels in the off-Reservation vicinity of the project?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
■ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Studies completed by the Organization of Industry Standards (ISO 362; ISO 1996 1-3; ISO 3095; and ISO 3740-3747) state an increase of 10 dB is perceived as twice as loud and is perceived as a significant increase in the ambient noise level. Typically, a 3 dB increase in ambient sound levels would be perceptible, and has been used as a significance criterion for noise impacts.

It is possible that noise during construction of the parking garage could result in temporary off-Reservation impacts at nearby off-Reservation homes, but project compliance with County construction noise regulations and procedures make it unlikely that such temporary impacts would be found significant. It is also considered unlikely that garage operations after completion of construction would result in significant noise impacts, but these issues will be addressed in the TEIR noise study.

d) A substantial temporary or periodic increase in ambient noise levels in the off-Reservation vicinity of the project?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
■ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: The project does not involve any uses that may create substantial temporary or periodic increases in ambient noise levels in the project vicinity including but not limited to extractive industry; outdoor commercial or industrial uses

that involve crushing, cutting, drilling, grinding, or blasting of raw materials; truck depots, transfer stations or delivery areas; or outdoor sound systems. There would be no additional traffic at the Casino or Outlet Center as a result of parking garage completion.

Also, general construction noise is not expected to exceed the construction noise limits of the County of San Diego Noise Ordinance (Section 36-410), which are derived from State regulations to address human health and quality of life concerns. Construction operations will occur only during permitted hours of operation pursuant to Section 36-410. Also, it is not anticipated that the project will operate construction equipment in excess of 75 dB for more than 8 hours during a 24-hour period. Therefore, the project would not result in a substantial temporary or periodic increase in existing ambient noise levels in the project vicinity. However, potential levels of construction noise at the nearest homes outside the Reservation will be analyzed in the noise technical report and discussed in the TEIR.

XII. POPULATION AND HOUSING -- Would the project:

a) Induce substantial off-Reservation population growth?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: The proposed project would not induce substantial population growth in the area because the project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth including, but limited to the following: new or extended infrastructure or public facilities; new commercial or industrial facilities; large-scale residential development; accelerated conversion of homes to commercial or multi-family use; or regulatory changes including General Plan amendments, specific plan amendments, zone reclassifications, sewer or water annexations; or LAFCO annexation actions. The project merely proposes to provide vehicle parking for patrons in a structure, instead of in existing at-grade parking lots.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere off-Reservation?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: The proposed project would not displace any existing housing since the site is currently paved and is used for vehicle parking.

XIII. PUBLIC SERVICES -- Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered off-Reservation governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance service ratios, response times or other performance objectives for any of the public services:

Fire protection?
Police protection?
Schools?
Parks?
Other public facilities?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
■ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The proposed parking garage project represents an incremental expansion of an existing Casino complex. Schools, parks and other public facilities are not required to support this expansion. Fire protection is provided by Viejas Tribal Government and through the Tribe's cooperative agreements with neighboring Fire Districts. Police protection is provided by the Viejas Security Department and by contract with the San Diego County Sheriff. It is not anticipated that this new garage would substantially change the level of service currently provided by the Sheriff.

XIV. RECREATION -- Would the project:

a) Increase the use of existing off-Reservation neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The project does not propose any residential use, included but not limited to a residential subdivision, mobile home park, or construction for a single-family residence that may increase the use of existing neighborhood and regional parks or other recreational facilities in the vicinity.

XV. TRANSPORTATION/TRAFFIC -- Would the project:

a) Cause an increase in off-Reservation traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: As discussed under other topics, the proposed parking garage is not a trip generator or trip attractor. It only serves to provide more convenient vehicle parking for patrons visiting the Casino, who otherwise would park on existing surface parking lots. Therefore, there would be no additional traffic following completion of the garage, and no traffic impact.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated off-Reservation roads or highways?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: Willows Road and I-8 in the vicinity of the Reservation are not congestion management roads. There would be no new traffic, and no traffic impact is anticipated.

c) Substantially increase hazards due to an off-Reservation design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated
☐ Less than Significant Impact
■ No Impact

Discussion/Explanation:

No Impact: The proposed parking garage would not generate any additional traffic using off-Reservation roads. See Response XV.a. Therefore, there would be no increase in roadway hazards.

d) Result in inadequate emergency access for off-Reservation responders?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: See response XV.a. There would be no additional traffic as a result of the parking garage. Therefore, the proposed project would not result in inadequate emergency access. The project is not served by a dead-end road; therefore, the project has adequate emergency access for off-Reservation responders.

XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:

a) Exceed off-Reservation wastewater treatment requirements of the applicable Regional Water Quality Control Board?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: No wastewater would be generated or discharged at the parking garage. See Response VIII.a.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant off-Reservation environmental effects?

- ☐ Potentially Significant Impact
- ☐ Potentially Significant Unless Mitigation Incorporated
- ☐ Less than Significant Impact
- ■ No Impact

Discussion/Explanation:

No Impact: As described above in Item VIII.a, no wastewater would be generated at the parking garage. No potable water supplies would be needed. Therefore, there would be no project-related construction of water treatment facilities required.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant off-Reservation environmental effects?

☐ Potentially Significant Impact	☐ Less than Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated	■ No Impact

Discussion/Explanation:

No Impact: The project does not include new or expanded storm water drainage facilities. The project does not involve any landform modification or require any source treatment or structural Best Management Practices for storm water during operations. (Applicable construction BMPs in conformance with the Clean Water Act will be identified prior to construction, and subsequently employed during project construction.) Therefore, the project would not require any construction of new or expanded facilities that could cause significant environmental effects.

d) Result in a determination by an off-Reservation wastewater treatment provider (if applicable), which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

☐ Potentially Significant Impact	☐ Less than Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated	■ No Impact

Discussion/Explanation:

No Impact: No wastewater service to the parking garage would be required from the on-Reservation Viejas Water Reclamation Plant, or from any off-Reservation wastewater treatment provider. Therefore, there would be no project-related effect on any off-Reservation wastewater treatment provider.

XVII. CUMULATIVE EFFECTS:

a) Would the project have impacts that are individually limited, but cumulatively considerable off-Reservation? "Cumulatively considerable" means that the

incremental effects of a project are considerable when viewed in connection with the effects of past, current, or probable future projects.

☐ Potentially Significant Impact	■ Less than Significant Impact
☐ Potentially Significant Unless Mitigation Incorporated	☐ No Impact

Discussion/Explanation:

Less than Significant Impact: All impacts associated with the proposed East Parking Garage except potentially Aesthetics are expected to be below a level of significance. Nevertheless, traffic, air quality, and noise technical reports will be prepared and off-Reservation direct, indirect, and cumulative impacts to those resources will be addressed in the TEIR.

NATIVE AMERICAN HERITAGE COMMISSION

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April 14, 2022

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Governor's Office of Planning & Research

Apr 15 2022

STATE CLEARINGHOUSE

Re: 2022030743, Viejas Casino East Garage Project, San Diego County

Dear Mr. Hans:

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.

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

County of San Diego

PLANNING & DEVELOPMENT SERVICES
5510 OVERLAND AVENUE, SUITE 310, SAN DIEGO, CA 92123
(858) 505-6445 General ▪ (858) 694-2705 Codes
(858) 565-5920 Building Services
www.SDCPDS.org

DAHVIA LYNCH
DIRECTOR

June 7, 2022

Erich Hans
Chief Financial Officer
Viejas Enterprises
5000 Willows Road
Alpine, CA 91903

Sent via email to: ehans@viejas-nsn.gov

REQUEST FOR COMMENTS ON THE VIEJAS CASINO EAST GARAGE PROJECT FOR THE VIEJAS BAND OF KUMEYAAY INDIANS

Dear Mr. Hans,

The County of San Diego (County) staff reviewed the Viejas Band of Kumeyaay Indians' (Viejas Band) Notice of Preparation (NOP) of an Off-Reservation Tribal Environmental Impact Report (TEIR) for the Viejas Casino East Garage (Project), dated March 25, 2022.

County staff appreciates the opportunity to participate in the review process for this NOP. This letter responds to the NOP's request for comments regarding Off-Reservation environmental issues and reasonable mitigation measures that the Viejas Band should explore in the TEIR. The letter also offers suggestions and assistance to the Viejas Band to help alleviate impacts related to future development.

DEPARTMENT OF PUBLIC WORKS

The Project site is adjacent to Viejas Creek, a tributary to the Sweetwater River. The Sweetwater River, after its confluence with Viejas Creek, flows southwest for 1.75 miles before entering the Loveland Reservoir. The Loveland Reservoir is considered an impaired waterbody due to the presence of pollutants at levels exceeding State water quality standards. Development activities, even those located within previously disturbed and paved areas, have the potential to increase pollutants and bacteria, further impairing surface water resources. For this reason, the County respectfully requests that Off-Reservation water quality and water quantity impacts be analyzed as part of the TEIR.

The County has a wide array of information on stormwater quantity and quality mitigation measures such as post-construction treatment control Best Management Practices (BMPs), Low Impact Development, Source Control BMPs, hydromodification management practices, and

construction BMPs. The County, in partnership with the cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the San Diego County Regional Airport Authority, and the San Diego Unified Port District, have also developed a Water Quality Improvement Plan (WQIP) for the watershed. The WQIP consists of a framework of strategies to address impairments in the watershed. The County would welcome the opportunity to provide this information to the Viejas Band in furtherance of our shared interest in protecting water quality and aquatic habitats.

The County appreciates the opportunity to comment on the Project TEIR NOP. We look forward to receiving future documents related to the Project and providing any additional assistance that you request. If you have any questions regarding these comments, please contact me at 619-613-5197 or Scott.Christman@sdcounty.ca.gov.

Sincerely,

Scott Christman
Group Program Manager, Long Range Planning Division
Planning & Development Services

cc: Ray Teran, Resource Management Director, Viejas Band of Kumeyaay Indians
Erich R. Lathers, Principal Planner, BRG Consulting, Inc.
Luis Pallera, CAO Staff Officer, LUEG
Crystal Benham, LUEG Program Manager, DPW

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Appendix B

Air Quality Study

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VIEJAS CASINO EAST GARAGE

AIR QUALITY STUDY

Prepared for:

BRG Consultants, Inc.
304 Ivy Street
San Diego, CA 92101

Prepared by:

BPG
BIRDSEYE
PLANNING GROUP

May 2022

BRG Consulting, Inc.
Environmental Planning and Impact Assessment
Land Use Planning and Permitting

304 Ivy Street
San Diego, CA 92101
619-298-7127 x 101
erich@brginc.net

Memo

To: File	**Date:** June 16, 2022
	Job No. 2203
Cc:	**By:** Erich Lathers

Subject: Viejas Casino East Garage

- **Description:**

I spoke with Messrs. John Boarman of Linscott, Law & Greenspan and Ryan Birdseye of Birdseye Planning Group regarding the change in design of the Viejas Casino East Garage from 5-level to 7-level while accommodating essentially the same number of parking spaces and within the same area of the Reservation. Both stated that such a change would not have any meaningful effect on the analysis or conclusions presented in their respective Technical Reports.

AIR QUALITY STUDY

VIEJAS CASINO EAST GARAGE

Prepared for

BRG Consulting, Inc.
304 Ivy Street
San Diego, California 92101

Prepared by:

Birdseye Planning Group, LLC
1354 York Drive
Vista, California 92084

May 2022

Viejas Casino East Garage
San Diego County, California

AIR QUALITY STUDY

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Appendix A CalEEMod Air Quality and Greenhouse Gas Emissions Model Results – Summer Construction and Operation Emissions

Viejas Casino East Garage
San Diego, California

AIR QUALITY STUDY

This report is an analysis of the potential air quality impacts associated with the proposed construction and operation of a new parking structure on the Viejas Reservation located in unincorporated San Diego County. The report has been prepared by Birdseye Planning Group under contract to BRG Consultants, Inc. to support preparation of the Tribal Environmental Impact Report (TEIR). The TEIR will be prepared consistent with Tribal Gaming Compact Section 11.1 (2016) which defines the scope of activities required to evaluate off-Reservation impacts associated with activities occurring on the reservation. This study analyzes the potential for temporary air quality impacts associated with construction activity and long-term air quality impacts associated with operation of the proposed project.

PROJECT DESCRIPTION

The proposed Project is the construction of a parking structure located just to the north-east of the existing Viejas Casino (Casino). The parking structure would be a 5-stories with approximately 2,485 parking spaces and a base footprint of approximately 158,000 square feet. Approximately 397 surface parking spaces would be lost to the structure, resulting in a net increase of 2,088 spaces. The Project site is approximately 4 acres in size.

The proposed 5-story parking structure would include an elevator tower, three stairwells, two automobile access roads, a pedestrian walkway connector, pavement areas, landscaping, and the necessary public utilities. The pedestrian walkway will connect the parking structure to the existing casino and hotel. The parking structure would be built on a currently developed and paved area. The area is currently used for surface parking.

The primary purpose of the parking structure is to support the casino and hotels by providing more convenient patron parking. In addition, the parking structure will be taking cars currently parking in remote lots and concentrating them in a parking structure; thus, reducing the amount of existing mobile source emissions. Also, by providing parking closer to the hotels and casino, the Project would eliminate use of the shuttles that currently provide transportation from the existing parking lots to the Viejas Casino and Hotel. Thus, the parking structure will result in environmental benefits such as reducing vehicle miles traveled, energy use, and greenhouse gas emissions because patrons would no longer need to search for parking in remote lots. The existing parking lots will remain for the use of employee or Viejas vehicle parking, guest overflow parking and private tribal events.

The casino currently offers approximately 133,000 square feet of gaming area in a 325,000 square foot facility. Current gaming offerings include 2,500 slot machines, approximately 85 gaming tables and five restaurants. No new gaming space will result from construction and operation of

the proposed parking structure. No new infrastructure will be required for the parking structure or is proposed. The project site is shown in Figure 1. The site plan is shown in Figure 2.

Construction of the proposed project is anticipated to begin in January 2023 and be completed by February 2024.

Dust Control Methods
The project would implement various construction dust control strategies as design features to be compliant with San Diego Air Pollution Control District Rule 55. Compliance with these dust control measures are as follows and would be identified on the approved grading plan:

- During clearing, grading, earth-moving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease;

- During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning, after work is completed for the day, and whenever winds exceed 15 mph during active operations. Watering of active disturbance areas, including active grading areas and unpaved roads, would occur approximately every 2 hours of active operations, approximately three times per work day (at a minimum);

- Speeds on unpaved roads shall be reduced to less than 15 miles per hour;

- All grading and excavation operations shall be halted when wind speeds exceed 25 miles per hour;

- Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday; and

- All trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be covered and/or a minimum 2 feet of freeboard shall be maintained.

REGULATORY SETTING

Air pollutants are regulated at the national, State, and air basin level; each agency has a different degree of control. The Environmental Protection Agency (EPA) regulates at the national level; the California Air Resources Control Board (CARB) regulates at the State level; and the San Diego Air Pollution Control District (SDAPCD) regulates air quality in San Diego County.

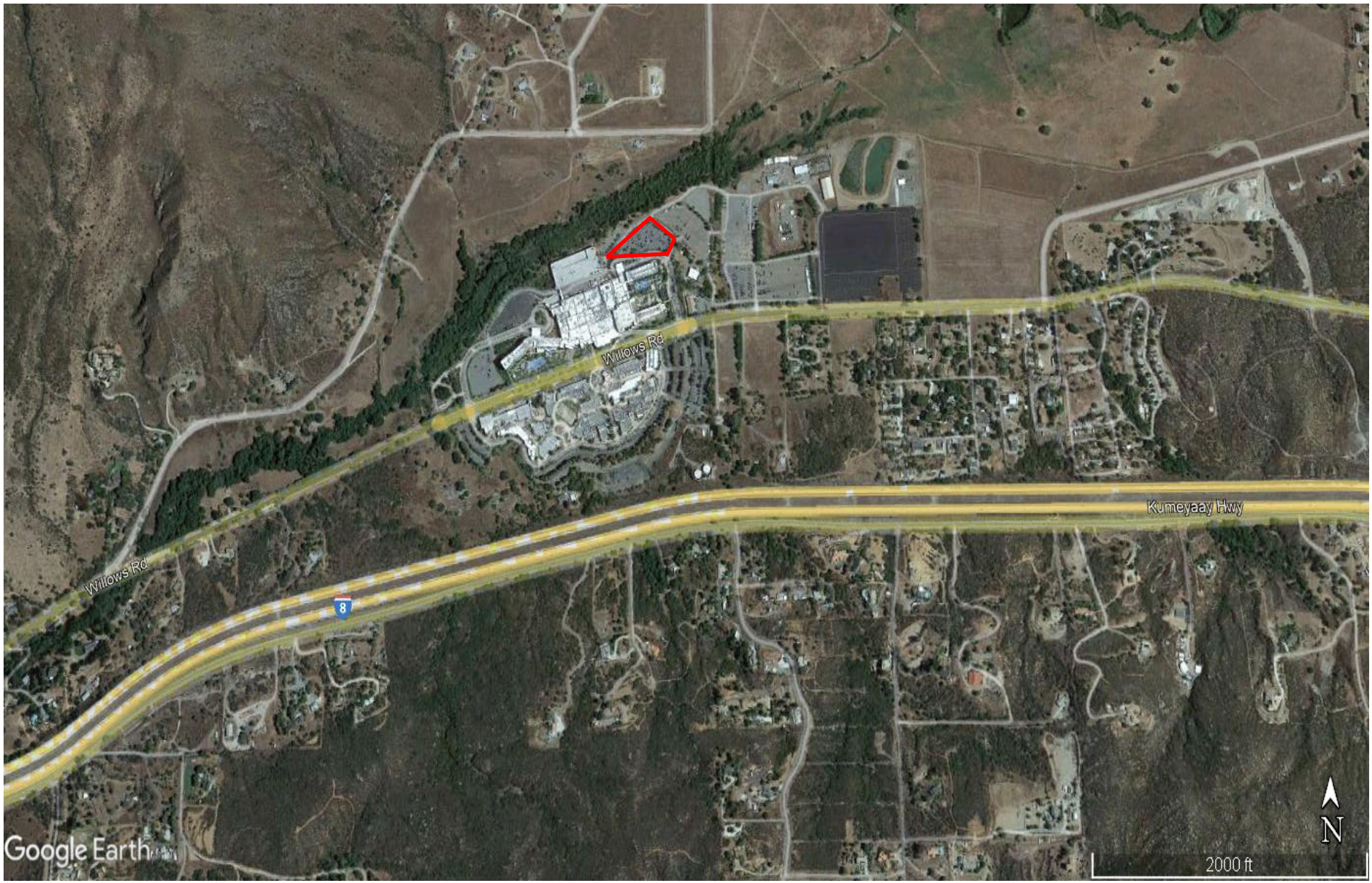


Figure 1 — Vicinity Map **- Project Site**

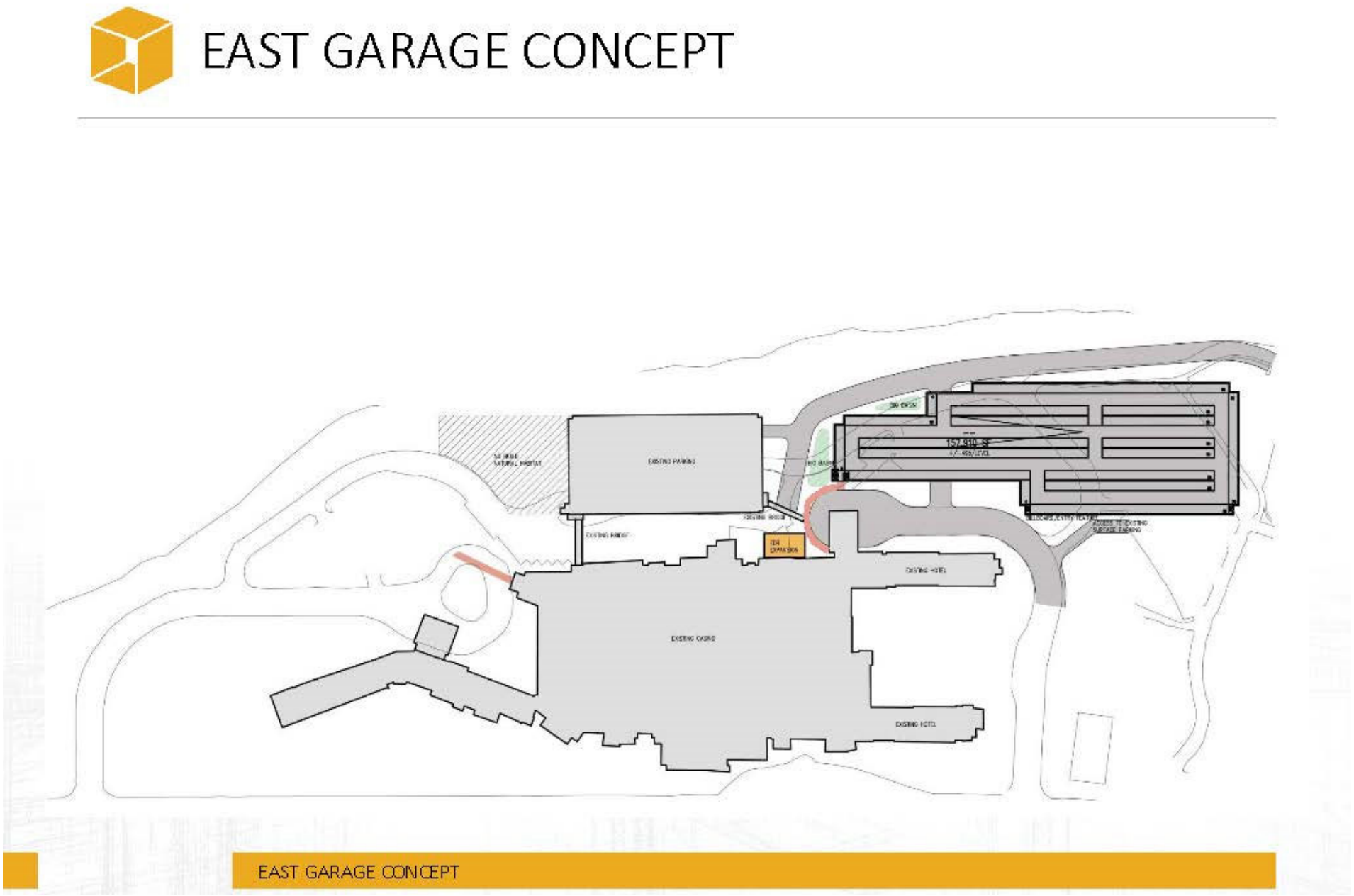


Figure 2 — Site Plan

The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (USEPA) is the federal agency designated to administer national air quality regulations, while the California Air Resources Board (CARB) is the state equivalent in the California Environmental Protection Agency. Local control over air quality management is provided by CARB through multi-county and county-level Air Pollution Control Districts (APCDs) (also referred to as Air Quality Management Districts). CARB establishes statewide air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. CARB has established 15 air basins statewide. The Viejas Reservation is located in the San Diego Air Basin (SDAB), which is under the jurisdiction of the SDAPCD.

California Air Resources Board

CARB, which became part of the California EPA (CalEPA) in 1991, is responsible for ensuring implementation of the California Clean Air Act (CCAA), meeting state requirements of the federal Clean Air Act and establishing California Ambient Air Quality Standards (CAAQSs). It is also responsible for setting emission standards for vehicles sold in California and for other emission sources such as consumer products and certain off-road equipment. CARB also established passenger vehicle fuel specifications and oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level. The CCAA is administered by CARB at the state level and by the Air Quality Management Districts at the regional level. Both state and federal standards are summarized in Table 1. The federal "primary" standards have been established to protect the public health. The federal "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

San Diego Air Pollution Control District

The SDAPCD was created to protect the public from the harmful effects of air pollution, achieve and maintain air quality standards, foster community involvement and develop and implement cost-effective programs that meet state and federal mandates while considering environmental and economic impacts.

Specifically, the SDAPCD is responsible for monitoring air quality and planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. Programs developed include air quality rules and regulations that regulate stationary source emissions, including area sources, point sources, and certain mobile source emissions. The SDAPCD is also responsible for establishing permitting requirements for stationary sources and ensuring that new, modified or relocated stationary sources do not create net emissions increases; and thus, are consistent with the region's air quality goals. The

Table 1
State and Federal Ambient Air Quality Standards

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS[1]		NATIONAL STANDARDS[2]		
		Concentration[3]	Method[4]	Primary[3, 5]	Secondary[3, 6]	Method[7]
Ozone[8] (O_3)	1 hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 hours	0.070 ppm (137µg/m³)		0.070 ppm (137 µg/m³)		
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m³)	--	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
Nitrogen Dioxide (NO_2)[10]	Annual Average	0.030 ppm (57 µg/m³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	--	
Sulfur Dioxide (SO_2)[11]	Annual Average	--	Ultraviolet Fluorescence	0.03 ppm (80 µg/m³)	--	Pararosaniline
	24 hours	0.04 ppm (105 µg/m³)		0.14 ppm (365 µg/m³)	--	
	3 hours	--		--	0.5 ppm (1300 µg/m³)	
	1 hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)	--	
Respirable Particulate Matter (PM_{10})[9]	24 hours	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	150 µg/m³	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		--	--	
Fine Particulate Matter ($PM_{2.5}$)[9]	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12 µg/m³	15 µg/m³	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m³	Same as Primary Standard	
Sulfates	24 hours	25 µg/m³	Ion Chromatography	--	--	--
Lead[12, 13] (Pb)	30-day Average	1.5 µg/m³	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m³		

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS[1]		NATIONAL STANDARDS[2]		
		Concentration[3]	Method[4]	Primary[3, 5]	Secondary[3, 6]	Method[7]
	3-month Rolling Average	--		0.15 μg/m^3	Same as Primary Standard	
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 μg/m^3)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride[12]	24 hours	0.010 ppm (26 μg/m^3)	Gas Chromatography	--	--	--

Notes:

ppm = parts per million
μg/m^3 = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
Source: California Air Resources Board 2017

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, 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 PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than one. For $PM_{2.5}$, 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 measurement method which can be shown to the satisfaction of the 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 U.S. 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 U.S. 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 $PM_{2.5}$ primary standard was lowered from 15 μg/ m^3 to 12.0 μg/ m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/ m^3, as was the annual secondary standard of 15 μg/ m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/ m^3 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 SO_2 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 SO_2 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.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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 $\mu g/ m^3$ 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.

SDAPCD provides significance thresholds in Regulation II, Rule 20.2, Table 20-2-1. "AQIA Trigger Levels." These trigger levels were established for stationary sources of air pollution and are commonly used for environmental evaluations. The SDAPCD enforces air quality rules and regulations through a variety of means, including inspections, educational or training programs, or fines, when necessary. The project site is within the SDAB; and thus, is subject to SDAPCD rules and regulations.

State Implementation Plan/Air Quality Management Plan/Regional Air Quality Strategy

The federal Clean Air Act Amendments (CAAA) mandate that states submit and implement a State Implementation Plan (SIP) for areas not meeting air quality standards. SIPs are comprehensive plans that describe how an area will attain national and state ambient air quality standards. SIPs are a compilation of new and previously submitted plans, programs (i.e., monitoring, modeling and permitting programs), district rules, state regulations and federal controls and include pollution control measures that demonstrate how the standards will be met through those measures.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards SIP revisions to the USEPA for approval and publication in the Federal Register. Thus, the Regional Air Quality Strategy (RAQS) and Air Quality Management Plan (AQMP) prepared by SDAPCD and referenced herein become part of the SIP as the material relates to efforts ongoing in San Diego to achieve the national and state ambient air quality standards. The most recent SIP element for San Diego County was submitted in December 2016. The document identifies control measures and associated emission reductions necessary to demonstrate attainment of the 2008 Federal 8-hour ozone standard by July 20, 2018.

The San Diego RAQS was developed pursuant to California Clean Air Act (CCAA) requirements. The RAQS was initially adopted in 1991 and was updated in 1995, 1998, 2001, 2004, 2009 and 2016. The RAQS can be found at the following:

https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/2016%20RAQS%20(1).pdf

The RAQS identifies feasible emission control measures to provide progress in San Diego County toward attaining the State ozone standard. The pollutants addressed in the RAQS are volatile organic compounds (VOC) and oxides of nitrogen (NOx), precursors to the photochemical formation of ozone (the primary component of smog). The RAQS was initially adopted by the San Diego County Air Pollution Control Board on June 30, 1992, and amended on March 2, 1993, in response to ARB comments. At present, no attainment plan for particulate matter less than 10 microns in diameter (PM_{10}) or particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) is required by the state regulations; however, SDAPCD has adopted measures to reduce particulate matter in San Diego County. These measures range from regulation against open burning to incentive programs that introduce cleaner technology. These measures can be found in a report titled "*Measures to Reduce Particulate Matter in San Diego County"* December 2005 and can be found at:

https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/PM-Measures.pdf

The RAQS relies on information from CARB and San Diego Association of Governments (SANDAG), including mobile and area source emissions, as well as information regarding projected growth in the County, to estimate future emissions and then determine strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends as well as land use plans developed by the cities and the County as part of the development of the individual General Plans. As such, projects that propose development consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the General Plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the General Plan and SANDAG's

growth projections, the project might conflict with the RAQS and SIP; and thus, have a potentially significant impact on air quality.

Under state law, the SDAPCD is required to prepare an AQMP for pollutants for which the SDAB is designated non-attainment. Each iteration of the SDAPCD's AQMP is an update of the previous plan and has a 20-year horizon. Currently the SDAPCD has implemented a 2012 8-hour National Ozone Implementation/Maintenance Plan, a 2007 8-hour Ozone Plan, and a 2004 Carbon Monoxide Plan. The SDAPCD adopted the 2008 8-hour Ozone Attainment Plan for San Diego County on December 16, 2016. CARB adopted the ozone plan as a revision to the California SIP on March 23, 2017. The ozone plan was submitted to the USEPA for review on April 12, 2017. Comments from the USEPA are pending. These plans are available for download on the ARB website located at the following URL: http://www.arb.ca.gov/planning/sip/planarea/sansip.htm.

SDAPCD Rules and Regulations

As stated above, SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD, and would apply to the project.

SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions. Prohibits discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997).

SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance. Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1976).

SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust. Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009b).

SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings. Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2015).

SDAPCD Regulation XII: Toxic Air Contaminates; Rule 1200: Toxic Air Contaminants – New Source Review. Requires new or modified stationary source units with the potential to emit TACs above rule threshold levels to either demonstrate that they will not increase the maximum incremental cancer risk above 1 in 1 million at every receptor location, or demonstrate that toxics best available control technology (T-BACT) will be employed if maximum incremental cancer risk is equal to or less than 10 in 1 million, or demonstrate compliance with SDAPCD's protocol for those sources with an increase in maximum incremental cancer risk at any receptor location of greater than 10 in 1 million but less than 100 in 1 million (SDAPCD 2017b).

SDAPCD Regulation XII: Toxic Air Contaminates; Rule 1210: Toxic Air Contaminant Public Health Risks – Public Notification and Risk Reduction. Requires each stationary source that is required to prepare a public risk assessment to provide written public notice of risks at or above the following levels: maximum incremental cancer risks equal to or greater than 10 in 1 million, or cancer burden equal to or greater than 1.0, or total acute noncancer health hazard index equal to or greater than 1.0, or total chronic non-cancer health hazard index equal to or greater than 1.0 (SDAPCD 2017c).

Environmental Setting

Regional Climate and Local Air Quality

The weather of San Diego County is profoundly influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average minimum temperature for January ranges from the mid-40s to the high-50s degrees Fahrenheit (4 to 15 degrees Celsius) across the county. July maximum temperatures average in the mid-80s to the high-90s degrees Fahrenheit (high-20s to the high-30s degrees Celsius). Most of the county's precipitation falls from November to April, with infrequent (approximately 10 percent) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches (254 millimeters); the amount increases with elevations as moist air is lifted over the mountains.

The interaction of ocean, land, and the Pacific High-Pressure Zone maintains clear skies for much of the year and drives the prevailing winds. Local terrain is often the dominant factor inland and winds in inland mountainous areas tend to blow upwards in the valleys during the day and down the hills and valleys at night.

In conjunction with the onshore/offshore wind patterns, there are two types of temperature inversions (reversals of the normal decrease of temperature with height), which occur within the region that affect atmospheric dispersive capability and that act to degrade local air quality. In the summer, an inversion at about 1,100 to 2,500 feet (335 to 765 meters) is formed over the entire coastal plain when the warm air mass over land is undercut by a shallow layer of cool marine air flowing onshore. The prevailing sunny days in this region further exacerbate the

smog problem by inducing additional adverse photochemical reactions. During the winter, a nightly shallow inversion layer (usually at about 800 feet or 243 meters) forms between the cooled air at the ground and the warmer air above, which can trap vehicular pollutants. The days of highest Carbon Monoxide (CO) concentrations occur during the winter months.
The predominant onshore/offshore wind pattern is sometimes interrupted by so-called Santa Ana conditions, when high pressure over the Nevada-Utah region overcomes the prevailing westerly wind direction. This draws strong, steady, hot, and dry winds from the east over the mountains and out to sea. Strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or breakdown of these conditions or if the Santa Ana is weak, prevailing northwesterly winds are reestablished which send polluted air from the Los Angeles basin ashore in the SDAB. "Smog transport from the South Coast Air Basin (the metropolitan areas of Los Angeles, Orange, San Bernardino, and Riverside counties) is a key factor on more than half the days San Diego exceeds clean air standards" (San Diego Air Pollution Control District, 2010).

Pollutants

The SDAPCD 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." San Diego County is listed as a federal non-attainment area for ozone (eight hour) and a state non-attainment area for ozone (one hour and eight-hour standards), PM_{10} and $PM_{2.5}$. As shown in Table 2, the SDAB is in attainment for the state and federal standards for nitrogen dioxide, carbon monoxide, sulfur dioxide and lead. Characteristics of ozone, carbon monoxide, nitrogen dioxide, and suspended particulates are described below.

Table 2
San Diego County Attainment Status

Criteria Pollutant	Federal Designation	State Designation
Ozone (one hour)	Attainment*	Non-Attainment
Ozone (eight hour)	Moderate Non-Attainment	Non-Attainment
Carbon Monoxide	Attainment	Attainment
PM_{10}	Unclassifiable**	Non-Attainment
$PM_{2.5}$	Attainment	Non-Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

Table 2
San Diego County Attainment Status

Criteria Pollutant	Federal Designation	State Designation

** The federal 1-hour standard of 12 ppm was in effect from 1979 through June 1, 2005. The revoked standard is referenced here because it was used for such a long period and because this benchmark is addressed in State Implementation Plans (SIPs).*

*** At the time of designation, if the available data does not support a designation of attainment or non-attainment, the area is designated as unclassifiable.*

Source: San Diego Air Pollution Control District. June 2016. http://www.sandiegocounty.gov/content/sdc/apcd/en/air-quality-planning/attainment-status.html

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG)[1]. Nitrogen oxides are formed during the combustion of fuels, while reactive organic compounds are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide. Carbon monoxide (CO) is a local pollutant that is found in high concentrations only near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile exhaust. Elevated CO concentrations; therefore, are usually only found near areas of high traffic volumes operating in congested conditions. Carbon monoxide health effects are related to blood hemoglobin. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light and causes a reddish-brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

[1] Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC).

Suspended Particulates. PM_{10} is particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM_{10} and $PM_{2.5}$ are by-products of fuel combustion and wind erosion of soil and unpaved roads and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern. Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum

refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for PM2.5 described above.

Toxic Air Contaminants/Diesel Particulate Matter. Hazardous air pollutants, also known as toxic air pollutants (TACs) or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Examples of toxic air pollutants include:

- benzene, which is found in gasoline;
- perchloroethylene, which is emitted from some dry-cleaning facilities; and
- methylene chloride, which is used as a solvent.

Transportation related emissions are focused on particulate matter constituents within diesel exhaust and TAC constituents that comprise a portion of total organic gas (TOG) emissions from both diesel and gasoline fueled vehicles. Diesel engine emissions are comprised of exhaust particulate matter and TOGs which are collectively defined as Diesel Particulate Matter (DPM). DPM and TOG emissions from both diesel and gasoline fueled vehicles is typically composed of carbon particles and carcinogenic substances including polycyclic aromatic (i.e., odorous) hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and oxides of nitrogen (NO_x).

Sensitive Receptors

Land uses considered to be sensitive receptors include residential, school, childcare centers, acute care hospitals, and long-term health care facilities. Sensitive receptors are determined based upon special factors which may include the age of the users or occupants, the frequency and duration of the use or occupancy, continued exposure to hazardous substances as defined by federal and state regulations, and the user's ability to evacuate a specific site in the event of a hazardous incident. 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; the elderly; persons engaged in strenuous work or exercise and people with cardiovascular and chronic respiratory diseases. Recreational uses can be considered moderately sensitive to air pollution. Exercise can place a high demand on respiratory functions, which can be impaired by air pollution even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to

air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time.

The nearest sensitive receptors to the site are single-family residences. A residence is located approximately 780 feet north of the site on the south side of Viejas Grade Road. The closest receiver outside the reservation boundary is approximately 1,100 feet southeast of the site on the south side of Willows Road.

Monitored Air Quality

The SDAPCD monitors air quality conditions at locations throughout the SDAB. For the purpose of this analysis, data from the Alpine-2300 Victoria Drive monitoring station in east San Diego County were used to characterize existing ozone and $PM_{2.5}$ conditions in the vicinity of the project site. Data from the El Cajon Lexington Avenue monitoring station are reported to characterize PM_{10} concentrations. The air quality data for 2018, 2019 and 2020 are reported in Table 3.

Table 3
Measured Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2018	2019	2020	2018	2019	2020
Ozone (O_3) – Alpine, 2300 Victoria Drive									
Maximum 1-hour concentration	ppm	State	0.09	0.102	0.110	0.105	2	2	5
Maximum 8-hour concentration	ppm	State	0.070	0.082	0.084	0.089	20	16	24
		Federal	0.070	0.082	0.084	0.089	20	16	24
Nitrogen Dioxide (NO_2) – Alpine, 2300 Victoria Drive									
Maximum 1-hour concentration	ppm	State	0.18	0.031	0.029	0.021	0	0	0
		Federal	0.100	0.031	0.031	0.021	0	0	0
Coarse Particulate Matter (PM_{10}) – El Cajon – Lexington Elementary School, 533 First Street									
Maximum 24-hour concentration	$\mu g/m^3$	State	50	44.7	37.4	--	0	0	0
		Federal	150	43	38.7	_	0	0	0
Fine Particulate Matter ($PM_{2.5}$) – El Cajon – Lexington Elementary School, 533 First Street									
Maximum 24-hour concentration	$\mu g/m^3$	Federal	35	29.7	13.5	22.9	*	*	*

[1] – *Federal O3 standard reduced from 75 ppm to 70 ppm in October 2015*
*Insufficient data to determine number of exceedances
Ozone, Nitrogen Oxide and PM2.5 data from the Alpine, 2300 Victoria Drive Monitoring Station. PM10 data from 533 First Street in El Cajon.
Source: California Air Resources Board, 2018, 2019, 2020 Air Quality Data Summaries available at: http://www.arb.ca.gov/adam/topfour/topfourdisplay.php Accessed April 21, 2022.

AIR QUALITY IMPACT ANALYSIS

METHODOLOGY AND SIGNIFICANCE THRESHOLDS

Air quality modeling was performed in general accordance with the methodologies outlined in the SDAPCD 2009 RAQS to identify both construction and operational emissions associated with each phase and the cumulative total of all project phases at build out. All emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0 which incorporates current air emission data, planning methods and protocol approved by CARB.

Construction activities would include removal of asphalt, ornamental vegetation, site clearing, excavation of the building foundation, grading/trenching to install utilities, construction of the buildings and related improvements as well as painting the interior and exterior building surfaces and paving driveways and parking areas. Construction activities would require the use of equipment that would generate criteria air pollutant emissions. For modeling purposes, it was assumed that all construction equipment used would be diesel-powered. Construction emissions associated with development of the proposed project were quantified by estimating the types of equipment, including the number of individual pieces of equipment, that would be used on-site during each of the construction phases as well as off-site haul trips to remove demolition debris and excavation spoils. Construction emissions are analyzed using the regional thresholds established by the SDAPCD and published under Rule 20-2.

Operational emissions include mobile source emissions, energy emissions, and area source emissions. Mobile source emissions are generated by motor vehicle trips associated with operation of the project. Emissions attributed to energy use include electricity and natural gas consumption for space and water heating. Area source emissions are generated by landscape maintenance equipment, consumer products and architectural coatings (i.e., paints). To determine whether a regional air quality impact would occur, the increase in emissions are compared with the SDAPCD recommended regional thresholds for operational emissions. Note, the proposed Project would not generate vehicle trips. Rather, vendors and guests would use the new parking garage rather than park in remote surface lots. As stated, this would avoid emissions generated by vehicles searching for parking and shuttle operation required to transport guests from remote parking locations.

Thresholds of Significance. Based on Appendix B of the *Tribal-State Compact Between the State of California and the Viejas Band of Kumeyaay Indians,* a project on the Reservation would have a significant air quality impact if it would:

a) *Conflict with or obstruct implementation of the applicable air quality plan;*
b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
c) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air*

quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);

d) Expose off-Reservation sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people off-Reservation.

Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented below in Table 4 are exceeded.

Table 4
SDAPCD Air Emission Significance Thresholds

Construction Emissions			
Pollutant	Total Emissions (pounds per day)		
Reactive Organic Gas (ROG)	75		
Nitrogen Oxides (NOx)	250		
Carbon Monoxide (CO)	550		
Sulfur Oxides (SOx)	250		
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter (PM2.5)	55		
Operational Emissions			
	Total Emissions		
	Pounds per Hour	Pounds per Day	Tons per Year
Reactive Organic Gas (ROG)	--	75	13.7
Nitrogen Oxides (NOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Sulfur Oxides (SOx)	25	250	40
Respirable Particulate Matter (PM_{10})	--	100	15
Fine Particulate Matter (PM2.5)	--	55	10
Lead and Lead Compounds	--	3.2	0.6

The thresholds listed in Table 4 are screening-level thresholds used to evaluate whether proposed-project-related emissions could cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. The emissions-based thresholds for ozone precursors (ROG and NOx) are intended to serve as the threshold for ozone. This approach is used because ozone is not emitted directly; thus, ozone concentrations associated with individual projects precursors (VOC and NOx) emissions cannot be determined through air quality models or other quantitative methods. For nonattainment pollutants, if emissions exceed the thresholds shown in Table 4, the project has the potential to result in a cumulatively considerable net increase in these pollutants; and thus, could have a significant impact on the ambient air quality.

With respect to odors, SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

As stated, under state law, the SDAPCD is required to prepare an AQMP for pollutants for which the SDAB is designated non-attainment. Each iteration of the SDAPCD's AQMP is an update of the previous plan and has a 20-year horizon. A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates local city General Plans and the San Diego Association of Governments socioeconomic forecast projections of regional population, housing and employment growth.

The proposed project involves the construction of a new parking structure within the existing Viejas Casino and gaming complex. The proposed project would replace an existing asphalt parking lot and provide a net increase of 2,088 parking spaces. The project is intended to provide more convenient parking options for guests. As stated, it is not expected to generate an increase in vehicle trips.

The San Diego APCD and San Diego Association of Governments are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the basin—specifically, the SIP and RAQS. The federal O3 maintenance plan, which is part of the SIP, was adopted in 2012. The most recent O3 attainment plan was adopted in 2016. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the basin based on the NAAQS. The RAQS was initially adopted in 1991 and is updated on a triennial basis (most recently in 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O3. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions as well as information regarding projected growth in the County and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls.

CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends and land use plans developed by the County and the cities in the County as part of the General Plan development process. If a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality.

As stated, the project would not generate population growth. Employment growth would be limited to temporary construction jobs. No long-term employment would be required to manage or maintain the parking structure. Therefore, the project would not conflict with SANDAG's population or employment growth forecast; thus, would not conflict with the SIP and RAQS. The project would be consistent with the AQMP and not cause an adverse impact under threshold (a).

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation;

Construction Emissions

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction vehicles, work crew vehicle trips in addition to ROG that would be released during the drying phase upon application of paint and other architectural coatings. Construction would generally consist of demolition (debris removal), site preparation (clearing/grubbing), excavation/grading, construction of the proposed garage, architectural coating (i.e., paint) application and paving.

Emissions from the construction phase of the project were estimated using CalEEMod 2020.4.0. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the project applicant and CalEEMod default values when project specifics were not known.

For purposes of estimating project emissions, and based on information provided by the project applicant, it is assumed that construction of the project would occur five days per week and commence in January 2023 and would be complete by February 2024. If construction begins earlier, it will not affect the emission calculations as they are based on daily maximum emissions. The schedule is an estimate calculated by CalEEMod 2020.4.0. The duration of phases are approximated:

- Demolition: 1.5 weeks
- Site Preparation: 1 weeks
- Grading: 1.5 weeks
- Building Construction: 46 weeks
- Paving: 3.5 weeks
- Architectural Coating: 3.5 weeks

Construction-worker and vendor trips estimates by construction phase were based on CalEEMod default data. Mass grading would include the entire project site. Defaults for the construction equipment mix and vehicle trips used for estimating the project-generated construction emissions, including removal of asphalt and demolition debris, were used and are provided in Appendix A.

As discussed, the project would implement dust control strategies as a project design feature. To reflect implementation of proposed dust control strategies, the following was used in CalEEMod:

- Water exposed area two times per day (55% reduction in PM10 and PM2.5); and
- Limit vehicle travel on unpaved roads to 15 miles per hour.

Table 5 summarizes the estimated maximum daily emissions of pollutants occurring during construction.

Table 5
imated Maximum Daily Construction Emissions with Dust Control Measures

Construction Phase		Maximum Emissions (lbs/day)				
	ROG	NO_x	CO	SOx	PM_{10}	$PM_{2.5}$
2023 Maximum lbs/day	2.9	27.5	28.7	0.09	10.2	5.7
2024 Maximum lbs/day	15.7	21.0	27.9	0.08	5.2	1.8
SDAPCD Regional Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded 2023	**No**	**No**	**No**	**No**	**No**	**No**
Threshold Exceeded 2023	**No**	**No**	**No**	**No**	**No**	**No**

As shown in Table 5, construction of the proposed project would not exceed the SDAPCD daily thresholds. With SDAPCD Rule 55 compliance, no mitigation measures would be required to meet construction emission thresholds. Construction emissions would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. Therefore, project impacts will be **less than significant** per thresholds (b) referenced above.

Operational Impacts

Emissions from the operational phase of the project were estimated using CalEEMod version 2020.4.0. Operational year 2024 was assumed consistent with completion of project construction.

Area Sources. CalEEMod was used to estimate operational emissions from area sources, including emissions from architectural coatings and use of landscape maintenance equipment. Emissions associated with these uses are calculated in the building energy use module of CalEEMod.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. VOC emissions were estimated based on compliance with SDAPCD Rule 67.0.1, which provides VOC content limits for various coatings. The three general coatings categories are 50 grams per liter (g/L) VOC for flat coatings, 100 g/L VOC for non-flat coatings, and 150 g/L VOC for non-flat high gloss coatings. Consistent with typical construction practices, it is anticipated that interior and exterior paint would not exceed non-flat coating limits, exterior paint would not exceed non-flat coating limits, and a small portion of exterior paint and finishes (trim and other minor finishes) would not exceed non-flat high-gloss coatings limits. It was conservatively assumed that all residential (interior and exterior) architectural coating would be 150 g/L VOC.

Energy Sources. Energy sources include emissions associated with building electricity and natural gas use. Electricity use would contribute indirectly to criteria air pollutant emissions.

Mobile Sources. Parking garages do not generate vehicle trips. The trips are generated by other uses. The proposed project would accommodate existing visitors and guests of the casino, hotel and other attractions. Emission factors for 2024 (the first full year of project operation) were used to estimate emissions associated with full buildout of the project and would be associated with building maintenance activities.

Table 6 summarizes area, energy and mobile source emissions associated with operation of the proposed project. As shown in Table 6, daily emissions would not exceed the SDAPCD thresholds for ROG, NO_X, CO, SO_X, PM_{10} or $PM_{2.5}$. Therefore, the project's operational air quality emissions (including impacts related to criteria pollutants, sensitive receptors and violations of air quality standards) would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. Therefore, project impacts will be **less than significant** per thresholds (b).

Table 6
Estimated Operational Emissions

	Estimated Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Proposed Project						
Area	0.45	0.01	0.2	0.01	0.01	0.01
Energy	0.0	0.0	0.0	0.0	0.0	0.0
Mobile	0.0	0.0	0.0	0.0	0.0	0.0
Maximum lbs/day	**0.45**	**0.01**	**0.2**	**0.01**	**0.01**	**0.01**
SCAQMD Thresholds	**75**	**250**	**550**	**250**	**100**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum lbs/hour[1]	**--**	**0.025**	**0.00125**	**0.00125**	**--**	**--**
SCAQMD Thresholds	**--**	**25**	**100**	**25**	**--**	**--**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum tons/year[2]	**0.088**	**0.0018**	**0.0365**	**0.0091**	**0.0018**	**0.0018**
SCAQMD Thresholds	**13.7**	**40**	**100**	**40**	**15**	**10**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix for CalEEMod version. 2020.4.0 computer model output - summer emissions shown

c. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);

As shown in Tables 5 and 6, the construction and operational emissions generated by the proposed project would not exceed the thresholds; and thus, would have no adverse effect on air quality. The project would not result in a cumulatively considerable net increase of any criteria pollutant for which region is in non-attainment under applicable federal or state ambient air quality standards. Impacts would be **less than significant** (**threshold c**).

d. Would the project expose off-Reservation sensitive receptors to substantial pollutant concentrations;

Construction-Related Toxic Air Contaminant Impacts

Certain construction projects can create the potential for toxic air contaminant emissions related to diesel particulate emissions associated with heavy equipment operations during construction. According to South Coast Air Quality Management District (SCAQMD) methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". A cancer risk greater than 10 cases per 1,000,000 people exposed would be considered a significant impact. The California Office of Environmental Health Hazard Assessment (OEHHA) health risk guidance states that a residential receptor should be evaluated based on a 30-year exposure period. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The construction schedule duration would be approximately 13 months; however, only a portion of the overall construction work would require the use of diesel-powered equipment. The proposed project would not result in a long-term (i.e., 30 or 70 year) exposure to a substantial source of toxic air contaminant emissions; and thus, neighboring residents would not be exposed to the related individual cancer risk. Therefore, no significant toxic air contaminant impacts would occur during construction of the proposed project**.**

Carbon Monoxide Hotspots

As discussed, carbon monoxide is a colorless, odorless, poisonous gas that may be found in high concentrations near areas of high traffic volumes. CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. The SDAB is in attainment of state and federal CO standards; thus, CO data is no longer collected and not all monitoring stations have CO data available. The 1110 Beardsley Street monitoring station in the Barrio Logan community is the closest monitoring station to the site that collected CO data. The maximum 8-hour average CO level recorded in 2012 (the last year data were recorded) was 1.81 parts per million (ppm). Concentrations are below the 9-ppm state and federal 8-hour standard.

Numerous factors are related to the formation of CO hotspots. The potential for CO hotspots in the SDAB is steadily decreasing because of the continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion and the already very low ambient CO concentrations. Furthermore, CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions; however, CO concentrations near a congested roadway or intersection may reach unhealthy levels.

Typically, high CO concentrations are associated with roadways or intersections operating under congested conditions. Projects contributing to adverse traffic conditions may contribute to the formation of CO hotspots. Guidance recommended by the County of San Diego was applied to evaluate the potential for CO hotspots to occur as a result of the project. As indicated in the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements Air Quality (County of San Diego 2007), a site-specific CO hotspot analysis should be performed if a proposed development would cause road intersections to operate at or below a LOS E with intersection peak-hour trips exceeding 3,000 (DUDEK, October 2019).

The proposed project was evaluated for CO hotspots under 2024 build out conditions based on projected peak hour volumes provided in the Traffic Impact Assessment (Linscott, Law and Greenspan Traffic Engineers, Inc., April 2022). While some traffic operations would shift between the West Casino Driveway and East Casino Driveway, the intersections volumes studied would remain less than 3,000 vehicles in the peak hour and the Project would not cause or contribute to a study intersection operating at or below LOS E.. Therefore, the project would not result in CO hot spots that could expose sensitive receptors off-Reservation to substantial pollutant concentrations. Impacts would be **less than significant** (**threshold c**).

e. ***Create objectionable odors affecting a substantial number of people off-Reservation***

SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors. Odor issues are very subjective by the nature of odors themselves and due to the fact that their measurements are difficult to quantify. As a result, this guideline is qualitative and will focus on the existing and potential surrounding uses and location of sensitive receptors.

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints. Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the project. Potential odors produced during construction would be attributable to exhaust emissions, architectural coatings, and

asphalt pavement application. Such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with other emissions (such as those leading to odors) adversely affecting a substantial number of people during construction would be less than significant.

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding facilities. The project would provide a new parking garage and related infrastructure improvements. These uses are not associated with emissions (such as those leading to odors) adversely affecting a substantial number of people that could rise to the level of significance. Therefore, impacts would be **less than significant** per threshold (e).

CONCLUSION

As stated herein, the project is new construction of 2,485-space, 5-level parking garage. The project would replace an existing asphalt parking lot. The project as proposed would not conflict with the approved AQMP or generate air emissions that would exceed SDAPCD thresholds. Further, the project would not expose sensitive receptors to substantial pollutant concentrations or result in odors that would affect a substantial number of people. Air quality impacts generated by the proposed project would be less than significant.

REFERENCES

California Air Resources Board. *Ambient Air Quality Standards.* Updated February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf

California Air Resources Board. 2018, 2019, & 2020 Annual Air Quality Data Summaries. http://www.arb.ca.gov/adam/topfour/topfour1.php. Accessed March 2022.

California Air Resources Board, San Diego Air Quality Management Plans, January 10, 2013 http://www.arb.ca.gov/planning/sip/planarea/sansip.htm

California Emission Estimator Model Users Guide. May 2021.

County of San Diego, *Guidelines for Determining Significance and Report Format and Content Requirements*, Department of Planning and Land Use, Department of Public Works, March 19, 2007

DUDEK, *Air Quality and Greenhouse Gas Emissions Analysis Technical Report for the Alta Oceanside Project*, October 2019

Linscott Law & Greenspan, *Viejas Parking Garage Traffic Impact Assessment*, April 2022

San Diego Air Pollution Control District. Attainment Status. January 2010. http://www.sdapcd.org/info/facts/attain.pdf

San Diego Air Pollution Control District. Smog in San Diego Fact Sheet. January, 2010.

San Diego Air Pollution Control District. Regional Air Quality Strategy, April 2009. http://www.sdapcd.org/planning/2009-RAQS.pdf

South Coast Air Quality Management District (SCAQMD). *California Emissions Estimator Model User Guide Version 2020.4.0*. Prepared by BREEZE Software, A Division of Trinity Consultants. May 2021.

Appendix A

CalEEMod Air Emission Model Results –
Summer Emissions for Construction and Operation

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Viejas Parking Garage

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	2,485.00	Space	4.00	994,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 4 acres.

Demolition -

Architectural Coating - For Rule 67 compliance it was assumed that 50 g/L for interior/exterior surfaces and 100 g/L for traffic marking.

Area Coating - For Rule 67 compliance, it was assumed 50 g/L for exteror/interior surface coating and 100 g/L for traffic marking.

Construction Off-road Equipment Mitigation -

Area Mitigation - Rule 67 compliance

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Parking	250	100
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblLandUse	LotAcreage	22.36	4.00

2.0 Emissions Summary

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	2.9070	27.5547	28.7696	0.0906	19.8049	1.2668	21.0717	10.1417	1.1655	11.3071	0.0000	9,217.6543	9,217.6543	1.1961	0.5980	9,415.8459
2024	15.7510	21.0199	27.9622	0.0890	4.5295	0.6736	5.2031	1.2264	0.6339	1.8604	0.0000	9,054.8057	9,054.8057	0.7915	0.5838	9,248.5785
Maximum	**15.7510**	**27.5547**	**28.7696**	**0.0906**	**19.8049**	**1.2668**	**21.0717**	**10.1417**	**1.1655**	**11.3071**	**0.0000**	**9,217.6543**	**9,217.6543**	**1.1961**	**0.5980**	**9,415.8459**

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					
2023	2.9070	27.5547	28.7696	0.0906	8.9935	1.2668	10.2603	4.5853	1.1655	5.7508	0.0000	9,217.6543	9,217.6543	1.1961	0.5980	9,415.8458
2024	15.7510	21.0199	27.9622	0.0890	4.5295	0.6736	5.2031	1.2264	0.6339	1.8604	0.0000	9,054.8057	9,054.8057	0.7915	0.5838	9,248.5785
Maximum	**15.7510**	**27.5547**	**28.7696**	**0.0906**	**8.9935**	**1.2668**	**10.2603**	**4.5853**	**1.1655**	**5.7508**	**0.0000**	**9,217.6543**	**9,217.6543**	**1.1961**	**0.5980**	**9,415.8458**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	44.43	0.00	41.15	48.88	0.00	42.20	0.00	0.00	0.00	0.00	0.00	0.00

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.4512	2.3000e-003	0.2533	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004		0.5439	0.5439	1.4200e-003		0.5793
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	0.0000	0.0000	0.0000	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	**0.4512**	**2.3000e-003**	**0.2533**	**2.0000e-005**	**0.0000**	**9.0000e-004**	**9.0000e-004**	**0.0000**	**9.0000e-004**	**9.0000e-004**		**0.5439**	**0.5439**	**1.4200e-003**	**0.0000**	**0.5793**

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	0.4512	2.3000e-003	0.2533	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004		0.5439	0.5439	1.4200e-003		0.5793
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	0.0000	0.0000	0.0000	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	**0.4512**	**2.3000e-003**	**0.2533**	**2.0000e-005**	**0.0000**	**9.0000e-004**	**9.0000e-004**	**0.0000**	**9.0000e-004**	**9.0000e-004**		**0.5439**	**0.5439**	**1.4200e-003**	**0.0000**	**0.5793**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	Demolition	Demolition	1/2/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	1/28/2023	2/3/2023	5	5	
3	Grading	Grading	2/4/2023	2/15/2023	5	8	
4	Building Construction	Building Construction	2/16/2023	1/3/2024	5	230	
5	Paving	Paving	1/4/2024	1/29/2024	5	18	
6	Architectural Coating	Architectural Coating	1/30/2024	2/22/2024	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 59,640 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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
Demolition	6	15.00	0.00	793.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	417.00	163.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	83.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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					
Fugitive Dust					8.6827	0.0000	8.6827	1.3149	0.0000	1.3149			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**8.6827**	**0.9975**	**9.6802**	**1.3149**	**0.9280**	**2.2429**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	0.0898	5.1868	1.4248	0.0237	0.6935	0.0440	0.7375	0.1901	0.0421	0.2322		2,621.9647	2,621.9647	0.1321	0.4170	2,749.5221
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
Worker	0.0410	0.0255	0.3600	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		110.0496	110.0496	2.9800e-003	2.7400e-003	110.9417
Total	**0.1308**	**5.2122**	**1.7848**	**0.0248**	**0.8167**	**0.0447**	**0.8614**	**0.2228**	**0.0427**	**0.2655**		**2,732.0143**	**2,732.0143**	**0.1351**	**0.4197**	**2,860.4638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2023

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					3.9072	0.0000	3.9072	0.5917	0.0000	0.5917			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**3.9072**	**0.9975**	**4.9047**	**0.5917**	**0.9280**	**1.5197**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	0.0898	5.1868	1.4248	0.0237	0.6935	0.0440	0.7375	0.1901	0.0421	0.2322		2,621.9647	2,621.9647	0.1321	0.4170	2,749.5221
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
Worker	0.0410	0.0255	0.3600	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		110.0496	110.0496	2.9800e-003	2.7400e-003	110.9417
Total	**0.1308**	**5.2122**	**1.7848**	**0.0248**	**0.8167**	**0.0447**	**0.8614**	**0.2228**	**0.0427**	**0.2655**		**2,732.0143**	**2,732.0143**	**0.1351**	**0.4197**	**2,860.4638**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 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					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	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
Worker	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300
Total	**0.0492**	**0.0306**	**0.4320**	**1.3100e-003**	**0.1479**	**7.9000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**132.0595**	**132.0595**	**3.5800e-003**	**3.2900e-003**	**133.1300**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2023

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					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	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
Worker	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300
Total	**0.0492**	**0.0306**	**0.4320**	**1.3100e-003**	**0.1479**	**7.9000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**132.0595**	**132.0595**	**3.5800e-003**	**3.2900e-003**	**133.1300**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 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					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.0826**	**0.7749**	**7.8575**	**3.4247**	**0.7129**	**4.1377**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	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
Worker	0.0410	0.0255	0.3600	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		110.0496	110.0496	2.9800e-003	2.7400e-003	110.9417
Total	**0.0410**	**0.0255**	**0.3600**	**1.0900e-003**	**0.1232**	**6.6000e-004**	**0.1239**	**0.0327**	**6.1000e-004**	**0.0333**		**110.0496**	**110.0496**	**2.9800e-003**	**2.7400e-003**	**110.9417**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2023

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					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**3.1872**	**0.7749**	**3.9621**	**1.5411**	**0.7129**	**2.2541**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	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
Worker	0.0410	0.0255	0.3600	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		110.0496	110.0496	2.9800e-003	2.7400e-003	110.9417
Total	**0.0410**	**0.0255**	**0.3600**	**1.0900e-003**	**0.1232**	**6.6000e-004**	**0.1239**	**0.0327**	**6.1000e-004**	**0.0333**		**110.0496**	**110.0496**	**2.9800e-003**	**2.7400e-003**	**110.9417**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 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**

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	0.0000
Vendor	0.1947	6.9875	2.5181	0.0334	1.1039	0.0426	1.1465	0.3178	0.0407	0.3585		3,603.0654	3,603.0654	0.1092	0.5217	3,761.2609
Worker	1.1396	0.7077	10.0076	0.0303	3.4256	0.0184	3.4439	0.9086	0.0169	0.9255		3,059.3790	3,059.3790	0.0829	0.0763	3,084.1789
Total	**1.3343**	**7.6951**	**12.5256**	**0.0637**	**4.5295**	**0.0609**	**4.5904**	**1.2264**	**0.0576**	**1.2841**		**6,662.4444**	**6,662.4444**	**0.1921**	**0.5980**	**6,845.4398**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

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**

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	0.0000
Vendor	0.1947	6.9875	2.5181	0.0334	1.1039	0.0426	1.1465	0.3178	0.0407	0.3585		3,603.0654	3,603.0654	0.1092	0.5217	3,761.2609
Worker	1.1396	0.7077	10.0076	0.0303	3.4256	0.0184	3.4439	0.9086	0.0169	0.9255		3,059.3790	3,059.3790	0.0829	0.0763	3,084.1789
Total	**1.3343**	**7.6951**	**12.5256**	**0.0637**	**4.5295**	**0.0609**	**4.5904**	**1.2264**	**0.0576**	**1.2841**		**6,662.4444**	**6,662.4444**	**0.1921**	**0.5980**	**6,845.4398**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 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**

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	0.0000
Vendor	0.1875	6.9398	2.4592	0.0328	1.1040	0.0428	1.1467	0.3178	0.0409	0.3587		3,540.2470	3,540.2470	0.1117	0.5126	3,695.7855
Worker	1.0700	0.6363	9.3362	0.0293	3.4256	0.0175	3.4430	0.9086	0.0161	0.9247		2,958.8598	2,958.8598	0.0755	0.0713	2,981.9854
Total	**1.2575**	**7.5761**	**11.7954**	**0.0620**	**4.5295**	**0.0603**	**4.5898**	**1.2264**	**0.0570**	**1.2835**		**6,499.1068**	**6,499.1068**	**0.1872**	**0.5838**	**6,677.7709**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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**

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	0.0000
Vendor	0.1875	6.9398	2.4592	0.0328	1.1040	0.0428	1.1467	0.3178	0.0409	0.3587		3,540.2470	3,540.2470	0.1117	0.5126	3,695.7855
Worker	1.0700	0.6363	9.3362	0.0293	3.4256	0.0175	3.4430	0.9086	0.0161	0.9247		2,958.8598	2,958.8598	0.0755	0.0713	2,981.9854
Total	**1.2575**	**7.5761**	**11.7954**	**0.0620**	**4.5295**	**0.0603**	**4.5898**	**1.2264**	**0.0570**	**1.2835**		**6,499.1068**	**6,499.1068**	**0.1872**	**0.5838**	**6,677.7709**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8814**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

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	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
Worker	0.0513	0.0305	0.4478	1.4000e-003	0.1643	8.4000e-004	0.1651	0.0436	7.7000e-004	0.0444		141.9117	141.9117	3.6200e-003	3.4200e-003	143.0209
Total	**0.0513**	**0.0305**	**0.4478**	**1.4000e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.7000e-004**	**0.0444**		**141.9117**	**141.9117**	**3.6200e-003**	**3.4200e-003**	**143.0209**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2024

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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8814**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

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	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
Worker	0.0513	0.0305	0.4478	1.4000e-003	0.1643	8.4000e-004	0.1651	0.0436	7.7000e-004	0.0444		141.9117	141.9117	3.6200e-003	3.4200e-003	143.0209
Total	**0.0513**	**0.0305**	**0.4478**	**1.4000e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.7000e-004**	**0.0444**		**141.9117**	**141.9117**	**3.6200e-003**	**3.4200e-003**	**143.0209**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 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	15.3573					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	**15.5381**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	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
Worker	0.2130	0.1267	1.8583	5.8300e-003	0.6818	3.4800e-003	0.6853	0.1809	3.2000e-003	0.1841		588.9337	588.9337	0.0150	0.0142	593.5367
Total	**0.2130**	**0.1267**	**1.8583**	**5.8300e-003**	**0.6818**	**3.4800e-003**	**0.6853**	**0.1809**	**3.2000e-003**	**0.1841**		**588.9337**	**588.9337**	**0.0150**	**0.0142**	**593.5367**

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2024

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	15.3573					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	**15.5381**	**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**

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	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
Worker	0.2130	0.1267	1.8583	5.8300e-003	0.6818	3.4800e-003	0.6853	0.1809	3.2000e-003	0.1841		588.9337	588.9337	0.0150	0.0142	593.5367
Total	**0.2130**	**0.1267**	**1.8583**	**5.8300e-003**	**0.6818**	**3.4800e-003**	**0.6853**	**0.1809**	**3.2000e-003**	**0.1841**		**588.9337**	**588.9337**	**0.0150**	**0.0142**	**593.5367**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Enclosed Parking with Elevator	9.50	7.30	7.30	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
Enclosed Parking with Elevator	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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					
Enclosed Parking with Elevator	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
Enclosed Parking with Elevator	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

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

Viejas Parking Garage - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	0.4512	2.3000e-003	0.2533	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004		0.5439	0.5439	1.4200e-003		0.5793
Unmitigated	0.4512	2.3000e-003	0.2533	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004		0.5439	0.5439	1.4200e-003		0.5793

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	0.0757					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3521					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0234	2.3000e-003	0.2533	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004		0.5439	0.5439	1.4200e-003		0.5793
Total	**0.4512**	**2.3000e-003**	**0.2533**	**2.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**		**0.5439**	**0.5439**	**1.4200e-003**		**0.5793**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0757					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3521					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0234	2.3000e-003	0.2533	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004		0.5439	0.5439	1.4200e-003		0.5793
Total	**0.4512**	**2.3000e-003**	**0.2533**	**2.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**		**0.5439**	**0.5439**	**1.4200e-003**		**0.5793**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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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Appendix C

Noise Study

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VIEJAS PARKING STRUCTURE PROJECT

NOISE STUDY

Prepared for:

BRG Consultants, Inc.
304 Ivy Street
San Diego, CA 92101

Prepared by:

BPG
BIRDSEYE
PLANNING GROUP

May 2022

BRG Consulting, Inc.
Environmental Planning and Impact Assessment
Land Use Planning and Permitting

304 Ivy Street
San Diego, CA 92101
619-298-7127 x 101
erich@brginc.net

Memo

To: File	**Date:** June 16, 2022
	Job No. 2203
Cc:	**By:** Erich Lathers

Subject: Viejas Casino East Garage

- **Description:**

I spoke with Messrs. John Boarman of Linscott, Law & Greenspan and Ryan Birdseye of Birdseye Planning Group regarding the change in design of the Viejas Casino East Garage from 5-level to 7-level while accommodating essentially the same number of parking spaces and within the same area of the Reservation. Both stated that such a change would not have any meaningful effect on the analysis or conclusions presented in their respective Technical Reports.

NOISE IMPACT STUDY

VIEJAS CASINO EAST GARAGE

Prepared for

BRG Consulting, Inc.
304 Ivy Street
San Diego, California 92101

Prepared by:

Birdseye Planning Group
P.O. Box 1956
Vista, California 92085

May 2022

Viejas Casino East Garage
San Diego County, California
Noise Study

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Viejas Casino East Garage
San Diego County, California
NOISE STUDY

This report is an analysis of the potential noise impacts associated with the proposed Viejas Casino East Garage proposed for construction on the Viejas Reservation in unincorporated San Diego County. The report has been prepared by Birdseye Planning Group under contract to BRG Consulting, Inc., to support preparation of the Tribal Environmental Impact Report (TEIR). The TEIR will be prepared consistent with Tribal Gaming Compact Section 11.1 (2016) which defines the scope of activities required to evaluate off-reservation impacts associated activities occurring on the reservation. This study analyzes potential noise impacts associated with construction and operation of the proposed project. The analysis herein is based partially on traffic volumes provided by Linscott, Law and Greenspan Traffic Engineers, (April 2022).

PROJECT DESCRIPTION

The proposed Project is the construction of a parking structure located just to the north-east of the existing Viejas Casino (Casino). The parking structure would be a 5-stories with approximately 2,485 parking spaces and a base footprint of approximately 158,000 square feet. Approximately 397 surface parking spaces would be lost to the structure, resulting in a net increase of 2,088 spaces. The Project site is approximately 4 acres in size.

The proposed 5-story parking structure would include an elevator tower, three stairwells, two automobile access roads, a pedestrian walkway connector, pavement areas, landscaping, and the necessary public utilities. The pedestrian walkway will connect the parking structure to the existing casino and hotel. The parking structure would be built on a currently developed and paved area. The area is currently used for surface parking.

The primary purpose of the parking structure is to support the casino and hotels by providing more convenient patron parking. In addition, the parking structure will be taking cars currently parking in remote lots and concentrating them in a parking structure; thus, reducing the amount of existing mobile source emissions. Also, by providing parking closer to the hotels and casino, the Project would eliminate use of the shuttles that currently provide transportation from the existing parking lots to the Viejas Casino and Hotel. Thus, the parking structure will result in environmental benefits such as reducing vehicle miles traveled, energy use, and greenhouse gas emissions because patrons would no longer need to search for parking in remote lots. The existing parking lots will remain for the use of employee or Viejas vehicle parking, guest overflow parking and private tribal events.

The casino currently offers approximately 133,000 square feet of gaming area in a 325,000 square foot facility. Current gaming offerings include 2,500 slot machines, approximately 85 gaming tables and five restaurants. No new gaming space will result from construction and

operation of the proposed parking structure. No new infrastructure will be required for the parking structure or is proposed. The project site is shown in Figure 1. The site plan is shown in Figure 2.

Construction of the proposed project is anticipated to begin in January 2023 and be completed by February 2024.

SETTING

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 would be half as loud and influence the character of ambient noise without influencing the overall sound level. 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 (FTA 2018).

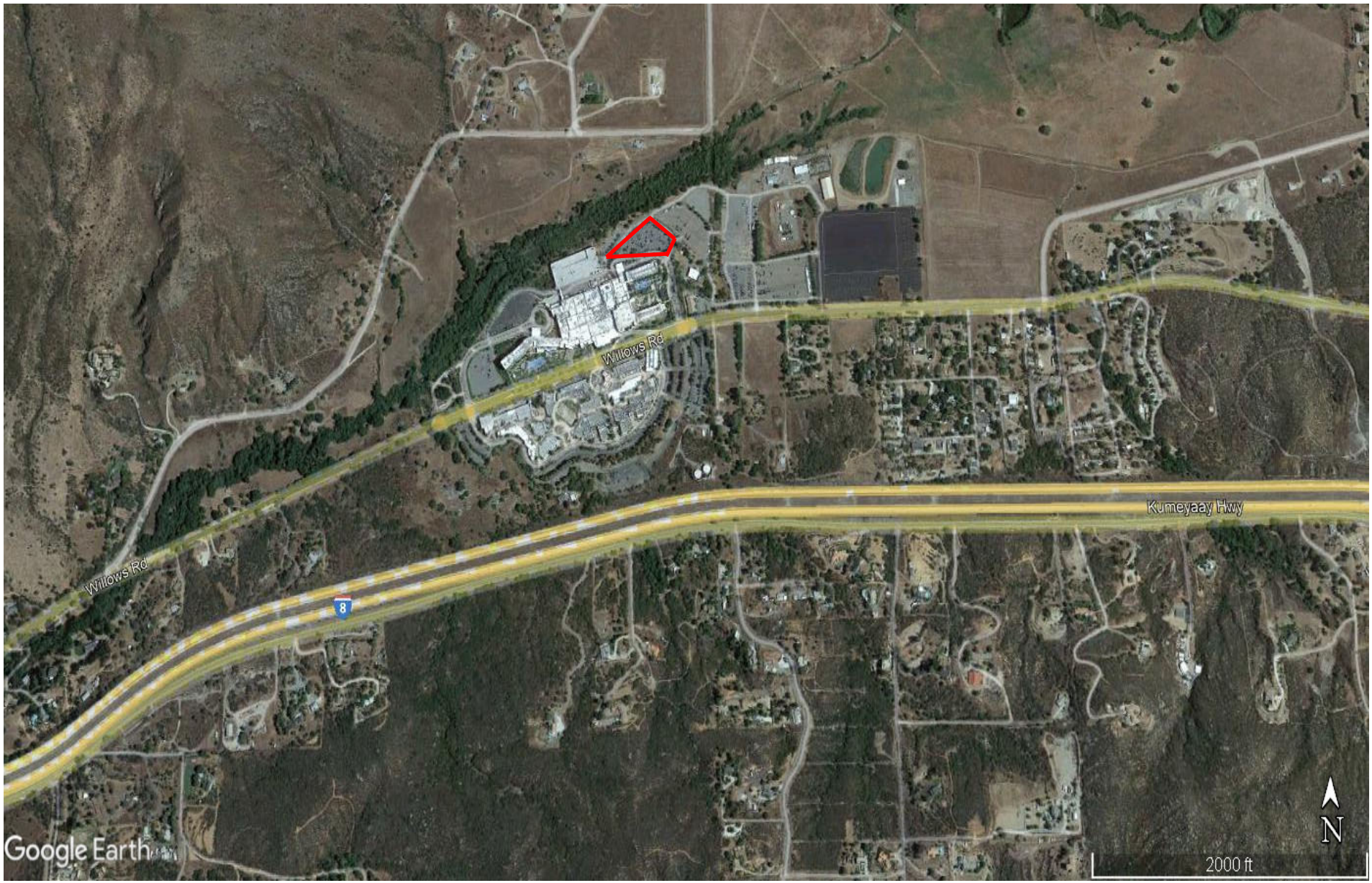


Figure 1 — Vicinity Map **- Project Site**

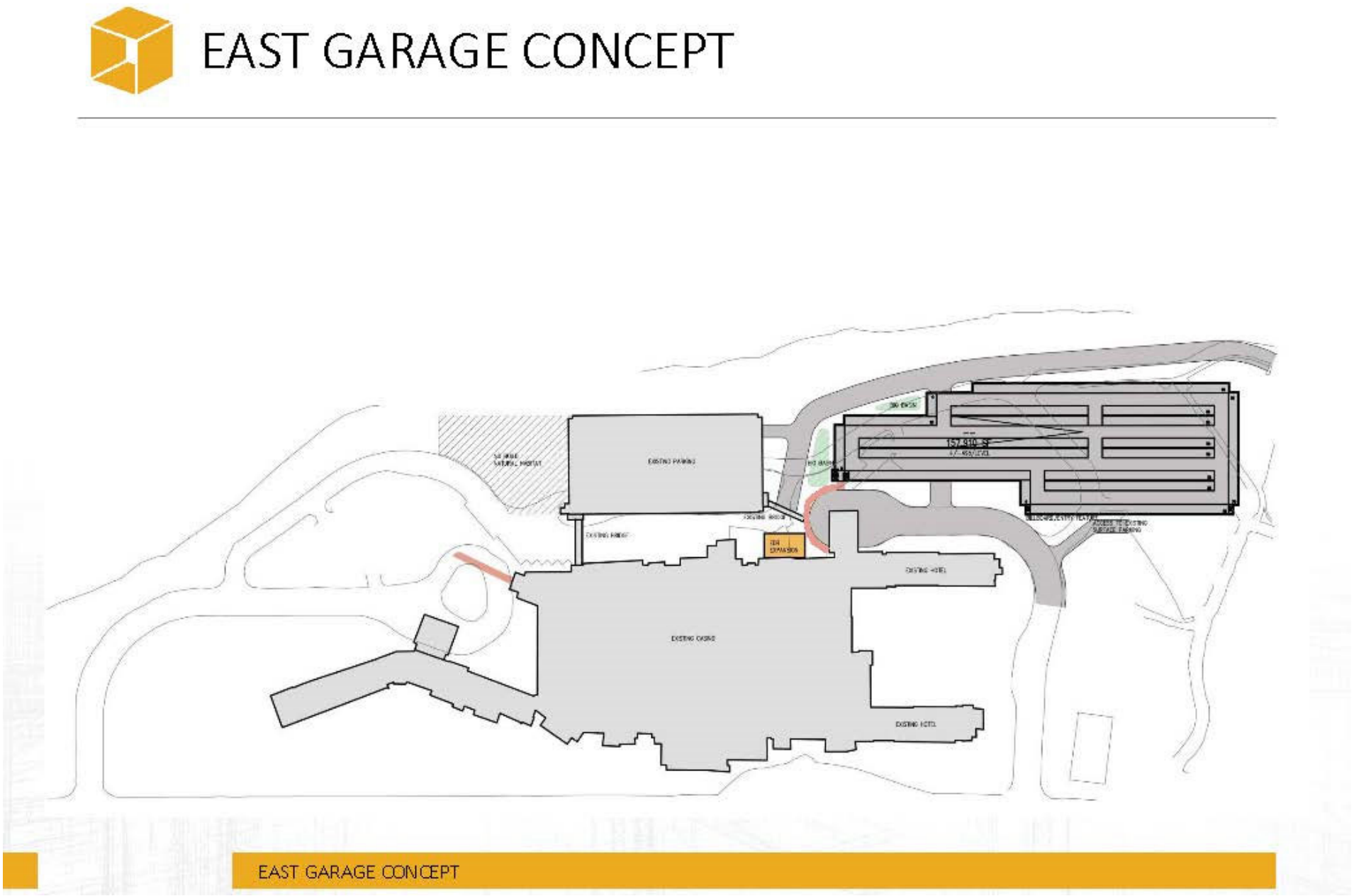


Figure 2 — Site Plan

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 and/or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period. Lmax is the highest RMS (root mean squared) 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 noise occurring 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 p.m. to 7 a.m.) 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 p.m. to 10 p.m. and a 10 dBA penalty for noise occurring from 10 p.m. to 7 a.m. Noise levels described by Ldn and CNEL usually do not differ by more than 1 dB. Table 1 shows sounds levels of typical noise sources in Leq.

Table 1
Sound Levels of Typical Noise Sources and Noise Environments

Noise Source (at Given Distance)	Noise Environment	A-Weighted Sound Level (Decibels)	Human Judgment of Noise Loudness (Relative to Reference Loudness of 70 Decibels*)
Military Jet Takeoff with Afterburner (50 ft)	Carrier Flight Deck	140	128 times as loud
Civil Defense Siren (100 ft)		130	64 times as loud
Commercial Jet Take-off (200 ft)		120	32 times as loud **Threshold of Pain**
Pile Driver (50 ft)	Rock Music Concert Inside Subway Station (New York)	110	16 times as loud
Ambulance Siren (100 ft) Newspaper Press (5 ft) Gas Lawn Mower (3 ft)		100	8 times as loud **Very Loud**
Food Blender (3 ft) Propeller Plane Flyover (1,000 ft) Diesel Truck (150 ft)	Boiler Room Printing Press Plant	90	4 times as loud
Garbage Disposal (3 ft)	Noisy Urban Daytime	80	2 times as loud

Passenger Car, 65 mph (25 ft) Living Room Stereo (15 ft) Vacuum Cleaner (10 ft)	Commercial Areas	70	Reference Loudness **Moderately Loud**
Normal Speech (5 ft) Air Conditioning Unit (100 ft)	Data Processing Center Department Store	60	½ as loud
Light Traffic (100 ft)	Large Business Office Quiet Urban Daytime	50	¼ as loud
Bird Calls (distant)	Quiet Urban Nighttime	40	1/8 as loud **Quiet**
Soft Whisper (5 ft)	Library and Bedroom at Night Quiet Rural Nighttime	30	1/16 as loud
	Broadcast and Recording Studio	20	1/32 as loud **Just Audible**
		0	1/64 as loud **Threshold of Hearing**

Source: Compiled by dBF Associates, Inc., 2016

SENSITIVE RECEPTORS

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with each of these uses. As required per the Tribal Gaming Compact Section 10.8, only off-Reservation impacts are evaluated in a TEIR. In this case, there are off-reservation receptors located on the south side of Willows Road, approximately 850 southeast of the project site.

The County of San Diego City Guidelines for Determining Significance - Noise (January 2009) includes a variety of land use and development types that are noise sensitive. Noise sensitive, land uses include residences, schools, churches, and hospitals and convalescent care facilities. The closest sensitive properties in proximity to the project site are all single-family residences. As stated, the closest receivers are located on the south side of Willows Road approximately 1,100 feet southeast of the site. Receivers are located on the north side of the site, north of Viejas Creek. The closest receiver is located approximately 780 feet to the north; however, it is located on reservation property. The receivers to the south are used to evaluate potential impacts associated with the project. The receiver locations are shown in Figure 2.

PROJECT SITE SETTING

The most common and primary sources of noise in the project site vicinity are motor vehicles (e.g., automobiles, buses, trucks, and motorcycles) along Willows Road. Interstate 8 is located south of the site but is not audible over the traffic noise on Willows Road. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create

a sustained noise level, and because of its proximity to noise sensitive uses. Activities associated with the existing hotel, including the outdoor physical plant area located at the east end of the existing complex are audible from outside the hotel. No other noise sources are near the project site.

Two weekday morning 15-minute noise measurements were taken in proximity to the project site on March 15, 2022, using an ANSI Type II integrating sound level meter. These noise measurements provide an estimate of the general noise environment at nearest sensitive properties located on the Reservation. The primary noise source in the area during monitoring was traffic operating within the parking area (Monitoring Site 1) and along Willows Road at the east entrance (Site 2). Noise from the existing physical plant equipment located on the east end of the existing Casino/Resort was audible at Monitoring Sites 1 and 2. Construction noise was also audible and contributed to ambient conditions. Table 2 identifies the noise measurement locations and measured noise levels. Monitoring locations are shown in Figure 3. As shown, existing noise levels ranged from 56.0 dBA to 63.7 dBA Leq during the morning monitoring period (Appendix A).

Table 2
Noise Monitoring Results

Measurement Location	Primary Noise Source	Sample Time	Leq (dBA)
M1. Project site east of the existing parking garage and north of the hotel.	Traffic	Weekday – 7:25 – 7:40 a.m.	56.0
M2. Willows Road south of east entrance to parking lots and physical plant	Traffic	Weekday– 7:50 to 8:00 a.m.	63.7

Source: Field visit using ANSI Type II Integrating sound level meter.

The temperature during monitoring was 60 degrees Fahrenheit with wind gusting between 5-10 miles per hour from the east. During monitoring, 12 cars/light trucks, one medium truck (i.e., two axles, six tires) and one heavy truck (i.e., 18-wheel tractor/trailer) passed Monitoring Site 1 during the 15-minute period. Approximately 43 cars/light trucks; five medium trucks and zero heavy truck passed Monitoring Site 2. The majority of the traffic and highest existing noises levels are along Willows Road south of the project site and reflect higher traffic volumes traveling between I-8 and the Viejas Resort area.

Regulatory Setting

In 1976, the California Department of Health, State Office of Noise Control published a recommended noise/land use compatibility matrix which many jurisdictions have adopted as a standard in their general plan noise elements. The California State Office of Planning and Research 2017 updates to the General Plan Guidelines, Appendix D Noise Element Guidelines, Figure 2, shows that exterior noise levels up to 60 dBA (CNEL or Ldn) are normally compatible

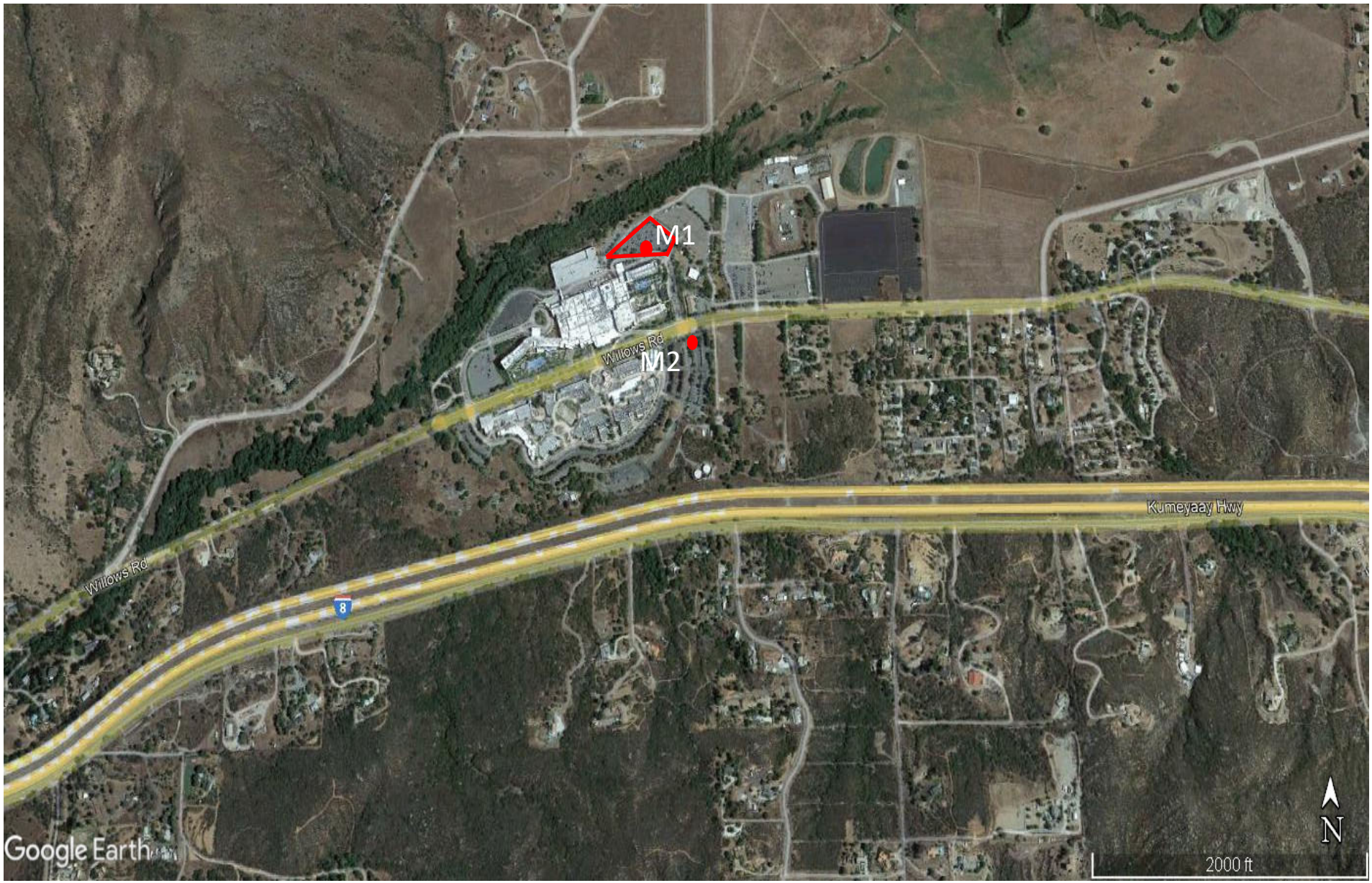


Figure 3 — Monitoring Locations

for low density single-family residences, duplexes and mobile homes. Noise levels up to 70 dBA (CNEL or Ldn) are conditionally compatible in urban settings like the project site for multifamily residences. The term "normally compatible" refers to compatibility with the ambient outdoor noise environment for the land use type referenced such that interior noise levels are adequately attenuated without implementation of specific noise reduction measures. Whereas, "conditionally compatible" refers to exterior ambient conditions that require the use of construction materials and methods or mitigation to achieve interior noise standards for the specified land use type.

County of San Diego Code

Section 36.408: Hours of Operation of Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate or cause to be operated, construction equipment:

a. Between 7 p.m. and 7 a.m.

b. On a Sunday or a holiday. For purposes of this section, a holiday means January 1st, the last Monday in May, July 4th, the first Monday in September, December 25th and any day appointed by the President as a special national holiday or the Governor of the State as a special State holiday. A person may, however, operate construction equipment on a Sunday or holiday between the hours of 10 a.m. and 5 p.m. at the person's residence or for the purpose of constructing a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind and does not violate the limitations in sections 36.409 and 36.410.

Section 36.409: Sound Level Limitations on Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 decibels for an eight-hour period, between 7 a.m. and 7 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Operational Noise

Section 36.404: Non-Construction Noise

With respect to the proposed project, the Viejas Tribe has not developed or adopted related noise standards nor are federal or local regulations directly applicable to the proposed project. Thus, thresholds used in this analysis for impacts affecting off-reservation receptors are based on the County of San Diego noise standards and policies for stationary sources. Transportation

related noise standards are based on the California State Office of Planning and Research 2017 updates to the General Plan Guidelines referenced above. As stated, exterior noise levels up to 60 dBA (CNEL or Ldn) are normally compatible for low density single-family residences, duplexes and mobile homes. Noise levels up to 70 dBA (CNEL or Ldn) are conditionally compatible in urban settings for multifamily residences.

.

Section 36.404 of the County of San Diego noise ordinance provides performance standards and noise control guidelines for determining and mitigating non-transportation, or stationary, noise source impacts. The County of San Diego Noise Ordinance prohibits any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property exceeds the applicable limits. Section 36.404 of the County of San Diego Code sets a most restrictive operational exterior noise limit for residential noise sensitive land uses of 50 dBA Leq for daytime hours of 7 a.m. to 10 p.m. and 45 dBA Leq during the noise sensitive nighttime hours of 10 p.m. to 7 a.m. Where existing noise levels exceed 50 dBA, the County of San Diego Guidelines for Determining Significance - Noise (January 2009) (hereafter referred to as Guidelines) state that an increase of 10 dBA CNEL is considered a significant impact. For the purpose of this review, project-related noise that exceeds ambient conditions (as measured by Leq) by 10 dBA or more, when ambient conditions exceed 50 dBA, are considered a significant noise impact.

Impulse Noise. Section 36.410 of the San Diego County Code states that in addition to general limitations on sound levels in section 36.404 and 36.408, 36.409 referenced above, except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive (short-term, one second or less) noise (i.e., gunshot, explosion or noise from construction equipment) of more than 82 dBA. Impulse noise is typically related to construction where pile driving and use of explosives is required. Construction techniques that generate impulse noise are not required for the proposed project nor would impulse noises be generated by the proposed project.

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 peak particle velocity (PPV) in inches per second. Vibration impacts to buildings are generally discussed in terms of PPV which describes particle movement over time (in terms of physical displacement of mass). Vibration can impact people, structures, and sensitive equipment Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and other high impact demolition and excavation-related activities. Grading also has the potential to cause short-term vibration impacts if large bulldozers, loaded trucks, or other heavy equipment operate within proximity to sensitive land uses. Use of the PPV descriptor is common when addressing potential impacts to structures. The maximum vibration level standard used by the California Department of

Transportation (Caltrans) for the prevention of structural damage to typical residential buildings is 0.2 ips PPV (Caltrans 2020).

The vibration velocity level (VdB) is used to describe potential impacts to people. The 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 (Federal Transit Administration, 2018).

Construction activities referenced above that would generate significant vibration levels are not proposed (i.e., blasting, pile driving, jackhammering). However, to provide information for use in completing the TEIR evaluation, construction-related vibration impacts are evaluated using both PPV and associated VdB criteria. Table 3 shows PPV, approximate VdB and related human reaction and effects on buildings.

Table 3
Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Traffic Vibration Levels

Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effects on Buildings
0.006–0.019	64–74	Range of threshold of perception.	Vibrations unlikely to cause damage of any type.
0.08	87	Vibrations readily perceptible.	Recommended upper level to which ruins and ancient monuments should be subjected.
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities.	Virtually no risk of architectural damage to normal buildings.
0.2	94	Vibrations may begin to annoy people in buildings.	Threshold at which there is a risk of architectural damage to normal dwellings.
0.4–0.6	98-104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges.	Architectural damage and possibly minor structural damage.

Source: Caltrans, April 2020

County of San Diego Guidelines provide construction-related vibration thresholds based on those established by the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment* (September 2018) summarized above. Thus, FTA VdB thresholds are used herein to describe potential vibration impacts. The threshold used for the proposed project is 72 VdB as residences are the only off-Reservation receptors that would be affected by the project.

IMPACT ANALYSIS

METHODOLOGY AND SIGNIFICANCE THRESHOLDS

Construction noise estimates are based upon noise levels reported by the Federal Transit Administration, Office of Planning and Environment, and the distance to nearby sensitive receptors. Reference noise levels from that document were used to estimate noise levels at nearby sensitive receptors based on the applicable noise attenuation rate of 6 dB per doubling of distance (free field propagation of sound attenuation).

The proposed project would be a new use; however, overall traffic volumes are not anticipated to change. The project would accommodate parking needs of existing guests and vendors. However, the project would shift traffic between the West and East Casino Driveways. Whether this would cause an increase in noise levels were based on the difference in volumes using the segment of Willows Road between the two driveways. A doubling of traffic volumes would be required to cause a noticeable increase (3 dBA) in traffic noise. As stated, measured baseline conditions exceed 60 dBA Leq, the normally acceptable exterior sound level for residential properties, along Willows Road. Baseline and with project sound levels were calculated to determine whether project traffic, when added to baseline traffic, would noticeably increase (+3 dBA or greater) the Leq over baseline conditions.

As noted, a noise increase greater than 3 dBA is readily perceptible to the average human ear; and thus, is the level considered a substantial noise increase related to traffic operations. For the purpose of this evaluation, the CNEL are used for traffic noise as it provides a conservative estimate of potential noise levels.

Thresholds of Significance. Based on Appendix B of the *Tribal-State Compact Between the State of California and the Viejas Band of Kumeyaay Indians*, a project on the Reservation would have a significant noise impact if it would:

a) Expose off-reservation persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b) Expose off-reservation persons to excessive ground borne vibration or groundborne noise levels;

c) Cause a substantial permanent increase in ambient noise levels in the off-reservation vicinity of the project; or

d) Cause a substantial temporary or periodic increase in ambient noise levels in the off-reservation vicinity of the project.

a. Would the project expose off-reservation persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The primary noise sources during construction activities would include heavy machinery used in demolition, site preparation, grading/excavation, garage construction and paving. Table 4 provides typical noise levels associated with operation of mobile and stationary construction equipment. As shown, average noise levels associated with the use of heavy equipment can range from 86 to 94 dBA at 25 feet from the source, depending upon the types of equipment in operation at any given time and phase of construction.

Table 4
Typical Maximum Construction Equipment Noise Levels

Equipment Onsite	Typical Maximum Level (dBA) 25 Feet from the Source	Typical Maximum Level (dBA) 50 Feet from the Source	Typical Maximum Level (dBA) 100 Feet from the Source
Air Compressor	86	80	74
Backhoe	86	80	74
Bobcat Tractor	86	80	74
Concrete Mixer	91	85	79
Loader	86	80	74
Bulldozer	91	85	79
Jack Hammer	94	88	82
Pavement Roller	91	85	79
Street Sweeper	88	82	76
Man Lift	81	75	69
Dump Truck	90	84	78
Mobile Crane	89	83	77
Excavator/Scraper	91	85	79

Source: FTA Noise and Vibration Impact Assessment Manual (September 2018), Table 7-1.
Noise levels are based on actual maximum measured noise levels at 50 feet (Lmax).
Noise levels are based on a noise attenuation rate of 6 dBA per doubling of distance.

As stated, the nearest off-reservation receivers to the proposed Project site are located on the south side of Willows Road southeast of the East Casino Driveway intersection. The distance between the site and receivers are approximately 1,100 feet. The noise level used to estimate the maximum sustained noise level that could occur is based on use of a bulldozer as the mobile source reference sound level (Table 4) and a jackhammer as the stationary source reference sound level. Based on a standard noise attenuation rate of 6 dBA per doubling of distance.

Noise levels during mobile equipment operation would attenuate from a high of 85 dBA at 50 feet from the source to 58.2 dBA at 1,100 feet. For stationary equipment with a reference level of 95 dBA (i.e., jackhammer) would attenuate to 68.2 dBA at 1,100 feet. Combined, the two sources would be 68.6 dBA at 1,100 feet. Construction equipment noise would not exceed 75 dBA at the property line of the nearest off-Reservation receivers. The existing hotel buildings will provide some screening for construction noise to the west and south. Existing traffic operation on Willows Road will also mask construction noise. Actual construction noise levels will fluctuate throughout the day depending on the type and location of equipment used and whether multiple pieces of equipment are operating simultaneously in the same area.

Temporary construction noise levels would be less than significant; thus, no mitigation would be required.

b. Would the project expose off-reservation persons to excessive ground borne vibration or groundborne noise levels?

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 for many people. As stated, 0.2 PPV (94 VdB) is the vibration level at which damage to residential structures can occur and considered annoying to most people exposed to the vibration energy (FTA 2018).

Heavy impact construction methods that could generate enough vibration to damage buildings proximal to the project site (i.e., pile driving, rock breaking, drilling, blasting) would not be required for the project. However, both PPV and the related VdB are used to address construction vibration and related effects to people residing in adjacent residences. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible. The PPV and accompanying VdB level associated with common construction equipment is shown in Table 5.

Construction activity on the project site would be temporary and vibration events would be transitory occuring only during equipment pass bys. Using vibration levels associated with a large bulldozer the piece of equipment with the highest vibration level, as a worst case scenario, typical groundborne vibration could reach 87 VdB at 25 feet, 81 VdB at 50 feet, and 75 VdB at 100 feet, based on the FTA *Transit Noise and Vibration Impact Assessment* (September 2018) as shown in Table 5. As stated, the closest residence off-Reservation residence is approximately 1,100 feet to the southeast. Vibration levels may reach 63 VdB (0.008 PPV) at 400 feet from the site. As stated, vibration levels in excess of 75 VdB may be perceptible. Vibration would not be perceptible at the nearest off-Reservation receivers. Thus, sustained equipment operation is not expected to occur proximal to this location nor would the PPV reach levels that may cause structural damage in the residential building. Thus, temporary vibration impacts would be **less than significant**.

Table 5
Vibration Source Levels for Construction Equipment

	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58
Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, September 2018.		

c. Would the project cause a substantial permanent increase in ambient noise levels in the off-reservation vicinity of the project?

Traffic Noise. Traffic is the primary noise source associated with the proposed project post-construction. As stated, the proposed project would not add to existing traffic volumes. Rather, the project would shift volumes between the West Casino Driveway to the East Casino Driveway. The majority of visitor trips would continue to enter the site from west. The project is expected to add approximately 38 weekend peak hour trips to westbound Willows Road west of the East Casino Driveway and 79 weekend peak hour trips to eastbound Willows Road west of the East Casino Driveway. The change in traffic volumes may cause or contribute to an increase in traffic-related noise on and adjacent to the project site.

Noise levels at the nearest off-Reservation receiver (5301 Willows Road) was estimated using the Traffic Noise Model Version 2.5 (U.S. Department of Transportation, Federal Highway Administration [FHWA], April 2004) (see Appendix A). TNM was calibrated to within 2 dBA of the noise measurements taken in the field using traffic volumes counted during noise monitoring. Roadway noise levels were estimated for a weekend day peak hour, the period of time when the heaviest volumes would occur. Average daily trips were obtained from traffic data provided by Linscott, Law and Greenspan (April 2022). The stop control located at the intersection of Willows Road and East Casino Driveway was included in the modeling calculations to account for speeds approaching and departing the intersection. The closest off-Reservation receiver to the Project is located approximately 870 feet east of the Willows Road/East Casino Driveway intersection. The existing modeled noise level at this location is 62.8 dBA (Appendix A).

The increased traffic volumes on the Willow Road segment fronting the casino/hotel gaming complex would be west of the nearest off-Reservation receiver. Therefore, increased volumes added to this segment would not effect on traffic noise at the receiver to the east. Modeled noise levels with adjustments to traffic volumes would remain 62.8 dBA.

Further, off-Reservation volumes west of the Reservation boundary would not change from baseline conditions. Therefore, traffic noise associated with the proposed Project would have no impact to baseline noise levels at the nearest off-Reservation receivers.

d. Would the project cause a substantial temporary or periodic increase in ambient noise levels in the off-reservation vicinity of the project.

As stated herein, temporary construction and vibration associated with the proposed Project would attenuate to below the County of San Diego standards at the northern property line of the nearest off-Reservation receiver located at 5301 Willows Road, southeast of the site. Thus, there would be no adverse effect associated with construction noise and vibration. With respect to operation, changes in traffic distribution associated with the proposed Project would increase peak hour trips on Willows Road west of the East Casino Driveway intersection. However, this would have no effect on traffic noise levels at off-Reservation receivers east of the intersection because of the distance between the Willows Road and East Casino Driveway intersection and the nearest receiver. Thus, the project would not cause or contribute to a temporary or periodic increase in noise levels at off-Reservation vicinity of the project.

REFERENCES

California Department of Transportation, *Vibration Guidance Manual*, April 2020

County of San Diego Code, Sections 34.404, 34.408 and 34.409 Noise Standards.

County of San Diego Guidelines for Determining Significance - Noise, January, 2009.

Federal Highway Administration. *Roadway Construction Noise Model. 2006*. Users Guide Table 1.

Federal Highway Administration, Transportation Noise Model Version 2.5, 2004.

Federal Transit Administration. *Transit Noise and Vibration Impact Assessment*. September 2018

Linscott, Law and Greenspan Traffic Engineers, Inc. Traffic Volumes Estimates, April 2022.

Appendix A

Transportation Noise Model Files

FIELD NOISE MEASUREMENT DATA

Project Name: VILLAS PARKING STRUCTURE Page 1 of

Project #: Day / Date My Name.

Sound Level Meter	Calibrator	Weather Meter
Model #: Rion 1L	Model #	Model # Serial #
Serial #	Serial #	
Weighting: (A) / C / Flat	Pre-Test: dBA SPL	Terrain: Hard / Soft / (Mixed)
Response: (Slow) / Fast / Impl	Post-Test: dBA SPL	Topo: (Flat) / Hilly (describe)
Windscreen: (Yes) / No		Wind: (Steady) / Gusty

ID	Time Start	Time Stop	Leq	Lmin	Lmax	L10	L50	L90	Wind Spd/ Dir (mph)	Temp (°F)	RH (%)	Bar Psr (in Hg)	Cloud Cover (%)
1	7:25	7:40	56.0	44.3	74.0				5-10 E				0
2	7:50	8:05	63.7	50.5	84.8				10-15 E				0

Roadway Name: PARKING STRUCTURE	WILLOWS	Location(s) / GPS Reading(s):
Speed (post/obs)	15	35
Number of Lanes	2	4
Width (pave/row)	24	48
1- or 2- way	2	2
Grade	NO	NO
Bus Stops	NO	NO
Stoplights	NO	YES
Street Parking	NO	43
Automobiles	12	5
Medium Trucks	1	0
Heavy Trucks	1	

Background traffic, birds construction equipment physical plant noise, gusty wind | CONSTRUCTION EQUIPMENT ACROSS THE STREET & GUSTY WIND CONTRIBUTE TO AMBIENT CONDITIONS

Other Noise Sources: distant (aircraft) / (speedway traffic) trains / landscaping / rustling leaves / children playing / dogs barking / birds vocalizing

Notes and Sketches on Reverse

Monitoring Site	1
Start Date	3/23/2022
Start Time	7:22:58 AM
End Time	7:37:57 AM
Duration	00:14:59
Meas Mode	Single
Input Range	High
Input Type	Mic
SPL Time Weight	Slow
LN% Freq Weight	dBA
Overload	No
UnderRange	Yes
Sensitivity	18.44mV/Pa

LZeq	85.8
LCeq	79.1
LAeq	56.0
LZSmax	104.7
LCSmax	98.5
LASmax	74.0
LZSmin	61.2
LCSmin	57.6
LASmin	44.3
LZE	115.3
LCE	108.6
LAE	85.5
LZpeak	117.7
LCpeak	111.0
LApeak	92.3
1%	68.1
2%	63.6
5%	60.7
8%	58.7
10%	57.6
25%	52.9
50%	49.7
90%	46.1
95%	45.6
99%	44.9

Monitoring Site	2
Start Date	3/23/2022
Start Time	7:47:24 AM
End Time	8:02:23 AM
Duration	00:14:59
Meas Mode	Single
Input Range	High
Input Type	Mic
SPL Time Weight	Slow
LN% Freq Weight	dBA
Overload	No
UnderRange	No
Sensitivity	18.44mV/Pa

LZeq	86.5
LCeq	81.0
LAeq	63.7
LZSmax	104.3
LCSmax	98.1
LASmax	84.8
LZSmin	66.9
LCSmin	64.0
LASmin	50.5
LZE	116.0
LCE	110.5
LAE	93.2
LZpeak	118.4
LCpeak	111.2
LApeak	100.2
1%	72.8
2%	69.9
5%	65.9
8%	64.7
10%	64.2
25%	61.9
50%	59.8
90%	55.0
95%	53.7
99%	51.7

<Organization?>
29 April 2022
<Analysis By?>
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: Viejas Parking Structure
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
29 April 2022
<Analysis By?>
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: Viejas Parking Structure
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

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Appendix

D

Traffic Assessment

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BRG Consulting, Inc.
Environmental Planning and Impact Assessment
Land Use Planning and Permitting

304 Ivy Street
San Diego, CA 92101
619-298-7127 x 101
erich@brginc.net

Memo

To: File	**Date:** June 16, 2022
	Job No. 2203
Cc:	**By:** Erich Lathers

Subject: Viejas Casino East Garage

- **Description:**

I spoke with Messrs. John Boarman of Linscott, Law & Greenspan and Ryan Birdseye of Birdseye Planning Group regarding the change in design of the Viejas Casino East Garage from 5-level to 7-level while accommodating essentially the same number of parking spaces and within the same area of the Reservation. Both stated that such a change would not have any meaningful effect on the analysis or conclusions presented in their respective Technical Reports.

LINSCOTT LAW & GREENSPAN engineers

Engineers & Planners
Traffic
Transportation
Parking

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Pasadena
Irvine
San Diego
Woodland Hills

April 29, 2022

Mr. Erich Lathers
BRG Consulting, Inc.
304 Ivy Street
San Diego, CA 92101

LLG Reference: 3-22-3546

Subject: **Viejas Casino and Resort Parking Structure Project**
Alpine, CA

Dear Mr. Lathers:

Linscott, Law and Greenspan, Engineers (LLG) has prepared this transportation assessment for the Viejas Casino and Resort proposed parking structure. This letter report evaluates the traffic operations under existing and future conditions at the two main access driveways serving the Viejas Casino and Resort.

INTRODUCTION

The project site is located within the Viejas Indian Reservation, at 5000 Willows Road, in the unincorporated San Diego County Community of Alpine. ***Figure 1*** shows the Vicinity Map. The proposed parking structure would be located northeast of the casino as shown on the aerial map on the following page.

The proposed parking structure would be 5 stories with approximately 2,485 parking spaces. The parking structure would be built in an area currently used for surface parking. The development of this structure would result in a lost of 397 surface spaces, which would result in a net gain of 2,088 parking spaces. The proposed parking structure will provide convenience to the casino and hotel guests. Other existing parking lots will continue to be available for the use of employee parking, Viejas vehicle parking, guest overflow parking, and private tribal events.

The proposed parking structure is not being provided to correct an existing parking deficiency as there is a large supply of parking even on busy days. Rather, it will improve the inefficient parking layout of the site. Therefore, the parking structure will not generate new trips to the casino and resort but rather will result in a redistribution of traffic with the increase in attraction to the proposed parking structure easily accessible at the eastern driveway. Hence, the need for this analysis.

Philip M. Linscott, PE (1924-2000)
William A. Law, PE (1921-2018)
Jack M. Greenspan, PE (Ret.)
Paul W. Wilkinson, PE (Ret.)
John P. Keating, PE (Ret.)
David S. Shender, PE
John A. Boarman, PE
Clare M. Look-Jaeger, PE (Ret.)
Richard E. Barretto, PE
Keil D. Maberry, PE
Walter B. Musial, PE
Kalyan C. Yellapu, PE
Dave Roseman, PE
An LG2WB Company Founded 1966



EXISTING CONDITIONS

LLG Engineers conducted traffic counts at the two main access driveways on Saturday, March 19, 2022 and Thursday, March 24, 2022 during the PM peak hours. The AM peak hour was omitted as traffic during that time frame is much less. ***Figure 2*** shows the existing conditions at the two main access driveways. ***Figure 3*** shows the existing Weekday PM and Weekend PM peak hour traffic volumes at the two main access driveways.

AREA TRAFFIC REDISTRIBUTION

The aerial above depicts the existing parking lots. Based on the existing traffic counts, the split among the two driveways is shown to be approximately 80/20 with 80% of vehicles entering/existing via the west driveway.

With the construction of the parking structure, the traffic at the two main access driveways is expected to redistribute. It is assumed that approximately 20% of the traffic at the west driveway will be redistributed to the east driveway due to the attraction of the proposed parking structure.

As explained previously in the Introduction section, while the parking structure will be convenient for patrons, it will not attract new patrons and therefore not generate new traffic. The traffic analyzed would only reflect a redistribution of trips.

Figure 4 shows the reassigned traffic volumes.

CUMULATIVE PROJECTS TRAFFIC

To account for cumulatively generated traffic not associated with the Project, an ambient growth was derived and applied to the existing traffic volumes to obtain Opening Year conditions. Per discussion with the client, the parking structure is proposed to be complete by Year 2023. Therefore, a 2% growth from existing traffic volumes was deemed appropriate.

Figure 5 shows the Opening Year traffic volumes. ***Figure 6*** shows the Opening Year + Parking Structure traffic volumes.

ANALYSIS RESULTS

Table 1 summarizes the operations at the two study area intersections. As shown in *Table 1*, both project driveways are calculated to operate at LOS B or better during the Weekday and Weekend PM peak hours for all scenarios. In the Opening Year + Project scenarios, with redistribution of area traffic, the western driveway is calculated to slightly improve its operation and the eastern driveway is calculated to slightly worsen its operation due to the shift in traffic.

Attachment 1 contains the Existing, Opening Year and Opening Year + Parking Structure peak hour intersection analysis worksheets.

TABLE 1
INTERSECTION OPERATIONS

Intersection	Peak Hour	Traffic Control	Existing		Opening Year		Opening Year + Parking Structure	
			Delay	LOS	Delay	LOS	Delay	LOS
1. Willows Road / West Driveway	Weekday PM	AWSC [a]	9.4	A	9.4	A	9.3	A
	Weekend PM		13.1	B	13.4	B	13.0	B
2. Willows Road / East Driveway	Weekday PM	AWSC [a]	7.9	A	7.9	A	8.1	A
	Weekend PM		9.0	A	9.1	A	9.7	A

Footnotes:
a. All-Way Stop-Controlled intersection. The overall intersection control delay and LOS are reported.

LINSCOTT LAW & GREENSPAN engineers

CONCLUSIONS

The above analysis indicates that with the construction of the new parking structure and the consequent redistribution of traffic, the two main access driveways are calculated to operate at an acceptable LOS B or better during the weekday and weekend PM peak hours with the existing geometry and traffic controls. These intersections are also calculated to operate at LOS B or better with the addition of ambient growth and the parking structure redistribution. Therefore, no improvements are required.

Please let us know if you have any questions. Thank you.

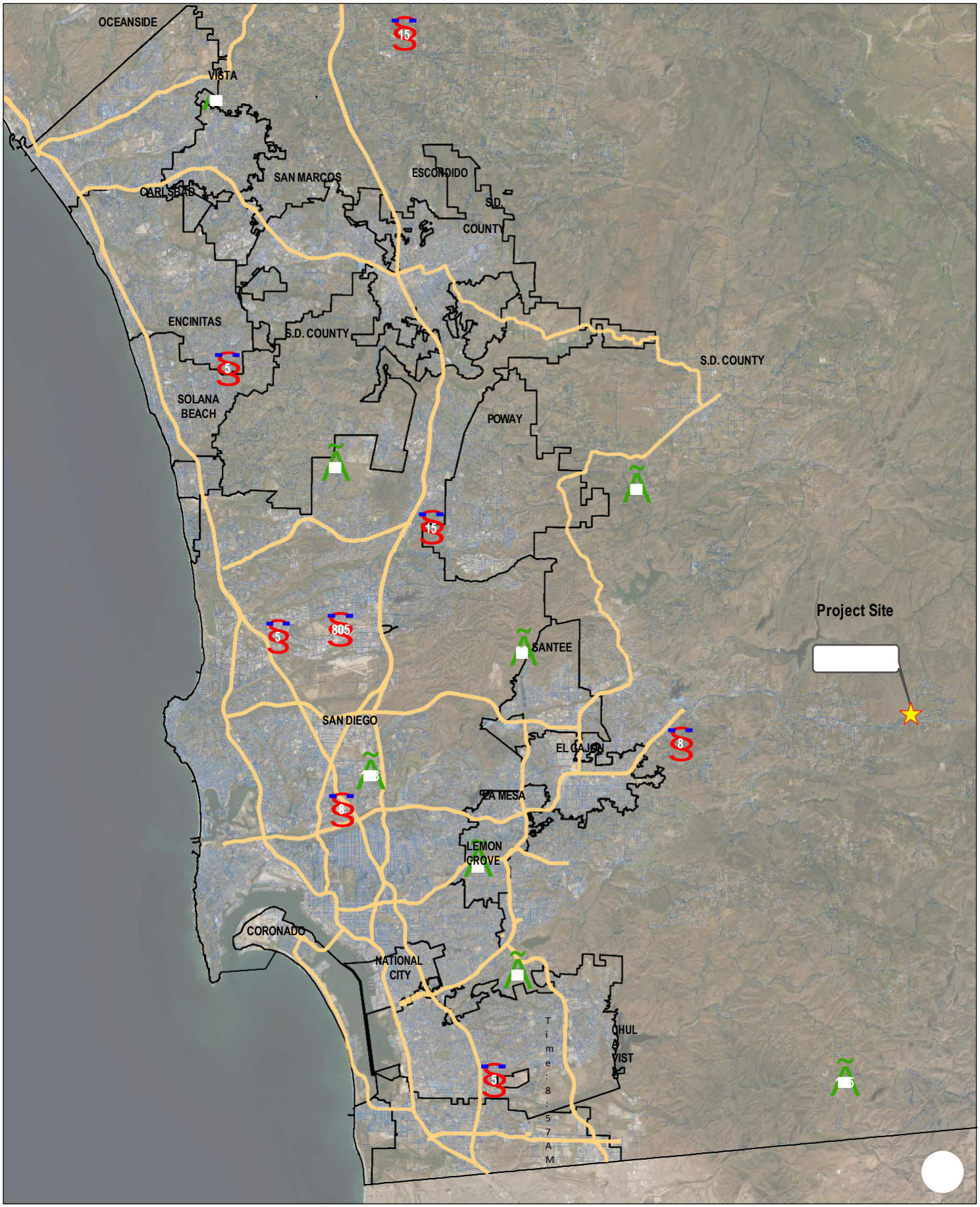
Sincerely,

Linscott, Law & Greenspan, Engineers

John Boarman, P.E.
Principal

Renald Espiritu
Transportation Engineer II

cc: File



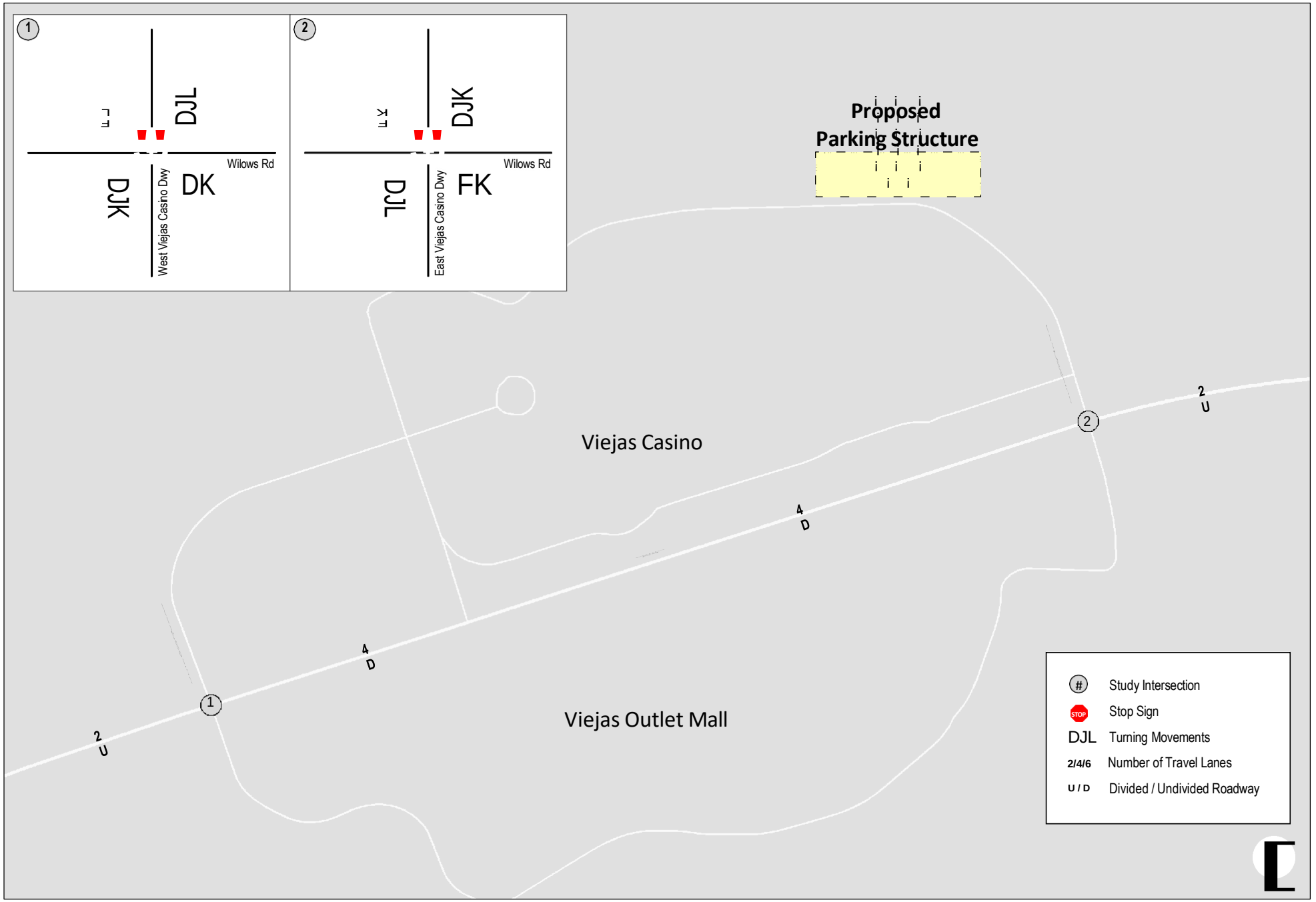
LINSCOTT

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Date: 4/5/2022

Figure 1

Vicinity Map

Viejas Casino and Resort Parking Structure Project



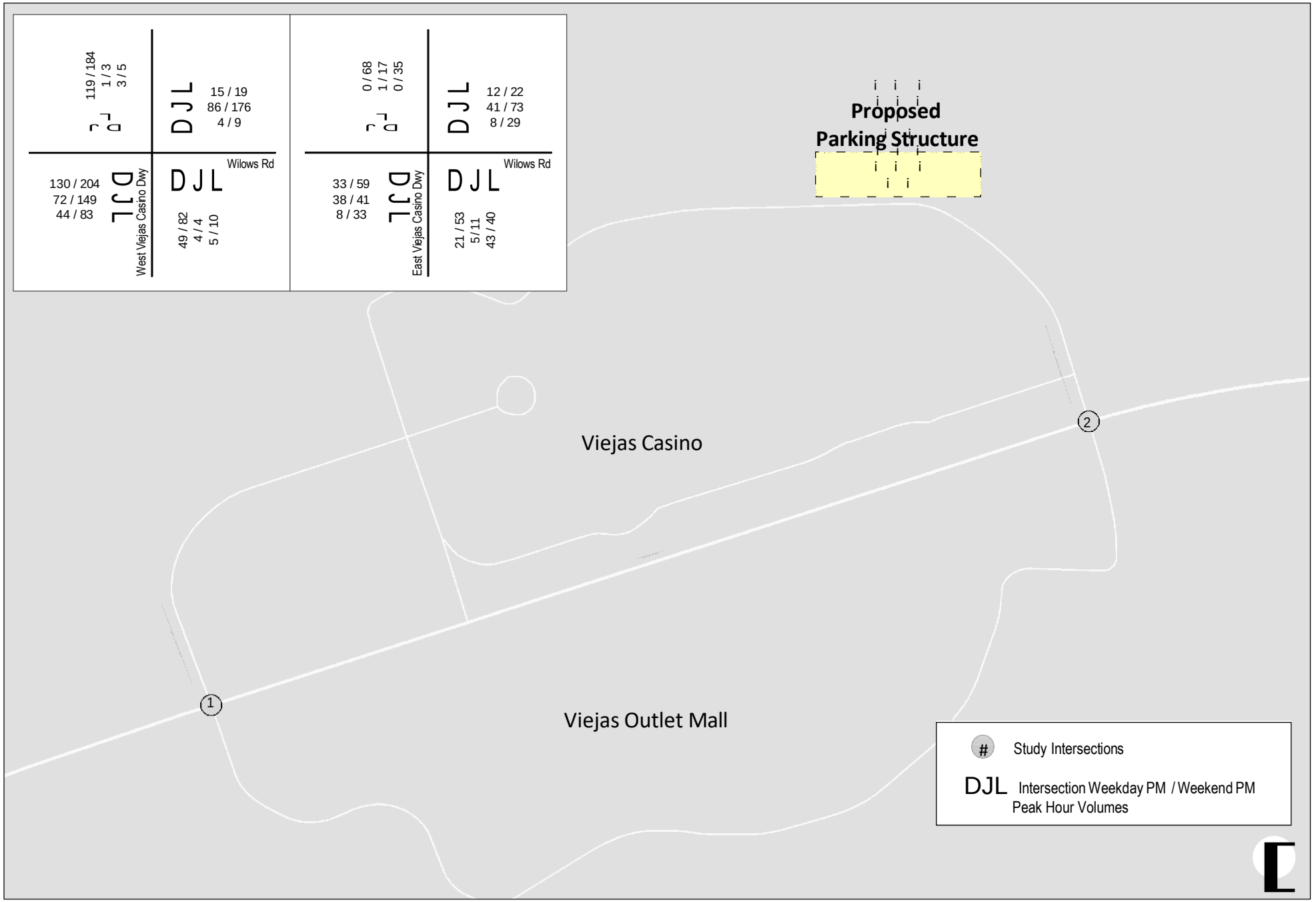
LINSCOTT LAW & GREENSPAN engineers

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Figure 2

Existing Conditions Diagram

Viejas Casino and Resort Parking Structure Project



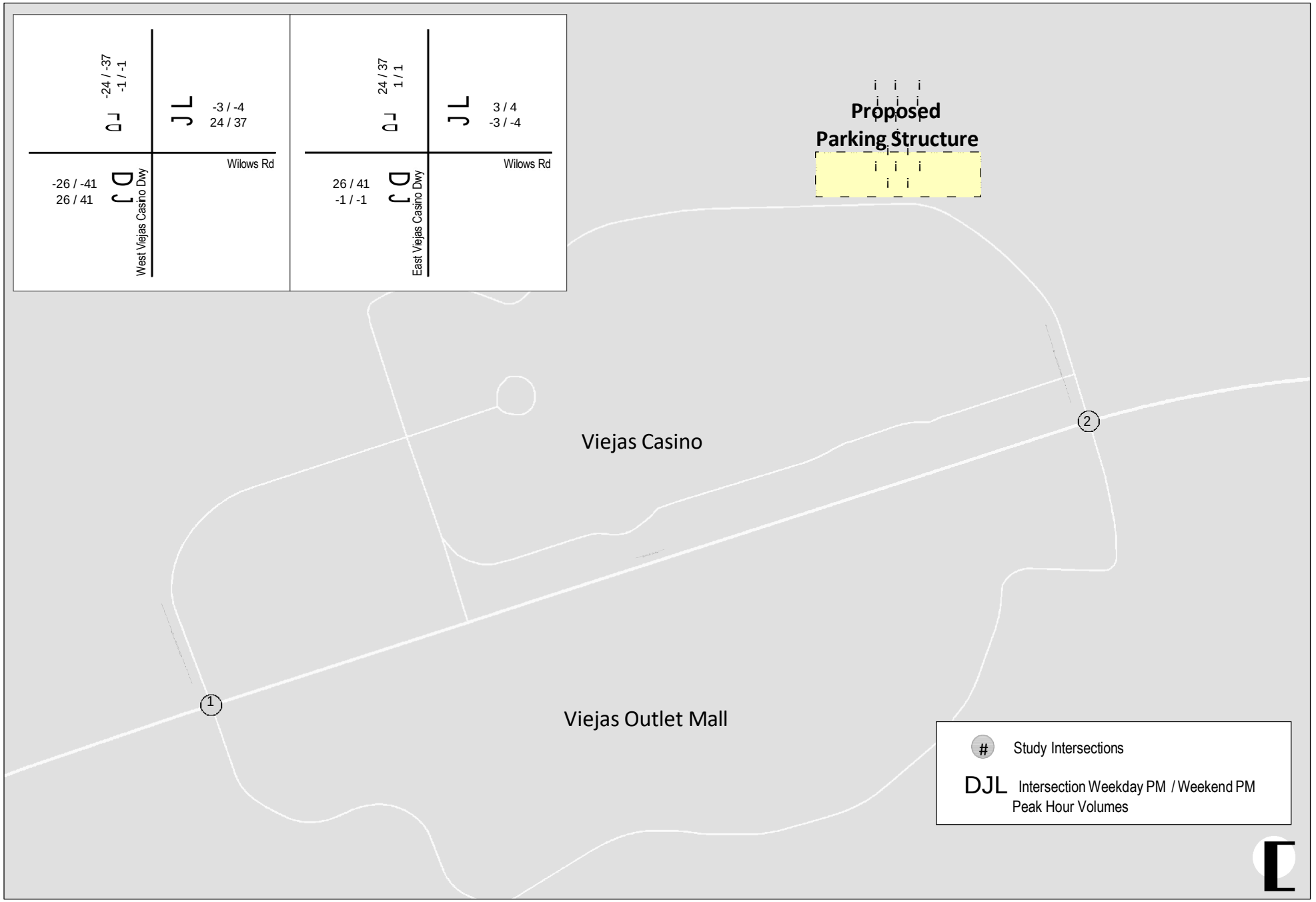
LINSCOTT LAW & GREENSPAN engineers

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Figure 3

Existing Traffic Volumes

Viejas Casino and Resort Parking Structure Project



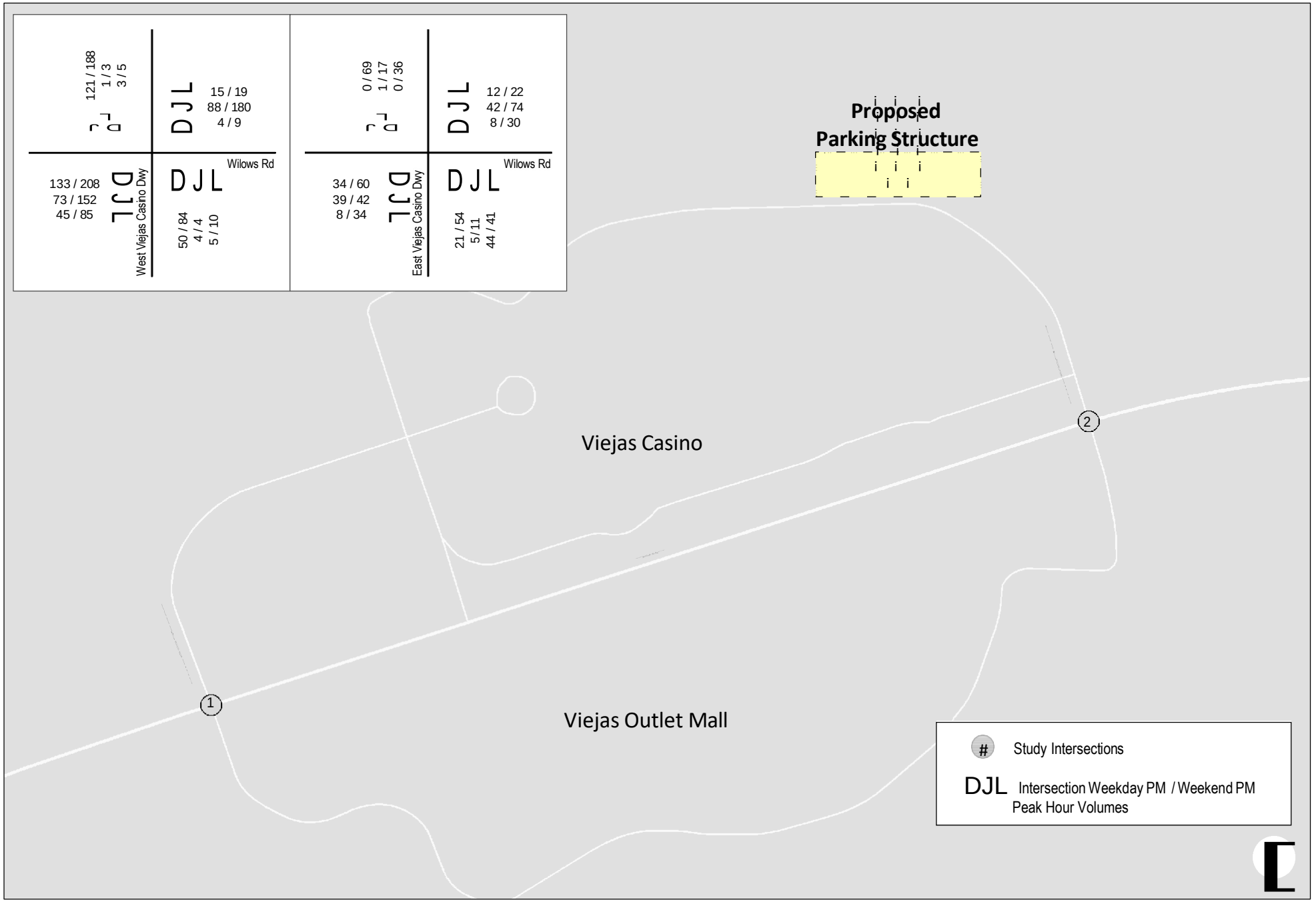
LINSCOTT LAW & GREENSPAN engineers

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Figure 4

Reassigned Traffic Volumes

Viejas Casino and Resort Parking Structure Project



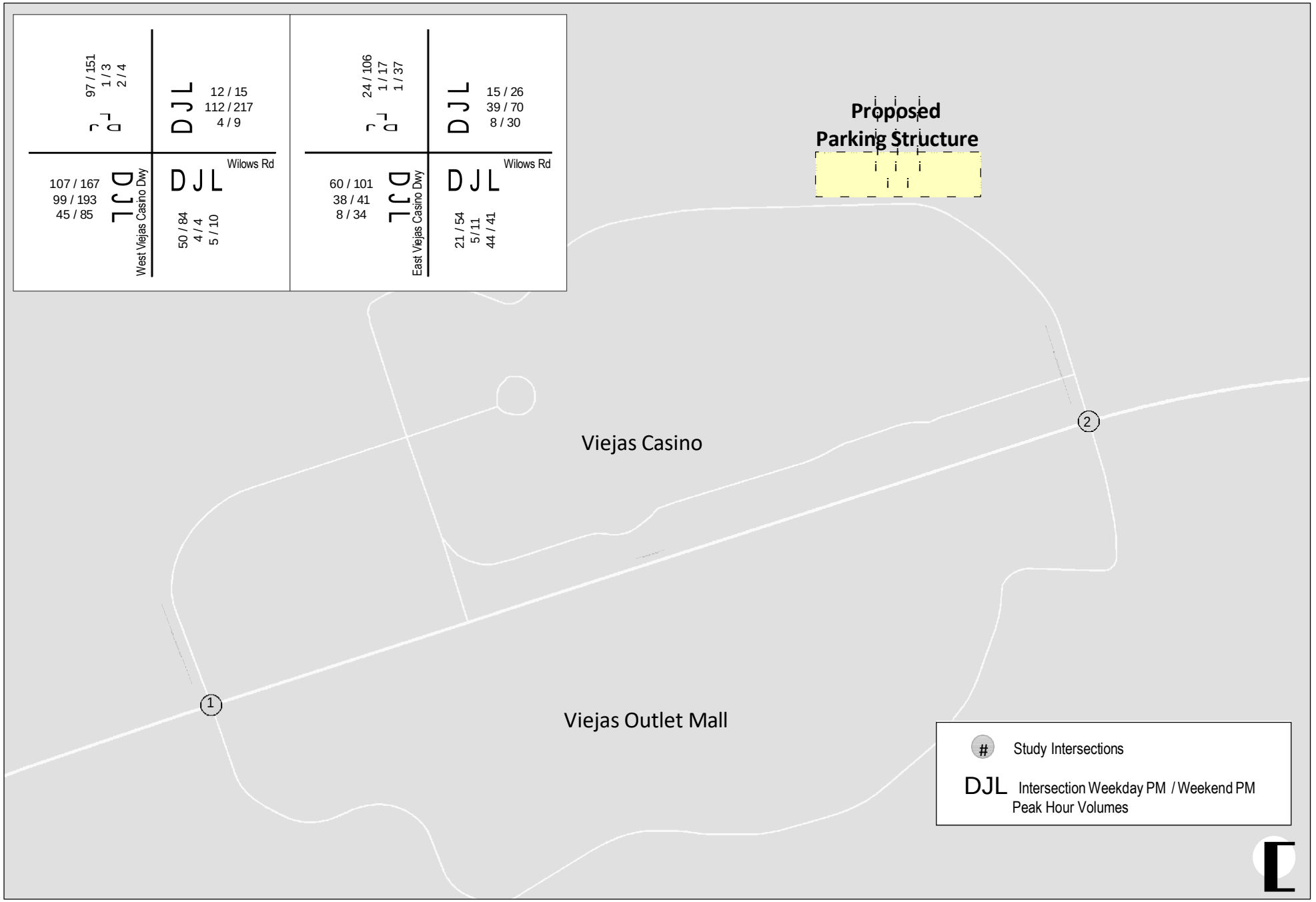
LINSCOTT LAW & GREENSPAN engineers

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Figure 5

Opening Year Traffic Volumes

Viejas Casino and Resort Parking Structure Project



LINSCOTT LAW & GREENSPAN engineers

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Figure 6

Opening Year + Parking Structure Traffic Volumes

Viejas Casino and Resort Parking Structure Project

ATTACHMENT 1

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	130	72	44	4	86	15	49	4	5	3	1	119
Future Vol, veh/h	130	72	44	4	86	15	49	4	5	3	1	119
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	144	80	49	4	96	17	54	4	6	3	1	132
Number of Lanes	1	2	0	1	1	1	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	9.5	9.3	9.6	9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	75%	0%
Vol Thru, %	0%	44%	0%	100%	35%	0%	100%	0%	25%	0%
Vol Right, %	0%	56%	0%	0%	65%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	9	130	48	68	4	86	15	4	119
LT Vol	49	0	130	0	0	4	0	0	3	0
Through Vol	0	4	0	48	24	0	86	0	1	0
RT Vol	0	5	0	0	44	0	0	15	0	119
Lane Flow Rate	54	10	144	53	76	4	96	17	4	132
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.096	0.015	0.236	0.08	0.103	0.008	0.151	0.023	0.008	0.185
Departure Headway (Hd)	6.342	5.452	5.875	5.372	4.917	6.188	5.685	4.981	6.105	5.031
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	561	650	607	662	722	574	625	711	583	707
Service Time	4.132	3.243	3.65	3.147	2.691	3.974	3.47	2.765	3.88	2.805
HCM Lane V/C Ratio	0.096	0.015	0.237	0.08	0.105	0.007	0.154	0.024	0.007	0.187
HCM Control Delay	9.8	8.3	10.5	8.6	8.3	9	9.5	7.9	8.9	9
HCM Lane LOS	A	A	B	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0	0.9	0.3	0.3	0	0.5	0.1	0	0.7

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	38	8	8	41	12	21	5	43	0	1	0
Future Vol, veh/h	33	38	8	8	41	12	21	5	43	0	1	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	49	10	10	53	15	27	6	55	0	1	0
Number of Lanes	1	1	1	1	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	8.1	7.8	7.7	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	89%	0%	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	11%	5%	0%	100%	0%	0%	100%	53%	100%	100%
Vol Right, %	0%	95%	0%	0%	100%	0%	0%	47%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	46	33	38	8	8	27	26	1	1
LT Vol	21	0	33	0	0	8	0	0	0	0
Through Vol	3	3	0	38	0	0	27	14	1	1
RT Vol	0	43	0	0	8	0	0	12	0	0
Lane Flow Rate	30	58	42	49	10	10	35	33	1	1
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.046	0.07	0.064	0.067	0.012	0.016	0.048	0.043	0.001	0.001
Departure Headway (Hd)	5.45	4.343	5.429	4.927	4.226	5.48	4.979	4.651	5.169	3.436
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	659	827	662	729	849	655	722	772	694	1042
Service Time	3.165	2.058	3.143	2.642	1.94	3.195	2.693	2.365	2.89	1.156
HCM Lane V/C Ratio	0.046	0.07	0.063	0.067	0.012	0.015	0.048	0.043	0.001	0.001
HCM Control Delay	8.4	7.4	8.5	8	7	8.3	7.9	7.6	7.9	6.2
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.2	0	0	0.2	0.1	0	0

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	204	149	83	9	176	19	82	4	10	5	3	184
Future Vol, veh/h	204	149	83	9	176	19	82	4	10	5	3	184
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	234	171	95	10	202	22	94	5	11	6	3	211
Number of Lanes	1	2	0	1	1	1	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	13	13.7	12.3	12.9
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	62%	0%
Vol Thru, %	0%	29%	0%	100%	37%	0%	100%	0%	38%	0%
Vol Right, %	0%	71%	0%	0%	63%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	14	204	99	133	9	176	19	8	184
LT Vol	82	0	204	0	0	9	0	0	5	0
Through Vol	0	4	0	99	50	0	176	0	3	0
RT Vol	0	10	0	0	83	0	0	19	0	184
Lane Flow Rate	94	16	234	114	152	10	202	22	9	211
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.207	0.031	0.451	0.204	0.253	0.022	0.396	0.038	0.019	0.374
Departure Headway (Hd)	7.923	6.916	6.927	6.42	5.976	7.558	7.05	6.338	7.486	6.469
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	455	520	516	554	595	476	514	568	481	560
Service Time	5.635	4.628	4.725	4.217	3.773	5.258	4.75	4.038	5.186	4.169
HCM Lane V/C Ratio	0.207	0.031	0.453	0.206	0.255	0.021	0.393	0.039	0.019	0.377
HCM Control Delay	12.7	9.8	15.4	10.9	10.8	10.4	14.3	9.3	10.3	13
HCM Lane LOS	B	A	C	B	B	B	B	A	B	B
HCM 95th-tile Q	0.8	0.1	2.3	0.8	1	0.1	1.9	0.1	0.1	1.7

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	41	33	29	73	22	53	11	40	35	17	68
Future Vol, veh/h	59	41	33	29	73	22	53	11	40	35	17	68
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	50	40	35	89	27	65	13	49	43	21	83
Number of Lanes	1	1	1	1	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	9.1	9	9.1	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	91%	0%	100%	0%	0%	100%	0%	0%	80%	0%
Vol Thru, %	9%	12%	0%	100%	0%	0%	100%	53%	20%	11%
Vol Right, %	0%	88%	0%	0%	100%	0%	0%	47%	0%	89%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	46	59	41	33	29	49	46	44	77
LT Vol	53	0	59	0	0	29	0	0	35	0
Through Vol	6	6	0	41	0	0	49	24	9	9
RT Vol	0	40	0	0	33	0	0	22	0	68
Lane Flow Rate	71	55	72	50	40	35	59	57	53	93
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.122	0.078	0.123	0.078	0.055	0.061	0.094	0.084	0.089	0.131
Departure Headway (Hd)	6.147	5.078	6.154	5.651	4.945	6.18	5.677	5.342	6.07	5.045
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	579	698	578	628	716	575	626	664	586	703
Service Time	3.933	2.864	3.942	3.438	2.732	3.967	3.463	3.128	3.853	2.828
HCM Lane V/C Ratio	0.123	0.079	0.125	0.08	0.056	0.061	0.094	0.086	0.09	0.132
HCM Control Delay	9.8	8.3	9.8	8.9	8	9.4	9.1	8.6	9.5	8.6
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.4

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	133	73	45	4	88	15	50	4	5	3	1	121
Future Vol, veh/h	133	73	45	4	88	15	50	4	5	3	1	121
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	148	81	50	4	98	17	56	4	6	3	1	134
Number of Lanes	1	2	0	1	1	1	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	9.6	9.3	9.7	9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	75%	0%
Vol Thru, %	0%	44%	0%	100%	35%	0%	100%	0%	25%	0%
Vol Right, %	0%	56%	0%	0%	65%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	9	133	49	69	4	88	15	4	121
LT Vol	50	0	133	0	0	4	0	0	3	0
Through Vol	0	4	0	49	24	0	88	0	1	0
RT Vol	0	5	0	0	45	0	0	15	0	121
Lane Flow Rate	56	10	148	54	77	4	98	17	4	134
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.098	0.015	0.242	0.081	0.106	0.008	0.155	0.023	0.008	0.189
Departure Headway (Hd)	6.367	5.477	5.892	5.389	4.932	6.212	5.708	5.004	6.127	5.052
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	558	646	606	660	720	572	623	707	580	703
Service Time	4.162	3.273	3.668	3.165	2.708	4	3.496	2.791	3.907	2.832
HCM Lane V/C Ratio	0.1	0.015	0.244	0.082	0.107	0.007	0.157	0.024	0.007	0.191
HCM Control Delay	9.9	8.4	10.6	8.6	8.3	9.1	9.6	7.9	9	9
HCM Lane LOS	A	A	B	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0	0.9	0.3	0.4	0	0.5	0.1	0	0.7

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	39	8	8	42	12	21	5	44	0	1	0
Future Vol, veh/h	34	39	8	8	42	12	21	5	44	0	1	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	50	10	10	54	15	27	6	56	0	1	0
Number of Lanes	1	1	1	1	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	8.1	7.9	7.7	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	89%	0%	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	11%	5%	0%	100%	0%	0%	100%	54%	100%	100%
Vol Right, %	0%	95%	0%	0%	100%	0%	0%	46%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	47	34	39	8	8	28	26	1	1
LT Vol	21	0	34	0	0	8	0	0	0	0
Through Vol	3	3	0	39	0	0	28	14	1	1
RT Vol	0	44	0	0	8	0	0	12	0	0
Lane Flow Rate	30	60	44	50	10	10	36	33	1	1
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.046	0.072	0.066	0.069	0.012	0.016	0.05	0.043	0.001	0.001
Departure Headway (Hd)	5.462	4.354	5.434	4.932	4.231	5.488	4.987	4.663	5.182	3.448
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	658	825	661	728	848	654	720	770	692	1037
Service Time	3.176	2.068	3.15	2.649	1.947	3.205	2.703	2.38	2.904	1.171
HCM Lane V/C Ratio	0.046	0.073	0.067	0.069	0.012	0.015	0.05	0.043	0.001	0.001
HCM Control Delay	8.4	7.4	8.5	8	7	8.3	8	7.6	7.9	6.2
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.2	0	0	0.2	0.1	0	0

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	208	152	85	9	180	19	84	4	10	5	3	188
Future Vol, veh/h	208	152	85	9	180	19	84	4	10	5	3	188
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	239	175	98	10	207	22	97	5	11	6	3	216
Number of Lanes	1	2	0	1	1	1	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	13.4	14	12.5	13.3
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	62%	0%
Vol Thru, %	0%	29%	0%	100%	37%	0%	100%	0%	38%	0%
Vol Right, %	0%	71%	0%	0%	63%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	14	208	101	136	9	180	19	8	188
LT Vol	84	0	208	0	0	9	0	0	5	0
Through Vol	0	4	0	101	51	0	180	0	3	0
RT Vol	0	10	0	0	85	0	0	19	0	188
Lane Flow Rate	97	16	239	116	156	10	207	22	9	216
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.215	0.031	0.471	0.213	0.266	0.022	0.409	0.039	0.019	0.393
Departure Headway (Hd)	8.001	6.994	7.087	6.579	6.134	7.624	7.115	6.403	7.556	6.539
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	449	512	512	547	588	470	507	559	475	551
Service Time	5.745	4.737	4.801	4.293	3.848	5.363	4.854	4.142	5.276	4.259
HCM Lane V/C Ratio	0.216	0.031	0.467	0.212	0.265	0.021	0.408	0.039	0.019	0.392
HCM Control Delay	12.9	10	16	11.1	11.1	10.5	14.7	9.4	10.4	13.4
HCM Lane LOS	B	A	C	B	B	B	B	A	B	B
HCM 95th-tile Q	0.8	0.1	2.5	0.8	1.1	0.1	2	0.1	0.1	1.9

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	42	34	30	74	22	54	11	41	36	17	69
Future Vol, veh/h	60	42	34	30	74	22	54	11	41	36	17	69
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	51	41	37	90	27	66	13	50	44	21	84
Number of Lanes	1	1	1	1	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	9.2	9	9.1	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	91%	0%	100%	0%	0%	100%	0%	0%	81%	0%
Vol Thru, %	9%	12%	0%	100%	0%	0%	100%	53%	19%	11%
Vol Right, %	0%	88%	0%	0%	100%	0%	0%	47%	0%	89%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	47	60	42	34	30	49	47	45	78
LT Vol	54	0	60	0	0	30	0	0	36	0
Through Vol	6	6	0	42	0	0	49	25	9	9
RT Vol	0	41	0	0	34	0	0	22	0	69
Lane Flow Rate	73	57	73	51	41	37	60	57	54	95
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.124	0.08	0.125	0.081	0.057	0.063	0.095	0.085	0.092	0.133
Departure Headway (Hd)	6.168	5.096	6.174	5.67	4.965	6.201	5.697	5.365	6.094	5.066
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	576	695	576	626	713	573	623	661	583	700
Service Time	3.96	2.888	3.965	3.461	2.755	3.994	3.49	3.157	3.88	2.851
HCM Lane V/C Ratio	0.127	0.082	0.127	0.081	0.058	0.065	0.096	0.086	0.093	0.136
HCM Control Delay	9.8	8.3	9.9	9	8.1	9.4	9.1	8.7	9.5	8.6
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.5

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	107	99	45	4	112	12	50	4	5	2	1	97
Future Vol, veh/h	107	99	45	4	112	12	50	4	5	2	1	97
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	119	110	50	4	124	13	56	4	6	2	1	108
Number of Lanes	1	2	0	1	1	1	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	9.2	9.6	9.6	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	67%	0%
Vol Thru, %	0%	44%	0%	100%	42%	0%	100%	0%	33%	0%
Vol Right, %	0%	56%	0%	0%	58%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	9	107	66	78	4	112	12	3	97
LT Vol	50	0	107	0	0	4	0	0	2	0
Through Vol	0	4	0	66	33	0	112	0	1	0
RT Vol	0	5	0	0	45	0	0	12	0	97
Lane Flow Rate	56	10	119	73	87	4	124	13	3	108
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.098	0.015	0.194	0.109	0.119	0.008	0.194	0.018	0.006	0.153
Departure Headway (Hd)	6.362	5.473	5.869	5.366	4.96	6.127	5.624	4.921	6.134	5.101
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	559	648	608	664	717	580	633	720	580	697
Service Time	4.149	3.26	3.639	3.136	2.73	3.906	3.403	2.699	3.91	2.877
HCM Lane V/C Ratio	0.1	0.015	0.196	0.11	0.121	0.007	0.196	0.018	0.005	0.155
HCM Control Delay	9.8	8.3	10.1	8.8	8.4	9	9.8	7.8	8.9	8.8
HCM Lane LOS	A	A	B	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0	0.7	0.4	0.4	0	0.7	0.1	0	0.5

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	38	8	8	39	15	21	5	44	1	1	24
Future Vol, veh/h	60	38	8	8	39	15	21	5	44	1	1	24
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	49	10	10	50	19	27	6	56	1	1	31
Number of Lanes	1	1	1	1	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	8.5	8	7.9	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	89%	0%	100%	0%	0%	100%	0%	0%	67%	0%
Vol Thru, %	11%	5%	0%	100%	0%	0%	100%	46%	33%	2%
Vol Right, %	0%	95%	0%	0%	100%	0%	0%	54%	0%	98%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	47	60	38	8	8	26	28	2	25
LT Vol	21	0	60	0	0	8	0	0	1	0
Through Vol	3	3	0	38	0	0	26	13	1	1
RT Vol	0	44	0	0	8	0	0	15	0	24
Lane Flow Rate	30	60	77	49	10	10	33	36	2	31
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.047	0.075	0.118	0.068	0.012	0.016	0.048	0.048	0.003	0.04
Departure Headway (Hd)	5.619	4.511	5.527	5.025	4.323	5.649	5.148	4.771	5.618	4.599
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	639	795	650	714	829	635	697	751	638	779
Service Time	3.339	2.231	3.249	2.748	2.045	3.373	2.871	2.495	3.344	2.325
HCM Lane V/C Ratio	0.047	0.075	0.118	0.069	0.012	0.016	0.047	0.048	0.003	0.04
HCM Control Delay	8.6	7.6	9	8.1	7.1	8.5	8.1	7.7	8.4	7.5
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.4	0.2	0	0	0.2	0.2	0	0.1

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	167	193	85	9	217	15	84	4	10	4	3	151
Future Vol, veh/h	167	193	85	9	217	15	84	4	10	4	3	151
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	192	222	98	10	249	17	97	5	11	5	3	174
Number of Lanes	1	2	0	1	1	1	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	12.3	15.1	12.4	12.3
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	57%	0%
Vol Thru, %	0%	29%	0%	100%	43%	0%	100%	0%	43%	0%
Vol Right, %	0%	71%	0%	0%	57%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	14	167	129	149	9	217	15	7	151
LT Vol	84	0	167	0	0	9	0	0	4	0
Through Vol	0	4	0	129	64	0	217	0	3	0
RT Vol	0	10	0	0	85	0	0	15	0	151
Lane Flow Rate	97	16	192	148	172	10	249	17	8	174
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.213	0.031	0.369	0.264	0.287	0.021	0.474	0.029	0.017	0.318
Departure Headway (Hd)	7.956	6.949	6.925	6.418	6.015	7.454	6.946	6.235	7.589	6.602
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	454	518	516	555	592	483	521	578	474	548
Service Time	5.665	4.658	4.723	4.216	3.812	5.154	4.646	3.935	5.292	4.302
HCM Lane V/C Ratio	0.214	0.031	0.372	0.267	0.291	0.021	0.478	0.029	0.017	0.318
HCM Control Delay	12.8	9.9	13.8	11.5	11.3	10.3	15.7	9.1	10.4	12.4
HCM Lane LOS	B	A	B	B	B	B	C	A	B	B
HCM 95th-tile Q	0.8	0.1	1.7	1.1	1.2	0.1	2.5	0.1	0.1	1.4

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	101	41	34	30	70	26	54	11	41	37	17	106
Future Vol, veh/h	101	41	34	30	70	26	54	11	41	37	17	106
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	123	50	41	37	85	32	66	13	50	45	21	129
Number of Lanes	1	1	1	1	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	10.1	9.4	9.6	9.5
HCM LOS	B	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	91%	0%	100%	0%	0%	100%	0%	0%	81%	0%
Vol Thru, %	9%	12%	0%	100%	0%	0%	100%	47%	19%	7%
Vol Right, %	0%	88%	0%	0%	100%	0%	0%	53%	0%	93%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	47	101	41	34	30	47	49	46	115
LT Vol	54	0	101	0	0	30	0	0	37	0
Through Vol	6	6	0	41	0	0	47	23	9	9
RT Vol	0	41	0	0	34	0	0	26	0	106
Lane Flow Rate	73	57	123	50	41	37	57	60	55	140
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.132	0.086	0.22	0.082	0.06	0.067	0.096	0.095	0.098	0.206
Departure Headway (Hd)	6.547	5.474	6.439	5.934	5.227	6.587	6.082	5.709	6.374	5.319
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	549	656	558	605	686	545	590	628	563	676
Service Time	4.274	3.201	4.167	3.662	2.955	4.317	3.811	3.438	4.1	3.045
HCM Lane V/C Ratio	0.133	0.087	0.22	0.083	0.06	0.068	0.097	0.096	0.098	0.207
HCM Control Delay	10.3	8.7	11	9.2	8.3	9.8	9.5	9	9.8	9.4
HCM Lane LOS	B	A	B	A	A	A	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0.8	0.3	0.2	0.2	0.3	0.3	0.3	0.8

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