FINAL Tribal Environmental Evaluation Jamul Indian Village Gaming Development Project





Volume I

January 2013

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ACRONYMS

Α	
AB	- Assembly Bill
AIRFA	- American Indian Religious Freedom Act
ALS	- Advanced Life Support
AMR	- American Medical Services
AMSL	- above mean sea level
APCD	- Air Pollution Control District
ARB	- California Air Resources Board
р	
B	
BACI	- Best Available Control Technology
BIA	- Bureau of Indian Affairs
BMPs	- best management practices
BOD	- biochemical oxygen demand
С	
CAAOS	- California Ambient Air Quality Standards
CalTrans	- California Department of Transportation
CBC	- California Building Code
CCR	- California Code of Regulations
CDF	- California Department of Forestry and Fire Protection
CDFW	- California Department of Fish and Wildlife
CEC	- California Electrical Code
CERCLA	- Comprehensive Environmental Response. Compensation Liability Act
CERFA	- Community Environmental Response Facilitation Act
CEO	- Council on Environmental Quality
CEOA	- California Environmental Quality Act
CESA	- California Endangered Species Act
CFC	- California Fire Code
CHP	- California Highway Patrol
CH_4	- Methane
CIE2	- Cieneba loam
CIWMP	- County of San Diego Integrated Waste Management Plan
CkA	- Chino silt loam
CMC	- California Mechanical Code
CmE2	- Cieneba rocky loam
CmrG	- Cieneba very rocky coarse sandy loam
CNDD	- California Natural Diversity Database
CNEL	- Community Noise Equivalent Level
CNPS	- California Native Plant Society
СО	- carbon monoxide

CO_2	- carbon dioxide
CO _{2e}	- carbon dioxide equivalent
COSE	- Conservation and Open Space Element
CPC	- California Plumbing Code
CRHR	- California Register of Historic Places
CSE	- countywide sitting element
CWA	- Clean Water Act

D

DaE, Da	aD -	Diablo clay
dBA	-	decibels
DcD	-	Diablo-Urban land complex
DHS	-	California Department of Health Services
		-

E

EA	- Environmental Assessment
Ec	- Eocene sandstone
EDR	- electro dialisis reversal
EIS	- Environmental Impact Statement
EPA	- Environmental Protection Agency
Esc	- Escondido loam

EsE2 - Escondido very fine sandy loan	m
---------------------------------------	---

F

Г	
FCC	- Fire Command Center
FaD2	- Fallbrook sandy loam
FaC2,FaD2	2, FeE2 - Fallbrook rocky sandy loam
FEIS	- Final Environmental Impact Statement
FESA	- Federal Endangered Species Act
FIFR	- Federal Insecticide, Fungicide, and Rodenticide Act
FONSI	- Finding of No Significant Impact
FPP	- Fire Protection Plan
FTE	- full time equivalent
FvE	- Fallbrook-Vista sandy loam
FxG	- Friant rocky fine sandy loam
G	
gb	- gabbro
GHG	- greenhouse gases
gpd	- gallons per day
gpm	- gallons per minute
gr-m	- gneiss
grMZ	- granodiorite and quartz monzonite
ц	
нарс	hazardous air pollutants
TIALO	- indiandous all pollutalits
HASE	

HCFA HrD2	Heartland Communication Facility AuthorityHuerhuero loam
I IBC IFC ITE	 International Building Code International Fire Code Institute of Transportation Engineers
L LpC2 LpD2	Las Posas loamLas Posas fine sandy loam
M m Mc MSATs MBR MHPA MOE MPH MSA MSCP MVC MWD MZy	 schist/gneiss sandstone mobile source air toxics membrane bioreactor Multiple Habitat Planning Areas measure of effectiveness miles per hour Metropolitan Statistical Area Multi-Species Conservation Plan mechanical vapor compression Metropolitan Water District of Southern California felsic volcanic rock
N NAGPRA NAHC NEC NEPA	 Native American Graves Protection and Repatriation Act Native American Heritage Commission National Electric Code National Environmental Policy Act

- NFPA National Fire Protection AssociationNIGC National Indian Gaming Commission
- NHPA National Historic Preservation Act
- NOX nitrogen oxides
- NO2 nitrogen dioxide
- NPDES National Pollutant Discharge Elimination System
- NRCS Natural Resource Conservation Service
- N_2O nitrous oxide
- NSR New Source Review
- NTU nephelometric turbidity units

0

OSHA - Occupational Safety and Health Act O₃ - Ozone

Р	
Р	- Pleistocene sandstone
Pb	- lead
PCB	- poly-chlorinated biphenyl
PeC, PfC	- Placentia sandy loam
PM	- particulate matter
PM _{2.5}	- fine particles
PM_{10}	- inhalable particles
PPE	- personal protection equipment

Q Q

R

- Ramona sandy loam
- Ramona loam
- Regional Air Quality Strategy
- Resource Conservation and Recovery Act
- right-of-way
- Resource Protection Ordinance
- Regional Water Quality Control Board

S

SANDAG	- San Diego Association of Governments
SCIC	- South Coastal Information Center
SDAB	- San Diego Air Basin
SDCWA	- San Diego County Water Authority
SDGE	- San Diego Gas and Electric Company
SDRFD	- San Diego Rural Fire Protection District
SOX	- sulfur oxides
SO_2	- sulfur dioxide
SPE	- same practical effect
SR 94	- State Route 94
SWPPP	- Storm Water Pollution Prevention Plan

Т

TAC	-	toxic air contaminant
TMDL	-	Total Maximum Daily Load
Tribal EE	-	Tribal Environmental Evaluation
Tribal EIS	S/R	- Tribal Environmental Impact Statement/Report
TSS	-	total suspended solids
U		

UBC	- uniform building code
UCMP	- University of California Museum of Paleontology
UPC	- Uniform Plumbing Code
UMC	- Uniform Mechanical Code

USA	- Underground Service Alert
USACE	- United States Army of Corps of Engineers
USFWS	- United States Fish and Wildlife Service
USGS	- United States Geological Survey
UST	 underground storage tanks
UV	- ultraviolet

V

VaB, VaC - Visalia sandy loam
VMT - vehicles miles traveled
VOC - volatile organic compounds
VsE, VsG - Vista course sandy loams

W

WmC	-	Wyman loam
WWTP	-	wastewater treatment plant

SECTION 1.0

INTRODUCTION

SECTION 1 INTRODUCTION

1.1 INTRODUCTION

The Jamul Indian Village (Tribe) is proposing to construct a <u>228,000-203,000</u> square foot gaming facility on its Reservation approximately one mile south of the community of Jamul (**Figure 1-1**). This Tribal Environmental Evaluation (Tribal EE) is prepared to evaluate the off-reservation impacts of the proposed gaming facility pursuant to the *Tribal-State Compact Between the State of California and the Jamul Indian Village* (hereafter "Compact") signed on October 5, 1999, as well as the *Jamul Indian Village Tribal Gaming Project Environmental Review Ordinance* (Ordinance) (Appendix 1) adopted by the Tribe on September 17, 2011.

Following circulation of the Draft Tribal EE, changes were made to components of the proposed project including gaming facility square footage, parking layout and number of spaces, site grading, surface water detention and treatment, and fire protection. In addition, Section 4.15 has been renamed *Effects of Mitigation Measures* from *Indirect Effects* to eliminate any confusion. This section evaluates the environmental effects associated with physical changes resulting from access options and proposed traffic mitigation. This Tribal EE also includes an analysis of on-Reservation effects, as well as off-Reservation effects, to allow for a complete and total picture of environmental effects and for future use of this Tribal EE in other contexts. Where it has proven convenient to relay information regarding on-Reservation impacts separately, the Tribal EE does so. Otherwise, the analysis of on-Reservation impacts is combined with the analysis of off-Reservation impacts. Lastly, an analysis of Environmental Justice and Socioeconomics has been added to the Final Tribal EE (Section 4.16). Changes made to the Proposed Project and/or Tribal EE are summarized below:

 Parking: Changes made to the Proposed Project include the elimination of the 10-level, 930 space Structure 2 Parking Garage on the west side of Willow Creek and replacing it with a 94 space surface parking lot. To accommodate the change on the west side of the Reservation, the total number of parking spaces within Parking Structure 1 on the east side of the Reservation has increased from the previously proposed 1,197 parking spaces to the currently proposed 1,888 parking spaces. To accommodate the change within Parking Structure 1, the parking structure would be made into an 8-level facility from a 4level facility. All of this change would be accommodated below ground. No change in total height of the above ground structures has been made. The total number of parking spaces for the Proposed Project has decreased by 163 parking spaces from the previously proposed 2,145 parking spaces to the current count of 1,982 parking spaces. No changes to the Alternatives are proposed (see Section 3.2A.2).

- 2. Construction: To accommodate the changes made to parking, the project site would experience increased construction duration, as well as site excavation. The additional excavation would result in the need to expand the construction of the facility from 18 months to 24 months, with on-site excavation being expanded from 3 months to 9 months. The amount of exported material from the Reservation is estimated to increase from 22,600 cubic yards of material to 200,000 cubic yards of material. This increased export is estimated to increase the number of truck trips from the previously estimated 1,619 to the current estimate of 14,286 over the life of the construction period. With the typical work day increasing from 8-hours to 9-hours (7 days a week), the estimate for the number of daily truck trips during the peak period has increased from 3 to 17. No changes to the Alternatives are proposed (see Section 3.2A.8).
- 3. Square Footage: The overall square footage for the Proposed Project gaming facility has been reduced from 228,000 square feet to 203,000 square feet. The majority of the change came from the elimination of the 24,000 square foot Event Center. Other square footage changes can be seen in Table 3-1. No change to building height is proposed. No changes to the Alternatives are proposed (see Section 3.2A.1).
- 4. Drainage: Runoff from impervious surfaces will be conveyed into an underground StormtechTM detention facility rather than the previously proposed gravel detention facility. The surface parking lot would be constructed with a pervious parking surface (Gravelpave2TM). A gravel detention facility, or subsurface gravel beds, would be constructed under the parking structure to detain the increase in runoff generated by impervious site improvements. An outlet structure would be constructed at the outlet of the gravel detention facility to release stormwater at a rate such that there would be no net increase in 100 year storm runoff in Willow Creek where it leaves the site.

Subterranean chambers (StormTechTM RC-750, or equivalent) with gravel backfill, serving as detention facilities would be constructed underneath the onsite roads and cantilevered roads. These are proposed to detain the increase in runoff generated by impervious site improvements to mitigate both the increase in runoff from the 100 year storm and for Hydromodification detention. Outlet structures would be constructed at the outlets of the gravel detention facilities to release stormwater at a rate such that there would be no net increase in 100 year storm runoff in Willow Creek where it leaves the site. Detention facilities for Hydromodification would release runoff at the appropriate rate to treatment facilities. (See Section 3.2A.4)

- 5. Fire Protection: Under the Proposed Project and development alternatives, a minimum 2,500 gallons of water per minute for a duration of 4-hours would be provided rather than the previously stated 1,500 gallons per minute for a duration of 4-hours. Additionally, the on-site landscaping and green roof plantings will be designed consistent with San Diego County's acceptable plant listings for fire prone areas. All on-site plants will be specified as species that will not advance fire or threaten the proposed facilities. In addition to the ladder truck and engines, the Proposed Project and Alternative 1 would necessitate a "Mini-Pumper" fire truck for incident responses in the parking garage. (see Section 3.2A.5 and 3.3A.5), and
- 6. Socio-economics and Environmental Justice: Section 4.16 of the Final Tribal EE contains a discussion of the Socioeconomic and Environmental Justice Effects associated with the proposed gaming facility.

1.2 PROJECT LOCATION/ACCESS

The Jamul Reservation is located in the unincorporated portion of southwestern San Diego County approximately one mile south of the community of Jamul on approximately six acres of land held in federal trust. **Figure 1-1** and **Figure 1-2** show the location of the project site on a regional and local scale. The Reservation is located within portions of Section 10 and unsectioned areas of Township 17 S, Range 1 East, San Bernardino Baseline and Meridian, Dulzura, CA and Jamul Mountains, CA, U.S. Geological Survey 7.5-minute Quadrangles.

State Route 94 (SR 94) provides regional access to the project site from downtown San Diego, which is located approximately 20 miles to the west where it intersects with Highway 5. Local access to the Reservation is provided directly from SR 94 via Reservation Road and Daisy Drive. From the project site, SR 94 travels briefly north and then west to Downtown San Diego, passing through the unincorporated communities of Jamul, Casa de Oro, Spring Valley and Lemon Grove.



Jamul Indian Village Draft Final Tribal EE 🔳

Figure 1-1 Regional Location Map

SOURCE: Microsoft Streets and Trips, 2012; EDS, 2012



1.3 PROJECT SUMMARY

This Tribal EE addresses the off reservation environmental effects associated with the 228,000 203,000 square foot gaming complex located on the Jamul Reservation. The size of the Proposed Project has been reduced from the original 228,000 square foot facility addressed in the Draft Tribal EE primarily through the removal of the event center which eliminates 24,000 square feet from the original proposal. Other square footage adjustments, shown in Table 3-1, make up the remaining 1,000 square foot reduction. Additionally, the parking garage west of Willow Creek has been eliminated and replaced with a parking lot. The parking structure east of Willow Creek will absorb additional parking by going deeper, which requires additional excavation. The overall height of the gaming facility east of Willow Creek does not change. All changes to the Project Description are reflected in Section 3.0 Proposed Project and Alternatives and Section 4.0 Environmental Setting, Impacts and Mitigation Measures. Ancillary uses include a structured parking garage integrated into the gaming building, a separate parking garage on the west side of the drainage channel (Willow Creek), a wastewater treatment plant, and a fire station incorporated into the gaming/parking structure located on the east side of Willow Creek. All of the development would be constructed in one phase over an 18-24 month period.

1.4 PURPOSE AND NEED/PROJECT OBJECTIVES

The economic need for the gaming project has grown over the past ten years that the project has been proposed for the Reservation. The economy of the Tribe lags behind the economy of the local community in terms of the employment rate, median household income, and percentage of those living in poverty. The need for this project is based on:

- · Tribal Government has no sustained revenue stream,
- · Lack of economic development opportunities for tribal members on the Reservation,
- · Disadvantaged socioeconomic conditions of the Tribal Government and its members,
- · Potential profitability of gaming, and
- Federal and state government cut backs on programs that the Tribal Government has relied on to fund its governmental programs.

Through the proposed development, the Tribal Government is making an effort to improve the long-term economic condition of the Tribe and its members through the development of a stable, sustainable source of employment and revenue that takes advantage of the Tribe's Reservation. Given the location of the Reservation at the eastern extent of the unincorporated community of Jamul, this enterprise must independently attract patrons in order to be successful. The facility must be of sufficient size and quality to compete with other gaming facilities and attract patrons on a consistent basis. The proposed <u>228,000 203,000</u> square foot facility is of sufficient size to incorporate the various amenities to draw patrons from surrounding areas.

Presently, a substantial portion of Tribal members' individual incomes is derived from Tribal administration and programs, and in general there is a high reliance upon the federal government for social services. The Tribe is a federally recognized sovereign Indian Tribe with a tribal enrollment that totals 47 persons, with 64% aged 16 to 64. Of the total work force of 30 persons, 11 are employed, resulting in a tribal unemployment rate of 63 percent (Lotta, 2012).

The Proposed Project would be operated pursuant to the requirements of federal law and the Tribal-State Compact between the State of California and the Tribal Government.

The Project Objectives are listed below:

- Develop a gaming facility (including food and beverage services) that will devote Tribal land to an economically productive use.

Locate an Event Center on Tribal land in connection with the gaming facility so as to create a community event location for cultural, musical and other events.

- Complete construction and open the facility by 2013 in order to allow the Tribal Government to recoup costs invested into entitlement and development of the Tribal land.
- Provide the Tribal Government with a long term, sustainable revenue base used to fund Tribal governmental programs and decrease the Tribal Government's dependence on federal and state funding.
- Strengthen Tribal Government with a long term, sustainable revenue base able to support and fund a variety of social, governmental, administrative, educational, health and welfare services to improve the long-term welfare and quality of life of the tribal members. Such programs would include promoting cultural and historical preservation and education, social and educational programs for the elderly, the poor and younger Tribal members, providing new tribal housing, expanding environmental, health and safety programs and providing capital for other economic development and investment opportunities.
- Provide the Tribal Government with a long term, sustainable revenue base -to contribute financially to County and local organizations and public services in order to enhance the local community and the Tribe's standing within it.
- Provide long-term employment opportunities for tribal members and many local non-tribal <u>community</u> members.

- Generate immediate jobs for both tribal and local non-tribal members during construction phase of the project.
- Create the opportunity to purchase support goods and services within the County and local community.

1.5 PROJECT BACKGROUND

The Reservation serves as the sole land base of the Tribe. Historically, the land contained 17 structures including a tribal office, library, and 15 residences; however, these structures were removed from the Reservation in 2007. Visitors continue to access the church/cemetery across the Reservation via SR 94 and Reservation Road. The Reservation currently contains two (2) mobile offices that were relocated back to the Reservation in 2009. In addition, a 3,000 square foot cultural center is located on the west side of the Reservation. It is expected that the mobile offices would be removed and the cultural center would remain should the Proposed Project be approved.

Since the late 1990s, the Tribe has planned to develop gaming on the Reservation. In 2001, the Bureau of Indian Affairs (BIA) and the National Indian Gaming Commission (NIGC) issued an Environmental Assessment (EA) for a project that would have brought 87+/- additional acres adjacent to the Reservation into federal trust. The EA addressed the proposed development of the gaming complex and other land uses on what would be an expanded Reservation. The BIA issued a Finding of No Significant Impact (FONSI), but on appeal determined that the mitigation proposed for traffic effects were too provisional and that an Environmental Impact Statement (EIS) was required.

In August 2003, the BIA completed a Final Environmental Impact Statement (FEIS) for the 87acre Fee-to-Trust Transfer Project and Gaming Project (BIA, 2002). The FEIS evaluated the environmental consequences associated with placing $87\pm$ acres into federal trust for the Tribe and subsequent development of the proposed gaming complex, which was to include a 205,194 square foot gaming facility together with a 222,985 square foot 300-room hotel. The 2003 project also included a 2,550 space parking structure on adjacent land, as well as 18 homes for Tribal members on a 10-acre parcel north of Melody Road.

The Tribe revised its gaming project in 2006 by proposing to place the entire gaming complex on the Reservation. The size of the gaming facility was kept constant from the 2003 proposal at 205,194 square feet, while the hotel was increased to 400-rooms totaling 361,900 square feet. The overall size of the 2006 proposal increased 32% from the 2003 version. Proposed Tribal housing on the adjacent 10-acre lot was removed in the 2006 version. This revised plan did not require the taking of land into federal trust. The Tribe commenced preparation of the 2006 Tribal

Environmental Impact Statement/Report (Tribal EIS/R) pursuant to the 1999 Tribal-State Compact following a redesign, which confined all facilities on the Reservation. The Tribal EIS/R analyzed the off-reservation impacts of the development and operation of the gaming, hotel and supporting land uses on the Reservation. The Tribe initiated construction of the gaming project following completion of the environmental work and approval of the on-Reservation gaming/hotel project-in-200; however, the Tribe did not proceed with the project.

The Tribe has recently reevaluated the project and has made changes to the 2006 design such as the removal of the hotel component and making the project a single phase project rather than a multi-phased project. The current $\frac{228,000203,000}{203,000}$ square foot project is $\frac{60.64}{53}$ % smaller than the 2006 version and $\frac{46.53}{53}$ % smaller than the 2003 version. All facilities are designed to fit on the Reservation. As was the case in 2006, the 10-acre Tribal housing is not part of this proposal. The Tribe has prepared this Tribal EE pursuant to the Tribal-State Compact to address the off-reservation-impacts associated with the current proposal.

It should be noted that Section 10.8.2(c) of the Tribal-State Compact refers to "environmental impact reports" as meaning any "…environmental assessment, environmental impact report, or environmental impact statement as the case may be." The adopted *Tribal Gaming Project Environmental Review Ordinance* refers to the preparation of an "Environmental Impact Report," which is intended to be consistent with the Tribal-State Compact definition of environmental impact report. Although called a Tribal Environmental Evaluation (Tribal EE), this document complies with the Environmental Impact Report content requirements of both the Tribal-State Compact and Tribal Ordinance

1.6 DOCUMENT STRUCTURE

The <u>Final Tribal EE is divided into two volumes: (Volume I) Final Tribal EE Text, which</u> document-is divided into seven main sections: (1) Introduction, (2) Executive Summary, (3) Proposed Project and Alternatives, (4) Environmental Setting, Impacts and Mitigation Measures, (5) List of Preparers, (6) References, and (7) Appendices, and (Volume II) Tribal EE Comments and Responses to Comments, which is divided into two main sections: (1) Comments Received, and (2) Responses to Comments. The discussion below provides a summary of information contained in each <u>volume/</u>section.

Volume I: Final Tribal EE Text

Section 2.0 presents an executive summary of information contained in Sections 3-4, which in turn contain details of the Proposed Project/Alternatives, environmental setting, and impacts and mitigation measures. Issues to be resolved and areas of controversy are also identified in Section 2.0. Section 2.0 contains a cross-reference table, which allows the reader to easily find issues of

concern either in the summary table, setting discussion or impact and mitigation discussion. Section 2.0 also contains a summary table identifying all issues, impacts and mitigation measures detailed in Section 4.0. Lastly, Section 2.0 contains a section that provides a comparison of gaming alternatives and access options.

Section 3.0 presents the details of the Proposed Project and Alternatives to the project, which are evaluated for off Reservation environmental impacts. The Proposed Project consists of a 228,000 <u>203,000</u> square foot gaming facility, while Alternative 1 is sized at 119,000 and Alternative 2 at 17,500. The No Project Alternative assumes no development on the project site.

Section 4.0 presents the environmental setting, impacts and mitigation measures for each environmental issue addressed. This section also contains the environmental checklist, which was used to evaluate all environmental issues before the evaluation took place. The environmental checklist provides the rationale for including or excluding environmental issues from detailed environmental review. The analysis for each environmental issue begins with a discussion of the existing setting that exists prior to implementation of the Proposed Project and Alternatives. The setting is followed by an assessment of the off reservation environmental impacts assuming project features presented in Section 3.0 being applied to the existing setting. Each environmental issue discussion contains significance criteria by which the environmental impact will be measured to determine level of significance. Mitigation measures are then presented for impacts that were found to be significant when compared against the significance criteria. Section 4.0 also presents that analysis for growth inducing impacts, cumulative impacts and effects resulting from traffic mitigation measuresindirect impacts. The reader can easily find select environmental issues by referring to Table 2-1 Environmental Issues: Document Cross-*Reference*, or viewing the lower right corner of the page which presents the environmental name being evaluated in that subsection.

Section 5.0 presents the list of preparers for information contained within this Tribal EE, Section 6.0 lists the references used within the analysis, and the Appendices include reference material used either in the description of project features or as backup materials for the impact analysis presented in Section 4.0.

Volume II: Tribal EE Comments and Responses to Comments

The Draft Tribal EE was circulated for a 47-day public review and comment period from March 14, 2012 to April 30, 2012. This review and comment period was extended an additional 30-days to May 30, 2012. Written and oral comments were submitted to the Tribe during this 77-day review and comment period for the Draft Tribal EE. All of the comments have been compiled and are presented in Volume II, Section 1.0 Draft Tribal EE Comments Received. Each comment submitted has been responded to and the responses are included in Volume II, Section 2.0 Responses to Comments.

1.7 REGULATORY APPROVALS

The following federal approvals or permits/consultations may be required as a result of implementation of the Proposed Project or Alternatives:

U.S. Army Corps of Engineers consultation and possible issuance of permit(s) under the Clean Water Act Section 404 program;

Consultation with USFWS under Section 7 of the Endangered Species Act; and

Enrollment in USEPA's program for a National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity, and water quality certification (or waiver) under Section 401 of the Clean Water Act.

The following state approvals or permits may be issued as a result of the Proposed Action and Alternatives:

- <u>Caltrans approval of encroachment permits to allow the construction of roadway,</u> <u>drainage, and utility improvements within public rights-of-ways;</u>
- Enrollment in the State Water Resources Control Board's program for a NPDES General Permit for Stormwater Discharges Associated with Construction Activity, and water quality certification (or waiver) under Section 401 of the Clean Water Act; and

Consultation with California Department of Fish and Game and issuance of a Streambed Alteration Agreement under Fish and Game Code Section 1600 et seq.

The following local approvals and permits may be required:

- San Diego County approval of encroachment permits to allow the construction of roadway, drainage, and utility improvements within public rights-of-ways (associated with the implementation of identified traffic mitigation measures);
- Prior to any grading activities for Access Option 3 (described in Section 4.15 Effects of Mitigation Measures), the Tribe would need an amendment to the Otay Mesa Specific Plan allowing for the reconfiguration of parcels to accommodate the Access Option 3 alignment;
- Prior to any grading activities for Access Option 3 (described in Section 4.15 Effects of Mitigation Measures), the Tribe would need an exemption to Mobility Goal #1,
 Policy #15 of the Jamul/Dulzura Sub regional Plan allowing for the connection of a commercial facility to Melody Road, which is a collector street; and

Prior to any grading activities for Access Option 3 (described in Section 4.15 Effects of Mitigation Measures), the Tribe would need a Major Amendment to the MSCP

allowing for recategorization of lands in the Access Option 3 corridor from Hardline Preserve Area to Take Authorized Area. Development in take authorized areas is subject to mitigation ratios contained in the Biological Mitigation Ordinance.

SECTION 2.0

EXECUTIVE SUMMARY

SECTION 2 EXECUTIVE SUMMARY

2.1 INTRODUCTION

This section provides a summary of the Proposed Project and Alternatives, potential areas of controversy, and a comparison of the Proposed Project and Alternatives, as well as the three access options analyzed in this Tribal EE. This section also includes a table summarizing the impacts, mitigation measures, and level of significance (before and after mitigation) for the Proposed Project and Alternatives.

2.2 **PROJECT LOCATION**

The project site for the Jamul gaming facility is the Jamul Reservation located approximately one mile south of the community of Jamul (**Figure 1-1**). Regional access to the 6+/- acre Reservation is provided via SR 94, while local access is provided by Reservation Road, which connects the main body of the Reservation with SR 94.

2.3 PROJECT DESCRIPTION

The Proposed Project includes the construction and operation of a $\frac{228,000}{203,000}$ square foot gaming complex on the Reservation. The new facility would be constructed in one phase over an 18-24 month period. Figures 3-1 and 3-2 shows the conceptual layout of the gaming complex on the Reservation together with a photo simulation of how the facility would appear off Reservation near SR 94. Elements of the gaming complex includes the gaming facility, two-one multi-level parking structures, surface parking facility, fire fighting facilities, wastewater treatment and disposal facilities, water delivery system, and improved on-site traffic circulation. The gaming building would measure approximately 105-feet from lowest to highest level of the structure; however, due to the sloping site topography, the apparent height would be approximately 45 feet from surrounding grade. The gaming facility would contain 31 levels of gaming floor area. When fully operational, the facility would employ approximately 1,611 employees.

2.4 ALTERNATIVES TO THE PROPOSED PROJECT

This Tribal EE evaluates the off-Reservation impacts of two development alternatives and one no project alternative. Alternative 1 is a 119,000 square foot reduced intensity gaming facility that contains most of the same components as the Proposed Project, but on a reduced scale (**Figures 3-3 through 3-4**).

Alternative 1 would be constructed in one phase over an 24-month period, and measure approximately 105-feet from lowest to highest level of the structure; however, as is the case with the Proposed Project, the apparent height would be approximately 45 feet from surrounding grade. Development under Alternative 1 would include a gaming facility, a multi-level parking structure (east of Willow Creek), surface parking lot (west of Willow Creek), wastewater treatment and disposal facilities, water delivery system, fire fighting facilities, and an improved on-site circulation system. Under Alternative 1, the Gaming Complex would employ approximately 846 employees.

Alternative 2 is a 17,500 square foot reduced intensity gaming facility that is significantly scaled back from the Proposed Project (**Figures 2-5 through 2-6**). The complex would include a gaming facility, three surface parking lots, water treatment and disposal facilities, water delivery system, fire fighting facilities, and an improved on-site circulation system. Alternative 2 would be constructed in one phase over a 12-month period, and would be a total of 45 feet in height from lowest to highest point. Under Alternative 2, the Gaming Complex would employ approximately 223 employees.

The No Action Alternative does not include any future development assumptions for the Reservation. For the purposes of the environmental analysis, it is assumed that the property would continue to be utilized in its current state.

2.5 ISSUES TO BE RESOLVED AND AREAS OF CONTROVERSY

There have been issues raised over the years about the environmental effects associated with a gaming facility on the Reservation. The list below is not intended to be inclusive of all issues raised over the past decade; rather, it is intended to be a list of the most prominent issues raised to-date.

- Traffic: Potential impacts to level of service of SR 94 and neighboring county roadways;
- Community Character/Visual Effects: The change of community character that would come from the introduction of a gaming facility in the Jamul area, as well as impacts to dark skies and the County designated SR 94 scenic highway;

- Fire/Emergency Service/Police Service: The effects of the added traffic on area roadways on the ability of Fire District to respond to service calls, as well as the lack of a public offer to fund an additional fire station. The increased potential for fire damage due to the lack of mutual aid agreements.
- Biological Resources: Potential operational impacts of the gaming facility on adjacent wildlife refuge and Multi Species Habitat Conservation Plan.

An *Off Reservation-Impact Checklist* was prepared for the gaming project to identify those issues that required detailed study in the Tribal EE and those issues that could be eliminated from detailed consideration (**Table 4.1-1**). The issues discussed within this Tribal EE are those that have been identified within the Checklist as having potentially significant impacts. The following environmental resources were found to have the potential of being significantly affected by the Proposed Project and have been addressed in greater detail in this Tribal EE.

- 1. Land Use,
- 2. Aesthetics,
- 3. Geology and Soils,
- 4. Hydrology and Water Quality,
- 5. Hazardous Materials,
- 6. Biological Resources,
- 7. Cultural Resources,
- 8. Transportation,
- 9. Noise,
- 10. Air Quality, and
- <u>11.</u> Public Services (including water supply, wastewater service, solid waste service, electricity/natural gas/telecommunications, law enforcement, fire protection and emergency services-, and
- 11.12. Socioeconomics and Environmental Justice.

2.6 SUMMARY OF ENVIRONMENTAL IMPACTS

Table 2-1 presents the summary table for impacts and includes proposed mitigation measures that would further avoid or minimize potential impacts. The level of significance of each environmental impact is indicated both before and after the application of the recommended mitigation measure(s). For detailed discussions of all project impacts and mitigation measures, the reader is referred to environmental analysis sections in Section 4.0.

2.7 TRAFFIC MITIGATION

Traffic mitigation presented in Section 4.9 includes the development of alternative access options to the Reservation due to existing deficient design of the Reservation Road/SR 94 connection. In addition, mitigation presented in Section 4.9 includes improvements to off-site intersections along SR 94. The potential environmental effects to the access road mitigation and the off-site intersection improvement mitigation are considered in this document as "Indirect Impacts" and are evaluated within Section 4.15 *Indirect Impacts Effects of Mitigation Measures*.

2.8 COMPARISON OF GAMING ALTERNATIVES/ACCESS OPTIONS

Gaming Alternatives

The criteria used in this Tribal EE to determine which development scenario is environmentally superior to the other, is the number of significant impacts one would have vs. the other. All significant impacts being equal, the relative difference between the magnitude of the impact would then assist in defining the environmentally superior alternative. Evaluating the Proposed Project and Alternatives together with environmental sensitivities of the project area, reveals that traffic is the key issue in the Jamul area. All of the other environmental issues are either less than significant or rendered less than significant with mitigation. Traffic is the only environmental issue that has residual impacts after mitigation.

Under Existing Plus Project conditions, the Proposed Project would significantly impact 6_{-7} intersections, while Alternative 1 would impact 5_{-6} intersections and Alternative 2 would impact 2_{-1} intersections. None of the roadway segments would be significantly impacted under the gaming development project in the Existing Plus Project scenario. The Roadway Segment Analysis concluded that all County road segments would continue to function at LOS C_{-D} or better with the addition of traffic for either of the gaming development projects – a less than significant impact. All three gaming development projects would result in a significant impact at Reservation Road, which is the Reservation's link with SR 94. Operation of the Proposed Project and Alternatives 1 and 2 would necessitate the construction of an improved access point to SR 94 to ensure a less than significant traffic impact.

The traffic analysis uses two cumulative scenarios to evaluate cumulative traffic impacts: (1) Near Term 2015, and (2) Horizon Year 2035. To assess these cumulative impacts, traffic from other projects in the area or plan growth identified in the local land use plans is added to existing traffic. Once this cumulative baseline is established, gaming project traffic is then added to determine whether a significant cumulative impact would result. Under Near Term (2015) cumulative conditions without consideration for gaming project traffic, 10_{-8} of the study intersections would be significantly impacted. Traffic from the Proposed Project would be cumulatively considerable at all 10_12-of these intersections, while traffic from Alternative 1 and 2 would be cumulatively considerable at 9_11 and 8_7 of these intersections, respectively. The Roadway Segment Analysis concluded that all of the County segments analyzed would continue to function at LOS D or better with the addition of any of the gaming development projects, which is considered acceptable by the County.

Under Horizon Year (2035) cumulative conditions, <u>all_12</u> of the study intersections would be significantly impacted prior to consideration of gaming project traffic. Traffic from the Proposed Project <u>would be cumulatively considerable at 18 intersections</u>, <u>while traffic from and</u>-Alternative 1 and 2 would be cumulatively considerable at <u>each of the intersections studied_17 of these intersections</u>. The Roadway Segment Analysis concluded that the Proposed Project would have a cumulatively considerable significant traffic impact on <u>two_seven</u> roadway segments in the County, while Alternative 1 would impact <u>one three</u> County segments and Alternative 2 would not have an-impact <u>one to any of the County roadway segments</u>.

The No Action Alternative would be the environmentally superior alternative as it would not result in any environmental impacts. However, the No Action Alternative would not assist in attaining any of the Tribal Objectives identified in **Section 1.4**. Each of the build scenarios would result in the equal number of significant unavoidable intersection impacts under the Horizon (2035) Plus Project cumulative scenario. This is due to the fact that cumulative impacts would exist under pre project conditions and the incremental effect of the added traffic from the Proposed Project and Alternatives would be considered a significant contribution given the significance criteria used in the Tribal EE. Nevertheless, Alternative 2 was found to not-have <u>one</u> any-cumulative impacts on County roadways under the Horizon (2035) Plus Project and Near Term (2015) Plus Project cumulative scenario than either the Proposed Project or Alternative 1. Therefore, given the reduced number of significant unavoidable traffic impacts resulting from Alternative 2, Alternative 2 is considered the environmentally superior alternative.

Access Options

The traffic analysis conducted for the gaming project identified three access options as potential mitigation for the significant traffic impact that would occur at the intersection of Reservation Road and SR 94. The environmental impacts of these three options are presented in Section 4.15

Indirect-Effects of Mitigation Measures of this Tribal EE. The three access options are identified as (1) Access Option 1: Realigned Reservation Road Option, (2) Access Option 2: 4-Acre Parcel Access Option, and (3) Option 3: Melody Road Access Option. Please see Section 4.14-1 for a description of each access option. The Tribe would carry forward one of the access options with the selected project as project mitigation should one of the development alternatives be approved at the end of the environmental process. The information provided below presents a comparison of environmental impacts associated with each access option.

With the exception of land use and biological services, the severity of impacts are similar among the three access options. All three access options are expected to result in significant impacts (before mitigation) to water resources, hazardous materials, biological resources (water resources, habitat loss, and migratory birds), cultural resources and public services. Mitigation measures presented in **Section 4.15-3** would reduce these impacts to less than significant levels for each of the Access Options.

Under land use, Access Option 3 would require a separate County planning and environmental process to address what would be considered a private drive from Melody Road through the vacant 87 acre parcel to the Reservation. The new road alignment would travel through vacant land that is subject to the County's Multi-Species Conservation Plan (MSCP). Within the MSCP, the new roadway would cross the "Hardline Preserve", which limits potential development. Grading, excavation, clearing vegetation, and construction of any building or structure are typically precluded within the Hardline Preserve. Any encroachment into the Hardline Preserve would require the County to approve a Major Amendment to the MSCP. The County's Subarea Plan, which implements the MSCP, states that new roads can only be approved if "there are no feasible, less environmentally damaging locations, alignments or non-structural alternatives."¹ To approve Access Option 3, the County may need to make findings in contravention to its adopted policies, as less environmentally damaging alternatives are available (Options 1 and 2). As a result, the County may not be able to approve the development of the Melody Road access option, without first amending the policies of the MSCP.

Total direct habitat acreage impacted by construction of Option 3 is greater than Access Options 1 and 2. Access Option 3 would impact approximately 0.8 acres of Riparian/Oak Woodland, while Access Options 1 and 2 would not impact Riparian/Oak Woodland habitat. This increased impact to Riparian habitat under Access Option 3 is related to the Willow Creek crossing that would be necessary north of the Reservation. Access Options 1 and 2 would not require a new creek crossing. All three access options would impact jurisdictional waters of the U.S.; however, the combined acreage for Options 1 and 2 would be below 0.5 acres and include improvements only to road culverts, whereas Option 3 includes a new bridge at Melody Road and 2 new drainage/swale crossings on the 87-acre parcel. Access Option 3 would be required to seek an

¹ / South County Subarea Plan, Section 1.9.3.2.b

Individual Permit from the U.S. Army Corps of Engineers (USACE) due to the increased acreage impact to jurisdictional waters. Access Options 1 and 2 would be allowed to file for a Nationwide Permit with the Corps due to the reduce scale of impact (below 0.50 acres). Lastly, the Willow Creek crossing under Option 3 would create a greater impact to State waters than Access Options 1 and 2.

Access Options 1 and 2 are very similar in that the access is located off SR 94 and the northerly/southerly extent is the same under both options. The east/west improvements along Melody Road are also the same under both Access Options 1 and 2. Access Option 1 generates .05 acre greater impact to scrub habitat. By virtue of the reduced magnitude of impact to coastal scrub habitat under Access Option 2, Access Option 2 is considered to be environmentally superior to Access Option 1. Both Access Options 1 and 2 are environmentally superior to Access Option 3.
ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.2 LAND USE			
4.2(1) Consistency with Adopted Plans			
Proposed Project	LTS	None required.	LTS
The Proposed Project would not result in significant County land use consistency conflicts given that the proposed development on the Reservation is not subject to County Land Use plans or policies, as well as the fact tha County's recently updated Jamul Dulzura Subregional Plan is assumed to have considered the potential for gaming on the Jamul Reservation. Additionally, the Proposed Project would not preclude existing or planned land uses or disrup access on adjacent lands regulated by the County or State.	2 5 5 5 5		
Alternative 1	LTS	None required.	LTS
The Land Use impacts associated with Alternative 1 would be the same as identified for the Proposed Project. The gaming complex would be located or the Reservation and, as such, is not subject to County land use regulations Additionally, Alternative 1 would not preclude existing or planned land uses or disrupt access on adjacent lands regulated by the County or State.	5 1 -		
Alternative 2	LTS	None required.	LTS
While not being subject to local land use authority, Alternative 2 would nonetheless be more consistent with County policies stated in the Jamul Dulzurr Subregional Plan. The height of the gaming facility would be consistent with the stated policy to have commercial facilities no taller than 2-levels. In addition the height of the facility would be more consistent with the policies related to scenic corridor preservation. Additionally, Alternative 2 would not preclude existing or planned land uses or disrupt access on adjacent lands regulated by the County or State.			
No Action Alternative	NI	None Required.	NI
The No Action Alternative would not result in the development of a gaming complex on the Reservation. The Tribe would complete the development of the 3,000 square foot community center and would retain the use of the mobile			
Less than Significant = LTS Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Environmental Impact	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
office currently being used on the Reservation. As is the case with Alternative 1 and B, the No Action Alternative is not subject to County land use regulations nor would it preclude existing or planned land uses or disrupt access on adjacent lands regulated by the County or State.			
4.2(2) On-Reservation Land Use Effects			
Proposed Project	LTS	None Required.	LTS
The existing community center would remain on the western portion of the Reservation and unaffected by the proposed development. The Tribe has not adopted any Tribal land use plans or a zoning ordinance for the Reservation; therefore, the proposed gaming facility would not create an inconsistency with on-Reservation Tribal land use plans.			
Alternative 1	LTS	None required.	LTS
As is the case with the Proposed Project, existing community center would remain on the western portion of the Reservation and unaffected by the proposed development under Alternative 1. The Tribe has not adopted any Tribal land use plans or a zoning ordinance for the Reservation; therefore, the proposed gaming facility would not create an inconsistency with on-Reservation Tribal land use plans.			
Alternative 2	LTS	None required.	LTS
As is the case with the Proposed Project, existing community center would remain on the western portion of the Reservation and unaffected by the proposed development under Alternative 2. The Tribe has not adopted any Tribal land use plans or a zoning ordinance for the Reservation; therefore, the proposed gaming facility would not create an inconsistency with on-Reservation Tribal land use plans.			

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.3 AESTHETICS			
4.3(1) Visual Resources			
Proposed Project	LTS	None Required.	LTS
The view of the project site would be altered by the construction of the Proposed Project. Both the elevation and the massing of the proposed facilities would alter the visual prominence of the project site from the outlying areas. In addition, the Proposed Project would introduce new night lighting in the area but not to a level that would substantially degrade the existing visual character or quality of the site and its surroundings.			
Alternative 1	LTS	None Required.	LTS
The view of the project site would be altered by the construction of Alternative 1. Both the elevation and the massing of the proposed facilities would alter the visual prominence of the project site from the outlying areas. In addition, Alternative 1 would introduce new night lighting in the area but not to a level that would substantially degrade the existing visual character or quality of the site and its surroundings.			
Alternative 2	LTS	None Required	LTS
The view of the project site would be altered by the construction of Alternative 2; however, the massing and expanse of the development is significantly reduced under Alternative 2. Alternative 2 would introduce new night lighting in the area but not to a level that would substantially degrade the existing visual character or quality of the site and its surroundings.			
No Action Alternative	NI	None Required.	NI
The No Action Alternative would not result in the development of a gaming complex on the Reservation.			

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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Environmental Impact	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.4 GEOLOGY AND SOILS			
4.4(1) Topography and Erosion			
Proposed Project	LTS	None Required.	LTS
Construction of the Proposed Project would entail clearing, grading, and excavating; the project components have been designed to take advantage of the existing topography and minimize changes to topography. However, due to the steep slopes and drainages within the project area, the cutting and filling of topographic features would be necessary. The geological studies performed for this project indicate that blasting of granitic bedrock would be necessary.			
Alternative 1	LTS	None Required	LTS
Construction of the Alternative 1 would entail clearing, grading, and excavating. The cutting and filling of topographic features would be necessary. The geological studies performed for this project indicate that blasting of granitic bedrock would be necessary. Alternative 1 is a significantly reduced gaming complex compared to the Proposed Project, which would result in a corresponding reduction in erosion and sedimentation potential during construction.			
Alternative 2	LTS	None Required.	LTS
Construction of the Alternative 2 would entail clearing, grading, and excavating. The cutting and filling of topographic features would be necessary. Alternative 2 is a significantly reduced gaming complex, which would be 92% smaller than the Proposed Project gaming complex. The clearing, grading, and excavation features of Alternative 2 would be significantly reduced when compared with the Proposed Project and Alternative 1.			

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
The No Action Alternative would not result in the development of a gaming complex on the Reservation.	NI	None Required.	NI
4.4(2) Seismic Hazards			
Proposed Project	LTS	None Required.	LTS
The project area could be subject to seismic activity such as severe ground shaking and acceleration forces from earthquakes in other regions.			
Alternative 1	LTS	None Required.	LTS
Alternative 1 would be constructed on the same site as the Proposed Project. As is the case with the Proposed Project, Alternative 1 could be subject to seismic activity such as severe ground shaking and acceleration forces from earthquakes in other regions.			
Alternative 2	LTS	None Required.	LTS
Alternative 2 would be constructed on the same site as the Proposed Project and Alternative 1. Alternative 2 could be subject to seismic activity such as severe ground shaking and acceleration forces from earthquakes in other regions.			
No Action Alternative	NI	None Required	NI
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any new adverse impacts resulting			

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

January 2013

BI = Beneficial

NI = No Impact

Less than Significant = LTS

from seismic hazards.

Environmental Impact	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.5 HYDROLOGY AND WATER QUALITY			
4.5(1) Drainage and Flooding			
Proposed Project	LTS	None Required.	LTS
The Proposed Project includes the construction of a 203,000 square foot gaming structure, a surface parking lot and a multi-level parking structure, which would increase site imperviousness. To address the potential off site drainage effect caused by increased runoff from impervious surfaces, the Proposed Project has engineered a stormwater detention facility to detain stormwater collected from the impervious surfaces and discharge it at a rate that matches pre-project flow conditions. Green roofs, bioretention areas, and permeable pavements have also been added to the project description to reduce impervious surfaces and to allow storm water to infiltrate into the ground.			
Alternative 1	LTS	None Required.	LTS
Alternative 1 is a significantly reduced gaming complex, which would be 41% smaller than the Proposed Project gaming complex, but would still increase site imperviousness by the construction of a gaming structure, driveways, walkways, and parking structure/ lots. Similar to the Proposed Project, Alternative 1 would engineer a stormwater detention facility to detain stormwater collected from the impervious surfaces and discharge it at a rate that matches pre-project flow conditions. Green roofs, bioretention areas, and permeable pavements have also been added to the project description to reduce impervious surfaces and to allow storm water to infiltrate into the ground.			
Alternative 2	LTS	None Required.	LTS
Alternative 2 is a significantly reduced gaming complex, which would be 91% smaller than the Proposed Project gaming complex. Alternative 2 would also incorporate a stormwater detention facility to detain stormwater collected from the impervious surfaces and discharge it at a rate that matches pre-project flow conditions. Green roofs, bioretention areas, and permeable pavements have also been added to the project description to reduce impervious surfaces and to allow storm water to infiltrate into the ground.			

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
No Action Alternative	NI	None Required.	NI
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts to hydrology and water quality.			
4.5(2) Water Quality			
Proposed Project	LTS	None Required.	LTS
Construction of the project site could result in the temporary uncovering of soils that could be subject to transport to area waterways. During operation of the Proposed Project, parking lots and access roads could collect petroleum hydrocarbons, heavy metals, and other pollutants from vehicles that are typically concentrated in paved areas and then transported to receiving water bodies during storm events.			
Alternative 1	LTS	None Required.	LTS
Construction of the project site could result in the temporary uncovering of soils that could be subject to transport to area waterways. During operation of Alternative 1, parking lots and access roads could collect petroleum hydrocarbons, heavy metals, and other pollutants from vehicles that are typically concentrated in paved areas and then transported to receiving water bodies during storm events.			
Alternative 2	LTS	None Required.	LTS
Construction of the project site could result in the temporary uncovering of soils that could be subject to transport to area waterways. During operation of Alternative 2, parking lots and access roads could collect petroleum hydrocarbons, heavy metals, and other pollutants from vehicles that are typically concentrated in paved areas and then transported to receiving water bodies during storm events.			

TABLE 2-1
Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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Environ	MENTAL IMPACT	Level of Significance Before Mitigation		MITIGATION MEASURES	Level of Significance After Mitigation
No Action Alternative		NI		None Required.	NI
No construction or land alteration with the No Action Alternative would not	would take place under this alternative. Thus, ot result in any impacts to water quality.				
4.6 HAZARDOUS MATER	RIALS				
4.6(1) Accidental Release of Hazar	rdous Materials – Construction				
Proposed Project		LTS		None Required.	LTS
During the period of construction materials would be stored and used	, various petroleum products and hazardous in the project area.				
Alternative 1		LTS		None Required.	LTS
During the period of construction products and hazardous materials w	on under Alternative 1, various petroleum yould be stored and used in the project area.				
Alternative 2		LTS		None Required.	LTS
During the period of construction products and hazardous materials w	on under Alternative 2, various petroleum would be stored and used in the project area.				
No Action Alternative		NI		None Required	NI
The No Action Alternative would complex on the Reservation. No impacts would occur under the No	not result in the development of a gaming o significant hazards or hazardous materials Action Alternative.				
4.6(2) Buried Hazards or Hazard	ous Materials – Construction				
Proposed Project Construction of the Proposed Project would involve excavation, trenching and grading, and such earth-moving activities may uncover a previously unknown		SI	If contaminated soil container, is encount area, and the type characterized by qua	or groundwater, or a buried hazardous material stor ered during project construction, work shall be halted in and extent of the contamination shall be identified lified professionals. A qualified professional, in consulta	rage LTS that and tion
Less than Significant = LTS	Significant = SI	Significant and Una	avoidable = SU	BI = Beneficial	NI = No Impact

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation
underground fuel storage tank, contaminated soil, or other hazardous material issue. Thus, construction activities could pose a risk to human health for construction personnel if contaminants are encountered.		with regulatory agencies shall then develop an appropriate method to remediate the contamination. If necessary, a remediation plan shall be implemented in conjunction with continued project construction.	
		If any hazardous materials issues are encountered, a Health and Safety Plan (HASP) should also be implemented. A HASP prepared for the construction process, consistent with general industry standards and the Occupational Safety and Health Administration, could address any risks to construction personnel and public safety such that these health and safety risks could be mitigated to an acceptable level.	
Alternative 1	SI	Same as Proposed Project	LTS
Construction activities associated with Alternative 1 could pose a risk to human health for construction personnel if contaminants are encountered.			
Alternative 2	SI	Same as Proposed Project	LTS
Construction activities associated with Alternative 2 could pose a risk to human health for construction personnel if contaminants are encountered.			
No Action Alternative	NI	None Required.	NI
The No Action Alternative would not result in the development of a gaming complex on the Reservation. No significant hazards or hazardous materials impacts would occur under the No Action Alternative.			
4.6(3) Accidental Release of Hazardous Materials – Operation			
Proposed Project	LTS	None Required.	LTS
Operation of the Proposed Project would involve the use, storage, and disposal of some hazardous materials and petroleum products.			
Alternative 1	LTS	None Required.	LTS
Operation of Alternative 1 would involve the use, storage, and disposal of some			
Less than Significant = LTS Significant = SI	Significant and U	navoidable = SU BI = Beneficial NI =	No Impact
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TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
hazardous materials and petroleum products.			
Alternative 2	LTS	None Required.	LTS
Operation of Alternative 2 would involve the use, storage, and disposal of some hazardous materials and petroleum products.			
No Action Alternative	LTS	None Required.	LTS
The No Action Alternative would not result in the development of a gaming complex on the Reservation. No significant hazards or hazardous materials impacts would occur under the No Action Alternative.			
4.6(4) Risk of Causing Wildfire During Project Construction			
Proposed Project	SI	To reduce the risk of starting a wildfire during construction, construction best management practices should be employed, including the following:	LTS
Wildfires are a potential hazard in rural San Diego County. Portions of the project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resincus shrubs and trees. The project area is located within an area of		Use spark arresters on construction equipment,	
moderate to high fire hazard. Construction activities may introduce potential ignition sources that have the potential to initiate a wildfire, which could cause		Restrict vehicular parking to areas devoid of grasses or other fuels,	
injury or death of people or property losses. This is a potentially significant impact.		Designate safe areas for welding and metal cutting operations,	
		Prohibit smoking,	
		Properly store flammable or explosive materials,	
		Keep construction areas wetted with water trucks and implement a fire safety/fire response plan.	
Alternative 1	SI	Same as Proposed Project.	LTS
The potential for causing a wildfire during project construction under Alternative 1 is the same as for the Proposed Project. This is a potentially significant impact.			

Significant = SI

Less than Significant = LTS

NI = No Impact

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 2	SI	Same as Proposed Project	LTS
The potential for causing a wildfire during project construction under Alternative 2 is the same as for the Proposed Project. This is a potentially significant impact.			
No Action Alternative	NI	None Required.	NI
The No Action Alternative would not result in the development of a gaming complex on the Reservation. No significant hazards or hazardous materials impacts would occur under the No Action Alternative.			
4.7 BIOLOGICAL RESOURCES			
4.7(1) Special Status Species/Protected Species			
Proposed Project	SI	a. Because special-status species or protected species that occur in the	e LTS

No special-status species have been detected over the past decade within the Reservation. None of these special status species were ranked with a moderate

or high potential of occurrence on the Reservation.

The Proposed Project would not result in the development of off-Reservation lands, except for the implementation of mitigation measures. The environmental effects from access/intersection mitigation are evaluated in Section 4.15 *Effects of Mitigation Measures*.

The Project Area does contains suitable nesting habitat for various bird species because of the presence of rock outcrops, large trees, utility poles, and riparian canopy. However, no nests were observed during any field surveys, except for one nest spotted in 2009 in the Willow Creek corridor on the adjacent 87-are parcel. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal, and indirectly impacted by noise, vibration, and other construction-related disturbance. Therefore, Project construction is considered a potentially significant adverse impact.

Because special-status species or protected species that occur in the a vicinity could migrate onto the Reservation between the time that the field surveys were completed and the start of construction, preconstruction surveys for special-status species and protected species should be performed by a qualified biologist to ensure that threatened or endangered species are not present. If any special-status species or protected species are detected, construction should be delayed, the appropriate wildlife agencies should be consulted (e.g. USFWS) and avoidance measures implemented. To comply with the federal laws protecting eagles and migratory birds, and to avoid any direct and indirect impacts to nesting birds (especially raptors and migratory species), pre-construction surveys for nesting birds will be performed. If active nesting is detected, the nesting area will be protected by creating a fenced buffer area that excludes construction activities until the young have fledged.

b. To comply with Fish and Game Code sections protecting nesting birds, and to avoid any direct and indirect impacts to nesting birds (especially raptors and migratory species), grubbing and clearing of vegetation on non-federal lands that may support active nests and construction activities adjacent to nesting habitat, should occur outside of the breeding season (February 15 to September 15; and as early as January 1

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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Advante to the service of the construction activities of reservice of advance of the service	ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
existing level of human activity within the buffer distance). If construction on non-federal lands must take place within the recommended buffer widths above, the project applicant should contact CDFW and County PDS to determine the appropriate buffer.	Federally-listed species that occur in the vicinity could migrate onto the Project Area between the time that the field surveys were completed and the start of construction. If this occurred, construction activities, especially excavation and rough grading, could result in the take of federally-listed species; this is considered a potentially-significant impact before mitigation.		 for raptors). If removal of habitat and/or construction activities on non-federal lands is necessary adjacent to nesting habitat during the breeding season, the applicant should retain a CDFW-approved biologist to conduct a pre-construction survey to determine the presence or absence of non-listed nesting migratory birds on or within 100 feet of the construction area, determine the presence or absence of ESA- or CESA-listed birds (e.g., coastal California gnatcatcher, least Bell's vireo) on or within 300 feet of the construction area, and determine the presence or absence of absence of nesting raptors within 500 feet of the construction area. The pre-construction survey should be conducted within 10 calendar days prior to the start of construction on non-federal lands, the results of which should be submitted to CDFW and County PDS for review and approval prior to initiating any construction activities. If nesting birds are detected by the biologist, the following buffers should be established: No work should occur within 300 feet of a non-listed bird nest, and No work should occur within 500 feet of a raptor nest. 	
Alternative 1 SI Same as Proposed Project LTS			existing level of human activity within the buffer distance). If construction on non-federal lands must take place within the recommended buffer widths above, the project applicant should contact CDFW and County PDS to determine the appropriate buffer.	
	Alternative 1	SI	Same as Proposed Project	LTS

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

L_{C}	Less	than	Significant =	LTS
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Significant = SI

Significant and Unavoidable = SU

BI = Beneficial

NI = No Impact

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 2	SI	Same as Proposed Project	LTS
On-Reservation development would result in potential impacts to special status species/protected species.			
No Action Alternative	NI	None Required.	NI
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts to special status species/protected species.			
4.7(2) Special Status Habitats/Protected Habitats			
Proposed Project	LTS	None Required.	LTS
The design of the Proposed Project will completely avoid (and protect) the Willow Creek channel and its riparian corridor. Only a few hundred square feet of degraded coastal scrub habitat would be removed. There is no indication that the removal of this small amount of habitat will significantly impact any special-status species, or any wildlife in general.			
Alternative 1	LTS	None Required.	LTS
Implementation of Alternative 1 has similar potential impacts upon special status habitats as does the Proposed Project.			
Alternative 2	LTS	None Required.	LTS
Implementation of Alternative 2 has similar potential impacts upon special status habitats as does the Proposed Project.			
No Action Alternative	NI	None Required.	NI
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts to nesting birds.			

TABLE 2-1		
Summary of Impacts and Mitigation Measures ((Updated)	

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.7(3) Wildlife Corridors, Nurseries, and Fisheries			
Proposed Project	LTS	None Required.	LTS
The Willow Creek channel is the only wildlife corridor in the project area. No fishery resources exist in the project area because all drainages flow only ephemerally or intermittently. Willow creek cannot sustain a fishery because it carries water only intermittently, and at very low volumes. The design of the Proposed Project would completely avoid the Willow Creek channel and the riparian forest associated with the channel. Therefore, project implementation will not affect off-site wildlife corridors, nurseries, fisheries, etc. The Proposed Project would not result in the development of off-Reservation lands, so the proposed development would not result in direct impacts to wildlife corridors, nurseries, or fisheries that occur on off-Reservation lands.			
Alternative 1	LTS	None Required.	LTS
Implementation of Alternative 1 has similar insignificant impacts upon wildlife corridors, nurseries, or fisheries as does the Proposed Project. Therefore, Alternative 1 would result in a less than significant impact to wildlife corridors, nurseries, and fisheries.			
Alternative 2	LTS	None Required	LTS
Implementation of Alternative 2 has similar insignificant impacts upon wildlife corridors, nurseries, or fisheries as does the Proposed Project. Therefore, Alternative 2 would result in a less than significant impact to wildlife corridors, nurseries, and fisheries.			
No Action Alternative	NI	None Required.	NI
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts to hydrology and water quality.			

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.7(4) Conflicts with Policies or Adopted Habitat Conservation Plans			
Proposed Project	LTS	None Required.	LTS
Project-related development is located entirely on the Reservation and, as such would not result in impacts to off-Reservation sensitive habitats protected by state or federal regulations, nor would it impact policies, or adopted habitat conservation plans. Conflicts between the proposed development and adopted habitat conservation plans is considered to be less than significant due to the development being located entirely on the Reservation, which is not included in the plan area of any adopted habitat conservation plan.			
Alternative 1	LTS	None Required.	LTS
Implementation of Alternative 1 has similar level of impact upon conservation policies or adopted conservation plans as the Proposed Project. Conflicts between the Alternative 1 development and adopted habitat conservation plans is considered to be less than significant due to the development being located entirely on the Reservation, which is not included in the plan area of any adopted habitat conservation plan.			
Alternative 2	LTS	None Required.	LTS
Implementation of Alternative 2 has similar level of impact upon conservation policies or adopted conservation plans as the Proposed Project. Conflicts between the Alternative 2 development and adopted habitat conservation plans is considered to be less than significant due to the development being located entirely on the Reservation, which is not included in the plan area of any adopted habitat conservation plan.			
No Action Alternative	NI	None Required.	NI
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts.			

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION		MITIGATION MEASURES	Level of Significance After Mitigation
4.7(5) Operational Effects from Noise or Lighting				
Proposed Project	LTS	А.	Glass used in the proposed gaming facility shall contain less than 10% reflectivity.	LTS
The Proposed Project has incorporated measures to reduce or eliminate light and noise pollution on adjacent off-Reservation properties, which reduces lighting impact to a less than significant level. Noise and vibration levels adjacent to the Reservation would increase temporarily during the construction period due to the periodic use of explosives blasting, rock drilling, and heavy construction equipment. No special status species were detected adjacent to the Reservation, thus construction related noise impacts to special status species are less than significant. Noise mitigation measures have been identified in Section 4.10 to reduce construction-related noise and operation noise to a less than significant level. The CDFW recommended that the proposed facility incorporate non- reflective glass to reduce the potential for avian collisions with the facility.				
Alternative 1	LTS		Same as Proposed Project	LTS
Implementation of Alternative 1 has similar insignificant impacts from noise and light pollution, and since Alternative 1 has a significantly smaller building footprint, any potential impacts are reduced proportionately.				
Alternative 2	LTS		Same as Proposed Project	LTS
Implementation of Alternative 2 has similar insignificant impacts from noise and light pollution, and since Alternative 2 has a significantly smaller building footprint, any potential impacts are reduced proportionately.				
No Action Alternative	NI		None Required.	NI
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts.				

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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Environmental Impact	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.8 CULTURAL RESOURCES			
4.8(1) Cultural Resources			
Proposed Project	NI	None Required.	NI
The development of the proposed gaming facility would occur on the Reservation and, as such, would not result in direct off-site impacts to documented, significant cultural resources (historic properties or historic resources).			
Alternative 1	NI	None Required.	NI
The development of the proposed gaming facility under Alternative 1 would occur on the Reservation and, as such, would not result in direct off- site impacts to documented, significant cultural resources (historic properties or historical resources).			
Alternative 2	NI	None Required.	NI
The development of the proposed gaming facility under Alternative 2 would occur on the Reservation and, as such, would not result in direct off- site impacts to documented, significant cultural resources (historic properties or historical resources).			
No Action Alternative	NI	None Required.	NI
Under the No Action Alternative, no change in existing land use is proposed. No adverse effects have been identified.			
4.8(2) Paleontological Resources			
Proposed Project	NI	None Required.	NI
The development of the proposed gaming facility would occur on the Reservation and, as such, would not result in direct off-site impacts to			
Less than Significant = LTS Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation
paleontological resources.			
Alternative 1	NI	None Required.	NI
The development of the proposed gaming facility under Alternativ would occur on the Reservation and, as such, would not result in direct site impacts to paleontological resources.	re 1 off-		
Alternative 2	NI	None Required.	NI
The development of the proposed gaming facility under Alternativ would occur on the Reservation and, as such, would not result in direct site impacts to paleontological resources.	ve 2 off-		
No Action Alternative	NI	None Required.	NI
Under the No Action Alternative, no change in existing land us proposed. No adverse effects have been identified.	e is		
4.9 TRANSPORTATION			
4.9(1) Construction Traffic			
Proposed Project Fourteen daily vehicle trips would be generated by the construct workers during grading operations. It was conservatively assumed that fourteen of the workers would arrive during the morning peak-period would leave during the afternoon peak-period. In addition to the work vehicle trips, truck trips will be generated by the earthwork phase construction. A total of 14,286 truckloads would be required throug the grading/export phase of the project. The Proposed Project w require approximately 60 trucks per day. An adjusted daily volume of vehicle trips would be generated by the trucks. It was assumed that t would be an even distribution of trucks throughout the nine-hour v day; therefore the trucks would generate approximately 34 vehicle during the morning and afternoon peak-period. The construction tr	SI tion t all and er's e of nout buld 300 here work trips affic	 A. To lessen the concentration of construction traffic, the contractor shall implement a Construction Management Plan (CMP) for the project. This CMP shall be implemented as a project feature and shall include the following: Encourage construction workers to rideshare to the site; Staggering of work hours to avoid all workers arriving at the same time; Restrict alternative work hours to avoid the peak-hour commuter traffic along SR-94; and 	LTS
would cause a significant impact at the intersection of Indian Spr	ings	• Schedule deliveries or equipment hauling to occur at off-	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation
Drive/ Jefferson Road and SR-94 (Campo Road).		peak times.	
Safety and operations at the project driveway are a particular concern during the construction phase of the project. SR-94 is a high speed (55 MPH) two-lane major road with horizontal and vertical curves that limit sight distance in the vicinity of the project driveway. Heavy trucks will need to merge in and out of the site throughout the work day. Safety and operations at the project driveway is considered a short term construction traffic related impact. SR 94 is currently a truck road and would be able to accommodate the truck traffic generated by the construction phase. Therefore, a less than significant impact would result during construction activities. Nonetheless, mitigation is provided in order to lessen the concentration of construction traffic.		 The above listed CMP strategies shall be documented in the Transportation Management Plan to be submitted to Caltrans. B. To reduce traffic safety impacts related to construction activities, a Traffic Management Plan (TMP) shall be developed, reviewed and approved by Caltrans prior to commencement of construction work. This TMP shall be prepared to demonstrate to Caltrans the ability of the existing SR-94 to safely handle construction traffic in conjunction with existing truck traffic along SR-94. Elements of the TMP shall include the following: Speed reduction signs, Temporary flashing beacons, and Flagger managing the vehicular conflicts along SR-94 (Campo Road) and the construction entrance driveway. The flagger operations will force vehicles traveling along SR-94 (Campo Road) to reduce their speeds to a stop conditions to allow truck traffic to enter the SR-94 facility. C. To minimize the impact cause by the construction traffic to SR-94 (Campo Road) the construction truck traffic shall be restricted to the following times: Truck traffic shall be restricted to between 9:00 AM to 2:00 PM and from 5:30 PM to 7:00 PM during a typical weekday, and 	
		• Truck traffic shall be restricted on Fridays to between8:00 AM to 2:00 PM and 5:30 PM to 7:00 PM.	
Alternative 1 Similar to the Proposed Project, the initial earthwork phase of construction for Alternative 1 is anticipated to last approximately six months.	SI	Same as Proposed Project.	LTS

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Less than Significant = LTS

Significant = SI

BI = Beneficial

NI = No Impact Jamul Indian Village Final Tribal EE – Summary Tables

Environ	IENTAL IMPACT	Level of Significance Before Mitigation		MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 1 is expected to g the morning or afternoon p estimates for each subseque Alternative 1. All construct between 6 and 7 a.m. and be Construction traffic would oc State Route 94 is currently a t the truck traffic generated by significant impact would resu	generate approximately 14 trucks trips during weak-hour periods. The Proposed Project ent phase on the project are applicable to tion traffic for Alternative 1 would occur tween 3 and 4 p.m. Monday through Friday. cur before the peak-hour traffic along SR 94. ruck road and would be able to accommodate the construction phase of Alternative 1. A lt during construction activities.				
Alternative 2		SI		Same as Proposed Project.	LTS
Similar to both the Propose earthwork phase of construct approximately six months; H significantly less than the P- during the morning or afternot Proposed Project. As woul Alternative 1, all construct between 6 and 7 a.m. and be Construction traffic would oc State Route 94 is currently a t the truck traffic generated by significant impact would resu	sed Project and Alternative 1, the initial tion for Alternative 2 is anticipated to last nowever, the amount of exaction would be roposed Project. The truck trips generated oon peak-hour periods would be less than the d be the case for the Proposed Project and ion traffic for Alternative 2 would occur tween 3 and 4 p.m. Monday through Friday. cur before the peak-hour traffic along SR 94. ruck road and would be able to accommodate the construction phase of Alternative 2. A It during construction activities.				
No Action Alternative		NI		None Required.	NI
The No Action Alternative we construction related impacts v	ould not result in construction activities. No vould occur.				
4.9(2) Existing Plus Project Condit	tions				
Proposed Project		SI	The Tribe shall fination improvements shown i	ance and implement the recommended intersec n Table 4.9-51. All project related impacts would	ion LTS be
Intersection Analysis (HCM)			mitigated with the recor	nmended mitigation measures.	
Intersections would have or generated by the Proposed Pr	ne or more peak-hours where the traffic roject would cause a significant direct traffic				
Less than Significant = LTS	Significant = SI	Significant and U	Inavoidable = SU	BI = Beneficial	NI = No Impact

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Jamul Indian Village Final Tribal EE – Summary Tables

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
related impact.			
Intersection Analysis (ILV)			
Intersections would operate above capacity with the addition of the Proposed Project traffic.			
Roadway Segment Analysis			
All roadway segments within the study area would continue to function at LOS C or better with the addition of traffic from the Proposed Project.			
HCM Peak-Hour Arterial Analysis			
Via Mercado and Jefferson Road/Proctor Road under Existing Plus Project Conditions continue to function at LOS B or better with the addition of the Proposed Project.			
HCM Peak-Hour Two-Lane Highway Analysis			
All two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed.			
Proposed Access Evaluation			
The intersection of SR 94 (Campo) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result.			
Alternative 1	SI	The Tribe shall finance and implement the recommended intersection improvements shown in Table 4.9.51. All project related impacts would be	LTS
Intersection Analysis (HCM)		mitigated with the recommended mitigation measures.	
Intersections would have one or more peak-hours where the traffic generated by the Alternative 1 Project would cause a significant direct traffic related impact.			

Less than Significant = LTS

Significant = SI

Significant and Unavoidable = SU

Jamul Indian Village Final Tribal EE – Summary Tables

NI = No Impact

Summary of Impacts and Mitigation Measures (Updated)				
ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION	
Intersection Analysis (ILV)				
All intersection will operate at below or approaching capacity.				
Roadway Segment Analysis				
All roadway segments within the study area would continue to function at LOS C or better with the addition of traffic from Alternative 1.				
HCM Peak-Hour Arterial Analysis				
SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor Road under Existing Plus Alternative 1 Conditions would continue to function at LOS B or better with the addition of traffic from Alternative 1.				
HCM Peak-Hour Two-Lane Highway Analysis				
All two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed.				
Proposed Access Evaluation				
The intersection of SR 94 (Campo) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result.				
Alternative 2	SI	The Tribe shall finance and implement the recommended intersection improvements shown in Table 4.9.51. All project related impacts would be	LTS	
Intersection Analysis (HCM)		mitigated with the recommended mitigation measures.		
Intersections would have one or more peak-hours where the traffic generated by he Alternative 2 Project would cause a significant direct traffic related impact.				

TABLE 2-1

Less than Significant = LTS

Significant and Unavoidable = SU

BI = Beneficial

NI = No Impact

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Intersection Analysis (ILV)			
All intersection will operate at below or approaching capacity.			
Roadway Segment Analysis			
All roadway segments within the study area would continue to function at LOS C or better with the addition of traffic from Alternative 2.			
HCM Peak-Hour Arterial Analysis			
The roadway segment would continue to function at LOS B or better with the addition of traffic from Alternative 2.			
HCM Peak-Hour Two-Lane Highway Analysis			
SR 94 (Campo Road) between Jefferson Road/Proctor Road and Otay Lakes Road under Existing Plus Alternative 2 Conditions would operate at LOS D or E during all peak-hours analyzed.			
Proposed Access Evaluation			
The intersection of SR 94 (Campo) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result.			
No Action Alternative	NI	None Required.	NI
The No Action Alternative would not result in the addition of traffic to area roadways. No impact would result.			

TABLE 2-1	
Summary of Impacts and Mitigation Measures	(Updated)

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES		Level of Significance After Mitigation
4.9(3) Near Term (2015) Plus Project Conditions				
Proposed Project	SI	А.	The Tribe shall pay their fair share for the mitigation shown in Table	LTS
Intersection Analysis (HCM)			4.9-54. The recommended improvements would mitigate the Propose Project cumulatively significant impacts at all intersections.	
Intersections would have one or more peak-hours where the Proposed Project would cause a cumulatively considerable significant impact.		В.	The Tribe shall pay into the County's Transportation Impact Fee for cumulatively considerable traffic impacts on County of San Diego facilities.	
Intersection Analysis (ILV)				
Intersections would have one or more peak-hours where the operations would be above capacity.				
Roadway Segment Analysis				
All roadway segments within the study area would continue to function at LOS D or better with the addition of traffic from the Proposed Project.				
HCM Peak-Hour Arterial Analysis				
SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor Road under Near Term (2015) Plus Project Conditions would function at LOS D or better with the addition of the Proposed Project.				
HCM Peak-Hour Two-Lane Analysis				
All two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed.				
Proposed Access Evaluation				
The intersection of SR 94 (Campo) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result.				

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS

Significant and Unavoidable = SU

BI = Beneficial

NI = No Impact

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 1	SI	Same as Proposed Project	LTS
Intersection Analysis (HCM)		Salle as rroposed rroject	
Intersections would have one or more peak-hours where the Alternative 1 Project would have a cumulatively significant impact.			
Intersection Analysis (ILV)			
Intersections would have one or more peak-hours where the operations would be above capacity.			
Roadway Segment Analysis			
All roadway segments within the study area would continue to function at LOS D or better with the addition of traffic from Alternative 1.			
HCM Peak-Hour Arterial Analysis			
SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor Road under Near Term (2015) Plus Project Conditions would function at LOS C or better with the addition of traffic from Alternative 1.			
HCM Peak-Hour Two-Lane Highway Analysis			
All two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed.			
Proposed Access Evaluation			
The intersection of SR 94 (Campo) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result.			

Significant and Unavoidable = SU

BI = Beneficial

NI = No Impact

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 2	SI	Same as Proposed Project	LTS
Intersection Analysis (HCM)			
Intersections would have one or more peak-hours where the Alternative 2 Project would have a cumulatively significant impact.			
Intersection Analysis (ILV)			
Intersections would have one or more peak-hours where the operations would be above capacity.			
Roadway Segment Analysis			
All roadway segments within the study area would continue to function at LOS D or better with the addition of traffic from Alternative 2.			
HCM Peak-Hour Arterial Analysis			
SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor Road under Near Term (2015) Plus Project Conditions would function at LOS C or better with the addition of traffic from Alternative 2.			
HCM Peak-Hour Two-Lane Highway Analysis			
All two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed.			
Proposed Access Evaluation			
The intersection of SR 94 (Campo) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result.			
	NI	None Required.	NI

Less than Significant = LTS

Significant = SI

Significant and Unavoidable = SU

MITIGATION		WITIGATION WEASURES	AFTER MITIGATION
SI	A.	To mitigate cumulatively considerable significant traffic related impacts at intersections and roadway segments within the Caltrans jurisdiction, the Tribe shall pay a fair-share contribution toward the construction of improvements identified in Table 4.9-57, as well as mitigation phasing displayed under Mitigation 4.9-2. To mitigate cumulatively considerable significant traffic related impacts at the intersections and roadway segments within the County of San Diego, pay toward the County's Transportation Impact Fee. The improvements shown are consistent with the County of San Diego's Mobility Element approved in 2011. Table 4.9-19 and 4.9-20 shows the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Otay Lakes Road with the recommended improvements under all project alternatives. As shown in the tables, all cumulatively considerable impacts would be mitigated with the successful implementation of the recommended improvements prior to operation of the gaming facility.	LTS
	SI	SI A.	SI A. To mitigate cumulatively considerable significant traffic related impacts at intersections and roadway segments within the Caltrans jurisdiction, the Tribe shall pay a fair-share contribution toward the construction of improvements identified in Table 4.9-57, as well as mitigation phasing displayed under Mitigation 4.9-2. To mitigate cumulatively considerable significant traffic related impacts at the intersections and roadway segments within the County of San Diego, pay toward the County's Transportation Impact Fee. The improvements shown are consistent with the County of San Diego's Mobility Element approved in 2011. Table 4.9-19 and 4.9-20 shows the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Otay Lakes Road with the recommended improvements under all project alternatives. As shown in the tables, all cumulatively considerable impacts would be mitigated with the successful implementation of the recommended improvements prior to operation of the gaming facility.

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Significant = SI

Less than Significant = LTS

NI = No Impact

Environmental Impact	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Intersection Analysis (ILV)			
All intersections within the study area would operate at above capacity during one or more peak-hour periods. Appendix 10 (Appendix F) contains the ILV worksheets.			
Roadway Segment Analysis			
The Proposed Project would have a cumulatively considerable significant traffic related impact along the following roadway segments within the County of San Diego.			
1. Jamacha Road between SR-94 and Fury Lane; and			
2. Proctor Valley Road between Melody Road and Pioneer Way.			
HCM Peak-Hour Arterial Analysis			
All roadway segments within the study area (listed below) would function at LOS D, E, or F with the addition of any of the Proposed Project alternatives during one or more peak-hours.			
 SR 94 between Via Mercado and Otay Lakes Road; 			
 Jamacha Boulevard between SR 94 and Sweetwater Springs Boulevard; 			
 Jamacha Road between SR 94 and Fury Lane; 			
• Steele Canyon Road between SR 94 and Jamul Drive;			
 Lyons Valley Road between SR 94 and Jefferson Road; 			
 Melody Road between SR 94 and Proctor Valley Road; 			
 Proctor Valley Road between SR 94 and Melody Road; and 			

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS

Significant and Unavoidable = SU

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Significant = SI

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation
 Proctor Valley Road between Melody Road and Pioneer Way. 			
HCM Peak-Hour Two-Lane Highway Analysis			
All two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed.			
Proposed Access Evaluation			
The intersection of SR 94 (Campo) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result.			
Alternative 1	SI	Same as Proposed Project.	LTS
Intersection Analysis (HCM)			
All intersections within the study area would operate at LOS D, E or F under one or more peak-hours under the Horizon Year (2035) Plus project conditions.			
Intersection Analysis (ILV)			
All intersections within the study area would operate at above capacity during one or more peak-hour periods.			
Roadway Segment Analysis			
Alternative 1 would have a cumulative traffic related impact along Proctor Valley Road between Melody Road and Pioneer Way.			
HCM Peak-Hour Arterial Analysis			
All roadway segments within the study area would function at LOS D, E, or F with the addition of traffic from Alternative 1.			

TABLE 2-1
Summary of Impacts and Mitigation Measures (Updated)

Significant = SI

Less than Significant = LTS

NI = No Impact

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
HCM Peak-Hour Two-Lane Highway Analysis			
All two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed.			
Proposed Access Evaluation			
The intersection of SR 94 (Campo) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result.			
Alternative 2	SI	Same as Proposed Project.	LTS
Intersection Analysis (HCM)			
Under Horizon Year conditions, all intersections within the study area would operate at LOS D, E or F under one or more peak-hours under the Horizon Year (2035) Plus project conditions.			
Intersection Analysis (ILV)			
All intersections within the study area would operate at above capacity during one or more peak-hour periods.			
Roadway Segment Analysis			
Alternative 2 would have a cumulative traffic related impact along Proctor Valley Road between Melody Road and Pioneer Way.			
HCM Peak-Hour Arterial Analysis			
All roadway segments within the study area would function at LOS D, E, or F with the addition of traffic from Alternative 2.			
HCM Peak-Hour Two-Lane Highway Analysis			
All two-lane facilities analyzed would operate at LOS D or E during all			

Significant and Unavoidable = SU

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 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS

Significant = SI

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	F ICE MITIGATION MEASURES		Level of Significance After Mitigation	
 peak-hours analyzed. <u>Proposed Access Evaluation</u> The intersection of SR 94 (Campo) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result. No Action Alternative The No Action Alternative would not result in the addition of traffic to area roadways. No impact would result. 	NI		None Required.	NI	
4.10(1 and 2) Construction Noise and Vibration					
Proposed Project The use of construction equipment would create noise and vibration during grading and preparation of the project site and blasting. The effect of construction noise and vibration would depend upon the noise and vibration level, the distance between construction activities and the nearest noise/vibration-sensitive receptor.	SI	 The following recommassociated with project of associated with project of a simultaneous use to the extent prace Construction better, noise shide maximum extent Equipment r from local resider The following mitigation project construction: Prepare and Imp Near Sensitive R pressure generat applicant(s) of requirements: 	nended noise abatement measures would reduce noise construction: should schedule construction activities to avoid of several pieces of high noise level-emitting equipment ticable. equipment shall be fitted with manufacturer's standard, or elding and muffling devices to reduce noise levels to the feasible. naintenance and staging areas shall be located as far away nees and hotel uses, as feasible. on measure would reduce noise/vibration associated with lement a Blast Plan and Monitor and Record Each Blast eceptors. To reduce impacts associated with air blast over- ed by project-related construction activities, the project all project phases shall conform to the following		
Less than Significant = LTS Significant = SI	Significant and L	Jnavoidable = SU	BI = Beneficial N	= No Impact	

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

Environmental Impact		Level of Significance Before Mitigation		MITIGATION MEASURES	Level of Significance After Mitigation
			- All blasting personnel license	s shall be performed by a blast contractor and ed to operate in the County.	blasting
			- Each blast pressure monitor Tribe that is loca	shall be monitored and recorded with an air bl r and groundborne vibration accelerometer approv- ted outside the closest residence to the blast.	ast over- ed by the
			- A blasting p and groundborn submitted to the commence until	blan, including estimates of the air blast over-press e vibration at the residence closest to the blast, Tribe for review prior to the first blast. Blasting the Tribe has approved the blast plan.	sure level shall be shall not
Alternative 1		SI		Same as Proposed Project.	LTS
Noise and vibration impacts from the same as under the Proposed construction of the Proposed Proje	a construction of Alternative 1 would be Project and all mitigation required for act would be required for Alternative 1.				
Alternative 2		SI		Same as Proposed Project.	LTS
While likely shorter in duration th noise and vibration impacts from the same as under the Proposed construction of the Proposed Proje	an the Proposed Project or Alternative 1, construction of Alternative 2 would be Project and all mitigation required for ct would be required for Alternative 2.				
No Action Alternative		NI		None Required.	NI
The No Project Alternative wou beyond those that currently exis Action Alternative would not incre	Id not result in a change of land use t; therefore, noise levels from the No ease. No impact would result.				
4.10(3) Traffic Noise					
Proposed Project		LTS		None Required.	LTS
The Proposed Project would convolumes, resulting in higher noise	ntribute to an increase in local traffic levels along local roadways.				
Less than Significant = LTS	Significant = SI	Significant and Una	voidable = SU	BI = Beneficial	NI = No Impact

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

	Environmental Impact	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Alternativ	ve 1	LTS	None Required.	LTS
	Alternative 1 would contribute to an increase in local traffic volumes, resulting in higher noise levels along local roadways.			
Alternativ	ve 2	LTS	None Required.	LTS
	Alternative 2 would contribute to an increase in local traffic volumes, resulting in higher noise levels along local roadways.			
No Actio	n Alternative	NI	None Required.	NI
	The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.			
4.10(4)	On Site Mechanical Equipment			
Proposed	Project	SI	The following recommended measures would reduce noise associated with the use of mechanical equipment:	LTS
	Mechanical equipment could be a primary noise source associated with the Proposed Project. The equipment would be mounted on the rooftop of the gaming complex within a mechanical room. Potential noise sources include fans, pumps, compressors, chillers, and cooling towers. Noise levels from this equipment vary substantially depending on unit efficiency, size, and location, but generally range from 45 to 70 dBA Leq at a distance of 50 feet (EPA 1971).		 Acoustical louvers capable of a 10 decibel reduction should be installed for all ventilation and when possible orientate the ventilation away from sensitive uses. Although not required to mitigate the impact, the Tribal will also consider the use of roof top parapet walls, screening barriers, and mechanical enclosures to ensure County Code requirements are met. 	
Alternativ	ve 1	SI	Same as Proposed Project.	LTS
	While potentially fewer and smaller, operation noise sources associated with Alternative 1 would be the same as those identified for the Proposed Project. Thus, all impacts and mitigation from on site activities under Alternative 1 would be the same as under the Proposed Project.			

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 2	SI	Same as Proposed Project.	LTS
While potentially fewer and smaller, operation noise sources associated with Alternative 2 would be the same as those identified for the Proposed Project. Thus, all impacts and mitigation from on site activities under Alternative 2 would be the same as under the Proposed Project.			
No Action Alternative	NI	None Required.	NI
The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.			
4.10(5) Emergency Electrical Generators			
Proposed Project	LTS	None Required.	LTS
The Proposed Project may use emergency generators to supply necessary power requirements to vital systems within facilities. Emergency generators are typically operated under two conditions: loss of main electrical supply or preventive maintenance/testing.			
Alternative 1	LTS	None Required.	LTS
While potentially fewer and smaller, emergency electrical noise associated with Alternative 1 would be the same as those identified for the Proposed Project. Thus, all impacts under Alternative 1 would be the same as under the Proposed Project.			
Alternative 2	LTS	None Required.	LTS
While potentially fewer and smaller, emergency electrical noise associated with Alternative 2 would be the same as those identified for the Proposed Project. Thus, all impacts under Alternative 2 would be the same as under the Proposed Project.			

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation
No Action Alternative	NI	None Required.	NI
The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.			
4.10(6) Emergency Facilities			
Proposed Project	LTS	None Required.	LTS
The Proposed Project would include emergency facilities, i.e., a fire station that would generate high noise levels from alarms and vehicle movements when station crews respond to emergency situations.			
Alternative 1	LTS	None Required.	LTS
While potentially fewer and smaller, operation noise sources associated with Alternative 1 would be the same as those identified for the Proposed Project.			
Alternative 2	LTS	None Required.	LTS
While potentially fewer and smaller, operation noise sources associated with Alternative 2 would be the same as those identified for the Proposed Project.			
No Action Alternative	NI	None Required.	NI
The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase.			
4.10(7) Parking Lot Activities			
Proposed Project	LTS	None Required.	LTS
Activities making up a single parking event included vehicle arrival, limited idling, occupants exiting the vehicle, door closures, conversations among passengers, occupants entering the vehicle, startup, and departure of the vehicle. A representative parking lot with 200 stalls and 400 parking events per hour			
Less than Significant = LTS Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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TABLE 2-1
Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
would produce a noise level that exceeds the significance criteria for the daytime at distances up to 200 feet and exceeds the nighttime noise standard at distances up to 350 feet. Based on the project land use plan no noise sensitive residential land uses would be within 570 feet of parking areas.			
Alternative 1	LTS	None Required.	LTS
While potentially fewer and smaller, parking lot noise associated with Alternative 1 would be the same as those identified for the Proposed Project. Thus, all impacts Alternative 1 would be the same as under the Proposed Project.			
Alternative 2	LTS	None Required.	LTS
While potentially fewer and smaller, parking lot noise associated with Alternative 2 would be the same as those identified for the Proposed Project. Thus, all impacts Alternative 2 would be the same as under the Proposed Project.			
No Action Alternative	NI	None Required.	NI
The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.			
4.10(8) Loading Dock and Delivery Activity			
Proposed Project	LTS	None Required.	LTS
Noise sources associated with loading dock and delivery activities can include trucks idling, onsite truck circulation, trailer-mounted refrigeration units, pallets dropping, and the operation of forklifts. Based on the Proposed project site plan no noise sensitive land uses would be within 280 feet of proposed loading docks.			
Alternative 1	LTS	None Required.	LTS
While potentially fewer and smaller, loading dock and delivery activity noise sources associated with Alternative 1 would be the same as those identified for the Proposed Project. Thus, all impacts would be the same as			
Less than Significant = LTS Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)
LTS
LTS
NI
LTS

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Significant and Unavoidable = SU

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
		- Minimize unnecessary vehicular and machinery activities	
		 Sweep paved streets at least once per day where there is evidence that dirt has been carried on to the roadway, 	
		- Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities, and	
		- Remove unused material.	
Alternative 1	LTS	Same as Proposed Project	LTS
Emissions of criteria air pollutants for the Alternative 1 construction scenario were modeled based on the above assumptions and other assumptions for construction equipment and architectural coatings as contained in UREBMIS2007. Results of the modeling are summarized in Table 4.11-6 . As shown, criteria pollutant emissions from construction under Alternative 1 would not exceed applicable <i>de minimis</i> levels and would be less than significant.			
Alternative 2	LTS	Same as Proposed Project	LTS
Emissions of criteria air pollutants for the Alternative 2 construction scenario were modeled based on the above assumptions and other assumptions for construction equipment and architectural coatings as contained in UREBMIS2007. Results of the modeling are summarized in Table 4.11-7 . As shown, criteria pollutant emissions from construction under Alternative 2 would not exceed applicable <i>de minimis</i> levels and would be less than significant.			
No Action Alternative	NI	None Required.	NI
Under the No Action Alternative, no construction would occur on the Reservation. Therefore, no construction related criteria pollutant impacts would occur.			

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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Environme	ENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.11(2) Odor - Construction				
Proposed Project		LTS	None Required.	LTS
Sources of odor during Project diesel-fueled construction equip associated with asphalt paving These odors may be considere these odors would be temporary the source, and would not as Reservation.	construction would be exhaust fumes from pment and haul trucks, as well as emissions and the application of architectural coatings. d offensive to some individuals. However, y, would disperse rapidly with distance from ffect a substantial number of people off-			
Alternative 1		LTS	None Required.	LTS
Sources of odor during constru- those under the proposed projec would be temporary, would dis and would not affect a substant	action of Alternative 1 would be Similar to ct. As with the Proposed Project, these odors perse rapidly with distance from the source, ial number of people off-Reservation.			
Alternative 2		LTS	None Required.	LTS
Sources of odor during constru- those under the proposed projec would be temporary, would dis and would not affect a substant	action of Alternative 2 would be Similar to ct. As with the Proposed Project, these odors perse rapidly with distance from the source, ial number of people off-Reservation.			
No Action Alternative		NI	None Required.	NI
Under the No Action Alterna Reservation and, thus no odor impact would occur.	tive, no construction would occur on the r would be generated. Therefore, no odor			
4.11(3) Toxic Air Contaminants – C	Construction			
Proposed Project		LTS	None Required.	LTS
Construction activities would result matter (PM) from off-road heavy-o	in short-term emissions of diesel particulate duty diesel equipment exhaust and diesel-			
Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
fueled haul trucks. Diesel PM was identified as a TAC by ARB in 1998.			
Construction-related emissions are based on the previous assumptions and include GHG sources such as construction equipment, material delivery trucks, and construction worker vehicles.			
Alternative 1	LTS	None Required.	LTS
As with the Proposed Project, construction under Alternative 1 would occur over a much shorter period of time than the exposure period of concern, use of off- road heavy-duty diesel equipment would be temporary, and diesel PM emissions would disperse rapidly with distance from the source.			
Construction-related emissions are based on the previous assumptions and include GHG sources such as construction equipment, material delivery trucks, and construction worker vehicles.			
Alternative 2	LTS	None Required.	LTS
As with the Proposed Project, construction under Alternative 2 would occur over a much shorter period of time than the exposure period of concern, use of off- road heavy-duty diesel equipment would be temporary, and diesel PM emissions would disperse rapidly with distance from the source.			
Construction-related emissions are based on the previous assumptions and include GHG sources such as construction equipment, material delivery trucks, and construction worker vehicles.			
No Action Alternative	NI	None Required.	NI
Under the No Project Alternative, no construction activities would occur; therefore, no TACs would be generated. Therefore, no TAC impacts would occur.			

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
Laure am 2012		2 47		Laurel Le dian Villa

Environmental Impact	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation
4.11(4) Criteria Pollutants - Operational			
Proposed Project	LTS	None Required.	LTS
Operation of the Proposed Project would result in an increase in emissions primarily from vehicle exhaust (mobile source emissions) and natural gas combustion, landscape equipment, consumer products, and maintenance architectural coatings (area source emissions).			
Alternative 1	LTS	None Required.	LTS
While fewer or smaller, operation emission sources under Alterative 1 would generally be the same as under the Proposed Project.			
Alternative 2	LTS	None Required.	LTS
While fewer or smaller, operation emission sources under Alterative 2 would generally be the same as under the Proposed Project.			
No Action Alternative	NI	None Required.	NI
Under the No Project Alternative, no increased emissions would result from vehicle exhaust (mobile source emissions) and natural gas combustion, landscape equipment, consumer products, and maintenance architectural coatings (area source emissions). Therefore, no impacts to air quality or GHG emissions would occur.			
4.11(5) CO Hotspots – Operational			
Proposed Project	LTS	None Required.	LTS
A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. Under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals.			
Loss than Significant – LTS Significant – SI	Significant and Linevoidable – SI	PI – Ponoficial	NI – No Import

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 1	LTS	None Required.	LTS
As described under the Proposed Project, under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. According to the project traffic report, with implementation of proposed mitigation measures, all intersections would operate at LOS D or better under the near term conditions with Alternative 1.			
Alternative 2	LTS	None Required.	LTS
As described under the Proposed Project, under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. According to the project traffic report, with implementation of proposed mitigation measures, all intersections would operate at LOS D or better under the near term conditions with Alternative 2.			
No Action Alternative	LTS	None Required.	LTS
Under the No Action Alternative, no traffic would be added to area roadways; therefore, no CO impacts would occur.			
4.11(6) Toxic Air Contaminants- Operational			
Proposed Project	LTS	None Required.	LTS
While, the Proposed Project does not include any significant new sources, such as a central energy plant, the Proposed Project would include a central cooling and heating system, which is expected to include a boiler that would utilize natural gas for external combustion, as well as backup generators. The Proposed Project would also include commercial uses that may generate stationary sources of TACs such as restaurants with char broilers and fuel dispensers for casino vehicles.			

TABLE 2-1	
Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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Environm	IENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 1		LTS	None Required.	LTS
Alternative 1 would include a cer expected to include a boiler tha combustion, as well as backup ge commercial uses that may generate broilers and fuel dispensers.	ntral cooling and heating system, which is at would utilize natural gas for external enerators. Alternative 1 would also include e stationary sources of TACs such as char			
Alternative 2		LTS	None Required.	LTS
Alternative 2 would include a cer expected to include a boiler tha combustion, as well as backup ge commercial uses that may generate broilers and fuel dispensers.	ntral cooling and heating system, which is at would utilize natural gas for external nerators. Alternative 2 would also include e stationary sources of TACs such as char			
No Action Alternative		NI	None Required.	NI
Under the No Action Alternative, no activities. Therefore, no operational	D TACs would be generated from operational TAC impact would occur.			
4.11(7) Odor – Operational				
Proposed Project		LTS	None Required.	LTS
The Proposed Project proposes a w considered a potential odor source. I system and storage would be a clo would be located on the roof and wo vaporization process.	astewater treatment plant, which is typically However, the proposed wastewater treatment sed system located underground. The MVC ould vent odorless steam from the wastewater			
Alternative 1		LTS	None Required.	LTS
As with the Proposed Project, Alta plant. However, as with the Propos and storage would be a closed syste located on the roof and would	ernative 1 proposes a wastewater treatment sed Project, the wastewater treatment system m located underground. The MVC would be vent odorless steam from the wastewater			
Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

TABLE 2-1
Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
vaporization process.			
Alternative 2	LTS	None Required.	LTS
As with the Proposed Project, Alternative 2 proposes a wastewater treatment plant. However, as with the Proposed Project, the wastewater treatment system and storage would be a closed system located underground. The MVC would be located on the roof and would vent odorless steam from the wastewater vaporization process.			
No Action Alternative	NI	None Required.	NI
Under the No Action Alternative, no gaming facility would be constructed. Operational odor would not be generated from operational activities; therefore, no odor impact would occur.			
4.11(8) GHG Emissions - Operational			
Proposed Project GHG emissions would be generated throughout the operational life of the proposed project. The proposed Project includes creation of new facilities, which include a gaming facility, events center, and other facilities as described in detail in the Project Description, and would result in 203,000 square feet of additional operations. Emissions would be generated by mobile sources associated with increased vehicle trips to the Proposed Project and would include trips generated by employees and visitors.	SI	GHG emissions associated with the Proposed Project would be reduced approximately 30 percent from BAU conditions by combining all regulatory measures such as Pavley, Low Carbon Fuel Standards (which results in a 30 percent reduction in vehicle emissions), utility reduction goals required by the State and recycling requirements under AB 341, design features described in Section 2.0 <i>Proposed Project and</i> <i>Alternatives</i> (such as green roof technology) and the following mitigation measures. The reduction would result in a less than significant impact to GHG emissions (see Appendix 11 GHG Generator and Estimated Reductions).	LTS
		- Install solar panels on the roof, where possible, in areas not being utilized for the green roof technologies.	
		- Provide shuttle and bus services to and from the project to reduce vehicle trips and miles traveled.	
		- Flare off and burned CH_4 produced at the wastewater treatment plant to reduce CH_4 emissions up to 95%.	
		- Utilize low flow water devices High Efficiency Toilets	
Less than Significant = LTS Significant = SI	Significant and Unavoidable =	= SU BI = Beneficial NI :	= No Impact

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
		(HET) and with specifications meeting or exceeding standards set forth by the EPA.	
		- Install low energy utilities (i.e., lighting and appliances) to increase building efficiency and reduce power consumption.	
		 Promote employee and patron ridesharing to help reduce vehicle trips traveled. 	
		- Install dedicated parking stalls and charging stations for electric vehicles.	
Alternative 1	SI	Same as Proposed Project	LTS
GHG emissions would be generated throughout the operational life of Alternative 1. As with the Proposed Project, Alternative 1 includes creation of approximately 119,000 square feet of new facilities as described in detail in the Project Description. GHG emissions would be generated by mobile sources associated with increased vehicle trips to the built-out casino and other amenities, and would include trips generated by employees and casino visitors.			
Alternative 2	SI	Same as Proposed Project.	LTS
GHG emissions would be generated throughout the operational life of Alternative 2. As with the Proposed Project, Alternative 2 includes creation of approximately 17,500 square feet of new facilities as described in detail in the Project Description. GHG emissions would be generated by mobile sources associated with increased vehicle trips to the built-out casino and other amenities, and would include trips generated by employees and casino visitors.			
No Action Alternative	LTS	None Required.	LTS
Under the No Action Alternative, no gaming facility would be constructed. Operational GHG would not be generated from operational activities; therefore, no operational GHG impact would occur.			

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.12 PUBLIC SERVICES			
4.12(1) Water Supply			
Proposed Project	LTS	None Required.	LTS
The gaming facility would require an average water supply volume of approximately 86,730 gpd, and a peak hour demand flow rate of 181 gallons per minute (gpm). The prior adopted Subarea Master Plan for Potable Water Service to the Jamul Reservation (Appendix 5) assumed a buildout average day demand of 143 gpm and peak hour demand of 428 gpm before reclamation. Therefore, the Proposed Project, as revised from the prior 2006 design, reduces average and peak daily potable water demand on the Otay Water District by 58%.			
Alternative 1	LTS	None Required.	LTS
Alternative 1 contains the same project components as the Proposed Project, but on a reduced scale. Water demand estimates and design water demands for this development are summarized in Table 4.12-1 . The estimates for Alternative 1 are reduced because the facility components are reduced.			
Alternative 2	LTS	None Required.	LTS
The proposed gaming complex under Alternative 2 would be 92% smaller than the Proposed Project gaming complex. Water demand estimates and design water demands for this development are summarized in Table 4.12-1 . The estimates for Alternative 2 are dramatically reduced because the facility components are similarly reduced.			
No Action Alternative	LTS	None Required.	LTS
Under the No Action Alterative the Reservation would continue to receive water supply from the Otay Water District. The No Action Alternative would not result in the development of a gaming complex on the Reservation. The No Action Alternative does not increase water demand. No significant water supply impacts would occur under the No Action Alternative.			

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
January 2013		2- 53		Jamul Indian Village
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ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.12(2) Wastewater Service			
Proposed Project	LTS	None Required.	LTS
Wastewater generated from the proposed facilities would flow by gravity through a series of pipes to the WWTP located under the entrance drive to the parking garage. The wastewater would be treated to a level that meets California Title 22 recycled water quality standards. A wastewater treatment capacity of approximately 165,200 gallons per day is needed for the wastewater treatment plant to allow for peak wastewater flows.			
Alternative 1	LTS	None Required.	LTS
Wastewater generated from the proposed facilities would flow by gravity through a series of pipes to the WWTP located under the entrance drive to the parking garage. A wastewater treatment capacity of approximately 80,500 gallons per day is needed for the wastewater treatment plant to allow for peak wastewater flows.			
Alternative 2	LTS	None Required.	LTS
Wastewater generated from the proposed facilities would flow by gravity through a series of pipes to the WWTP located near the parking facilities. A wastewater treatment capacity of approximately 22,770 gallons per day is needed for the wastewater treatment plant to allow for peak wastewater flows.			
No Action Alternative	NI	None Required.	NI
No increase in wastewater generation, treatment, or discharge would occur under the No Action Alternative. The individual septic systems would continue as the waste water treatment method on the Reservation site. No significant impacts would occur from implementation of the No Action Alternative.			

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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				Final Tribal EE – Summary Tables

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.12(3) Solid Waste Service			
Proposed Project	LTS	None Required.	LTS
Construction of the Proposed Project is expected to result in a temporary increase in waste generation. Waste generation resulting from operation of the Proposed Project's facilities was estimated to be 6.08 tons per day (Table 4.12 . 5). However, the gaming complex would employ a 30 cubic yard compactor to reduce the volume of trash being produced. To reduce the volume of trash even further, a streamline compactor would be used to reduce the water content of the trash.			
Alternative 1	LTS	None Required.	LTS
Construction of Alternative 1 is expected to result in a temporary increase in waste generation. Alternative 1 would generate approximately 3.16 tons per day.	l r		
Alternative 2	LTS	None Required.	LTS
Construction of Alternative 2 is expected to result in a temporary increase in waste generation. Alternative 2 is expected to generate 0.49 tons per day.	l de la constante de		
No Action Alternative	NI	None Required.	NI
No new development would take place under this alternative. Thus, the No Action Alternative would not result in increased solid waste production. No significant impacts to solid waste would occur from implementation of the No Action Alternative.			
4.12(4) Electricity, Natural Gas, and Telecommunications			
Proposed Project	LTS	None Required.	LTS
The Proposed Project's peak demand load of 6.6 megawatts represents only 1% of the County's current generating capacity. According to the California Energy Commission, California's massive electricity generation			
Less than Significant = LTS Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

En	VIRONMENTAL IMPACT	Level of Significance Before Mitigation		MITIGATION MEASURES	Level of Significance After Mitigation
system generates mor Energy Commission capacity is 5,438 me nuclear to wind turbir	re than 296,000 gigawatt hours each year (California , 2011). San Diego County's current generating gawatts from 68 generation facilities, ranging from ne.				
Alternative 1		LTS		None Required.	LTS
Alternative 1 would and thus Alternative upon regional energy	require 69% less energy than the Proposed Project, 1 has a corresponding reduction in potential impact supply.				
Alternative 2		LTS		None Required.	LTS
Alternative 2 would and thus Alternative upon regional energy	require 92% less energy than the Proposed Project, 2 has a corresponding reduction in potential impact supply.				
No Action Alternative		NI		None Required.	NI
No new development No Action Alternative of electricity, natural to service of electric from implementation	t would take place under this alternative. Thus, the e would not result in additional demands upon service gas, or telecommunications. No significant impacts ity, natural gas, or telecommunications would occur of the No Action Alternative.				
4.12(5) Law Enforcemen	t				
Proposed Project The development of the Pro enforcement services to loo for public safety services consistent with Section 8.0 to providing on-site secu criminal and civil incidents day presence of Tribal surveillance, which would gaming facility.	pposed Project would result in additional calls for law al law enforcement agencies. The increased demand is typical of commercial development. However, of the Tribal-State Compact, the Tribe is committed rity for gaming operations to reduce and prevent s. Impacts would be lessened due to the 24-hour per security and monitoring of the casino by video l aid in the deterrence of criminal activity at the	SI	Consistent with Section providing on-site secu and civil incidents. Th the mitigation measure enforcement services. 1. Provide on- criminal and 2. All security efficiently would aid	n 8.0 of the Tribal-State Compact, the Tribe is rity for gaming operations to reduce and prev the Tribe would also make a good faith effort t is listed below to reduce potential adverse effe site security for gaming operations to reduce d civil incidents. guards would carry two-way radios so they respond to back up and emergency related in the prevention of criminal activity wi	committed to LTS vent criminal to implement cts upon law and prevent v are able to calls. This thin gaming
Less than Significant = LTS	Significant = SI	Significant and U	navoidable = SU	BI = Beneficial	NI = No Impact

TABLE 2-1
Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		 facilities. Adopt a "Responsible Alcoholic Beverage Policy" which would include, but not be limited to, requiring patrons to prove their age and refusing service to those who have had too much to drink. This policy would be coordinated with the San Diego Sheriff's Office. All parking areas would be well lit and monitored by parking staff and/or roving security guards at all times during operation. This would aid in the prevention of auto theft and other related criminal activity. Areas surrounding the gaming facilities would have "No Loitering" signs in place, would be well lit and would be patrolled regularly by roving security guards. This would aid in the prevention of illegal loitering and all crimes that relate to, or require, loitering. Provide traffic control with appropriate signage and the presence of peak-hour traffic control staff. This would aid in the prevention of offsite parking, which could create possible security issues. The Tribe will make good faith efforts to enter into an agreement with the County regarding law enforcement services. Under Public Law 280, the State of California and other local law enforcement agencies have enforcement authority over criminal activities on Tribal land. The Tribe may enter into a service agreement with the San Diego County Sheriff's 	
Alternative 1	SI	Department to address criminal issues. The Sheriff's Department does not, however, have authority over civil matters on Tribal lands. Based on information provided by the CHP, the increase in traffic along SR 94 could increase service demands on the El Cajon Office. The Tribe has identified mitigation to traffic improvements in order to assist in the mitigation SR 94. These measures would assist in reducing congestion and operation effects and thereby are expected to reduce the increased demand for CHP service. Same as Proposed Project	LTS
Alternative 1 is a significantly reduced gaming complex, which would result in a corresponding reduction in law enforcement needs.			

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

BI = Beneficial

NI = No Impact

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 2	SI	Same as Proposed Project	LTS
Alternative 2 is a significantly reduced gaming complex, which result in a corresponding reduction in law enforcement needs.			
No Action Alternative	NI	None Required.	NI
No new development would take place under this alternative. Thus, the No Action Alternative would not result in additional demands upon law enforcement services. No significant impacts to law enforcement services would occur from implementation of the No Action Alternative.			
4.12(6) Fire Protection and Emergency Medical Services			
Proposed Project Construction of the proposed facilities would occur in an area that is surrounded by grasslands and is highly susceptible to grassfires. The use of construction equipment could result in a grass fire, which in turn could result in a significant off-site impact.	SI	 To reduce the risk of starting a wildfire during construction, the Tribe will make a good faith effort to implement the following best management practices during construction: 1. use spark arresters on construction equipment, 2. restrict vehicular parking to areas devoid of grasses or other fuels, 3. designate safe areas for welding and metal cutting operations, 4. prohibit smoking, 5. properly store flammable or explosive materials, and 6. keep construction areas wetted with water trucks and implement a fire safety / fire response plan 	LTS
Alternative 1	SI	Same as the Proposed Project	LTS
The reduced size of facilities under Alternative 1 would result in a corresponding reduction in fire protection and emergency services needs. The risk of grassfire is the same as for the Propose Project. Alternative 1 would include the same design requirements as identified for the Proposed Project.			

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

Environmental Impact	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 2	SI	Same as the Proposed Project	LTS
Alternative 2 is a significantly reduced gaming complex, which would be 92% smaller than the Proposed Project gaming complex. There would be a corresponding reduction in fire protection and emergency services needs. Fire station staffing for Alternative would be reduced to 14 personnel due to the reduced size of the facility to be served. Construction of the Alternative 2 gaming complex could still have a significant grassland impact as identified for the Proposed Project.			
No Action Alternative	NI	None Required.	NI
No new development would take place under this alternative. Thus, the No Action Alternative would not result in additional demands upon fire protection or emergency medical services. No significant impacts to fire protection or emergency services would occur from implementation of the No Action Alternative.			
4.13 GROWTH INDUCING EFFECTS			
Proposed Project	LTS	None Required.	LTS
The Proposed Project would result in an estimated 1,043 temporary construction jobs, and an estimated 1,611 permanent jobs at full buildout of the gaming complex. While the overall demand for housing could increase as a result of the project, the demand is not expected to create the need for construction of new housing and would likely be filled by the existing housing stock. The creation of temporary and permanent jobs is expected to result in increased demand for goods and services, which may result in commercial growth within San Diego County. Demand for goods and services would be expected to be most significant in the South Suburban areas where the majority of employees are expected to reside. The employees of the Proposed Project would constitute only a small portion of total growth in population expected for the South Suburban area. The vast majority of increased commercial demand generated by the Proposed Project and development alternatives is expected to be absorbed by existing businesses and enterprises.			

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 1	LTS	None Required.	LTS
Alternative 1 would result in an estimated 531 temporary construction jobs, and an estimated 846 permanent jobs at full buildout of the gaming complex. While the overall demand for housing could increase as a result of the project, the demand is not expected to create the need for construction of new housing and would likely be filled by the existing housing stock. The creation of temporary and permanent jobs is expected to result in increased demand for goods and services, which may result in commercial growth within San Diego County. Demand for goods and services would be expected to be most significant in the South Suburban areas where the majority of employees are expected to reside. The employees of the Proposed Project would constitute only a small portion of total growth in population expected for the South Suburban area. The vast majority of increased commercial demand generated by the Proposed Project and development alternatives is expected to be absorbed by existing businesses and enterprises.			
Alternative 2	LTS	None Required.	LTS
Alternative 1 would result in an estimated 103 temporary construction jobs, and an estimated 223 permanent jobs at full buildout of the gaming complex. While the overall demand for housing could increase as a result of the project, the demand is not expected to create the need for construction of new housing and would likely be filled by the existing housing stock. The creation of temporary and permanent jobs is expected to result in increased demand for goods and services, which may result in commercial growth within San Diego County. Demand for goods and services would be expected to be most significant in the South Suburban areas where the majority of employees are expected to reside. The employees of the Proposed Project would constitute only a small portion of total growth in population expected for the South Suburban area. The vast majority of increased commercial demand generated by the Proposed Project and development alternatives is expected to be absorbed by existing businesses and enterprises.			
No Action Alternative	LTS	None Required.	LTS
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in an adverse growth-inducing impact.			
Less than Significant = LTS Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

TABLE 2-1
Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	LEVEL OF Significance T Before Mitigation Measures Mitigation		Level of Significance After Mitigation
4.14 CUMULATIVE EFFECTS			
Proposed Project	SI	1. Implement Mitigation 4.9(3) in Section 4.9	LTS
The Proposed Project would result in a cumulatively considerable contribution to		2. Implement Mitigation 4.9(4) in Section 4.9.	
traffic impacts under Near Term (2015) and Horizon Year (2035) conditions, as well as greenhouse gas emissions.		3. Implement Mitigation 4.11(8) in Section 4.11.	
Alternative 1	SI	Same as Proposed Project	LTS
Alternative 1 would result in a cumulatively considerable contribution to traffic impacts under Near Term (2015) and Horizon Year (2035) conditions, as well as greenhouse gas emissions.			
Alternative 2	SI	Same as Proposed Project	LTS
Alternative 2 would result in a cumulatively considerable contribution to traffic impacts under Near Term (2015) and Horizon Year (2035) conditions, as well as greenhouse gas emissions.			
No Action Alternative	LTS	None Required.	LTS
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in an adverse cumulative impact.			
4.15 EFFECTS OF MITIGATION MEASURES			
ACCESS ROAD IMPROVEMENT OPTIONS			
4.15(1) Land Use			
Option 1	SI	None Required.	LTS
All of the lands on the east side of SR 94 are located within the unincorporated areas of the Metro/Lakeside/Jamul segment of the plan. Approximately half (western half) of the 87-acre parcel is located within the			
Less than Significant = LTS Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

Environmi	ENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
take-authorized area, and the eastern area. Half of the 4-acre parcel is de Area (in the Metro-Lakeside-Jamu Hardline Preserve Area is discourage	half is located in the Hardline preserve esignated as a Pre-Approved Mitigation al Segment). Development within a ed.			
Option 2		SI	None Required.	LTS
All of the lands on the east sid unincorporated areas of the Metro Approximately half (western half) of take-authorized area, and the eastern area. Half of the 4-acre parcel is de Area (in the Metro-Lakeside-Jamu Hardline Preserve Area is discourage	le of SR 94 are located within the /Lakeside/Jamul segment of the plan. f the 87-acre parcel is located within the half is located in the Hardline preserve esignated as a Pre-Approved Mitigation al Segment). Development within a ed.			
Option 3		SI A.	Prior to any grading activities for Access Option 3, the Tribe	LTS
All of the lands on the east side of SR 94 are located within the unincorporated areas of the Metro/Lakeside/Jamul segment of the plan.	le of SR 94 are located within the /Lakeside/Jamul segment of the plan.		shall acquire an amendment to the Otay Mesa Specific Plan allowing for the reconfiguration of parcels to accommodate the Access Option 3 alignment,	
take-authorized area, and the eastern area. Half of the 4-acre parcel is de Area (in the Metro-Lakeside-Jamu Hardline Preserve Area is discourage	half is located in the Hardline preserve esignated as a Pre-Approved Mitigation al Segment). Development within a ed.	B.	Prior to any grading activities for Access Option 3, the Tribe shall acquire an exemption to Mobility Goal #1, Policy #15 of the Jamul/Dulzura Subregional Plan allowing for the connection of a commercial facility to Melody Road, which is a collector street.	
		C.	Prior to any grading activities in Hardline Preserve designated areas within Access Option 3, the Tribe shall acquire a Major Amendment to the MSCP allowing for recategorization of lands from Hardline Preserve Area to Take Authorized Area.	
4.15(2) Hydrology and Water (Juality			
Option 1		SI	A. Implement temporary and permanent BMPs including:	LTS
The development of Access Opt uncovering of soils during constru-	ion 1 would result in a temporary action and an increase in impervious		(1) Temporary BMPs: fiber rolls, hydro-seeding, temporary drainage inlet protection, preserve	
Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

January 2013

Jamul Indian Village Final Tribal EE – Summary Tables

Environm	ental Impact	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
surfaces during operation. Construct and off-site sediment transport f excavation of materials from cuts, These activities could result in a sign	tion activities could result in soil erosion rom removal of vegetation/grubbing, and deposition of excavated material. ificant impact to water quality.		existing vegetation, stabilized construction entrances, self-contained concrete washout area, and covered material delivery and storage areas, and	
Additional runoff volume to area dra considered minor and could be left i improvements. The runoff increase be expected to cause measureable do surface runoff is considered to be a le Access Option 1 would necessitate i not known at this time if the Melody modified for these two Access O constrict surface flows and result properly designed and constructed. impact.	ainages from the new Access Options is n the current flow path without channel is considered negligible and would not wnstream impact. Therefore, additional ess than significant impact. mprovements to two road culverts. It is Road Bridge crossing would need to be ptions. The drainage crossing could in potential flooding impacts if not This would be considered a significant	Ε	 (2) Permanent BMPs: vegetate all disturbed slopes, implementing biostrips or bioswales, and detention basins. Theses BMPs would be used to prevent pollutants from entering the Waters of the United States. B. The drainage crossing plans shall include a design that shows improvements to be located outside of the ordinary high water mark. If unable to design outside of high water make, the Tribe shall acquire a Clean Water Act Section 404 Permit from the USACOE prior to undertaking any grading activities and shall implement all permit requirements during construction and operation. Permit conditions may include the purchase of in-lieu credits at a mitigation bank, as well as the implementation of Best Management Practices during construction activities. 	
		C	C. Employ plywood shoring (or a similar temporary construction barrier) and the following erosion and sediment control measures to ensure that sediment does not enter Willow Creek during construction of retaining walls.	
			 Existing vegetation will be preserved when feasible, Erosion in concentrated flow paths will be 	
			controlled by applying fiber rolls, erosion control / fiber blankets, silt fences, and plastic sheeting,	
Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

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Environ	MENTAL IMPACT	Level of Significance Before Mitigation		MITIGATION MEASURES	Level of Significance After Mitigation
				and/or lining swales as required,	
			(3)	Concentrated water flows shall be channeled away from disturbed soil areas and stockpiles. Concentrated water flows shall be conveyed in a non-eroding fashion, and	
			(4)	Non-active areas, and all finished slopes, will be stabilized with effective soil cover (such as aggregate, paving, or vegetation) as soon as feasible after construction or disturbance is complete and no later than 14 days after construction or disturbance in that portion of the site has temporarily or permanently ceased.	
		I	D. Desig and a	gnate riparian areas with warning signs and fencing avoid completely, where feasible.	
Option 2		SI		Same as Proposed Project	LTS
The development of Access O uncovering of soils during cons surfaces during operation. Constru and off-site sediment transport excavation of materials from cut These activities could result in a si	ption 2 would result in a temporary truction and an increase in impervious action activities could result in soil erosion from removal of vegetation/grubbing, s, and deposition of excavated material. gnificant impact to water quality.				
Additional runoff volume to area of considered minor and could be lef improvements. The runoff increas be expected to cause measureable surface runoff is considered to be a	drainages from the new Access Options is t in the current flow path without channel se is considered negligible and would not downstream impact. Therefore, additional a less than significant impact.				
Access Option 2 would necessitate not known at this time if the Meloo modified for these two Access constrict surface flows and resu properly designed and constructed impact.	e improvements to two road culverts. It is dy Road Bridge crossing would need to be Options. The drainage crossing could all in potential flooding impacts if not I. This would be considered a significant				
Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU		BI = Beneficial	NI = No Impact

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

Significant and Unavoidable = SU 2-64

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Option 3	SI	Same as Proposed Project	LTS
The development of Access Option 3 would result in a temporary uncovering of soils during construction and an increase in impervious surfaces during operation. Construction activities could result in soil erosion and off-site sediment transport from removal of vegetation/grubbing, excavation of materials from cuts, and deposition of excavated material. These activities could result in a significant impact to water quality.			
Additional runoff volume to area drainages from the new Access Options is considered minor and could be left in the current flow path without channel improvements. The runoff increase is considered negligible and would not be expected to cause measureable downstream impact. Therefore, additional surface runoff is considered to be a less than significant impact.			
The new access road associated with Access Option 3 would result in three new channel crossings on the 87-acre site and possibly require a bridge widening on Melody Road. It is not known at this time if the Melody Road Bridge crossing would need to be modified for these two Access Options. The drainage crossing could constrict surface flows and result in potential flooding impacts if not properly designed and constructed. This would be considered a significant impact.			
4.15(3) Hazardous Materials			
Option 1	SI	A. Implement Mitigation 4.6(2), and	LTS
No recognized environmental conditions were found from environmental site assessments. However, construction of the Access Options would involve trenching and grading, and such earth-moving activities may uncover a previously unknown underground fuel storage tank, contaminated soil, or other hazardous material issue (especially in proximity to the old fire station). Thus, construction activities could pose a risk to human health for construction personnel if contaminants are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as USTs, piping, or solid waste.		B. Implement Mitigation 4.12(6).	
Less than Significant = LTS Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

SU Significant and lavoluable

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Wildfires are a potential hazard in rural San Diego County. Portions of the Access Option project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The Access Option project area is located within an area of moderate to high fire hazard. Construction activities have the potential to initiate a wildfire, which could cause injury or death of people or property losses.			
Option 2	SI	Same as Proposed Project	LTS
No recognized environmental conditions were found from environmental site assessments. However, construction of the Access Options would involve trenching and grading, and such earth-moving activities may uncover a previously unknown underground fuel storage tank, contaminated soil, or other hazardous material issue (especially in proximity to the old fire station). Thus, construction activities could pose a risk to human health for construction personnel if contaminants are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as USTs, piping, or solid waste.			
Wildfires are a potential hazard in rural San Diego County. Portions of the Access Option project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The Access Option project area is located within an area of moderate to high fire hazard. Construction activities have the potential to initiate a wildfire, which could cause injury or death of people or property losses.			
Option 3	SI	Same as Proposed Project	LTS
No recognized environmental conditions were found from environmental site assessments. However, construction of the Access Options would involve trenching and grading, and such earth-moving activities may uncover a previously unknown underground fuel storage tank, contaminated soil, or other hazardous material issue (especially in proximity to the old fire station). Thus, construction activities could pose a risk to human health for construction personnel if contaminants are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as USTs,			

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Significant = SI

Less than Significant = LTS

NI = No Impact

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation		MITIGATION MEASURES	Level of Significance After Mitigation
piping, or solid waste.				
Wildfires are a potential hazard in rural San Diego County. Portions of the Access Option project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The Access Option project area is located within an area of moderate to high fire hazard. Construction activities have the potential to initiate a wildfire, which could cause injury or death of people or property losses.				
4.15(4) Biological Resources				
Option 1	SI	A.	Implement Mitigation Measure 4.7(1).	LTS
If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal, and impacted by noise, vibration, and other construction-related disturbance. Construction will involve destruction of habitats protected by the County's Biological Mitigation Ordinance		B. C.	Implement Mitigation Measure 4.7(1)(B). A monitoring biologist (approved by CDFW and County of San Diego Director of Planning and Development Services [County PDS]) shall be on site during initial clearing and grubbing of habitat on non-federal	
Biological Miligation Ordinance. During construction, surface water quality has the potential to be degraded from storm water transport of sediment from disturbed soils or by accidental release of hazardous materials or petroleum products from sources such as heavy equipment servicing or refueling. Road widening could impact the Willow Creek channel and its riparian			lands, and project construction within 300 feet of preserved habitat, to ensure compliance with all conservation measures. The biologist shall be knowledgeable of upland and wetland biology and ecology. The applicant shall submit the biologist's name, address, telephone number, and work schedule on the Project to CDFW and County PDS at least 30 days prior to initiating construction. The biologist shall perform the following duties:	
corridor. The access option footprint is located within two segments of the MSCP: the South County segment and the Metro/Lakeside/Jamul segment. Implementation of the access road would impact lands protected by these segments.		-	Oversee installation of and inspect temporary fencing and erosion control measures within or up-slope of all restoration and/or preservation areas a minimum of once per week and daily during all rain events to ensure that any breaks in the fence or erosion control devices are repaired immediately.	
		-	Monitor the work area weekly to ensure that work activities do not generate excessive amounts of dust.	
		-	Train all contractors and construction personnel on the biological resources associated with this project and ensure that training is	

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
		implemented by construction personnel. At a minimum, training shall include:	
		i. The purpose for resource protection.	
		ii. The conservation measures that shall be implemented during project construction, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced project footprint to avoid sensitive resource areas in the field (i.e., avoided areas delineated on maps or on the project site by fencing).	
		iii. Environmentally responsible construction practices.	
		iv. The protocol to resolve conflicts that may arise at any time during the construction process.	
	-	Halt work, if necessary on non-federal lands, and confer with CDFW and County PDS to ensure the proper implementation of species and habitat protection measures. The biologist shall report any violation to CDFW and County PDS within 24 hours of its occurrence.	
	-	Submit weekly letter reports (including photographs of impacted areas) to CDFW and County PDS during clearing of habitat and/or construction within 300 feet of preserved habitat on non-federal lands. The weekly reports will document that authorized impacts were not exceeded, and general compliance with all conditions. The reports will also outline the duration of species monitoring, the location of construction activities, the type of construction which occurred, and equipment used. These reports will specify numbers, locations, and sex of sensitive species (if present), observed species behavior (especially in relation to construction activities), and remedial measures employed to avoid, minimize, and mitigate impacts to sensitive species. Raw field notes shall be made available upon request by CDFW and County PDS.	

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

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Envir	ONMENTAL IMPACT	Level of Significance Before Mitigation			MITIGATION MEASURES	Level of Significance After Mitigation
			-	Submit a final re project completic overlay of habit habitat areas tha information docu that general comp	port to CDFW and County PDS within 60 days of the on that includes: as-built construction drawings with ar at that was impacted and protected, photographs of the were to be avoided, and other relevant summary menting that authorized impacts were not exceeded and pliance with all conditions was achieved.	e 1 f 7 1
			D.	<u>Habitat Loss</u> : F mitigation shall b	Prior to grading activities, the following habitat loss be implemented:	
				 Prior to dev habitats (gr must be r Department Biological depending u a Biologica by deed res CDFW and 	velopment of the access road, the loss of protected asslands, coastal scrub, coast live oak riparian forest) nitigated with San Diego County and California to of Fish and Wildlife at the ratios specified by the Mitigation Ordinance, which vary from 0.5:1 to 3:1 upon the Tier category and whether or not the land is in l Resource Core Area, either by in lieu fee payment or striction of qualified lands to the satisfaction of both County Director of PDS, and	
				(2) Implement M	fitigation Measure 4.15(1)(C).	
			E.	<u>Water Quality</u> : Mitigation 4.15-2	Prior to and during grading activities, implement	:
Option 2		SI			Same as Proposed Project	LTS
If construction activities are c birds could be directly impact vibration, and other constructio	conducted during the nesting season, nesting and by tree removal, and impacted by noise, nn-related disturbance.					
Construction will involve destr Biological Mitigation Ordinanc	ruction of habitats protected by the County's se.					
During construction, surface w from storm water transport of s release of hazardous materials heavy equipment servicing or n	vater quality has the potential to be degraded sediment from disturbed soils or by accidental or petroleum products from sources such as efueling.					
Less than Significant = LTS	Significant = SI	Significant and Una	avoidal	ole = SU	BI = Beneficial	NI = No Impact

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

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ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION		MITIGATION MEASURES	Level of Significance After Mitigation
Road widening could impact the Willow Creek channel and its riparian corridor. The access option footprint is located within two segments of the MSCP: the South County segment and the Metro/Lakeside/Jamul segment. Implementation of the access road would impact lands protected by these segments.				
 Option 3 If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal, and impacted by noise, vibration, and other construction-related disturbance. Construction will involve destruction of habitats protected by the County's Biological Mitigation Ordinance. During construction, surface water quality has the potential to be degraded from storm water transport of sediment from disturbed soils or by accidental release of hazardous materials or petroleum products from sources such as heavy equipment servicing or refueling. Road widening could impact the Willow Creek channel and its riparian corridor. The construction of the new access road would impact Palmer's Goldenbush (<i>Ericamaria palmeri</i> ssp. <i>palmeri</i>). The access option footprint is located within two segments of the MSCP: the South County segment and the Metro/Lakeside/Jamul segment. Implementation of the access road would impact lands protected by these segments. 	SI	А. В.	 Same as Proposed Project <u>Plant Species</u>: Prior to grading activities, mitigate for the loss of <i>Plantago erecta</i> and <i>Ericameria palmeri palmeri</i> in the following ways: (1) Obtain a USFWS permit for the removal of California Plantain (<i>Plantago erecta</i>) and implement permit requirements. Mitigation would likely involve compensatory mitigation by land dedication or in-lieu fee payment, and (2) Compensation for the removal of Palmer's Goldenbrush (<i>Ericameria palmeri palmeri</i>) shall be provided at a 3:1 ratio (either in lieu fee payment to the County or by deed restriction of qualified lands) of this Group A plant population to the satisfaction of the County of San Diego PDS. (3) Should the project require removal of greater than 20% of the Palmer's Goldenbush population, prior to implementation of Access Option 3, the Tribe shall acquire an Exception to the Biological Mitigation Ordinance according to BMO Section 86.509(b) to allow the project to impact more than 20% of the onsite population of Palmer's goldenbush. 	LTS
		C.	 <u>Habitat Loss</u>: Prior to grading activities, the following habitat loss mitigation shall be implemented: (1) Prior to grading activities, mitigate for the loss of Quino Checkerspot Butterfly habitat by performing a habitat survey to 	

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Significant and Unavoidable = SU

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation		MITIGATION MEASURES	Level of Significance After Mitigation
			enumerate impacted habitat, and then implementing compensatory mitigation (by land dedication or in-lieu fee payment) to the satisfaction of USFWS.	
4.15(5) Cultural Resources				
Option 1 The boundaries of multi-component site CA-SDI-7966/11410 and site CA-SDI-11050, which have been determined or recommended eligible for NRHP and CRHR listing and qualify as historic properties/historical resources, are mapped immediately adjacent to portions of the access road. It is thus possible that components of site CA-SDI-7966/11410, site CA-SDI-11050 and/or undocumented cultural resources, including human remains, may be affected during construction or ground-disturbing activities, particularly outside the existing ROWs.	SI	Α.	 The Tribe shall implement inadvertent discovery measures during all construction activities within the proposed Access Option road and Off-Site Intersection Improvement areas. Measures include: (1) A worker education course for all construction personnel covering immediate work curtailment to protect cultural resources and to be conducted prior to initiation of ground-disturbing activities, (2) Monitoring by a qualified archeologist, who meets the Secretary of the Interior's Standards for archaeologists (found at 36 CFR §61), as well as a JIV tribal monitor, of all earth-disturbing activities in close proximity to site CA-SDI-7966/11410 and CA-SDI-11051, and of all off-site earth-disturbing activities in native soils/sediments; and 	LTS
		В.	(3) Procedures for discovery of cultural resources, including human remains, during construction or earth-disturbing activities if an archaeological monitor is not present. In the event that any prehistoric, historic, or paleontological resources are discovered during construction-related earth-moving activities, all work within 50 feet of the resources shall be halted and a qualified archaeologist or paleontologist, as appropriate, shall be consulted to assess the significance of the find. If any find is determined to be significant by the qualified professional, then appropriate agency and project representatives and the qualified archaeologist and/or paleontologist shall meet to determine the appropriate course of action. All significant cultural or paleontological materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist or paleontologist according to current professional standards.	

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

NI = No Impact Jamul Indian Village Final Tribal EE – Summary Tables

Environmental Impact	Level of Significance Before Mitigation		MITIGATION MEASURES	Level of Significance After Mitigation
		C.	If human bone or bone of unknown origin is found during construction, all work shall stop within 50 feet of the find and the San Diego County Coroner and the Tribe shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC) who shall identify the most likely descendant. The most likely descendant shall work with the Tribe and the Lead Agency, as appropriate, to develop a plan for re-interment of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the identified actions have been implemented.	
Option 2 The boundaries of multi-component site CA-SDI-7966/11410 and site CA-SDI-11050, which have been determined or recommended eligible for NRHP and CRHR listing and qualify as historic properties/historical resources, are mapped immediately adjacent to portions of the access road. It is thus possible that components of site CA-SDI-7966/11410, site CA-SDI-11050 and/or undocumented cultural resources, including human remains, may be affected during construction or ground-disturbing activities, particularly outside the existing ROWs.	SI		Same as Proposed Project	LTS
Option 3 The boundaries of multi-component site CA-SDI-7966/11410 and site CA-SDI-11050, which have been determined or recommended eligible for NRHP and CRHR listing and qualify as historic properties/historical resources, are mapped immediately adjacent to portions of the access road. It is thus possible that components of site CA-SDI-7966/11410, site CA-SDI-11050 and/or undocumented cultural resources, including human remains, may be affected during construction or ground-disturbing activities, particularly outside the existing ROWs.	SI		Same as Proposed Project	LTS

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.15(6) Public Services			
Option 1	SI	A. Implement Mitigation 4.12(6).	LTS
Wildfires are a potential hazard in rural San Diego County. Portions of the Access Option project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The Access Option project area is located within an area of moderate to high fire hazard. Construction activities may introduce potential ignition sources that have the potential to initiate a wildfire, which could cause injury or death of people or property losses. This is a potentially significant impact before mitigation.			
Option 2	SI	Same as Proposed Project	LTS
Wildfires are a potential hazard in rural San Diego County. Portions of the Access Option project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The Access Option project area is located within an area of moderate to high fire hazard. Construction activities may introduce potential ignition sources that have the potential to initiate a wildfire, which could cause injury or death of people or property losses. This is a potentially significant impact before mitigation.			
Option 3	SI	Same as Proposed Project	LTS
Wildfires are a potential hazard in rural San Diego County. Portions of the Access Option project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The Access Option project area is located within an area of moderate to high fire hazard. Construction activities may introduce potential ignition sources that have the potential to initiate a wildfire, which could cause injury or death of people or property losses. This is a potentially significant impact before mitigation.			

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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LEVEL OF SIGNIFICANCE ENVIRONMENTAL IMPACT BEFORE MITIGATION MITIGATION	Level of Significance After Mitigation
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SI

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

OFF SITE INTERSECTION IMPROVEMENTS

Proposed Project

Some intersection improvements may require bridge modifications or bridge replacement to allow for improvements (SR 94/Jamacha Road and SR 94/Jamacha Boulevard). Such bridge modification or replacement could constrict surface flows and result in potential flooding impacts if not properly designed and constructed.

The intersection improvements have the potential to either remove sensitive native vegetation (e.g. oak trees), vegetation with a potential to provide habitat for special-status species or support nesting migratory birds, or modify intermittent drainages.

Potentially suitable habitat for San Diego thorn mint occurs within some areas of the intersection improvement footprints. Destruction of coastal scrub habitat or grassland during intersection improvements could adversely affect this species.

Suitable habitat for the yellow-billed cuckoo occurs in riparian corridors adjacent to, or within, the traffic improvement footprints at SR 94/ Jamacha Blvd. Intersection. SR 94/ Jamacha Rd. Intersection. SR 94 / Cougar Canyon Road Intersection, SR 94 / Steele Canyon Road Intersection, and SR 94 / Lyons Valley Road Intersection. The riparian habitat occurring at the SR 94 / Melody Road Intersection is currently degraded from cattle ranching and generally lacks the habitat structure required by this species for foraging and nesting. Coast live oak riparian habitat could be impacted at SR 94/ Jamacha Blvd. Intersection, SR 94/ Jamacha Rd. Intersection, SR 94 / Cougar Canyon Road Intersection, SR 94 / Steele Canyon Road Intersection, and SR 94 / Lyons Valley Road Intersection by construction activities. Yellow-billed cuckoo could be directly affected if nesting habitat is destroyed.

Construction of intersection improvements would involve operation of heavy equipment, staging of soils, grading and excavation activities that could impact protected habitats.

At the SR 94 / Jamacha Boulevard Intersection, impacts to coast live oaks and riparian vegetation may occur as a result of bridge widening. At the SR

- A. Implement Mitigation Measures 4.6(2) and 4.12(6) to reduce potential Hazardous Materials impacts to a less than significant level.
- B. Prior to grading activities for any intersections impacting jurisdictional waters, the improvement plans shall include a design that shows improvements to be located outside of the ordinary high water mark. If unable to design outside of high water make, the developer shall acquire a Clean Water Act Section 404 Permit from the USACOE prior to undertaking any grading activities. Permit conditions typically include the purchase of in-lieu credits at a mitigation bank as well as the implementation of Best Management Practices during construction activities
- C. Prior to development of any of the intersection improvement areas, impacted protected habitats (grasslands, coastal scrub, coast live oak riparian forest) shall be mitigated at the ratio specified by the Biological Mitigation Ordinance, which vary from 0.5:1 to 3:1 depending upon the Tier category and whether or not the land is in a Biological Resource Core Area (either by in lieu fee payment or by deed restriction of qualified lands),
- D. Implement Mitigation Measure 4.15(2)(B) to reduce potential Jurisdictional Waters impacts to a less than significant level.
- E. Implement Mitigation 4.15(4) to reduce biological resource impacts to a less than significant level.
- F. Implement Mitigation 4.15-5 to reduce cultural resource impacts to a less than significant level.
- G. Prior to development of the intersection improvement areas, any

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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LTS

MITIGATION MEASURES	Level of Significance After Mitigation
 impacted County-protected plants (Group A Plants defined by County PDS), such as San Diego thormmint or Palmer's Goldenbush, shall be compensated at a 3:1 acreage ratio (either in lieu fee payment to the County or by deed restriction of qualified lands) to the satisfaction of the County of San Diego Director of Planning and Development Services. H. The following Best Management Practices shall be implemented to protect water bodies from impacts: create and implement a Hazardous Materials Management Plan and Spill Response Plan, including the identification of specific refueling areas, create and implement an erosion control plan and a sediment monitoring plan, including the placement of jute mats, straw bales and wattles, sand bags, and vegetative covers (e.g. Hydroseed), weather monitoring, and specific inspection protocols, designated concrete washout areas and other filters for construction materials, a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs, create and implement a Hazardous Materials Management Plan and Spill Response Plan, including the identification of specific refueling areas, 	
	 BATIGATION MEASURES Impacted County-protected plants (Group A Plants defined plants for plants) for plants of plants for plants of plants for plants of plants for plants of plants for plants to the county or by deed restriction of qualified ads) to the satisfaction of the County of San Diego Director of plants in the foreignes and Development Services. In for following Best Management Practices shall be implemented to foreigne to deed restriction of specific restriction of specific restrictions of specific restrictions areas. Greate and implement a Hazardous Materials fundating the identification of specific restrictions areas. Greate and implement an erosion control plant and spint foreignes development. Beignated coverse (e.g. Hydroseed), weather specific restrictions of interment and spint foreignes and vertices. Beignated coverse washout areas and other first coverse (e.g. Hydroseed), meant and spint restriction materials. Beignated coverse (e.g. Hydroseed), weather specific restrictions of interment and spint foreignes and and the planter and spint foreignes and the tranter for coverse (e.g. Hydroseed), weather spint and spint foreignes and the tranter for coverse (e.g. Hydroseed). Beignated coverse (e.g. Hydroseed) areas and other first coverse (e.g. Hydroseed). Beignated coverse (e.g. Hydroseed) areas and the tranter for coverse (e.g. Hydroseed). Beignated coverse (e.g. Hydroseed) areas and the tranter for coverse (e.g. Hydroseed). Beignated coverse (e.g. Hydroseed).

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
		and vegetative covers (e.g. Hydroseed), weather monitoring, and specific inspection protocols,	
		- designated concrete washout areas and other filters for construction materials, and	
		- a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs.	
Alternative 1	SI	Same as Proposed Project	LTS
Due to the presence of soils with moderate and high significant slopes, and the proximity of the natural d effects from erosion are considered to be significant.	erosion potential, rainage channels,		
Some intersection improvements may require bridge modified replacement to allow for improvements (SR 94/Jamach 94/Jamacha Boulevard). Such bridge modification or r constrict surface flows and result in potential floodin properly designed and constructed.	fications or bridge ha Road and SR eplacement could g impacts if not		
The intersection improvements have the potential to either native vegetation (e.g. oak trees), vegetation with a po habitat for special-status species or support nesting m modify intermittent drainages.	r remove sensitive tential to provide igratory birds, or		
Potentially suitable habitat for San Diego thorn mint oc areas of the intersection improvement footprints. Desti scrub habitat or grassland during intersection improvemen affect this species.	ccurs within some ruction of coastal ts could adversely		
Suitable habitat for the yellow-billed cuckoo occurs in adjacent to, or within, the traffic improvement footprints a Blvd. Intersection, SR 94/ Jamacha Rd. Intersection, Canyon Road Intersection, SR 94 / Steele Canyon Road SR 94 / Lyons Valley Road Intersection. The riparian ha the SR 94 / Melody Road Intersection is currently deg ranching and generally lacks the habitat structure require for foraging and nesting. Coast live oak riparian habitat of	riparian corridors at SR 94/Jamacha SR 94 / Cougar I Intersection, and abitat occurring at graded from cattle ed by this species could be impacted		
Less than Significant = LTS Significant =	= SI Significant and Unavoidable =	- SU BI = Beneficial	NI = No Impact

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

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LEVEL OF Significance Environmental Impact Refore Mitigation M	Level of Significance Measures After
MITIGATION	MITIGATION
at SR 94/ Jamacha Blvd. Intersection, SR 94/ Jamacha Rd. Intersection, SR 94 / Cougar Canyon Road Intersection, SR 94 / Steele Canyon Road Intersection, and SR 94 / Lyons Valley Road Intersection by construction activities. Yellow-billed cuckoo could be directly affected if nesting habitat is destroyed.	
Construction of intersection improvements would involve operation of heavy equipment, staging of soils, grading and excavation activities that could impact protected habitats.	
At the SR 94 / Jamacha Boulevard Intersection, impacts to coast live oaks and riparian vegetation may occur as a result of bridge widening. At the SR 94 / Cougar Canyon Road Intersection, impacts to mature coast live oaks may occur on the south side of SR 94.At the SR 94 / Steele Canyon Road Intersection, implementation of the Project may require the removal of coast live oaks. At the SR 94 / Lyons Valley Road Intersection, widening of eastbound SR 94 may impact coast live oaks and riparian habitat. At SR 94 / Melody Road Intersection, construction of the intersection improvements may require the removal of coast live oaks and riparian vegetation. Therefore, construction of some of the intersection improvement areas would have a significant impact upon protected habitats.	
If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal, and impacted by noise, vibration, and other construction-related disturbance. Therefore, construction of intersection improvements would result in a significant impact.	
Potential adverse impacts to water resources associated with construction of intersection improvements consist primarily of increased erosion and sedimentation in receiving water bodies due to soil disturbance.	
Due to the abundance of cultural resource sites along SR 94, construction of the intersection improvements could potentially result in significant effects to cultural resources. Previously identified or unknown sites may be inadvertently disturbed by construction activities.	

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

BI = Beneficial

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
Alternative 2	SI	Same as Proposed Project	LTS
Due to the presence of soils with moderate and high erosion potential, significant slopes, and the proximity of the natural drainage channels, effects from erosion are considered to be significant.			
Some intersection improvements may require bridge modifications or bridge replacement to allow for improvements (SR 94/Jamacha Road and SR 94/Jamacha Boulevard). Such bridge modification or replacement could constrict surface flows and result in potential flooding impacts if not properly designed and constructed.			
The intersection improvements have the potential to either remove sensitive native vegetation (e.g. oak trees), vegetation with a potential to provide habitat for special-status species or support nesting migratory birds, or modify intermittent drainages.			
Potentially suitable habitat for San Diego thorn mint occurs within some areas of the intersection improvement footprints. Destruction of coastal scrub habitat or grassland during intersection improvements could adversely affect this species.			
Suitable habitat for the yellow-billed cuckoo occurs in riparian corridors adjacent to, or within, the traffic improvement footprints at SR 94/ Jamacha Blvd. Intersection, SR 94/ Jamacha Rd. Intersection, SR 94 / Cougar Canyon Road Intersection, SR 94 / Steele Canyon Road Intersection, and SR 94 / Lyons Valley Road Intersection. The riparian habitat occurring at the SR 94 / Melody Road Intersection is currently degraded from cattle ranching and generally lacks the habitat structure required by this species for foraging and nesting. Coast live oak riparian habitat could be impacted at SR 94 / Jamacha Blvd. Intersection, SR 94 / Steele Canyon Road Intersection, SR 94 / Jamacha Rd. Intersection, SR 94 / Steele Canyon Road Intersection, SR 94 / Steele Canyon Road Intersection, activities. Yellow-billed cuckoo could be directly affected if nesting habitat is destroyed.			
Construction of intersection improvements would involve operation of heavy equipment, staging of soils, grading and excavation activities that could impact protected habitats.			

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	Level of Significance After Mitigation		
At the SR 94 / Jamacha Boulevard Intersection, impacts to coast live oaks and riparian vegetation may occur as a result of bridge widening. At the SR 94 / Cougar Canyon Road Intersection, impacts to mature coast live oaks may occur on the south side of SR 94.At the SR 94 / Steele Canyon Road Intersection, implementation of the Project may require the removal of coast live oaks. At the SR 94 / Lyons Valley Road Intersection, widening of eastbound SR 94 may impact coast live oaks and riparian habitat. At SR 94 / Melody Road Intersection, construction of the intersection improvements may require the removal of coast live oaks and riparian vegetation. Therefore, construction of some of the intersection improvement areas would have a significant impact upon protected habitats.					
If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal, and impacted by noise, vibration, and other construction-related disturbance. Therefore, construction of intersection improvements would result in a significant impact.					
Potential adverse impacts to water resources associated with construction of intersection improvements consist primarily of increased erosion and sedimentation in receiving water bodies due to soil disturbance.					
Due to the abundance of cultural resource sites along SR 94, construction of the intersection improvements could potentially result in significant effects to cultural resources. Previously identified or unknown sites may be inadvertently disturbed by construction activities.					
No Action Alternative	NI	None Required	LTS		
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in an adverse impact to off-site intersections.					

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)
ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.16 SOCIOECONOMICS AND ENVI JUSTICE	IRONMENTAL		
4.16(1) Housing			
Proposed Project	LTS	None Required.	LTS
The creation of new long-term jobs within San Diego C increased housing demand due to the relocation of wo generated housing demand from the proposed developmen over a regional area, would be accommodated by existing a in the East and South Suburban Areas and, thus, would no increases in housing demand to the region.	County may result in orkers. Employment t, which would occur nd future vacant units ot result in significant		
Alternative 1	LTS	None Required.	LTS
As is the case with the Proposed Project, the future housin Under Alternative 1 would be met with vacant units withi Suburban Areas.	ng demand generated n the East and South		
Alternative 2	LTS	None Required.	LTS
As is the case with the Proposed Project, the future housin Under Alternative 2 would be met with vacant units withi Suburban Areas.	ng demand generated n the East and South		
No Action Alternative	LTS	None Required.	LTS
No construction or land alteration would take place under the No Action Alternative would not result in an adverse im	his alternative. Thus, spact to housing.		

TABLE 2-1
Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
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Environ	MENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
4.16(2) Employment and Fisca	al Effects			
Proposed Project		LTS	None Required.	LTS
The Proposed Project would not r San Diego County given the relat casino facility would represent, co climate has resulted in a countywic an existing pool of labor within th the Proposed Project. Employmer Project generated expenditures fo dispersed and distributed among a throughout the County. The indii operation would be considered ber providers, the Tribe would be req services rendered, which will ensi- results to those service providers.	esult in a significant employment demand in ively low percentage of overall jobs that the upled with the fact that the current economic le unemployment rate of 7.8%. This provides e County well beyond the demand created by nt opportunities would be a beneficial effect. r both construction and operation would be variety of different industries and businesses rect and induced output for construction and heficial fiscal effects. With regards to service uired to compensate the service provider for ure that a less than significant fiscal impact			
Alternative 1		LTS	None Required.	LTS
As is the case with the Proposed significant employment impact in percentage of overall jobs that the the fact that the current econor unemployment rate of 7.8%. This County well beyond the deman opportunities would be a benefici both construction and operation v variety of different industries an indirect and induced output for co- beneficial fiscal effects. With reg required to compensate the servic ensure that a less than significant fi	Project, Alternative 1 would not result in a a San Diego County given the relative low casino facility would represent, coupled with mic climate has resulted in a countywide provides an existing pool of labor within the d created by Alternative 1. Employment al effect. Project generated expenditures for would be dispersed and distributed among a d businesses throughout the County. The nstruction and operation would be considered ards to service providers, the Tribe would be e provider for services rendered, which will scal impact results to those service providers.			
Alternative 2		LTS	None Required.	LTS
As is the case with the Proposed significant employment impact in	Project, Alternative 2 would not result in a a San Diego County given the relative low			
Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact

TABLE 2-1 Summary of Impacts and Mitigation Measures (Updated)

January 2013

BI = Beneficial

NI = No Impact

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
percentage of overall jobs that the casino facility would represent, coupled with the fact that the current economic climate has resulted in a countywide unemployment rate of 7.8%. This provides an existing pool of labor within the County well beyond the demand created by Alternative 2. Employment opportunities would be a beneficial effect. Project generated expenditures for both construction and operation would be dispersed and distributed among a variety of different industries and businesses throughout the County. The indirect and induced output for construction and operation would be considered beneficial fiscal effects. With regards to service providers, the Tribe would be required to compensate the service provider for services rendered, which will ensure that a less than significant fiscal impact results to those service providers.			
No Action Alternative	LTS	None Required.	LTS
No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in an adverse As is the case with the Proposed Project, Alternative 2 would not result in adverse/beneficial impacts.			
4.16(3) Environmental Justice for Minority and Low Income Populations			
Proposed Project	LTS	None Required.	LTS
All of the geographic areas of measurement have higher household incomes and lower poverty rates than the County as a whole. Therefore, the Proposed Project would not result in environmental justice effects.			
Alternative 1	LTS	None Required.	LTS
All of the geographic areas of measurement have higher household incomes and lower poverty rates than the County as a whole. Therefore, the Alternative 1 would not result in environmental justice effects.			
Alternative 2	LTS	None Required.	LTS
All of the geographic areas of measurement have higher household incomes and lower poverty rates than the County as a whole. Therefore, the Alternative 2			
Loss than Significant – LTS Significant – SI	Significant and Linavoidable – SLI	PI - Ponoficial	

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = LTS	Significant = SI	Significant and Unavoidable = SU	BI = Beneficial	NI = No Impact
January 2013		2-82		Jamul Indian Village
				Final Tribal EE – Summary Tables

ENVIRONMENTAL IMPACT	Level of Significance Before Mitigation	MITIGATION MEASURES	Level of Significance After Mitigation
would not result in environmental justice effects.			
No Action Alternative	LTS	None Required.	LTS
No development would occur under the No Action Alternative; environmental justice effects would result.	herefore, no		

 TABLE 2-1

 Summary of Impacts and Mitigation Measures (Updated)

Less than Significant = L	ГS
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Significant = SI

BI = Beneficial

SECTION 3.0

PROPOSED PROJECTS AND ALTERNATIVES

SECTION 3 PROPOSED PROJECT AND ALTERNATIVES

3.1 INTRODUCTION

This section provides a description of the Proposed Project and Alternatives analyzed within this Tribal EE. The Proposed Project is a 228,000_203,000 square foot gaming facility and ancillary uses, which would be constructed on the Reservation and consists of various uses including gaming, structured parking, wastewater treatment plant, mechanical evaporative system, water storage tanks, and on-site traffic circulation improvements.

This section also describes two development alternatives of lesser intensity and a no development alternative. Alternative 1 is an 119,000 square foot reduced intensity alternative that contains a gaming facility designed to be 48_41 % smaller than the Proposed Project. Alternative 2 is a 17,500 square foot reduced intensity alternative, which contains a gaming facility designed to be 92_91 % smaller than the Proposed Project. While Alternative 1 does include structured parking similar to the Proposed Project, Alternative 2 would include paved surface parking rather than structured parking. The No Action alternative would assume existing uses on the Reservation would continue.

The approved project could be scaled in size such that initial development of the project may be smaller than ultimately approved. If the approved project is the Proposed Project, either Alternative 1 or Alternative 2 could be implemented as phases of the approved project. If Alternative 1 or 2 is approved, a smaller version of the approved alternative could be implemented as a phase of the approved alternative. In either case, the environmental impacts will have been fully addressed by this document and the mitigation measures would be scaled according to the size of the phased or approved development.

3.2 PROPOSED PROJECT: 228,000 203,000 SQUARE FOOT GAMING FACILITY

The Proposed Project includes the construction and operation of a gaming complex on the Reservation. **Figures 3-1** through **3-3** shows the conceptual layout of the gaming complex on the Reservation together with a photo simulation of how the facility would appear off Reservation. Elements of the gaming complex includes the gaming facility, associated parking,



Jamul Indian Village Drafi Final Tribal EE ■ Figure 3-1 Proposed Project Site Plan



[−] Jamul Indian Village Draft Final Tribal EE ■ Figure 3-2 Location of Proposed Project Wastewater Treatment Plant

and Fire Station



SOURCE: Marnell Companies, 2012; EDS, 2012

– Jamul Indian Village Draft Final Tribal EE∎

Figure 3-3 Photo Simulation: Proposed Project from SR 94 fire fighting facilities, wastewater treatment and disposal facilities, water delivery facility, and improved on-site traffic circulation. Each of these elements is discussed below:

3.2A GAMING COMPLEX

The gaming complex includes the development and operation of various facilities including: (1) <u>228,000_203,000</u> square foot gaming building, (2) structured parking, (3) wastewater treatment facility, (4) fire station, (5) mechanical evaporative facility, (6) water storage tanks, (7) cooling towers, and (8) improved traffic circulation system.

The gaming complex would be constructed in one phase and would include two<u>one</u>-structures on the Reservation (gaming/parking building-and a parking structure) (Figure 3-1). One of the two structures would be used exclusively for parking and the other The parking facility would be incorporated into the gaming structure east of Willow Creek. The gaming building would measure approximately 105-feet from lowest to highest level of the structure; however, the apparent height would be approximately 45 feet from surrounding grade as viewed from passersby on SR 94. The difference in height is caused by the sloping topography on the Reservation.

The gaming facility would contain <u>3_1</u> levels of gaming related floor area and would be located on the east side of Willow Creek, and the riparian corridor that traverses the reservation from north to south. An <u>4_8</u>-level parking structure would be integrated below the gaming building. A wastewater plant would be located on the west end of this gaming/parking structure. The wastewater facility would be integrated into <u>the</u> lowest level of the parking structure and would not be seen as a separate facility by off-site viewers. <u>South East</u> of the wastewater treatment plant, integrated within the same level of the parking structure, would be the on-site fire station. A mechanical evaporative facility would also be constructed at the same level, south of the <u>parking structure fire station</u>.

A separate <u>94 space surface parking lot 10 level parking structure</u> (hereafter "surface lot"), planned for employee/ valet parking, would be constructed on the west side of Willow Creek.

When fully operational, the facility would employ approximately 1,611 employees.

The existing church and cemetery located west of the Reservation would continue to have access through the Reservation via Reservation Road, which would provide vehicular connection w/ SR 94. The Tribe has constructed a 3,000 square foot, single level community center, located immediately north-within the footprint of the planned employee/valet parking structure surface lot on the west side of Willow Creek. This community center would remain on the Reservation with access provided to/from SR 94 via Reservation Road.

3.2A.1 GAMING

The main use within the $\frac{228,000}{203,000}$ 203,000 square foot gaming facility is the gaming floor, which contains slots, table games, and poker entertainment. The break-down of square footages is provided in Table 3-1. The total estimated gaming floor area for the Proposed Project is approximately 73,300 70,000 square feet. The cage area includes uses such as the cashier space, cash manager's office, guest desk/security and other uses associated with the financial/security operation of the gaming floor. Gaming support would include such items as restrooms, internal circulation, sports bar, event center and slot/technical repair facilities. Food and beverage is designed to include a snack bar, buffet, two restaurants, bakery, and support facilities. The public space area would contain uses such as the main lobby/welcome desk, kid's quest/arcade, additional restrooms, retail, and internal circulation. The employee area would contain an employee cafeteria, storage, auto-valet, lockers/restrooms and other uses associated with employee operations. The on-site administration space would contain security facilities, conference/training facilities, and other operations related to day-to-day operations and marketing. The back of house would contain the operational equipment such as plumbing/fire pump, electrical, mechanical, and storage facilities. While the above description of uses is specific in detail, the facility and layout details are conceptual at this time and could shift to some degree.

The exterior of the facility would include downcast lighting consistent with County codes and ordinances to maintain consistency with the surrounding area. Lighting from the front of the gaming facility would be directionally pointed away from the adjacent Rancho Jamul Ecological Reserve and the building would shield light, human activity and noise effects from the Reserve. Lighting in the back of the facility would consist of low wattage security and safety lighting near doorways consistent with California Building Code (CBC) requirements.

Fencing Plan. The exterior of the entire facility will be fenced with opaque fencing / or walls; the materials may include chainlink fencing with slats, masonry wall, or wooden slat board fence. The purpose of this fence or wall is to stop casino patrons from entering adjacent properties and wildlife preserves, as well as to divert wildlife around the facility towards open spaces and wildlife corridors. The fence must be opaque so that any fugitive light and sound are attenuated. The exception to this fencing design are those fence sections that are located within the Willow Creek channel and adjacent riparian corridor. These fence sections will be constructed in a manner that allow wildlife passage, and shall be constructed out of a wildlife-compatible fencing such as wooden split rail and post; steel cable and post fencing, or multi-stranded wire fencing with t-posts.

3.2A.2 STRUCTURED PARKING

<u>One Two-structured parking facility_ies</u> and one surface lot would be constructed as part of the gaming complex. The : (1)-parking structure is a 353,142 845,426 square foot, 4_8-level parking structure-facility with 1,197-1,888 parking spaces that would be incorporated below the gaming facility on the east side of Willow Creek. The , (2)-surface lot is a 33,350 362,590-square foot, 10 level free standing parking structure parking lot with 930-94 parking spaces and would be constructed on the west side of Willow Creek. , and (3) a 5,200 square foot surface lot with 18 parking spaces would be constructed on the west side of Willow Creek from the Draft to the Final Tribal EE includes the construction of 4 additional parking levels below surface. The parking structure in the Draft Tribal EE takes the lowest level of parking to elevation 872'. The parking structures would include interior and exterior lighting designed to be downcast thereby minimizing spill-over to adjacent lands.

ITEM	TOTAL GROSS AREA	
Gaming Facility		
Gaming Area	73,300 70,000	
Cage Area	6,789 <u>5,000</u>	
Gaming Support	20,968 <u>17,100</u>	
Food and Beverage	4 0,690 40,000	
Retail	<u>900</u>	
Public Spaces	23,283 <u>13,000</u>	
Meeting Rooms/Event Center	24,000	
Employee Area	12,669 <u>10,000</u>	
Administration	11,316 <u>13,000</u>	
Back-of-House	14,985<u>34,000</u>	
Gaming Facility Total	228,000<u>203,000</u>	
Parking		
Structure 4 (4 <u>8</u> level; 1,197-<u>1,888</u> spaces)	353,142 <u>845,426</u>	
Structure 2 (10 level; 930 spaces)	362,590	
Surface lot (18- 94 spaces)	5,200 <u>33,350</u>	
Parking Total (2,145-1,982 spaces)	720,932 <u>878,776</u>	

TABLE 3-1

PROPOSED PROJECT - GAMING ELEMENTS

SOURCE: Lakes Entertainment Jamul Indian Village, 2012

3.2A.3 WASTEWATER TREATMENT AND DISPOSAL

A membrane bioreactor (MBR) wastewater treatment plant would be constructed on the east side of the Reservation <u>on the bottom level of under</u>-the 4<u>8</u>-level parking structure. The MBR plant, designed to satisfy the standards of the U.S. Environmental Protection Agency (EPA), would be sized for approximately 200,000 gallons per day (gpd), which is designed to accommodate the project's estimated maximum daily flow of 123,900 gpd and the estimated peak flow of 165,200 gpd (**Appendix 2**). The location of the MBR facility on the Reservation is shown in **Figure 3-2**. Following treatment, the treated water would be stored in an on-site storage tank to be used for the dual plumbing system for reuse in toilets, landscape irrigation, green roof, and the on-site cooling tower (used for air conditioning). Following reuse of the treated wastewater, the Proposed Project would require maximum daily disposal of 25,000 gallons during the month of January (accounting for seasonal variation). No disposal would be necessary during the summer months. Treated water would be temporarily stored in a below grade storage tank, which would measure 20' tall by 20' wide by 60' long, and would have a storage capacity of 200,000 gallons.

To ensure that the treated water is properly demineralized, the wastewater will undergo electrodialisis reversal (EDR). The EDR process will ensure that the blended effluent has a total dissolved solid concentration of 500 miligrams per liter or less.

Mechanical Vapor Compression (MVC): The Tribe would install and utilize a MVC evaporator near the wastewater treatment plant to reduce the volume of treated effluent. The MVC (**Appendix 3**) has standard evaporation rates ranging from 40 to 1,800 gallons per hour, depending upon facility sizing. For purposes of this analysis, the MVC system would be sized for an evaporation rate that allows for the elimination of 40,000 gallons per day (gpd) of treated wastewater. This would provide sufficient evaporation capacity in excess the 25,000 gallon maximum unused treated wastewater generated during January. The excess treated wastewater would be temporarily stored in the below ground storage tank, which would have excess holding capacity. These evaporator systems operate on electricity and compressed air, and use an electric heating element, a mechanically-driven compressor, a heat exchanger, and recirculation pumps which allow rapid steam generation and recapture of waste heat to preheat the incoming wastewater. The wastewater is efficiently transformed into clean water vapor and allowed to vent to the atmosphere. A small amount of distillate (concentrated wastewater brine) is periodically collected and disposed.

3.2A.4 DRAINAGE

To control storm water pollution and to protect water quality during the operational phase, the Proposed Project would utilize a combination of site planning, structural treatment devices, and best management practices. To accomplish this, design considerations were chosen from the County of San Diego Standard Urban Stormwater Mitigation Plan for storm water treatment and Low Impact Development. Low Impact Development is an engineering design approach to managing storm water runoff to protect water quality. All of the planned features of the Proposed Project would be located outside of the 100-year floodplain.

Runoff from impervious areas of the Proposed Project would be conveyed through a series of gutters, drop inlets, and subterranean storm drain system, into an <u>underground Stormtechtm</u> <u>detention facility</u> <u>gravel detention facility located under paved roads and cantilevered ramps</u>. For additional treatment, green roofs covering the gaming facility and a bioretention facility at the outlet of the gravel detention facility would be installed. Treatment for runoff west of the creek shall flow via curb and gutter, <u>inlets</u> drop inlets, and a storm drain line to a back bone storm drain line to another Stormtechtm detention facility prior to entering the bioretention facility adjacent to the creek. To verify control and appropriate reduction of contaminants in surface runoff, the Tribe would implement a water quality monitoring program that would include testing for contaminants of concern.

A green roof system is proposed to cover the gaming facilities. Since the green roof is in itself a treatment facility, the County of San Diego does not require further storm water treatment of runoff from these areas. Green roofs are vegetated roof covers with growing media and plants taking the place of traditional roofing systems. In effect, they are treated like landscape areas at ground level and do not increase levels of pollutants of concern. Since they are self-contained, runoff from green roofs can easily be kept separate from other ground level improvements and can be discharged directly into Willow Creek without treatment or detention.

Bioretention facilities work by percolating runoff through the soil which removes most pollutants before the runoff is allowed to seep into native soils below or a sub drain that carries treated runoff to a detention device or storm water conveyance system.

The surface lot would comprise of Gravelpave2TM cross section, or equivalent, to provide pervious parking surfaces. Gravelpave2TM is a gravel filled pervious plastic sub-surface reinforcement structure, with geotextile fabric underneath. Gravelpave2TM is used in lieu of asphalt or concrete, which are impervious, and allows water to percolate through the road or parking surface into gravel detention facility beneath the ground surface. Please see **Appendix 7**, (Figure 5) for details.

The gravel detention facility, or subsurface gravel beds, would be constructed underneath the parking structure to detain the increase in runoff generated by impervious site improvements. An outlet structure would be constructed at the outlet of the gravel detention facility to release stormwater at a rate such that there would be no net increase in 100 year storm runoff in Willow Creek where it leaves the site. Please see **Appendix 7** (Figure 6) for details.

Subterranean chambers (StormTech[™] RC-750, or equivalent) with gravel backfill, serving as detention facilities would be constructed underneath the onsite roads and cantilevered roads. These are proposed to detain the increase in runoff generated by impervious site improvements to mitigate both the increase in runoff from the 100 year storm and for Hydromodification detention. Outlet structures would be constructed at the outlets of the gravel detention facilities to release stormwater at a rate such that there would be no net increase in 100 year storm runoff in Willow Creek where it leaves the site. Detention facilities for Hydromodification would release runoff at the appropriate rate to treatment facilities. Please see **Appendix 7** (Figure 6) for details.

In addition to the structural controls designed into the Proposed Project, reduction of stormwater pollutant levels would be ensured through the use of source controls <u>(including "smart irrigation")</u> described in the San Diego County Stormwater Standards Manual. The Standards Manual requires commercial facilities to implement best management practices in the following areas: employee training; stormwater pollution prevention plans; storm drain tileage and signing; annual review of facilities and activities; pollution prevention; materials and waste management; vehicles and equipment; and outdoor areas.

3.2A.5 FIRE PROTECTION

A detailed Fire Protection Plan (FPP) was prepared for the Proposed Project and is included within **Appendix 4** of this Tribal EE, which is hereby incorporated in its entirety into this project description by reference. The FPP demonstrates compliance with, or offers the same practical effect as, applicable fire regulations including but not limited to; the 2010 Edition, California Fire Code, the 2010 Edition, California Building Code for Wildland/Urban Interface Building Standards. The FPP is consistent with the California Code of Regulations (CCR) Title 24, Building and Fire Code Standards. The FPP presents the details associated with the proposed onsite Jamul Indian Village Fire Department, which would be located within <u>level 1</u> the bottom <u>level of the easternmost parking structure garage</u>.

The proposed facilities would be constructed as Type 1-A construction. The gaming facility and parking structures would be fitted with Automatic Fire Sprinklers designed and installed per the National Fire Protection Association (NFPA) Automatic Fire Sprinkler Standard 13-10. The Fire Pump room would be located on level 1 of the parking garage nearest the gaming facility. Primary and secondary emergency water supply would be provided by the Otay Water District via the existing 12-inch water line within Reservation Road. The Proposed Project would be served with a minimum of <u>1,500_2.500</u> gallons per minute for flow duration of 4-hours. All portions of the building would be within 150 feet of a fire hydrant. A minimum of 4 onsite fire hydrants would be provided on the Reservation. The Proposed Project would include a Fire Pump due to the height of the occupied floors above grade, and would be equipped with a Class I wet-standpipe Fire Protection systems. Detailed information regarding passive Fire-Resistive Construction requirements for Type 1-A Construction is contained in **Appendix 4**.

Section 1.6 (page 10) of **Appendix 4** addresses the defensible space and vegetation management needed to provide optimum levels of fire protection for the project. The project site is located between the adjacent grassland areas, located primarily to the south and east. Contained in the FPP are the Defensible Space and Vegetation Management Plan to declare that the wildland separation distance equates as the Same Practical Effect (SPE) in lieu of the 100 foot of fuel treatment around the structures¹. The Jamul Indian Village Fire Department would be available to respond to wildland Brush Fires on adjacent parcels in a response time of less than two minutes. The on-site landscaping and green roof plantings will be designed consistent with San Diego County's acceptable plant listings for fire prone areas. All on-site plants will be specified as species that will not advance fire or threaten the proposed facilities.

Section 2.0 (page 11) and Appendix C of **Appendix 4** includes a listing of general and enhanced fire-resistive construction requirements for the Proposed Project. General standards presented include building element, fire resistance rating, and CBC compliance citations. All of these features are incorporated into this project description by reference.

The Tribe would construct an on-site fire station to address the fire protection needs of the Proposed Project. The Fire Command Center (FCC) would be located within level 1 of <u>the parking garage</u> with direct access to the exterior of the building served by fire department access. The FCC would be provided with equipment to conform to Section 911, 2010 edition, California Building Code, and Section 914, 2010 edition, California Fire Code. Detailed features of the FCC are presented in Section 12.0 of **Appendix 4**, and are hereby incorporated into this project description by reference.

Staffing would consist of a Fire Chief, responsible for management of the Department and a minimum of two full time equivalent (FTE) Fire-Fighters/Emergency Response members per shift. At the discretion of the Fire Chief, separate company shifts (either three or four shifts) would be implemented throughout the life-cycles of the project during construction and after Occupancy Clearances, on a continuous full time basis.

The Proposed Project would necessitate a Ladder Truck (74'-105'), <u>and</u>-two engines, and a <u>"Mini-Pumper" fire truck for incident responses in the parking garage</u>. Staffing allocation would be 2<u>4</u>5-26 personnel. In order to participate in the Mutual Aid Program, the Jamul Fire Department will maintain one Fire Response unit with a Fire Fighter/Paramedic at all times. The Fire Department Personnel would be required to be trained in the areas shown in Section 1.5.7 (pages 8-9) of **Appendix 4**.

¹ / As required by the County of San Diego Consolidated Fire Code Section 16 which requires a minimum of 100 feet of fuel treatment around all structures. This is commonly referred to as the Fuel Modification Zone (FMZ).

Although capable of meeting its own fire protection demands, the Jamul Fire Department intends to enter into a Mutual Aid Agreement with local agencies, including San Miguel Consolidated Fire Protection District, San Diego Rural Fire Protection District, the US Department of Forestry, Cal-Fire, and shared resources for Emergency Dispatch Center the Heartland Communication Facility Authority (HCFA), El Cajon, CA and Emergency Medical Responses. The Jamul Tribe would contract directly with American Medical Services (AMR) for Advanced Life Support (ALS) ambulance services. Subject to the Director of Public Safety review, the ALS would be staffed with an on-site paramedic and Emergency Medical Technician. Detailed fire protection and life safety features of the proposed on-site facilities are included in **Appendix 4** of this Tribal EE.

3.2A.6 WATER DELIVERY

Potable water and water used for fire flow service would be supplied by the Otay Water District pursuant to the *Jamul Indian Village Gaming Development Project: Subarea Master Plan for Potable Water Service* (Appendix 5). The 2006 Subarea Master Plan was developed and approved for the 2006 version of the gaming project, which included multiple phases and a hotel component. The current project includes only one phase of development and does not contain a hotel component. Therefore, the approved 2006 Subarea Master Plan assumed a larger facility than currently proposed. Details regarding the existing/proposed water service and nearby water mains to the Jamul Indian Village site are hereby incorporated by reference from Appendix 5.

The Proposed Project gaming facility would require an average water supply volume of approximately 86,730 gpd, and a peak hour demand flow rate of 181 gallons per minute (gpm). The prior adopted Subarea Master Plan assumed a buildout average day demand of 205,920 gpd and peak hour demand of 428 gpm before reclamation. Therefore, the Proposed Project, as revised from the prior 2006 design, reduces average and peak daily potable water demand on the Otay Water District by 58%.

Recycled water would be used for irrigation of landscape and green roofs, cooling tower, and toilet and urinal flushing within the gaming facility. Restrooms within the gaming facility would be double plumbed. An estimated 60% of the water used by gaming patrons would be used for toilet flushing. Water uses with potable applications would remain on potable water service. By using recycled water, the total water demand volume is decreased from 86,730 gallons per day to 34,692 gallons per day and the peak hour day demand flow rate for design capacity is decreased from 181 gallons per minute to 72 gallons per minute.

The gaming facility would receive water service from the Otay Water District's Regulatory Water System (1296 Pressure Zone). The potable water pipelines internal to the gaming facility would be sized in accordance with Otay Water District design criteria to ensure adequate service is provided. The facilities would be designed to meet all fire flow, pressure, storage, and capacity requirements of Otay Water District and the San Diego County Rural Fire District in effect at the time the plan is approved. The design would also incorporate the American Water Works Association recommendations and requirements for private systems. (Otay Water District, 2006).

3.2A.7 CIRCULATION

Regional and local access to the Reservation would be provided via SR 94. All traffic to and from the project site would use Reservation Road, which provides existing access from the Reservation to SR 94. The Reservation Road includes a 2 -lane access road that crosses Willow Creek on the Reservation. Reservation Road would include an improved crossing of Willow Creek on the Reservation, with abutments placed outside of the flood zone. The Proposed Project also includes the abandonment of the existing creek crossing and 24-inch culvert that is located within the Willow Creek flood zone. The on-site circulation plan for the entrance level of the Project site is shown in **Figure 3-1**. One turnoff before the parking garage would provide access to the back of the facility for loading docks.

3.2A.8 GAMING COMPLEX CONSTRUCTION

Construction of the gaming complex is expected to span <u>18–24</u> months and would occur between the hours of 7 am and 5 pm each construction day Monday through Friday. On-site excavation would be required and is expected to cover approximately <u>3–9</u> months. The excavation activity would consist mostly of backhoe excavation or use of a hydraulic excavator or ripper. It is expected that some blasting would be included in the excavation work. Excavation activities are expected to result in the removal of approximately <u>22,600–200,000</u> cubic yards of subsurface material, which would be disposed of by trucking to area landfills. Material hauled is expected to result in approximately <u>1,619–14,286</u> truck trips during the life of construction period. For a typical <u>8_9</u>-hour day, approximately <u>24_60</u> truck trips are anticipated during the initial earthwork phase of the project. Approximately <u>3_17</u> truck trips would occur during the morning or afternoon pear-hour periods.

In addition to the initial earthwork phase of construction, the following outlines the number of truck trips anticipated for each subsequent construction phase for the project:

- 10 truck trips per day during the foundation forming and concrete work, which would occur during months 4 and 5 of the construction schedule;
- 4 truck trips per day for the delivery of steel and other construction materials, which would occur during months 6 through 11 of construction schedule; and
- 2 truck trips per day for the remaining six months of construction for miscellaneous deliveries of equipment, furniture, including two truck trips per week for wastewater hauling.

In addition to the trip estimates above, it is estimated that vehicle trips by construction workers to and from the site would average 10 trips per day during grading operations (first 6 months), 20 trips per day during foundation work (6 months), 50 trips per day during vertical construction (6 months) and 26 trips per day during finish and furnishing phases (6 months).

Most construction traffic would occur between 6 and 7 a.m. and between 3 and 4 p.m. Monday through Friday. <u>Most Cc</u>onstruction traffic would occur before the peak-hour traffic along State Route 94.

SR-94 is currently a truck road and will be able to accommodate the truck traffic generated by the construction phase. Nonetheless, in order to lessen the concentration of construction traffic, the contractor will implement a construction management plan for the project and will include the following:

- Encourage construction workers to rideshare to the site;
- Consider staggering of work hours to avoid all workers arriving at the same time;
- Consider alternative construction work times to avoid the peak-hour commuter traffic along SR-94; and
- Schedule truck deliveries or equipment hauling to occur at off-peak times.

The foundations of the gaming building and parking garages would be spread footings founded in bedrock. The remaining structures and retaining walls would be founded on spread footings in compacted fill or undisturbed bedrock. The allowable bearing capacity, lateral loads and footing observation for the proposed structures are described in **Appendix 6** and are hereby incorporated by reference into this Project Description.

Best management practices (BMPs) would be employed to ensure that off site impacts resulting from dust and sediment transport would be minimized. These BMPs would include use of such items as silt fences, sacked straw bales, sediment basins, traps or other appropriate measures. A spill prevention and countermeasure plan would be developed, which would identify proper storage, collection and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used onsite. Exposed topsoil would be stored, covered and otherwise isolated to prevent runoff and contamination of waters. The fuel and vehicle maintenance areas would be established away from all drainage courses to control runoff during construction activities. No disturbed surfaces would be left without erosion control measures in place. In addition, all necessary permits would be acquired prior to construction such as US EPA's Construction General Permit, which requires the preparation and implementation of a Storm Water Pollution Prevention Plan, Hazardous Materials Management and Spill Response Plan, and related Best Management Practices.

3.2A.9 GAMING COMPLEX DEVELOPMENT AND OPERATION STANDARDS

The Tribal Government would adopt the standards of the most recent California Building Code: Title 24, including all CBC fire, plumbing, electrical, mechanical, and related codes. These standards would be followed when constructing the proposed facilities. In addition, the proposed facilities would be constructed to the standards presented in technical studies prepared specific for the Proposed Project. The codes, standards and studies are identified below:

The development would comply with the Federal Americans with Disabilities Act, P.L. 101-336, as amended, 42 U.S.C. Section 12101 *et seq*. Consistent with the Tribal-State Compact, the proposed development would also comply with the following provisions:

- Development would be issued a certificate of occupancy by the Tribal Gaming Agency prior to occupancy;
- Tribal Government would adopt and comply with standards no less stringent than the State of California public health standards for food and beverage handling;
- Tribal Government would adopt and comply with standards no less stringent than Federal air quality, water quality, and safe drinking water standards applicable in the surrounding area;
- Tribal Government would adopt and comply with standards no less stringent than Federal workplace and occupational health and safety standards;
- <u>Adoption of t The 2010 Editions of the California Building Code, California Fire Code, California Plumbing Code, California Mechanical Code, California Electrical Code, and the California Elevator Safety Code provides for the substitution of the 2007 edition, CBC which was based on the 2006 edition, International Building Code (IBC);</u>
- <u>Tribal Government would adopt and comply with standards no less stringent than</u> <u>CA Title 23 for tertiary treated effluent from onsite wastewater treatment</u> <u>facilities.</u>
- Tribal Government would comply with Tribal codes and other applicable Federal law regarding public health and safety; and,
- Tribal Government would make reasonable provisions for adequate emergency, fire, medical, and related relief and disaster services for patrons and employees of the gaming facility.

The Tribal Government would also meet standards identical to those established by the following State and County Codes/Ordinances when constructing and operating the proposed facility:

- Sections 67.801 through 67.811 of San Diego County Code of Regulatory Ordinances (Storm Water Ordinance);
- Sections 87.101 through 87.717 of San Diego County Code of Regulatory Ordinances (Grading Ordinance);
- Caltrans Storm Water Quality Handbook; and,
- California Storm Water BMP Handbook of Construction.

At this time (preliminary design stage), the design and construction of the proposed gaming facilit<u>yies</u> would be consistent with the following project studies, which are hereby incorporated into this project description:

- Fire Protection Plan Report: Jamul Indian Village. National Code Consultants, September 30, 2011 (Appendix 4);
- Jamul Indian Village Subarea Master Plan for Potable Water Service². Martin and Ziemniak, August, 2006 (Appendix 5);
- Geotechnical Evaluation: Jamul Indian Village. Prepared by Construction Testing and Engineering, Inc. September 15, 2011 (Appendix 6); and
- Preliminary Detention and Stormwater Analysis. October 10, 2011 (Appendix 7)-, and
- Jamul Gaming Facility Wastewater Treatment and Re-use Analysis (Appendix 2).

Lastly, San Diego Gas and Electric (SDGE) will evaluate required loads to service the site. Per PUC regulations, if necessary, SDGE will upgrade existing service at no cost to other rate payers.

3.2A.10 PROBLEM GAMING MEASURES

The Tribe is committed to addressing the issue of problem gaming. To this end, the Tribe has incorporated the following policies into their operation of the gaming facility:

² / The project has been reduced in size compared to the project description presented in Appendix 5; however, water design criteria and service facilities described would apply to the Proposed Project.

- A. The Tribe will create a fund to support problem gambling-specific research, prevention and education, and treatment programs. A portion of annual revenues will be used to create and maintain the fund.
- B. The Tribe will adopt a policy statement on problem gambling.
- C. The Tribe will contract with a gambling treatment professional to train management and staff to develop strategies for recognizing and addressing customers whose gambling behavior may strongly suggest they may be experiencing serious to severe difficulties.
- D. The Tribe will refuse service to any customer whose gambling behavior convincingly exhibits indications of problem or pathological gambling.
- E. The Tribe will respectfully and confidentially provide the customer (as described above) with written information that includes a list of professional gambling treatment programs and self-help groups.
- F. The Tribe will implement procedures to allow for voluntary self-exclusion, enabling gamblers to ban themselves from a gambling establishment for a specified period of time.

3.3 ALTERNATIVE 1: 119,000 SQUARE FOOT REDUCED INTENSITY GAMING ALTERNATIVE

The 119,000 Square Foot Reduced Gaming Intensity Alternative (Alternative 1) contains most of the same components as the Proposed Project, but on a reduced scale (**Table 3-2** and **Figures 3-4** through **3-6**). The gaming complex would be constructed in one phase and be located in one structure on the Reservation. The new structure would measure 105 feet in height, but as is the case with the Proposed Project, the height would appear to be approximately 45 feet high from surrounding grade. The gaming facility would contain three levels. Development under Alternative 1 would also include a parking structure below and adjacent to the gaming facility, wastewater treatment/MVC unit and associated facilities, and Fire Station, all located on the east side of Willow Creek. A surface parking lot would be located west of Willow Creek. Under Alternative 1, the Gaming Complex would employ approximately 846 employees.

ITEM	TOTAL GROSS SQUARE FOOTAGE
Gaming Facility	
Gaming Area	37,550
Cage Area	4,831
Gaming Support	11,610
Food and Beverage	19,040
Public Spaces	7,908
Meeting Rooms/Event Center	7,200
Employee Area	9,717
Administration	8,269
Back-of-House	12,875
Gaming Facility Total	119,000
Parking	
Structure (5 level; 1,197 spaces)	352,143
Surface Lot 1 (72 spaces)	18,636
Surface Lot 2 (18 spaces)	5,200
Parking Total (1,287 spaces)	375,979
SOURCE: Lakes Entertainment Jamul Indian Vi	illage, 2012

TABLE 3-2 ALTERNATIVE 1 - GAMING ELEMENTS

The gaming complex would contain 37,500 square feet of gaming area, which is $49_41\%$ smaller than the gaming proposed under the Proposed Project. Total parking for Alternative 1 is 1,287 spaces, which is a 357% reduction compared with the Proposed Project. The parking structure under Alternative 1 would be <u>a 5 level structure located on the east side of the Reservation. the same size as the first parking structure under the Proposed Project; however, the The second and third parking facilities under Alternative 1 are parking lots (90 spaces) that represent a $93_4\%$ reduction in capacity from the second parking structure <u>surface lot (94 spaces)</u> proposed under the Proposed Project. In addition to the gaming/parking structure, Alternative 1 would include a wastewater plant within the parking structure on the west side of the gaming/parking complex.</u>

The fire station would also be integrated into the parking structure facility east of the wastewater treatment plant and would have direct access to SR 94 via the improved access road connecting the Reservation to the highway. These various uses of the gaming complex are described in more detail below.



- Jamul Indian Village Draft Final Tribal EE■ Figure 3-4 Alternative 1 Site Plan



SOURCE: Delawie Wilkes Rodrigues Barker Architects, 2011; EDS, 2012

- Jamul Indian Village Draft Final Tribal EE ■ Figure 3-5 Location of Alternative I Wastewater Treatment Plant and Fire Station



– Jamul Indian Village Draft Final Tribal EE∎

Figure 3-6 Photo Simulation: Alternative I from SR 94 As is the case with the Proposed Project, the existing church and cemetery located immediately west of the Reservation would be preserved and access to the church and cemetery would be maintained.

3.3A.1 GAMING

The gaming facility would consist of the same mixture of uses as described under the Proposed Project; however, the size of these uses would be reduced to fit within a 119,000 square foot facility. The exterior of the gaming facility under Alternative 1 would include downcast lighting consistent with County codes and ordinances. Lighting from the front of the gaming facility would be directionally pointed away from the adjacent Reserve and the building would shield light, human activity and noise effects from the Reserve. Lighting in the back of the gaming would consist of low wattage security and safety lighting near doorways consistent with UBC requirements.

3.3A.2 PARKING

Under Alternative 1, the Tribe would construct three parking facilities to accommodate 1,287 parking spaces, which includes a 4/5-level, 1,197 space parking structure below and adjacent to the gaming facility, and two surface parking lots for an additional 90 parking spaces. The 352,143 square foot parking structure would be designed into the gaming complex on the east side of Willow Creek as shown in **Figure 3-3.** Four of the 5 levels of parking provided by the parking structure would be located below the gaming facility. The surface parking lots, measuring 18,636 square feet and 5,200 square feet, would be located on the west side of the Reservation and would be used exclusively for employee parking. The parking structure and surface parking lots would include downcast lighting designed to minimizinge spill over to adjacent lands.

3.3A.3 WASTEWATER TREATMENT AND DISPOSAL

Wastewater would be treated, reused and disposed of in the same manner as described for the Proposed Project. The MBR facility, designed to satisfy EPA standards, would be designed to accommodate approximately 60,375 gpd of maximum daily flow and a peak flow of 80,500 gpd. Following reuse, the worst case amount of treated water to be disposed of is approximately 12,000 gpd during the month of January. Treated water would be temporarily stored in an underground storage tank, which would measure 10 feet high by 20x60 foot length, and would have a storage capacity of 100,000 gallons. The treated effluent would be disposed of in the same manners as described under the Proposed Project. Excess treated wastewater would be temporarily stored in the below ground storage tank, which would have excess holding capacity.

3.3A.4 DRAINAGE

Alternative 1 would use the same combination of storm water control and water quality filtering features as described for the Proposed Project. As is the case for the Proposed Project, the features of Alternative 1 would not encroach into the 100-year floodplain. Design considerations would be chosen from the County of San Diego Standard Urban Stormwater Mitigation Plan for storm water treatment and Low Impact Development, while runoff from impervious areas of the project site would be conveyed through a series of gutters, drop inlets, and subterranean storm drain system, into a gravel detention facility. For additional treatment, green roofs covering the gaming facilities and a bioretention facility at the outlet of the gravel detention facility would be installed. Treatment for runoff west of the creek shall flow via curb and gutter, drop inlets, and a storm drain line to the bioretention facility adjacent to the creek.

3.3A.5 FIRE PROTECTION/STATION

As is the case for the Proposed Project, the Tribe would construct an on-site fire station to address the fire protection needs of Alternative 1. Staffing would consist of a Fire Chief, responsible for management of the Department and a minimum of two FTE Fire-Fighters/Emergency Response members per shift. At the discretion of the Fire Chief, separate company shifts, (either three or four shifts) would be implemented throughout the life-cycles of the project during construction and after Occupancy Clearances, on a continuous full time basis.

Staffing allocation would be 2<u>4</u>5-26 personnel. Equipment would consist of a ladder truck (74' to 105'), <u>and</u> two engines, and a "Mini-Pumper" fire truck for incident responses in the parking garage. Fire department training standards are the same as those identified for the Proposed Project. In addition, the fire department mutual aid/emergency medical services for Alternative 1 would be the same as the Proposed Project.

3.3A.6 WATER DELIVERY

Potable water would be delivered, treated, and disposed of in the same manner as described for the Proposed Project. The use of recycled water from the wastewater treatment plant would significantly reduce potable water demands on-site. By using recycled water, the total water volume demand is decreased from 42,263 gallons per day to 16,901 gallons per day and the maximum day demand for design flow rate capacity is decreased from 59 gallons per minute to 23 gallons per minute.

3.3A.7 CIRCULATION

Site circulation would be designed in the same manner as described for the Proposed Project.

3.3A.8 GAMING COMPLEX CONSTRUCTION

Construction of the gaming complex under Alternative 1 is expected to span 16 months and would occur between the hours of 7 am and 5 pm each construction day Monday through Friday. On-site excavation would be required and is expected to cover approximately 3_{-6} months. The excavation activity would consist mostly of backhoe excavation or use of a hydraulic excavator or ripper. It is expected that some blasting would be included in the excavation work. Excavation activities are expected to result in the removal of approximately 22,600 cubic yards of subsurface material, which would be disposed of by trucking to area landfills. Material hauled is expected to result in approximately 1,6159 truck trips during the life of construction period. For a typical 8-hour day, approximately 24_{-11} truck trips are anticipated during the initial earthwork phase of the project. Approximately 37 truck trips would occur during the morning or afternoon pear-hour periods.

The following includes the number of truck trips anticipated for each construction phase of the project:

- 6 truck trips per day during the foundation forming and concrete work, which would occur during months 4 and 5 of the construction schedule;
- 2 truck trips per day for the delivery of steel and other construction material, which would occur during months 6 through 11 of construction schedule; and
- 2 truck trips per day for the remaining seven months of construction for miscellaneous deliveries of equipment, furniture, including two truck trips per week for wastewater hauling.

In addition to the trip estimates above, it is estimated that vehicle trips by construction workers to and from the site would average 10 trips per day during grading operations (first 3 months), 12 trips per day during foundation work (2 months), 28 trips per day during vertical construction (6 months) and 14 trips per day during finish and furnishing phases (7 months).

All construction traffic for Alternative 1 would occur between 6 and 7 a.m. and between 3 and 4 p.m. Monday through Friday. Construction traffic would occur before the peak-hour traffic along SR 94.

SR-94 is currently a truck road and will be able to accommodate the truck traffic generated by the construction phase. Nonetheless, in order to lessen the concentration of construction traffic, the

contractor will implement a construction management plan for the project and will include the following:

- Encourage construction workers to rideshare to the site;
- Consider staggering of work hours to avoid all workers arriving at the same time;
- Consider alternative construction work times to avoid the peak-hour commuter traffic along SR-94; and
- Schedule truck deliveries or equipment hauling to occur at off-peak times.

Construction under Alternative 1 would include spread footings founded in undisturbed bedrock (as described for the Proposed Project). Runoff from the Project would be conveyed in the same manner as described under the proposed Project. The BMPs described under the Proposed Project would also be employed for Alternative 1.

3.3A.9 GAMING COMPLEX DEVELOPMENT STANDARDS

The development standards are the same as those described for the Proposed Project.

3.3A.10 PROBLEM GAMING MEASURES

The problem gaming measures are the same as those described for the Proposed Project.

3.4 ALTERNATIVE 2: 17,500 SQUARE FOOT REDUCED INTENSITY GAMING ALTERNATIVE

The 17,500 Square Foot Reduced Gaming Intensity Gaming Complex (hereafter "Alternative 2") includes the development of a significantly reduced gaming complex when compared to the Proposed Project. The gaming building, located on the east side of the Reservation, would be 92% smaller than the Proposed Project gaming facility (**Table 3-3** and **Figures 3-7** through **3-8**). The facility would include a surface parking lot located adjacent to the gaming that could accommodate 373 parking spaces.

The facilities would be constructed in one phase and would be located on the east and west side of Willow Creek. The structure would be a total of 45 feet in height from lowest to highest point.

Under Alternative 2, the Gaming Complex would employ approximately 223 employees. The gaming building would be located on the east side of Willow Creek and outside of the mean high water mark.



- Jamul Indian Village Draft Final Tribal EE ■ Figure 3-7 Alternative 2 Site Plan



Jamul Indian Village Draft Final Tribal EE ■ Figure 3-8 Photo Simulation: Alternative 2 from SR 94

As is the case with the Proposed Project and Alternative 1, the existing church and cemetery located immediately west of the trust property would be preserved and access to the church and cemetery would be maintained.

ITEM	TOTAL GROSS AREA
Gaming Facility	
Gaming Area	11,376
Gaming Support	1,600
Food and Beverage	1,019
Public Spaces	1,140
Employee Area	2,365
Gaming Facility Total	17,500
Parking	
Surface Lot 1 (72 spaces)	18,636
Surface Lot 2 (150 spaces)	35,000
Surface Lot 3 (133 spaces)	45,000
Surface Lot 4 (18 spaces)	5,200
Parking Total (373 spaces)	103,836

TABLE 3-3 ALTERNATIVE 2- GAMING ELEMENTS

3.4A.1 GAMING

The 17,500 square foot gaming facility would consist of the gaming floor, gaming support, food and beverage, public spaces and employee area. The exterior of the gaming facility under Alternative 2 would include downcast lighting consistent with County codes and ordinances. Lighting from the front of the gaming facility would be directionally pointed away from the adjacent Reserve and the building would shield light, human activity and noise effects from the Reserve. Lighting in the back of the gaming facility would consist of low wattage security and safety lighting near doorways consistent with UBC requirements.

3.4A.2 SURFACE PARKING

Parking would be provided within four surface lots totaling 103,836 square feet, which would accommodate 373 parking spaces as shown in **Table 3-3** and **Figure 3-7**. The parking lots would be located on the east and west sides of Willow Creek outside the high water mark. The parking lots would include exterior downcast lighting, which would minimize spill over to adjacent lands.

3.4A.3 WASTEWATER TREATMENT AND DISPOSAL

Wastewater would be treated, reused and disposed of in the same manner as described for the Proposed Project with the exception of the cooling tower, which would not be used for this alternative. The wastewater facility would be capable of treating 25,000 gpd and would be constructed on the east side of Willow Creek as shown in **Figure 3-7**. Maximum daily wastewater flow is estimated to be 17,000 gpd, while peak flow is estimated at 22,770 gpd. Treated water would be temporarily stored in an above ground storage tank, which would measure 10 feet high by 18 feet square, and would have a storage capacity of 25,000 gallons. Excess treated wastewater would be temporarily stored in the above ground storage tank, which would have excess holding capacity.

3.4A.4 DRAINAGE

Alternative 2 would use the same combination of storm water control and water quality filtering features as described for the Proposed Project. As is the case with the Proposed Project and Alternative 1, the features of Alternative 2 would not encroach into the 100-year floodplain. Design considerations would be chosen from the County of San Diego Standard Urban Stormwater Mitigation Plan for storm water treatment and Low Impact Development, while runoff from impervious areas of the project site would be conveyed through sheet flow to curbs and gutter to the gravel detention facility. The parking lots would consist of pervious material that would allow for infiltrations of surface water. The lower parking lot, east of the creek, would also serve as a gravel detention facility located beneath the permeable parking lot surface. Treatment for runoff west of the creek shall flow via curb and gutter, spillway, inlets, and a back bone storm drain line to the bioretention facility adjacent to the creek. For additional treatment, green roofs covering the gaming facility and bioretention at the outlet of the gravel detention facility are proposed.

3.4A.5 FIRE PROTECTION/STATION

This alternative would require a minimum of two engines, staffed with three personnel; a Captain, an Engineer and a Fire-Fighter. Subject to review by the Director of Public Safety a four person engine Company may be preferred for the Project. Staffing estimate would be 14 personnel.

Equipment maintenance could be contracted out with the adjacent Fire District (SMCFPD, San Diego Rural FPD, etc.).

3.4A.6 WATER DELIVERY

Potable water would be delivered, treated, and disposed of in the same manner as described for the Proposed Project. By using recycled water, the total water volume demand is decreased from 11,954 gallons per day to 4,782 gallons per day and the maximum day demand for design flow rate capacity is decreased from 17 gallons per minute to 7 gallons per minute.

3.4A.7 CIRCULATION

Regional and local access to the Project site would be provided via SR 94. All traffic to and from the project site would use Reservation Road, which provides existing access from the Reservation to SR 94. Traffic on the Reservation would be directed west towards the on site parking lots. Truck deliveries and pickup would occur towards the rear of the facility where a separate driveway would connect to the loading dock.

3.4A.8 GAMING COMPLEX CONSTRUCTION

Construction of the gaming complex under Alternative 2 is expected to span 12 months and would occur between the hours of 7 am and 5 pm each construction day Monday through Friday. On-site excavation would be required and is expected to cover $3_{.6}$ months. The excavation activity would consist mostly of backhoe excavation or use of a hydraulic excavator or ripper. It is expected that some blasting would be included in the excavation work. Excavation activities are expected to result in the removal of approximately 22,600 cubic yards of subsurface material, which would be disposed of by trucking to area landfills. Material hauled is expected to result in approximately 1,6159 truck trips during the life of construction period. For a typical 8-hour day, approximately $24_{.11}$ truck trips are anticipated during the initial earthwork phase of the project. Approximately 3.7 truck trips would occur during the morning or afternoon pear-hour periods.

The following includes the number of truck trips anticipated for each construction phase of the project:

- 4 truck trips per day during the foundation forming and concrete work, which would occur during month 4 of the construction schedule;
- 2 truck trips per day for the delivery of steel and other construction material, which would occur during months 5 through 8 of construction schedule; and

• 2 truck trips per day for the remaining four months of construction for miscellaneous deliveries of equipment, furniture, including two truck trips per week for wastewater hauling.

In addition to the trip estimates above, it is estimated that vehicle trips by construction workers to and from the site would average 10 trips per day during grading operations (first 3 months), 12 trips per day during foundation work (1 months), 28 trips per day during vertical construction (3 months) and 14 trips per day during finish and furnishing phases (4 months).

All construction traffic for Alternative 2 would occur between 6 and 7 a.m. and between 3 and 4 p.m. Monday through Friday. Construction traffic would occur before the peak-hour traffic along SR 94.

SR-94 is currently a truck road and will be able to accommodate the truck traffic generated by the construction phase. Nonetheless, in order to lessen the concentration of construction traffic, the contractor will implement a construction management plan for the project and will include the following:

- Encourage construction workers to rideshare to the site;
- Consider staggering of work hours to avoid all workers arriving at the same time;
- Consider alternative construction work times to avoid the peak-hour commuter traffic along SR-94; and
- Schedule truck deliveries or equipment hauling to occur at off-peak times.
- Excavation activities are expected to result in the removal of subsurface material from the project site in similar quantities to the Proposed Project and Alternative 1. The foundation of the gaming complex would be a concrete poured foundation.
- Runoff from the Project site would be conveyed in the same manner as described under the proposed Project. The best management practices (BMPs) described under the Proposed Project would also be employed for Alternative 1.

3.4A.9 GAMING COMPLEX DEVELOPMENT STANDARDS

The development standards are the same as those described for the Proposed Project.

3.4A.10 PROBLEM GAMING MEASURES

The problem gaming measures are the same as those described for the Proposed Project.
3.5 NO ACTION ALTERNATIVE

Under the No Action Alternative, the development described under the Proposed Project, Alternative 1 and Alternative 2 would not take place on the Reservation site for the benefit of the Tribal Government. For the purposes of the environmental analysis, it is assumed that the property would continue to be utilized in its current state. All other effects of the Proposed Project and Reduced Intensity Alternatives, both on- and off-site, would be avoided.

SECTION 4.0

ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

SECTION 4 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

4.1 INTRODUCTION

This section of the Tribal EE presents the off Reservation environmental setting, analyzes potential environmental consequences of the Proposed Project and Alternatives on the setting, and recommends mitigation measures. It is best to remember that the impact analysis considers all features of the Proposed Project/Alternatives as described previously in Section 3.0 prior to concluding whether there is a significant impact. So, for example, if construction activities result in the uncovering of soil through grading activities, project features such as the implementation of BMPs may result in a conclusion of "less than significant" impact, because the BMPs would ensure that the transport of sediment to area waterways would not be a significant event during construction activities could result in a significant impact to water quality. Mitigation would then be recommended to ensure the potential impact to water quality is less than significant. Pursuant to the provisions of the Tribal-State Compact, the Tribe would then make a good faith effort to implement the recommended mitigation measures during construction and operation activities.

Environmental resources that are described and analyzed within this section are:

- Land Use,
- Aesthetics,
- Geology and Soils,
- Hydrology and Water Quality,
- Hazardous Materials,
- Biological Resources,
- Cultural Resources,
- Traffic and Circulation,

- Noise,
- Air Quality, and
- Public Services, and .
- Socioeconomic and Environmental Justice Impacts.

In addition to the above topical sections, this section also addresses growth inducing effects, cumulative effects and indirect effects resulting from traffic mitigation measures.

The Tribe will use this Tribal EE to determine if the Proposed Project and Alternatives would result in significant off Reservation environmental impacts. As mentioned above, the Tribe will make a good faith effort to reduce the significant impacts identified in this section below a level of significance through implementation of the mitigation recommended.

In addition to thoroughly analyzing the direct and indirect effects <u>effects</u> of the Proposed Project, the Tribal EE considered the collective impacts of the gaming facility and each Access Option. As a result of this analysis, it was concluded that no new or more severe impacts would occur than those discussed elsewhere in this document.

Environmental Checklist

Table 4.1-1 presents an environmental checklist used to determine which environmental issues have the potential to be significantly impacted by the Proposed Project. Each category is followed by a brief discussion that either concludes that a less-than-significant impact would result, or that a potentially significant impact would result. A conclusion by the checklist that an impact is potentially significant does not mean that it is significant. The potentially significant impact conclusion within the checklist warrants further analysis, which is provided in the detailed analysis that follows the checklist.

TABLE 4.1-1 OFF-RESERVATION ENVIRONMENTAL CHECKLIST

I. Aesthetics

Would the project	Potentially Significant Impact	Less than Significant	No Impact
a.) Have a substantial adverse effect on a scenic vista?			
b.) Substantially damage off-reservation scenic resources, including, but not limited to, tress,			
rock outcroppings, and historic buildings within a state scenic highway?			
c.) Substantially degrade the existing visual character or quality of the site and its surroundings?			
d.) 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?			
Discussion:	1		1
	V 11 (D1 (1	1 • 4 1	• •

The development of the proposed facility would result in a new urban feature within the Jamul Valley. There are currently no designated scenic vistas or state scenic highways that would be impacted by the proposed facility. The proposed facility would introduce a new scale of structure and some nighttime lighting into the area. The height and massing of this facility, together with the proposed night lighting may cause a significant impact of views within the area. This issue will be addressed in detail within the Tribal EE.

II. Agriculture and Forestry Resources

Would the project	Potentially Significant Impact	Less than Significant	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			\checkmark
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?			\checkmark
d) Result in the loss of forest land or conversion of forest land to non-forest use?			\checkmark

e) Involve other changes in the existing environment which due to their location or		V
nature could result in conversion of Farmland to non-agricultural use or conversion of forest		,
land to non-forest use?		
Discussion:		

The project as proposed would not result in the conversion of off-reservation lands from farmland to non-agricultural uses. The decision to allow conversion of farmland to non-farmland ultimately resides with the County Board of Supervisors who serve as the local land use authority. Beyond the fact that the ultimate approval of land use conversion lies with the County, circumstances leading up to the request for conversion could include development pressures resulting indirectly from the gaming project. This could include pressures for additional residential and commercial development resulting from the growth-inducing effects. However, as noted in Section 4.13 of the Tribal EE, the amount of existing vacancies within the region would provide an ample amount of residential opportunities to the employees of the gaming project such that the gaming project would not generate growth-inducing effects that would trigger requests for conversion.

III. Air Quality

Would the project	Potentially Significant	Less than	No Impact
	Impact	Significant	
a.) Conflict with or obstruct implementation of the applicable air quality plan?	\checkmark		
b.) Violate any air quality standard or contribute to an existing or projected air quality violation?	\checkmark		
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?)			
d.) Expose off-reservation sensitive receptors to substantial pollutant concentrations?			
e.) Create objectionable odors affecting a substantial number of people off-reservation?			
Discussion:			
The proposed development is expected to result in both construction and operational air emission	ns. Both construction and	operational emissio	ns may result in
a significant contribution to the criteria pollutant levels; therefore, these issues will be addressed	in detail within the Air Q	uality chapter of thi	s Tribal EE.
The only use of the project that could result in objectionable odors would be the wastewater treat	ment plant. As identified	in Section 3.0, the e	entire plan
would be located within the basement level of the building and, as such, would contain and filter	all odors within the facili	ty. No odor impacts	s to surrounding
residents would occur.			

IV. Biological Resources

Would the project	Potentially Significant Impact	Less than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	\checkmark		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	\checkmark		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	\checkmark		
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?		\checkmark	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	\checkmark		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	\checkmark		
Discussion:			•
The proposed development would occur on the Reservation; however, mitigation may be required There are a number of federally and state listed species in the project area; however, none of these CDF <u>WG</u> Reserve located south of the site does have the potential to contain listed species. Project of the U.S. The access mitigation could be located on MSCP land. Issues associated with listed species. Effects.	l off site for access and roa e species have been identif et mitigation has the potent pecies and MSCP is addres	adway/intersection ied on the Reserva ial to impact off-re sed within Section	improvements. tion. The eservation waters 4.15 Indirect

V. Cultural Resources

Would the project	Potentially Significant Impact	Less than Significant	No Impact	
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?		√		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		\checkmark		
d) Disturb any human remains, including those interred outside of formal cemeteries?			V	
Discussion:				
The project as proposed would not include any off reservation development; however, traffic mitigation would be necessary for access and roadway/intersections. The potential for off-reservation mitigation to affect cultural resources is addressed in Section 4.15 Indirect Effects. A review of the paleontological locality maps by the San Diego Museum of Natural History identified no recorded fossil sites on the project site or in the immediate surrounding				

area. Additionally, the museum's review of available geologic maps confirmed that the geologic formations (igneous rock and alluvial veneers) that underlie the project site have a low probability of containing paleontological resources. The project would not affect off-reservation human remains, including those outside those interred outside formal cemeteries.

VI. Geology and Soils

Would the project	Potentially Significant Impact	Less than Significant	No Impact	
a) Expose off-reservation people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
 Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. 		V		
ii) Strong seismic ground shaking?				
iii) Seismic-related ground failure, including liquefaction?				
iv) Landslides?				
b) Result in substantial soil erosion or the loss of topsoil?				
c) Be located on a geologic unit or soil that is unstable, or that would become				

unstable as a result of the project, and potentially result in on or off-site landslide,		
lateral spreading, subsidence, liquefaction or collapse?		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform		
Building Code (1994), creating substantial risks to life or property?		
e) Have soils incapable of adequately supporting the use of septic tanks or		
alternative waste water disposal systems where sewers are not available for the		
disposal of waste water?		
Discussion:		

The project area is not mapped within the State-delineated Earthquake Fault Zone and there are no known faults in the immediate vicinity of the study area. Over the last 200 years, only one large-magnitude earthquake has occurred in the immediate San Diego County area. With that said, Section 4.4 Land Resources will address the potential for impacts associated with earthquakes. The development would incorporate BMP's to the maximum extent practicable. Nevertheless, Section 4.4 of this TEIS/R will address issues related to soil erosion.

VII. Greenhouse Gas Emissions

Would the project	Potentially Significant	Less than	No Impact	
	Impact	Significant		
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a				
significant impact on the environment?				
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of				
reducing the emissions of greenhouse gases?				
Discussion:				
Green house gas emissions would be emitted throughout the life of the project. The proposed project is not expected to conflict with any applicable plan, policy				

Green house gas emissions would be emitted throughout the life of the project. The proposed project is not expected to conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The topic of greenhouse gases will be addressed within Section 4.11 Air Quality.

VIII. Hazards and Hazardous Materials

Would the project	Potentially Significant Impact	Less than Significant	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	~		

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?		
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?		
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?		
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	\checkmark	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		

Discussion:

Small amounts of hazardous materials would be transported during construction and operation of the project. During grading and construction, the use of hazardous materials would include substances such as gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint and paint thinner. These materials would be used for the operation and maintenance of equipment, and directly in the construction of the facilities. Regular fueling and oiling of construction equipment would be performed daily. The most likely possible incidents would involve the dripping of fuels, oil and grease from construction equipment, and during handling and transfer from one container to another. The small quantities of fuel, oil and grease that may drip would have low relative toxicity and concentrations. Typical construction management practices limit and often eliminate the effect of such accidental releases.

During operation of the facilities included under the Project, the majority of waste produced would be non-hazardous. The small quantities of hazardous materials that would be generated would include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint and paint thinner. These materials would be generated from the use and maintenance of the sewage treatment facility, fire station, casino, emergency generators and other project facilities. The amount and type of hazardous materials that would be generated are common to commercial sites and do not pose unusual storage, handling or disposal issues.

Based upon the amount and type of hazardous materials that will be stored, used and generated during operation of the Project, effects on the environment or public are considered to be less than significant. However, Section 4.6 Hazards and Hazardous Materials will address these issues.

IX. Hydrology and Water Quality

Would the project	Potentially Significant Impact	Less than Significant	No Impact
a.) Violate any water quality standards or waste discharge requirements?			
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 drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			V
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 which would result in substantial erosion of siltation off-site?			
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 which would result in flooding off-site?			
e.) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted run off-reservation			
f) Otherwise substantially degrade water quality?			
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			
i) Expose 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?			
j) Inundation by seiche, tsunami, or mudflow?			\checkmark

Discussion:

Development of the project would result in the overcovering of soils on the Reservation, and off site due to implementation of traffic mitigation for improved access, roadways and intersections. To attenuate peak flows, the gaming development incorporates a filtering/detention facility into the project design on the Reservation. The result of this is to filter/detain surface runoff until capacity exists within the surface drainage system. Therefore, post-project runoff would be the same or less than pre-project runoff. The filtering system would remove the vast majority of surface contaminants, reducing the potential for water quality impacts off-site. All project features would be built outside of jurisdictional waters. Traffic mitigation would be required to apply for a Nationwide Permit due to the drainage crossing required. Although the project features are designed to avoid significant impacts to both water quality and capacity, these issues are addressed within Section 4.5 Water Resources. The Tribe will get its potable water from the Otay Water District. No use of groundwater resources will occur; therefore, no impact to groundwater resources will occur.

X. Land Use and Planning

Would the project	Potentially Significant Impact	Less than Significant	No Impact		
a) Physically divide an established community?					
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?		V			
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	\checkmark				
Discussion:					
The project as proposed would be developed on the Reservation; however site. The development of one or more access mitigation measures may	, there are several traffic r require an MSCP plan an	nitigation measure nendment. The N	s that would be constructed off- ASCP consistency issue will be		

addressed within Section 4.7 Biological Resources. County land use plans would not apply to the proposed Reservation development; however, they would apply to one or more of the access mitigation measures. The land use consistency issue will be addressed in Section 4.2 Land Use.

XI. Mineral Resources

Would the project	Potentially Significant Impact	Less than Significant	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?		V
Discussion:		

The California Geological Survey classifies land in western San Diego County according to the presence or absence of construction aggregate resources. However, the project area itself does not offer a suitable combination of soils and minerals types to warrant extraction of aggregates. There are no known mapped mines within the area or visual evidence of any mining activity. The field survey did not indicate past or present mines or quarries. The proposed grading and landform alteration associated with the Project will not adversely affect known or recorded mineral resources. Alteration in the land use will not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. Because there are no known or mapped mineral resources within the project area, development and use of the land will not be affected by such resources. There are no abandoned mines, shafts or tailing that would affect development. Therefore impacts associated with mineral resources would be less than significant.

XII. Noise

Would the project	Potentially Significant Impact	Less than Significant	No Impact	
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Ń			
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			\checkmark	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?			V	
Discussion:				
Construction and operation activities with the gaming project would result in an increase of on-reservation noise during construction and operation. Short-term				

Construction and operation activities with the gaming project would result in an increase of off-reservation noise during construction and operation. Short-term increases in noise would be associated with heavy construction equipment. Operational noise associated with the increase in vehicular activity, HVAC systems, on-site parking structure noise, and truck delivery and loading activities would all be long term noise continuing through the life of the project. Section 4.10 Noise addresses these potential noise issues.

XIII. Population and Housing

Would the project	Potentially Significant Impact	Less than Significant	No Impact	
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				
Discussion:				
The gaming project has the potential to induce some growth in both housing demand and population. The potential effects of increased housing demand and population growth are evaluated within Section 4.13 Growth Inducing Effects .				

XIII. Public Services

Would the project	Potentially Significant Impact	Less than Significant	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:			
Fire Protection?			
Police Protection			
Schools?			
Parks?			
Other public facilities?			
Discussion			

Discussion:

The construction and operation of the gaming project would result in an increased demand for various public services. As part of the project, the Tribe is proposing to construct a fire facility on-Reservation. The construction of a new fire station would be beneficial to both the Tribe and community; therefore, the fire demand impact to be less than significant. Nevertheless, the fire demand impacts are addressed in detail in Section 4.12 Public Services. The project increase on law enforcement services will be addressed through site design issues, and traffic improvements. This issue will also be addressed in detail within Section 4.12. No libraries or parks are located within the Jamul area. Effects to libraries and parks would be spread out over a wide geographic area. Therefore, effects to the San Diego County library system and recreational areas are expected to be less than significant. The effects on schools are expected to be less than

significant due to the fact that the vast majority of the new employment resulting from the gaming facility is expected to come from the San Diego-Carlsbad-San Marcos MSA, which would minimize the number of new families moving into the County public/private school system. The small increase in the number of school students generated by the project is expected to occur over a wide geographic area. Therefore, the school impact is expected to be less than significant.

Changes to County expenditures could potentially occur as the result of an increased demand for public services. For some of these services the Tribe may enter into a contract with a service provider. The Tribe may also supplement some of the existing services, or provide independent services. It should also be noted that the Tribe would provide financial reimbursement for some of the services provided. For example, the Tribe will provide fair share contributions for traffic improvements for some intersections affected by the project. Fire service will be provided by the Tribal fire department created as part of the project, while emergency medical service will be contracted through a service provider. Increased costs of providing public services to new employees and their families would be offset by increased revenue generated from property and sales tax collected from these employees. Effects to County revenue would occur due to an increase in sales tax. Potential changes in other sources of revenue such as motor vehicle fees, fines and forfeiture, license fees, and other fees and represent minor changes in overall County revenues.

XV. Recreation

Would the project	Potentially Significant	Less than	No Impact	
	Impact	Significant	_	
a) Would the project increase the use of existing neighborhood and regional parks		\checkmark		
or other recreational facilities such that substantial physical deterioration of the				
facility would occur or be accelerated?				
b) Does the project include recreational facilities or require the construction or				
expansion of recreational facilities which might have an adverse physical effect on				
the environment?				
Discussion:	•			
No community or regional parks are located within the Jamul area. The project area is home to a unique mix of preserves and reserves, which afford limited				
recreational opportunities. The Hollenbeck Canyon Wildlife Area offers hiking opportunities and is located approximately 4 miles south of the Reservation.				
The area is also home to a number of reserves, preserves and reservoirs, which prov	vide recreational opportun	ities to area resider	nts and visitors - Rancho Jamul	
Ecological Reserve, Otay Mountain Ecological Reserve, Sycuan Peak Ecological Re	eserve, McGintry Mountai	n Ecological Reser	rve, Otay Reservoir, Sweetwater	
Reservoir, as well as others. Other recreational opportunities identified by the pu	ublic include school field	s, and stables/eque	estrian training centers, Future	
employees of the Jamul gaming facility are expected to occupy housing primarily	in the East and South Sub	ourban residential a	areas. Population growth in the	
Jamul area resulting from the Proposed Project would not be great enough to result in an impact to these facilities. Effects to parks would be spread out over a				
wide geographic area. Therefore, effects to the San Diego County and recreational areas are expected to be less than significant. Additionally, the Proposed				
Project would not include the construction or expansion of recreational facilities.				

XVI. Social Issues

Would the project	Potentially Significant	Less than	No Impact		
	Impact	Significant			
a) Significantly increase pathological or compulsive gambling, or significantly					
increase local crimes?					
Discussion:					
The report issued by the National Gambling Impact Study Commission (NGISC) could find no conclusive evidence that the introduction of legalized gambling					
increased pathological or compulsive gambling, or that local crimes increased significantly. Nonetheless, the Tribe has incorporated Problem Gaming Measures					
into their project description to address this issue. There measures incorporated into	the project description wo	uld ensure a less th	an significant impact.		

XVII. Transportation and Traffic

Would the project	Potentially Significant	Less than Significant	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	√ √	Significant	
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	V		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			V
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			

e) Result in inadequate emergency access?		
f) Conflict with adopted policies, plans, or programs regarding public transit,		
bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of		
such facilities?		

Discussion:

The operation of the proposed project would increase the amount of traffic on area roadways especially State Route 94. This increased traffic has the potential to significantly contribute to already congested intersections and roadways, as well as the potential to result in new intersection/roadway impacts along SR94 Section 4.9 Transportation addresses the potential impacts to area roadways and intersections. In addition, an assessment of increased truck traffic associated with wastewater delivery off-site is addressed in Section 4.9.

XVIII. Utilities and Service Systems

Would the project	Potentially Significant	Less than Significant	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Impact	$\sqrt{\frac{1}{\sqrt{1-\frac{1}{1-\frac{1}{\sqrt{1-\frac{1}{\sqrt{1-\frac{1}{1-\frac{1}{\sqrt{1-\frac{1}}}}}}}}}}$	
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 environmental effects?		V	
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 environmental effects?			
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?		V	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			\checkmark
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?		V	
g) Comply with federal, state, and local statutes and regulations related to solid waste?		V	
Discussion:			·

The proposed project includes the development of a wastewater treatment facility on the Reservation. This wastewater facility will treat the wastewater to Title 22 standards. Once treated, the water will be used in double plumbing, live roof, irrigation, and cooling tower. The disposal of wastewater will occur either by on site MVC or trucking the water to another reservation to be used for irrigation purposes. No on-site disposal of wastewater will occur. No traditional demand to other municipal wastewater facilities will occur. An analysis of the potential effects of wastewater treatment and disposal is provided in Section 4.12 Public Services. No new off-reservation storm drainage facility would be constructed except for the traffic mitigation described in Section 4.9 Transportation. The additional surface runoff resulting from the additional pavement would be directed into the area's surface drainage system pursuant to applicable regulations. The increased runoff from the reservation would be detained on-site via an on-site detention facility. The facility would assure that post project flows are equal to pre-project conditions. Therefore, a less than significant impact off-reservation would occur. Construction and operational waste is expected to be transferred to the Otay Landfill (located in the City of Chula Vista) or the Sycamore Sanitary Landfill located in the City of San Diego. Both landfills are expected to have adequate capacity to address the disposal needs of the gaming project. Quantities of material to be shipped and capacity of target landfills will be addressed within Section 4.12 Public Services.

XVIX. Mandatory Findings of Significance

Would the project	Potentially Significant	Less than	No Impact	
	Impact	Significant	-	
a) Does the project have the potential to degrade the quality of the environment,		-		
substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife				
population to drop below self-sustaining levels, threaten to eliminate a plant or				
animal community, reduce the number or restrict the range of a rare or endangered				
plant or animal or eliminate important examples of the major periods of California				
history or prehistory?				
b) Does the project have impacts that are individually limited, but cumulatively				
considerable? ("Cumulatively considerable" means that the incremental effects of a				
project are considerable when viewed in connection with the effects of past				
projects, the effects of other current projects, and the effects of probable future				
projects)?				
c) Does the project have effects which will cause substantial adverse effects on				
human beings, either directly or indirectly?				
Discussion:				
Sections 4.7 Biology and 4.8 Cultural Resources address the potential impacts on b	iological and cultural reso	ources resulting fro	m the proposed gaming project.	
Without mitigation, the project has the potential to result in significant impacts to these areas. When considering cumulative growth, various cumulative issues				
arise such as air quality, transportation/circulation, biological resources, public services, etc. The potentially significant impacts associated with cumulative				
growth for these, and other topics, are addressed in Section 4.14 Cumulative Effects. Research has been conducted nationally on the social costs associated with				

growth for these, and gambling.



LAND USE

4.2 LAND USE

4.2.1 ENVIRONMENTAL SETTING

Regional Setting

The project site is located in the southwestern portion of San Diego County, which is the southwestern most county in California. San Diego County is the second largest county by area in the state at 4,425 square miles, and is home to approximately 3.05 million people and contains 1.14 million housing units within the incorporated and unincorporated areas. The County extends from the Mexican border in the south, to Orange/Riverside Counties on the north, and Imperial County on the east. The Pacific Ocean forms the western boundary of the County. The population in San Diego County, which grew 10 percent from 2000 to 2010, accounts for approximately 8.26 percent of California's 37 million population.

The County consists of eighteen incorporated cities and numerous unincorporated communities. The metropolitan area of the City of San Diego is the largest in the County, followed by Chula Vista, Oceanside and Escondido, respectively. Approximately fifty-five percent of County lands are held in the public trust as national forests and state, county or local parks. Jamul is an unincorporated community within San Diego County measuring approximately 16.8 square miles. There are eighteen federally recognized Native American reservations within the County, covering 125,000 acres (County of San Diego, 2011). The Jamul Reservation, measuring approximately 6 acres in size, is the only Indian reservation within the unincorporated Jamul Community.

Jamul/Dulzura Subregion Setting

The Jamul/Dulzura Subregion of San Diego County encompasses approximately 168 square miles extending southward to the U.S./Mexico border (**Figure 4.2-1**). Land within the Jamul/Dulzura Subregion is characterized by rolling hills with flat, broad valleys. The Subregion is home to approximately 10,159 people and 3,231 housing units. There are several unincorporated communities within the Jamul/Dulzura Subregion including Jamul, Steel Canyon, Dulzura and Barrett Junction. Jamul, located in the northwestern portion of the Jamul/Dulzura Subregion, is the largest of these communities and houses a majority of the Subregion's population. State Route 94, which traverses the Subregion in an northwest to southeast direction, provides regional access to the area. The northwest section of this Subregion has recently felt residential growth pressures according to the San Diego County Jamul/Dulzura Subregional Plan adopted in August 2011 (County of San Diego, 2011a). As of January 1, 2010, there were 3,231 housing units divided between single family (3,010 units), multi-family units (125 units), and mobile/other homes (96 units) within the Jamul/Dulzura Subregional planning area. Commercial development, consisting primarily of strip commercial, is generally confined to the community of Jamul, with the exception of small, dispersed



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Figure 4.2-1 Jamul/Dulzura Subregional Plan Map sites along SR 94. Agricultureal uses occur in small, scattered areas and include dry land farming, grazing, and some row crops.

Project Area Setting

The unincorporated community of Jamul (census designated place) covers a land area of 16.56 square miles and, as of 2010, was home to 6,163 people. The population growth from 2000 to 2010 equaled a 4% growth rate, while the State of California experienced a 10% growth rate during the same period. As of 2010, the Jamul community contained 1,974 housing units with a median value of \$706,000 (U.S. Census, 2012). The U.S. Census estimates that Jamul has a population density of approximately 3.04 people per household.

Land uses surrounding the Jamul Reservation are largely rural and semi-rural in nature. State Route (SR) 94, which provides access to and from the area, is a two-lane undivided highway lined with fence and utility posts. The town of Jamul is a predominately residential area with commercial development along SR 94. The most substantial commercial business is Simpson's nursery located 0.5 mile northwest on SR 94 at the corner of Jefferson Road/Proctor Valley Road. Other commercial development at this intersection includes the Jamul Shopping Village, an ARCO gas station, and Jamul Liquor. Land uses between the town center and the Reservation consist of scattered housing, open space and small businesses.

Within the vicinity of the Reservation, existing land uses consist primarily of rural residences and open space. The natural terrain consists of sparsely vegetated rocky hillsides with open tree-lined drainages, and is interrupted by vegetated residential lots. The San Diego Rural Fire Protection District (SDRFD) has recently <u>occupied-opened</u> a new <u>fire</u> station on Peaceful Valley Ranch Road. A SDRFD station that was formerly located on the 4-acre triangular parcel owned by the Tribe (located immediately north of the Reservation), has been removed and only the concrete pads remain. The triangular parcel is currently vacant, with building slabs, pavement, and a paved driveway ("Daisy Drive") that serves the Reservation.

To the south of the Indian Village and south/west of SR 94 is the Rancho Jamul Ecological Reserve, (approximately 4,800 acres), which were transferred to the California Department of Fish and Game (CDF<u>W</u>G) for preservation purposes. To the north/east of the Ecological Reserve is the Hollenbeck Canyon Wildlife Area. Both the Ecological Reserve and the Wildlife Area are owned by the State of California and managed by CDF<u>W</u>G for conservation purposes. Rancho Jamul Estates, a low-density residential development, is located approximately 0.7 miles southeast of Reservation Road. Rural residences are located in the hilly terrain in the vicinity. Residential lots are large, ranging from just under one acre to over ten acres.

Northeast of the Reservation across SR 94 is Peaceful Valley Ranch, which was approved by the County Board of Supervisors in 2008. State Route 94 forms the western boundary of Peaceful Valley

Ranch, while Melody Road forms a portion of the northern boundary. A portion of Daley Ranch forms the southern boundary and a mixture of private properties form the eastern boundary. The major subdivision approval of 181+/- acres created 57 estate residential, equestrian, open space, and public fire service lots within the Jamul-Dulzura Subregional Plan. The County General Plan redesignations and rezone allowed for increased residential densities on the residential portion of the land, while also allowing for a Major Use Special Permit for spectator events at the private equestrian/polo training facility. Primary access to Peaceful Valley Ranch is via SR 94 and Peaceful Valley Ranch Road.

The trend of land use development/growth over the last two decades within the Jamul/Dulzura Subregion has been characterized by residential development and associated commercial growth. San Diego County estimated in 1995 that the Jamul/Dulzura Subregion planning area had a population of 5,000 people. This estimate was at 9,915 people in 2008, and 10,159 in 2009. The County of San Diego estimates the buildout potential of the Jamul/Dulzura Subregion to be at approximately 16,000.

Partly as a result of this growth, the County has increased efforts to preserve habitat for endangered species and other natural resources. The Land Use Map for the Jamul/Dulzura planning area issued by the County in 2008 showed a shift in land use designations in the region east of the project site from General Agriculture and Multiple Rural Use to Open Space and Rural Lands. Population growth is expected to center primarily in the Jamul area, west and north of the project area. The County adopted the revised Jamul/Dulzura land use plan in August 2011.

Project Site

The existing Jamul Reservation is located on approximately 6 acres of Tribal trust land in the Jamul/Dulzura Subregion approximately 1-mile south of the unincorporated community of Jamul. Regional access to the Reservation is provided off SR 94. The Reservation is currently vacant with the exception of an office trailer and the current development of a 3,000 square foot community center on the western portion of the Reservation. The homes and buildings that had been located on the Indian Village have been removed.

The topography of the Reservation consists of gentle hills with rock and rock outcrop features. Willow Creek crosses the property in a north-south direction and has light stream flow much of the year. Access to the Reservation is from either Daisy Drive on the adjacent 4-acre triangular parcel, or Reservation Road located south of the old fire station driveway.

Guidance Documents

The project site is within the boundaries of the Reservation. Land use on the Reservation is regulated and guided by the Tribal Council, the governing body of the Tribal Government. Adjacent land uses are regulated by either Caltrans (SR 94), CDF<u>WG</u> (Rancho Jamul Ecological Reserve to the south) or

the-San Diego County. Land use development on adjacent County land is guided by the recently updated and adopted County General Plan and Jamul/Dulzura Subregional Plan, which were both updated and adopted in August 2011. The various land use plans and programs guiding off-reservation land uses are summarized below:

San Diego County General Plan Update

The County Board of Supervisors voted on August 3, 2011 to approve the County General Plan Update, which represents the first large scale update of the General Plan in approximately 30 years. The General Plan Update directs future growth in the unincorporated areas of the County with a projected capacity to accommodate more than 232,300 homes (County of San Diego, 2011a). The recently adopted document reduces housing capacity by 15 percent and shifts 20 percent of future growth from the eastern backcountry areas to the western communities. The elements of the General Plan Update include the following:

- Vision and Guiding Principles,
- Land Use Element,
- Mobility Element,
- Conservation and Open Space Element,
- Housing Element,
- Safety
- Noise Element, and
- Implementation

The Land Use element designates the general location and intensity of housing, business, industry, open space, education, public buildings and grounds, waste disposal facilities and other land uses. This element of the General Plan Update states that Community Plans, such as the Jamul/Dulzura Subregional Plan (at times referred to as a "Community" Plan), define goals and policies to provide more precise guidance regarding the character, land uses, and densities. Given that goals and policies of the Jamul/Dulzura Subregional Plan provide more precise guidance than the General Plan, the discussion of Land Use goals and objectives will be provided below within the Jamul/Dulzura discussion.

The "Other Land Use Designations" section of the County's Land Use Element states "(s)even additional land use designations are applied in the General Plan to recognize other existing land use types and jurisdictions." One of these categories is "Tribal Lands", which comprise about 125,000

acres, or 5%, of the unincorporated County on 18 federally recognized reservations or Indian Villages.

Jamul/Dulzura Subregional Plan

The Jamul/Dulzurra Subregional Plan was initially adopted in 1979 to guide development in the unincorporated areas of Jamul and other rural communities in the region, including Steel Canyon, Dulzurra, and Barrett Junction. The Subregional Plan was most recently amended in August 2011, and continues to have the goal of encouraging development in a manner as to retain the rural atmosphere of the community. The updated Jamul/Dulzura Subregional Plan contains six main sections and an appendix identifying Resource Conservation Areas. The main sections to the Subregional Plan address land use, mobility, recreation, conservation, scenic highway and plan implementation.

Land use designations in the project vicinity include General Agriculture, Estate Residential, and Residential with a density of 1 du per 1 to 4 acres. The recently adopted Land Use Map for the Jamul/Dulzura planning area shows a shift in land use designations in the project area. Areas in the southern portion of the project area, now designated General Agriculture, are converted to Open Space (conservation), consistent with the creation of the Rancho Jamul Ecological Reserve and the Hollenbeck Canyon Wildlife Area. Other area designations shifted slightly with areas of Multiple Rural Use converted to Semi-Rural Residential, and Residential areas were converted to Semi-rural Residential.

The Jamul/Dulzura goals include the following:

Land Use:

Goal: Development of the land in such a manner as to retain the rural densities and land uses of the community.

Goal: Agricultural land uses, which are compatible with limited water resources and established residential development.

Mobility:

Goal: Develop a transportation system that provides for safe, efficient travel throughout this rural community and preserves the beauty, quality, and rural character of the Jamul/Dulzura Subregional Planning area.

Goal: Automobile and non motorized modes of travel is accommodated within the planning area.

Goal: A local road system that is safe and efficient.

Recreation:

Goal: Support the establishment of improved recreational facilities in the Jamul/Dulzura Planning Area that will meet the distinctive needs of the community and enrich the lives of the residents.

Conservation:

Goal: Environmental resources in the Jamul/Dulzura area that are carefully managed to maintain them for future needs.

Scenic Highways:

Goal: The designation of a scenic highway system that provides attractive and scenic travel routes within the Jamul/Dulzura Subregional Area.

4.2.2 ENVIRONMENTAL CONSEQUENCES

Significance Criteria

The discussion in this section differs from other sections in this Tribal EE in that consistencies and inconsistencies with adopted local land use plans are addressed as opposed to environmental effects. As shown in **Table 4.1-1**, all land use impacts would be less than significant except for potential conflict with the Multi-Species Conservation Plan, which is addressed in Section 4.7. Physical environmental impacts of the Proposed Project and Alternatives are discussed in the other topical sections of the Tribal EE such as Section 4.7 Biological Resources. Therefore, a finding of inconsistency with an adopted plan does not necessarily result in a significant physical environmental impact.

Impact 4.2(1): Consistency with Adopted Plans

Proposed Project

Development under the Proposed Project would include a <u>228,000_203,000</u> square foot gaming complex on the existing Jamul Reservation. Although being identified within the County's Jamul/Dulzura Land Use jurisdiction (Jamul/Dulzura Subregional Plan Land Use Map), County regulations would not apply to land development on the Jamul Reservation given the federally recognized sovereign status of the Tribe. The entirety of the gaming complex would be constructed on the Reservation and, as such, would not conflict with current or future land use plans on adjacent County land. Development of the gaming complex on the Reservation is not subject to the Resource Protection Ordinance, Habitat Loss Permit/Coastal Sage Scrub Ordinance, Grading and Clearing Ordinance, Biological Mitigation Ordinance, or Multiple Species Conservation Program.

The Jamul Dulzura Subregional Plan states that Highway 94 and Jefferson is the centralized area for commercial development. According to the Plan, other commercial uses outside of this area should be neighborhood serving in nature. The development of the proposed gaming complex on the Reservation would be regional in nature, which would not be consistent with the County's Subregional Plan for Jamul Dulzura if the Reservation were under County land use authority, which it is not. While being included within the Jamul Dulzura Subregional Plan Map, the County applies the "Tribal Lands" designation to the Reservation. The recently updated and adopted Jamul Dulzura Subregional Plan does not include either goals or policies for the "Tribal Lands" designation, which is understandable given the County's lack of land use authority over the Reservation.

The Subregional Plan does contain Policy 7, which states that commercial development should retain the rural character of the Subregion, be limited to two stories in height, have permanent exterior signs limited to 32 square feet with only indirect lighting, and have the site plan be reviewed by the County. The proposed gaming development includes a steeped gaming/parking building consisting of one, two and three levels of gaming over four eight levels of parking and a <u>surface parking lot 10 level parking structures</u> on the Reservation. The Tribe may elect at some future date to allow the County to review the gaming plans; however, there is no land use requirement for this action given that all development would be located on the Reservation.

Policy 8 of the Subregional Plan states that commercial development should be discouraged outside the designated Village Boundary areas and should only be approved in the rural areas if (1) the circulation and access needs can be met adequately, (2) would not cause an adverse impact on neighborhood properties, and (3) site plan review and appropriate landscaping would be required. The Reservation is not within the Rural Village boundary, nor is it within the jurisdiction of San Diego County. As such, development on the Reservation would not be subject to this policy. However, the Tribe is currently working with Caltrans to ensure that circulation and access needs can be adequately met. In addition, this Tribal EE presents the environmental consequences associated with the construction and operation of the gaming facility. The County does not define what would cause an adverse impact "…on neighborhood properties"; however, per the analysis in the Aesthetics, Noise, and Air Quality Sections, the Proposed Project would not result in an adverse impact to residential uses. With regards to site review, while there is no requirement for this action, the Tribe may elect to request that the County do so.

The recent adoption of the Updated Jamul/Dulzura Subregional Plan followed years of discussion within the Jamul community regarding the Tribe's plan for an on-Reservation gaming facility. Therefore, it can be concluded that the County and the Jamul Dulzura community were aware of the Tribe's plans for the Reservation in adopting the Jamul Dulzura Subregional Plan update. Due to this knowledge, <u>and the fact that development on the Reservation is not subject to the County's Land Use</u> regulations, the Proposed Project would not result in significant environmental impacts due to any resulting conflicts with these policies.

The County's Subregional Plan contains mobility goals that seek to ensure a safe and efficient roadway system. The Tribe is currently working with Caltrans to identify those improvements to SR 94 that will ensure safe and efficient access to and from the Jamul Reservation. The various access improvements identified in the mitigation discussion of Section 4.9 Transportation, will be designed to Caltrans standards and would, thus, provide for safe and efficient movement of people.

The Subregional Plan states that SR 94 is a scenic highway corridor as designated by the County General Plan Conservation and Open Space Element. The County's General Plan Updates states that two County routes have been designated State Scenic Highways, a segment of SR 78 and SR 125. The segment of SR 94 that travels past the Reservation is a designated County Scenic Highway, but has not achieved State Designated Scenic Highway status. The County has adopted Policy COS-11.3, which states:

Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following:

- Creative site planning
- Integration of natural features into the project
- Appropriate scale, materials, and design to complement the surrounding natural landscape
- Minimal disturbance to topography
- Clustering of development so as to preserve a balance of open space vistas, natural features, and community character
- Creation of contiguous open space networks

Although not subject to County land use regulations, the Tribe has designed its proposed facility to step up in height from east to west moving away from SR 94, the single story portion of the proposed buildings located approximately 400 feet west of SR 94 and the three story portion starting approximately 650 feet west of SR 94. In addition, the proposed facility includes the use of a "green roof" that will soften the appearance of the proposed gaming facility to SR 94 travelers. The original proposal (2003 version) for the gaming complex included the 6-acre Reservation and the adjacent $80\underline{7}$ +/- acres of land. This proposal has been modified to include just the 6-acre Reservation. In addition, the previously proposed (2006 version) version of the facility included a 300-room hotel located near SR 94. This hotel component has been eliminated from consideration, thereby, reducing the impact to the SR 94 corridor. As the years have gone by, the Tribe has altered its development to confine the facilities to 6 acres from the originally proposed 100+/- acres. The clustering and confinement of the current development proposal to 6% +/- of the original land proposal leaves adjacent lands undeveloped.

County Policy COS-11.4 states that the County will coordinate with adjacent "…tribal governments to protect scenic resources and corridors that extend beyond the County's land use authority, but are important to the welfare of County residents." The public review of this Draft Tribal EE will afford the County the opportunity to comment on the Tribe's proposed plan as it relates to the SR 94 County designated scenic corridor.

The fact that the existing 6+/- acre Reservation is the Tribe's only land base is a limiting factor for the Tribe when it comes to land development. The Tribe cannot build this, or any other facility, on any site outside their Reservation and exert their federally recognized tribal sovereignty over that development and land. The Tribe has no other land in federal trust.

The Proposed Project would not result in significant County land use consistency conflicts given that the proposed development on the Reservation is not subject to County Land Use plans or policies, as well as the fact that County's recently updated Jamul Dulzura Subregional Plan is assumed to have considered the potential for gaming on the Jamul Reservation.

Alternative 1

Development under Alternative 1 would include a 119,500 square foot gaming complex located on the Reservation. The Land Use consistency issues associated with Alternative 1 would be the same as identified for the Proposed Project. The gaming complex would be located on the Reservation and, as such, is not subject to County land use regulations. Additionally, Alternative 1 would not preclude existing or planned land uses or disrupt access on adjacent lands regulated by the County or State. No significant land use consistency issues would occur under Alternative 1.

Alternative 2

Development under Alternative 2 would include a 17,500 square foot gaming facility located on the Reservation. While not being subject to local land use authority, Alternative 2 would nonetheless be more consistent with County policies as stated in the Jamul Dulzura Subregional Plan. The height of the gaming facility would be consistent with the stated policy to have commercial facilities no taller than 2-levels. In addition, the height of the facility would be more consistent with the policies related to scenic corridor preservation. As is the case with the Proposed Project and Alternative 1, the Tribe would also coordinate with Caltrans under Alternative 2 to ensure a safe and efficient transportation and access system. Additionally, Alternative 2 would not preclude existing or planned land uses or disrupt access on adjacent lands regulated by the County or State. No significant land use consistency issues would occur under Alternative 2.

No Action Alternative

The No Action Alternative would not result in the development of a gaming complex on the Reservation. The Tribe would has completed the development of the 3,000 square foot community center and would retain the use of the mobile office currently being used on the Reservation. As is the case with the Proposed Project, Alternative 1 and 2, the No Action Alternative is not subject to County land use regulations nor would it preclude existing or planned land uses or disrupt access on adjacent lands regulated by the County or State. No significant land use consistency issues would occur under the No Action Alternative.

Impact 4.2(2): On-Reservation Land Use Effects

Proposed Project

Development under the Proposed Project would include a 203,000 square foot gaming complex on the existing Jamul Reservation, which contains a recently completed 3,000 square foot Tribal community center. The existing community center would remain on the western portion of the Reservation and unaffected by the proposed development as it would be separated from the proposed surface parking lot by a new access road that would serve the parking lot, community center and church. Tribal regulations require that any gaming related facility undergo tribal environmental review, which is currently being undertaken with the publication and processing of this Tribal EE. There is no adopted Tribal land use plans/zoning ordinance for the Reservation, therefore, the proposed gaming facility would not create an inconsistency with on-Reservation Tribal land use plans.

<u>Alternative 1</u>

Development under Alternative 1 would include a 119,000 square foot gaming facility located on the Reservation. As is the case with the Proposed Project, the public disclosure of potential environmental effects associated with the construction and operation of Alternative 1 is being processed consistent with adopted Tribal Ordinance. Alternative 1 would not create an inconsistency with on-Reservation Tribal land use plans given that there is no adopted Tribal land use plans/zoning ordinance for the Reservation.

<u>Alternative 2</u>

Development under Alternative 2 would include a 17,500 square foot gaming facility located on the Reservation. As is the case with the Proposed Project, the public disclosure of potential environmental effects associated with the construction and operation of Alternative 2 is being processed consistent with adopted Tribal Ordinance. Alternative 2 would not create an inconsistency with on-Reservation Tribal land use plans given that there is no adopted Tribal land use plans/zoning ordinance for the Reservation.

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No Action Alternative

The No Action Alternative would not result in the development of a gaming complex on the Reservation. The Tribe has completed the development of the 3,000 square foot community center and would retain the use of the mobile office currently being used on the Reservation. No significant land use consistency issues would occur under the No Action Alternative.

4.2.3 MITIGATION

Mitigation 4.2(1): Consistency with Adopted Plans

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.2(2): On Reservation Land Use Effects

Proposed Project

No mitigation is necessary.

<u>Alternative 1</u>

No mitigation is necessary.

<u>Alternative 2</u>

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

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AESTHETICS

4.3 **AESTHETICS**

4.3.1 ENVIRONMENTAL SETTING

Regional Context

The project site is located in southwestern San Diego County approximately 15 miles east of the center of the City of San Diego, and approximately one mile south of the community of Jamul. The project lies on moderately steep slopes in the Jamul Mountains, which surround the site on all sides. State Route (SR) 94 transects the region on its course between Interstate 5 in the City of San Diego, and Interstate 8 near the community of Manzanita in eastern San Diego County. SR 94 passes through a number of distinct viewsheds, separated from each other by the mountainous topography of the region.

Project Area Viewshed

The project area is located in a rural area of San Diego County at the southeastern edge of the unincorporated community of Jamul. Within the vicinity of the project site, SR 94 is a two-lane undivided highway lined with fence posts and utility posts. Natural terrain consists of sparsely vegetated rocky hillsides with tree-lined drainages, interrupted by vegetated rural residential lots. Due to rolling terrain and curves within the project area, views along SR 94 range from distant views of hills with a mountainous backdrop to views with lines of sight obscured by hillsides and vegetation.

The visual character of the viewshed is mainly influenced by topography and surrounding land uses that shape local viewing corridors to and from the Reservation. The topography of the project area generally ranges from approximately 870 feet to 960 feet above mean sea level. For the purpose of this analysis, the maximum current elevation is used to generalize the Reservation's range of visibility. The project area slopes downward from the east and west towards the intermittent drainage that transects the Reservation. Surrounding land uses are largely rural and semi-rural in nature. Undeveloped lands immediately surround the project site. Approximately one mile north of the Reservation is the town of Jamul. Land uses between the town center and the Reservation consist of scattered housing and small businesses. Peaceful Valley Ranch is a 57 lot residential development located northeast of the Reservation, which was approved by the County in 2008. Rancho Jamul Estates, a low-density residential development, is located 0.7 miles southeast of Reservation Road.

The project area viewshed is comprised of three viewing corridors, or *vistas*. Each of these vistas provides a line-of-sight that can be characterized uniquely from among the other vistas. **Vista A** is the line-of-sight corridor between the residences north and east of the site and the project site to the south. As such, it is classified a *residential vista*. **Vista B** is the line-of-sight between the project site

and the portion of Melody Road north of the project site, extending approximately 1,000 feet west and 1,000 feet east of SR-94. Vista B is classified as a *Melody Road commuter vista*. **Vista C** is a commuter vista that includes a portion of SR-94 and a portion of Peaceful Valley Ranch Road, just east of the project site.

The portion of SR-94 within the Vista C is a segment approximately 2,000 feet long, beginning on its north end approximately 500 feet north of Melody Road and ending approximately 300 feet south of Peaceful Valley Road. The portion of Peaceful Valley Road within Vista C extends approximately 500 feet east of SR-94. No roads or residences occur within view south of the project site; therefore, nothing south of the project site is considered for analysis in this viewshed. Topography is the most influential characteristic of the regional viewshed, and its role in delineating the vistas introduced here is explained in detailed discussion of each vista, below.

Vista A – Residential Vista

Vista A is a residential vista, experienced by residents to the north and east of the project site. The view from the residences is generally framed by near and distant topography, with sage scrub dominating the view until the vegetation transitions into a band of live oak along the margins of the drainage that bisects the project site. The topography on and off site offers a sustained, variable partial view of the project site to approximately 12 residences within this vista. Viewers are all topographically up-grade of the project site, and removed from the project site by approximately 1,400 feet to approximately 2,600 feet northwest of the site, by approximately 1,200 to 2,000 feet northeast of the site, and by approximately 1,800 feet east of the project site.

Vista B – Melody Road Commuter Vista

Vista B is a commuter vista generally providing access between SR-94 and the residential areas to the east and to the west of SR 94. On westbound Melody Road, the view to the project site begins at the origin of the Road itself, approximately 1,000 feet east of SR-94. Development along this portion of Melody Road is sparse, and westbound vehicular use is correspondingly limited. The western portion of the project site appears downgrade and to the left, approximately 2,100 feet distant and against a backdrop comprised mainly of mountains. The general view is framed by rural and semi-rural land uses and sage scrub chaparral. A more complete view of the project site occurs as the commuter progresses westward. Approximately 250 feet east of SR-94, the project site is directly to the left of the commuter 's left flank. Turning either left or right onto SR-94 removes the commuter from this vista. The SR-94 commuter vista is described below. Though the duration of the Vista B view is reliant upon traffic conditions, a westbound commuter traveling within this vista at 30

miles per hour (MPH) would experience the view to the project site for approximately half a minute.

On eastbound Melody Road, the view to the project site begins approximately 1,000 feet west of SR-94. Residential development is more intensive along this portion of Melody Road than on the westbound portion east of SR-94, which offers a commuter view to local residents outside of the residential vista described above. The eastern portion of the project site appears downgrade and to the right, approximately 2,500 feet in distance, and against a backdrop that includes mountainous terrain and SR-94 as it undulates in and out of view in its intercourse with the foreground topography. The view to the project site becomes more complete as the commuter progresses east, until it is directly to the right, approximately 1,200 feet removed when the commuter is approximately 250 feet east of SR-94. Progressing eastward on Melody Road, the project site is removed from forward-oriented view at the commuter's right flank. Turning either left or right onto SR-94 removes the commuter from this vista, as described above, as the commuter enters the SR-94 commuter vista. Though the duration of this view is reliant upon traffic conditions, an eastbound commuter traveling within this vista would experience the view to the project site for approximately half a minute.

Vista C – SR-94 Commuter Vista

Vista C is a commuter vista, oriented to the eastern side of the project site along a portion of SR-94 approximately 2,000 feet long. The vista segment extends from just east of the project site, to approximately 500 feet north of Melody Road, and includes approximately 500 feet along Peaceful Valley Road from its connection with SR-94. There is significantly more local development along SR-94 north of the project site than south of the project site, although a residential community served by Rancho Jamul Drive, adjoining SR-94 approximately 0.7 miles south of the project site, would also be a source of passing residential traffic. The southbound route of SR-94 also provides access to the U.S.-Mexico border at Tecate, Mexico. It is therefore anticipated that a moderate flow of commercial traffic passing the project site would be more prevalent than for residential commuters except at AM and PM peak hours. Residential commuters are anticipated to mostly commute to and from the metropolitan San Diego area.

Southbound SR-94 commuters enter the vista approximately 500 feet north of Melody Road, with the project site appearing directly forward, downgrade and approximately 1,900 feet distant. After crossing Melody Road, SR-94 curves approximately 40 degrees to the left, thereafter winding slightly to the right in its intercourse with the hilly terrain. The project site is at the commuter's right quarter for this segment, which continues for approximately 1,000 feet, where SR-94 curves to the left approximately 10 degrees on a downgrade, placing the

project site from 400 feet to 250 feet away, directly to the right, for a distance of approximately 850 feet until the project site disappears from view behind the local terrain. While the duration of visibility is reliant upon traffic conditions in a commuter vista, a commuter traveling through this vista at 60 MPH would experience this view for approximately 30 seconds.

The northbound view presents the project site as it emerges from behind the terrain and into view directly on the left hand side at approximately 250 feet of distance, flanked by live oak and sage scrub chaparral against a mountain backdrop. Continuing northbound within the vista, the point of view is elevated due to the localized vertical curvature of SR-94, and the view to the left opens up to emphasize the mountainous backdrop, as the foreground appears to descend from view. SR-94 enters a gradual curve to the left here, and as a result the project site remains directly to the left for approximately 850 feet, until SR-94 curves to the right approximately 10 degrees, and the project site is removed from forward-oriented view at the commuter's left flank. While the duration of visibility is reliant upon traffic conditions, a northbound SR-94 commuter traveling at 60 MPH experiences this view for approximately 16 seconds.

Peaceful Valley Road adjoins SR-94 directly north of the project site, providing SR-94 access to approximately 4 households. Westbound commuters enter the vista approximately 500 feet east of SR-94 after passing occluding terrain features. Upon reaching the intersection with SR-94, the project site appears directly forward at similar elevation, and approximately 400 feet distant. It is partially occluded by terrain, with mountains in the background and SR-94 directly in the foreground. The project sight disappears from view at the commuter's left flank after turning right onto SR-94 and progressing for approximately 350 feet. For left-turning commuters, the project site comes directly to a right side view, and remains in view for approximately 500 feet before disappearing behind local terrain features. While duration of visibility is reliant upon traffic conditions, deceleration and stopping time, the cumulative duration of visibility for right-turning commuters from Peaceful Valley Road is expected to be approximately 30 seconds, while left-turning commuters may experience visibility for approximately 35 seconds.

Regulatory Setting

Land use on the Reservation is regulated and guided by the Tribal Council, the governing body of the Tribal Government. Land use planning for land adjacent to the Reservation is guided by the County of San Diego General Plan Update and the Jamul-Dulzura Subregional Plan (Subregional Plan), a part of the San Diego County General Plan Update. The General Plan contains a Visual Resources section that addresses landscape/setting, scenic corridors, and astronomical dark skies. The Jamul/Dulzura Subregional Plan contains conservation, scenic highway and resource conservation chapters that
address aesthetics and visual quality. Although the Tribe is not regulated by County policies, updated goals/policies from the County are presented below for informational purposes.

County of San Diego General Plan Update

The Conservation and Open Space Element (COSE) of the County's General Plan Update contains goals and policies related to landscape/setting, scenic corridors, and astronomical dark skies. The General Plan points out that the County has three distinctive geographic regions, listed from west to east: (1) low-lying coastal plain, (2) mountainous peninsular range, and (3) desert salton (Imperial) basin. The General Plan states that the diversity of these regions provides the residents/visitors with an array of natural vistas and scenic environments that provide a unique collection from the ocean to the desert.

The COSE addresses two aspects of scenic highways within the scenic corridor discussion: (1) County designated and (2) State designated. For County designated segments, the General Plan Update states that "A "scenic highway" can pertain to any freeway, highway, road or other vehicular right-of-way along a corridor with considerable or otherwise scenic landscape". For State Scenic Highways, highways that are officially designated as scenic or eligible for designation are considered "State Scenic Highways" by the County. SR 94 is not designated as a State Designated Scenic Highway. State Route 94 from Interstate 8 to SR 125, inclusive of the segment traveling past the Reservation, is designated as a County Scenic Highway.

The astronomical dark sky discussion lists two sites within the County that meet five criteria for highquality observatory locations: (1) Palomar and (2) Mount Laguna Observatories. Palomar Observatory is located 5,500 feet at the top of Palomar Mountain approximately 76.2 miles from the Reservation in northern San Diego County near Palomar Mountain State Park. The Mount Laguna Observatory is located at an altitude of 6,100 feet on the eastern edge of the Cleveland National Forest approximately 38.7 miles from the Reservation near the Anza-Borrego State Park, 45 miles east of downtown San Diego.

The County of San Diego General Plan Update goals and policies include the following:

Preservation of Scenic Resources:

Goal COS-1: Preservation of scenic resources, including vistas of important natural and unique features, where visual impacts of development are minimized.

Policy COS 11.1: Require the protection of scenic highways, corridors, regionally significant vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.

Policy COS 11.2: Promote the connection of regionally significant natural features, designated historic landmarks, and points of regional historic, visual, and cultural interest via designated scenic corridors, such as scenic highways and regional trails.

Policy COS 11.3: Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following: (a) creative site planning, (b) integration of natural features into the project, (c) appropriate scale, materials, and design to complement the surrounding natural landscape, and (d) minimal disturbance of topography.

Dark Skies:

Goal COS-13: Preserved dark skies that contribute to rural character and are necessary for the local observatories.

Policy COS 13.1: Restrict outdoor light and glare from development projects in Semi-Rural and Rural Lands and designated rural communities to retain the quality of night skies by minimizing light pollution.

Policy COS 13.2: Minimize, to the maximum extent feasible, the impact of development on the dark skies surrounding Palomar and Mount Laguna observatories to maintain dark skies which are vital to these two world-class observatories by restricting exterior light sources within the impact areas of the observatories.

Policy COS 13.3: Coordinate with adjacent federal and State agencies, local jurisdictions, and tribal governments to retain the quality of night skies by minimizing light pollution.

Jamul/Dulzura Subregional Plan Update

The County recently updated the Subregional Plan in August 2011 as part of their General Plan Update process. The policies within the conservation and scenic highway chapter selectively amend and/or carry out the policies for the Visual Resources section of the Conservation and Open Space Element of the General Plan for the Jamul/Dulzura Subregion.

The following aesthetic Goals/Policies were adopted as part of this update process:

Mobility:

Goal 1: Develop a transportation system that provides for safe, efficient travel throughout this rural community and preserves the beauty, quality, and rural character of the Jamul/Dulzura Subregional Planning area.

Policy 1: Road design within the community shall be compatible with topography and landscape and minimize grading. All road improvements shall be designed to maximize environmental and aesthetic considerations.

Policy 2: ...provide for the replacement of all healthy, mature trees lost during highway maintenance...

Policy 5: In order to keep the rural character of the community, it is important to retain the dark skies. Therefore, street lighting should be of the type as to reflect downward only. Such lighting, when required, should be located at street intersections, end of cul-de-sacs, and other locations as necessary for safety only.

Conservation:

Goal 5: Environmental resources in the Jamul/Dulzura area that are carefully managed to maintain them for future needs.

Policy 1: Require the preservation of diverse, viable natural habitats, and aesthetic resources, such as scenic rock outcroppings, ridge tops, and mountain peaks.

Policy 6: Standards should be developed for control over light pollution to preserve the dark sky characteristics of Jamul/Dulzura Subregion.

Scenic Highways:

Goal 6: The designation of a scenic highway system that provides attractive and scenic travel routes within the Jamul/Dulzura Subregional Area.

Policy 1: The scenic highway corridors in the Jamul/Dulzura Subregional Area designated in the County General Plan Conservation and Open Space Element include: State Route 94, Lyons Valley Road, Skyline Truck Trail, Proctor Valley Road, Honey Springs, and Otay Lakes. In addition to these scenic highway corridors, Lawson Valley Road is a scenic corridor that is also important to the community.

Policy 2: The route identified above, and those identified in the Conservation and Open Space Element, should be protected by the application of a "S" Scenic designator.

Appendix A of the Jamul/Dulzura Subregional Plan identifies Resource Conservation Areas "requiring special attention to conserve resources in a manner best satisfying public and private objectives". Appropriate implementation actions identified by the County include the establishment of such measures as scenic or natural resource preservation overlay zones. Resource conservation areas include groundwater problem areas, coastal wetlands, native wildlife habitats, construction quality sand areas, littoral sand areas, astronomical dark sky areas, unique geological formations, and significant archaeological and historical sites.

The important resource conservation areas as defined by the Jamul/Dulzura Subregional plan includes the San Miguel/Jamul Mountains located to the southwest of the project site, Indian Springs located north of the project site, and Mother Miguel located west of the project site. The San Miguel/Jamul Mountains are recognized for the large number of rare and endangered plants, Indian Springs for the Riparian and Oak woodlands representing a part of the "character of Jamul", and Mother Miguel for the outstanding Golden Eagle habitat and significant stands of the rare and endangered coast barrel cactus.

4.3.2 ENVIRONMENTAL CONSEQUENCES

Significance Criteria

Criteria used to determine if the project would have a significant visual impact include (1) substantial adverse effect on a recognized scenic vista; (2) substantially damage recognized off-reservation scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway; (3) create a new source of substantial light or glare, which would adversely affect day or nighttime views of listed historic buildings or recognized views in the area, or (4) substantially degrade the existing visual character or quality of the site and its surroundings. Inconsistencies with the County's General Plan Update and Jamul/Dulzura Subregional Plan goals/policies are assessed; however, inconsistencies are not necessarily considered significant impacts due to lack of regulatory applicability to the Jamul Reservation.

Impact 4.3(1): Visual Resources

Proposed Project

As noted above, the visual character of the project area viewshed is mainly influenced by topography and surrounding land uses that shape local viewing corridors to and from the project site. The view of the project site would be altered by the construction of the Proposed Project. At its highest point, the proposed structures would measure approximately 105 feet high, but would appear to be approximately 45 feet high to passing motorists on SR 94 due to varied topography on the Reservation and the adjacent grade to SR 94. Both the elevation and the massing of the proposed facilities would alter the visual prominence of the project site from the outlying areas.

Vista A – Residential Vista

Within **Vista A**, residents to the north of the project site would experience a view of the proposed structure that obscures views to a portion of SR-94 south of the project site, with limited occlusion of the mountains on the horizon. In that the view from the residences is generally framed by near and distant topography, the western portion of the facilities would be occluded by foreground topography and vegetation on the right margin of the visual aspect (**Figure 4.3-1**). For residents northwest of the project site, a portion of the proposed structure would emerge into view from behind the hilly foreground, though little to no obstruction of the mountains to the east would be expected. For the residents east of the project site, the proposed structure would emerge from behind the topography in the foreground, and would be framed by the mountains to the west, which would continue to dominate the view. Residents within this viewshed would be offered a view of some portion of the proposed structures, though the prominence of the facilities would decrease with distance, altitude of the viewer and topographical obstructions between the viewer and the proposed facilities. The general character of the area, however, would change to include a visibly commercial element to a largely rural-residential area.

The proposed facilities would be visible to residents in a manner that is subordinate to the distant landscape and does not occlude the skyline. As such, the Proposed Project is not expected to substantially degrade the existing visual character or quality of the site and its surroundings. As noted below in the County General Plan Update and Jamul/Dulzura Subregional Plan Update discussion, the Proposed project would not adversely affect a recognized scenic vista, nor would it damage recognized off-reservation scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway.



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Figure 4.3-1
Photo Simulation: Proposed Project View South from Melody Road West of SR94

The exterior of the gaming/parking facility would include downcast lighting to maintain consistency with the surrounding area. Lighting from the front of the gaming facility would be directionally pointed away from the adjacent Rancho Jamul Reserve and the building would shield light, human activity and noise effects from the reserve. Lighting in the back of the gaming facility would consist of low wattage security and safety lighting near doorways consistent with CBC requirements. Providing lighting consistent with local codes and ordinances would ensure that the Proposed Project would not create a new source of substantial light or glare. Therefore, lighting associated with the gaming facility would not adversely affect day or nighttime views of listed historic buildings or recognized views in the area.

Vista B – Melody Road Commuter Vista

The Melody Road commuter vista would generally expand to include portions of County streets, such as Proctor Valley Road and Calle Mesquite, west of SR-94. Commuters on these tributaries would experience an emerging view of the upper portion of the proposed structure nearing the approach to Melody Road. Commuters traveling eastbound toward SR-94 would observe the proposed facilities increasing in prominence, until it dominates the view southward at SR-94 (**Figure 4.3-2**). On the portion of Melody Road east of SR-94, westbound commuters would be offered a view of the upper levels of the proposed facilities to the southwest, which would emerge from behind foreground topography into a more complete view as the view until the commuter is at SR-94, at which point the proposed facilities would command the southward line of sight.

The Melody Road commuter vista would be dominated in southward views by the proposed facilities near the intersection with SR-94. However, with increased distance from SR-94 the prominence of the proposed facilities decreases in significance. Based on the criteria set forth above, the Proposed Project would not result in a significant impact to visual resources.

Vista C – SR-94 Commuter Vista

Southbound SR-94 commuters would begin to see the upper portion of the proposed structure immediately north of Melody Road, as it emerges from behind foreground topography and vegetation. Crossing Melody Road, the structure would be brought into full view until it becomes a dominant feature of the southward view. Continuing southbound as SR-94 curves to the left, the proposed facilities continue to appear to the right quarter, as they relinquish their visual dominance to the mountains to the west.



Figure 4.3-2 Photo Simulation: Proposed Project View from SR94/Melody Road Intersection The northbound view presents the top of the proposed facilities as it emerges into view from behind the foreground topography, directly forward, from approximately the intersection of SR 94 and Rancho Jamul Drive (**Figure 4.3-3**). The structure shifts gradually to the left quarter on approach, increasing in apparent size until adjacent to Campo Road, where the structure would suddenly come into full view directly left. The mountains to the west continue to dominate the vista in this perspective. Continuing north, the facilities drop back and out of forward-oriented view.

Where Peaceful Valley Road adjoins SR-94 directly north of the project site, the effects of foreshortening grant visual dominance to the proposed facilities in a southward perspective. Westbound commuters first see the upper portion of the proposed structure immediately upon joining the road, as a minor component of a southwesterly view. Continuing westbound, the structure emerges from behind foreground topography, and into clear view upon reaching the apex of a hill approximately 170 yards east of SR-94.

Southbound SR-94 commuters would begin to see the upper portion of the proposed structure immediately north of Melody Road, and it would emerge from behind residences and foreground topography to dominate the southward view from the intersection with Melody Road, occluding the view to the valley floor. The northbound SR-94 view is not dominated by the proposed facilities. Where Peaceful Valley Road adjoins SR-94 directly north of the project site, the effects of foreshortening grant visual dominance to the proposed facilities in a southward perspective.

The Proposed Project would introduce a new structure with new massing into an area dominated by rolling terrain and rural residential development where the mountains would continue to dominate views. As such, the Proposed Project is not expected to substantially degrade the existing visual character or quality of the site and its surroundings. Additionally, the Proposed Project would not adversely affect a recognized scenic vista, nor would it damage recognized off-reservation scenic resources, including trees, rock outcroppings, or historic buildings within a state scenic highway. Lastly, the Proposed Project would not create a new source of substantial light or glare, which would adversely affect day or nighttime views of listed historic buildings or recognized views in the area. Therefore, the Proposed Project would not result in a significant impact to visual resources even though it would result in a new urban structure in the Jamul area.



County General Plan Update and Jamul/Dulzura Subregional Plan Update

The County General Plan and Jamul/Dulzura Subregional Plan both address the preservation of scenic highways and dark skies in their respective Updates, which were approved in August 2011. As noted previously, SR 94 is not designated a State Scenic Highway; however, it is designated as a County Scenic Highway. The importance of this designation is that County policies exist to protect the scenic corridors, regionally significant vistas, and natural features along these corridors. Where a proposed County project would potentially impact these resources, the County would require the proposed development to minimize visual impacts and preserve unique or special features by various methods including site design, downcast lighting, etc. The Jamul/Dulzura Subregional Plan identifies resource conservation areas within the plan area requiring special attention. Two of three areas closest to the Jamul Reservation are listed due to their on-site features (San Miguel/Jamul Mountains and Mother Miguel) and Indian Springs is noted for its aesthetic value. The rare and endangered species/habitats located on both the San Miguel/Jamul Mountains and Mother Miguel sites would not be impacted by the Proposed Project. Likewise, the visual qualities of the Indian Springs site would not be impacted by the Proposed Project due to distance and intervening topography.

The massing of the proposed structure would not be consistent with structures in the area and would not be consistent with the County's stated vision for land development surrounding the Reservation. It is assumed that the recently updated and approved County General Plan and Jamul/Dulzura Subregional Plan were updated with the knowledge that a gaming facility on the Jamul Reservation has been planned for more than ten years. Since development on the Reservation is not subject to County land use plans and policies, which do not reflect the possibility of a development of this scale, the inconsistency with the massing of existing land development surrounding the Reservation does not result in a significant environmental impact.

The County General Plan and Jamul/Dulzura Subregional Plan Updates also address the issue of dark skies as it relates to the two recognized observatories – Palomar and Mount Laguna observatories. The Palomar Observatory is located in north San Diego County and is approximately 75 miles north of the project site. The trip to Palomar from Jamul would take a traveler through several urban areas along that 75 mile journey. The trip to the Mount Laguna Observatory is approximately 30 miles northeast of the Jamul Reservation. The Tribe has committed via their project description to include downcast lighting for all exterior lamination to avoid glare overflowing off-site. Given the distance to the observatories and the commitment by the Tribe to use downcast lighting, the impact to the observatories is considered less than significant. The Tribe's restriction of outdoor light and glare via use of

downcast lighting consistent with County regulations will also ensure that the impact to local night skies would be less than significant.

Alternative 1

Vista A – Residential Vista

Within Vista A, residents to the north of the project site would experience a view of the proposed structure that obscures views to a portion of SR-94 south of the project site, with limited occlusion of the mountains on the horizon (Figure 4.3-4). For residents northwest of the project site, a portion of the proposed structure would emerge into view from behind the hilly foreground, though little to no obstruction of the mountains to the east would be expected. For the residents east of the project site, the proposed structure would emerge from behind the topography in the foreground, and would be framed by the mountains to the west, which would dominate the view to a greater extent than under the Proposed Project due to the proposed changes made to the parking structures, which were located on the western portion of the Reservation. Residents within this viewshed would be offered a view of some portion of the proposed structures, though the prominence of the facilities would decrease with distance, altitude of the viewer and topographical obstructions between the viewer and the proposed facilities. The general character of the viewshed, however, would change to include a visibly commercial element in a largely rural-residential area although to a lesser extent than the change under the Proposed Project due to the elimination of the western parking structure and reduction in height of a portion of the eastern parking structure.

The proposed facilities would be visible to residents in a manner that is subordinate to the distant landscape and does not occlude the skyline. As such, the Alternative 1 is not expected to substantially degrade the existing visual character or quality of the site and its surroundings. The structures under Alternative 1 would not adversely affect a recognized scenic vista, nor would it damage recognized off-reservation scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway.

As is the case with the Proposed Project, the exterior of the gaming/parking facility would include downcast lighting to maintain consistency with the surrounding area. Lighting from the front of the gaming facility would be directionally pointed away from the adjacent reserve and the building would shield light, human activity and noise effects from the Rancho Jamul Reserve. Lighting in the back of the gaming facility would consist of low wattage security and safety lighting near doorways consistent with Uniform Building Code (UBC) requirements. Providing lighting consistent with local codes and ordinances would ensure that the Proposed Project would not create a new source of substantial light or glare. Therefore, lighting associated with the gaming facility would not adversely affect day or nighttime views of listed historic buildings or recognized views in the area.



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SOURCE: Delawie Wilkes Rodrigues Barker Architects, 2011; EDS, 2012

Figure 4.3-4 Photo Simulation: Alternative1View South from Melody Road West of SR94

Vista B – Melody Road Commuter Vista

Commuters within Vista B would experience an emerging view of the upper portion of the proposed structure on near-approach to Melody Road. Commuters traveling eastbound toward SR-94 would observe the proposed facilities increasing in prominence, until it dominates the view southward at SR-94, although to a lesser extent than the Proposed Project due to the elimination and modification of the parking structures on the western portion of the Reservation (**Figure 4.3-5**). On the portion of Melody Road east of SR-94, westbound commuters would be offered a view of the upper levels of the proposed facilities to the southwest, which would emerge from behind foreground topography into a more complete view as the viewer progresses westward. The mountains in the background would continue to dominate the view until the commuter is at SR-94, at which point the proposed facilities would command the southward line of sight, although to a lesser extent than the Proposed Project.

The Melody Road commuter vista would be dominated in southward views by the proposed facilities near the intersection with SR-94. However, with increased distance from SR-94 the prominence of the proposed facilities decreases in significance. Based on the criteria set forth above, Alternative 1 would not result in a significant impact to visual resources.

Vista C – SR-94 Commuter Vista

Southbound SR-94 commuters would begin to see the upper portion of the proposed structure immediately north of Melody Road, as it emerges from behind foreground topography and vegetation. Crossing Melody Road, the structure would be brought into full view until it becomes a dominant feature of the southward view, although to a lesser extent than the Proposed Project due to the elimination of the western most parking structure.

The northbound view presents the top of the proposed facilities as it emerges into view from behind the foreground topography, directly forward, from approximately the intersection of SR 94 and Rancho Jamul Drive (**Figure 4.3-6**). This view would be the same as for the Proposed Project due to the similar height and design of the facility on the eastern portion of the Reservation for both the Proposed Project and Alternative 1. Continuing north, the facilities drop back and out of forward-oriented view.

Southbound SR-94 commuters would begin to see the upper portion of the proposed structure immediately north of Melody Road, and it would emerge from behind residences and foreground topography to dominate the southward view from the intersection with Melody Road, occluding a portion of the view to the valley floor. The northbound SR-94 view is not dominated by the proposed facilities.





Alternative 1 would introduce a new structure with new massing into an area dominated by rolling terrain and rural residential development where the mountains would continue to dominate views. As such, Alternative 1 is not expected to substantially degrade the existing visual character or quality of the site and its surroundings. The proposed structures under Alternative 1 would not adversely affect a recognized scenic vista, nor would it damage recognized off-reservation scenic resources, including trees, rock outcroppings, or historic buildings within a state scenic highway. Lastly, Alternative 1 would not create a new source of substantial light or glare, which would adversely affect day or nighttime views of listed historic buildings or recognized views in the area. Therefore, Alternative 1 would not result in a significant impact to visual resources even though it would result in a new urban structure in the Jamul area.

County General Plan Update and Jamul/Dulzura Subregional Plan Update

The rare and endangered species/habitats located on both the San Miguel/Jamul Mountains and Mother Miguel sites would not be impacted by Alternative 1. Likewise, the visual qualities of the Indian Springs site would not be impacted by Alternative 1 due to distance and intervening topography.

The massing of the structures under <u>aA</u>lternative 1 would not be consistent with structures in the area and would not be consistent with the County's stated vision for land development surrounding the Reservation. It is assumed that the recently approved County General Plan and Jamul/Dulzura Subregional Plan were updated with the knowledge that a gaming facility on the Jamul Reservation has been planned for more than ten years. Since development on the Reservation is not subject to County land use plans and policies, which do not reflect the possibility of a development of this scale, the inconsistency with the massing of existing land development surrounding the Reservation does not result in a significant environmental impact.

As stated for the Proposed Project, the Tribe has committed via their project description to include downcast lighting for all exterior lamination to avoid glare overflowing off-site. Given the distance to the observatories and the commitment by the Tribe to use downcast lighting, the impact to the observatories is considered less than significant. The Tribe's restriction of outdoor light and glare via use of downcast lighting consistent with County regulations will also ensure that the impact to local night skies would be less than significant.

Alternative 2

Vista A – Residential Vista

Within Vista A, residents to the north of the project site would experience a view of the proposed structure that obscures views to a portion of SR-94 south of the project site, with limited occlusion of the mountains on the horizon (Figure 4.3-7). Development under Alternative 2 does not include the parking structures proposed under the Proposed Project or Alternative 1, so the massing and expanse of the proposed development is significantly reduced under this Alternative. As is the case with the Proposed Project and Alternative 1, residents northwest of the project site would see a portion of the proposed structure from behind the hilly foreground, though little to no obstruction of the mountains to the east would be expected. For the residents east of the project site, the proposed structure would emerge from behind the topography in the foreground, and would be framed by the mountains to the west, which would continue to dominate the view. Residents within this viewshed would be offered a view of some portion of the proposed structure, though the prominence of the facility would decrease with distance, altitude of the viewer and topographical obstructions between the viewer and the proposed facilities. The general character of the area, however, would change to include a visibly commercial element to a largely residential area. Alternative 2 would not adversely affect a recognized scenic vista, nor would it damage recognized off-reservation scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway.

Vista B – Melody Road Commuter Vista

Commuters would experience an emerging view of the upper portion of the gaming structure on near-approach to Melody Road. Commuters traveling eastbound toward SR-94 would observe the proposed facility increasing in prominence at SR-94 (**Figure 4.3-8**). The development under Alternative 2 would appear as a single structure which would not dominate the entire Reservation as under the Proposed Project. On the portion of Melody Road east of SR-94, westbound commuters would be offered a view of the upper levels of the proposed facility to the southwest, which would emerge from behind foreground topography into a more complete view as the viewer progresses westward. Viewers on the Melody Road Commuter Vista would have their southward views dominated by both the proposed facility near SR-94 and the surrounding mountains/valley floor. With increased distance from SR-94 the prominence of the gaming facility decreases in significance. Based on the criteria set forth above, Alternative 2 would not result in a significant impact to visual resources.

Vista C – SR-94 Commuter Vista

Southbound SR-94 commuters would begin to see the upper portion of the proposed structure immediately north of Melody Road, as it emerges from behind foreground topography and vegetation. Crossing Melody Road, the structure would be brought into full view until it becomes a feature of the southward view, although to a lesser extent than the Proposed Project and Alternative 2 due to the elimination of the parking structures, which would open up the valley and mountains in the background.

The northbound view presents the top of the proposed facilities as it emerges into view from behind the foreground topography, directly forward, from approximately the intersection of SR 94 and Rancho Jamul Drive (**Figure 4.3-9**). This view would be similar as for the Proposed Project due to the similar height and design of the facility on the eastern portion of the Reservation. One difference would be the elimination of the parking garage view near the hillside, which is eliminated under Alternative 2. Continuing north, the facility drops back and out of forward-oriented view.

Southbound SR-94 commuters would begin to see the upper portion of the proposed structure immediately north of Melody Road, and it would emerge from behind residences and foreground topography to share the southward view with the mountains and valley floor. The northbound SR-94 view is not dominated by the proposed gaming facility.

As stated for the Proposed Project and Alternative 1, the Tribe has committed via their project description to include downcast lighting for all exterior lamination to avoid glare overflowing off-site. Given the distance to the observatories and the commitment by the Tribe to use downcast lighting, the impact to the observatories is considered less than significant. The Tribe's restriction of outdoor light and glare via use of downcast lighting consistent with County regulations will also ensure that the impact to local night skies would be less than significant.

No Action Alternative

The No Action Alternative would not result in the development of a gaming complex on the Reservation. No significant aesthetics impacts would occur under the No Action Alternative.

4.3.3 MITIGATION

Mitigation 4.3(1): Visual Resources

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.







Figure 4.3-9 Photo Simulation: Alternative 2 View from SR94 South of Reservation



GEOLOGY AND SOILS

4.4 GEOLOGY AND SOILS

4.4.1 ENVIRONMENTAL SETTING

Regional Geologic Setting

The site is located in the Peninsular Ranges geomorphic province of California. The dominant structural trend of the Peninsular Ranges is characterized by faults associated with the Rose Canyon and Elsinore fault zones, along with other similar northerly and northwesterly-trending fault zones in southern and Baja California that form steep "tread and riser" topography that rises to the east (**Appendix 6**).

Local Geologic Setting

The project area is located within the foothills of the Jamul Mountains, south of the town of Jamul. In the project vicinity, pre-Tertiary granitic and metavolcanic bedrock is locally overlain by Ouaternary alluvial and colluvial deposits which are locally covered by shallow fill. Figure 4.4-1 shows a map of the geologic units in the project vicinity, where Ec = Eocene sandstone, gb = gabbro, gr-m =gneiss, grMZ = granodiorite and quartz monzonite, m = schist/gneiss, Mc = sanstone, Mzv = felsicvolcanic rock, P = Pleistocene sandstone, and Q = Quaternary alluvium. Surficial materials include undocumented fill, alluvium, colluvium and possible landslide deposits (Appendix 6). The fill at the site consists of silt and sand. It is composed of locally derived stream terrace deposits and colluvium generated from cutting into the natural slope during grading for previously existing structures. Alluvial deposits are material such as sand, silt, or clay that has been deposited by streams. Alluvial deposits are present along the drainage which traverses the site. The alluvial soils are composed of sand and silty sand with scattered gravel. Colluvium is soil material or rock fragments that have moved by creep, slide, or local wash and were deposited at the base of steep slopes. Colluvium locally covers the granitic bedrock on the slopes. The colluvial materials consist of sand and silt mixtures. Possible landslide deposits at the site were mapped based on surficial expression and stereoscopic photographs (Appendix 6). Landslide deposits are composed of intermixed surficial soil and granitic bedrock. Pre-Tertiary granitic bedrock underlies the site soil deposits. The granitic bedrock is considered as undifferentiated igneous crystalline bedrock that locally forms bold outcrops. The granitic bedrock is composed mainly of diorite with contact metamorphic zones. Pre-Tertiary volcanic and metamorphic bedrock is exposed on the southwest corner of the site. The bedrock forms outcrops and is hard and dense. It is composed of intermixed volcanic and sedimentary rocks that have experienced low-grade metamorphism.



SOURCE: Natural Investigations Co., 2011; EDS, 2012

Topography and Soils

The elevation of the project area ranges from 870 to 960 feet. The project lies on moderately steep slopes. The steeper gradients are situated in the southwestern portion of the area. The project area slopes down from the east and west to Willow Creek, which then drains the entire project area in a southerly direction.

The soils of the project area are eroded coarse sandy loams to loams which have developed from granodiorite, granitic alluvium, basic igneous rock, or metamorphosed sandstone. Soils that have been formed from basic igneous rock and granitic alluvium can be found on terraces or alluvial fans. Some upland soils have been developed from metamorphosed sandstone and granodiorite. Soils found on gently rolling to hilly topography have formed in material weathered from granitic rock (Applied Engineering and Geology, 2003).

The USDA Natural Resource Conservation Service (NRCS) has mapped the project area as being underlain by 10 soil types, but primarily the Cieneba loam (codes CIE2, CmrG), Escondido loam (Esc), Fallbrook loam (FaD2, FaE2), Friant loam (FxG), Las Posas loam (LpC2, LpE2), Ramona loam (RaC2), and Wyman loam (WmC). **Figure 4.4-2** displays these soil types and their codes in relation to the project area. NRCS classifies the soils according to their shrink/swell nature: the Cienaba, Escondido, and Friant soils have low shrink/swell capabilities; the Fallbrook, Ramona, and Wyman soils have moderate shrink/swell capabilities; and the Las Posas soils have high shrink/swell capabilities. The soils are well drained to somewhat excessively drained and have a low to moderately low water-holding capacity and slow to moderately rapid permeability. Runoff is slow to very rapid. Soil depth to bedrock varies with topography (0 to over 70 inches) (Applied Engineering and Geology, 2003).

In the land capability classification system used by the NRCS, soils are grouped by Soils Capability Class: Class I is the least restricted with Class VIII being severely limited and nearly precluded from use for commercial crop production. Prime soils are those located on land which has a combination of physical and chemical characteristics best suited to produce forage, feed, food, and other crops. Based on information from the NRCS soils survey, Soils Capability classes on the proposed project site range from II to VII. The capability subclassification indicates that the Las Posas fine sandy loam, Escondido very fine sandy loam, Wyman loam, Fallbrook sandy loam, Ramona sandy loam have a main limitation of erosion. The Friant rocky fine sandy loam and Cieneba very rocky coarse sandy loam have main limitation factors of shallow soil depths as well as being stony and subject to drought conditions.

Soils on the alluvial fan terraces are unconsolidated. As a result, runoff from storm events can pick up these unconsolidated soils and transport them. Intense storm events transport sediment from the alluvial fans terraces to the flat valley floor. The transported debris is immediately deposited. Rain events may transport sediment from deposited material into the wash area.



SOURCE: Natural Investigations Co., 2011; EDS, 2012

– Jamul Indian Village Draft Final Tribal EE ■ Figure 4.4-2 Mapped Soil Units

Mineral Resources

The California Geological Survey classifies land in western San Diego County according to the presence or absence of construction aggregate resources. However, the project area itself does not offer a suitable combination of soils and minerals types to warrant extraction of aggregates. There are no known mapped mines within the area. The geologic surveys performed for this project did not indicate any significant mineral resources.

Geologic Hazards

Geologic hazards in the project area are limited primarily to those caused by strong shaking from earthquake-generated ground motions (**Appendix 6**). Nevertheless, presented next is a discussion of potential geologic hazards that may affect project development.

Tsunamis and Seiche Evaluation

The site is about 15 miles inland from the Pacific Ocean at an elevation of approximately 900 feet above sea level. Therefore, risk of damage from seismic sea waves (tsunamis) is not anticipated (**Appendix 6**). The site is not downslope of a large body of water that could adversely affect the site in the event of earthquake-induced failures or seiches (wave oscillations in an enclosed or semi-enclosed body of water).

Landsliding

Based on surface expression, possible landslides have been mapped in the northeast corner of the project site (**Appendix 6**).

Compressible and Expansive Soils

Encountered site soils consisted of non-expansive sands and hard bedrock with low compressibility. Therefore, compressible and/or expansive site materials are not anticipated to adversely impact the proposed development (**Appendix 6**).

Fault Rupture and Earthquake Hazard Evaluations

Over the last two centuries, only one large-magnitude earthquake has occurred in the San Diego County area. However, San Diego County area has been subject to ground shaking on many other occasions as a result of earthquakes in other regions. The project area is not mapped within a State-delineated Earthquake Fault Zone and there are no known faults in the immediate vicinity of the study area. The closest active fault or fault zone to the site is the Rose Canyon fault zone, located about 15.5 miles to the west-southwest. The Elsinore Fault is located approximately 30 miles to the northeast and the San Andreas Fault is located approximately 80 miles to the east (**Appendix 6**).

As defined by the California Geological Survey, an active fault is one that has had surface displacement within the Holocene Epoch (roughly the last 11,000 years). This definition is used in delineating Earthquake Fault Zones as mandated by the Alquist-Priolo Special Studies Zones Act of 1972 and revised in 1994 and 1997 as the Alquist-Priolo Earthquake Fault Zoning Act and Earthquake Fault Hazard Zones. The intent of this act is to require fault investigations on sites located within Earthquake Fault Hazard Zones to preclude new construction of certain habitable structures across the trace of active faults. Based on the Construction Testing & Engineering (2011) review of available literature, the site is not located within an Alquist-Priolo Earthquake Fault Zone. No evidence of active faulting is present on the site.

The California Geological Survey broadly groups faults as "Class A" or "Class B" (Cao et al, 2003). Class A faults are identified based upon relatively well constrained paleoseismic activity, and a fault slip rate of more than 5 mm per year. In contrast, Class B faults have comparatively less defined paleoseismic activity and are considered to have a fault slip rate less than 5 mm per year. The following Table 4.4-1 presents the nearest faults to the site and their magnitude and fault classification.

FAULT NAME	DISTANCE FROM SITE (miles)	MAXIMUM EARTHQUAKE MAGNITUDE	CLASSIFICATION
Rose Canyon	15.5	7.2	В
Coronado Bank	27.5	7.6	В
Elsinore-Julian	32.2	7.1	А
Elsinore-Coyote Mountain	34.6	6.8	А
Earthquake Valley	35.6	6.5	В
Newport-Inglewood (Offshore)	45.2	7.6	В
Elsinore-Temecula	47.3	6.6	А
San Jacinto-Coyote Creek	52.0	6.8	А
San Jacinto-Borrego	52.2	6.6	А
San Jacinto-Anza	55.7	7.2	А
SOURCE: Construction Testing & Engineering, 2011			

TABLE 4.4-1

PARAMETERS FOR EARTHOUAKE FAULTS IN THE PROJECT VICINITY

Liquefaction occurs when saturated fine-grained sands, silts or low plasticity clays lose their physical strength during earthquake-induced shaking and behave as a liquid. This is due to loss of point-topoint grain contact and transfer of normal stress to the pore water. Liquefaction potential varies with groundwater level, soil type, material gradation, relative density, and the intensity and duration of ground shaking. Since the site soils and bedrock are very dense, the potential for liquefaction is considered low.

Regulatory Setting

Federal Regulations

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." The project area does not contain any rare, high quality, or scientifically significant geologic or topographic resources, and does not encompass any areas designated as National Natural Landmarks.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act (Amended in 1994) (California Public Resources Code Section 25523(a); 20 CCR 1752(b) and (c)) was created to mitigate seismic hazards. Its main purpose is to prevent the construction of buildings on the surface trace of active faults. Before a project can be permitted in an Alquist-Priolo Earthquake Fault Zone, municipalities must require a geologic investigation to demonstrate that potential buildings would not be constructed across active faults.

The California Building Code contains minimum standards for design and construction of structures in California. Local standards may be adopted if those standards are stricter. Design considerations associated with seismic hazards should address the appropriate building codes.

The Greenbook Standard Specifications for Public Works Construction is produced by a joint committee of the Southern California Chapter of the American Public Works Association and the Southern California Districts of the Associated General Contractors of California. The Greenbook is focused on public works projects and includes geologic and soil standards related to construction materials/methods (e.g., grading and fill/base material placement), utilities, landscaping/irrigation facilities, pipelines, aggregate, and concrete/asphalt pavement.

Local Laws, Ordinances, Regulations, and Standards

The County of San Diego Codes and Regulations regulates vegetation clearing and grading through the Clearing of Vegetation / Grading and Clearing Ordinance (No. 9547) (administered by the Dept. of Planning and Landuse). The Sensitive Habitats / Resource Protection Ordinance (Nos. 7968, 7739, 7685 and 7631) protects steep-slope lands, wetlands, floodplains.

4.4.2 ENVIRONMENTAL CONSEQUENCES

Significance Criteria

The project would be considered to have a significant adverse impact on land resources if it would:

- Expose people or structures to geologic hazards such as rupture of a known earthquake fault, strong seismic shaking, seiches, landslides, mudslides, or ground failure including liquefaction,
- Is located on a geologic unit or soils that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, expansion, subsidence, liquefaction or collapse,
- Result in substantial soil erosion or the loss of topsoil,
- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

Impact 4.4(1): Topography and Erosion

Proposed Project

Construction of the Proposed Project would entail clearing, grading, and excavating; the project components have been designed to take advantage of the existing topography and minimize changes to topography. However, due to the steep slopes and drainages within the project area, some cutting and filling of certain topographic features would be necessary. Project components would be built into the sloping hills, avoiding Willow Creek in the project area. The geological studies performed for this project indicate that blasting of granitic bedrock would be necessary. While some cut slopes would be noticeable after construction is complete, the major topographical features of the project area would be preserved. Furthermore, the project area does not contain any rare, high quality, or scientifically significant geologic or topographic resources, and does not encompass any areas designated as National Natural Landmarks. Thus, implementation of the Proposed Project is considered to have a less than significant effect on topography.

The Proposed Project would not adversely affect any known or recorded mineral resources. Construction of the Proposed Project would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. Because there are no known or mapped mineral resources within the project area, development and use of the land would not be affected by such resources. Thus, implementation of the Proposed Project would have no significant adverse effect upon mineral resources.

Under Clean Water Act Section 402, any construction project that disturbs at least one acre of land requires enrollment in the construction general permitting program under the National Pollutant Discharge Elimination System (NPDES). For construction on Indian reservations and federal lands, the landowner and contractor must enroll for coverage under USEPA's General Storm Water Discharge Permit for Construction Activities (NPDES No. CAR10000IF). For construction on non-federal lands in California, the landowner and contractor must enroll for coverage under the State Water Resources Control Board's General Storm Water Discharge Permit for Construction Activities (Order No. 2009-0009, NPDES No. CAS000002) prior to the initiation of construction. Coverage under either permit requires creation and implementation of an effective storm water pollution prevention plan, erosion control plan, hazardous materials management and spill response plan, and construction best management practices, all of which are designed to minimize or eliminate erosion issues and eliminate sediment discharges. With proper implementation, these plans reduce or eliminate the potential for accidental release of sediment and other pollutants during construction, as well as reduce the potential for erosion. The erosion control plan would be prepared before construction commences, and would identify the location of erosion control features necessary to protect and filter stormwater runoff. Features used during construction may include but are not limited to silt fences, fiber rolls, and gravel bag check dams. The location of permanent erosion control features such as drop inlet sediment traps, vegetated drainage swales, and energy dissipaters would also be identified. Furthermore, the project's grading plan would meet or exceed standards established by Sections 87.101 through 87.717 of San Diego County Code of Regulatory Ordinances (Grading, Clearing, and Watercourses Ordinance), which requires effective erosion control and compensatory mitigation for natural habitat loss, if applicable. Erosion impacts would be less than significant.

Alternative 1

Alternative 1 is a significantly reduced gaming complex, which would be 69% smaller than the Proposed Project gaming complex. There would be a corresponding reduction in erosion and sedimentation potential during construction. The clearing, grading, and excavation features of Alternative 1 are similar to the Proposed Project. As is the case under the Proposed Project, development under Alternative 1 requires enrollment in the construction general permitting program under the National Pollutant Discharge Elimination System (NPDES). The Tribe/Contractor must also enroll for coverage under USEPA's General Storm Water Discharge Permit for Construction Activities (NPDES No. CAR10000IF), as well as coverage under the State Water Resources Control Board's General Storm Water Discharge Permit for Construction Activities (Order No. 2009-0009, NPDES No. CAS000002) prior to the initiation of construction. Furthermore, the alternative development's grading plan would meet or exceed standards established by Sections 87.101 through 87.717 of San Diego County Code of Regulatory Ordinances (Grading Ordinance). Erosion impacts under Alternative 1 would be less than significant.

Alternative 2

Alternative 2 is a significantly reduced gaming complex, which would be 92% smaller than the Proposed Project gaming complex. The clearing, grading, and excavation features of Alternative 2 would be significantly reduced when compared with the Proposed Project and Alternative 1. As is the case under the Proposed Project, development under Alternative 2 requires enrollment in the construction general permitting program under the National Pollutant Discharge Elimination System (NPDES). The Tribe/Contractor must also enroll for coverage under USEPA's General Storm Water Discharge Permit for Construction Activities (NPDES No. CAR10000IF), as well as coverage under the State Water Resources Control Board's General Storm Water Discharge Permit for Construction. Furthermore, the alternative development's grading plan would meet or exceed standards established by Sections 87.101 through 87.717 of San Diego County Code of Regulatory Ordinances (Grading Ordinance). Erosion impacts under Alternative 2 would be less than significant.

No Action Alternative

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts resulting from construction, such as erosion and sedimentation.

Impact 4.4(2): Seismic Hazards

Proposed Project

Although the project area is not near any active fault zones, the project area could be subject to seismic activity such as severe ground shaking and acceleration forces from earthquakes in other regions. The Proposed Project would incorporate appropriate seismic design and construction measures. Design and construction of project features would adhere to the 2010 California Building Code (CBC). The CBC addresses structural design requirements for buildings and other structures (including hazardous materials storage facilities) that are consistent with rational analyses and well-established principles of mechanics. It covers earthquake design, which has provisions to safe guard against major structural failures and loss of life. Use of the 2010 CBC would allow for ground shaking-related hazards to be managed from a geologic, geotechnical, and structural standpoint such that risks to the health or safety of workers or members of the public would be reduced to a less than significant level. Use of these standards would ensure that seismic hazard risks are less than significant.

Alternative 1

Alternative 1 would be constructed on the same site as the Proposed Project. As is the case with the Proposed Project, Alternative 1 could be subject to seismic activity such as severe ground shaking and acceleration forces from earthquakes in other regions. Alternative 1 would be designed and constructed with the same standards as identified for the Proposed Project. Use of standards identified for the Proposed Project would ensure that seismic hazards for Alternative 1 are less than significant.

Alternative 2

Alternative 2 would be constructed on the same site as the Proposed Project and Alternative 1. Alternative 2 could be subject to seismic activity such as severe ground shaking and acceleration forces from earthquakes in other regions. Alternative 2 would be designed and constructed with the same standards as identified for the Proposed Project. Use of standards identified for the Proposed Project would ensure that seismic hazards for Alternative 2 are less than significant.

No Action Alternative

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any new adverse impacts resulting from seismic hazards.

4.4.3 MITIGATION

Mitigation 4.4(1): Topography and Erosion

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

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Mitigation 4.4(2): Seismic Hazards

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.
SECTION 4.5

HYDROLOGY AND WATER QUALITY

4.5 HYDROLOGY AND WATER QUALITY

4.5.1 ENVIRONMENTAL SETTING

Surface Water, Drainage and Flooding

The topography of the project area is a rolling terrain, with a general slope to the south via the Willow Creek drainage, which bisects the project area. **Figure 4.5-1** shows the relevant USGS 7.5-minute topographic quadrangles "Dulzura" and "Jamul Mountains". The elevation ranges from approximately 850 feet to 950 feet above mean sea level. The climate is arid, with annual precipitation averaging only about 10 inches (Western Regional Climate Center 2011).

The project area is located within a small watershed (approximately 10 square miles) in the headwaters of Jamul Creek north of the Jamul Mountains (**Figure 4.5-2**). The project area is located within the Jamul Hydrologic Subarea (Hydrologic Unit 10.33), which is located within the Dulzura Hydrologic Area of the larger Otay Basin. The Otay Hydrologic Unit consists of the Otay River and its major tributaries. The Otay River is the second largest river draining into San Diego Bay. Damming in the early part of the 20th century created the Otay Reservoirs, which provide drinking water for southern San Diego County (Regional Water Quality Control Board 2007b). Seventy percent of the Otay River watershed is open and undeveloped; agriculture occurs in ten percent of the watershed, and urban or industrial land uses occur in twenty percent of the Otay watershed are protected, there has been rapid growth in certain regions, including the Jamul area. Large areas within the watershed are protected by state and federal wildlife refuges, and by the San Diego Water Department. Other major landowners include Caltrans, with jurisdiction over all freeways and highways in the watershed, tribes, and the US Navy (Regional Water Quality Control Board 2007b).

The general direction of surface runoff in the project area is to the south via Willow Creek, a drainage tributary to Jamul Creek, which is tributary to Dulzura Creek, which terminates in the Lower Otay Reservoir. The Lower Otay Reservoir is the terminus of the second San Diego Aqueduct. Surface runoff from over 160 square miles within the Otay Basin watershed flows ultimately to the south San Diego Bay (Pacific Ocean) (San Diego Regional Water Quality Control Board 2007a).

All stormwater originating within the project area drains by sheet flow along surface grades to Willow Creek or, to a minor extent, to the ditches of the SR 94 right-of-way. The San Diego County Flood Control District currently maintains culverts along Willow Creek at the following locations: 1) a private roadway about 360 feet north of Melody Road with a 12-inch corrugated metal pipe; 2) Melody Road, with a 60-inch concrete pipe; and 3) the Tribe's private road, which has a 24-inch corrugated metal pipe. A tributary of Willow Creek collects runoff from a residential development (Calle Mesquite) north of Melody Road, and discharges runoff under Melody road via a 24-inch corrugated metal pipe.



SOURCE: "Jamul MTS, CA" & "Dulzura, CA" USGS 7.5 Minute Topographic Quadrangles; Section 10, T17S, R1E, San Bernardino Baseline & Meridian; EDS, 2012 – Jamul Indian Village Draft Final Tribal EE∎

Figure 4.5-1 Project Area Topography



SOURCE: Natural Investigations Co., 2011; EDS, 2012

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Figure 4.5-2 Project Area Water Features The project area and vicinity is designated Zone D for areas of undetermined flood risk, according to FEMA Flood Insurance Rate Map Panel Number 06073C1975F. Within the Reservation, Willow Creek has a slope gradient of 3 to 4%, with side slopes having a variable gradient of between 12 and 50% (Martin and Ziemniak 2006; San Dieguito Engineering 2011). Results of hydrologic modeling by Martin and Ziemniak (2006) indicate that the flow within the channel during a 100-year storm event is 392 cubic feet per second. The total rainfall that would occur during a 6-hour 100-year rain event in the Jamul region is 3 inches (Martin and Ziemniak 2006).

Ground Water

The Regional Water Quality Control Board defines and describes groundwater in the region as follows:

"The term 'ground water' for basin planning and regulatory purposes, includes all subsurface waters that occur in fully saturated zones within soils, and other geologic formations. Subsurface waters are considered ground water even if the waters do not occur in an aquifer or an identified ground water basin....All major drainage basins in the San Diego Region contain ground water basins. The basins are relatively small in area and usually shallow. Although these ground water basins are limited in size, the ground water yield from the basins has been historically important to the development of the Region. A number of the larger ground water basins can be of future significance in the Region for storage of both imported waters and reclaimed wastewaters. Nearly all of the local ground waters of the Region have been intensively developed for municipal and agricultural supply purposes." (San Diego Regional Water Quality Control Board 2007a)

The groundwater in the vicinity of the project area flows through the geologic substrata such as alluvium, residuum (unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place), and crystalline bedrock. The effective porosity in crystalline bedrock and residuum is poor; consequently, groundwater occurs predominantly in alluvium. County well data indicates that in the low areas (inter-mountain basins) such as the project area, average depth to water is about 40 feet, but can vary widely from 7 to 250 feet; in higher areas (such as mountain erosional plains), depth to water is about 93 feet, with a range of 11 feet to 263 feet (San Diego County 1977).

Water Quality

Surface Water Quality

The Regional Water Quality Control Board describes the quality of the Otay River watershed as follows: "The Otay hydrologic unit (HU 910) is a watershed in the southern portion of San Diego County and is home to about 150,000 people and represents an important water resource in one of the

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most arid regions of the nation. Home to many endemic, rare, and endangered plants and animals, the ecological health of the Otay watershed is of increasing concern" (Regional Water Quality Control Board. 2007b).

The Regional Water Quality Control Board assessed Jamul Creek as part of the statewide Surface Water Ambient Monitoring Program. The results of the bioassessment indicated that biological health was very poor, and Jamul Creek "did not support a healthy community of benthic macroinvertebrates". The following results were also published regarding the assessment of Jamul Creek (Regional Water Quality Control Board 2007b):

- Physical habitat was moderately degraded, with only two components (embeddedness and channel flow) showing signs of severe alteration.
- Pesticides and other organic compounds were detected (PAHs, p,p'-DDT, and oxadiazon).
- Ammonia, manganese and specific conductivity exceeded aquatic life thresholds during sampling.
- Sediments were acutely toxic to amphipods (*Hyalella azteca*) in one of 3 samples, and most samples showed algal toxicity.

The study concluded that, "This study's assessment of the Otay Hydrologic Unit suggests that the watershed is in moderately poor ecological health. Multiple lines of evidence support this conclusion. For example, several water chemistry constituents exceeded aquatic life thresholds, toxicity was observed at every site, and bioassessment of macroinvertebrate communities were in poor or very poor condition at most sampling events." (Regional Water Quality Control Board 2007b).

Land uses in the Jamul area have historically been rural in nature, and consisted largely of ranching and some dry crop farming. In the Jamul Creek watershed, cattle grazing has resulted in the introduction of manure and has increased erosion, compaction, and stream-bank degradation. These and other effects of cattle grazing typically lead to increased temperature and decreased dissolved oxygen content of surface waterways (Regional Water Quality Control Board 2007a).

Section 303(d) of the Clean Water Act requires states to periodically prepare a list of all surface waters in the state for which beneficial uses of the waterbody -such as for drinking, recreation, aquatic habitat, and industrial use -are impaired by pollutants. These are estuaries, lakes, streams, and groundwater basins that do not meet state surface water quality standards, and are not expected to improve within the next two years. States are also required to establish a priority ranking of these impaired waters for purposes of developing plans that include Total Maximum Daily Load (TMDL) plans. These plans describe how an impaired water body would meet water quality standards through the use of TMDLs.

A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount to each of the pollutant's sources.

The State Water Resources Control Board, in compliance with Clean Water Act Section 303(d), has prepared a list of impaired water bodies in the State of California (Regional Water Quality Control Board 2011). The list includes a priority schedule for the development of TMDLs for each contaminant or "stressor" affecting the water body. Within the Otay Hydrologic Unit, both the Lower Otay Reservoir and Jamul Creek are on the 303(d) list. The Lower Otay Reservoir is listed as impaired for the following constituents: ammonia, color, iron, manganese, nitrogen, and pH (high). Jamul Creek, first listed in 2008, is impaired under the category of sediment toxicity from the following sources: unknown nonpoint source; unknown point source; urban runoff/storm sewers (Regional Water Quality Control Board 2011).

The Regional Water Quality Control Board has also identified beneficial uses for the Jamul Creek watershed and Lower Otay Reservoir. The Regional Water Quality Control Board (2007a) defines beneficial uses as "*the uses of water necessary for the survival or wellbeing of man, plants and wildlife*". Beneficial use designations for the Jamul Creek watershed are: municipal and domestic supply, agricultural supply, industrial service and process supply, contact and non-contract water recreation, warm freshwater habitat, and wildlife habitat. Beneficial uses for the Lower Otay Reservoir include: municipal and domestic supply, agricultural supply, industrial service and process supply, include: municipal and domestic supply, agricultural supply, industrial service and process supply, industrial service and process supply, industrial service and process supply, contact and non-contact water recreation, warm and cold freshwater habitat, and wildlife habitat.

The Regional Water Quality Control Board has defined water quality objectives to protect beneficial uses. Water quality objectives are defined as, "...the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area" (RWQCB 2007a). Table 4.5-1 lists the water quality objectives that apply to the project area (Jamul Creek Subarea, Dulzura Hydrologic Area, Otay Hydrologic Unit).

Ground Water Quality

Groundwater in the Jamul area is characterized as shallow and small in volume, and generally unsuitable for domestic or industrial use due to its low yield and due to the presence of high nitrate and total dissolved solids concentrations (Regional Water Quality Control Board 2007a,b). The San Diego Regional Water Quality Control Board (RWQCB) has identified beneficial uses for groundwater resources in the Otay Hydrologic Unit as follows: municipal and domestic supply, agricultural supply, and industrial service supply. The RWQCB has defined water quality objectives to protect these beneficial uses in the Otay Hydrologic Unit, summarized in **Table 4.5-2**.

Regulatory Setting

Federal Regulations

Executive Order 11988 addresses floodplain management. Executive Order 11988 requires the evaluation of actions taken in a floodplain. Specifically, the order states that agencies shall first determine whether the Proposed Project a proposed development would occur in a floodplain. Second, if an agency proposes to allow an action to be located in a floodplain, "the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains." Finally, if the only practicable alternative action requires siting in a floodplain, the agency shall "minimize potential harm to or within the floodplain."

TABLE 4.5-1 WATER QUALITY OBJECTIVES FOR SURFACE WATERS IN THE DULZURA HYDROLOGIC AREA OF THE OTAY HYDROLOGIC UNIT

WATER QUALITY CONSTITUENT	WATER QUALITY OBJECTIVE
Total dissolved solids	500 mg/L
Chlorides	250 mg/L
Sulfate	250 mg/L
Sodium	60 mg/L
Phosphorus and Nitrogen	0.05 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Methylene Blue-Activated Substances	0.5 mg/L
Boron	0.75 mg/L
Turbidity	20 NTU
Fluoride	1 mg/L
pH	6.5 to 8.5 pH units
Dissolved Oxygen (warm habitat)	5.0 mg/L minimum
Fecal coliform	200 MPN/100 mL
SOURCE: San Diego Basin Plan (RWOCB 2007a)	1

The basic federal law dealing with surface water quality control is the Federal Water Pollution Control Act, which was amended in 1972 and is commonly referred to as the Clean Water Act. The objective

of the Clean Water Act is to "restore and maintain the chemical, physical and biological integrity of the Nation's waters" to make all surface waters "fishable" and "swimmable".

The National Pollutant Discharge Elimination System (NPDES) program established pursuant to the Clean Water Act (33 USC §§ 1251 to 1387) is a national program for regulating and administering permits for discharges to receiving waters. The EPA is ultimately charged with regulating discharges to surface waters. In some states, the EPA has delegated permitting authority to a state agency. However, the EPA continues to regulate discharges originating on Tribal lands into receiving waters. Under the Federal Clean Water Act, Indian Tribes can be treated as states for the purposes of the NPDES program if they demonstrate similar management proficiency as the states [33 USC § 1377(e)].

TABLE 4.5-2

WATER QUALITY OBJECTIVES FOR GROUND WATERS IN THE DULZURA HYDROLOGIC AREA OF THE OTAY HYDROLOGIC UNIT

WATER QUALITY CONSTITUENT	WATER QUALITY OBJECTIVE
Total Dissolved Solids	1,000 mg/L
Chloride	400 mg/L
Sulfate	500 mg/L
Sodium	60 mg/L
Nitrate	10 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Methylene Blue-Activated Substances	0.5 mg/L
Boron	0.75 mg/L
Turbidity	5 NTU
Color units	15
Fluoride	1.0 mg/L
SOURCE: San Diego Basin Plan (RWOCB 2007a).	

State Regulations

The California Water Code contains provisions which control almost every consideration of water and its use. Division 2 of the Water Code provides that the State Board shall consider and act upon all

applications for permits to appropriate waters. California Water Code section 2100 provides that the State Board may make a formal determination or judgment in order to protect ground water quality.

Division 7 of the California Water Code is the basic water quality control law for California, entitled the Porter-Cologne Water Quality Control Act. The Porter-Cologne Act establishes a regulatory program to protect water quality and to protect beneficial uses of the state waters. The Porter-Cologne Act established the State Board and the regional boards as the principle state agencies responsible for control of water quality. The Porter-Cologne Act empowers the regional boards to formulate and adopt, for all areas within the regions, a Water Quality Control Plan (Basin Plan) which designates beneficial uses and establishes such water quality objectives as in its judgment would ensure reasonable protection of beneficial uses. Each regional board establishes water quality objectives that would insure the reasonable protection of beneficial uses and the prevention of nuisance. In 1975, the Regional Board published the "Water Quality Control Plan for the San Diego Basin (9)". The 1975 Basin Plan has been amended by the Regional Board on numerous occasions since 1975, and it is reviewed triennially. The latest version is dated 2011, and contains the most current water quality standards.

4.5.2 ENVIRONMENTAL CONSEQUENCES

Significance Criteria

A significant water resources impact would occur if the project would:

- Place structures in a dam inundation zone or propose any other use that would involve concentrations of people that could be exposed to harm in the event of a dam failure,
- Place structures within a 100-year flood plain or alter the floodway in a manner that would redirect or impede flow resulting in the placement of other structures in a 100 year flood hazard,
- Substantially alter the existing drainage pattern of the site or area in a matter which would result in substantial erosion or siltation on- or off-site,
- Substantially alter the existing drainage pattern of the site or area in a matter which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, or which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff,
- Degrade water quality or beneficial uses, or otherwise violate any water quality standards or waste discharge requirements.

Impact 4.5(1): Drainage and Flooding

Proposed Project

The Proposed Project includes the construction of a 228,000203,000 square foot gaming structure, <u>and</u> multi-level parking structures, <u>and surface lot</u> which would increase site imperviousness. To address the potential off site drainage effect caused by increased runoff from impervious surfaces, the Proposed Project has engineered a stormwater detention facility to detain stormwater collected from the impervious surfaces and discharge it at a rate that matches pre-project flow conditions based on the County's 6 hour 100 year model storm. Green roofs and permeable pavements have also been added to the project description to reduce impervious surfaces and to allow storm water to infiltrate into the ground or reduce the rate at which it leaves the site. Hydrologic studies performed by engineers have determined that the Proposed Project would not cause an increase in peak runoff volume or severity off-reservation (**Appendix 7**).

Runoff from these impervious areas would be conveyed through <u>a series of piping and sheet</u> flow via inlets, spillways, back bone storm drain systems, and curbs and gutter into an underground StormtechTM detention facility underneath the paved roads and cantilevered ramps to detain the increase in runoff. Treatment for runoff shall flow via curb and gutter inlets to a back bone storm drain line to another StormtechTM detention facility prior to entering the bioretention facility adjacent to the creek. The bioretention facility is a planter area with 18 inches or more of engineered soil. Bioretention facilities works by percolating runoff through the soil which removes most pollutants before the runoff is allowed to seep into native soils below or a sub drain that carries treated runoff to a detention device or storm water conveyance system. a series of gutters, drop inlets, and subterranean storm drain system, into a gravel detention facility. Underneath the parking structure a gravel storm water detention facility would be constructed to detain the increase in runoff for the entire site. For additional detention, green roofs covering the gaming facilities <u>and a bioretention facility at the outlet of the detention facility</u> would be installed. Runoff west of the creek would flow via curb and gutter, drop inlets, and a storm drain line to the bioretention facility adjacent to the creek.

The gravel detention facility consists of subsurface gravel beds that would be constructed underneath the parking structure to detain the increase in runoff generated by impervious site improvements. An outfall structure would be constructed at the outlet of the gravel detention facility to release stormwater at a rate such that there would be no net increase in 100-year storm runoff in Willow Creek where it leaves the site.

Subterranean chambers (StormTech[™] RC-750, or equivalent) with gravel backfill, serving as detention facilities would be constructed underneath the onsite roads and cantilevered roads. These are proposed to detain the increase in runoff generated by impervious site improvements to

mitigate both the increase in runoff from the 100 year storm and for Hydromodification detention. Outlet structures would be constructed at the outlets of the gravel detention facilities to release stormwater at a rate such that there would be no net increase in 100 year storm runoff in Willow Creek where it leaves the site. Detention facilities for Hydromodification would release runoff at the appropriate rate to treatment facilities.

Green roofs are vegetated roof covers with growing media and plants taking the place of bare membrane, gravel ballast, shingles, roof tiles, etc. Green roofs are considered by the County of San Diego to be self retaining and do not require additional storm water detention. In effect, they are treated like landscape areas at ground level and do not increase runoff. Since they are self contained, runoff from green roofs can easily be kept separate from other ground level improvements and can be discharged directly into Willow Creek without detention.

The parking lot on grade would be comprised of Gravelpave2TM pavement, or equivalent, to provide pervious parking surfaces. Gravelpave2TM is a gravel filled pervious plastic subsurface reinforcement structure, with geotextile fabric underneath. Gravelpave2TM is used in lieu of asphalt or concrete, which are impervious, and allows water to percolate through the road or parking surface, where it is collected and conveyed to the gravel detention facility beneath the ground surface.

This stormwater system was designed to handle the additional runoff generated by the project development so that downstream runoff during the peak period is not increased when compared with pre-project conditions. The detention facility would allow for a controlled release of stormwater at or below pre-development peak rates. Therefore, stormwater discharge from the project site would not significantly affect downstream drainage conditions.

The Jamul region is subject to flooding, and project development could pose a significant flood hazard if structures were to be placed within the flood zone. Hydrologic studies determined that the peak flow for Willow Creek during the 100 year storm event is 392 cubic feet per second (Martin and Ziemniak 2006, San Dieguito Engineering 2011). The channel cross-sections for this modeled floodplain vary in width from 26 to 68 feet within, or immediately adjacent to, the project area. The Proposed Project includes a 4-lane access road that crosses Willow Creek. This access road would include a bridge that would span Willow Creek, and whose abutments would be placed outside of the flood zone. The Proposed Project also includes the abandonment or removal of the existing road and 24-inch culvert that is located within the Willow Creek flood zone. Because no structures would be placed in the flood zone, implementation of the Proposed Project would not be subject to, nor create, a flood hazard.

Alternative 1

Alternative 1 is a significantly reduced gaming complex, which would be 69 41% smaller than the Proposed Project gaming complex, but would still increase site imperviousness by the construction of a gaming structure, driveways, walkways, and parking structure/ lots. Similar to the Proposed Project, Alternative 1 would engineer a stormwater detention facility to detain stormwater collected from the impervious surfaces and discharge it at a rate that matches preproject flow conditions based on the County's 6 hour 100 year model storm. Green roofs, and permeable pavements have also been added to the project description to reduce impervious surfaces and to allow storm water to infiltrate into the ground or reduce the rate at which it leaves the site. These design features (detention facility, green roofs, bioretention areas, and permeable pavements) have been scaled down from the size used for the Proposed Project. Hydrologic studies performed by engineers have determined that Alternative 1, with incorporation of these design features, would not cause an increase in runoff flow rate (based on the County's 6 hour $\frac{110-100}{100}$ year model storm) or severity off- #Reservation. Therefore, stormwater discharge from the project site would not significantly affect downstream drainage conditions. Because no structures would be placed in the flood zone, implementation of Alternative 1 would not be subject to, nor create, a flood hazard.

Alternative 2

Alternative 2 is a significantly reduced gaming complex, which would be 92.91% smaller than the Proposed Project gaming complex. Alternative 2 would also incorporate a stormwater detention facility to detain stormwater collected from the impervious surfaces and discharge it at a rate that matches pre-project flow conditions based on the County's 6 hour 100 year model storm. Green roofs and permeable pavements have also been added to the project description to reduce impervious surfaces and to allow storm water to infiltrate into the ground. These design features (detention facility, green roofs, and permeable pavements) have been scaled down from the size used for the Proposed Project. Hydrologic studies performed by engineers have determined that Alternative 2, with incorporation of these design features, would not cause an increase in runoff flow rate (based on the County's 6 hour 110-100 year model storm) or severity off- R<u>R</u>eservation. Therefore, stormwater discharge from the project site would not significantly affect downstream drainage conditions. Because no structures would be placed in the flood zone, implementation of Alternative 2 would not be subject to, nor create, a flood hazard.

No Action Alternative

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts to water resources.

Impact 4.5(2): Water Quality

Proposed Project

Construction of the proposed project would result in the temporary disturbance of soils that could be subject to erosion and transported to area waterways. However, an erosion control plan will be created and implemented for the construction phase to address this issue. During operation of the Proposed Project, parking lots and access roads could collect petroleum hydrocarbons, heavy metals, and other pollutants generated by vehicles. These pollutants are typically concentrated in paved areas and then transported to receiving water bodies during storm events. Please see **Impact 4.4-1** discussion for information concerning Clean Water Act Section 402 requirements, which would ensure a less than significant water quality impact during construction activities.

Numerical water quality objectives have been set for some of the expected pollutants. For pollutants that do not have numerical limits defined, water quality objectives are narrative and require protection of beneficial uses. For these pollutants, federal drinking water standards (Maximum Contaminant Levels) are often used as criteria.

To control storm water pollution and to protect water quality during the operational phase, the Proposed Project would utilize a combination of site planning, structural treatment devices, and best management practices. To accomplish this, design considerations were chosen from the County of San Diego Standard Urban Stormwater Mitigation Plan for storm water treatment and Low Impact Development. Low Impact Development is an engineering design approach to managing storm water runoff to protect water quality.

Runoff from impervious areas of the Proposed Project would be conveyed through a series of gutters, drop inlets, and subterranean storm drain system, into a gravel detention facility. For additional treatment, green roofs covering the gaming facilities and a bioretention facility at the outlet of the gravel detention facility would be installed. Runoff west of the creek shall flow via curb and gutter, drop inlets, and a storm drain line to the bioretention facility adjacent to the creek, which provides treatment.

A green roof system is proposed to cover the gaming facilities. Since the green roof is in itself a detention and treatment facility, the County of San Diego does not require further storm water detention and treatment of runoff from these areas. Green roofs are vegetated roof covers with growing media and plants taking the place of traditional roofing systems. In effect, they are treated like landscape areas at ground level and do not increase levels of pollutants of concern. Since they are self-contained, runoff from green roofs can easily be kept separate from other ground level improvements and can be discharged directly into Willow Creek without treatment or detention. Bioretention facilities work by percolating runoff through the soil which removes most pollutants before the runoff is allowed to seep into native soils below or a sub drain that carries treated runoff to a detention device or storm water conveyance system.

In addition to the structural controls designed into the proposed project, reduction of stormwater pollutant levels would be ensured through the use of source controls described in the San Diego County Stormwater Standards Manual. The Standards Manual requires commercial facilities to implement best management practices in the following areas: employee training; stormwater pollution prevention plans; storm drain tileage and signing; annual review of facilities and activities; pollution prevention; materials and waste management; vehicles and equipment; and outdoor areas.

The combination of structural devices and best management practices would reduce pollutants in stormwater to the maximum extent practicable. The residual pollutant concentration of the stormwater runoff would not significantly affect water quality downstream. To verify control and appropriate reduction of contaminants in surface runoff, the Tribe would implement a water quality monitoring program that would include testing for contaminants of concern. The combination of structural devices, best management practices, and monitoring would ensure that water quality is not degraded by project implementation.

Alternative 1

Construction of the proposed project would result in the temporary disturbance of soils that could be subject to erosion and transported to area waterways. However, an erosion control plan will be created and implemented for the construction phase to address this issue. During operation of Alternative 1, parking lots and access roads could collect petroleum hydrocarbons, heavy metals, and other pollutants generated by vehicles. These pollutants are typically concentrated in paved areas and then transported to receiving water bodies during storm events. Please see **Impact 4.4-1** discussion for information concerning Clean Water Act Section 402 requirements, which would ensure a less than significant water quality impact during construction activities.

Alternative 1 is a significantly reduced gaming complex, which would be <u>69_41</u>% smaller than the Proposed Project gaming complex, but would still have the potential to transport pollutants from paved surfaces. To control storm water pollution and to protect water quality during the operational phase, Alternative 1 would utilize a combination of site planning, structural treatment devices, and best management practices. Runoff from impervious areas of Alternative 1 would be conveyed through a series of gutters, drop inlets, and subterranean storm drain system, into a gravel detention facility. For additional treatment, green roofs covering the gaming facilities and a bioretention facility at the outlet of the gravel detention facility would be installed. Runoff west of the creek shall flow via curb and gutter, drop inlets, and a storm drain line to the bioretention facility adjacent to the creek, which provides treatment. The reduction of stormwater pollutant levels would be ensured through the use of source controls described in the San Diego County Stormwater Standards Manual, including the implementation of best management practices.

The combination of structural devices and best management practices would reduce pollutants in stormwater to the maximum extent practicable. The residual pollutant concentration of the stormwater runoff would not significantly affect water quality downstream. To verify control and appropriate reduction of contaminants in surface runoff, the Tribe would implement a water quality monitoring program that would include testing for contaminants of concern. The combination of structural devices, best management practices, and monitoring would ensure that water quality is not degraded by implementation of Alternative 1.

Alternative 2

Construction of the proposed project would result in the temporary disturbance of soils that could be subject to erosion and transported to area waterways. However, an erosion control plan will be created and implemented for the construction phase to address this issue. During operation of Alternative 2, parking lots and access roads could collect petroleum hydrocarbons, heavy metals, and other pollutants generated by vehicles. These pollutants are typically concentrated in paved areas and then transported to receiving water bodies during storm events. Please see **Impact 4.4-1** discussion for information concerning Clean Water Act Section 402 requirements, which would ensure a less than significant water quality impact during construction activities.

To control storm water pollution and to protect water quality during the operational phase, Alternative 2 would utilize a combination of site planning, structural treatment devices, and best management practices. Runoff from impervious areas of Alternative 2 shall be conveyed through a series of gutters, drop inlets, and subterranean storm drain system, into a gravel detention facility. For additional treatment, green roofs covering the gaming facilities and a bioretention facility at the outlet of the gravel detention facility would be installed. Runoff west of the creek shall flow via curb and gutter, drop inlets, and a storm drain line to the bioretention facility adjacent to the creek, which provides treatment. Reduction of stormwater pollutant levels would be ensured through the use of source controls described in the San Diego County Stormwater Standards Manual, including the implementation of best management practices

The combination of structural devices and best management practices would reduce pollutants in stormwater to the maximum extent practicable. The residual pollutant concentration of the stormwater runoff would not significantly affect water quality downstream. To verify control and appropriate reduction of contaminants in surface runoff, the Tribe would implement a water quality monitoring program that would include testing for contaminants of concern. The combination of structural devices, best management practices, and monitoring would ensure that water quality is not degraded by implementation of Alternative 2.

No Action Alternative

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any impacts to water quality.

4.5.3 MITIGATION

Mitigation 4.5(1): Drainage and Flooding

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.5(2): Water Quality

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

SECTION 4.6

HAZARDS AND HAZARDOUS MATERIALS

4.6 HAZARDS AND HAZARDOUS MATERIALS

4.6.1 ENVIRONMENTAL SETTING

Current Conditions and Land Use

Lands on the reservation are not currently in active use, except for a pre-fabricated building used for tribal administrative purposes and a recently constructed community center. Previously, the Reservation had approximately 15 residences (pre-fabricated structures). Propane gas for cooking and heating was stored in above-ground storage tanks that have since been removed. These residential lots are now vacant and have no improvements other than dirt / concrete building pads, pavement, and landscape plants. Weeds and tall grass appear to have been periodically mowed or cut back. Surrounding uses include: to the south, the Rancho Jamul Ecological Reserve and the Hollenbeck Canyon Wildlife Area, and private rangeland and large residential estates; to the north, the 4-acre parcel (former fire station), the 87-acre parcel (used as cattle pasture), and residential subdivisions and the town of Jamul; to the east, Highway 94, the new fire station, residential subdivisions (Peaceful Valley Ranch Estates), and hayfields; and to the west, cattle pasture and private estates. All fuel storage tanks associated with the old fire station have been removed under permit. The 10-acre parcel north of Melody Road has a defunct orchard and irrigation system, including 2 wells and a pump in a cistern.

Previous Environmental Assessments

The following environmental assessments analyzed parcels that included the entirety of, or portions of, the project area:

Level I Survey – **2002.** A Level I Survey was conducted for the Jamul Indian Village project development area in 2000 by ESA Inc. for Jamul Indian Village Environmental Assessment (BIA 2001), and updated by Analytical Environmental Services Inc. in 2002 for the Jamul Indian Village Environmental Impact Statement (BIA 2003). These previous assessment areas consisted of an adjacent 87-acre parcel (owned by Lakes Entertainment), 4-acre parcel (adjacent parcel owned by the Tribe), 10-acre parcel located at the northwest corner of SR 94 and Melody Road (owned by Lakes Entertainment), and the Jamul Indian Village, which were all part of a previous fee-to-trust request made by the Tribe to the BIA. The surveys included a contaminant survey checklist, field reconnaissances, and database queries by EDR, in accordance with the ASTM Standard Practice for Environmental Site Assessments E 1527-00 and the Bureau of Indian Affairs guidelines. Existing hazardous materials usage was reported as follows:

"Minor quantities of household debris (consisting of paper refuse, glass bottles, aluminum cans, etc.) were observed to be scattered along the eastern edge of the project area (along Highway 94), at the northern end of the project area (along Melody Road), and around the southern end of the project area (along the un-named dirt road near the fire station, residential area and cemetery). Such trash is typical of vacant land located near major roadways. Discarded chemical products or

drums were not observed on the subject Study Area. Each of the 15 residential structures [within the Jamul Indian Village] has a five-hundred-gallon propane tank associated with it. (BIA 2003)"

The report concluded that no recognized environmental conditions existed at the site other than de minimis (i.e., insignificant) conditions such as roadside litter. No further investigation was recommended.

Level I Hazardous Materials Assessment – 2007. In 2007, a Level I hazardous materials assessment was conducted by Natural Investigations Co. (2007) of the current project area and portions of adjacent parcels. The hazards/hazardous materials assessment consisted of a field reconnaissance, database queries, and impact analysis. The field survey detected no significant environmental conditions other than *de minimis* quantities of trash. Database searches produced no reported sites within the project area or immediate vicinity, except licensed use of fuel storage tanks by the Jamul fire station and household propane usage.

Level I Hazardous Materials Assessment – 2009. A follow-up Level I hazardous materials assessment was conducted for the proposed project by Natural Investigations Co. in 2009. This assessment included a database query and field reconnaissance to update previous assessments, and to survey areas that were not previously surveyed. Since the previous survey was completed, the homes and buildings on the Reservation have been removed, and the fire station on the 4-acre parcel was removed and relocated across SR 94, and roadway improvements were made on the Reservation and the 4-acre parcel.

Phase I Environmental Site Assessment for the Jamul Access Project – 2010. The Study Area consisted primarily of 3 parcels—the 87-acre parcel, the 4-acre parcel, and the 10-acre parcel, but also the CalTrans right-of-way corridor of State Route 94 and associated driveways. It was Natural Investigations Company's opinion that there are no historic recognized environmental conditions and no current recognized environmental conditions in connection with the Study Area pursuant to the ASTM Practice E 1527-05. Records review, database searches, or interviews failed to identify any environmental conditions in connection with the Study Area other than *de minimis* disposal of solid waste onto the Study Area. No further site investigation was recommended. Two common hazards were noted: portions of the Study Area may be located within a 100-year or 500-year floodplain, and the Study Area contains dense, dry vegetation that may fuel wildfire, and the region is prone to wildfires.

Environmental Database Queries

As part of this assessment, Natural Investigations Company retained the services of Environmental Data Resources Incorporated (EDR), which queries and maintains comprehensive environmental databases and historical information, including proprietary databases, aerial photography, topographic maps, Sanborn Maps, and city directories. EDR's Phase I ESA standard package - "Radius Map with GeoCheck" was performed in January 2011 (and also previously in 2007, 2009 and 2010). An additional 0.5 mile extension of the search radius was ordered because of the large size of the Study Area (Jamul Indian

Village, the 87-acre parcel, the 4-acre parcel, the 10-acre parcel, and the SR 94 study corridor). In this report, EDR presented the results of searches of all reasonably ascertainable environmental databases (federal, state, local, and private) for records of potential environmental impacts of the Study Area and vicinity. EDR performed these database searches within the prescribed radii of ASTM Practice E 1527-05 (ASTM, 2005).

The complete EDR Radius Map report is provided in Natural Investigation's 2010 Phase I report. Results are summarized in EDR's Radius Report map in **Figure 4.6-1**. Numbered elements in EDR's map correspond to numbered cases in EDR's report. The project area (Jamul Indian Village) was not listed in any databases. Three sites were listed in the vicinity of the project area:

- Map Element Number 1. Peaceful Valley Ranch, 14026 Peaceful Valley Ranch Road, San Diego Co. Hazardous Materials Management Division Database, DEH Site Assessment & Mitigation program, leaking UST incident, petroleum substance release to soil, case closed.
- Map Element Numbers A2, A3, A4. Jamul Fire Station No. 66, 14145 Highway 94. Databases: NPDES, HIST UST, SWEEPS, San Diego Co. Hazardous Materials Management Division Database, enrolled under construction general stormwater permit, registered diesel and gasoline underground storage tanks (USTs).
- Map Element Number 5. AMERI/MEX, 14063 Highway 94, HAZNET database, registered disposal of waste oil and mixed oil, 1999.

Also in the vicinity of the project area, but not mapped due to data deficiencies, are several sites that are either historic hazardous materials release cases or involve permitted uses of hazardous materials, summarized as follows:

- Las Montanas Golf Course, Vista Rancho Miguel Road, SWEEPS UST database, licensed UST use;
- Jamul Burnsite, Jamul Drive, LDS, FINDS, SWF/LF databases, licensed landfill;
- Rancho Miguel Estates, Jamacha Road and Steele Canyon, San Diego Co. Hazardous Materials Management Division Database, leaking UST incident, case closed;
- Jamul Christian School, P.O. Box 74, FINDS database, registered pesticide use;
- Gus Batton, 13212 Highway 94, San Diego Co. Dept. of Environmental Health database, leaking UST incident, oil release to soil, case closed.



SOURCE: EDR, 2011; Natural Investigations Co., 2011; EDS, 2012

[.] Jamul Indian Village Draft Final Tribal EE 🔳

Figure 4.6-1 Environmental Database Queries in Project Area The State Public Water Supply database lists the following wells in the Jamul area (from the EDR report): Circle J Ranch (no address); Sunrise Estates Municipal Water Supply (no address); Skyline Ranch Campground (no address); Indian Hills Camp, 15763 Lyons Valley Road, and Diamond Jack RV Ranch.

Historical and current aerial photos and topographic maps of the project area were analyzed to determine the following: topography and inferred surface water and ground water flow direction; current and historical land use; any current or historical structures, utilities, and roads; and any current or historical drum storage, above ground tanks, garbage dumps or landfills, or pits, ponds, or lagoons. This historical aerial photo sequence, beginning with 1953, documented relatively little change in land use of the project site and immediate vicinity, except for an increase of homes in the surrounding area. No visual clues as to any possible recognized environmental conditions were found.

Site Reconnaissance

A site reconnaissance of the project area was performed on 24 February 2010 and 4 May 2010 according to the ASTM (2005) standard (**Appendix 8**). No recognized environmental conditions were found, and no further investigation was recommended. Another site reconnaissance of the project area was performed on 23-24 March 2011. All accessible portions of the project area were observed by a pedestrian survey; adjoining properties were observed primarily by binocular or windshield (automobile) survey.

Roads within the project area are unpaved gravel roads or paved with asphalt or concrete, and showed no suspicious staining. Minor quantities of household debris (consisting of paper refuse, glass bottles, aluminum cans, etc.) were observed to be scattered along the SR 94 right-of-way, in the stream corridor, and other parcels adjacent to the project area. Discarded chemical product containers or drums were not observed within the project area. No hazardous substances or petroleum product usage or storage was noted within the project area during the site reconnaissance. The nearest known storage tank is the former above-ground storage tank concrete pad associated with the former fire station on the 4-acre parcel. The former fire station used two fuel USTs until 1986, then excavated the USTs and installed two ASTs. These ASTs were relocated when the fire station was relocated across SR 94 circa 2006-2007. No staining of the concrete pads or surrounding pavement was evident during the site reconnaissance. The fire station employed a septic system, and it is not known if the septic tanks were removed or left in place. No poly-chlorinated biphenyl (PCB)-containing equipment (electric or hydraulic) was observed during the site reconnaissance.

Regulatory Setting

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle

to grave" regulation of hazardous wastes. Other federal laws include: Community Environmental Response Facilitation Act (CERFA) of 1992; Clean Water Act; Clean Air Act; Safe Drinking Water Act; Occupational Safety and Health Act (OSHA); Atomic Energy Act; Toxic Substances Control Act (TSCA); and Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Federal Regulatory Requirements

Resource Conservation and Recovery Act of 1976 [42 U.S.C. §6901 et seq.]. Regulation of the identification, generation, transportation, storage, treatment, and disposal of hazardous materials and hazardous wastes.

Comprehensive Environmental Response, Compensation and Liability Act of 1980. Regulation of former and newly discovered uncontrolled waste disposal and spill sites. Established the National Priorities List of contaminated sites, and the "Superfund" cleanup program.

Clean Water Act. Regulation of discharges and spills of pollutants, including hazardous materials, to surface waters and groundwater.

Safe Drinking Water Act. Regulation of discharges of pollutants to groundwater and aquifers.

Toxic Substances Control Act. Regulation of manufacturing, inventory, and disposition of industrial chemicals including hazardous materials.

Federal Insecticide, Fungicide & Rodenticide Act. Regulation of the manufacturing, distribution, sale, and use of pesticides.

Hazardous Materials Transportation Act. Regulation of the transport of hazardous materials by motor vehicles, marine vessels, and aircraft.

Emergency Planning & Community Right To Know Act [40 C.F.R. Parts 350 to 372]. Regulation of facilities that use hazardous materials in quantities that require reporting to emergency response officials.

March 2012 January 2013

Executive Order 12088, Federal Compliance with Pollution Control. Mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

State Regulatory Requirements

Porter-Cologne Water Quality Act. Regulates water quality through the State Water Resources Control Board and Regional Water Quality Control Boards, including oversight of water monitoring and contamination cleanup and abatement.

Hazardous Materials Release Response Plans and Inventory Law. Requires facilities using hazardous materials to prepare hazardous materials inventories and business plans.

Hazardous Waste Control Act. Similar to Resource Conservation and Recovery Act on the federal level in regulating the identification, generation, transportation, storage and disposal of materials deemed hazardous by the State of California.

Safe Drinking Water & Toxic Enforcement Act [Proposition 65]. Similar to the Safe Drinking Water Act and Clean Water Act on the federal level in regulating the discharge of contaminants to groundwater.

California Government Code §65962.5. Requires the Department of Toxic Substances Control to compile and maintain lists of potentially contaminated sites located throughout the State of California (includes the Hazardous Waste and Substances Sites List known as "Cortese").

4.6.2 ENVIRONMENTAL CONSEQUENCES

Significance Criteria

The project would result in a significant hazard impact if:

- The project is a business, operation, or facility that emits hazardous emissions or handles hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed sensitive receptor, such as a school or nursing home, that in the event of a release could adversely affect the health of sensitive individuals, such as children or the elderly,
- The project is located on, or within one-quarter mile of, a site identified in one of the federal or hazardous substances databases or is otherwise known to have been the subject of a release of hazardous substances or petroleum products, and as a result the project may result in a significant hazard to the public or the environment,

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment,
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan, or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Impact 4.6(1): Accidental Release of Hazardous Materials - Construction

Proposed Project

During the period of construction, various petroleum products and hazardous materials would be stored and used in the project area. **Table 4.6-1** provides a list of construction materials that may be used and activities that may be performed that would have the potential to contribute pollutants, other than sediment, directly to the ground or to storm water runoff.

Under Clean Water Act Section 402, any construction project that disturbs at least one acre of land requires enrollment in the construction general permitting program under the National Pollutant Discharge Elimination System (NPDES). For construction on Indian Reservations and federal lands, the landowner and contractor must enroll for coverage under the US Environmental Protection Agency's General Storm Water Discharge Permit for Construction Activities (NPDES No. CAR10000IF). For construction on non-federal lands in California, the landowner and contractor must enroll for coverage under the State Water Resources Control Board's General Storm Water Discharge Permit for Construction Activities (Order No. 2009-0009, NPDES No. CAS000002) prior to the initiation of construction. Coverage under either permit requires creation and implementation of an effective storm water pollution prevention plan, erosion control plan, hazardous materials management and spill response plan, and construction best management practices, all of which are designed to minimize or eliminate accidental discharges of pollutants. These plans would reduce or eliminate the potential for accidental release of pollutants during construction, as well as properly control stormwater on the construction site. Implementation of these measures would reduce potential impacts of accidental release of hazardous materials during construction to a less-than-significant level.

Construction Activity/Material Type	Potential Pollutant
Vehicle lubricants and fuels, including oil, grease, diesel and gasoline, and coolants	Petroleum hydrocarbons, volatile organic compounds (VOCs)
Asphaltic emulsions associated with asphalt-concrete paving operations	Petroleum hydrocarbons, VOCs
Portland cement, masonry, and concrete products, muriatic acid, etc.	Materials with a low or high pH, materials with high alkalinity, metals
Base and subbase material	Materials with high alkalinity / pH, metals
Adhesives, paints, solvents, etc.	VOCs, SVOCs, metals
Landscaping materials and wastes	Pesticides, biological oxygen demand, metals
Treated lumber (materials and waste)	Arsenic, copper, other metals, creosote
Building material packaging and construction personnel	General litter (municipal solid waste, universal waste)
Portable toilets	Septic waste (fecal coliform, biological oxygen demand)
SOURCE:	

TABLE 4.6-1 SUMMARY OF POTENTIAL PROJECT POLLUTANTS OTHER THAN SEDIMENT

Alternative 1

As is the case with the Proposed Project, development under Alternative 1 would comply with Clean Water Act Section 402, receive coverage under the US Environmental Protection Agency's General Storm Water Discharge Permit for Construction Activities (NPDES No. CAR10000IF) and enroll for coverage under the State Water Resources Control Board's General Storm Water Discharge Permit for Construction Activities (Order No. 2009-0009, NPDES No. CAS000002) prior to the initiation of construction (for work on non-federal lands). Implementation of these plans/programs would reduce or eliminate the potential for accidental release of pollutants during construction, as well as properly control stormwater on the construction site. Implementation of these measures would reduce potential impacts of accidental release of hazardous materials during construction to a less-than-significant level for Alternative 1.

Alternative 2

As is the case with the Proposed Project, development under Alternative 2 would comply with Clean Water Act Section 402, receive coverage under the US Environmental Protection Agency's General Storm Water Discharge Permit for Construction Activities (NPDES No. CAR10000IF) and enroll for coverage under the State Water Resources Control Board's General Storm Water Discharge Permit for Construction Activities (Order No. 2009-0009, NPDES No. CAS000002) prior to the initiation of construction (for work on non-federal lands). Implementation of these plans/programs would reduce or eliminate the potential for accidental release of pollutants during construction, as well as properly control stormwater on the construction site. Implementation of

these measures would reduce potential impacts of accidental release of hazardous materials during construction to a less-than-significant level for Alternative 2.

No Action Alternative

The No Action Alternative would not result in the development of a gaming complex on the Reservation. No significant hazards or hazardous materials impacts would occur under the No Action Alternative.

Impact 4.6(2): Buried Hazards or Hazardous Materials - Construction

Proposed Project

No evidence of buried storage tanks or soil or groundwater contamination or other recognized environmental conditions were found during environmental site assessments performed in the last decade. However, construction of the Proposed Project would involve excavation, trenching and grading, and such earth-moving activities may uncover a previously unknown underground fuel storage tank, contaminated soil, or other hazardous material issue. Thus, construction activities could pose a risk to human health for construction personnel if contaminants are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as USTs, piping, or solid waste. This is a potentially significant impact.

Alternative 1

As is the case with the Proposed Project, no evidence of buried storage tanks or soil or groundwater contamination or other recognized environmental conditions were found during environmental site assessments. Construction activities associated with Alternative 1 could pose a risk to human health for construction personnel if contaminants are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as USTs, piping, or solid waste. This is a potentially significant impact.

Alternative 2

As is the case with the Proposed Project, no evidence of buried storage tanks or soil or groundwater contamination or other recognized environmental conditions were found during environmental site assessments. Construction activities associated with Alternative 2 could pose a risk to human health for construction personnel if contaminants are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces

such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as USTs, piping, or solid waste. This is a potentially significant impact.

No Action Alternative

The No Action Alternative would not result in the development of a gaming complex on the Reservation. No significant hazards or hazardous materials impacts would occur under the No Action Alternative.

Impact 4.6(3): Accidental Release of Hazardous Materials - Operation

Proposed Project

Operation of the Proposed Project would involve the use, storage, and disposal of some hazardous materials and petroleum products, which include the following:

- Emergency generators would provide back-up electrical service to the Proposed Project in the event of a loss of service from the SDG&E grid. Diesel fuel for the generators would be stored in four 2,000-gallon tanks. The tanks would be located above ground and would be double-walled to provide for leak-detection and containment. Additionally, the tanks would have a pre-cast concrete encasement to further protect against the possibility of a leak;
- A liquid propane tank would be located near the diesel fuel tanks to provide propane to the kitchen facility;
- A small emergency generator would provide back-up electrical service to the fire station. A small diesel tank would be used to power the generators; and
- Herbicides, pesticides, paints, and strong cleansers would be used as part of building and grounds maintenance.

Under state and federal laws that are jointly enforced under the Unified Program administered by the California Environmental Protection Agency, businesses and commercial and industrial operations are carefully monitored. Among the requirements for legal operation of a business or enterprise that is involved with reportable quantities of petroleum products or hazardous materials are the following:

• creation and implementation of a Hazardous Materials Business Plan, which includes a spill prevention, containment, and countermeasures plan;

- current inventory and site map of all reportable quantities of petroleum products or hazardous materials;
- annual inspections of the facility by the Certified Unified Program Agency and/or local fire department;
- employee training; and
- proper recordkeeping of purchases, disposal, and manifesting of hazardous materials and wastes.

If a business generates hazardous wastes above threshold volumes, the business must register as a Hazardous Waste Generator with the US Environmental Protection Agency and/or the California Environmental Protection Agency, depending upon the jurisdiction. Registration involves regular inspections as well as the implementation of requirements for storage, labeling, contingency planning, training, shipping, reporting, and disposal of hazardous materials.

Because of these existing regulatory and monitoring mechanisms in place, the risk to the public presented by these potential hazards is less than significant.

Alternative 1

Potential impacts for this Alternative 1 are similar to those for the Proposed Project but scaled down accordingly. Because of these existing regulatory and monitoring mechanisms in place, the risk to the public presented by these potential hazards is less than significant.

Alternative 2

Potential impacts for this Alternative 2 are similar to those for the Proposed Project but scaled down accordingly. Because of these existing regulatory and monitoring mechanisms in place, the risk to the public presented by these potential hazards is less than significant.

No Action Alternative

The No Action Alternative would not result in the development of a gaming complex on the Reservation. No significant hazards or hazardous materials impacts would occur under the No Action Alternative.

Impact 4.6(4): Risk of Causing Wildfire During Project Construction

Proposed Project

Wildfires are a potential hazard in rural San Diego County. Portions of the project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The project area is located within an area of moderate to high fire hazard. Construction activities may introduce potential ignition sources that have the potential to initiate a wildfire, which could cause injury or death of people or property losses. This is a potentially significant impact.

Alternative 1

The potential for causing a wildfire during project construction under Alternative 1 is the same as for the Proposed Project. This is a potentially significant impact.

Alternative 2

The potential for causing a wildfire during project construction under Alternative 2 is the same as for the Proposed Project. This is a potentially significant impact.

No Action Alternative

The No Action Alternative would not result in the development of a gaming complex on the Reservation. No significant hazards or hazardous materials impacts would occur under the No Action Alternative.

4.6.3 MITIGATION

Mitigation 4.6(1): Accidental Release of Hazardous Materials - Construction

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

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Mitigation 4.6(2): Buried Hazards or Hazardous Materials - Construction

Proposed Project

If contaminated soil or groundwater, or a buried hazardous material storage container, is encountered during project construction, work shall be halted in that area, and the type and extent of the contamination shall be identified and characterized by qualified professionals. A qualified professional, in consultation with regulatory agencies shall then develop an appropriate method to remediate the contamination. If necessary, a remediation plan shall be implemented in conjunction with continued project construction.

If any significant hazardous materials issues are encountered, a Health and Safety Plan (HASP) shall also be created and implemented before construction resumes. A HASP prepared for the construction process, consistent with general industry standards and the Occupational Safety and Health Administration, would address any risks to construction personnel and public safety such that these health and safety risks could be mitigated to an acceptable level. This site-specific HASP shall describe in detail the health and safety guidelines, procedures, and work practices that must be adhered to and the work to be performed, and shall also include special details governing certain work, such as working in confined spaces. Should contaminants be found, appropriate measures shall be taken to mitigate potential effects. This may include excavation of contaminated soils and disposal at an appropriate facility. The HASP shall also address appropriate personal protective equipment (PPE), monitoring to protect on-site workers (if contamination or storage tanks are encountered), and the appropriate level of worker training (e.g., Hazardous Waste Operations and Emergency Response training). Monitoring may include visual and olfactory observation (e.g., soil staining or unusual odors), or air monitoring with hand-held devices (e.g., photo-ionization detector) to detect volatile hydrocarbons. In addition, health-risk based action levels shall be identified for applicable contaminants that would trigger modifications to work practices. Work practice modifications may include the cessation of construction activities until soil or groundwater sampling is performed, or an increase in the level of PPE or worker training. A Sampling and Analysis Plan shall accompany the HASP to determine if constituents of concern are present and at what concentrations. The HASP shall also address procedures to follow if unknown objects (e.g., USTs and associated piping) are encountered, and the use of specialized contractors to decommission and remove such USTs and perform confirmation sampling. The implementation of remedial activities and implementation of an adequate HASP would reduce the health risk to construction personnel to a less than significant level.

Alternative 1

The mitigation measures for impacts associated with Alternative 1 are identical to the mitigation measures identified for the Proposed Project.

Alternative 2

The mitigation measures for impacts associated with Alternative 2 are identical to the mitigation measures identified for the Proposed Project.

No Action Alternative

No mitigation is necessary.

Mitigation 4.6(3): Accidental Release of Hazardous Materials - Operation

Proposed Project

The project will conform to federal (e.g., Resource Conservation and Recovery Act of 1976), state, and county laws pertaining to the storage, use, and disposal of petroleum products and hazardous materials. The Unified Program (http://www.calepa.ca.gov/CUPA/) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of federal and state environmental and emergency response programs. Cal/EPA and other state agencies set the standards for their programs while local governments implement the standards—these local implementing agencies are called Certified Unified Program Agencies (CUPA). For San Diego County, the Hazardous Materials Division is the CUPA.

No mitigation is necessary.

Alternative 1

No mitigation is necessary Same as Proposed Project.

Alternative 2

No mitigation is necessary Same as Proposed Project.

No Action Alternative

No mitigation is necessary.

Mitigation 4.6(4): Risk of Causing Wildfire - Construction

Proposed Project

To reduce the risk of starting a wildfire during construction, construction best management practices should be employed, including the following:

- Use spark arresters on construction equipment,
- Restrict vehicular parking to areas devoid of grasses or other fuels,
- Designate safe areas for welding and metal cutting operations,
- Prohibit smoking,
- Properly store flammable or explosive materials, and
- Keep construction areas wetted with water trucks and implement a fire safety / response plan that addresses the following elements:
 - Secure on-site water sources for fire suppression (either a tap into a nearby hydrant or the rental of portable water storage tanks),
 - Water delivery system (hoses, water trucks, etc.),
 - Personnel training and incident command system,
 - On-site fire suppression equipment (e.g., flame resistant suits, fire extinguishers, high-pressure hoses and nozzles, self-contained breathing apparatus), and
 - A warning system.

Implementation of construction best management practices will reduce the risk of construction activities starting a wildfire to a less than significant level.

Alternative 1

Mitigation for Alternative 1 is the same as for the Proposed Project.

Alternative 2

Mitigation for Alternative 2 is the same as for the Proposed Project.

No Action Alternative

No mitigation is necessary.



BIOLOGICAL RESOURCES

4.7 BIOLOGICAL RESOURCES

4.7.1 ENVIRONMENTAL SETTING

Regional Setting

The project area is located within the Peninsular Ranges geographic sub region, which is contained within the Southwestern geographic subdivision of the larger California Floristic Province (Hickman 1993). The region is in climate Zone 21 – "Ocean-influenced southern California," characterized by infrequent frost, with mild to hot, dry summers and mild, wet winters moderated by marine air influx (Hickman 1993; Brenzel 2001). The topography of the project area is undulating and slopes generally toward the Willow Creek drainage, and ultimately, to the south. The elevation ranges from approximately 850-<u>800</u> feet to 950-<u>1,000</u> feet above mean sea level. The general direction of surface runoff in the project area is to the southwest via Willow Creek, an intermittent drainage tributary to Jamul Creek.

Study Area

For purposes of this assessment, the Study Area is defined as the Project Area (the 6-acre Jamul Indian Village) plus potential access road / traffic mitigation areas. The access road/traffic mitigation areas consist of 3 parcels plus a State Route 94 (SR 94) study corridor with some overlap between these subareas: the eastern half of an 87-acre parcel (APN 597-06-005); a 4-acre parcel (APN 597-06-004); a 10-acre parcel (APN 597-04-213); and a 20-acre SR 94 study corridor that consists of an widened CalTrans right-of-way of SR 94, from 1/4-mile north of Melody Road to 1/2 mile south of the Jamul Indian Village, and the frontage and driveways of affected parcels and ancillary roads.

The Project Area (Jamul Indian Village) is not currently in active use, other than having a prefabricated building used for tribal administrative purposes. Previously, the Jamul Indian Village had numerous residences, consisting of pre-fabricated structures. These portions of the parcel are now vacant and have no improvements other than dirt / concrete building pads, pavement and landscape plants. Weeds and tall grass appear to have been periodically mowed or cut back. The far west portion of the Village parcel is owned by the Roman Catholic Church and contains a small cemetery and church.

The surrounding land uses are as follows: to the south, the Rancho Jamul Ecological Reserve and the Hollenbeck Canyon Wildlife Area, and private rangeland; to the north, the 4-acre parcel (former fire station), the 87-acre (used as cattle pasture), and residential subdivisions and the town of Jamul; to the east, Highway 94, the new fire station, private estates (Peaceful Valley Ranch Estates), and hayfields; and to the west, cattle pasture and private estates.
Vegetation Communities and Wildlife Habitat Types

On-Reservation

The project area currently contains three terrestrial natural community/habitat types: ruderal/urbanized (approximately 4.6 acres); annual grassland (1.0 acre); and coast oak riparian (0.4 acre) (see Exhibit 4A) (**Figure 4.7-1**) (**Appendix 9**). A small remnant (> 0.1 acre) of coastal scrub is also present.

Off-Reservation

The larger Study Area currently contains four terrestrial natural community/habitat types, listed in descending areal preponderance: annual grassland, ruderal/developed, coast oak riparian, and coastal scrub (Figure 4.7-2).

Ruderal or developed areas consist of disturbed or converted natural habitat that is now either in a weedy and barren (ruderal) state, recently graded, or urbanized with pavement, landscaping, and structure and utility placement. Vegetation within this habitat type consists primarily of nonnative weedy or invasive ruderal species or ornamental plants lacking a consistent community structure. The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages. However, common, disturbance-tolerant species do occur in these lands.

Annual grassland is a plant community in the project area, and consists of open fields of non-native pasture grasses and weedy forbs. These annual grasslands have replaced native habitats of perennial bunchgrasses or coastal scrub. Grazing disturbances, rather than periodic wildfires, keep this plant community from undergoing successional changes to woodland or scrub. Plant species common in this community include European annual grasses (*Avena, Bromus, Hordeum, Festuca*), and forbs, such as turkey mullein (*Eremocarpus setigerus*), yellow star thistle (*Centaurea solstitialis*), and black mustard (*Brassica nigra*). The conversion of native habitats to annual grasslands greatly reduces wildlife biodiversity and habitat value.

A coast live oak riparian corridor (Willow Creek) runs north-south through the project area, but is severely degraded from cattle grazing. The dominant canopy tree is coast live oak (*Quercus agrifolia*); other characteristic riparian trees include canyon live oak and Engelmann oaks (*Quercus chrysolepis*, *Q. engelmannii*), willows (e.g. *Salix gooddingii* and *S. lasiolepis*), cottonwood, walnut, and non-native trees such as Eucalyptus. Understory vegetation is sparse, but includes elderberry, blackberry, and poison oak. This type of habitat is important to many wildlife species.



SOURCE: Digital Globe, 2012; Natural Investigations Co., 2012; EDS, 2012

Jamul Indian Village Draft Final Tribal EE **Figure 4.7-1** Vegetation Community/Habitat Types within the Study Area



SOURCE: Digital Globe, 2012; Natural Investigations Co., 2012; EDS, 2012

Jamul Indian Village Draft Final Tribal EE Figure 4.7-2 Vegetation Community/Habitat Types in the Vicinity of the Study Area Remnants of coastal scrub habitat are present in the project area, and consist largely of California sagebrush (*Artemisia californica*) and buckwheats (*Eriogonum*). Other common species in this habitat type are mule-fat (*Baccharis salicifolia*), tumbleweed (*Salsola*), white sage (*Salvia apiana*), and laurelleaf sumac. Coastal scrub plant communities are adapted to wildfires and drought conditions, and provide habitat for many different types of wildlife. Cattle grazing has severely degraded the coastal scrub vegetation community and reduced the native shrub cover and allowed non-native weedy species to establish. Degraded scrub provides little habitat for wildlife. Granitic outcrops in the project area provide breaks in the scrub cover for reptiles to bask and birds to perch.

Two special-status communities were reported by the California Natural Diversity Database (CNDDB) (CDFG CDFW 2011) within a 5-mile radius of the project area: Southern Coast Live Oak Riparian Forest and Southern Interior Cypress Forest. One special-status community is present within the project area: the Willow Creek riparian corridor contains Southern Coast Live Oak Riparian Forest (on the 87-acre parcel, the 10-acre parcel, and the Jamul Indian Village). No critical habitat for any federally-listed species occurs within the project area.

Habitat Connectivity and Wildlife Corridors

Wildlife movement corridors link remaining areas of functional wildlife habitat that are separated primarily by human developments, but natural barriers such as rugged terrain and abrupt changes in vegetation cover also exist. Wilderness and open lands have been fragmented by urbanization, which can disrupt migratory species and separate interbreeding populations. Corridors allow migratory movements and act as links between these separated populations. Within the region, wildlife corridors exist: Jamul Creek drainage; and the preserve areas (Rancho Jamul Ecological Reserve and Hollenbeck Canyon Wildlife Area). Busy roadways (primarily SR 94) and their fences create barriers and significant sources of mortality. Culverts under roads and bridges, such as the bridge at Melody Road, allow some wildlife movement under busy roads; thus the Willow Creek riparian corridor within the project area functions to a limited extent as a wildlife corridor. No fishery resources exist in the project area because all drainages flow only ephemerally or intermittently and are highly degraded.

Protected Water Resources

Water Resources Under Federal Jurisdiction

A formal delineation of water features under federal jurisdiction (waters of the US) of the Jamul Indian Village and surrounding parcels (the 87-acre parcel, the 4-acre parcel, the 10-acre parcel) and the SR 94 corridor was performed in summer 2011 (**Appendix 9**). This delineation was field verified by USACE in November 2011, and a preliminary jurisdictional determination was agreed upon by both USACE and the Tribe. Water features subject to USACE jurisdiction under the Clean Water Act consist of Willow Creek, its tributaries, and instream riverine marshes. (**Figure 4.7-23**). Within the

Jamul Indian Village, only one water feature is present: Willow Creek. No wetlands, vernal pools, or other water features are present.

On-Reservation

Willow Creek is an intermittent tributary of Jamul Creek, which spans approximately 269 feet within the Study Area and has an average channel width of 3 feet; this equates to an area of about 800 square feet (0.02 acre). One 36-inch corrugated metal pipe culvert conveys flows under Reservation Road. Ordinary High Water Mark indicators for this drainage include: shelving; drift lines; sediment deposits; destruction/absence of vegetation; bank erosion; and litter/debris packing. Where scouring did not remove vegetation, in-channel vegetation included: watercress (*Rorippa nasturtium-aquaticum*), curly dock (*Rumex crispus*), nutsedge (*Cyperus* sp.), Jimsonweed (*Datura stramonium*), tree tobacco (*Nicotiana* sp.), and various non-native annual grasses and weedy forbs. Where present, riparian canopy species included: Arroyo willow (*Salix lasiolepis*), coast live oak (*Quercus agrifolia*), Tree of Heaven (*Ailanthus altissima*), and pepper tree (*Schinus* sp.).

Off-Reservation

Parcels adjacent to the project area are discussed here so that potential off-site project-related effects may be analyzed later in **Section 4.15** *Indirect Effects of Mitigation Measures*. On the adjacent 87-acre parcel, Willow Creek and its tributaries (Drainage B and Swales 2, 3, 3B, 4, 4B) are intermittent or ephemeral channels, with a combined length of about 1,700 feet and an average channel width of 3 feet. On the 87-acre parcel, two instream marshes ("Wetland A" and "Wetland B") are located within the Willow Creek channel. On the 10-acre parcel north of Melody Road and west of SR 94, Willow Creek continues as an ephemeral stream with a length of about 1,500 feet and a channel width of 6 to 10 feet. Also on this parcel is a tributary channel ("Swale 5) that is approximately 800 feet long and 3 feet wide. The entire 4-acre Parcel has upland features and contains no water features and no waters of the US. The majority of the Highway 94 Study Corridor has upland features and contains no water features and no waters of the US, except for two drainage culverts under Highway 94 that connect to Willow Creek ("Swale 4" and "Swale 4B"), which have a combined length of about 100 feet and an average width of 3 feet. Swales, roadside ditches, and culverts are not expected to be subject to federal regulation. No vernal pools or other isolated wetlands were detected within these parcels adjacent to the project area.

Water Resources Under State Jurisdiction

The project area (Jamul Indian Village) is a federal Indian reservation that is not subject to California state laws. Parcels adjacent to the project area are discussed here so that potential off-site project-related effects may be analyzed later. All channels and two wetlands that are subject to federal jurisdiction are also subject to State jurisdiction under the Porter-Cologne Act: the entire length of



SOURCE: Digital Globe, 2012, Natural Investigations Co., 2012; EDS, 2012

Willow Creek from the southern border of the 87-acre parcel to the northern border of the 10-acre parcel; ephemeral channels tributary to Willow Creek, and Wetland A and B, riverine marshes located within the ordinary high water mark of Willow Creek and completely within the 87-acre parcel (**Figure 4.7-3**). Under Fish and Game Code (Section 1600 et seq.), the Stream Zone of Willow Creek and Drainage B are also protected. On the 87-acre parcel, the limits of riparian vegetation on Willow Creek and Drainage B equate to approximately 3.7 acres of stream zone; on the 10-acre parcel, the stream zone is approximately 0.7 acres in size.

The entire 4-acre parcel has upland features and contains no water features and no waters of the State. All of the Highway 94 Study Corridor has upland features and contains no water features and no waters of the State; the exception are two ephemeral drainages (Swale 4 and Swale 4B) that run through culverts under SR 94 and into Willow Creek on the 87-acre parcel. <u>Grass-lined r</u>Roadside ditches are not expected to be subject to State regulation.

Special-status Species

Historical Records of Special-status Species' Occurrences

A list of special-status plant and animal species that historically occurred within the project area and vicinity was compiled based upon the following:

- Any previous and readily-available biological resource studies pertaining to the project area;
- Informal consultation with USFWS by generating an electronic Species List (available on the applicable Field Office website); and
- A spatial query (query of specified geographic area) of the California Natural Diversity Database (CNDDB) and SanBIOS (San Diego County database).

The CNDDB was spatially queried and any reported occurrences of special-status species were plotted in relation to the project area boundary using GIS software. Within a 5-mile radius of the project area boundaries, 369 special-status species occurrence records were returned (**Figure 4.7-34**). Although no records occur directly within the project area, the CNDDB reported two special-status species with historical occurrences very near the project area:

• Ericameria palmeri var. palmeri (Palmer's goldenbush). The CNDDB record reads: "on a rock knoll southwest of the fire station near Peaceful Valley Ranch Road in Jamul; mapped as best guess by CNDDB in vicinity of Campo Road (Hwy 94), south of intersection with Melody Road; note - 2001 Reiser Report is the only source for this site; a dozen shrubs observed, unknown date; needs fieldwork."



SOURCE: EDR, 2011; Natural Investigations Co., 2012; EDS, 2012

Jamul Indian Village Draft Final Tribal EE Figure 4.7-4 Special Status Species Record • Polioptila californica californica (coastal California Gnatcatcher). The CNDDB record reads: "Just west of Saint Francis Xavier Cemetery, south of Jamul; habitat consists of coastal sage scrub, dominated by Artemisia californica and Eriogonum fasciculatum, on an east-facing slope; 2 adults observed on 8 Sep. 2001; report by Allen, Douglas (Pacific SW Biological Services). California Gnatcatcher (Polioptila californica californica) Presence/Absence Surveys for Jamul Rancheria Parcels, Jamul, San Diego County, California. 2001-10-02."

The County's SanBIOS database (20102012) was also spatially queried and any reported occurrences of special-status species plotted. The County's database reported no special-status species with a historical occurrence within the project area. Two special-status species occurrences were reported by SanBIOS database on adjacent properties: *Masitcophis flagellum* (coachwhip snake), Rancho Jamul, near SR 94; and *Myotis evotis* (Long-eared Myotis bat), 13993 Wanda Way, Jamul.

A federal species list was also generated from the USFWS website using the USGS 7.5-minute quadrangle in which the project area is located (Dulzura quad), plus the surrounding quadrangles.

Analyses of Likelihood of Occurrence of Listed Species / Special-status Species

The special-status species were further assessed for their likelihood to occur within the project area based upon previously documented occurrences, field surveys, their habitat requirements, and the quality and extent of any suitable habitat within the project area.

Thirty-six animals species designated as special status were reported within a 5-mile radius of the project area by the CNDDB. Of these 36 species, the following species were ranked "moderate" or "high" in potential occurrence in the project area or adjacent parcels: *Accipiter cooperii* (Cooper's hawk); *Aquila chrysaetos* (golden eagle); *Aspidoscelis hyperythra* (orange-throated whiptail); *Aspidoscelis tigris stejnegeri* (coastal western whiptail); *Chaetodipus californicus femoralis* (Dulzura pocket mouse); *Crotalus ruber ruber* (northern red-diamond rattlesnake); *Dendroica petechia brewsteri* (yellow warbler); *Empidonax traillii extimus* (southwestern willow flycatcher); *Eumeces skiltonianus interparietalis* (Coronado skink); *Lepus californicus bennettii* (San Diego black-tailed jackrabbit); *Neotoma lepida intermedia* (San Diego desert woodrat); and *Phrynosoma coronatum* (*blainvillii* population, coast horned lizard). Special-status animals are not expected to thrive in the project area because of the preponderance of invasive and non-native plants, and habitat degradation associated with urbanization and cattle grazing, and because previous field surveys over the last decade did not detect any rare animals. Other areas that have a moderate to high potential to support special-status animals are the hills with remnants of coastal scrub and rock outcrops on the 87-acre parcel, and the Willow Creek riparian corridor.

Regulatory Setting

Special-status Species Regulations

The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service implement the federal Endangered Species Act of 1973 (FESA) (16 USC §1531 et seq.). Threatened and endangered species on the federal list (50 CFR §17.11, 17.12) are protected from "take" (direct or indirect harm), unless a FESA Section 10 Permit is granted or a FESA Section 7 Biological Opinion with incidental take provisions is rendered. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present in the project area and determine whether the proposed project will have a potentially significant impact upon such species. Under FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC §1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require mitigation. Species that are candidates for listing are not protected under FESA; however, USFWS advises that a candidate species could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration.

The California Endangered Species Act of 1970 (CESA) (California Fish and Game Code §2050 et seq., and CCR Title 14, §670.2, 670.51) prohibits "take" (defined as hunt, pursue, catch, capture, or kill) of species listed under CESA. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Section 2081 establishes an incidental take permit program for state-listed species. Under CESA, California Department of Fish and Game_Wildlife (CDFG CDFW) has the responsibility for maintaining a list of threatened and endangered species designated under state law (CFG Code 2070). CDFG CDFW also maintains lists of species of special concern, which serve as "watch lists." Pursuant to requirements of CESA, an agency reviewing proposed projects within its jurisdiction must determine whether any state-listed species may be present in the project area and determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation.

California Fish and <u>Game-Wildlife</u> Code Sections 4700, 5050, and 5515 designates certain mammal, amphibian, and reptile species "fully protected," making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The California Native Plant Protection Act of 1977 (CFG Code §1900 et seq.) requires CDFG <u>CDFW</u> to establish criteria for determining if a species or variety of native plant is endangered or rare. Section 19131 of the code requires that landowners notify CDFG <u>CDFW</u> at least 10 days prior to initiating activities that will destroy a listed plant to allow the salvage of plant material.

Many bird species, especially those that are actively breeding, migratory, or of limited distribution, are protected under federal and state regulations. Under the Migratory Bird Treaty Act of 1918 (16 USC §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbances must be reduced or eliminated during the nesting cycle. California Fish and Game Code (§3503, 3503.5, and 3800) prohibits the possession, incidental take, or needless destruction of any bird nests or eggs, regardless of the species. Fish and Game Code §3511 designates certain bird species "fully protected," making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The Bald and Golden Eagle Protection Act (16 USC §668) specifically protects bald and golden eagles from harm or trade in parts of these species.

California Environmental Quality Act (CEQA) (Public Resources Code §15380) defines a "rare" species in a broader sense than the definitions of threatened, endangered, or fully protected species. Under the CEQA definition, CDFG CDFW can request additional consideration of species not otherwise protected. CEQA requires that the impacts of a project upon environmental resources must be analyzed and assessed using criteria determined by the lead agency. Sensitive species that would qualify for listing but are not currently listed may be afforded protection under CEQA. The CEQA Guidelines (§15065) require that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines (§15380) provide for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Plant species on the California Native Plant Society (CNPS) Lists 1A, 1B, or 2 are typically considered rare under CEQA. California "Species of Special Concern" is a category conferred by CDFG CDFW on those species that are indicators of regional habitat changes or are considered potential future protected species. While they do not have statutory protection, Species of Special Concern are typically considered rare under CEQA and thereby warrant specific protection measures.

Protected Water Resources

Real property that contains water resources is subject to various federal and state regulations and activities occurring in these water resources may require permits, licenses, variances, or similar authorization from federal, state and local agencies, as described below.

The Federal Water Pollution Control Act Amendments of 1972 (as amended), commonly known as the Clean Water Act (CWA), established the basic structure for regulating discharges of pollutants into "waters of the United States." Waters of the US includes essentially all surface waters, all interstate waters and their tributaries, all impoundments of these waters, and all wetlands adjacent to these waters. CWA Section 404 requires approval prior to dredging or discharging fill material into any waters of the US, especially wetlands. The permitting program is designed to minimize impacts to waters of the US, and when impacts cannot be avoided, requires compensatory mitigation. The US Army Corps of Engineers (USACE) is responsible for administering Section 404 regulations.

Substantial impacts to jurisdictional wetlands may require an Individual Permit. Small-scale projects may require only a Nationwide Permit, which typically has an expedited process compared to the Individual Permit process. Mitigation of wetland impacts may include on-site preservation, restoration, or enhancement and/or off-site restoration or enhancement. The characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands to achieve no net loss of wetlands.

Under CWA Section 401, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. The California State Water Resources Control Board is responsible for administering CWA Section 401 regulations. Any construction project that disturbs at least one acre of land requires enrollment in the State's general permitting program under the National Pollutant Discharge Elimination System and implementation of a storm water pollution prevention plan.

California Fish and Game Code (§1601 - 1607) protects fishery resources by regulating "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFG CDFW requires notification prior to commencement, and issuance of a Lake or Streambed Alteration Agreement, if a proposed project will result in the alteration or degradation of "waters of the State". The limit of CDFG CDFW jurisdiction is subject to the judgment of the Department; currently, this jurisdiction is interpreted to be the "stream zone," defined as "that portion of the stream channel that restricts lateral movement of water" and delineated at "the top of the bank or the outer edge of any riparian vegetation, whichever is more landward." CDFG CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFG CDFW and the applicant is the Streambed Alteration Agreement. Projects that require a Streambed Alteration Agreement may also require a CWA 404 Section Permit and/or CWA Section 401 Water Quality Certification.

Local Laws, Ordinances, Regulations, and Standards

The project area is located within an unincorporated portion of San Diego County. The project area (Reservation) is a federal Indian reservation that is not subject to County or State laws. Local laws, ordinances, regulations and standards are discussed here to provide background information for the potential indirect effects that are described in Section 4.15.

Development in the vicinity of the project area is guided by the Jamul/Dulzura Subregional Community Plan, which is the portion of the San Diego County General Plan that contains the County's goals, policies and maps for land use, conservation, recreation, and scenic highways for this subregion.

The County of San Diego Codes and Regulations protects natural resources under the following ordinances and policies (administered by the Department of Planning and Land Use):

- Clearing of Vegetation / Grading and Clearing Ordinance (No. 9547). No person may do any vegetation clearing or grading without a permit. No permit shall be issued, unless Habitat Loss Permit code has been complied with. Clearing up to 5 acres on a single-family residential lot, routine landscaping, maintenance, removal of dead trees, clearing for fire protection purposes within 100' of a dwelling, or incidental to repair or construction of a single-family dwelling outside the Multiple Species Conservation Plan (MSCP) Subarea is exempt. Within the MSCP, the Biological Mitigation Ordinance must be complied with (discussed in the next section). The Grading and Clearing Ordinance requires a permit for vegetation clearing (and a Habitat Loss Permit) for projects including 5 acres on a single-family residential lot.
- Coastal Sage Scrub Habitat Ordinance (No. 8365). This ordinance regulates development so as to avoid potential loss of Coastal Sage Scrub Habitat.
- Sensitive Habitats / Resource Protection Ordinance (Nos. 7968, 7739, 7685 and 7631). This
 ordinance protects steep-slope lands, wetlands, floodplains, and sensitive habitats (including
 mature riparian woodland). The Resource Protection Ordinance (RPO) limits impacts to
 several sensitive natural resources found throughout the County. These sensitive resources
 include coastal sage scrub. A Resource Protection Study is required for discretionary projects
 that may affect these sensitive natural resources. Impacts to sensitive habitat lands will be
 minimized and mitigated in accordance with the County guidelines and will provide equal or
 greater value to the affected species.
- Biological Mitigation Ordinance. This ordinance specifies mitigation standards for all projects requiring a discretionary permit. Projects should avoid sensitive biological resources (as defined in the Ordinance) to the maximum extent practicable through siting the project in less sensitive areas, reducing road standards, and developing on steeper slopes (to avoid sensitive habitats). Projects should be designed so that they do not significantly contribute to edge effects or affect established movement corridors. Projects must mitigate potential effects to covered species and their habitats. These measures include identifying mitigation sites based on their value to covered species (based on data within the MSCP and Ordinance), avoiding known populations, avoiding special habitats (such as vernal pools), determining appropriate mitigation ratios, and grading restrictions.

In 1997, the County of San Diego adopted the Multiple Species Conservation Program (MSCP) South County Subarea Plan as part of a larger Natural Communities Conservation Program to provide long-term habitat conservation for a variety of sensitive habitats and species (County of San Diego, 1997). The project area is located at the junction of 3 different planning segments: the Metropolitan-Lakeside-

Jamul segment, and the South County Segment Preserve Areas and Developable Areas. MSCP designated areas are regulated under the authority of the County of San Diego in cooperation with the CDFG CDFW and the USFWS. Regulations associated with the different MSCP designations occurring within the project area are summarized below and incorporate by reference the San Diego County MSCP (County of San Diego, 1997).

- Metro-Lakeside-Jamul Segment. Within this segment, the take of covered species and their habitats are authorized for projects that meet the requirements of the Biological Mitigation Ordinance and conformance with the terms of the Subarea Plan. The Ordinance contains guidelines for the design and mitigation requirements for all projects subject to County discretionary authority. These guidelines include the following:
 - Project Design Criteria. Projects proposed within the segment will avoid sensitive biological resources (as defined in the Ordinance) to the maximum extent practicable through siting the project in less sensitive areas, reducing road standards, and developing on steeper slopes (to avoid sensitive habitats). Projects will also be designed so that they do not significantly contribute to edge effects or affect established movement corridors.
 - Habitat and Species Based Mitigation. Several measures are identified to ensure that a
 proposed project properly mitigates potential effects to both covered species and their
 habitats. These measures include identifying mitigation sites based on their value to
 covered species (based on data within the MSCP and Ordinance), avoiding known
 populations, avoiding special habitats (such as vernal pools), determining appropriate
 mitigation ratios, and grading restrictions.
- South County Segment. This segment is separated into two designations: areas where take is authorized, and Multiple Habitat Planning Areas (MHPA), also named preserve areas or hardline areas. Within take-authorized areas, projects must still conform to the Ordinance and the Subarea Plan. Land uses within the MHPA preserve areas are generally very limited. Some examples of land uses that may be authorized include hand clearing of vegetation for fuels management, habitat restoration, noxious weed control, scientific studies, and recreational trails.

Within the Metro-Lakeside-Jamul Segment, specific mitigation requirements for individual projects will be consistent with the mitigation requirements set forth in the MSCP, the County's Subarea Plan and the County's Biological Mitigation Ordinance. The mitigation ratios included in the Subarea Plan are identical to the mitigation ratios in the Biological Mitigation Ordinance.

4.7.2 ENVIRONMENTAL CONSEQUENCES

Significance Criteria

The project would result in a significant biological resources impact if it would:

- Adversely affect, either directly or through habitat modifications, any species designated as special status species or protected in federal, state or regional plans, policies, or regulations,
- Adversely affect, either directly or through habitat modifications, any habitat or natural community designated as rare or protected in federal, state or regional plans, policies, or regulations, such as riparian corridors or wetlands (including isolated wetlands such as vernal pools),
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or interfere with wildlife corridors, linkages, or nursery sites,
- Conflict with any federal, state, or regional policies or ordinances protecting biological resources, including a tree preservation ordinance or an approved habitat conservation plan,
- Increase the noise or night_time lighting to a level above ambient that would adversely affect sensitive species.

Impact 4.7(1): Special Status Species / Protected Species

Proposed Project

Various special-status species occur in the vicinity of the Jamul Indian Village, but none have been detected within the Reservation in wildlife and botanical surveys performed over the last decade. Furthermore, none of these regionally-occurring special-status species were ranked in the Biological Assessment with a moderate or high potential of occurrence on the Reservation.

The Proposed Project would not result in off-site development, except for the implementation of mitigation measures. The environmental effects from access options and mitigation measures are evaluated in Section 4.15 *Effects of Mitigation Measures*., and as such, would not result in significant impacts to special status species/protected species or nesting birds. Implementation of the Proposed Project (as described in Section 3.0) would not result in the removal of natural habitats. Thus, listed species or special-status species are not expected to be displaced from the Reservation and forced on to off-Reservation lands. Furthermore, implementation of the Proposed Project will completely avoid the on-Reservation riparian corridor and Willow Creek

channel, which may function as a wildlife corridor through the Reservation. Thus, animals requiring a wildlife corridor through the Reservation would not be affected. <u>The Project Area</u> does contains suitable nesting habitat for various bird species because of the presence of rock outcrops, large trees, utility poles, and riparian canopy. However, no nests were observed during any field surveys, except for one nest spotted in 2009 in the Willow Creek corridor on the adjacent 87-acre parcel. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal, and indirectly impacted by noise, vibration, and other construction-related disturbance. Therefore, Project construction is considered to have a potentially significant adverse impact to biological resources.

Therefore, a less than significant impact to special status species/protected species would result from implementation of the Proposed Project. Indirect oOff-Reservation impacts associated with the implementation of traffic mitigation are presented in Section 4.15.

Federally-listed species that occur in the vicinity could migrate onto the Project Area between the time that the field surveys were completed and the start of construction. If this occurred, construction activities, especially excavation and rough grading, could result in the take of federally-listed species; this is considered a potentially-significant impact before mitigation.

Alternative 1

As is the case with the Proposed Project, development under Alternative 1 would occur exclusively on the Reservation outside of the riparian corridor and Willow Creek channel. As such, Alternative 1 would have similar impacts upon special status species as the Proposed Project. Thus, Alternative 1 would result in potentially significant impacts to migratory birds and special-status species that may migrate onto the Reservation between now and when construction begins. a less than significant impact to special status species/protected species. Indirect oOff-Reservation impacts associated with the implementation of traffic mitigation are presented in Section 4.15.

Alternative 2

Development under Alternative 2 would occur exclusively on the Reservation outside of the riparian corridor and Willow Creek channel. As such, Alternative 2 would have similar impacts upon special status species as the Proposed Project. Thus, Alternative 2 would result in potentially significant impacts to migratory birds and special-status species that may migrate onto the Reservation between now and when construction begins. a less than significant impact to special status species/protected species. Indirect oOff-Reservation impacts associated with the implementation of traffic mitigation are presented in Section 4.15.

No Action Alternative

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts to special status species.

Impact 4.7(2): Special Status Habitats / Protected Habitats

Proposed Project

The Project Area contains small amounts of two protected habitat types: the Willow Creek channel and its coast live oak riparian forest, and a small area of coastal scrub. The design of the Proposed Project will completely avoid (and protect) the Willow Creek channel and its riparian corridor. Only a few hundred square feet of degraded coastal scrub habitat would be removed. There is no indication that the removal of this small amount of habitat will significantly impact any special-status species, or any wildlife in general. Adjacent parcels have copious amounts of open space and wildlife habitat. For example, the parcel to the north and west (87-acre parcel) has 87 acres of wildlife habitat, and the parcel to the south (the RJER) has 3,700 acres of wildlife habitat. No mitigation is necessary.

The Proposed Project would not result in off-site development, and as such, would not result in significant impacts to special status habitats/protected habitats. Only one special status habitat occurs within the Reservation — coast riparian forest, which is found in the Willow Creek corridor. The design of the Proposed Project will completely avoid the Willow Creek channel and its coast riparian forest. Indirect oOff-Reservation impacts associated with the implementation of traffic mitigation are presented in Section 4.15.

Construction activities on-Reservation could impact the Willow Creek channel downstream of the Reservation if the placement of fill occurs within the channel, or if increased erosion or sedimentation in receiving water bodies off-site occurs due to soil disturbance. This would be a potentially significant impact; however, federal regulations require protection from construction-related impacts to waters of the US under the Clean Water Act. The Tribe and its contractor must enroll in the USEPA's Construction General Permit No. CAR10000I for Indian Lands in California, which requires the preparation and proper implementation of a Storm Water Pollution Prevention Plan, Hazardous Materials Management and Spill Response Plan, and related Best Management Practices. With proper implementation, these plans reduce or eliminate the potential for accidental release of sediment and other pollutants during construction, as well as reduce the potential for erosion. Implementation of these required measures would reduce potential impacts to protected aquatic habitats from project construction to a less than significant level.

Alternative 1

Implementation of Alternative 1 has similar potential impacts upon special status habitats as does the Proposed Project. Similar to the Proposed Project, implementation of Alternative 1 would require the enrollment in the Construction General Permit and implementation of a Storm Water Pollution Prevention Plan, Hazardous Materials Management and Spill Response Plan. Implementation of these required measures would reduce potential impacts to aquatic habitats from project construction to a less than significant level.

Alternative 2

Implementation of Alternative 2 has similar potential impacts upon special status habitats as does the Proposed Project. Similar to the Proposed Project, implementation of Alternative 2 would require the enrollment in the Construction General Permit and implementation of a Storm Water Pollution Prevention Plan, Hazardous Materials Management and Spill Response Plan. Implementation of these required measures would reduce potential impacts to aquatic habitats from project construction to a less than significant level.

No Action Alternative:

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts to special status habitats.

Impact 4.7(3): Wildlife Corridors, Nurseries, and Fisheries

Proposed Project

The Willow Creek channel is the <u>only</u> wildlife corridor in the project area. <u>No fishery</u> resources exist in the project area because all drainages flow only ephemerally or intermittently. Willow Creek cannot sustain a fishery because it carries water only intermittently, and at very low volumes. The design of the Proposed Project would completely avoid the Willow Creek channel and the coastal-riparian forest associated with the channel. Therefore, project implementation will not affect off-site wildlife corridors, nurseries, fisheries, etc. The Proposed Project would not result in the development of off-Reservation lands, so the proposed development would not result in direct impacts to wildlife corridors, nurseries, or fisheries that occur on off-Reservation lands. Therefore, the Proposed Project would result in a less than significant impact to wildlife corridors, nurseries, and fisheries. Indirect oOff-Reservation impacts associated with the implementation of traffic mitigation are presented in Section 4.15.

Alternative 1

Implementation of Alternative 1 has similar insignificant impacts upon wildlife corridors, nurseries, or fisheries as does the Proposed Project. Therefore, Alternative 1 would result in a less than significant impact to wildlife corridors, nurseries, and fisheries.

Alternative 2

Implementation of Alternative 2 has similar insignificant impacts upon wildlife corridors, nurseries, or fisheries as does the Proposed Project. Therefore, Alternative 2 would result in a less than significant impact to wildlife corridors, nurseries, and fisheries.

No Action Alternative:

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts to wildlife corridors, nurseries, or fisheries.

Impact 4.7(4): Conflicts with Policies or Adopted Habitat Conservation Plans

Proposed Project

Project-related development is located entirely on the Reservation and, as such would not result in impacts to off-Reservation sensitive habitats protected by state or federal regulations, nor would it impact policies, or adopted habitat conservation plans. Conflicts between the proposed development and adopted habitat conservation plans is considered to be less than significant due to the development being located entirely on the Reservation, which is not included in the plan area of any adopted habitat conservation plan.

Alternative 1

Implementation of Alternative 1 has similar level of impact upon conservation policies or adopted conservation plans as the Proposed Project. Conflicts between the Alternative 1 development and adopted habitat conservation plans is considered to be less than significant due to the development being located entirely on the Reservation, which is not included in the plan area of any adopted habitat conservation plan.

Alternative 2

Implementation of Alternative 2 has similar level of impact upon conservation policies or adopted conservation plans as the Proposed Project. Conflicts between the Alternative 2 development and adopted habitat conservation plans is considered to be less than significant

due to the development being located entirely on the Reservation, which is not included in the plan area of any adopted habitat conservation plan.

No Action Alternative

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts.

Impact 4.7(5): Operational Effects from Noise or Lighting

Proposed Project

By way of the project description (see Section 3.0), the Proposed Project has incorporated measures to reduce or eliminate light and noise pollution on adjacent off-Reservation properties. The exterior of the gaming facility would include downcast lighting consistent with County codes and ordinances to maintain consistency with the surrounding area. Lighting from the front of the gaming facility would be directionally pointed away from the adjacent Rancho Jamul Ecological Reserve and the building would shield light, human activity and noise effects from the Reserve. Lighting in the back of the facility would consist of low wattage security and safety lighting near doorways consistent with Uniform Building Code (UBC) requirements. The parking structures would include interior and exterior lighting designed to be downcast thereby minimizing spill-over to adjacent lands.

Noise and vibration levels adjacent to the Reservation would increase temporarily during the construction period due to the periodic use of explosives blasting, rock drilling, and heavy construction equipment. No special status species were detected adjacent to the Reservation, thus construction related noise impacts to special status species are less than significant. Common wildlife species in the vicinity may be affected, but the duration of construction is considered short enough for the impacts to be less than significant. Noise mitigation measures have been identified in Section 4.10 to reduce construction-related noise and operation noise to a less than significant level.

Because of these design criteria and avoidance measures built into the project design, and because mitigation measures for noise have been specified, noise and lighting impacts from project operation on wildlife are less than significant. The Department of Fish and Game recommended that the proposed facility incorporate non-reflective glass to reduce the potential for avian collisions with the facility. Mitigation measures below have been added to the Proposed Project.

Alternative 1

Implementation of Alternative 1 has similar insignificant impacts from noise and light pollution, and since Alternative 1 has a significantly smaller building footprint, any potential impacts are reduced proportionately. The Department of Fish and Game recommended that the proposed facility incorporate non-reflective glass to reduce the potential for avian collisions with the facility. Mitigation measures below have been added to Alternative 1.

Alternative 2

Implementation of Alternative 2 has similar insignificant impacts from noise and light pollution, and since Alternative 2 has a significantly smaller building footprint, any potential impacts are reduced proportionately. The Department of Fish and Game recommended that the proposed facility incorporate non-reflective glass to reduce the potential for avian collisions with the facility. Mitigation measures below have been added to Alternative 2.

No Action Alternative

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in any adverse impacts.

4.7.3 MITIGATION

Mitigation 4.7(1): Special Status Species/Protected Species

Proposed Project

A. Because special-status species or protected species that occur in the vicinity could migrate onto the Reservation between the time that the field surveys were completed and the start of construction, pre-construction surveys for special-status species and protected species should be performed by a qualified biologist to ensure that threatened or endangered species are not present. If any special-status species or protected species are detected, construction should be delayed, the appropriate wildlife agencies should be consulted (e.g. USFWS) and avoidance measures implemented. To comply with the federal laws protecting eagles and migratory birds, and to avoid any direct and indirect impacts to nesting birds (especially raptors and migratory species), pre-construction surveys for nesting birds will be performed. If active nesting is detected, the nesting area will be protected by creating a fenced buffer area that excludes construction activities until the young have fledged.

- B. To comply with Fish and Game Code sections protecting nesting birds, and to avoid any direct and indirect impacts to nesting birds (especially raptors and migratory species), grubbing and clearing of vegetation on non-federal lands that may support active nests and construction activities adjacent to nesting habitat, should occur outside of the breeding season (February 15 to September 15; and as early as January 1 for raptors). If removal of habitat and/or construction activities on non-federal lands is necessary adjacent to nesting habitat during the breeding season, the applicant should retain a CDFW-approved biologist to conduct a pre-construction survey to determine the presence or absence of non-listed nesting migratory birds on or within 100 feet of the construction area, determine the presence or absence of ESA- or CESA-listed birds (e.g., coastal California gnatcatcher, least Bell's vireo) on or within 300 feet of the construction area, and determine the presence or absence of nesting raptors within 500 feet of the construction area. The preconstruction survey should be conducted within 10 calendar days prior to the start of construction on non-federal lands, the results of which should be submitted to CDFW and the County of San Diego Director of Planning and Development Services for review and approval prior to initiating any construction activities. If nesting birds are detected by the biologist, the following buffers should be established:
 - a) No work should occur within 100 feet of a non-listed nesting migratory bird nest.
 - b) No work should occur within 300 feet of a listed bird nest, and
 - c) No work should occur within 500 feet of a raptor nest.

There may be a reduction of buffer size depending on site-specific conditions (e.g., the width and type of screening vegetation between the nest and proposed activity) or the existing ambient level of activity (e.g., existing level of human activity within the buffer distance). If construction on non-federal lands must take place within the recommended buffer widths above, the project applicant should contact CDFW and the County of San Diego Director of Planning and Development Services to determine the appropriate buffer.

No mitigation is necessary.

Alternative 1

No mitigation is necessary

A. <u>Same as Proposed Project.</u>

Alternative 2

A. Same as Proposed Project.

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.7(2): Special Status Habitats / Protected Habitats

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.7(3): Wildlife Corridors, Nurseries, and Fisheries

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.7(4): Conflicts with Policies or Habitat Conservation Plans

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.7(5): Operational Effects from Noise and Lighting

Proposed Project

No mitigation is necessary.

A. Glass used in the proposed gaming facility will contain less than 10% reflectivity.

Alternative 1

No mitigation is necessary.

A. Same as Proposed Project.

Alternative 2

No mitigation is necessary.

A. Same as Proposed Project.

No Action Alternative

No mitigation is necessary.

SECTION 4.8

CULTURAL AND PALEONTOLOGICAL RESOURCES

4.8 CULTURAL AND PALEONTOLOGICAL RESOURCES

4.8.1 CULTURAL RESOURCES

Culture History Context

Located 12 miles from the coast, the project site is situated within an area of southern California that was occupied by different prehistoric cultures dating to at least 12,000 years ago (Moratto 1984; Gallegos 2002; Byrd and Raab 2007). Prehistoric archaeological research for the region is divided into three broad periods: Paleoindian, Archaic, and Late Prehistoric. The Paleoindian period (12,000–8,500 years before present [B.P.]) is characterized by a diverse mixture of hunting and gathering by relatively mobile groups, who relied on marine resources near the coast. During the Archaic Period (8,500 B.C.–A.D. 500), milling tools were added to the toolkit and subsistence practices were more diversified, focusing more on plants and small animals. Groups likely traveled seasonally between coastal and inland sites, and had a continued reliance on fish and shellfish along the coast. The Late Prehistoric (A.D. 500–historic contact) is characterized by an increase in social complexity with central villages, associated satellite camps and specialized activity sites distributed along the coast and inland river valleys, a change in mortuary practices, and an expansion of trade networks. There was an increased reliance on acorns and other nuts at upland bedrock milling station seasonal camps. Artifacts associated with this period include the bow and arrow, mortars and pestles, ceramics, ornaments, and rock art.

The characteristics of the Late Prehistoric period are similar to the culture of the Yuman-speaking Native American group occupying this region at historic contact (Kroeber 1925; Luomala 1978). The Kumeyaay inhabited most of today's San Diego and Imperial Counties and portions of adjoining northern Baja California. The Tipai, a geographic division of the Kumeyaay, occupied the Jamul region, west to San Diego, and south into Baja California past Ensenada. Their diet depended on a variety of natural resources including large and small game, fish, shellfish, waterfowl, and seasonally available plant foods, some of which like the acorn were collected in the fall and then stored in granaries before processing with bedrock or portable mortars and pestles. In terms of seasonal resources, the Sweetwater River and Otay River/Jamul Creek drainage systems west, south and east of the project area would have been productive environments during prehistoric and ethnohistoric times. Ethnographic Tipai established villages along these waterways, and archaeological sites have been identified along their banks.

Early historic land use in the project vicinity included establishment of the first Franciscan mission and the San Diego Presidio in Tipai territory in 1769, transportation routes, and Mexican land grants in the early 1800s. A portion of SR 94 and the JIV lie within the northernmost extent of Rancho Jamul. Situated between Jamul and Dulzura, the rancho was provisionally granted in 1831 and regranted in 1845 to Pío Pico, who was the last Mexican Governor of California (Gudde 2004). It was sold several times in the late 1800s, and was part of the Jamul Portland Cement Manufacturing Company between

1889 and 1892 (Brackett 1960). During this same period, stage lines connecting to San Diego operated roughly along today's SR 94. In 1915, Rancho Jamul was purchased for use as a Wild West motion picture backdrop. By 1943, Campo Road (today's SR 94) connected the communities of Jamul, Indian Springs, and North Jamul. Settled by a small band of Tipai over 65 years ago, the JIV was declared a reservation in 1981.

Cultural Resources Setting

A literature search by the South Coastal Information Center (SCIC) at San Diego State University in July 2009, a Sacred Lands file search by the Native American Heritage Commission (NAHC) and related communication with local Native American groups and individuals in 2009 and 2010, and pedestrian surveys in June 2010 and August 2011, involving transect spacing no greater than 15 meters apart, were conducted for the project. The NAHC August 2009 response stated their search does indicate the presence of Native American cultural resources within a one-half-mile radius of the project area of potential effects (APE). Of the letters and follow-up telephone calls made in June 2010 to the 14 tribes, groups or individuals on the contact list provided by the NAHC, three responses were received. Kenneth Meza, immediate past Chairperson of the Jamul Indian Village stated the tribe has no issues regarding the project. The response from the Barona Group of Capitan Grande was that the group had no concerns regarding the project. The Secretary for the Kumeyaay Cultural Heritage Preservation stated no issues had been raised by the tribe regarding the Proposed Project.

The SCIC records search indicates portions of 23 cultural resources studies have been previously conducted within a one-half-mile radius of the Reservation, with an additional four studies including the Reservation. A total of 41 prehistoric and historic-era resources have been recorded within a onehalf-mile radius but outside the Reservation. These include bedrock milling features, lithic scatters, shell scatters, rock cairns, pottery sherds, historic-era debris, historic-era drainage ditches, and a multicomponent site. Of these known cultural resources outside the Reservation, seven archaeological sites are mapped adjacent to portions of the Access Option road improvement areas (Table 4.8-1). The potential for access options and traffic mitigation to affect cultural resources is addressed in Section 4.15 Effects of Mitigation Measures. Of the seven resources, site CA-SDI-11050 has been recommended eligible and only the multi-component site (CA-SDI-7966/11410) has been determined eligible for NRHP and CRHR inclusion; each site and thus qualifies as a historic property/historical resource. Site CA-SDI-7966/11410 was determined eligible for NRHP inclusion in July 2003 during consultation between the Bureau of Indian Affairs and the State Historic Preservation Officer (SHPO) as part of the Section 106 process. Of the remaining five sites listed in the table, three have been recommended not eligible for NRHP and CRHR listing, and two have been destroyed and are thus ineligible.

TABLE 4.8-1 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES ADJACENT TO PORTIONS OF ROAD IMPROVEMENT AREAS

ARCHAELOGICAL <u>SITE</u> <u>DESIGNATION</u>	BRIEF DESCRIPTION	<u>NRHP/CRHR</u> ELIGIBILITY
<u>CA-SDI-</u> 07966/11410*	Multi-component: Prehistoric bedrock milling, lithics, ceramics, groundstone, midden, possible village; historic debris scatter	Determined NRHP eligible**
<u>CA-SDI-11050</u>	Prehistoric lithic, groundstone, bone and shell scatter; core midden preserved within conservation easement; site margins around core midden are disturbed	Recommended eligible
<u>CA-SDI-14954</u>	Prehistoric bedrock milling, lithic scatter; tested; sparse subsurface lithics; disturbed	Recommended not eligible
<u>CA-SDI-16671</u>	Prehistoric bedrock milling, lithics groundstone, fire- affected rock feature; disturbed; tested; no integrity or research potential	Recommended not eligible
<u>CA-SDI-18402</u>	Prehistoric lithic scatter (5 flakes); disturbed; destroyed by vehicular activity along dirt road	Not eligible (destroyed)
<u>CA-SDI-18403</u>	Prehistoric bedrock milling, lithics; disturbed by Caltrans survey marker and secondary boulder deposition	Recommended not eligible
CA-SDI-19159	Prehistoric shell scatter (5 fragments); destroyed	Not eligible (destroyed)
 * CA-SDI-7966 and CA-SDI-11410 were combined in 1998 as multi-component site CA-SDI-7966/11410. ** Automatically listed in CRHR. 		

No built environment resources have been recorded within the project area and no cultural resources were identified within the Reservation during the pedestrian surveys in 2010 and 2011. <u>Six</u> archaeological sites (CA-SDI-7683, CA-SDI-7684, CA-SDI-7685, CA-SDI-7686, CA-SDI-7687, and CA-SDI -7688) previously recorded within the Reservation are not considered eligible for NRHP or CRHR inclusion and have no potential to be impacted by the Proposed Project since each has been disturbed, removed or destroyed by natural or human agencies during the three decades since initial recordation in 1979.

The potential for off-reservation <u>Reservation access options and</u> traffic mitigation to affect cultural resources is addressed in Section 4.15 <u>Indirect Effects of Mitigation Measures</u>.

Regulatory Framework

Cultural resources include prehistoric, ethnohistoric, or historic-era (>50 years old) archaeological artifacts, features and sites, districts, buildings, structures and objects that are protected under federal and state regulations and policies, including the National Historic Preservation Act of 1966 (NHPA),

the Archaeological Resources Protection Act of 1979 (ARPA), NEPA, CEQA, and Section 5097.5 of the California Public Resources Code (PRC). Cultural resources that are judged to meet the criteria for listing in the National Register of Historic Places (NRHP) are considered to be significant historic properties and, as such, must be considered during planning for federal undertakings under Section 106 of the NHPA (36 CFR 800). Historic properties listed in the NRHP are automatically listed in the California Register of Historical Places (CRHR) maintained by the State Office of Historic Preservation. Both registers may include districts, sites, buildings, structures and objects with local, regional, state or national significance, although the CRHR may also include historical resources not listed in the NRHP.

Federal agencies are also required to consider the effects of their actions on items, resources, and locations of religious significance to Native Americans, as specified in the American Indian Religious Freedom Act (AIRFA), Executive Order (EO) 13007: Indian Sacred Sites, and EO 13287: Preserve America. On federal lands, including Native American Trust lands, Native American graves and burial grounds, including human remains, sacred and funerary objects, and objects of cultural patrimony, are protected under the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA).

4.8.2 PALEONTOLOGICAL RESOURCES

Paleontological Resources Setting

The presence of paleontological resources at any particular site is influenced by geological composition resulting from formation processes occurring over long periods of time. Fossils typically reside in sedimentary layers, and may or may not become mineralized dependent upon the mineral composition within their depositional environment.

A search of the University of California Museum of Paleontology (UCMP) database indicates more than 1,700 fossil localities occur within San Diego County, ranging in age from the Late Cretaceous (99–65 million years ago) to the Pleistocene (1.8–0.1 million years ago) (UCMP 2011). The localities, many of which are along the coast, contain mostly invertebrate fossils.

No significant paleontological fossils have been produced in the project area or vicinity (UCMP 2011). The project area is underlain by igneous Mesozoic granitic rocks (Strand 1962). Since granitic rocks are plutonic in origin, this geologic unit is determined to have no potential for paleontological resources.

The potential for off-reservation traffic mitigation to affect paleontological resources is addressed in Section 4.15 Indirect-Effects of Mitigation Measures.

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Regulatory Framework

Paleontological resources are the traces or remains of prehistoric plants and animals. Such remains often appear as fossilized or petrified skeletal matter, imprints or endocasts, and reside in sedimentary rock layers. Paleontological resources are protected by several federal and state regulations and policies, including the Antiquities Act of 1906, NEPA, CEQA, and PRC §5097.5.

4.8.3 ENVIRONMENTAL CONSEQUENCES

Significance Criteria

Adverse impacts on cultural resources would be significant if implementation of the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- Disturb any human remains, including those interred outside of formal cemeteries.

Cultural Resources

Section 106 of the NHPA requires that potential impacts to historic properties are assessed by using the "criteria of adverse effect" (36 CFR 800.5[a][1]): "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative."

To be eligible for the NRHP and thus qualify as a "historic property," cultural resources must possess integrity and meet at least one of the following four criteria:

- Are associated with events that have made a significant contribution to the broad patterns of our history (Criterion A);
- Are associated with the lives of persons significant in our past (Criterion B);

- Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C), or
- Have yielded, or may be likely to yield, information important in prehistory or history (Criterion D).

Under CEQA, a project that may cause a "substantial adverse change in the significance of an historical resource" is considered to have a significant environmental effect (14 CCR Section 15064.5). The term "historical resource" is similar to but more inclusive than the NRHP criteria. Under CEQA, a historical resource includes, but is not limited to:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in the CRHR (PRC §5024.1; 14 CCR §4852)
- A resource included in a local register of historical resources (as defined by PRC §5020.1[k]), or identified in a historical resource survey meeting the requirements of PRC §5024.1(g) (presumption of historical significance), and:
- Any object, building, structure, site area, place, record or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the agency's determination is supported by substantial evidence. Generally, a resource shall be considered by a lead agency to be historically significant if it meets the criteria for listing on the CRHR, including the following:
 - Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage (Criterion 1);
 - Is associated with the lives of persons important in our past (Criterion 2);
 - Embodies the distinctive characteristics of a type, period, region, or method of installation, represents the work of an important creative individual, or possesses high artistic values (Criterion 3); or
 - Has yielded, or may be likely to yield, information important in prehistory or history (Criterion 4).
- A resource that the lead agency otherwise determines is a historical resource as defined by PRC §5020(j) or §5024.1.

For cultural resources listed in or eligible for listing in the CRHR or local register, a project that may cause a substantial adverse change in the significance of an archaeological or historical resource is considered a project that may have a significant adverse effect on the environment (14 CCR §15064.5). Substantial adverse change in significance means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (14 CCR §15064.5 [b][1]).

Impacts to cultural resources are being considered in the context of Section 106 of the NHPA and NEPA, as well as CEQA. Resolution of any adverse effects through the Section 106 process, in consultation with the State Historic Preservation Officer (SHPO), would result in less-than-significant impacts in the context of NEPA, and may also mitigate impacts under CEQA.

No cultural resources that meet the definition of historic property or historical resource have been documented within the project area. One-Two adjacent historic propertyproperties/historical resources (sites CA-SDI-7966/11410 and CA-SDI-11050) is are located outside the project and will be avoided by the Proposed Project on the Reservation and the proposed gaming facility will thus have no impacts on these resources. The potential for off-Reservation access options and traffic mitigation to affect cultural resources is addressed in Section 4.1.5 Effects of Mitigation Measures.

Paleontological Resources

A significant impact to paleontological resources would occur if important fossils, which could substantially add to scientific understanding of paleontological resources, are directly or indirectly destroyed. No fossils have been identified within the project area, and the geologic formations that underlie the project vicinity have a low potential for producing paleontological resources.

Impact 4.8(1): Cultural Resources

Proposed Project

The development of the proposed gaming facility would occur on the Reservation and, as such, would not result in direct off-site impacts to documented, significant cultural resources (historic properties or historical resources).

Alternative 1

The development of the proposed gaming facility under Alternative 1 would occur on the Reservation and, as such, would not result in direct off-site impacts to documented, significant cultural resources (historic properties or historical resources).

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Alternative 2

The development of the proposed gaming facility under Alternative 2 would occur on the Reservation and, as such, would not result in direct off-site impacts to documented, significant cultural resources (historic properties or historical resources).

No Action Alternative

Under the No Action Alternative, no change in existing land use is proposed. No adverse effects have been identified.

Impact 4.8(2): Paleontological Resources

Proposed Project

The development of the proposed gaming facility would occur on the Reservation and, as such, would not result in direct off-site <u>impacts to paleontological resources</u>.

Alternative 1

The development of the proposed gaming facility under Alternative 1 would occur on the Reservation and, as such, would not result in direct off-site <u>impacts to paleontological</u> resources.

Alternative 2

The development of the proposed gaming facility under Alternative 2 would occur on the Reservation and, as such, would not result in direct off-site <u>impacts to paleontological</u> resources.

No Action Alternative

Under the No Action Alternative, no change in existing land use is proposed. No adverse effects have been identified.

4.8.4 MITIGATION

Mitigation 4.8(1) Cultural Resources

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.8(2) Paleontological Resources

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

SECTION 4.9

TRANSPORTATION AND CIRCULATION

4.9 TRANSPORTATION AND CIRCULATION

4.9.1 ENVIRONMENTAL SETTING

Road Network

The following provides a description of the existing street system within the vicinity of the project area.

State Route 94 begins near downtown San Diego as an eight-lane, access-controlled freeway. As it proceeds to the east, it narrows to a four-lane facility, with the freeway terminating at Avocado Boulevard. SR 94 then becomes a four-lane major roadway with signalized at-grade intersections between Avocado Boulevard and Jamacha Boulevard. In the relatively short section between Jamacha Boulevard and Jamacha Road, it is a six-lane road. South and east of Jamacha Road, it is a four-lane facility, which then transitions to a two-lane cross section. In the vicinity of the project site, it is a two-lane, undivided, conventional highway that is also known as Campo Road. Bike Lanes are currently not provided and curbside parking is prohibited along both sides of the roadway. Bus stops are provided intermittently along the roadway. SR 94 is part of the County of San Diego Bicycle Network System. SR 94 is approximately 26 feet wide with shoulders generally varying from 2 to 8 feet in the project area. The posted speed limit is 55 mph. A two-way left-turn lane striping is provided along sections of the roadway where driveway access is denser. The segment between Cougar Canyon Road and Steele Canyon Road provides a two-way left-turn lane. SR 94 is classified as a prime arterial north of Melody Road and a major road south of Melody Road on the County of San Diego Circulation Element.

Jamacha Boulevard is constructed as a six-lane prime arterial south of SR 94. The posted speed limit along this corridor is 45 mph. This roadway segment is built to its ultimate classification.

Jamacha Road is constructed as a six-lane prime arterial east of SR 94. The posted speed limit along this corridor is 45 mph. This roadway segments is built to its ultimate classification.

Steele Canyon Road is currently constructed as a two lane undivided roadway, providing one travel lane in the north direction and one travel lane in the south direction. Steele Canyon Road is signalized at SR 94, Jamul Drive and Willow Glen Drive. Steele Canyon Road has a roadway width of 45 feet with no shoulders provided. The posted speed limit on Steele Canyon Road is 45 mph. Steele Canyon Road is classified as a collector road in the County of San Diego Circulation Element. Between Jamul Drive and Heatherwood, a two-way left-turn lane is provided to facilitate access to adjacent properties along both sides of the road.

Lyons Valley Road is a two-lane undivided roadway. Bike lanes are provided and curbside parking is prohibited. Lyons Valley Road has a current roadway width of 35 feet with no shoulders provided. The speed limit is posted at 45 mph.
Jefferson Road is a two-lane undivided roadway with a posted speed limit of 40 mph. Currently, Jefferson Road has a roadway width of 30 feet with no shoulders provided. Jefferson Road is an unclassified roadway within the County of San Diego.

Melody Road is currently constructed as a two-lane undivided roadway providing one lane of travel per direction. No bike lanes or bus stops are provided and curbside parking is prohibited. No speed limit was posted, so the prima facie speed limit is 25 mph. Currently, Melody Road has a roadway width of 40 feet with no shoulders provided.

Jamul Drive is currently constructed as a two-lane undivided roadway providing one lane of travel per direction. Bike lanes are provided and curbside parking is prohibited. Left-turn lanes are provided intermittently within the corridor to facilitate access to existing driveways and roads along both sides for the roadway. The posted speed limit along Jamul Drive is 45 mph.

Willow Glen Drive is currently constructed as a two-lane undivided roadway providing one lane of travel per direction. Between Steele Canyon Road and the Cottonwood Golf Course, two westbound lanes, an eastbound lane are provided. Bike lanes are present along the corridor. The posted speed limit along Willow Glen Drive is 45 mph.

Study Intersections

The study area analyzed was <u>initially</u> defined in coordination with Caltrans District 11 staff and included all of the significant intersections along SR 94 between Via Mercado and Otay Lakes Road. <u>In addition to Caltrans intersections, County of San Diego intersections were added for those locations where the project would generate 25 or more directional peak-hour trips.</u>

Table 4.9-1 lists all of the intersections included in the study area. As shown in **Table 4.9-1**, <u>six ten</u> study intersections are signalized and <u>six nine</u> study intersections are unsignalized. **Figure 4.9-1** displays the location of the study intersections. **Figure 4.9-2** shows the existing geometrics for the intersections within the study area.

Study Roadway Segments

The study area was determined in coordination with Caltrans District 11 staff and included all of the significant roadway segments providing access to the Reservation. In addition, County of San Diego's roadway segments where included in the study based on the County of San Diego's *Report Format & Content Requirements – Transportation and Traffic*, dated August 24, 2011. The roadway segments included in the analysis are:

SR 94 between Via Mercado and Otay Lakes Road;

Jamacha Boulevard between SR 94 and Sweetwater Springs Boulevard;

INTERSECTION	TRAFFIC CONTROL ¹
1. SR 94 and Via Mercado	Signal
2. SR 94 and Jamacha Blvd	Signal
3. SR 94 and Jamacha Rd	Signal
4. SR 94 and Cougar Canyon Rd	Signal
5. SR 94 and Steele Canyon Rd	Signal
6. SR 94 and Lyons Valley Rd	TWSC
7. SR 94 and Jefferson Rd	Signal
8. SR 94 and Melody Rd	TWSC
9. Proctor Valley Rd and Melody Rd	TWSC
10. SR 94 and Reservation Road	OWSC
11. SR 94 and Honey Springs Rd	OWSC
12. SR 94 and Otay Lakes Rd	OWSC
13. Jamacha Blvd. & Sweetwater Springs Blvd	Signal
14. Willow Glen Dr. & Jamacha Rd.	Signal
15. Steele Canyon Rd. & Willow Glen Dr.	Signal
16. Steele Canyon Rd & Jamul Dr.	<u>Signal</u>
17. Lyons Valley Rd & Jamul Dr	OWSC
18. Jefferson Rd. & Lyons Valley Rd.	OWSC
19. SR 94 (Campo Rd) & Maxfield Rd.	OWSC

TABLE 4.9-1STUDY INTERSECTIONS

¹/Signal = Traffic signal; OWSC = One – Way Stopped Control; TWSC = Two-Way Stopped Control

SOURCE: Kimley Horn, 2012



Jamul Indian Village Draft Final Tribal EE **Figure 4.9-1** Study Intersections





Jamul Indian Village $\frac{\partial T}{\partial T}$ Final Tribal EE

Figure 4.9-2 cont. Existing Intersection Geometrics

- Jamacha Road between SR 94 and Fury Lane;
- Steele Canyon Road between SR 94 and Jamul Drive;
- Lyons Valley Road between SR 94 and Jefferson Road;
- Melody Road between SR 94 and Proctor Valley Road;
- Proctor Valley Road between SR 94 and Melody Road; and
- Proctor Valley Road between Melody Road and Pioneer Way.
- Sweetwater Springs Boulevard between Jamacha Boulevard and Austin Drive;
- Jamacha Boulevard between SR-94 and Sweetwater Springs Boulevard;
- Jamacha Road between SR-94 and Fury Lane:
- Jamacha Road between Willow Glen Drive and Brabham Street;
- Steele Canyon Road between SR-94 and Jamul Drive;
- Steele Canyon Road between Jamul Drive and Willow Glen Drive:
- Jamul Drive between Steele Canyon Road and Lyons Valley Road;
- Willow Glen Drive between Jamacha Road and Steele Canyon Road;
- Willow Glen Drive between Steele Canyon Road and Hillsdale Road;
- Lyons Valley Road between SR-94 and Jefferson Road;
- Lyons Valley Road between Jefferson Road and Jamul Drive;
- Lyons Valley Road between Jamul Drive and Myrtle Street;
- Jefferson Road between SR-94 and Lyons Valley Road;
- Melody Road between SR-94 and Proctor Valley Road;
- Proctor Valley Road between Melody Road and Pioneer Way;
- Honey Springs Road between SR-94 and Mother Grundy Truck Trail; and

• Otay Lakes Road between SR-94 and Otay Mountain Truck Trail.

Figure 4.9-3 shows the existing number of lanes and functional classification for the roadway segments within the study area.

Methodology

Analysis Scenarios

The analysis scenarios to be evaluated were determined in coordination with Caltrans District 11 staff. A total of twelve scenarios are analyzed within the traffic impact analysis for the Gaming project. The scenarios are listed below:

Existing Conditions

- *Existing Baseline Conditions*: Represents the traffic conditions of the existing street network with the use of traffic counts collected in the years 2009 through 2012., 2010 and 2011. This scenario does not include the traffic generated by the Proposed Project, Alternative 1 or Alternative 2. The Existing Baseline Scenario is the environmental setting, or baseline, against which the impacts of the Proposed Project and the Alternatives are judged.
- *Existing Plus the-Proposed Project Conditions*: Represents the Existing traffic conditions with the addition of the Proposed Project to evaluate project level impacts.
- *Existing Plus Alternative 1 Project-Conditions*: Represents the Existing traffic conditions with the addition of the Alternative 1 project to evaluate project level impacts.
- *Existing Plus Alternative 2 Conditions*: Represents the Existing traffic conditions with the addition of the Alternative 2 project to evaluate project level impacts.

Near Term Conditions (2015)

- Near Term No Build Conditions: Represents the traffic conditions of the street network assumed to be in place under the Near Term without project conditions. This scenario includes a projected traffic growth based on other potential projects in the study area. This scenario does not include the traffic generated by the Proposed Project, Alternative 1 or Alternative 2.
- Near Term Plus the Proposed Project Conditions: Represents the Near Term traffic conditions with the addition of the Proposed Project and thus demonstrates cumulative impacts.



- *Near Term Plus Alternative 1 Conditions*: Represents the Near Term traffic conditions with the addition of the Alternative 1 project and thus demonstrates cumulative impacts.
- *Near Term Plus Alternative 2 Conditions*: Represents the Near Term traffic conditions with the addition of the Alternative 2 project and thus demonstrates cumulative impacts.

Horizon Year Conditions (2035)

- Horizon Year No Build Conditions: Represents the traffic conditions of the street network expected to be in place under Horizon Year conditions, consistent with the Series 11 Regional Transportation Plan, and is used to establish a long-term, without project conditions for evaluating cumulative impacts and the degree to which the project would contribute to any such impacts. This scenario does not include the traffic generated by the Proposed Project, Alternative 1 or Alternative 2.
- Horizon Year Plus the Proposed Gaming Project Conditions: Represents the Horizon Year traffic conditions with the addition of the Proposed Project and thus demonstrates cumulative impacts.
- Horizon Year Plus Alternative 1 Project-Conditions: Represents the Horizon Year traffic conditions with the addition of the Alternative 1 project thus demonstrates cumulative impacts.
- Horizon Year Plus Alternative 2 Project-Conditions: Represents the Horizon Year traffic conditions with the addition of the Alternative 2 project and thus demonstrates cumulative impacts.

Analysis Process

The analysis process includes determining the operations at the study intersections for the weekday a.m. and p.m. peak periods. Because the project would generate higher peak-hour traffic during the Friday and Saturday afternoons, the Friday p.m. peak-hour and the Saturday p.m. peak-hour were also evaluated. In addition, the operations along the roadway segments are determined by using the County's volume to capacity ratio and the Highway Capacity Manual (HCM) peak-hour arterial and two-lane highway analysis.

Signalized and Unsignalized Intersections HCM Methodology

The 2000 *HCM* published by the Transportation Research Board establishes procedures to evaluate highway facilities and rate their ability to process traffic volumes. The terminology "level of service" is used to provide a qualitative evaluation based on certain quantitative calculations, which are related to empirical values.

Level of service (LOS) for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay. The LOS for unsignalized intersections is determined by the computed or measured control delay and is defined for each minor movement. At an all-way stop controlled intersection, the delay reported is the average control delay of the intersection. At a one-way or two-way stop controlled intersection, the delay reported represents the worst movement, which are typically the left-turns from the minor street approach.

The criteria for the various levels of service designations are given in Table 4.9-2.

Per Caltrans requirements, all signalized and unsignalized intersections are expected to operate at LOS C or better.

To analyze the operations of both signalized and unsignalized intersections, Synchro 7.0 (Trafficware) will be was used for the analysis. Synchro 7.0 uses the methodologies outlined in the 2000 *Highway Capacity Manual (HCM)*.

	CONTROL DELAY (sec/veh)		DESCRIPTION
LOS	Signalized Intersection (a)	Unsignalized Intersection (b)	DESCRIPTION
А	<u>≤</u> 10.0	<u><</u> 10.0	Operations with very low delay and most vehicles do not stop.
В	>10.0 and <20.0	>10.0 and <15.0	Operations with good progression but with some restricted movement.
С	>20.0 and <u><</u> 35.0	>15.0 and <u><</u> 25.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35.0 and <u><</u> 55.0	>25.0 and <u><</u> 35.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines
Е	>55.0 and <u><</u> 80.0	>35.0 and <u><</u> 50.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80.0	>50.0	Operations that is unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

TABLE 4.9-2LOS CRITERIA FOR INTERSECTIONS

Notes:

(a) 2000 Highway Capacity Manual, Chapter 16, Page 2, Exhibit 16-2

(b) 2000 Highway Capacity Manual, Chapter 17, Page 2, Exhibit 17-2

The following list contains the assumptions used for the intersection analyses:

- Peak-hour factor (PHF) = Existing peak-hour factors will be was used for the Existing and Near Term scenarios. The Syncro's default value of 0.92 peak hour factor will be was used for the Horizon Year scenarios. The peak-hour factor represents the relationship between the peak 15-minute flow rate and the full hourly volume to estimate the most critical time period for evaluation.
- Percent of heavy vehicle (PHV) = Measured in field PHV was used at all locations with available data. For locations with no PHV data, a 2 percent default value will be was used.
- Signal Timing = All cycle lengths were optimized and account for the minimum pedestrian crossing times.

Intersection Intersecting Lane Vehicle (ILV) Methodology

Per Caltrans District 11 requirements intersection analysis must be performed at each Caltransowned signalized intersection affected by the project using the <u>intersection intersecting</u> lane vehicle (ILV) procedure, which is discussed in further detail from the Caltrans Highway Design Manual Topic 406, page 400-23. The ILV analysis is used to estimate the capacity of a signalized intersection when the phasing is relatively simple. The intersection is thought to be at capacity when the ILV is 1,500 vehicles per hour. **Table 4.9-3** describes the traffic flow conditions of ramp intersections at various levels of operations.

ILV/hr (a)	RESULT	DESCRIPTION			
< 1200	Below Capacity	Stable flow with slight, but acceptable delay. Occasional signal loading may develop. Free mid-block operations.			
1200 - 1500	Approaching Capacity	Unstable flow with considerable delays possible. Some vehicles occasionally wait two or more cycles to pass through the intersection. Continuous backup occurs on some approaches.			
> 1500	Above Capacity	Stop-and-go operation with severe delay and heavy congestion ^(b) . Traffic volume is limited by maximum discharge rates of each phase. Continuous backup in varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection.			

TABLE 4.9-3
ILV CRITERIA AT RAMP INTERSECTIONS

Notes:

Based on the Caltrans Highway Design Manual, Table 406 "Traffic Flow Conditions at Intersections at Various Levels of Operation", page 400-23.

(a) = Intersecting Lane Vehicles/hour (ILV/hr)

(b) = The amount of congestion depends on how much the ILV/hr value exceeds 1500. Observed flow rates will normally not exceed 1500 ILV/hr, and the excess will be delayed in a queue.

Roadway Segments

In order to determine the impacts on the study area roadway segments within the County of San Diego, **Table 4.9-4** has been developed by the County and is used as a reference to evaluate the operation of its roadway segments. The segment traffic volumes under LOS E, as shown in this table, are considered at capacity because at LOS E the volume-to-capacity Ratio (v/c Ratio) is equal to 1.0.

ROAD			LEVEL OF SERVICE (LOS)				
CLASSIFICATION	LANES	X-Section ^(a)	Α	В	С	D	E
Expressway	6	126/146	36,000	54,000	70,000	86,000	108,000
Prime Arterial	6	102/122	22,200	37,000	44,600	50,000	57,000
Major Road	4	78/98	14,800	24,700	29,600	33,400	37,000
Collector	4	64/84	13,700	22,800	27,400	30,800	34,200
Town Collector	2	54/74	3,000	6,000	9,500	13,500	19,000
Light Collector	2	40/60	1,900	4,100	7,100	10,900	16,200
Rural Collector	2	40/84	1,900	4,100	7,100	10,900	16,200
Rural Light Collector	2	40/60	1,900	4,100	7,100	10,900	16,200
Recreational Highway	2	40/100	1,900	4,100	7,100	10,900	16,200
Rural Mountain Road	2	40/100	1,900	4,100	7,100	10,900	16,200
Residential Collector	2	40/60			4,500		
Residential Road	2	36/56			1,500		
Residential Cul de sac or Loop road	2	32/52			200		

TABLE 4.9-4 LOS CRITERIA FOR ROADWAY SEGMENTS WITHIN THE COUNTY OF SAN DIEGO

Notes:

The volumes and the average daily level of service listed above are only intended as a general planning guideline.

Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic

Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

(a) XXX/XXX=Curb-to-curb width (feet)/right-of-way width (feet): based on the County of San Diego Public Road Standards.

SOURCE: County of San Diego Public Road Standards, Table 1 (page 9)

The roadway segment analysis was only conducted for a typical weekday. The Friday and Saturday roadway operation was not analyzed for the following reasons:

- The project daily traffic generation is the same for the weekday as for the Friday or Saturday operations; and
- Average daily traffic volumes within the study area are higher on weekdays.

HCM Peak-Hour Arterial Analysis

A peak-hour arterial analysis was conducted for segments of SR-94 between Via Mercado and Jefferson Road - Proctor Valley Road using the 2000 Highway Capacity Manual (HCM)-HCM Chapter 15 procedures since this segment functions as an urban arterial due to the number of signal along this corridor. Peak-Hhour arterial analysis estimates average travel speed on the given facility based on the operations of controlling intersections. This type of analysis, and provides a more accurate representation of street segment LOS than ADT-based evaluation because it considers peak-hour volumes and incorporates the capacity benefits of intersection turn lanes. Based on its speed, SR-94 is classified as a Class I arterial facility. The criteria for the various level of service designation for Class I arterials is given in **Table 4.9-5**.

LOS	AVERAGE TRAVEL SPEED (mph) (a)	DESCRIPTION
A	>42.0	Free-flow operations, motorists can travel at desired speed and passing demand is well below capacity.
В	>34.0 and ≤42.0	Stable flow, with speeds generally higher than 50 miles per hour. The passing demand to maintain desired speeds becomes significant.
С	>27.0 and <34.0	Stable flow at slower speeds. Individuals become noticeably affected by interactions with others, and percent time-spent-following drastically increases.
D	>21.0 and ≤27.0	Unstable flow, with slower speeds and long platoons. Turning vehicles and roadside distractions cause major shock waves in the traffic stream.
E	>16.0 and <u><</u> 21.0	Operating conditions at or near capacity. Speeds are slow, and passing is virtually impossible. Platooning becomes intense.
F	< 16.0	Heavily congested flow.

 TABLE 4.9-5

 LOS CRITERIA FOR URBAN ARTERIALS CLASS I FACILITIES

Notes:

Based on the Caltrans Highway Design Manual, Table 406 "Traffic Flow Conditions at Intersections at Various Levels of Operation", page 400-23.

(a) = Intersecting Lane Vehicles/hour (ILV/hr)

(b) = The amount of congestion depends on how much the ILV/hr value exceeds 1500. Observed flow rates will normally not exceed 1500 ILV/hr, and the excess will be delayed in a queue.

HCM Peak-Hour Two-Lane Highway Analysis

For the two-lane segment of SR-94 where the intersections are not signalized, the 2000 Highway Capacity Manual "two-lane highway" methodology was used.

According to the Caltrans SR-94 operations report, the highway is categorized as a Class I facility.

Level of service for Class I highways is based on a combination of two parameters: percent time-spent following (PTSF) and average travel speed in miles/hour (MPH). The PTSF is the average percent of total travel time that vehicles must travel in platoons behind slower vehicles due to inability to pass on a two-lane highway. This parameter represents the freedom to maneuver and convenience of travel along a facility. The criteria for the various levels of service designations for Class I two-lane highway facilities are given in **Table 4.9-6**.

The two-lane highway calculations were performed using the HCS+ software (Version 5.4).

LOS	PERCENT SPENT FOLLOWING (PTSF) (a)	AVERAGE TRAVEL SPEED (MPH) (a)	DESCRIPTION
А	<u><</u> 35.0	>55.0	Free-flow operations, motorists can travel at desired speed and passing demand is well below capacity.
В	>35.0 and <u><</u> 50.0	>50.0 and <u><</u> 55.0	Stable flow, with speeds generally higher than 50 miles per hour. The passing demand to maintain desired speeds becomes significant.
С	>50.0 and <u><</u> 65.0	>45.0 and <u><</u> 50.0	Stable flow at slower speeds. Individuals become noticeably affected by interactions with others, and percent time-spent-following drastically increases.
D	>65.0 and <u><</u> 80.0	>40.0 and ≤45.0	Unstable flow, with slower speeds and long platoons. Turning vehicles and roadside distractions cause major shock waves in the traffic stream.
E	<u><</u> 80.0	<40.0	Operating conditions at or near capacity. Speeds are slow, and passing is virtually impossible. Platooning becomes intense.
F	N/A	N/A	Heavily congested flow.

 TABLE 4.9-6

 LOS CRITERIA FOR TWO-LANE HIGHWAY CLASS I FACILITIES

Notes:

(a) 2000 Highway Capacity Manual, Chapter 12

Existing Conditions

Intersection Conditions (HCM)

Table 4.9-7 displays the peak-hour LOS analysis results for the study intersections under Existing Conditions for the weekday conditions. **Table 4.9-8** displays the peak-hour LOS analysis results for the typical Friday and Saturday conditions. As shown in the tables, all intersections currently operate at LOS $\underline{C-D}$ or better during all peak periods analyzed, except for the following intersection:

 SR 94 (Campo Road) and <u>Indian Spring Road/</u>Lyons Valley Road (LOS F– weekday morning and afternoon peak-hour, Friday afternoon peak-hour, LOS E Saturday afternoon peak-hour)

SR 94 (Campo Road) and Lyons Valley Road intersection is currently a two-way stop controlled intersection. During the peak-hour operations, considerable delay is experienced by vehicles entering the intersection from Lyons Valley <u>Road</u> as the through traffic along SR 94 (Campo Road) does not provide sufficient vehicle gaps needed to enter the intersection. **Appendix 10** (Appendix E) contains the intersections LOS calculation worksheets.

Intersection Conditions (ILV)

Tables 4.9-9 and **4.9-10** displays the ILV analysis results for the Caltrans-owned signalized intersections under Existing Conditions for all peak-hours analyzed. As shown in the table, all intersections along SR 94 (Campo Road) would operate at below capacity during all peak periods, except for the following intersections, which operate at approaching capacity:

- SR 94 (Campo Road) & Via Mercado (weekday a.m. and p.m. peak-hours); and
- SR 94 (Campo Road) & Jamacha <u>Blvd-Boulevard</u> (weekday p.m. peak-hour; Friday p.m. peak-hour).

Appendix 10 (Appendix F) contains the ILV worksheets.

Roadway Segment Conditions

Table 4.9-11 displays the roadway segments analysis under Existing Conditions for a typical weekday. As shown in the table, all roadway segments within the study area currently function at LOS CD or better, except for the following roadway segment:-

<u>Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS E)</u>

TABLE 4.9-7 EXISTING BASELINE WEEKDAY CONDITIONS PEAK-HOUR INTERSECTION LOS (UPDATED OCTOBER 2012)

		TRAFFIC CONTROL	DEAK HOUD	EXISTING		
	INTERSECTION	TRAFFIC CONTROL	FEAK HOUK	DELAY (a)	LOS (b)	
1	SP 04 (Commo Dd) & Via Marcada	Signal	AM	17.8	В	
1	SR 94 (Campo Rd) & Via Mercado	Signai	PM	17.9	В	
2	Lange the Dhud & CD 04 (Campa Dd)	<u>0'</u> 1	AM	15.3	В	
2	Jamacha Bivd. & SR 94 (Campo Rd)	Signal	PM	29.6	С	
		<u> </u>	AM	23.8	С	
3	SR 94 (Campo Rd) & Jamacha Rd.	Signai	PM	21.2	С	
4		<u>0'</u> 1	AM	17.9	В	
4	SR 94 (Campo Rd) & Cougar Canyon Rd.	Signai	PM	10.2	В	
5	Starle Commen D.J. & SD 04 (Commen D.J.)	<u>0'</u> 1	AM	28.8	С	
5	Steele Canyon Ru. & SK 94 (Campo Ru)	Signai	PM	24.7	С	
(Ladian Carriera Dr. (Larger Vallas D.J. & CD. 04 (Carres D.J.)	True Weer Steer	AM	589.6	F	
0	indian Springs Dr./Lyons valley Rd. & SR 94 (Campo Rd)	Two-way Stop	PM	73.6	F	
7	Dreater Vallay Dd /Laffaraan Dd & SD 04 (Compo Dd)	Fignal	AM	10.9	В	
/	Proctor Valley Rd./Jellerson Rd. & SR 94 (Campo Rd)	Signai	PM	10.1	В	
0	SP 04 (Commo Dd) & Malady Dd /Dagaafull Vallay Danah Dd	True Weer Steer	AM	14.5	В	
0	SK 94 (Campo Ku) & Melody Ku./Peacelun Vaney Kanch Ku.	Two-way Stop	PM	14.4	В	
0	Malada Dal & Danatan Mallan Dal	One West Sterr	AM	7.7	А	
9	Melody Ku. & Flociol Valley Ku.	One-way Stop	PM	7.5	А	
10	SP 04 (Commo Dd) & Decompation Dd		AM	Under this scenario, this intersection does		
10	SK 94 (Campo Ku) & Reservation Ku.	One-way Stop	PM	not have conflicting movements.		
11	SP 04 (Campo Pd) & Honey Springs Pd	One Way Sten	AM	12.0	В	
11	SK 94 (Campo Ku) & Honey Springs Ku.	One-way Stop	PM	11.0	В	
12	SP 04 (Commo Dd) & Otay Lakas Dd	One Wey Step	AM	11.2	В	
12	SK 94 (Campo Ku) & Otay Lakes Ku.	One-way Stop	PM	12.3	В	
12	Jamasha Plud & Sugartuatar Springs Plud	Signal	AM	24.9	С	
15	Jamacha Bivu. & Sweetwater Springs Bivu.	Signai	PM	20.1	С	
14	Willow Clan Dr. & Jamacha Pd	Signal	AM	45.2	D	
14	winow Olen DI. & Janacha Ku.	Signai	PM	32.3	С	
15	Steele Conven Pd & Willow Clan Dr	Signal	AM	38.3	D	
15	Steele Caliyon Ru. & Willow Glen DI.	Sigilai	PM	26.6	С	
16	Stoole Conven Pd & Jamul Dr	Signal	AM	16.7	В	
10	Steele Caliyon Ku. & Janiur Dr.	Signai	PM	15.1	В	
17	Lyons Velloy Pd & Jamul Dr	One Wey Step	AM	12.2	В	
17		One-way stop	PM	12.3	В	
18	Jofferson Pd. & Lyons Volley Pd	One Way Stop	AM	10.5	В	
10	Jenerson Ku. & Lyons vaney Ku.	One-way Stop	PM	11.0	В	
10	SP 04 (Campo Pd) & Maxfield Pd	One Way Stop	AM	12.3	В	
19	SK 74 (Campo Ku) & Maxileiu Ku.	One-way Stop	PM	14.8	В	

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

TABLE 4.9-8 EXISTING BASELINE FRIDAY/SATURDAY CONDITIONS PM PEAK-HOUR INTERSECTION LOS (UPDATED OCTOBER 2012)

	NORDOPON	TDA FEIG CONTROL	CTUDY DEDIOD	EXIST	ING
	INTERSECTION	TRAFFIC CONTROL	STUDY PERIOD	DELAY (a)	LOS (b)
			FRI PM	17.3	В
1	SR 94 (Campo Rd) & Via Mercado	Signal	SAT PM	11.6	В
			FRI PM	32.9	С
2	Jamacha Blvd. & SR 94 (Campo Rd)	Signal	SAT PM	15.8	В
			FRI PM	24.5	С
3	SR 94 (Campo Rd) & Jamacha Rd.	Signal	SAT PM	21	С
			FRI PM	10	В
4	SR 94 (Campo Rd) & Cougar Canyon Rd.	Signal	SAT PM	13.5	В
			FRI PM	27.3	С
5	Steele Canyon Rd. & SR 94 (Campo Rd)	Signal	SAT PM	26.2	С
			FRI PM	125.3	F
6	Indian Springs Dr./Lyons Valley Rd. & SR 94 (Campo Rd)	Two-Way Stop	SAT PM	40.7	Е
			FRI PM	15.9	В
7	Proctor Valley Rd./Jefferson Rd. & SR 94 (Campo Rd)	Signal	SAT PM	13.8	В
			FRI PM	16.6	С
8	SR 94 (Campo Rd) & Melody Rd./Peacefull Valley Ranch Rd.	Two-Way Stop	SAT PM	12.9	В
			FRI PM	7.5	А
9	Melody Rd. & Proctor Valley Rd.	One-Way Stop	SAT PM	7.6	А
			FRI PM	Under this sc	enario, this
10		O We fit	CATIDA	intersection do	bes not have
10	SR 94 (Campo Rd) & Reservation Rd.	One-way Stop	SAT PM	conflicting m	ovements.
	CD 04 (Course DJ) 8 Heaves Sectors DJ	O We fit	FRIPM	12	В
11	SR 94 (Campo Rd) & Honey Springs Rd.	One-way Stop	SAT PM	10.5	В
10	SD 04 (Commo Dd) & Otory Lalson Dd	One Way Ster		12.0	D
12	SK 94 (Campo Rd) & Otay Lakes Rd.	One-way Stop	SAT PM EDI DM	21.5	D C
12	Jamasha Plud & Sucativatar Springs Plud	Signal		21.5	D D
15	Jamacha Bivu. & Sweetwater Springs Bivu.	Signa	5AI FM	26.2	D
14	Willow Clap Dr. & Jamasha Pd	Signal		30.5	D C
14	winow Gien Di. & Jainacha Ku.	Signai	EDI DM	27.0	C
15	Steele Canyon Pd & Willow Glen Dr	Signal	SAT DM	21.9	C
15	Steele Carlyon Ku. & Willow Olen DI.	Signai	FRIPM	12.7	B
16	Steele Canvon Rd & Jamul Dr	Signal	SAT PM	12.7	B
	Steele canyon fai, a sumar Dr.	orgina	FRI PM	11.8	B
17	Lvons Vallev Rd. & Jamul Dr.	One-Way Stop	SAT PM	10.3	B
		one may stop	FRI PM	10.5	B
18	Jefferson Rd. & Lyons Valley Rd	One-Way Stop	SAT PM	9.6	A
		one may stop	FRI PM	14.2	B
19	SR 94 (Campo Rd) & Maxfield Rd.	One-Way Stop	SAT PM	11.6	B
		· · ·			1

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement. (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

ILV ANALYSIS								
	EXISTING							
	INTERSECTION	PEAK HOUR	ILV TOTAL	CAPACITY				
1	SP 04 (Compo Pd) & Via Marcado	AM	1253	Approaching Capacity				
1	SK 94 (Campo Ku) & Via Mercauo	PM	1240	Approaching Capacity				
2 SR 94 (C	SP 04 (Compo Pd) & Jamacha Plud	AM	895	Below Capacity				
	SK 94 (Campo Ku) & Jamacha Bivu.	PM	1346	Approaching Capacity				
2	SP 04 (Compo Dd) & Jamasha Dd	AM	997	Below Capacity				
5	5 SK 94 (Campo Ku) & Jamacha Ku.		1009	Below Capacity				
4	SP 04 (Compo Pd) & Cougar Convon Pd	AM	1094	Below Capacity				
4	SK 94 (Campo Ku) & Cougar Canyon Ku.	PM	888	Below Capacity				
5	SP 04 (Compo Pd) & Stoole Convon Pd	AM	1126	Below Capacity				
5	SK 94 (Campo Ku) & Steele Canyon Ku.	PM	999	Below Capacity				
7	SR 94 (Campo Rd) & Jefferson Rd	AM	646	Below Capacity				
/		PM	635	Below Capacity				

TABLE 4.9-9 EXISTING BASELINE WEEKDAY CONDITIONS ILV ANALYSIS

Notes:

<1200 = Below Capacity, 1201 - 1500 = Approaching Capacity, >1500 = Above Capacity **Bold** values indicate intersections operating above capacity.

TABLE4.9-10 EXISTING BASELINE FRIDAY/SATURDAY CONDITIONS ILV ANALYSIS

			EXISTING		
	INTERSECTION	PEAK HOUR	ILV TOTAL	CAPACITY	
1	SP 04 (Campo Pd) & Via Marcado	FRI PM	1170	Below Capacity	
1	SK 94 (Campo Ku) & Via Mercado	SAT PM	964	Below Capacity	
2 SR 94 (Campo Rd) & Jamacha Blvd.		FRI PM	1365	Approaching Capacity	
		SAT PM	1076	Below Capacity	
3 SR 94 (Campo Rd) & Jamacha Rd.		FRI PM	1058	Below Capacity	
		SAT PM	916	Below Capacity	
		FRI PM	928	Below Capacity	
4	SK 94 (Campo Ku) & Cougai Canyon Ku.	SAT PM	505	Below Capacity	
5	SP 04 (Campo Pd) & Steele Canyon Pd	FRI PM	1036	Below Capacity	
5 SK 94 (Campo Ku) & Steele Canyon Ku.		SAT PM	608	Below Capacity	
7	SP 94 (Campo Pd) & Jefferson Pd	FRI PM	726	Below Capacity	
1	SK 74 (Campo Ku) & Jenerson Ku	SAT PM	460	Below Capacity	

Notes:

<1200 = Below Capacity, 1201 - 1500 = Approaching Capacity, >1500 = Above Capacity

Bold values indicate intersections operating above capacity.

TABLE 4.9-11 EXISTING BASELINE CONDITIONS ROADWAY SEGMENT LOS (UPDATED OCTOBER 2012)

ROADWAY SEGMENT	ROADWAY CLASSIFICATION (a)	LOS E CAPACITY	ADT (b)	V/C RATIO (c)	LOS
Sweetwater Springs Blvd.	•			•	
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	15,483	0.418	В
Jamacha Blvd.					
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	16,683	0.451	В
Jamacha Rd. (SR 54)					
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	41,605	0.73	С
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	23,521	0.413	В
Steele Canyon Rd.					
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	6,379	0.394	С
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	14,028	0.738	Ε
Jamul Dr.					
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	2,433	0.15	В
Willow Glen Dr.					
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	19,986	0.54	В
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	12,237	0.644	D
Lyons Valley Rd.					
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	5,522	0.341	С
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	7,008	0.433	С
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	8,493	0.524	D
Jefferson Rd.					
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	2,685	0.166	В
Melody Rd.					
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	1,374	0.085	А
Proctor Valley Rd.					
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	1,630	0.101	А
Honey Springs Rd.					
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	1,579	0.097	А
Otay Lakes Rd.					
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	2,582	0.159	В

Notes:

Bold values indicate roadway segments operating at LOS E or F.

(a) Existing roads street classification is based on the County of San Diego Public Road Standards, Table 2A

(b) The segment traffic volumes under LOS E, as shown in this table, are considered at capacity because at LOS E the volume-to-capacity Ratio (v/c Ratio) is equal to 1.0.

(c) Average Daily Traffic (ADT) volumes for the roadway segments were collected by National Data Services (NDS) in 2012

(d) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

Tables 4.9-12 and **4.9-13** display the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor <u>Valley</u> Road under Existing Conditions. The roadway segments currently function at LOS A. **Appendix 10** (Appendix G) contains the peak-hour arterial analysis worksheets.

Peak-Hour Two-Lane Highway Conditions (HCM)

Table 4.9-14 displays the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under Existing Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. As shown in the table, all roadway segments within the study area currently function at LOS D. Appendix H contains the two-way two-lane analysis worksheets.

Near Term (2015) Conditions

Near Term Road Network

No roadway network changes are assumed to take place under the Near Term scenario.

Near Term Cumulative Projects

In addition to the Proposed Project, there are fourteen other potential cumulative projects that could add traffic to the study area intersections. Information from the other cumulative projects was extracted from the approved Traffic Impact Analysis for the Peaceful Valley Ranch (TM - 5341 RPL5), April 12, 2007.

(UPDATED OCTOBER 2012)														
(AM F	PEAK	PM PEAK										
ROADWAV SECMENT	DIRECTION	SPEED		SPEED										
KOADWAI SEOMENI		(a)	LOS (b)	(a)	LOS (b)									
SR 94 (Campo Rd)														
Via Manada ta Draatan Vallar, Dd	EB	49.7	А	45.9	А									
via Mercado to Proctor valley Rd	WB	46.4	А	47.2	А									

TABLE 4.9-12 EXISTING BASELINE WEEKDAY CONDITIONS PEAK HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

Notes:

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).

(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under consideration and is influenced both by the number of signals per mile and by the intersection control delay.

SOURCE: Kimley Horn, 2012

TABLE 4.9-12 EXISTING BASELINE WEEKDAY CONDITIONS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

		AM PEA	К	PM PEAK			
ROADWAY SEGMENT	DIRECTION	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)		
SR 94 (Campo Rd)							
Via Marcado to Proctor Vallay Pd	EB	49.7	А	45.9	А		
via Mercado to Floctor Valley Ru	WB	46.4	А	47.2	А		

Notes:

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).

(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under consideration and is influenced both by the number of signals per mile and by the intersection control delay.

TABLE 4.9-13 EXISTING BASELINE FRIDAY/SATURDAY CONDITIONS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

DOADWAY SECMENT	DIDECTION	FRIDAY	7	SATURDAY				
KOADWAT SEGMENT	DIRECTION	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)			
SR 94								
Via Marado to Prostor Vallay Pd	EB	44.9	А	46.3	А			
	WB	47.4	А	46.9	А			

Notes:

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).

(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under consideration and is influenced both by the number of signals per mile and by the intersection control delay.

The fourteen identified projects are the following:

- TPM 20550 (Morgan Minor Subdivision) proposes to construct 2 single-family estate homes. The project site is proposed north of the Procter Valley Road/Poplar Meadow Lane intersection. The project trips were manually calculated using SANDAG's <u>Trip Rates Brief</u> <u>Guide of Vehicular Traffic Generation Rates for the San Diego Region</u> (April, 2002) for estate homes. The project trips were calculated to generate 24 ADT with 1inbound/1 outbound trip during the AM peak-hour and 1 inbound/1 outbound trip during the PM peak-hour.
- 2. *TM 5154 RPL1 (Hendrix Subdivision)* is located east of Campo Road on Las Palmas Road. The project proposes to develop 5 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 60 ADT with 2 inbound/3 outbound trips during the AM peak-hour and 4 inbound/2 outbound trips during the PM peak-hour.
- 3. *TM 5213 RPL2 (Mintz Subdivision)* is located north of Skyline Truck Trail and east of Hidden Trail drive. The project proposes to develop approximately 25 acres of land into 10 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project trips were calculated to generate 120 ADT with 3 inbound/7 outbound trips during the AM peak-hour and 8 inbound/4 outbound trips during the PM peak-hour.
- 4. *TM 5289 RPL2 (Jamul Highlands Subdivision)* proposes to construct 25 single-family estate homes. The project site is proposed south of the Valley Road/Jamul Highlands Road intersection. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 300 ADT with 7 inbound/19 outbound trips during the AM peak-hour and 21 inbound/9 outbound trips during the PM peak-hour.
- 5. *TPM 20626* proposes to construct 3 single-family estate homes. The project site is proposed on the west side of Procter Valley Road, just north of the Proctor Valley Road/Melody Road intersection. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 36 ADT with 1 inbound/2 outbound trips during the AM peak-hour and 3inbound/1 outbound trips during the PM peak-hour.
- 6. *TPM 20628 RPLI (Yacoo Minor Subdivision)* proposes to construct 4 single-family estate homes. The project site is proposed on Schlee Canyon Road north of Procter Valley Road. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for

estate homes. The project is calculated to generate 48 ADT with 1 inbound/3 outbound trips during the AM peak-hour and 4 inbound/1 outbound trips during the PM peak-hour.

- 7. A Residential Development is located just east of the proposed project and south of Olive Vista Drive. The project proposes to develop 20 single-family estate homes. The project trips were calculated to generate 240 ADT with 6 inbound/13 outbound trips during the AM peak-hour and 17 inbound/7 outbound trips during the PM peak-hour.
- 8. *TPM 20599 RPLI (Blanco Parcel Map)* proposes to construct 4 single-family estate homes. The project site is proposed on the east side of SR 94, north of the Melody Road. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 48 ADT with 1 inbound/3 outbound trips during the AM peak-hour and 4 inbound/1 outbound trips during the PM peak-hour.
- 9. *TPM 20868 (Stein Barth Minor Subdivision)* is located just north of the proposed project and south of Olive Vista Drive. The project proposes to develop 2 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 24 ADT with 1 inbound/1 outbound trip during the AM peak-hour and 1 inbound/1 outbound trip during the PM peak-hour.
- 10. *TPM 20594 (Pioneer Minor Subdivision)* is located just west of the proposed project and north of Melody Lane. The project proposes to develop 3 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 36 ADT with 1 inbound/2 outbound trips during the AM peak-hour and 3 inbound/1 outbound trips during the PM peak-hour.
- 11. *Otay Ranch -Village 19* is located south west of the proposed project and south of Melody Lane. The project proposes to develop 20 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 240 ADT with 6 inbound/13 outbound trips during the AM peak-hour and 17 inbound/7 outbound trips during the PM peak-hour.
- 12. *Jamul Estates II* is located just north east of the proposed project. The maximum allowable developable lots are 68 single-family estate homes based on the current zoning. Therefore, the project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 816 ADT with 20 inbound/46 outbound trips during the AM peak-hour and 57 inbound/24 outbound trips during the PM peak-hour.
- 13. *Simpson Farms* is generally located on the northeast comer of the SR 94 (Campo Road)/Jefferson Road intersection in the Jamul Community of San Diego County. The project proposes to develop 98 single-family estate homes and 115,000 square feet (sf) of

commercial uses. The project trips were calculated to generate approximately 6,500 ADT with approximately 124 inbound/130 outbound trips during the AM peak-hour and 323 inbound/275 outbound trips during the PM peak-hour.

14. *Peaceful Valley Ranch* project proposes the subdivision of 181.31 acres for an estate residential development, equestrian uses and amenities, and fire service facilities. The project is located east of SR 94 and will use the intersection of SR 94 and Melody Road as a single access point. The total project is calculated to generate approximately 750 ADT with 43 inbound/46 outbound trips during the AM peak hour and 56 inbound/46 outbound trips during the PM peak hour.

Appendix 10 (Appendix D; Figures 6-1 and 6-2) contains each cumulative project trip generation, distribution and assignment within the study area.

Near Term Traffic Volumes

Traffic volumes for the Near Term (2015) No Build conditions were estimated by adding the cumulative project traffic to the existing traffic volumes. In addition, to account for other projects not yet identified by Caltrans or the County of San Diego, which could be constructed before the Jamul Indian Village project, a traffic volume growth rate was calculated for each movement and added to the existing traffic counts for a period of five years (2010 and 2015). **Appendix 10** (Figures 6-3 through 6-5) presents Near Term No Build peak-hour volumes for a typical weekday and a typical Friday/Saturday, respectively.

Near Term Intersection Conditions (HCM)

Appendix 10 (Table 6-1 and 6-2) displays the peak-hour LOS analysis results for the study intersections under Near Term (2015) No Build for the weekday conditions, as well as the peak-hour LOS analysis results for the typical Friday and Saturday conditions. The following intersections would operate at LOS D, E or F for at least one peak period analyzed:

- SR 94 (Campo Road) & Via Mercado (LOS D weekday a.m. and p.m. peak-hour, LOS E weekday p.m. peak hour, LOS D Friday p.m. peak-hour);
- SR 94 (Campo Road) & Jamacha Road-Boulevard (LOS D weekday p.m. peak-hour, LOS D Friday p.m. peak-hour);
- SR 94 (Campo Road) & Jamacha Boulevard-Road (LOS D-E weekday p.m. peak-hour, LOS D Friday p.m. peak-hour);
- SR 94 (Campo Road) & Steele Canyon Road (LOS D weekday ap.m. peak-hour), LOS E weekday p.m. peak hour;

- SR 94 (Campo Road) & Lyons Valley Road (LOS F all peak hours analyzed weekday a.m. and p.m. peak-hour, LOS F Friday P.m. peak-hour, LOS E Saturday p.m. peak-hour);
- SR 94 (Campo Road) & Jefferson Road (LOS D weekday a.m. peak-hour);and
- <u>SR 94 (Campo Road) & Melody Road (LOS D all peak hours analyzed). Jamacha</u> <u>Boulevard and Sweetwater Spring Boulevard (LOS E p.m. peak-hour, LOS F Friday p.m.</u> <u>peak-hour); and</u>
- <u>Lyons Valley Road and Jamul Drive (LOS E p.m. peak-hour).</u>

Appendix 10 (Appendix E) contains the intersection LOS calculation worksheets.

Near Term Intersection Conditions (ILV)

Appendix 10 (Tables 6-3 and 6-4) displays the ILV analysis results for the Caltrans-owned signalized intersections under Near Term (2015) conditions for all peak hours analyzed. All intersections along SR 94 (Campo Road) would operate at below or approaching capacity during all peak periods, except for the following intersections, which operate at above capacity conditions:

- SR 94 (Campo Road) & Via Mercado (weekday p.m. peak-hour);
- SR 94 (Campo Road) & Jamacha <u>Blvd-Boulevard</u> (weekday p.m. peak-hour); and
- SR 94 (Campo Road) & Steele Canyon Road (weekday p.m. peak-hour).

Appendix 10 (Appendix F) contains the ILV worksheets.

Near Term Roadway Segment Conditions

Appendix 10 (Table 6-5) displays the roadway segments analysis under the Near Term (2015) Baseline conditions for a typical weekday. All roadway segments within the study area would function at LOS D or better, with the exception of the following roadway segments:-

- Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS E); and
- Willow Glen Drive between Steele Canyon Road and Hillsdale Road (LOS E).

Near Term Peak-Hour Arterial Conditions (HCM)

Appendix 10 (Tables 6-6 and 6-7) displays the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor <u>Valley</u> Road under the Near Term (2015) Baseline conditions. The roadway segment would function at LOS <u>A B or better</u> under the Near

Term (2015) conditions. Appendix 10 (Appendix G) contains the peak-hour arterial analysis worksheets.

Near Term Peak-Hour Two-Lane Highway Conditions (HCM)

Appendix 10 (Table 6-8) displays the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under Existing Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. All roadway segments within the study area would function at LOS D with the exception of the following segment:

 SR 94 (Campo Road) between Proctor Valley Road and Melody Road (LOS E weekday a.m. and p.m. peak-hours, LOS E EB-Friday p.m. peak-hour)

Appendix 10 (Appendix H) contains the two-way two-lane analysis worksheets.

Horizon Year (2035) Conditions

Horizon Year Road Network

Per the County of San Diego's <u>Mobility Element of the General Plan</u>, two roadway segment improvements were assumed to be completed under the Horizon Year conditions:

- Completion of Proctor Valley Road as a 2-lane light collector from Chula Vista city limits to SR 94; and
- Realignment of Otay Lakes Road with the intersection of Honey Springs Road to form a four-way intersection at SR 94.

Horizon Year Traffic Volumes

Appendix 10 (Chapter 2; Figures 8-1 through 8-3) provides a description of how the Horizon Year 2035 volumes were developed, shows Horizon Year Baseline peak-hour volumes for a typical weekday and a typical weekend, and shows the Horizon Year Baseline ADT volumes within the study area.

Horizon Year Intersection Conditions (HCM)

Appendix 10 (Table 8-1 and 8-2) presents the peak-hour LOS analysis results for the study intersections under Horizon Year (2035) No Build scenario for the weekday conditions, and presents the peak-hour LOS analysis results for the typical Friday and Saturday conditions. <u>The All</u> study area intersections would operate at LOS E or F during one or more peak-hours. **Appendix 10**

(Appendix E) contains the intersection LOS calculation worksheets. <u>The following is the summary of the results:</u>

- SR-94 (Campo Road) and Via Mercado (LOS F during all peak-hours analyzed);
- SR-94 (Campo Road) and Jamacha Boulevard (LOS E weekday and Friday p.m. peakhours;
- SR-94 (Campo Road) and Jamacha Road (LOS E weekday a.m., LOS F weekday and Friday p.m. peak-hours, LOS E Saturday p.m. peak-hour);
- SR-94 (Campo Road) and Steele Canyon Road (LOS D weekday a.m. peak-hours, LOS E weekday p.m. peak-hours, LOS D Friday p.m. peak-hours);
- SR-94 (Campo Road) and Lyons Valley Road (LOS F all peak-hours analyzed);
- Melody Road and Proctor Valley Road (LOS F weekday a.m. and p.m. peak-hours, LOS F Saturday p.m. peak-hour);
- Jamacha Boulevard and Sweetwater Springs Boulevard (LOS F all peak-hours analyzed);
- Steele Canyon Road and Willow Glen Drive (LOS E weekday a.m. peak-hour);
- Steele Canyon Road and Jamul Drive (LOS F weekday a.m. and p.m. peak-hours, LOS E Friday p.m. peak-hour);
- Lyons Valley Road and Jamul Drive (LOS F weekday and Friday p.m. peak-hours);
- Jefferson Road and Lyons Valley Road (LOS F weekday a.m. and p.m. peak-hours);
- <u>SR-94 (Campo Road) and Maxfield Road (LOS D weekday and Friday p.m. peak-hours)</u>

Horizon Year Intersection Conditions (ILV)

Appendix 10 (Tables 8-3 and 8-4) presents the ILV analysis results for the Caltrans-owned signalized intersections under Horizon Year (2035) No Build conditions for all peak-hours

analyzed. All intersections along SR 94 (Campo Road) would operate at above capacity during one or more peak-hours. **Appendix 10** (Appendix F) contains the ILV worksheets.

Roadway Segment Analysis

Appendix 10 (Table 8-5) displays the roadway segments analysis under the Horizon Year (2035) No Build conditions for a typical weekday. All roadway segments within the study area would function at LOS D or better, with the following two exceptions exception of the following roadway segments:

- Jamacha Road between SR 94 and Fury Lane (LOS F);
- Steele Canyon Road between Jamul Drive and Willow Glend Drive (LOS F);
- Willow Glen Drive between Steele Canyon Road and Hillsdale Road (LOS E);
- Lyons Valley Road between Jefferson Road and Jamul Drive (LOS E);
- Lyons Valley Road between Jamul Drive and Myrtle Street (LOS E); and
- Proctor Valley Road between Melody Road to and Pioneer Way (LOS E).

Horizon Year Peak-Hour Arterial Conditions (HCM)

Appendix 10 (Tables 8-6 and 8-7) displays the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor <u>Valley</u> Road under the Horizon Year (2035) No Build conditions. <u>All The</u>-segments would operate at LOS D-<u>C</u> or better under both <u>directions during all peak-hour periods analyzed</u> in the westbound direction during the weekday morning peak hour, LOS E in the eastbound direction during the afternoon peak hour and LOS D in the eastbound direction during a Friday afternoon peak hour. **Appendix 10** (Appendix G) contains the peak-hour arterial analysis worksheets.

HCM Peak-Hour Two-Lane Highway Analysis

Appendix 10 (Table 8-8) displays the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under Existing Conditions Horizon Year (2035) No Build conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. All roadway segments within the study area would function at LOS D or E under the Horizon Year conditions. **Appendix 10** (Appendix H) contains the two-way two-lane analysis worksheets.

4.9.2 ENVIRONMENTAL CONSEQUENCES

Significance Criteria

The Caltrans *Guide for the Preparation of Traffic Impact Studies*, dated December 2002, was used to determine the project impacts to facilities within Caltrans jurisdiction. These guidelines state that Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" for all of its facilities. When an existing State Highway facility is operating at less than the appropriate target LOS, the existing measure of effectiveness (MOE) for that facility should be maintained. This means that, for facilities that operate at LOS D, E or F, a significant project impact would occur if a project causes a decrease in the MOE for that facility. **Table 4.9-15** shows the MOE that is used for each type of Caltrans facility. By way of example, if a signalized intersection were operating at a mid-range LOS D (45 seconds of delay per vehicle) and the project were to cause the delay to increase one or more seconds per vehicle, the project would be deemed to cause a significant impact at that intersection.

FACILITY	MEASURE OF EFFECTIVENESS
Signalized Intersection	Control delay per vehicle (sec/veh)
Unsignalized Intersection	Average control delay per vehicle (sec/veh)
Urban Streets	Average travel speeds (mile/hr)
Two-lane Highway	Percent time following and average travel speeds (mile/hr)

TABLE 4.9-15 CALTRANS MEASURE OF EFFECTIVENESS BY FACILITY TYPE

SOURCE: Kimley Horn, 2012

of San Diego Guidelines for Determining Significance, Part XV-A The Countv (Transportation/Traffic) and Report Format and Content Requirement – Transportation and Traffic, last modified August 24, 2011, was used as a reference to determine the project impacts to intersections and roadway segments within the County of San Diego. At intersections, the measurement of effectiveness (MOE) is based on seconds of delay or the addition of peak-hour trips to a critical movement. On roadway segments, the MOE is based on allowable increases in the ADT for a circulation element road. At signalized intersections that are expected to operate at LOS E with the project, the allowable increase is up to two seconds of delay. For intersections that are expected to operate at LOS F with the project, the allowable increase is up to one second delay or five peak-hour trips on a critical movement. At unsignalized intersections that are expected to operate at LOS E with the project; the allowable increase is up to 20 directional peak-hour trips on a critical movement. For intersections that are expected to operate at LOS F with the project, the allowable increase is up to five directional peak-hour trips on a critical movement. For roadway segments that are forecasted to operate at LOS E or F, the allowable increase in ADT depends on the classification of the roadway (i.e., two-lane, four-lane, or six-lane). The criteria for intersections and roadway segments are summarized in further detail in Table 1 of the <u>County of San Diego</u> <u>Guidelines for Determining Significance and Report Format and Content Requirement –</u> <u>Transportation and Traffic, last modified in August 24, 2011County of San Diego Guidelines for</u> <u>Determining Significance, Part XV A (Transportation/Traffic)</u>. Table 4.9-16 shows the County of San Diego's criteria for determining levels of significance at intersections and roadway segments. Per the County of San Diego's guidelines, a LOS D operation is acceptable.

FACILITY	MEASURE OF EFFECTIVENESS (MOE)	SIGNIFICANCE THRESHOLD
Signalized Intersection	Seconds of delay/Peak-hour trips on critical movement	At LOS E, > 2.0 seconds of delay At LOS F, > 1.0 seconds of delay or 5 peak-hour trips on a critical movement
Unsignalized Intersection	Peak-hour trips	At LOS E, 20 peak-hour trips on a critical movement At LOS F, 5 peak-hour trips on a critical movement
Roadway Segment	ADT	At LOS E, >200 ADT for a 2-lane road, >400 ADT for a 4-lane road, and >600 ADT for a 6- lane road At LOS F, >100 ADT for a 2-lane road, >200 ADT for a 4-lane road, and >300 ADT for a 6- lane road

TABLE 4.9-16 COUNTY OF SAN DIEGO SIGNIFICANCE CRITERIA

Notes: Source: County of San Diego Guidelines for Determining Significance, Part XV-A (Transportation/Traffic) (a) Significance threshold applies only when the type of facility operates at LOS E or F.

SOURCE: Kimley Horn, 2012

Two classes of impacts are measured for significance: Direct impacts and cumulative impacts. Direct traffic impacts are those projected to occur with the addition of the Proposed Project traffic to existing traffic volumes where the County or Caltrans significance criteria (as applicable) are exceeded. Direct impacts are deemed to be mitigated when mitigation measures improve the intersection or roadway segment to an acceptable level of service or to a level that is equal to or better than pre-project conditions.

Cumulative traffic impacts are those projected to occur when project traffic is added to "future traffic", and where this resulting combined future traffic exceeds County or Caltrans significance criteria. Future traffic is based on additional proposed developments in the area (short-term cumulative) or when the affected community plan area reaches full planned build out (long-term

cumulative). A project would be considered to have a cumulatively considerable impact when the addition of the project traffic to a future cumulative impact caused by other developments exceeds the County or Caltrans significance criteria. The project applicant would be responsible for mitigating its cumulatively considerable impact by providing a fair share contribution toward the implementation of mitigation measures needed to improve the intersection or roadway segment to an acceptable level of service or to a level that is equal to better than pre project operations. A fair share contribution is based on the project's proportionate traffic contribution to the overall future traffic volumes at locations which exceed County or Caltrans significance criteria (as applicable).

To mitigate cumulatively significant impacts within the County of San Diego, projects must pay aTransportation Impact Fee (TIF). An impact is considered to be mitigated to less than cumulatively considerable levels when identified mitigation measures reduce traffic impacts to pre-project levels or better and/or the project pays into the TIF to support on a fair share basis the construction of improvements that will restore an impact to a less than significant level.

Project Traffic

The following section describes the traffic generation and traffic distribution related to the proposed Jamul Indian Village Gaming project.

Trip Generation

SANDAG's Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (April, 2002) is a typical source for trip generation estimates for traffic impact studies within the County of San Diego. Another common source for trip generation rates is the Institute of Transportation Engineers (ITE) Trip Generation Manual, 8th Edition. Unfortunately, neither of these two sources provide rates for gaming facilities. In 2003, the County of San Diego prepared the Traffic Needs Assessment of Tribal Development Projects in the San Diego Region, March 2003 Update. For that particular study, the County of San Diego reviewed environmental evaluations and traffic impact studies for Indian gaming facilities both inside and outside the County of San Diego. In consultation with private traffic engineering consultants and discussion with representatives from some of the tribes, a trip generation rate of 100 average daily trips per 1,000 square feet of gaming area was agreed as the appropriate trip rate for the traffic evaluations of these types of facilities. The total square footage of the gaming area was used since this was the main attraction of the Tribal Gaming Project facilities and other uses supplement this activity. The supplemental uses are intended to provide support to the gaming facility and would not generate additional daily traffic. Examples of these facilities would be the administrative office, storage, employee area, cage area, public spaces, etc. For the food and beverages uses, it was determined that SANDAG's trip generation rate for a "Quality Restaurant" was the appropriate rate to use with a 50 percent reduction. This reduction was applied to recognize that the primary attractor of this site is gaming and that the food and beverage establishments are a secondary attraction.

The County of San Diego study established rate for the Indian gaming facility only addresses the daily trip generation, not peak-hour trip rates. Kimley Horn and Associates (KHA) has completed the Traffic Study for the Graton Rancheria Gaming and Hotel in Sonoma County, California. As part of this study, KHA researched peak-hour trip generation rates for two other facilities similar to the Jamul Indian Village Gaming project. The facilities investigated were the Auburn Rancheria/Thunder Valley Gaming and Shingle Springs. Appendix I contains the trip generation data for the three mentioned casino sites. Based on the research, it was determined that the trip rate used for Shingle Springs is a reasonable, but also more conservative, assumption for this traffic study, chosen to eliminate the possibility of underestimating project trips. The Shingle Springs studies used the following peak-hour rates for the trip generation calculation:

- Weekday AM Peak-Hour: 2.95 trips/1,000 square feet of total gaming area
- Weekday PM Peak-Hour: 4.95 trips/1,000 square feet of total gaming area
- Friday/Saturday PM Peak-Hour: 6.9 trips/1,000 square feet of total gaming area

These peak-hour trip generation rates from the Shingle Springs study were found acceptable by Caltrans for the peak-hour traffic estimation for the proposed Jamul Indian Village project based on comparison with the Pauma Casino existing traffic generation. The rates used in this study include the traffic generated by visitors, employee, delivery trucks and other typical activity of the facility.

Table 4.9-17 displays the trip generation calculation for the Proposed Project development. As shown in the table, the Proposed Project development would generate a total of 10,325-9,000 average daily trips. Table 4-1 also indicates that 602-599 (422-420 in, 180-179 out) trips would occur during the weekday morning peak-hour period. During the weekday afternoon peak-hour period, the project would generate 1,010 1,005 (536-533 in, 474-472 out) trips. During each of the Friday and Saturday peak-hour periods, the project would generate 1,456 1,401 (696-645 in, 760 756 out) trips.

Table 4.9-18 displays the trip generation calculation for the Alternative 1 project development. As shown in the table, the Alternative 1 development would generate a total of 4,995 average daily trips. Table 4-2 also indicates that 330 (231 in, 99 out) trips would occur during the morning peak-hour period. During the weekday afternoon peak-hour period, the project would generate 553 (294 in, 259 out) trips. During the Friday and Saturday peak-hour periods, the project would generate 786 (369 in, 417 out) trips. Alternative 1 will include the traffic for a 7,200 square foot Event Center facility.

TABLE 4.9-17TRIP GENERATIONS SUMMARY FOR PROPOSED PROJECT
(UPDATED OCTOBER 2012)

	Unite T			Weekday										Friday/Saturday				
Land Use Gaming Area (1) Food and Beverage (3)		Trin	Daily	AM Peak-Hour						PM Pe	ak-Ho	ur		PM Peak-Hour				
Land Osc	Cints	Rates	Trips	Trip Rate2	2 In 2 Out Ratio2	In	Out	Total	Trip Rate2	In Out Ratio2	In	Out	Total	Trip Rate2	In Out Ratio2	In	Out	Total
Gaming Area (1)	70.000 ksf	100/ksf	7,000			1	1		L		1			L		1		
Food and Beverage (3)	40.000 ksf	50/ksf	2,000															
Gaming Total (4)	203.000 ksf		9,000	2.95/ksf	0.70 0.30	420	179	599	4.95/ksf	0.53 0.47	533	472	1,005	6.9/ksf	0.46 0.54	645	756	1,401
NET TRIP GENERATION			9,000			420	179	599			533	472	1,005			645	756	1,401

Note:

Ksf= thousand square feet; emp= employees

1. Reference: San Diego County, Update on Impacts of Tribal Economic Development Projects in San Diego County, April 2003.

2. Reference: David Evans and Associates, Inc. and California Department of Transportation, Transportation/Circulation Technical Study- Shingles Springs Rancheria Interchange Project, April 2002.

3. For the Food and Beverage Use, the SANDAG's trip generation rate for a "Quality Restaurant" was used with a 50 percent reduction. This reduction was applied to recognize that the primary attraction of this site is the gaming facility and that the food and beverage establishments are a secondary attraction

4. This square footage includes facilities that provides operational support to the gaming facility. Daily trip generation for this support uses are included in the 100 trips/thousand square foot per the San Diego County, *Update on Impacts of Tribal Economic Development Projects in San Diego County*, April 2003. For this facility the additional square footage includes the following: 13.000 ksf of public space, 17.100 ksf of gaming support, 13.000 ksf of administration space, 10.000 ksf of employee area space and 34,000 ksf of back-of-house space.

SOURCE: Kimley-Horn, 2012

TABLE 4.9-18 TRIP GENERATIONS SUMMARY FOR ALTERNATIVE 1 (UPDATED OCTOBER 2012)

						Weekday							Friday	riday/Saturday				
Land Use	Units	Trin	Daily Trips	AM Peak-Hour						PM Pe		PM Peak-Hour						
		Rate1		Trip Rate2	In Out Ratio ₂	In	Out	Total	Trip Rate ₂	In Out Ratio ₂	In	Out	Total	Trip Rate2	In Out Ratio ₂	In	Out	Total
Gaming Area (1)	37.550 ksf	100/ksf	3,755															
Food and Beverage (3)	19.040 ksf	50/ksf	952															
Gaming Total (4)	111.800 ksf		4,707	2.95/ksf	0.70 0.30	231	99	330	4.95/ksf	0.53 0.47	294	259	553	6.9/ksf	0.46 0.54	355	416	771
Event Center (1)	7.200 ksf	40	288		See Note 5				See Note 5					2/ksf	1.00 0.00	14	1	14
NET TRIP GENERATION=			4,995			231	99	330			294	259	553			369	417	786

Note:

Ksf= thousand square feet; emp= employees

1. Reference: San Diego County, Update on Impacts of Tribal Economic Development Projects in San Diego County, April 2003.

2. Reference: David Evans and Associates, Inc. and California Department of Transportation, Transportation/Circulation Technical Study- Shingles Springs Rancheria Interchange Project, April 2002.

3. For the Food and Beverage Use, the SANDAG's trip generation rate for a "Quality Restaurant" was used with a 50 percent reduction. This reduction was applied to recognize that the primary attractor of this site is the gaming facility and that the food and beverage establishments are a secondary attraction

4. This square footage includes facilities that provide operational support to the gaming facility. Daily trip generation for this support uses are included in the 100 trips/thousand square foot per the San Diego County, Update on Impacts of Tribal Economic Development Projects in San Diego County, April 2003. For this facility the additional square footage includes the following: 7.908 ksf of public space, 11.610 ksf of gaming support space, 4.831 ksf of cage area space, 8.269 ksf of administration space, 12.875 ksf of storage area space and 9.717 ksf of employee area space.

5. This use will not generate peak-hour trips during a typical weekday.

SOURCE: Kimley-Horn, 2012

It should be noted that the traffic generation for the Proposed Project development includes traffic generated by a 24,000 square foot Event Center facility. For the daily traffic generation for the Event Center, a 40 trips per 1,000 square foot rate was used based on the *Updates on Impacts of Tribal Economic Development Project in San Diego County*, April 2003, study. For the peak-hour generation of the Event Center, it was assumed that approximately 10 percent of the traffic generated by this use would arrive to the facility during the afternoon peak-hour analyzed during only Fridays and Saturdays. The Event Center would not generate peak-hour volumes during the typical weekday. The 10 percent assumption was based on the fact that most events would have a start time of 7:30 p.m.

Table 4.9-19 displays the trip generation calculation for the Alternative 2 project development. As shown in the table, the Alternative 2 development would generate a total of 1,189 average daily trips. Table 4-3 also indicates that 52 (37 in, 15 out) trips would occur during the morning peak-hour period. During the weekday afternoon peak-hour analyzed, the project would generate 87 (46 in, 41 out) trips. During the Friday and Saturday peak-hour periods analyzed, the project would generate 121 (56 in, 65 out) trips. Alternative 2 will not include the Event Center facility.

Trip Distribution

All trip distribution figures can be found in **Appendix 10** (Chapter 4.0). Two project trip distribution patterns were generated for the Jamul Indian Village project. One distribution pattern was generated for the Near Term conditions, which would also include the existing plus project conditions. This distribution represents the likely traffic patterns of Gaming traffic based on the existing land use densities and roadway network within the vicinity of the project site. The basis of the distribution for the Near Term conditions was a Select Zone model run prepared by SANDAG for the Tribal Gaming site for the Year 2015. **Appendix 10** (Figure 4-1) displays the assumed Jamul Indian Village Gaming project traffic distribution for the Existing (2009) and Near Term (2015) conditions.

A second Select Zone model run was prepared by SANDAG for the Year 2030 scenario. This new distribution pattern includes more development to the south of SR 94 and therefore assumes more traffic coming from and to the south. **Appendix 10** (Figure 4-2) displays the assumed Jamul Indian Village Gaming project traffic distribution for the Horizon Year 2035 conditions.

Appendix 10 (Figures 4-3 and Figure 4-4) displays the assumed project traffic distributions through the study intersections within the study area for the Near Term (2015) and Horizon Year (2035) conditions, respectively.

Trip Assignment

Based on the Jamul Indian Village Gaming project trip distributions, project related trips were assigned to the roadway network and through the study intersections. **Appendix 10** (Figures 4-5

TABLE 4.9-19 TRIP GENERATIONS SUMMARY FOR ALTERNATIVE 2 (UPDATED OCTOBER 2012)

					Weekday										Friday/Saturday					
I and Use	Units	Trin	Doily	AM Peak-Hour					PM Pea	PM Peak-Hour										
Land Use	Cints	Rates	Trips	Trip	In	In	Out	Total	Trip	In	In	Out	Total	Trip	In	In	Out	Total		
				Rate ₂	Out				Rate ₂	Out				Rate ₂	Out					
					Ratio ₂					Ratio 2					Ratio ₂					
Gaming Area (1)	11.376 ksf	100/ksf	1,138																	
Food and Beverage(3)	1.019 ksf	50/ksf	51																	
Gaming Total (4)	17.500 ksf		1,189	2.95/ksf	0.70	37	15	52	4.95/ksf	0.53	46	41	87	6.9/ksf	0.46	56	65	121		
					0.30					0.47					0.54					
NET TRIP			1,189			37	15	52			46	41	87			56	65	121		
GENERATION=																				

Note:

Ksf= thousand square feet; emp= employees

1. Reference: San Diego County, Update on Impacts of Tribal Economic Development Projects in San Diego County, April 2003.

2. Reference: David Evans and Associates, Inc. and California Department of Transportation, Transportation/Circulation Technical Study- Shingles Springs Rancheria Interchange Project, April 2002.

3. For the Food and Beverage Use, the SANDAG's trip generation rate for a "Quality Restaurant" was used with a 50 percent reduction. This reduction was applied to recognize that the primary attractor of this site is the gaming facility and that the food and beverage establishments are a secondary attraction

4. This square footage includes facilities that provide operational support to the gaming facility. Daily trip generation for this support uses are included in the 100 trips/thousand square foot per the San Diego County, Update on Impacts of Tribal Economic Development Projects in San Diego County, April 2003. For this facility the additional square footage includes the following: 1.140 ksf of public space, 1.6 ksf of gaming support and 2.145 ksf of employee area space.

SOURCE: Kimley-Horn, 2012
thru 4-22) illustrate the project trip assignment for the weekday morning and afternoon peak periods, the Friday and Saturday afternoon peak periods and the typical weekday daily trip assignment for both the Near Term and Horizon Year conditions.

Impact 4.9(1): Construction Traffic

Proposed Project

The temporary construction traffic was evaluated to determine whether construction traffic would adversely affect the roadway network creating transportation related impacts. Although each phase of the construction would generate a different number of delivery trucks and workers trips, it was determined that the highest number of truck trips would occur during the initial earthwork phase of construction, which is anticipated to last three months.

Construction traffic was evaluated to determine whether it would adversely affect the existing roadway, thereby causing transportation related impacts. Although each phase of construction would generate a different number of delivery trucks and workers trips, it was determined that the highest number of truck trips would occur during the initial earthwork phase of construction, which is anticipated to last nine months.

The total area of the project site is estimated to be seven acres. It was conservatively assumed that the site would require two workers per acre during grading operations, regardless of the cubic yards of dirt that would have to be exported from the site. It was also assumed that each worker would correspond to one vehicle. Thus, 14 daily vehicle trips (7 acres x 2 workers/acre = 14 workers = 14 vehicle trips) would be generated by the construction workers during grading operations. It was conservatively assumed that all fourteen of the workers would arrive during the morning peak-period and would leave during the afternoon peak-period.

In addition to the worker's vehicle trips, truck trips will be generated by the earthwork phase of construction. The number of trucks required will depend on the amount of soil that will need to be exported from the site, which in turn depends on the square footage of the proposed building. Thus, each project alternative will generate a different amount of trucks. Based on information provided by the Civil Engineering firm designing the project, it was determined that a total of 22,600,200,000 cubic yards of dirt would have to be exported from the site. At an estimated 14 cubic yards per truckload, this work would require a total of 1,619,14,286 truckloads (22,660,200,000/ 14 = -1619,14,286). It is estimated that each truck load would require approximate 1.5 hours to load, travel to a designated deposit site and return to the construction site. Since the loading time per truck is approximately 20 minutes, a total of four circulating trucks would provide the maximum loading capacity for the site. For a typical 8-hour day, a total of 24 trucks trips per day are anticipated during

this phase of the construction. Approximately 3 trucks trips would occur during the morning or afternoon peak hour period. It was assumed that the grading work would be performed six days a week over the total nine months of grading. Based on these assumptions, it was determined that the Proposed Project would require approximately 60 trucks per day (14,286 trucks/(9 months x 4.5 weeks/month x 6 days/week = 60 trucks/day)). A Passenger Car Equivalent (PCE) factor of 2.5 was used to convert the daily truck trips into vehicle trips. An adjusted daily volume of 300 vehicle trips (60 x 2.5 x 2.0 = 300) would be generated by the trucks. It was assumed that there would be an even distribution of trucks throughout the nine-hour work day; therefore the trucks would generate approximately 34 vehicle trips during the morning and afternoon peak-period (300/9 = 34).

Trip Distribution

It was assumed that all of the inbound and outbound trucks and construction workers would utilize SR-94 to access the project site and would not add any trips to the side streets within the study area. The inbound trips would travel southeast along SR-94 and would make a southbound right into the project driveway. The outbound trips would make an eastbound left out of the project driveway and would travel northwest along SR-94 out of the project study area. **Appendix 10** (Figure 11-1) illustrates the construction traffic distribution at the study intersections.

Trip Assignment

Based on the construction traffic trip distributions and trip generation for construction traffic, construction trips were assigned to the study intersections. **Appendix 10** (Figures 11-2 through 11-4) illustrates the project trip assignment for the weekday morning and afternoon peak periods for the Proposed Project/Alternatives.

Traffic Volumes

The construction trips for the Proposed Project/Alternatives were added to the Existing traffic volumes to generate the Existing Plus Construction Traffic conditions.

Based on the construction traffic trip distributions, construction trips were assigned to the study intersections for each of the proposed project alternatives. **Appendix 10** (Figures 11-2 through11-4) illustrates the project trip assignment for the weekday morning and afternoon peak periods for the Proposed Project/Alternatives.

An intersection analysis was performed to assess grading construction traffic during the weekday AM and PM peak-hour (**Appendix 10**, Table 11-2). The construction traffic would cause a significant impact at the intersection of Indian Springs Drive/ Jefferson Road

and SR-94 (Campo Road). This impact would be considered a short term construction traffic related impact.

Safety and operations at the project driveway are a particular concern during the construction phase of the project. SR-94 is a high speed (55 MPH) two-lane major road with horizontal and vertical curves that limit sight distance in the vicinity of the project driveway. Heavy trucks will need to merge in and out of the site throughout the work day. Safety and operations at the project driveway is considered a short term construction traffic related impact.

Intersection Analysis

Intersection analysis was performed for the grading construction traffic for each of the project alternatives during the weekday AM and PM peak-hour. The results are summarized in **Appendix 10** (Table 11-2). As shown in the table, the construction traffic related to all the alternatives evaluated would cause a significant short term impact at the intersection of Indian Springs Drive/ Jefferson Road and SR-94 (Campo Road). This would be considered a short term direct traffic related impact.

Safety and operations at the project driveway are a particular concern during the construction phase of the project. SR-94 is a high speed (55 MPH) two-lane major road with horizontal and vertical curves that limit sight distance in the vicinity of the project driveway. Heavy trucks will need to merge in and out of the site throughout the work day. This would be considered a short term direct traffic related impact.

Trip Generation Additional Construction Traffic

In addition to the initial earthwork phase of construction, the following outlines the number of truck trips anticipated for each subsequent construction phase for the project:

- 10 truck trips per day during the foundation forming and concrete work, which would occur during months 4 and 5 of the construction schedule;
- 4 truck trips per day for the delivery of steel and other construction material, which would occur during months 6 through 11 of construction schedule; and
- 2 truck trips per day for the remaining seven month of construction for miscellaneous deliveries of equipment, furniture, including two truck trips per week for wastewater hauling.

In addition to the trip estimates above, it is estimated that vehicle trips by construction workers to and from the site would average $\frac{10, 14}{14}$ trips per day during grading operations (first 3_9 months), 20 trips per day during foundation work (2 months), 50 trips per day

during vertical construction (6 months) and 26 trips per day during finish and furnishing phases (7 months).

<u>All Most</u>-construction traffic <u>associated with the above listed construction phases</u> would occur between 6 and 7 a.m. and between 3 and 4 p.m. Monday through Friday. Construction traffic would occur before the peak-hour traffic along <u>State Route SR</u> 94.

SR 94 is currently a truck road and would be able to accommodate the truck traffic generated by the construction phase. Therefore, a less than significant impact would result during construction activities. Nonetheless, mitigation is provided below in **Section 4.9.3** in order to lessen the concentration of construction traffic.

Alternative 1

Similar to the Proposed Project, the initial earthwork phase of construction for Alternative 1 is anticipated to last approximately <u>three_six_months</u>. Alternative 1 is expected to generate approximately <u>3</u>_7 trucks trips during the morning or afternoon peak-hour periods. The Proposed Project estimates for each subsequent phase on the project are applicable to Alternative 1. All construction traffic for Alternative 1 would occur between 6 and 7 a.m. and between 3 and 4 p.m. Monday through Friday. Construction traffic would occur before the peak-hour traffic along SR 94. State Route 94 is currently a truck road and would be able to accommodate the truck traffic generated by the construction phase of Alternative 1. A less_than_significant impact would result during construction traffic.

Alternative 2

Similar to both the Proposed Project and Alternative 1, the initial earthwork phase of construction for Alternative 2 is anticipated to last approximately three <u>six</u> months; however, the amount of exaction would be significantly less than the Proposed Project. The truck trips generated during the morning or afternoon peak-hour periods would be less than the Proposed Project. As would be the case for the Proposed Project and Alternative 1, all construction traffic for Alternative 2 would occur between 6 and 7 a.m. and between 3 and 4 p.m. Monday through Friday. Construction traffic would occur before the peak-hour traffic along SR 94. State Route 94 is currently a truck road and would be able to accommodate the truck traffic generated by the construction phase of Alternative 2. A less than significant impact would result during construction activities. However, mitigation is provided in order to lessen the concentration of construction traffic.

No Action Alternative

The No Action Alternative would not result in construction activities. No construction related impacts would occur.

Impact 4.9(2): Existing Plus Project Conditions

No roadway network changes are assumed to take place under the Existing Plus Project scenario.

Proposed Project

This section summarizes the operations of the existing roadway circulation network with the addition of the Reservation Gaming project.

Traffic Volumes

The traffic generation for the Proposed Project was added to the Existing traffic volumes to generate the Existing Plus project conditions. **Tables 4.9-20** through **4.9-29** present the traffic volumes for Proposed Project under Existing Plus Project Conditions.

Intersection Analysis (HCM)

Tables 4.9-20 and **4.9-21** presents the peak-hour LOS analysis results for the study intersections under Existing Plus Project weekday conditions, and the peak-hour LOS analysis results for the typical Friday and Saturday Existing Plus Project conditions. The following is the summary of the results:

Existing Plus Proposed Project Conditions: The following intersections would have one or more peak-hours where the traffic generated by the Proposed Project would cause a significant direct traffic related impact:

- SR 94 (Campo Road) and Jamacha Boulevard (LOS D weekday p.m. peak, LOS D Friday p.m. peak);
- SR 94 (Campo Road) and Jamacha Road (LOS <u>E-D</u> Friday p.m. peak);
- SR 94 (Campo Road) and Steele Canyon Road (LOS D weekday <u>a.m. and p.m.</u> peak, LOS E Friday p.m. peak, LOS D Saturday p.m. peak);
- SR 94 (Campo Road) and Lyons Valley Road (LOS F all peak-hours analyzed);
- SR 94 (Campo Road) and Melody Road (LOS D weekday p.m. peak, LOS F Friday p.m. peak, LOS E Saturday p.m. peak); and
- SR 94 (Campo Road) and Reservation Road (LOS E weekday a.m. peak, LOS F weekday p.m. peak, LOS F Friday p.m. peak, LOS F Saturday p.m. peak): and -

TABLE 4.9-20 EXISTING PLUS PROJECT WEEKDAY CONDITIONS PEAK-HOUR INTERSECTION LOS (UPDATED OCTOBER 2012)

			PEAK EXISTING BASELINE PRO		EXISTIN PROPOSEI	NG PLUS D PROJECT	EXISTIN ALTERN	IG PLUS ATIVE 1	EXISTIN ALTERN	IG PLUS IATIVE 2
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
1	SR 94 (Campo Rd) & Via Mercado	AM	17.8	В	20.7	С	19.1	В	17.8	В
1	SK 94 (Campo Kd) & Via Mercado	PM	17.9	В	24.0	С	21.4	С	18.3	В
2	Jamacha Plud & SP 04 (Campo Pd)	AM	15.3	В	16.2	В	15.8	В	15.3	В
2	Janiacha Bivu. & SK 94 (Campo Ku)	PM	29.6	С	37.2	D	34.3	С	29.8	С
2	SP 04 (Campo Pd) & Jamacha Pd	AM	23.8	С	25.0	С	24.6	С	23.9	С
5	SK 94 (Campo Ku) & Jamacha Ku.	PM	21.2	С	30.9	С	26.0	С	21.8	С
4	SR 94 (Campo Rd) & Cougar Canyon Rd	AM	17.9	В	19.5	В	18.5	В	17.9	В
-	SK 94 (Campo Ku) & Cougar Canyon Ku.	PM	10.2	В	15.0	В	12.5	В	10.4	В
5	Steele Canvon Rd. & SR 94 (Campo Rd)		28.8	С	37.9	D	32.0	С	29.1	С
5	Steel Carlyon Rd. & SR 94 (Campo Rd)	PM	24.7	С	42.0	D	31.8	С	26.5	С
6	Indian Springs Dr /Lyons Valley Rd & SR 94 (Campo Rd)	AM	589.6	F	ECL	F	ECL	F	716.6	F
0	indian Springs Dr./Eyons vancy Ku. & SK 94 (Campo Ku)	PM	73.6	F	659.0	F	223.6	F	85.8	F
7	Proctor Valley Rd /Jafferson Rd, & SR 94 (Campo Rd)	AM	10.9	В	13.3	В	11.8	В	11.1	В
,	ritetor valley ku/serierson ku. & SK 94 (Campo ku)	PM	10.1	В	13.6	В	12.3	В	10.4	В
8	SR 04 (Campo Rd) & Melody Rd /Peacefull Valley Ranch Rd	AM	14.5	В	24.1	С	18.5	С	14.9	В
0	SK 94 (Campo Ku) & Welouy Ku.7 Cacefull Valley Kaleli Ku.	PM	14.4	В	34.6	D	22.1	С	15.3	С
0	Malady Pd & Prostor Vallay Pd	AM	7.7	А	7.7	А	7.7	А	7.7	А
,	welouy ku, & Flociol Valley ku.	PM	7.5	А	7.5	А	7.5	А	7.5	А
10	SR 94 (Campo Rd) & Reservation Rd.	AM	Under this s	cenario, this loes not have	45.4	Е	19.7	С	13.3	В
		РМ	conflicting	movements.	645.3	F	68.9	F	14.4	В
11	SR 94 (Campo Rd) & Honey Springs Rd.	AM	12.0	В	13.1	В	12.5	В	12.0	В
		PM	11.0	В	12.3	В	11.6	В	11.1	В
12	SR 94 (Campo Rd) & Otay Lakes Rd.	AM	11.2	В	14.5	В	13.0	В	11.5	В
		PM	12.3	В	16.0	С	14.1	В	12.5	В
13	Jamacha Blvd. & Sweetwater Springs Blvd.	AM	24.9	С	25.2	С	25.0	С	24.9	С
		PM	20.1	С	20.3	С	20.2	С	20.1	С
14	Willow Glen Dr. & Jamacha Rd.	AM	45.2	D	46.7	D	46.0	D	45.2	D
		PM	32.3	С	35.6	D	34.1	С	32.7	С
15	Steele Canyon Rd. & Willow Glen Dr.	AM	38.3	D	39.0	D	38.8	D	38.4	D
		PM	26.6	С	27.5	С	27.0	С	26.7	С
16	Steele Canyon Rd. & Jamul Dr.	AM	16.7	В	16.9	В	16.8	В	16.7	В
		PM	15.1	В	15.7	В	15.1	В	15.1	В
17	Lyons Valley Rd. & Jamul Dr.	AM	12.2	В	12.6	В	12.4	В	12.2	В
		PM	12.3	В	12.9	В	12.6	В	12.3	В
18	Jefferson Rd. & Lyons Valley Rd.	AM	10.5	В	10.7	В	10.6	В	10.5	В
		PM	11.0	В	11.4	В	11.2	В	11.0	В
19	SR 94 (Campo Rd) & Maxfield Rd.	AM	12.3	В	19.5	С	15.6	С	12.8	В
	· · · · · · · · · · · ·	PM	14.8	В	45.3	E	24.7	С	15.8	С

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E, or F and San Diego County intersections operating at LOS E or F.

ELC indicates delay exceeds Synchro's calculable limit.

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

	РЕАК		EXISTING NO BUILD		EXISTIN PROPOSEI	NG PLUS D PROJECT	EXISTIN ALTERN	IG PLUS ATIVE 1	EXISTIN ALTERN	G PLUS ATIVE 2
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
1	SD 04 (Commo Dd) & Vio Manada	FRI PM	17.3	В	29.8	С	21.0	С	17.5	В
1	SK 94 (Campo Ku) & Via Mercado	SAT PM	11.6	В	15.3	В	13.4	В	12.0	В
2	Jamaaha Plud, & SP 04 (Campo Pd)	FRI PM	32.9	С	40.6	D	36.8	D	32.5	С
2	Jamacha Bivu. & SK 94 (Campo Ku)	SAT PM	15.8	В	20.0	С	17.3	В	15.9	В
2	SD 04 (Commo Dd) & Jamasha Dd	FRI PM	24.5	С	54.0	D	33.2	С	25.6	С
3	SK 94 (Campo Ku) & Jamacha Ku.	SAT PM	21.0	С	32.3	С	26.0	С	21.7	С
4	SP 04 (Campa Pd) & Courser Canyon Pd		10.0	В	16.3	В	12.4	В	10.3	В
4	SK 94 (Campo Ku) & Cougar Canyon Ku.	SAT PM	13.5	В	20.4	С	17.6	В	13.6	В
5	Steels Conven Dd. & SD 04 (Commo Dd)	FRI PM	27.3	С	56.7	Е	36.0	D	30.2	С
3	Steele Canyon Rd. & SK 94 (Campo Rd)	SAT PM	26.2	С	42.5	D	35.5	D	27.1	С
6	Indian Springs Dr. (Lyong Valley Dd. & SD 04 (Commo Dd)	FRI PM	125.3	F	ECL	F	756.2	F	160.2	F
0	Indian Springs Dr./Lyons vaney Rd. & SK 94 (Campo Rd)	SAT PM	40.7	Е	972.2	F	167.7	F	48.7	Е
7	Deceder Weller D.I. (Lefferrer D.I. & CD.04 (Correct D.I.)	FRI PM	15.9	В	17.2	В	17.0	В	16.8	В
1	Proctor Valley Rd./Jefferson Rd. & SR 94 (Campo Rd)	SAT PM	13.8	В	21.9	С	19.4	В	14.6	В
0	CD 04 (Course D4) & Male der D4 (Desser fall Wallers Dassels D4	FRI PM	16.6	С	77.8	F	33.5	D	18.3	С
8	SK 94 (Campo Kd) & Melody Kd./Peaceruli Valley Kanch Kd.	SAT PM	12.9	В	42.8	Е	22.5	С	13.9	В
0	Malada Dal & Decorto a Wallow Dal	FRI PM	7.5	А	7.5	А	7.5	А	7.5	А
9	Melody Rd. & Proctor Valley Rd.	SAT PM	7.6	А	7.7	А	7.6	А	7.6	А
		EDI DM	Under this s	cenario, this	ECL	F	402.1	F	16.7	С
10	SR 94 (Campo Rd) & Reservation Rd.	FKI F M	intersectio	n does not	ECL	-	210.5	-	10.5	- D
		SAT PM	have co	nflicting	ECL	ł	210.5	F	13.5	В
11	SR 94 (Campo Rd) & Honey Springs Rd.	FRI PM	12.0	В	14.2	В	13.1	В	12.2	В
		SAT PM	10.5	В	12.2	В	11.3	В	10.6	В
12	SR 94 (Campo Rd) & Otay Lakes Rd.	FRI PM	12.6	В	17.7	С	14.8	В	12.9	В
		SAT PM	10.6	В	14.2	В	12.4	В	10.9	В
13	Jamacha Blvd, & Sweetwater Springs Blvd.	FRI PM	21.5	С	22.0	С	21.8	С	21.5	С
	1 8	SAT PM	15.1	В	15.2	В	15.2	В	15.1	В
14	Willow Glen Dr. & Jamacha Rd.	FRI PM	36.3	D	40.9	D	38.8	D	36.7	D
		SAT PM	32.6	С	37.5	D	36.2	D	34.6	С
15	Steele Canvon Rd. & Willow Glen Dr.	FRI PM	27.9	С	29.2	С	28.8	С	28.3	С
		SAT PM	21.6	С	22.7	С	22.0	С	21.7	С
16	Steele Canvon Rd. & Jamul Dr	FRI PM	12.7	В	12.9	В	12.8	В	12.6	В
		SAT PM	12.9	В	13.3	В	13.1	В	13.1	В
17	17 I yons Valley Rd & Jamul Dr		11.8	В	12.6	В	12.2	В	11.9	В
		SAT PM	10.3	В	10.9	В	10.6	В	10.4	В
18	Jefferson Rd. & Lyons Valley Rd	FRI PM	10.5	В	11.0	В	10.8	В	10.5	В
	venessa na ez Eyons vaney na.	SAT PM	9.6	А	9.9	А	18.5	С	9.6	А
19	SR 94 (Campo Rd) & Maxfield Rd	FRI PM	14.2	В	58.9	F	26.4	D	15.4	С
17	Sit y : (Campo Ru) & maximu Ru.	SAT PM	11.6	В	32.3	D	18.5	С	12.3	В

TABLE 4.9-21 EXISTING PLUS PROJECT FRIDAY/SATURDAY CONDITIONS PM PEAK-HOUR INTERSECTION LOS (UPDATED OCTOBER 2012)

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

ELC indicates delay exceeds Synchro's calculable limit.

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

TABLE 4.9-22 EXISTING WEEKDAY PLUS PROJECT CONDITIONS ILV ANALYSIS (UPDATED OCTOBER 2012)

			E	XISTING PLUS	E	EXISTING PLUS	E	EXISTING PLUS
	INTERSECTION	PEAK	PRO	POSED PROJECT	А	LTERNATIVE 1	А	LTERNATIVE 2
		HOUR	ILV	CAPACITY	ILV	CAPACITY	ILV	CAPACITY
			TOTAL		TOTAL		TOTAL	
1	SR 94 (Campo Rd.) & Via Mercado	AM	1303	Approaching Capacity	1280	Approaching Capacity	1257	Approaching Capacity
		PM	1389	Approaching Capacity	1323	Approaching Capacity	1253	Approaching Capacity
2	SR 94 (Campo Rd.) & Jamacha Blvd.	AM	960	Below Capacity	926	Below Capacity	902	Below Capacity
		PM	1466	Approaching Capacity	1416	Approaching Capacity	1356	Approaching Capacity
3	SR 94 (Campo Rd.) & Jamacha Rd.	AM	1052	Below Capacity	1027	Below Capacity	1002	Below Capacity
		PM	1228	Approaching Capacity	1096	Below Capacity	1022	Below Capacity
4	SR 94 (Campo Rd.) & Cougar Canyon Rd.	AM	1230	Approaching Capacity	1159	Below Capacity	1103	Below Capacity
		PM	1292	Approaching Capacity	1082	Below Capacity	918	Below Capacity
5	SR 94 (Campo Rd.) & Steele Canyon Rd.	AM	1244	Approaching Capacity	1188	Below Capacity	1136	Below Capacity
		PM	1389	Approaching Capacity	1215	Approaching Capacity	1033	Below Capacity
7	SR 94 (Campo Rd.) & Jefferson Rd.	AM	795	Below Capacity	725	Below Capacity	658	Below Capacity
		PM	1060	Below Capacity	856	Below Capacity	672	Below Capacity

Notes: <1200 = Below Capacity, 1201 – 1500 = Approaching Capacity, >1500 = Above Capacity Bold values indicate intersections operating above capacity

TABLE 4.9-23 EXISTING FRIDAY/SATURDAY PLUS PROJECT CONDITIONS ILV ANALYSIS (UPDATED OCTOBER 2012)

	INTERSECTION	PEAK HOUR	E PRO	XISTING PLUS POSED PROJECT	E A	XISTING PLUS LTERNATIVE 1	EX AL	XISTING PLUS LTERNATIVE 2
			ILV	CAPACITY	ILV	CAPACITY	ILV	CAPACITY
			TOTAL		TOTAL		TOTAL	
1	SR 94 (Campo Rd.) & Via Mercado	FRIDAY PM	1362	Approaching Capacity	1269	Approaching Capacity	1185	Below Capacity
		SATURDAY PM	1175	Below Capacity	1080	Below Capacity	982	Below Capacity
2	SR 94 (Campo Rd.) & Jamacha Blvd.	FRIDAY PM	1517	Above Capacity	1449	Approaching Capacity	1378	Approaching Capacity
		SATURDAY PM	1228	Approaching Capacity	1160	Below Capacity	1091	Below Capacity
3	SR 94 (Campo Rd.) & Jamacha Rd.	FRIDAY PM	1391	Approaching Capacity	1208	Approaching Capacity	1078	Below Capacity
		SATURDAY PM	1162	Below Capacity	1051	Below Capacity	938	Below Capacity
4	SR 94 (Campo Rd.) & Cougar Canyon Rd.	FRIDAY PM	1354	Approaching Capacity	1162	Below Capacity	965	Below Capacity
		SATURDAY PM	934	Below Capacity	737	Below Capacity	540	Below Capacity
5	SR 94 (Campo Rd.) & Steele Canyon Rd.	FRIDAY PM	1517	Above Capacity	1305	Approaching Capacity	1087	Below Capacity
		SATURDAY PM	1152	Below Capacity	908	Below Capacity	655	Below Capacity
7	SR 94 (Campo Rd.) & Jefferson Rd.	FRIDAY PM	1212	Approaching Capacity	989	Below Capacity	767	Below Capacity
		SATURDAY PM	1000	Below Capacity	723	Below Capacity	501	Below Capacity

Notes:

<1200 = Below Capacity, 1201 - 1500 = Approaching Capacity, >1500 = Above Capacity **Bold** values indicate intersections operating above capacity

• <u>SR-94 (Campo Road) and Maxfield Road (LOS E weekday p.m. peak, LOS F</u> Friday p.m. peak and LOS D Saturday p.m. peak.

Intersection Analysis (ILV)

Tables 4.9-22 and **4.9-23** presents the ILV analysis results for the Caltrans-owned signalized intersections under Existing Plus Project Conditions for all peak-hours analyzed. All intersection would operate at below or approaching capacity with the exception of the following two intersections, which would operate at above capacity conditions with the addition of the Proposed Project traffic:

- SR 94 (Campo Road) and Jamacha Blvd (Friday p.m. peak-hour); and
- SR 94 (Campo Road) and Steele Canyon Road (LOS D weekday p.m. peak, LOS E Friday p.m. peak, LOS D Saturday p.m. peak).

The impact at the intersections listed above is considered significant.

Appendix 10 (Appendix E) contains the intersections LOS calculation worksheets.

Appendix 10 (Appendix F) contains the ILV worksheets.

Roadway Segment Analysis

Tables 4.9-24 through **4.9-26** display the roadway segments analysis under Existing Plus Project Conditions for a typical weekday for the Proposed Project. All roadway segments within the study area would continue to function at LOS C-D or better with the addition of traffic from the Proposed Project. Therefore, a less than significant roadway segment analysis would result from the Proposed Project, with the exception of the following roadway segment:-

• Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS E with and without the Proposed Project).

The roadway segment analysis used for the evaluation of the County of San Diego's roadway segments is based on theoretical capacities for each roadway based on the number of provided travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment like the number of intersections, number of driveways, parking availability, and more importantly, traffic patterns and distributions. Although this simple numerical type of analysis is acceptable for a typical planning level analysis, to better represent the conditions of a roadway segment, the operations of the upstream and downstream intersections of the segment during the peak-hour periods would indicate whether the roadway segment used to the adequate capacity. As shown in the intersection analysis tables (Appendix 10, Tables 5-

<u>1 and 5-2</u>), the intersections at both ends of Steele Canyon Road between Jamul Drive and Willow Glen Drive would operate at an acceptable LOS D or better with and without the addition of the Proposed Project. As a result, the Proposed Project would not have a significant direct traffic related impact along Steele Canyon Road between Jamul Drive and Willow Glen Drive.

HCM Peak-Hour Arterial Analysis

Tables 4.9-27 and **4.9-28** present the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor <u>Valley</u> Road under Existing Plus Project Conditions. The roadway segment would continue to function at LOS A<u>B</u> or better with the addition of the Proposed Project. Therefore, a less than significant peak-hour arterial impact would result from the Proposed Project. Appendix 10 (Appendix G) contains the peak-hour arterial analysis worksheets.

HCM Peak-Hour Two-Lane Highway Analysis

Table 4.9-29 presents the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under Existing Plus Project Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. All two-lane facilities analyzed would continue to operate at LOS D or E during all peak-hours analyzed and the Proposed Project would result in a significant impact along this roadway segment segmented highway. **Appendix 10** (Appendix H) contains the two-way two-lane analysis worksheets.

Proposed Access Evaluation

In addition to the intersection capacity analysis presented in this section, a preliminary review of existing geometric features at the intersection of SR 94 and Reservation Road was conducted. **Table 4.9-30** illustrates a summary of the geometric features evaluated in order to assess the adequacy of the Reservation Road intersection as a main access to the Reservation. The posted speed limit along State Route 94 in the vicinity of the intersection is 55 mph. A design speed of 60 mph was selected for the purposes of the comparison presented in **Table 4.9-30**, as applicable.

The intersection of SR 94 (Campo Road) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, a significant access impact would result from operation of the Proposed Project.

TABLE 4.9-24 EXISTING PLUS PROPOSED PROJECT CONDITIONS ROADWAY SEGMENT LOS (UPDATED OCTOBER 2012)

			EXISTING NO BUILD		E PRO	XISTING PL	US JECT				
ROADWAY SEGMENT	ROADWAY CLASSIFICATION	LOS E CAPACITY	ADT	v/C RATIO (a)	LOS	ADT	v/C RATIO (a)	LOS	∆ in ADT	Δ in V/C	SIGNIFICANT?
Sweetwater Springs Blvd.						1		1			
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	15,483	0.418	В	15,573	0.421	В	90	0.003	NO
Jamacha Blvd.											
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	16,683	0.451	В	17,133	0.463	В	450	0.012	NO
Jamacha Rd. (SR 54)											
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	41,605	0.73	С	42,055	0.738	С	450	0.008	NO
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	23,521	0.413	В	24,331	0.427	В	810	0.014	NO
Steele Canyon Rd.											
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	6,379	0.394	С	7,009	0.433	С	630	0.039	NO
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	14,028	0.738	Е	14,928	0.786	Е	900	0.048	NO
Jamul Dr.											
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	2,433	0.15	В	2,703	0.167	В	270	0.017	NO
Willow Glen Dr.											
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	19,986	0.54	В	20,616	0.557	В	630	0.017	NO
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	12,237	0.644	D	12,507	0.658	D	270	0.014	NO
Lyons Valley Rd.										-	
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	5,522	0.341	С	5,612	0.346	С	90	0.005	NO
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	7,008	0.433	С	7,638	0.471	D	630	0.038	NO
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	8,493	0.524	D	8,853	0.546	D	360	0.022	NO
Jefferson Rd.											
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	2,685	0.166	В	3,225	0.199	В	540	0.033	NO
Melody Rd.										-	
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	1,374	0.085	А	1,554	0.096	А	180	0.011	NO
Proctor Valley Rd.										-	
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	1,630	0.101	А	1,810	0.112	Α	180	0.011	NO
Honey Springs Rd.										-	
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	1,579	0.097	А	1,669	0.103	А	90	0.006	NO
Otay Lakes Rd.										-	-
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	2,582	0.159	В	4,022	0.248	В	1440	0.089	NO

Notes:

Bold values indicate roadway segments operating at LOS E or F. Bold and shaded values indicate a project significant impact

TABLE 4.9-25 EXISTING PLUS ALTERNATIVE 1 CONDITIONS ROADWAY SEGMENT LOS (UPDATED OCTOBER 2012)

			EXISTING BASELINE		E) Al	XISTING PLU .TERNATIVI	JS E 1				
		LOS E		V/C RATIO			V/C RATIO				
ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY	ADT	(a)	LOS	ADT	(a)	LOS	∆ in ADT	∆ in V/C	SIGNIFICANT?
Sweetwater Springs Blvd.			-	•	-					-	
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	15,483	0.418	В	15,533	0.42	В	50	0.002	NO
Jamacha Blvd.											
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	16,683	0.451	В	16,933	0.458	В	250	0.007	NO
Jamacha Rd. (SR 54)											
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	41,605	0.73	С	41,855	0.734	С	250	0.004	NO
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	23,521	0.413	В	23,971	0.421	В	450	0.008	NO
Steele Canyon Rd.											
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	6,379	0.394	С	6,729	0.415	С	350	0.021	NO
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	14,028	0.738	Е	14,528	0.765	Е	500	0.027	NO
Jamul Dr.		-		-		-			•		
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	2,433	0.15	В	2,583	0.159	В	150	0.009	NO
Willow Glen Dr.											
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	19,986	0.54	В	20,336	0.55	В	350	0.010	NO
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	12,237	0.644	D	12,387	0.652	D	150	0.008	NO
Lyons Valley Rd.		-		-		-			•		
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	5,522	0.341	С	5,572	0.344	С	50	0.003	NO
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	7,008	0.433	С	7,358	0.454	D	350	0.021	NO
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	8,493	0.524	D	8,693	0.537	D	200	0.013	NO
Jefferson Rd.											
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	2,685	0.166	В	2,985	0.184	В	300	0.018	NO
Melody Rd.											
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	1,374	0.085	А	1,474	0.091	А	100	0.006	NO
Proctor Valley Rd.											
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	1,630	0.101	А	1,730	0.107	А	100	0.006	NO
Honey Springs Rd.											
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	1,579	0.097	А	1,629	0.101	А	50	0.004	NO
Otay Lakes Rd.						-					
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	2,582	0.159	В	3,381	0.209	В	799	0.050	NO

Notes:

Bold values indicate roadway segments operating at LOS E or F. Bold and shaded values indicate a project significant impact

TABLE 4.9-26 EXISTING PLUS ALTERNATIVE 2 CONDITIONS ROADWAY SEGMENT LOS (UPDATED OCTOBER 2012)

		LOSE	EXISTING NO BUILD [V/C RATIO]		E	XISTING PL LTERNATIV	US E 2				
ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY	ADT	(a)	LOS	ADT	(a)	LOS	∆ in ADT	∆ in V/C	SIGNIFICANT?
Sweetwater Springs Blvd.						•					
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	15,483	0.418	В	15,495	0.419	В	12	0.001	NO
Jamacha Blvd.											
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	16,683	0.451	В	16,742	0.452	В	59	0.001	NO
Jamacha Rd. (SR 54)											
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	41,605	0.73	С	41,664	0.731	С	59	0.001	NO
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	23,521	0.413	В	23,628	0.415	В	107	0.002	NO
Steele Canyon Rd.											
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	6,379	0.394	С	6,462	0.399	С	83	0.005	NO
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	14,028	0.738	Е	14,147	0.745	Е	119	0.007	NO
Jamul Dr.											
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	2,433	0.15	В	2,469	0.152	В	36	0.002	NO
Willow Glen Dr.	-		-								
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	19,986	0.54	В	20,069	0.542	В	83	0.002	NO
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	12,237	0.644	D	12,273	0.646	D	36	0.002	NO
Lyons Valley Rd.											
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	5,522	0.341	С	5,534	0.342	С	12	0.001	NO
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	7,008	0.433	С	7,091	0.438	С	83	0.005	NO
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	8,493	0.524	D	8,541	0.527	D	48	0.003	NO
Jefferson Rd.											
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	2,685	0.166	В	2,756	0.17	В	71	0.004	NO
Melody Rd.	•				•		•	•			
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	1,374	0.085	Α	1,398	0.086	А	24	0.001	NO
Proctor Valley Rd.											
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	1,630	0.101	А	1,654	0.102	А	24	0.001	NO
Honey Springs Rd.											
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	1,579	0.097	А	1,591	0.098	А	12	0.001	NO
Otay Lakes Rd.		-					-				
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	2,582	0.159	В	2,772	0.171	В	190	0.012	NO
Notes:											

Bold values indicate roadway segments operating at LOS E or F. Bold and shaded values indicate a project significant impact

TABLE 4.9-27 EXISTING WEEKDAY PLUS PROJECT CONDITIONS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

ROADWAY SEGMENT	DIRECTION	EXISTIN PROPOSED	G PLUS PROJECT	EXISTIN ALTERN	IG PLUS ATIVE 1	EXISTING PLUS ALTERNATIVE 2							
		SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)						
WEEKDAY AM PEAK													
SR 94 (Campo Road)													
	EB	48.7	А	49.1	А	49.6	А						
Via Mercado to Proctor Valley Rd.	WB	44.2	А	45.5	А	46.4	А						
		WEEKDA	Y PM PEAK										
SR 94 (Campo Road)													
	EB	42.2	В	44.0	А	45.6	А						
Via Mercado to Proctor Valley Rd.	WB	46.7	А	47.0	А	47.3	А						

Notes:

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph)(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under construction and is influenced both by the number of signals per mile and by the intersection control delay.

TABLE 4.9-28 EXISTING FRIDAY/SATURDAY PLUS PROJECT CONDITIONS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

ROADWAY SEGMENT	DIRECTION	EXISTIN PROPOSEI	IG PLUS PROJECT	EXISTIN ALTERN	G PLUS ATIVE 1	EXISTING PLUS ALTERNATIVE 2		
		SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	
	FRIDAY	AM PEAK						
SR 94 (Campo Road)								
	EB	39.4	В	43.7	А	44.8	А	
Via Mercado to Proctor Valley Rd.	WB	45.3	А	46.6	А	47.4	А	
	SATURD	AY PM PEAK		I				
SR 94 (Campo Road)								
	EB	44.9	А	45.6	А	46.1	А	
Via Mercado to Proctor Valley Rd.	WB	44.2	А	45.4	А	46.8	А	
Notes:	1	1		· · · · ·				

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph)

(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under construction and is influenced both by the number of signals per mile and by the intersection control delay.

TABLE 4.9-29 EXISTING PLUS PROJECT TWO-WAY TWO-LANE HIGHWAY SEGMENT ANALYSIS (UPDATE OCTOBER 2012)

HIGHWAY SEGMENT	PEAK HOUR	EXISTING PLUS PROPOSED PROJECT			EXISTIN	NG PLUS ALTERNA	ATIVE 1	EXISTING PLUS ALTERNATIVE 2			
		LOS (a)	Average Travel Speed (mph)	PTSF (b)	LOS (a)	Average Travel Speed (mph)	PTSF (b)	LOS (a)	Average Travel Speed (mph)	PTSF (b)	
SR 94	ŀ	-	· • /			· • • /	1		· • /	1	
Proctor Valley Road to Melody Rd.	Weekday AM	Ε	37.2	78.5%	Е	39.5	70.0%	D	40.3	66.1%	
	Weekday PM	Е	34.5	84.8%	Е	37.9	76.6%	D	40.1	66.9%	
	Friday PM	Е	31.1	89.6%	Е	36.3	80.9%	Е	39.6	69.7%	
	Saturday PM	Е	32.6	87.7%	Е	37.6	77.5%	D	40.6	64.9%	
Melody Road to Project Driveway	Weekday AM	D	41.2	76.8%	D	42.5	72.4%	D	44.1	64.8%	
	Weekday PM	Е	38.1	84.1%	D	41.7	75.3%	D	43.7	67.0%	
	Friday PM	Е	34.1	89.5%	Е	39.8	80.4%	D	43.8	66.6%	
	Saturday PM	Е	36.0	87.2%	D	41.1	77.3%	D	44.3	64.7%	
Project Driveway to Otay Lakes Rd.	Weekday AM	D	43.7	67.0%	D	44.1	64.6%	D	44.4	63.6%	
	Weekday PM	D	43.1	69.8%	D	43.8	66.2%	D	44.3	63.8%	
	Friday PM	D	42.5	74.4%	D	43.8	66.2%	D	43.8	66.6%	
	Saturday PM	D	43.2	69.4%	D	44.2	64.2%	D	44.8	61.7%	

Notes:

Bold values indicate intersection operating at LOS D, E or F.
(a) LOS is based on Average Travel Speed and Percent-time-spend-following per Chapter 12 of the 2000 Highway Capacity Manual.
(b) PTSF = Percent time-spent-following

EXISTING RESERVATION ROAD ACCESS EVALUATIONS												
GEOMETRIC FEATURE	EXISTING CONDITION	DESIRED VALUE										
Angle of Intersection	$< 50^{\circ}$	75° min. 90° desirable										
Horizontal Radius	~ 750 feet	1150 feet min.										
Superelevation Rate	~ 2% (NB); ~ 8% (SB)	9%										
Shoulder Width ¹	Variable 2 feet to 8 feet	8 feet										
Corner Sight Distance (CSD)	300 feet < CSD < 400 feet	660 feet										

TABLE 4.9-30

¹ Preliminary review of existing shoulder width considered the continuous usable width of shoulder on approach/departure from the intersection, as well as the existing ADT along State Route 94 at the intersection.

SOURCE: Kimley Horn, 2012

Alternative 1

Traffic Volumes

Tables 4.9-23 through **4.9-25** illustrate the Existing Plus Alternative 1 project peakhour traffic volumes at the study intersections for a typical weekday and typical Friday/Saturday traffic, as well as the Existing Plus Alternative 1 project ADT volumes along the roadway segments.

Intersection Analysis (HCM)

The following intersections would have one or more peak-hours where the traffic generated by the Alternative 1 Project would cause a significant direct traffic related impact:

- SR 94 (Campo Road) and Jamacha Boulevard (LOS D weekday p.m. peak, LOS D Friday p.m. peak);
- SR 94 (Campo Road) and Steele Canyon Road (LOS D Friday p.m. peak, LOS D Saturday p.m. peak);
- SR 94 (Campo Road) and Lyons Valley Road (LOS F all peak-hours analyzed);
- SR 94 (Campo Road) and Melody Road (LOS D Friday p.m. peak); and
- SR 94 (Campo Road) and Reservation Road (LOS F weekday p.m. peak, LOS F Friday p.m. peak, LOS F Saturday p.m. peak), and -

• <u>SR-94 (Campo Road) and Maxfield Road (LOS D Friday p.m. peak).</u>

Intersection Analysis (ILV)

Tables 4.9-22 and **4.9-23** present the ILV analysis results for the Caltrans-owned signalized intersections under Existing Plus Project Conditions for all peak-hours analyzed. All intersections will operate at below or approaching capacity; therefore, a less than significant impact would result.

Roadway Segment Analysis

Tables 4.9-24 through **4.9-26** display the roadway segments analysis under Existing Plus Project Conditions for a typical weekday for each of the proposed project alternatives, respectively. All roadway segments within the study area would continue to function at LOS C-D or better with the addition of traffic from Alternative 1, with the exception of the following roadway segment: Therefore, a less than significant impact would result.

 Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS E with and without the Proposed Project).

The roadway segment analysis used for the evaluation of the County of San Diego's roadway segments is based on theoretical capacities for each roadway based on the number of provided travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment like the number of intersections, number of driveways, parking availability, and more importantly, traffic patterns and distributions. Although this simple numerical type of analysis is acceptable for a typical planning level analysis, to better represent the conditions of a roadway segment, the operations of the upstream and downstream intersections of the segment during the peak-hour periods would indicate whether the roadway segment would have adequate capacity. As shown in the intersection analysis tables (Appendix 10, Tables 5-1 and 5-2), the intersections at both ends of Steele Canyon Road between Jamul Drive and Willow Glen Drive would operate at an acceptable LOS D or better with and without the addition of Alternative 1. As a result, Alternative 1 would not have a significant direct traffic related impact along Steele Canyon Road between Jamul Drive and Willow Glen Drive.

HCM Peak-Hour Arterial Analysis

Tables 4.9-27 and **4.9-28** display the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor <u>Valley</u> Road under Existing Plus Project Conditions. The roadway segment would continue to function at LOS A-<u>B</u> or better with the addition of traffic from Alternative 1. Therefore, a less than significant impact would result.

HCM Peak-Hour Two-Lane Highway Analysis

Table 4.9-29 presents the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under Existing Plus Project Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. All two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed. Therefore, a significant impact would result from the addition of Alternative 1 traffic.

Proposed Access Evaluation

As is the case with the Proposed Project, several features associated with the existing access at Reservation Road do not provide adequate access to the Reservation. The intersection of SR 94 (Campo Road) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, Alternative 1 would result in a significant impact at the project access.

Alternative 2

Traffic Volumes

Tables 4.9-26 through **4.9-28** illustrate the Existing Plus Alternative 2 project peakhour traffic volumes at the study intersections for a typical weekday and typical Friday/Saturday traffic, as well as the Existing Plus Alternative 2 project ADT volumes along the roadway segments.

Intersection Analysis (HCM)

The following intersections would have one or more peak-hours where the traffic generated by the Alternative 2 Project would cause a significant direct traffic related impact:

• SR 94 (Campo Road) and Lyons Valley Road (LOS F weekday a.m. and p.m. peak-hour, LOS F Friday p.m. peak-hour and LOS E Saturday p.m. peak-hour).

Intersection Analysis (ILV)

Tables 4.9-22 and **4.9-23** present the ILV analysis results for the Caltrans-owned signalized intersections under Existing Plus Project Conditions for all peak-hours analyzed. All intersections will operate at below or approaching capacity, which is considered a less than significant impact.

Roadway Segment Analysis

Tables 4.9-24 through **4.9-26** display the roadway segments analysis under Existing Plus Project Conditions for a typical weekday for each of the proposed project alternatives, respectively. All roadway segments within the study area would continue to function at LOS C or better with the addition of traffic from Alternative 2, which is a less than significant impact. with the exception of the following roadway segment:

• Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS E with and without the Proposed Project).

The roadway segment analysis used for the evaluation of the County of San Diego's roadway segments is based on theoretical capacities for each roadway based on the number of provided travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment like the number of intersections, number of driveways, parking availability, and more importantly, traffic patterns and distributions. Although this simple numerical type of analysis is acceptable for a typical planning level analysis, to better represent the conditions of a roadway segment, the operations of the upstream and downstream intersections of the segment during the peak-hour periods would indicate whether the roadway segment would have adequate capacity. As shown in the intersection analysis tables (Appendix 10, Tables 5-1 and 5-2), the intersections at both ends of Steele Canyon Road between Jamul Drive and Willow Glen Drive would operate at an acceptable LOS D or better with and without the addition of Alternative 2. As a result, Alternative 2 would not have a significant direct traffic related impact along Steele Canyon Road between Jamul Drive and Willow Glen Drive.

HCM Peak-Hour Arterial Analysis

Tables 4.9-27 and **4.9-28** display the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor Valley Road under Existing Plus Project Conditions. The roadway segment would continue to function at LOS <u>A-B</u> or better with the addition of traffic from Alternative 2.

HCM Peak-Hour Two-Lane Highway Analysis

Table 4.9-29 presents the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under Existing Plus Project Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. As shown in the table, all two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed, which is considered a significant impact.

Proposed Access Evaluation

As is the case with the Proposed Project, several features associated with the existing access at Reservation Road do not provide adequate access to the Reservation. The intersection of SR 94 (Campo Road) and Reservation Road would not provide adequate access to the site unless reconstruction was completed. Therefore, Alternative 2 would result in a significant impact at the project access.

No Action Alternative

The No Action Alternative would not result in the addition of traffic to area roadways. No impact would result.

Impact 4.9(3): Near Term (2015) Plus Project Conditions

No roadway network changes are assumed to take place under the Near Term (2015) Plus Project scenario.

Proposed Project

This section summarizes the operations of the existing roadway circulation network with the addition of the Reservation Gaming project during the likely opening day scenario (2015). This analysis includes the traffic from other cumulative projects and anticipated traffic growth.

Traffic Volumes

The traffic generation for the Near Term Plus Project Conditions is presented in **Table 4.9-31** through **4.9-40**.

		PEAK NEAR TERM NO BUILD PRO		NEAR TE PROPOSEI	RM PLUS D PROJECT	NEAR TE ALTERN	RM PLUS ATIVE 1	NEAR TERM PLUS ALTERNATIVE 2		
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
1	SD 04 (Course Dd) & We Marcola	AM	37.1	D	42.1	D	39.6	D	37.4	D
1	SR 94 (Campo Rd) & Via Mercado	PM	50.2	D	89.3	F	69.3	E	52.6	D
2	Learning Divid & SD 04 (Courses Dat)	AM	17.7	В	18.8	В	18.3	В	17.9	В
2	Jamacha Bivd. & SK 94 (Campo Kd)	PM	40.4	D	57.1	Е	48.2	D	41.3	D
2	SP 04 (Compo Pd) & Jamacha Pd	AM	33.7	С	36.1	D	34.8	С	33.8	С
5	SK 94 (Campo Ku) & Jamacha Ku.	PM	68.4	Е	94.2	F	79.1	Е	69.5	Е
4	SP 04 (Compo Pd) & Courser Convon Pd	AM	27.1	С	34.7	С	31.0	С	27.5	С
4	SK 94 (Campo Ku) & Cougai Canyon Ku.	PM	17.7	В	45.6	D	27.3	С	19.1	В
5	Staala Canvon Pd. & SP. 04 (Campo Pd)	AM	33.9	С	43.9	D	38.3	D	34.4	С
5	Steele Canyon Ru. & SK 94 (Campo Ru)	PM	54.0	D	119.7	F	87.2	F	58.2	Е
6	Indian Springs Dr. / yone Valley Pd. & SP. 04 (Campo Pd)	AM	ECL	F	ECL	F	ECL	F	ECL	F
0	nutan Springs DL/Lyons valley Ru. & SR 94 (Campo Ru)	PM	1392.0	F	ECL	F	ECL	F	1725.4	F
7	Prostor Vallay Pd /Jaffarson Pd & SP 04 (Campo Pd)	AM	42.1	D	53.2	D	47.7	D	43.1	D
/	Floctor Vaney Ru./Jenerson Ru. & SR 94 (Campo Ru)	PM	31.2	С	61.1	Е	43.0	D	32.6	С
8	SP 94 (Campo Pd) & Malody Pd /Peacefull Valley Panch Pd	AM	18.9	С	43.5	Е	28.2	D	20.0	С
0	SK 94 (Campo Ku) & Weldy Ku/I cacciun vancy Kalen Ku.	PM	22.6	С	179.9	F	55.1	F	25.3	D
0	Malady P.d. & Droator Vallay P.d.	AM	9.7	А	9.8	А	9.7	А	9.7	А
,	Melody Ku. & Floctor Valley Ku.	PM	8.8	А	8.9	А	8.9	А	8.8	А
10	SR 94 (Campo Rd) & Reservation Rd.	AM	Under this s	cenario, this loes not have	56.7	F	21.7	С	14.0	В
		РМ	conflicting	movements.	767.0	F	97.0	F	15.5	С
11	SR 94 (Campo Rd) & Honey Springs Rd.	AM	14.8	В	16.8	С	15.8	С	14.9	В
	bit y (campo ita) a monoy opringo ita:	PM	14.3	В	17.2	С	15.8	С	14.5	В
12	SR 94 (Campo Rd) & Otay Lakes Rd.	AM	13.1	В	20.0	С	16.5	С	13.6	В
	~~····	PM	15.2	С	23.8	С	18.8	С	15.6	С
13	Jamacha Blvd. & Sweetwater Springs Blvd.	AM	43.0	D	43.5	D	43.2	D	43.1	D
	1 8	PM	76.4	E	79.0	E	77.9	Е	76.8	E
14	Willow Glen Dr. & Jamacha Rd.	AM	34.2	С	36.6	D	35.5	D	34.3	С
		PM	36.5	D	41.1	D	39.0	D	36.8	D
15	Steele Canvon Rd. & Willow Glen Dr.	AM	44.7	D	48.1	D	46.6	D	45.0	D
		PM	25.1	С	26.9	С	26.1	С	25.2	С
16	Steele Canvon Rd. & Jamul Dr.	AM	26.6	С	26.8	С	26.8	С	26.6	С
		PM	25.5	С	25.3	С	25.3	С	25.5	С
17	Lvons Valley Rd. & Jamul Dr.	AM	16.4	С	17.3	С	16.8	С	16.4	С
	,	PM	38.5	Е	49.2	Е	43.9	Е	39.2	Е
18	Jefferson Rd. & Lyons Valley Rd.	AM	33.7	D	42.0	Е	37.8	Е	34.2	D
		PM	21.7	С	25.1	D	23.5	С	21.9	С
19	SR 94 (Campo Rd) & Maxfield Rd	AM	15.0	С	25.4	D	19.7	С	15.6	С
17	on y i (campo hu) te maxilea na.	PM	21.2	С	111.2	F	44.0	Е	23.3	С

TABLE 4.9-31 NEAR TERM (2015) PLUS PROJECT WEEKDAY CONDITIONS PEAK-HOUR INTERSECTION LOS

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

ELC indicates delay exceeds Synchro's calculable limit.

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

		(01	Diffee oor	ODBIK 1 011)						
			NEAR TER	M NO BUILD	NEAR TE	RM PLUS PROJECT	NEAR TERM PLUS ALTERNATIVE 1		NEAR TEI ALTERN	RM PLUS ATIVE 2
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
1	SP 04 (Campo Pd) & Via Marando	FRI PM	39.7	D	61.6	E	48.6	D	41.0	D
1	SK 94 (Campo Ku) & Via Mercado	SAT PM	18.5	В	29.2	С	22.4	С	19.0	В
2	Jamasha Plud & SP 04 (Campo Pd)	FRI PM	37.8	D	52.4	D	43.8	D	38.4	D
2	Jamacna Bivd. & SR 94 (Campo Rd)	SAT PM	19.5	В	22.2	С	21.0	С	19.7	В
2	SP 04 (Campo Pd) & Jamesha Pd	FRI PM	42.9	D	71.2	E	55.8	Е	45.0	D
5	SK 94 (Campo Ku) & Jamacha Ku.	SAT PM	29.4	С	41.5	D	35.5	D	30.3	С
4	SP 04 (Campo Pd) & Courser Canyon Pd	FRI PM	10.4	В	19.9	В	14.2	В	10.8	В
4	SK 94 (Campo Ku) & Cougar Canyon Ku.	SAT PM	6.7	А	9.5	А	8.9	А	7.0	А
5	Steele Conven Pd. & SP. 04 (Commo Pd)	FRI PM	33.1	С	69.5	E	44.2	D	34.3	С
5	5 Steele Canyon Ku. & SK 94 (Campo Ku)		17.3	В	29.9	С	22.2	С	17.8	В
6	Indian Springs Dr./Lyons Valley Rd. & SR 94 (Campo Rd)		185.2	F	ECL	F	1328.4	F	246.9	F
0	Indian Springs DL/Lyons Vancy Ku. & SK 94 (Campo Ku)	SAT PM	45.5	E	1472.9	F	230.6	F	55.2	F
7	Prostor Vallay Pd /Ioffarson Pd & SP 04 (Compo Pd)	FRI PM	21.5	С	41.9	D	28.2	С	22.4	С
/	riocioi vaney ku./Jenerson ku. & SK 94 (Campo ku)	SAT PM	14.0	В	23.7	С	19.1	В	14.6	В
8 SR 94 (Campo Rd	CD 04 (Commo Dd) & Malada Dd (Decesfull Valles, Devel Dd	FRI PM	17.2	С	109.1	F	39.3	Е	19.2	С
	SK 94 (Campo Ku) & Melody Ku./Feacefull Valley Kaleli Ku.	SAT PM	12.8	В	48.3	Е	23.7	С	13.9	В
9 Me	Malada Dal & Deaster Vallas Dal	FRI PM	8.7	А	8.8	А	8.8	А	8.7	А
	Melody Rd. & Proctor Valley Rd.	SAT PM	9.4	А	9.6	А	9.6	А	9.5	А
10	10 SR 94 (Campo Rd) & Reservation Rd.		Under this scenario, this intersection does not have conflicting		ECL	F	485.6	F	17.8	С
	r (r	SAT PM	move	ements.	ECL	F	261.6	F	14.1	В
		FRI PM	16.7	С	22.8	С	19.7	С	17.1	С
11	SR 94 (Campo Rd) & Honey Springs Rd.	SAT PM	12.8	В	16.4	С	14.6	В	13.0	В
10		FRI PM	16.6	С	32.5	D	21.4	С	17.1	С
12	SR 94 (Campo Rd) & Otay Lakes Rd.	SAT PM	12.0	В	18.2	С	14.8	В	12.4	В
12		FRI PM	113.1	F	118.1	F	115.9	F	113.6	F
15	Jamacna Bivd. & Sweetwater Springs Bivd.	SAT PM	23.9	С	24.6	С	24.3	С	24.0	С
14	Willow Clap Dr. & Jamasha D.J.	FRI PM	35.8	D	39.9	D	37.9	D	36.1	D
14	whow Gien Dr. & Jamacha Ru.	SAT PM	47.3	D	50.5	D	49.0	D	47.4	D
1.5	Starla Canuna B.J. & Willow Clan Da	FRI PM	23.6	С	25.2	С	24.4	С	23.8	С
15	Steele Canyon Rd. & willow Gien Dr.	SAT PM	18.0	В	18.2	В	17.5	В	18.3	В
16	Steels Commun. Del & Longel Da	FRI PM	18.7	В	19.3	В	19.0	В	18.9	В
10	Steele Canyon Ku. & Janui Di.	SAT PM	15.0	В	15.1	В	14.9	В	15.0	В
17	Lyong Vallay P.d. & Jamul Dr.	FRI PM	14.0	В	15.5	С	14.8	В	14.1	В
1/	Lyons vancy Ku. & Jamui Dr.	SAT PM	11.2	В	12.0	В	11.6	В	11.3	В
19	Jaffarson P.d. & Lyons Vallay P.d	FRI PM	11.4	В	12.1	В	11.7	В	11.4	В
18	Jenerson Ku, & Lyons valley Ku.	SAT PM	10.2	В	10.6	В	10.4	В	10.2	В
10	SP 94 (Campo Pd) & Mayfield Pd	FRI PM	16.2	С	96.0	F	35.2	Е	17.8	С
19	SK 74 (Campo Ku) & Maxileiu Ku.	SAT PM	12.4	В	40.1	E	21.5	С	13.3	В

TABLE 4.9-32 NEAR TERM (2015) PLUS PROJECT FRIDAY/SATURDAY CONDITIONS PM PEAK-HOUR INTERSECTION LOS (UPDATED OCTOBER 2012)

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

ELC indicates delay exceeds Synchro's calculable limit.

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

TABLE 4.9-33 NEAR TERM (2015) WEEKDAY PLUS PROJECT CONDITIONS ILV ANALYSIS (UPDATED OCTOBER 2012)

			NE	AR TERM PLUS	N	EAR TERM PLUS	NEAR TERM PLUS			
	INTERSECTION	PEAK	PRO	POSED PROJECT	A	LTERNATIVE 1	A	LTERNATIVE 2		
		HOUR	ILV	CAPACITY	ILV	CAPACITY	ILV	CAPACITY		
			TOTAL		TOTAL		TOTAL			
1	SR 94 (Campo Rd.) & Via Mercado	AM	1537	Above Capacity	1515	Above Capacity	1491	Approaching Capacity		
		PM	1727	Above Capacity	1660	Above Capacity	1713	Above Capacity		
2	SR 94 (Campo Rd.) & Jamacha Blvd.	AM	1267	Approaching Capacity	1006	Below Capacity	982	Below Capacity		
		PM	1631	Above Capacity	1575	Above Capacity	1515	Above Capacity		
3	SR 94 (Campo Rd.) & Jamacha Rd.	AM	1210	Approaching Capacity	1186	Below Capacity	1160	Below Capacity		
		PM	1684	Above Capacity	1532	Above Capacity	1375	Approaching Capacity		
4	SR 94 (Campo Rd.) & Cougar Canyon Rd.	AM	1484	Approaching Capacity	1431	Approaching Capacity	1376	Approaching Capacity		
		PM	1697	Above Capacity	1539	Above Capacity	1375	Approaching Capacity		
5	SR 94 (Campo Rd.) & Steele Canyon Rd.	AM	1530	Above Capacity	1477	Approaching Capacity	1422	Approaching Capacity		
		PM	1891	Above Capacity	1717	Above Capacity	1535	Above Capacity		
7	SR 94 (Campo Rd.) & Jefferson Rd.	AM	1249	Approaching Capacity	1185	Below Capacity	1118	Below Capacity		
		PM	1670	Above Capacity	1480	Approaching Capacity	1281	Approaching Capacity		

Notes:

<1200 = Below Capacity, 1201 – 1500 = Approaching Capacity, >1500 = Above Capacity **Bold** values indicate intersections operating above capacity

TABLE 4.9-34 NEAR TERM (2015) FRIDAY/SATURDAY PLUS PROJECT CONDITIONS ILV ANALYSIS SUMMARY (UPDATED OCTOBER 2012)

	INTERSECTION	NEAR TERM PLUS NEAR TERM PLUS PEAK HOUR PROPOSED PROJECT ALTERNATIVE 1		AR TERM PLUS LTERNATIVE 1	NEA AL	AR TERM PLUS TERNATIVE 2		
			ILV TOTAL	CAPACITY	ILV TOTAL	CAPACITY	ILV TOTAL	CAPACITY
1	SR 94 (Campo Rd.) & Via Mercado	FRIDAY PM	1669	Above Capacity	1575	Above Capacity	1476	Approaching Capacity
		SATURDAY PM	1404	Approaching Capacity	1309	Approaching Capacity	1210	Approaching Capacity
2	SR 94 (Campo Rd.) & Jamacha Blvd.	FRIDAY PM	1592	Above Capacity	1527	Above Capacity	1453	Approaching Capacity
		SATURDAY PM	1291	Approaching Capacity	1225	Approaching Capacity	1152	Below Capacity
3	SR 94 (Campo Rd.) & Jamacha Rd.	FRIDAY PM	1465	Approaching Capacity	1342	Approaching Capacity	1268	Approaching Capacity
		SATURDAY PM	1281	Approaching Capacity	1171	Below Capacity	1086	Below Capacity
4	SR 94 (Campo Rd.) & Cougar Canyon Rd.	FRIDAY PM	1420	Approaching Capacity	1238	Approaching Capacity	1031	Below Capacity
		SATURDAY PM	968	Below Capacity	776	Below Capacity	569	Below Capacity
5	SR 94 (Campo Rd.) & Steele Canyon Rd.	FRIDAY PM	1591	Above Capacity	1393	Approaching Capacity	1164	Below Capacity
		SATURDAY PM	1197	Below Capacity	957	Below Capacity	703	Below Capacity
7	SR 94 (Campo Rd.) & Jefferson Rd.	FRIDAY PM	1684	Above Capacity	1485	Approaching Capacity	1248	Approaching Capacity
		SATURDAY PM	1288	Approaching Capacity	1088	Below Capacity	842	Below Capacity

Notes:

<1200 = Below Capacity, 1201 – 1500 = Approaching Capacity, >1500 = Above Capacity **Bold** values indicate intersections operating above capacity

TABLE 4.9-35 NEAR TERM (2015) PLUS PROPOSED PROJECT CONDITIONS ROADWAY SEGMENT LOS (UPDATED OCTOBER 2012)

			NEAR TERM NO BUILD PROPOSE		EAR TERM PL DPOSED PROJ	R TERM PLUS DSED PROJECT					
		LOS E		V/C RATIO			V/C RATIO				
ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY	ADT	(a)	LOS	ADT	(a)	LOS	∆ in ADT	∆ in V/C	SIGNIFICANT?
Sweetwater Springs Blvd.	r					1		-	r		
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	17,849	0.482	В	17,939	0.485	В	90	0.003	NO
Jamacha Blvd.								-			
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	18,897	0.511	В	19,347	0.523	В	450	0.012	NO
Jamacha Rd. (SR 54)											
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	49,234	0.864	D	49,684	0.872	D	450	0.008	NO
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	25,911	0.455	В	26,721	0.469	В	810	0.014	NO
Steele Canyon Rd.											
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	7,114	0.439	D	7,744	0.478	D	630	0.039	NO
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	16,499	0.868	Е	17,399	0.916	Е	900	0.048	NO
Jamul Dr.											
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	4,413	0.272	С	4,683	0.289	С	270	0.017	NO
Willow Glen Dr.											
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	21,399	0.578	В	22,029	0.595	В	630	0.017	NO
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	13,736	0.723	Е	14,006	0.737	Е	270	0.014	NO
Lyons Valley Rd.				•			•	-			
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	5,938	0.367	С	6,028	0.372	С	90	0.005	NO
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	7,126	0.44	D	7,756	0.479	D	630	0.039	NO
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	9,643	0.595	D	10,003	0.617	D	360	0.022	NO
Jefferson Rd.											
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	4,560	0.281	С	5,100	0.315	С	540	0.034	NO
Melody Rd.	•			-	•		-				
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	1,884	0.116	А	2,064	0.127	В	180	0.011	NO
Proctor Valley Rd.											
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	3,888	0.24	В	4,068	0.251	В	180	0.011	NO
Honey Springs Rd.											
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	2,126	0.131	В	2,216	0.137	В	90	0.006	NO
Otay Lakes Rd.											
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	4,938	0.305	С	6,378	0.394	С	1440	0.089	NO
Notes:											

Bold values indicate roadway segments operating at LOS E or F. Bold and shaded values indicate a project significant impact

TABLE 4.9-36 NEAR TERM (2015) PLUS ALTERNATIVE 1 CONDITIONS ROADWAY SEGMENT LOS

(UPDATED OCTOBER 2012)

			NEA	R TERM NO I	BUILD	NEAR TERM PLUS ALTERNATIVE 1					
ROADWAY SEGMENT	ROADWAY CLASSIFICATION	LOS E CAPACITY	ADT	(a)	LOS	ADT	(a)	LOS	∆ in ADT	∆ in V/C	SIGNIFICANT?
Sweetwater Springs Blvd.											1
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	17,849	0.482	В	17,899	0.484	В	50	0.002	NO
Jamacha Blvd.	•			•			•				•
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	18,897	0.511	В	19,147	0.517	В	250	0.006	NO
Jamacha Rd. (SR 54)		•		•			•				
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	49,234	0.864	D	49,484	0.868	D	250	0.004	NO
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	25,911	0.455	В	26,361	0.462	В	450	0.007	NO
Steele Canyon Rd.											
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	7,114	0.439	D	7,464	0.461	D	350	0.022	NO
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	16,499	0.868	Е	16,999	0.895	Е	500	0.027	NO
Jamul Dr.		•		•	-					-	
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	4,413	0.272	С	4,563	0.282	С	150	0.010	NO
Willow Glen Dr.											
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	21,399	0.578	В	21,749	0.588	В	350	0.010	NO
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	13,736	0.723	Е	13,886	0.731	Е	150	0.008	NO
Lyons Valley Rd.			-	-		-	-			-	
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	5,938	0.367	С	5,988	0.37	С	50	0.003	NO
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	7,126	0.44	D	7,476	0.461	D	350	0.021	NO
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	9,643	0.595	D	9,843	0.608	D	200	0.013	NO
Jefferson Rd.											
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	4,560	0.281	С	4,860	0.3	С	300	0.019	NO
Melody Rd.			-	-	-	·	-	-	·	•	-
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	1,884	0.116	А	1,984	0.122	В	100	0.006	NO
Proctor Valley Rd.											
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	3,888	0.24	В	3,988	0.246	В	100	0.006	NO
Honey Springs Rd.			-	-			-			-	
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	2,126	0.131	В	2,176	0.134	В	50	0.003	NO
Otay Lakes Rd.		-									
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	4,938	0.305	С	5,737	0.354	С	799	0.049	NO
Notes:											

Bold values indicate roadway segments operating at LOS E or F. Bold and shaded values indicate a project significant impact

TABLE 4.9-37 NEAR TERM (2015) PLUS ALTERNATIVE 2 CONDITIONS ROADWAY SEGMENT LOS (UPDATED OCTOBER 2012)

			NEAR TERM NO BUILD		NEAR TERM PLUS ALTERNATIVE 2						
ROADWAY SEGMENT	ROADWAY CLASSIFICATION	LOS E CAPACITY	ADT	V/C RATIO (a)	LOS	ADT	V/C RATIO (a)	LOS	∆ in ADT	∆ in V/C	SIGNIFICANT?
Sweetwater Springs Blvd.					1	1			1		
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	17,849	0.482	В	17,861	0.483	В	12	0.001	NO
Jamacha Blvd.											
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	18,897	0.511	В	18,956	0.512	В	59	0.001	NO
Jamacha Rd. (SR 54)											
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	49,234	0.864	D	49,293	0.865	D	59	0.001	NO
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	25,911	0.455	В	26,018	0.456	В	107	0.001	NO
Steele Canyon Rd.											
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	7,114	0.439	D	7,197	0.444	D	83	0.005	NO
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	16,499	0.868	Е	16,618	0.875	E	119	0.007	NO
Jamul Dr.				-	-	-			-		
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	4,413	0.272	С	4,449	0.275	С	36	0.003	NO
Willow Glen Dr.											
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	21,399	0.578	В	21,482	0.581	В	83	0.003	NO
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	13,736	0.723	Е	13,772	0.725	Е	36	0.002	NO
Lyons Valley Rd.			-	-	-	•					
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	5,938	0.367	С	5,950	0.367	С	12	0.000	NO
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	7,126	0.44	D	7,209	0.445	D	83	0.005	NO
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	9,643	0.595	D	9,691	0.598	D	48	0.003	NO
Jefferson Rd.											
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	4,560	0.281	С	4,631	0.286	С	71	0.005	NO
Melody Rd.											
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	1,884	0.116	Α	1,908	0.118	В	24	0.002	NO
Proctor Valley Rd.											
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	3,888	0.24	В	3,912	0.241	В	24	0.001	NO
Honey Springs Rd.											
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	2,126	0.131	В	2,138	0.132	В	12	0.001	NO
Otay Lakes Rd.							-				
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	4,938	0.305	С	5,128	0.317	С	190	0.012	NO

Notes:

Bold values indicate roadway segments operating at LOS E or F. Bold and shaded values indicate a project significant impact

TABLE 4.9-38 NEAR TERM (2015) WEEKDAY PLUS PROJECT CONDITIONS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

ROADWAY SEGMENT	DIRECTION	EXISTIN PROPOSED	G PLUS PROJECT	EXISTIN ALTERN	IG PLUS ATIVE 1	EXISTING PLUS ALTERNATIVE 2						
		SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)					
WEEKDAY AM PEAK												
SR 94 (Campo Road)												
	EB	46.5	А	47.6	А	48.3	А					
Via Mercado to Proctor Valley Rd.	WB	39.9	В	41.9	В	43.0	В					
		WEEKDA	Y PM PEAK									
SR 94 (Campo Road)												
	EB	25.6	D	31.8	С	38.0	В					
Via Mercado to Proctor Valley Rd.	WB	38.9	В	41.9	В	43.6	А					
Notes:	·						•					

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph)

(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under construction and is influenced both by the number of signals per mile and by the intersection control delay.

TABLE 4.9-39 NEAR TERM (2015) FRIDAY/SATURDAY PLUS PROJECT CONDITIONS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

ROADWAY SEGMENT	DIRECTION	EXISTIN PROPOSED	IG PLUS PROJECT	EXISTIN ALTERN	IG PLUS ATIVE 1	EXISTING PLUS ALTERNATIVE 2							
		SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)						
	FRIDAY AM PEAK												
SR 94 (Campo Road)													
	EB	33.7	С	40.6	В	42.7	А						
Via Mercado to Proctor Valley Rd.	WB	41.0	В	45.1	А	46.3	А						
	-	SATURDA	Y PM PEAK										
SR 94 (Campo Road)													
	EB	45.7	А	47.0	А	47.6	А						
Via Mercado to Proctor Valley Rd.	WB	44.0	А	46.5	А	47.3	А						
Notes:													

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph)(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under construction and is influenced both by the number of signals per mile and by the intersection control delay.

TABLE 4.9-40 NEAR TERM (2015) PLUS PROJECT TWO-WAY TWO-LANE HIGHWAY SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

HIGHWAY SEGMENT	PEAK HOUR	N PR	EAR TERM PLUS OPOSED PROJE(S CT	NEAR	R TERM PLUS PRO ALTERNATIVE 1	JECT	NEAR TERM PLUS PROJECT ALTERNATIVE 2			
		LOS (a)	Average Travel Speed (mph)	PTSF (b)	LOS (a)	Average Travel Speed (mph)	PTSF (b)	LOS (a)	Average Travel Speed (mph)	PTSF (b)	
SR 94						· • ·					
Proctor Valley Road to Melody Rd.	Weekday AM	Е	35.9	81.9%	Е	37.4	77.9%	Е	38.7	73.4%	
	Weekday PM	Е	32.8	87.4%	Е	35.5	82.9%	Е	38.1	76.0%	
	Friday PM	Е	31.3	89.3%	Е	35.3	83.3%	Е	38.7	73.5%	
	Saturday PM	Е	33.2	86.8%	Е	36.9	79.1%	D	40.1	67.5%	
Melody Road to Project Driveway	Weekday AM	D	41.3	76.6%	D	42.2	74.1%	D	43.7	66.7%	
	Weekday PM	Е	38.6	83.0%	Е	35.5	82.9%	D	43.3	68.7%	
	Friday PM	Е	35.5	87.9%	Е	39.6	80.8%	D	42.7	71.6%	
	Saturday PM	Е	37.2	85.5%	D	41.2	77.0%	D	44.2	64.8%	
Project Driveway to Otay Lakes Rd.	Weekday AM	D	43.1	69.7%	D	43.4	68.1%	D	43.7	66.4%	
	Weekday PM	D	42.6	71.9%	D	43.2	69.5%	D	43.8	66.8%	
	Friday PM	D	42.1	73.2%	D	42.2	72.9%	D	43.1	69.6%	
	Saturday PM	D	43.2	69.3%	D	43.9	65.3%	D	44.6	62.7%	

Notes:

Bold values indicate intersection operating at LOS D, E or F.

(a) LOS is based on Average Travel Speed and Percent-time-spend-following per Chapter 12 of the 2000 Highway Capacity Manual.
(b) PTSF = Percent time-spent-following

Intersection Analysis (HCM)

Tables 4.9-31 and **4.9-32** present the peak-hour LOS analysis results for the study intersections under Near Term (2015) Plus Project weekday conditions, as well as the peak-hour LOS analysis results for the typical Friday and Saturday Near Term (2015) Plus Project conditions. The following is the summary of the results:

Near Term (2015) Plus Proposed Project Conditions: The following intersections would have one or more peak-hours where the Proposed Project would cause a cumulatively considerable significant impact:

- SR 94 (Campo Road) and Via Mercado (LOS D weekday a.m. peak-hour, LOS F weekday p.m. peak-hour, LOS E Friday p.m. peak-hour);
- SR 94 (Campo Road) and Jamacha Boulevard (LOS <u>E</u> <u>D</u> weekday <u>ap</u>.m. peak <u>hours</u>, LOS E Friday p.m. peak);
- SR 94 (Campo Road) and Jamacha Road (LOS D weekday a.m. peak-hour, LOS F weekday p.m. peak-hour, LOS F E Friday p.m. peak-hour, LOS D Saturday p.m. peak-hour);
- SR 94 (Campo Road) and Cougar Canyon Road (LOS D weekday a.m. and p.m. peak-hour);
- SR 94 (Campo Road) and Steele Canyon Road (LOS D weekday a.m. peakhour, LOS F weekday p.m. peak-hour, and LOS F E Friday p.m. peak <u>hour</u>, LOS D Saturday p.m. peak);
- SR 94 (Campo Road) and Lyons Valley Road (LOS F all peak-hours analyzed);
- SR 94 (Campo Road) and Jefferson Road (LOS E weekday a.m. <u>peak hour and</u>, <u>LOS F weekday</u> p.m. peak-hour, LOS <u>E D</u> Friday p.m. peak-hour);
- SR 94 (Campo Road) and Melody Road (<u>LOS E weekday a.m. peak-hour, LOS</u> <u>F weekday p.m. peak-hour, LOS F Friday p.m. peak-hour, and LOS F<u>E all</u> <u>Saturday peak-hours analyzed</u>);
 </u>
- SR 94 (Campo Road) and Reservation Road (LOS F all peak-hours analyzed); and
- SR 94 (Campo Road) and Otay Lakes Road (LOS D weekday a.m. Friday p.m. peak-hour).

- Jamacha Boulevard and Sweetwater Springs Boulevard (LOS E weekday p.m. peak-hour, and LOS F Friday p.m. peak-hour); and
- <u>SR-94 (Campo Road) and Maxfield Road (LOS D weekday a.m. peak-hour, LOS F Friday p.m. peak-hour, LOS F Friday p.m. peak-hour and LOS E Saturday p.m. peak-hour.</u>

Appendix 10 (Appendix E) contains the intersections LOS calculation worksheets.

Intersection Analysis (ILV)

Tables 4.9-33 and **4.9-34** presents the ILV analysis results for the Caltrans-owned signalized intersections under Near Term Plus Project Conditions for all peak-hours analyzed. The following is the summary of the results:

Near Term (2015) Plus Proposed Project Conditions: The following intersections would have one or more peak-hours where the operations would be above capacity, which is a significant impact:

- SR 94 (Campo Road) and Via Mercado (weekday a.m. and p.m. peak-hours, Friday p.m. peak-hour);
- SR 94 (Campo Road) and Jamacha Boulevard (weekday p.m. peak-hour, Friday p.m. peak-hour);
- SR 94 (Campo Road) and Jamacha Road (weekday p.m. peak-hour, Friday p.m. peak hour);
- SR 94 (Campo Road) and Cougar Canyon Road (weekday a.m. and p.m. peakhours, Friday p.m. peak hour);
- SR 94 (Campo Road) and Steele Canyon Road (weekday a.m. and p.m. peakhours, Friday p.m. peakhour); and
- SR 94 (Campo Road) and Jefferson Road (weekday p.m. peak-hour, LOS E Friday and Saturday p.m. peak-hour).

Appendix 10 (Appendix F) contains the ILV worksheets.

Roadway Segment Analysis

Tables 4.9-35 through **4.9-37** present the roadway segments analysis under Near Term (2015) Plus Project Conditions for a typical weekday for the Proposed Project. All roadway segments within the study area would continue to function at LOS D or better with the addition of traffic from the Proposed Project, <u>which is considered a less than significant impact</u>. with the exception of the following roadway segments:

- Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS E): and
- Willow Glen Drive between Steele Canyon Road and Hillsdale Road (LOS E).

The roadway segment analysis used for the evaluation of the County of San Diego's roadway segments is based on theoretical capacities for each roadway based on the number of provided travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment like the number of intersections, number of driveways, parking availability, and more importantly traffic patterns and distributions. Although this type of simple numerical analysis is acceptable for a typical planning level analysis, to better represent the conditions of a roadway segment, the operations of the upstream and downstream intersections of the segment during the peak-hour periods would indicate whether the roadway segment would have adequate capacity. As shown in the intersection analysis tables (Appendix 10, Tables 7-1 and 7-2), the intersections at the ends of Steele Canyon Road between Jamul Drive and Willow Glen Drive, and Willow Glen Drive between Steele Canyon Road and Hillsdale Road would operate at an acceptable LOS D or better with and without the addition of the Proposed Project. As a result, the Proposed Project would not have a cumulatively considerable significant traffic related impact along Steele Canyon Road between Jamul Drive and Willow Glen Drive or along Willow Glen Drive between Steele Canyon Road and Hillsdale Road.

HCM Peak-Hour Arterial Analysis

Tables 4.9-38 and **4.9-39** present the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor <u>Valley</u> Road under Near Term (2015) Plus Project Conditions. The roadway segment would function at LOS C or better with the addition of the Proposed Project, <u>except during the weekday p.m. peak-hour period</u>. The analysis shows that this segment would operate at LOS D during the weekday p.m. peak-hour period. <u>which is considered a less than significant impact</u>. **Appendix 10** (Appendix G) contains the peak-hour arterial analysis worksheets.

The Proposed Project would have a cumulatively considerable traffic related impact along this roadway segment.

HCM Peak-Hour Two-Lane Highway Analysis

Table 4.9-40 displays the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under Near Term (2015) Plus Project Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. All two-lane facilities analyzed would continue to operate at LOS D or E during all peak-hours analyzed and this project alternative would be considered having a <u>cumulatively</u> <u>considerable</u> significant impact along this roadway segment. **Appendix 10** (Appendix H) contains the two-way two-lane analysis worksheets.

Proposed Access Evaluation

Based on a preliminary review of the geometric features, the intersection of SR-94 (Campo Road) and Reservation Road would not provide adequate access to the site for any of the project alternatives, unless certain reconstruction, most of which is not within the Tribe's jurisdiction, were completed. This would continue to be true under the Near Term (2015) conditions, and would be a significant project related impact that requires mitigation.

Alternative 1

Traffic Volumes

Tables 4.9-34 through **4.9-36** illustrate the Near Term (2015) Plus Alternative 1 project peak-hour traffic volumes at the study intersections for a typical weekday and typical Friday/Saturday, as well as the Near Term (2015) Plus Alternative 1 project ADT volumes along the roadway segments.

Intersection Analysis (HCM)

Near Term (2015) Plus Alternative 1 Project Conditions: The following intersections would have one or more peak-hours where the Alternative 1 Project would have a cumulatively significant impact:

- SR 94 (Campo Road) and Via Mercado (LOS D weekday a.m. peak-hour, LOS F weekday p.m. peak-hour, LOS <u>E-D</u> Friday p.m. peak-hour);
- SR 94 (Campo Road) and Jamacha Boulevard (LOS D weekday p.m. peak, LOS D Friday p.m. peak);
- SR 94 (Campo Road) and Jamacha Road (LOS D weekday a.m. peak-hour, LOS E weekday p.m. peak-hour, LOS E Friday p.m. peak-hour, LOS D Saturday p.m. peak-hour);
- SR 94 (Campo Road) and Cougar Canyon Road (LOS D weekday a.m. hours);
- SR 94 (Campo Road) and Steele Canyon Road (LOS D weekday a.m. peakhour, LOS F weekday p.m. peak-hour, LOS E-D Friday p.m. peak);
- SR 94 (Campo Road) and Lyons Valley Road (LOS F all peak-hours analyzed);
- SR 94 (Campo Road) and Jefferson Road (LOS D weekday a.m. and p.m. peak-hour);
- SR 94 (Campo Road) and Melody Road (LOS <u>F-D</u> weekday a.m. <u>peak-hour</u>, <u>LOS F weekday and p.m.</u> peak-hours, LOS <u>F-E</u> Friday p.m. peak-hour, LOS D <u>Saturday p.m. peak hour</u>); and
- SR 94 (Campo Road) and Reservation Road (LOS F weekday p.m. peak-hour, LOS F Friday and Saturday p.m. peak-hour)-:
- Jamacha Boulevard and Sweetwater Springs Boulevard (LOS F Friday p.m. peak-hour);
- Jamul Drive and Lyons Valley Road (LOS E weekday p.m. peak-hour); and
- <u>SR 94 and Maxfield Road (LOS E weekday p.m. peak-hour, LOS D Friday p.m. peak-hour).</u>

Intersection Analysis (ILV)

Near Term (2015) Plus Alternative 1 Conditions: The following intersections would have one or more peak-hours where the operations would be above capacity, which is considered a significant impact:

- SR 94 (Campo Road) and Via Mercado (weekday a.m. and p.m. peak-hours, <u>Friday p.m. peak-hour</u>);
- SR 94 (Campo Road) and Jamacha Boulevard (weekday p.m. peak-hour, Friday p.m. peak hour);
- SR 94 (Campo Road) and Cougar Canyon Road (weekday p.m. peak-hour); and

- SR 94 (Campo Road) and Steele Canyon Road (weekday a.m. and p.m. peakhours, Friday p.m. peak)-; and
- <u>SR 94 (Campo Road) and Jefferson Road (Friday and Saturday p.m. peak-hours).</u>

Roadway Segment Analysis

Tables 4.9-35 through **4.9-37** display the roadway segments analysis under Near Term (2015) Plus Project Conditions for a typical weekday for each of the proposed project alternatives. All roadway segments within the study area would continue to function at LOS D or better with the addition of traffic from Alternative 1, which is considered a less than significant impact. with the exception of the following roadway segments:

- Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS E)
- Willow Glen Drive between Steele Canyon Road and Hillsdale Road (LOS E)

The roadway segment analysis used for the evaluation of the County of San Diego's roadway segments is based on theoretical capacities for each roadway based on the number of provided travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment like the number of intersections, number of driveways, parking availability, and more importantly traffic patterns and distributions. Although this type of simple numerical analysis is acceptable for a typical planning level analysis, to better represent the conditions of a roadway segment, the operations of the upstream and downstream intersections of the segment during the peak-hour periods would indicate whether the roadway segment would have adequate capacity. As shown in the intersection analysis tables (Appendix 10, Tables 7-1 and 7-2), the intersections at the ends of Steele Canyon Road between Jamul Drive and Willow Glen Drive, and Willow Glen Drive between Steele Canyon Road and Hillsdale Road would operate at an acceptable LOS D or better with and without the addition Alternative 1. As a result, Alternative 1 would not have a cumulatively considerable significant traffic related impact along Steele Canyon Road between Jamul Drive and Willow Glen Drive or along Willow Glen Drive between Steele Canyon Road and Hillsdale Road.

HCM Peak-Hour Arterial Analysis

Tables 4.9-38 and **4.9-39** display the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor Valley Road under Near Term (2015) Plus Project Conditions. The roadway segment would function at LOS C or better with the addition of traffic from Alternative 1, which is a less than significant impact.

HCM Peak-Hour Two-Lane Highway Analysis

Table 4.9-40 displays the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor Valley Road and Otay Lakes Road under Near Term (2015) Plus Project Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. All two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed, which is considered a <u>cumulatively considerable</u> significant impact.

Proposed Access Evaluation

Based on a preliminary review of the geometric features, the intersection of SR-94 (Campo Road) and Reservation Road would not provide adequate access to the site for any of the project alternatives, unless certain reconstruction, most of which is not within the Tribe's jurisdiction, were completed. This would continue to be true under the Near Term (2015) conditions, and would be a <u>cumulatively considerable</u> significant project related impact that requires mitigation.

Alternative 2

Traffic Volumes

Tables 4.9-37 through **4.9-39** illustrate the Near Term (2015) Plus Alternative 1 project peak-hour traffic volumes at the study intersections for a typical weekday and typical Friday/Saturday traffic, as well as the Near Term (2015) Plus Alternative 1 project ADT volumes along the roadway segments.

Intersection Analysis (HCM)

Near Term (2015) Plus Alternative 2 Project Conditions: The following intersections would have one or more peak-hours where the Alternative 2 Project would have a cumulatively significant impact:

 SR 94 (Campo Road) and Via Mercado (LOS D weekday a.m. <u>and p.m.</u> peakhour<u>s</u>, <u>LOS E weekday p.m. peak hour</u>, LOS D Friday p.m. peak-hour);

- SR 94 (Campo Road) and Jamacha Boulevard (LOS D weekday p.m. peakhour, LOS D Friday p.m. peak-hour);
- SR 94 (Campo Road) and Jamacha Road (LOS <u>D-E</u>weekday p.m. peak-hour, LOS D Friday p.m. peak-hour);
- SR 94 (Campo Road) and Steele Canyon Road (LOS D weekday a.m. peakhour, LOS E weekday p.m. peak-hour, LOS D Friday p.m. peak);
- SR 94 (Campo Road) and Lyons Valley Road (LOS F all peak-hours analyzed);
- SR 94 (Campo Road) and Jefferson Road (LOS D weekday a.m. peak-hour); and
- SR 94 (Campo Road) and Melody Road (LOS D weekday a.m. and p.m. peakhours, LOS D Friday p.m. peak hour).

Intersection Analysis (ILV)

Near Term (2015) Plus Alternative 2 Conditions: The following intersections would have one or more peak-hours where the operations would be above capacity, which is considered a significant impact:

- SR 94 (Campo Road) and Via Mercado (weekday p.m. peak-hour);
- -SR 94 (Campo Road) and Jamacha Boulevard (weekday p.m. peak-hour); and
- SR 94 (Campo Road) and Steele Canyon Road (weekday p.m. peak-hour)-, and
- <u>SR 94 (Campo Road) and Jefferson Road (Friday p.m. peak hour).</u>

Roadway Segment Analysis

Tables 4.9-35 through **4.9-37** display the roadway segments analysis under Near Term (2015) Plus Project Conditions for a typical weekday for each of the proposed project alternatives. As shown in the tables, all roadway segments within the study area would continue to function at LOS D or better with the addition of traffic from Alternative 2, which is considered a less than significant impact. with the exception of the following roadway segments:

- Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS E)
- Willow Glen Drive between Steele Canyon Road and Hillsdale Road (LOS E)

The roadway segment analysis used for the evaluation of the County of San Diego's roadway segments is based on theoretical capacities for each roadway based on the number of provided travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment like the number of intersections, number of driveways, parking availability, and more importantly traffic patterns and distributions. Although this type of simple numerical analysis is acceptable for a typical planning level analysis, to better represent the conditions of a roadway segment, the operations of the upstream and downstream intersections of the segment during the peak-hour periods would indicate whether the roadway segment would have adequate capacity. As shown in the intersection analysis tables (Appendix 10, Tables 7-1 and 7-2), the intersections at the ends of Steele Canyon Road between Jamul Drive and Willow Glen Drive, and Willow Glen Drive between Steele Canyon Road and Hillsdale Road would operate at an acceptable LOS D or better with and without the addition of Alternative 2. As a result, Alternative 2 would not have a cumulatively considerable significant traffic related impact along Steele Canyon Road between Jamul Drive and Willow Glen Drive or along Willow Glen Drive between Steele Canyon Road and Hillsdale Road.

HCM Peak-Hour Arterial Analysis

Tables 4.9-38 and **4.9-39** display the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor <u>Valley</u> Road under Near Term (2015) Plus Project Conditions. The roadway segment would function at LOS C or better with the addition of traffic from Alternative 2, which is a less than significant impact.

HCM Peak-Hour Two-Lane Highway Analysis

Table 4.9-40 displays the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under Near Term (2015) Plus Project Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. As shown in the table, all two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed, which is considered a <u>cumulatively considerable</u> significant impact.

Proposed Access Evaluation

Based on a preliminary review of the geometric features, the intersection of SR-94 (Campo Road) and Reservation Road would not provide adequate access to the site for any of the project alternatives, unless certain reconstruction, most of which is not within the Tribe's jurisdiction, were completed. This would continue to be true under

the Near Term (2015) conditions, and would be a <u>cumulatively considerable</u> significant project related impact that requires mitigation.

No Action Alternative

The No Action Alternative would not result in the addition of traffic to area roadways. No impact would result.

Impact 4.9(4): Horizon Year (2035) Plus Project Conditions

Per the County of San Diego's <u>Mobility Element included in the approved</u> General Plan, two roadway segment improvements were assumed to be completed under the Horizon Year conditions<u>.</u>, and <u>The analysis</u> evaluates whether the project's contribution to any significant impacts would be cumulatively considerable:

- Completion of Proctor Valley Road as a 2-lane light collector from Chula Vista city limits to SR 94; and
- Realignment of Otay Lakes Road with the intersection of Honey Springs Road to form a four-way intersection at SR 94.

Proposed Project

This section summarizes the operations of the existing roadway circulation network with the addition of the Reservation Gaming project to the Horizon Year conditions, and evaluates whether the project's contribution to any significant impacts would be cumulatively considerable.

Traffic Volumes

The traffic generation for the Proposed Project was added to the Horizon Year (2035) Baseline traffic volumes to generate the Horizon Year (2035) Plus Project conditions. **Tables 4.9-41** through **4.9-50** present the traffic volumes for the Horizon Year Plus Project Conditions.

TABLE 4.9-41 HORIZON YEAR (2035) PLUS PROJECT WEEKDAY CONDITIONS PEAK-HOUR INTERSECTION LOS (UPDATED OCTOBER 2012)

		HORIZON YEAR HORIZON YEAR PLUS HORIZON YEAR PLUS HORI									
		DEAK	HORIZO NO B	N YEAR	HORIZON Y	EAR PLUS	HORIZON Y	EAR PLUS	HORIZON		
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)		DELAY (a)		DELAY (a)		
		AM	171.1	F	175.7	F	173.6	F	171.2		
1	SR 94 (Campo Rd) & Via Mercado	PM	268.6	F	310.0	F	291.1	F	272.2		
		AM	28.0	С	29.6	С	28.9	С	28.2		
2	Jamacha Blvd. & SR 94 (Campo Rd)	PM	67.0	Е	84.5	F	76.4	Е	68.3		
		AM	56.6	Е	61.6	Е	59.0	Е	57.0		
3	SR 94 (Campo Rd) & Jamacha Rd.	PM	147.3	F	185.6	F	167.0	F	150.1		
		AM	33.8	С	41.5	D	37.9	D	34.3		
4	SR 94 (Campo Rd) & Cougar Canyon Rd.	PM	20.2	С	43.4	D	29.7	С	21.3		
		AM	41.3	D	50.9	D	46.1	D	41.9		
5	Steele Canyon Rd. & SR 94 (Campo Rd)	PM	68.1	Е	124.4	F	96.8	F	72.4		
		AM	ECL	F	ECL	F	90.8FECLFECLF		ECL		
6	Indian Springs Dr./Lyons Valley Rd. & SR 94 (Campo Rd)	PM	ECL	F	ECL	F	ECL	F	ECL		
		AM	372.1	F	388.9	F	374.9	F	372.0		
1	Proctor Valley Rd./Jefferson Rd. & SR 94 (Campo Rd)	PM	269.0	F	321.6	F	288.1	F	270.5		
		AM	19.3	В	38.9	D	25.9	С	20.1		
8	SR 94 (Campo Rd) & Melody Rd./Peacefull Valley Ranch Rd.	PM	24.5	С	259.5	F	62.6	Е	27.1		
		AM	195.7	F	232.6	F	216.3	F	198.7		
9	Melody Rd. & Proctor Valley Rd.	PM	51.1	F	92.4	F	71.8	Е	54.3		
	SR 94 (Campo Rd) & Reservation Rd.	۸M	Under this se	cenario, this	87.1	F	25.6	D	15.4		
10		AM	intersection	n does not		-			15.0		
		PM	have con	nflicting	ECL	F	184.2	F	17.9		
11	SR 94 (Campo Rd) & Honey Springs Rd.	AM	As part of the	e County of Sa	an Diego's Genera	al Plan, the int	ersection of Hon	ey Springs Ro	ad will be reali		
		PM		four-	way intersection	with Otay Lak	tes Road and the	intersection o	f SR-94		
12	SR 94 (Campo Rd) & Otav Lakes Rd.	AM	17.7	В	20.1	C	18.5	В	17.7		
		PM	24.2	С	30.4	C	26.8	С	24.4		
13	Jamacha Blvd. & Sweetwater Springs Blvd.	AM	547.6	F	553.7	F	553.6	F	551.8		
	· ····································	PM	641.4	F	642.6	F	641.8	F	641.8		
14	Willow Glen Dr. & Jamacha Rd.	AM	43.4	D	45.2	D	44.4	D	43.5		
		PM	49.5	D	53.3	D	51.5	D	49.8		
15	Steele Canvon Rd. & Willow Glen Dr.	AM	77.6	E	81.4	F	79.4	E	77.8		
		PM	32.1	С	35.8	D	34.0	С	32.3		
16	Steele Canvon Rd. & Jamul Dr.	AM	292.2	F	295.8	F	294.6	F	292.6		
		PM	130.9	F	134.8	F	133.0	F	131.2		
17	Lvons Vallev Rd. & Jamul Dr.	AM	28.7	D	32.4	D	30.6	D	28.9		
	· · · · · · · · · · · · · · · · · · ·	PM	285.2	F	343.7	F	317.3	F	289.7		
18	Jefferson Rd. & Lvons Vallev Rd.	AM	ECL	F	ECL	F	ECL	F	ECL		
	······································	PM	53.8	F	78.7	F	66.6	F	55.3		
19	SR 94 (Campo Rd) & Maxfield Rd.	AM	16.8	С	26.7	D	21.4	C	17.5		
• /	(, , , , , , , , , , , , , , , , , , ,	PM	31.6	D	217.9	F	79.9	F	35.5		

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

ELC indicates delay exceeds Synchro's calculable limit.

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

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TABLE 4.9-42 HORIZON YEAR (2035) PLUS PROJECT FRIDAY/SATURDAY CONDITIONS PM PEAK-HOUR INTERSECTION LOS

(UPDATED OCTOBER 2012)

		DEAK	HORIZO NO BI	N YEAR	HORIZON Y	PROJECT	HORIZON Y	EAR PLUS	HORIZON Y	TEAR PLUS
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
		FRI PM	217.5	F	274.2	F	247.8	F	221.8	F
1	SR 94 (Campo Rd) & Via Mercado	SAT PM	108.1	F	143.9	F	126.9	F	110.9	F
		FRI PM	67.7	E	88.2	F	79.2	E	69.4	E
2	Jamacha Blvd. & SR 94 (Campo Rd)	SAT PM	31.9	С	36.6	D	34.2	С	32.2	С
		FRI PM	108.9	F	160.3	F	133.1	F	111.7	F
3	SR 94 (Campo Rd) & Jamacha Rd.	SAT PM	59.4	Е	99.0	F	78.3	Е	61.6	Е
		FRI PM	13.1	В	23.9	С	17.5	В	13.6	В
4	SR 94 (Campo Rd) & Cougar Canyon Rd.	SAT PM	7.4	А	9.5	А	9.0	А	7.6	А
-		FRI PM	43.7	D	90.9	F	65.9	Е	47.4	D
5	Steele Canyon Rd. & SR 94 (Campo Rd)	SAT PM	19.7	В	31.5	С	24.6	С	20.3	С
		FRI PM	1035.9	F	ECL	F	ECL	F	1315.1	F
6	Indian Springs Dr./Lyons Valley Rd. & SR 94 (Campo Rd)	SAT PM	62.8	Е	1499.5	F	301.1	F	76.9	Е
7	Denotes Maller D.J. (Leffinger D.J. & CD.04 (Course D.J.)	FRI PM	277.2	F	307.0	F	281.4	F	276.0	F
1	Proctor Valley Rd./Jenerson Rd. & SR 94 (Campo Rd)	SAT PM	109.0	F	140.5	F	114.8	F	111.7	F
		FRI PM	20.1	С	352.2	F	53.6	D	22.1	С
8	SR 94 (Campo Rd) & Melody Rd./Peacefull Valley Ranch Rd.	SAT PM	13.5	В	62.7	Е	23.1	С	14.2	В
		FRI PM	28.0	С	60.4	Е	41.3	D	2 41.4 20.3 20.3 7 1315.1 7 76.9 7 276.0 7 111.7 0 22.1 1 14.2 0 29.6 7 129.6 7 21.7 7 15.8 ugs Road will be realign tion of SR-94 2 28.5 3 15.5	С
9	Melody Rd. & Proctor Valley Rd.	SAT PM	122.5	F	208.9	F	169.3	F	129.6	F
		FRI PM	Under this so	cenario, this	ECL	F	740.6	F	21.7	С
10	SR 94 (Campo Rd) & Reservation Rd.	0.477 D) (intersection	n does not	ECL	-	201.2	-	15.0	
		SAT PM	have conflicting ECL F 391.3 F		F	15.8	С			
11	SR 94 (Campo Rd) & Honey Springs Rd.	FRI PM	As part of the	County of Sar	n Diego's Gener	al Plan, the inte	ersection of Hone	ey Springs Roa	d will be realign	ed to form a
		SAT PM		four-w	vay intersection	with Otay Lak	es Road and the	intersection of	SR-94	
12	SR 94 (Campo Rd) & Otay Lakes Rd.	FRI PM	28.3	С	39.3	D	32.0	С	28.5	C
		SAT PM	15.3	В	17.5	В	16.8	В	15.5	В
13	Jamacha Blvd. & Sweetwater Springs Blvd.	FRI PM	670.1	F	673.3	F	672.0	F	670.6	F
		SAT PM	341.9	F	344.7	F	343.3	F	342.3	F
14	Willow Glen Dr. & Jamacha Rd.	FRI PM	53.5	D	57.6	E	56.9	E	53.9	D
		SAT PM	38.6	D	40.7	D	39.7	D	38.7	D
15	Steele Canyon Rd. & Willow Glen Dr.	FRI PM	39.5	D	44.0	D	41.7	D	39.8	D
		SAT PM	22.0	С	23.8	С	22.8	С	22.1	С
16	Steele Canyon Rd. & Jamul Dr.	FRI PM	68.8	E	77.5	E	72.9	E	69.4	E
		SAT PM	30.5	С	31.2	С	31.0	С	30.5	C
17	Lyons Valley Rd. & Jamul Dr.	FRI PM	72.1	F	115.8	F	95.0	F	75.4	F
		SAT PM	17.4	С	20.8	C	19.1	C	17.6	C
18	Jefferson Rd. & Lyons Valley Rd.	FRI PM	16.9	С	20.0	С	18.4	С	17.1	C
		SAT PM	12.8	В	14.0	В	13.4	В	12.9	В
19	SR 94 (Campo Rd) & Maxfield Rd.	FRI PM	27.1	D	256.7	F	77.4	F	30.7	D
		SAT PM	15.7	C	52.7	F	27.9	D	16.9	С

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

ELC indicates delay exceeds Synchro's calculable limit.

Shaded boxes indicated intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

TABLE 4.9-43 HORIZON YEAR (2035) WEEKDAY PLUS PROJECT CONDITIONS ILV ANALYSIS (UPDATED OCTOBER 2012)

			HOR	IZON YEAR PLUS	HORI	ZON YEAR PLUS	HOI	RIZON YEAR PLUS
	INTERSECTION	PEAK	PRO	POSED PROJECT	AL	TERNATIVE 1	A	LTERNATIVE 2
		HOUR	ILV	CAPACITY	ILV	CAPACITY	ILV	CAPACITY
			TOTAL		TOTAL		TOTAL	
1	SR 94 (Campo Rd.) & Via Mercado	AM	2104	Above Capacity	2088	Above Capacity	2070	Above Capacity
		PM	2600	Above Capacity	2556	Above Capacity	2510	Above Capacity
2	SR 94 (Campo Rd.) & Jamacha Blvd.	AM	1061	Below Capacity	1098	Below Capacity	1023	Below Capacity
		PM	1739	Above Capacity	1752	Above Capacity	1644	Above Capacity
3	SR 94 (Campo Rd.) & Jamacha Rd.	AM	1419	Approaching Capacity	1043	Below Capacity	1381	Approaching Capacity
		PM	1951	Above Capacity	1693	Above Capacity	1837	Above Capacity
4	SR 94 (Campo Rd.) & Cougar Canyon Rd.	AM	1565	Above Capacity	1523	Above Capacity	1480	Approaching Capacity
		PM	1680	Above Capacity	1556	Above Capacity	1427	Approaching Capacity
5	SR 94 (Campo Rd.) & Steele Canyon Rd.	AM	1604	Above Capacity	1560	Above Capacity	1521	Above Capacity
		PM	1904	Above Capacity	1764	Above Capacity	1617	Above Capacity
7	SR 94 (Campo Rd.) & Jefferson Rd.	AM	2098	Above Capacity	2045	Above Capacity	1990	Above Capacity
		PM	3678	Above Capacity	3395	Above Capacity	3101	Above Capacity

Notes:

<1200 = Below Capacity, 1201 – 1500 = Approaching Capacity, >1500 = Above Capacity

Bold values indicate intersections operating above capacity

SOURCE: Kimley-Horn, 2012

TABLE 4.9-44 HORIZON YEAR (2035) FRIDAY/SATURDAY PLUS PROJECT CONDITIONS ILV ANALYSIS (UPDATED OCTOBER 2012)

		PEAK HOUR	HOR	IZON YEAR PLUS	HO	RIZON YEAR PLUS	HOR	IZON YEAR PLUS
INT	ERSECTION		PRC	POSED PROJECT	1	ALTERNATIVE 1	A	LTERNATIVE 2
			ILV	CAPACITY	ILV	CAPACITY	ILV	CAPACITY
			TOTAL		TOTAL		TOTAL	
1	SR 94 (Campo Rd.) & Via Mercado	FRIDAY PM	2540	Above Capacity	2459	Above Capacity	2385	Above Capacity
		SATURDAY PM	2030	Above Capacity	1959	Above Capacity	1885	Above Capacity
2	SR 94 (Campo Rd.) & Jamacha Blvd.	FRIDAY PM	1781	Above Capacity	1726	Above Capacity	1660	Above Capacity
		SATURDAY PM	1447	Approaching Capacity	1392	Approaching Capacity	1335	Approaching Capacity
3	SR 94 (Campo Rd.) & Jamacha Rd.	FRIDAY PM	2150	Above Capacity	1793	Above Capacity	1703	Above Capacity
		SATURDAY PM	1600	Above Capacity	1514	Above Capacity	1424	Approaching Capacity
4	SR 94 (Campo Rd.) & Cougar Canyon Rd.	FRIDAY PM	1523	Above Capacity	1373	Approaching Capacity	1217	Approaching Capacity
		SATURDAY PM	960	Below Capacity	805	Below Capacity	649	Below Capacity
5	SR 94 (Campo Rd.) & Steele Canyon Rd.	FRIDAY PM	1715	Above Capacity	1545	Above Capacity	1366	Approaching Capacity
		SATURDAY PM	1212	Approaching Capacity	1016	Below Capacity	812	Below Capacity
7	SR 94 (Campo Rd.) & Jefferson Rd.	FRIDAY PM	3025	Above Capacity	2851	Above Capacity	2672	Above Capacity
		SATURDAY PM	2204	Above Capacity	2030	Above Capacity	1851	Above Capacity

Notes:

<1200 = Below Capacity, 1201 – 1500 = Approaching Capacity, >1500 = Above Capacity Bold values indicate intersections operating above capacity

SOURCE: Kimley-Horn, 2012

TABLE 4.9-45 HORIZON YEAR (2035) PLUS PROPOSED PROJECT CONDITIONS ROADWAY SEGMENT LOS (UPDATED OCTOBER 2012)

			HORIZON YEAR NO BUILD) BUILD	HOR	ZON YEAR POSED PRO	PLUS JECT			
ROADWAY SEGMENT	ROADWAY CLASSIFICATION	LOS E CAPACITY	ADT	RATIO (a)	LOS	ADT	(a)	LOS	∆ in ADT	∆ in V/C	SIGNIFICANT?
Sweetwater Springs Blvd.											
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	26,910	0.727	С	27,000	0.73	С	90	0.003	NO
Jamacha Blvd.											
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	25,550	0.691	С	26,000	0.703	С	450	0.012	NO
Jamacha Rd. (SR 54)											
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	77,550	1.361	F	78,000	1.368	F	450	0.007	NO
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	33,190	0.582	В	34,000	0.596	В	810	0.014	NO
Steele Canyon Rd.											
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	8,370	0.517	D	9,000	0.556	D	630	0.039	NO
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	23,100	1.216	F	24,000	1.263	F	900	0.047	YES
Jamul Dr.											
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	10,730	0.662	D	11,000	0.679	Е	270	0.017	YES
Willow Glen Dr.											
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	25,370	0.686	С	26,000	0.703	С	630	0.017	NO
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	18,130	0.954	Е	18,400	0.968	Е	270	0.014	YES
Lyons Valley Rd.											
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	8,210	0.507	D	8,300	0.512	D	90	0.005	NO
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	11,370	0.702	Е	12,000	0.741	Е	630	0.039	YES
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	12,640	0.780	Е	13,000	0.802	Е	360	0.022	YES
Jefferson Rd.											
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	10,460	0.646	D	11,000	0.679	Е	540	0.033	YES
Melody Rd.											
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	3,920	0.242	В	5,000	0.309	С	1080	0.067	NO
Proctor Valley Rd.											
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	12,920	0.798	Е	14,000	0.864	Е	1080	0.066	YES
Honey Springs Rd.											
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	3,910	0.241	В	4,000	0.247	В	90	0.006	NO
Otay Lakes Rd.											
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	7,290	0.450	D	9,000	0.556	D	1710	0.106	NO

Notes:

Bold values indicate roadway segments operating at LOS E or F. Bold and shaded values indicate a project significant impact

(a) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

TABLE 4.9-46 HORIZON YEAR (2035) PLUS ALTERNATIVE 1 CONDITIONS **ROADWAY SEGMENT LOS**

(UPDATED OCTOBER 2012) 1 T Т

			HORIZON YEAR NO BUILD ALTERNATIVE 1			PLUS E 1					
		LOS E		V/C RATIO			V/C RATIO		1.		
ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY	ADT	(a)	LOS	ADT	(a)	LOS	Δ in ADT	Δ in V/C	SIGNIFICANT?
Sweetwater Springs Blvd.											
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	26,910	0.727	С	26,960	0.729	С	50	0.002	NO
Jamacha Blvd.											
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	25,550	0.691	С	25,800	0.697	С	250	0.006	NO
Jamacha Rd. (SR 54)											
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	77,550	1.361	F	77,800	1.365	F	250	0.004	NO
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	33,190	0.582	В	33,640	0.59	В	450	0.008	NO
Steele Canyon Rd.											
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	8,370	0.517	D	8,720	0.538	D	350	0.021	NO
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	23,100	1.216	F	23,600	1.242	F	500	0.026	YES
Jamul Dr.											
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	10,730	0.662	D	10,880	0.672	D	150	0.010	NO
Willow Glen Dr.											
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	25,370	0.686	С	25,720	0.695	С	350	0.009	NO
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	18,130	0.954	Е	18,280	0.962	Е	150	0.008	NO
Lyons Valley Rd.											
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	6,000	0.370	С	6,050	0.373	С	50	0.003	NO
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	11,370	0.702	Е	11,720	0.723	Е	350	0.021	YES
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	12,640	0.780	Е	12,840	0.793	Е	200	0.013	NO
Jefferson Rd.											
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	10,460	0.646	D	10,760	0.664	D	300	0.018	NO
Melody Rd.											
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	3,920	0.242	В	4,519	0.279	С	599	0.037	NO
Proctor Valley Rd.											
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	12,920	0.798	Е	13,519	0.835	Е	599	0.037	YES
Honey Springs Rd.											
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	3,910	0.241	В	3,960	0.244	В	50	0.003	NO
Otay Lakes Rd.											
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	7,290	0.450	D	8,239	0.509	D	949	0.059	NO

Notes:

Bold values indicate roadway segments operating at LOS E or F. Bold and shaded values indicate a project significant impact

(a) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

TABLE 4.9-47 HORIZON YEAR (2035) PLUS ALTERNATIVE 2 CONDITIONS ROADWAY SEGMENT LOS (UPDATED OCTOBER 2012)

						HOR	ZION YEAR	PLUS			
			HORIZ	ON YEAR NO) BUILD	A	LTERNATIVI	E 2			
		LOS E		V/C RATIO			V/C RATIO		∆in		
ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY	ADT	(a)	LOS	ADT	(a)	LOS	ADT	∆ in V/C	SIGNIFICANT?
Sweetwater Springs Blvd.											
between Jamacha Blvd. and Austin Dr.	4 Lane Major Road	37,000	26,910	0.727	С	26,922	0.728	С	12	0.001	NO
Jamacha Blvd.											
between SR 94 and Sweetwater Springs Blvd.	4 Lane Major Road	37,000	25,550	0.691	С	25,609	0.692	С	59	0.001	NO
Jamacha Rd. (SR 54)											
between SR 94 and Fury Rd.	6 Lane Prime Arterial	57,000	77,550	1.361	F	77,609	1.362	F	59	0.001	NO
between Willow Glen Dr. and Brabham St.	6 Lane Prime Arterial	57,000	33,190	0.582	В	33,297	0.584	В	107	0.002	NO
Steele Canyon Rd.											
between SR 94 and Jamul Dr.	2 Lane Light Collector	16,200	8,370	0.517	D	8,453	0.522	D	83	0.005	NO
between Jamul Dr. and Willow Glen Dr.	2 Lane Light Collector with Continuous Turn Lane	19,000	23,100	1.216	F	23,219	1.222	F	119	0.006	YES
Jamul Dr.											
between Steele Canyon Rd. and Lyons Valley Rd.	2 Lane Light Collector	16,200	10,730	0.662	D	10,766	0.665	D	36	0.003	NO
Willow Glen Dr.											
between Jamacha Rd. and Steele Canyon Rd.	4 Lane Major Road	37,000	25,370	0.686	С	25,453	0.688	С	83	0.002	NO
between Steele Canyon Rd. and Hillsdale Rd.	2 Lane Light Collector with Continuous Turn Lane	19,000	18,130	0.954	Е	18,166	0.956	Е	36	0.002	NO
Lyons Valley Rd.											
between SR 94 and Jefferson Rd.	2 Lane Light Collector	16,200	6,000	0.370	С	6,012	0.371	С	12	0.001	NO
between Jefferson Rd. and Jamul Dr.	2 Lane Light Collector	16,200	11,370	0.702	Е	11,453	0.707	Е	83	0.005	NO
between Jamul Dr. and Myrtle St.	2 Lane Light Collector	16,200	12,640	0.780	Е	12,688	0.783	Е	48	0.003	NO
Jefferson Rd.											
between SR 94 and Lyons Valley Rd.	2 Lane Light Collector	16,200	10,460	0.646	D	10,531	0.65	D	71	0.004	NO
Melody Rd.											
between SR 94 and Proctor Valley Rd.	2 Lane Light Collector	16,200	3,920	0.242	В	4,063	0.251	В	143	0.009	NO
Proctor Valley Rd.											
between Melody Rd. and Pioneer Wy.	2 Lane Light Collector	16,200	12,920	0.798	Е	13,063	0.806	Е	143	0.008	NO
Honey Springs Rd.											
between SR 94 and Mother Grundy Truck Trail	2 Lane Light Collector	16,200	3,910	0.241	В	3,922	0.242	В	12	0.001	NO
Otay Lakes Rd.											
between SR 94 and Otay Mountain Truck Trail	2 Lane Light Collector	16,200	7,290	0.450	D	7,516	0.464	D	226	0.014	NO

Notes:

Bold values indicate roadway segments operating at LOS E or F. Bold and shaded values indicate a project significant impact

(a) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

TABLE 4.9-48 HORIZON YEAR (2035) WEEKDAY PLUS PROJECT CONDITIONS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

ROADWAY SEGMENT	DIRECTION	HORIZON YEAR PLUSHORIZON YEARDIRECTIONPROPOSED PROJECTALTERNATIV				HORIZON YEAR I ALTERNATIVE		
		SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	
		· · · · · · · · · · · · · · · · · · ·	AM PEAK					
SR 94 (Campo Rd.)								
Via Marcado to Proctor Vallay Pd	EB	40.9	В	44.5	А	46.3	А	
via Mercado to Floctor valley Kd.	WB	25.9 D 27.4		27.4	С	29.0	С	
		L	PM PEAK			, i i i i i i i i i i i i i i i i i i i		
SR 94 (Campo Rd.)		-						
Via Mercado to Proctor Valley Rd.	EB	22.9	D	26.6	D	31.4	С	
	WB	22.8	D	26.0	D	28.7	С	
Notes Shaded hoves indicate intersections with a si	mificant impact from	the Jamul Indian	Village					

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village.
Bold values indicate intersections operating at LOS E or F.
(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).
(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under construction and is influenced both by the number of signals per mile and by the intersection control delay.

SOURCE: Kimley-Horn, 2012

TABLE 4.9-49 HORIZON YEAR (2035) FRIDAY/SATURDAY PLUS PROJECT CONDITIONS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

ROADWAY SEGMENT	DIRECTION	HORIZON PROPOSE	YEAR PLUS D PROJECT	HORIZON ALTER	YEAR PLUS NATIVE 1	HORIZON YEAR PLUS ALTERNATIVE 2						
		SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)					
			AM PEAK									
SR 94 (Campo Rd.)												
Via Margado to Prostor Vallay Pd	EB	26.7	D	32.2	С	39.0	В					
via Mercado to Floctor valley Ru.	WB	22.8	D	26.4	D	30.1	С					
			PM PEAK	И — — — — — — — — — — — — — — — — — — —								
SR 94 (Campo Rd.)												
	EB	40.1	В	44.6	А	46.5	А					
Via Mercado to Proctor Valley Rd.	WB	27.7	С	32.3	С	37.1	В					
Notes												

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village.

Bold values indicate intersections operating at LOS E or F.

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).

(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under construction and is influenced both by the number of signals per mile and by the intersection control delay.

SOURCE: Kimley-Horn, 2012

TABLE 4.9-50 HORIZON YEAR (2035) PLUS PROJECT TWO-WAY TWO-LANE HIGHWAY SEGMENT ANALYSIS SUMMARY

(UPDATED OCTOBER 2012)

		HORIZON	YEAR PLUS I	PROPOSED	HORIZON	N YEAR PLUS	PROJECT	HORIZON YEAR PLUS PROJECT		
			PROJECT		Α	LTERNATIVE	1	Α	LTERNATIVI	E 2
HIGHWAY SEGMENT PEAK HOUR		LOS (a)	Average Travel Speed (mph)	PTSF (b)	LOS (a)	Average Travel Speed (mph)	PTSF (b)	LOS (a)	Average Travel Speed (mph)	PTSF (b)
SR-94				1101 (0)						
	Weekday AM	Е	35.4	83.0%	Е	36.7	79.9%	Е	37.9	76.5%
Desister Willier Desider Malada Dd	Weekday PM	Е	30.7	90.1%	Е	33.2	86.7%	Е	35.5	82.8%
Proctor Valley Road to Melody Rd	Friday PM	Е	29.6	91.3%	Е	37.7	84.7%	Е	36.2	81.4%
	Saturday PM	Е	32.5	87.8%	Е	35.7	82.3%	Е	38.5	74.4%
	Weekday AM	D	40.8	77.9%	Е	39.1	81.4%	D	43.1	70.0%
Malody Rd to Project Driveway	Weekday PM	Е	38.0	84.3%	Е	39.0	81.8%	D	42.6	72.4%
Welody Ku to Hojeet Driveway	Friday PM	Е	34.8	88.7%	Е	38.9	82.6%	D	42.5	75.7%
	Saturday PM	Е	36.7	86.3%	D	41.1	76.6%	D	43.4	68.1%
	Weekday AM	Е	38.7	82.3%	Е	39.1	81.4%	Е	39.6	80.4%
Project Driveway to Otay Lakes Rd	Weekday PM	Е	38.3	83.3%	Е	39.0	81.8%	Е	39.8	80.2%
Tiojeet Driveway to Otay Lakes Ru	Friday PM	Е	36.6	86.1%	Е	37.7	84.7%	Е	38.7	83.0%
	Saturday PM	D	40.1	79.0%	D	41.1	76.6%	D	41.9	73.8%

Notes:

Bold values indicate intersections operating at LOS E or F.

(a) LOS is based on Average Travel Speed and Percent-time-spend-following per Chapter 12 of the 2000 Highway Capacity Manual.

(b) PTSF = Percent time-spent-following

Table 4.9-41 presents the peak-hour LOS analysis results for the study intersections under Horizon Year (2035) Plus Project weekday conditions, while **Table 4.9-42** displays the peak-hour LOS analysis results for the typical Friday and Saturday Horizon Year (2035) Plus Project conditions. Under Horizon Year conditions, all intersections within the study area would operate at LOS D, E or F under one or more peak hours under the Horizon Year (2035) Plus Project conditions, which are considered significant impacts. <u>The following is the summary of the results:</u>

Horizon Year (2035) *Plus Proposed Project Conditions:* The following intersections would have one or more peak-hours where the Proposed Project would cause a cumulatively considerable significant impact:

- SR-94 (Campo Road) and Via Mercado (LOS F for all the peak-hours analyzed);
- SR-94 (Campo Road) and Jamacha Boulevard (LOS F weekday and Friday p.m. peak hours, LOS D Saturday p.m. peak-hour);
- SR-94 (Campo Road) and Jamacha Road (LOS E weekday a.m. peak-hour, LOS F weekday p.m. peak-hour, LOS F Friday and Saturday p.m. peak-hours);
- SR-94 (Campo Road) and Cougar Canyon Road (LOS D weekday a.m. and p.m. peak-hours);
- SR-94 (Campo Road) and Steele Canyon Road (LOS D weekday a.m. peakhour, LOS F weekday and Friday p.m. peak-hours);
- SR-94 (Campo Road) and Lyons Valley Road (LOS F all peak-hours analyzed);
- SR-94 (Campo Road) and Jefferson Road (LOS F all peak-hours analyzed);
- SR-94 (Campo Road) and Melody Road (LOS D weekday a.m. peak-hour, LOS F weekday p.m. and Friday p.m. peak-hours, and LOS E Saturday p.m. peak-hours);
- Melody Road and Proctor Valley Road (LOS F weekday a.m. and p.m. peakhours, LOS FE Friday p.m. peak-hour, and LOS EF Saturday p.m. peak-hour);
- SR-94 (Campo Road) and Reservation Road (LOS F all peak-hours analyzed);

- SR-94 (Campo Road) and Otay Lakes Road (LOS D Friday p.m. peak-hour);
- Jamacha Boulevard and Sweetwater Springs Boulevard (LOS F all peak-hours analyzed);
- Willow Glen Drive and Jamacha Road (LOS E Friday p.m. peak-hours);
- Steele Canyon Road and Willow Glen Drive (LOS F weekday a.m. peak-hour);
- Steele Canyon Road and Jamul Drive (LOS F weekday a.m. and p.m. peakhours, LOS E Friday p.m. peak-hour);
- Lyons Valley Road and Jamul Drive (LOS F weekday and Friday p.m. peakhours);
- Jefferson Road and Lyons Valley Road (LOS F weekday a.m. and p.m. peakhours); and
- SR-94 (Campo Road) and Maxfield Road (LOS D weekday a.m. peak-hour, LOS F weekday, and Friday p.m., and, and peak-hour and LOS F Saturday p.m. peak-hours).

Appendix 10 (Appendix E) contains the intersections LOS calculation worksheets.

Intersection Analysis (ILV)

Tables 4.9-43 and **4.9-44** present the ILV analysis results for the Caltrans-owned signalized intersections under the Horizon Year (2035) Plus Project Conditions for all peak-hours analyzed. All intersections within the study area would operate at above capacity during one or more peak-hour periods, with the exception of SR 94 and Cougar Canyon Road under the Alternative 2 Conditions. This which is considered a significant impact. **Appendix 10** (Appendix F) contains the ILV worksheets.

Roadway Segment Analysis

Tables 4.9-45 through **4.9-47** presents the roadway segments analysis under the Horizon Year (2035) Plus Project Conditions for a typical weekday for the Proposed Project.

The Proposed Project would have a cumulatively considerable significant traffic related impact along the following roadway segments within the County of San Diego:

- Jamacha Road between SR 94 and Fury Lane; and

- Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS F without and with the Proposed Project);
- Jamul Drive between Steele Canyon Road and Lyons Valley Road (LOS E with the Proposed Project);
- Willow Glen Drive between Steele Canyon Road and Hillsdale Road (LOS E without and with the Proposed Project);
- Lyons Valley Road between Jefferson Road and Jamul Drive (LOS E without and with the Proposed Project);
- Lyons Valley Road between Jamul Drive and Myrtle Street (LOS E without and with the Proposed Project);
- Jefferson Road between SR 94 and Lyons Valley Road (LOS E with the Proposed Project); and
- Proctor Valley Road between Melody Road and Pioneer Way (LOS E without and with the Proposed Project).

The County of San Diego's General Plan states that due to special circumstances. The LOS F operations are acceptable on the segment of Jamacha Road between SR-94 (Campo Road) and Fury Lane. Thus, the project would not have a significant impact along this roadway.

The County of San Diego's General Plan states that due to special circumstances, the segment of Jamacha Road between SR 94 (Campo Road) and Fury Lane is accepted at LOS F operations. Therefore, the Proposed Project would not have a significant impact on Jamacha Road between SR 94 (Campo Road) and Fury Lane.

The segment of Proctor Valley Road between Melody Road and Pioneer Way is identified as one of the facilities listed for improvements under the County of San Diego's Traffic Impact Fee (TIF) program. The program includes the cost of widening Proctor Valley Road from its current rural light collector classification to a two collector classification.

HCM Peak-Hour Arterial Analysis

Tables 4.9-48 through **4.9-49** display the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor <u>Valley</u> Road under the Horizon Year (2035) Plus Project Conditions. All roadway segments within the

study area would function at LOS D, E, or F with the addition of traffic from the Proposed Project, which is considered a significant impact.

The Proposed Project would have a cumulatively considerable significant traffic related impact along the analyzed arterial during the following time periods:

- Weekday a.m. peak-hour (Westbound direction);
- Weekday p.m. peak-hour (WestboundBoth directions); and
- Friday p.m. peak-hour (Both directions).

Appendix 10 (Appendix G) contains the peak-hour arterial analysis worksheets.

HCM Peak-Hour Two-Lane Highway Analysis

Table 4.9-50 displays the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under the Horizon Year (2035) Plus Project Conditions. <u>All-This</u> two-lane facilit<u>yies analyzed</u> would operate at LOS D or E during all peak-hours analyzed and the project would be considered to have a <u>cumulatively considerable</u> significant <u>traffic related</u> impact along this roadway two-lane highway segment. **Appendix 10** (Appendix H) contains the two-way two-lane analysis worksheets.

Proposed Access Evaluation

Based on a preliminary review of the geometric features, the intersection of SR-94 (Campo Road) and Reservation Road would not provide adequate access to the site for any of the project alternatives, unless certain reconstruction, most of which is not within the Tribe's jurisdiction, were completed. This would continue to be true under the Horizon Year (2035) conditions, and would be a significant project related impact that requires mitigation.

Alternative 1

Traffic Volumes

Tables 4.9-44 through **4.9-46** illustrate the Horizon Year (2035) Plus Alternative 1 project peak-hour traffic volumes at the study intersections for a typical weekday and typical Friday/Saturday traffic, as well as the Horizon Year (2035) Plus Alternative 1 project ADT volumes along the roadway segments.

Intersection Analysis (HCM)

Tables 4.9-41 and **4.9-42** present the peak-hour LOS analysis results for the study intersections under Horizon Year (2035) Plus Project weekday conditions, and the peak-hour LOS analysis results for the typical Friday and Saturday Horizon Year (2035) Plus Project conditions. Under Horizon Year conditions, all intersections within the study area would operate at LOS D, E or F under one or more peak hours under the Horizon Year (2035) Plus project conditions, which are considered significant impacts. The following intersections would have one or more peak-hours where Alternative 1 would have a cumulatively significant impact:

- SR-94 (Campo Road) and Via Mercado (LOS F for all the peak-hours analyzed);
- SR-94 (Campo Road) and Jamacha Boulevard (LOS E weekday and Friday p.m. peak-hours);
- SR-94 (Campo Road) and Jamacha Road (LOS E weekday a.m. peak-hour, LOS F weekday and Friday p.m. peak-hours, LOS E Saturday p.m. peakhours);
- SR-94 (Campo Road) and Cougar Canyon Road (LOS D weekday a.m. peakhours);
- SR-94 (Campo Road) and Steele Canyon Road (LOS D weekday a.m. peakhour, LOS F weekday p.m. peak-hours, LOS E Friday p.m. peak-hour);
- SR-94 (Campo Road) and Lyons Valley Road (LOS F all peak-hours analyzed);
- SR-94 (Campo Road) and Jefferson Road (LOS F all peak-hours analyzed);
- SR-94 (Campo Road) and Melody Road (LOS E weekday p.m. peak-hour, LOS D Friday p.m. peak-hours);
- Melody Road and Proctor Valley Road (LOS F weekday a.m. peak-hour, LOS E weekday p.m. peak-hour, LOS F FridaySaturday p.m. peak-hour);
- SR-94 (Campo Road) and Reservation Road (LOS D weekday a.m. peak-hour, LOS F all other peak-hours analyzed);
- Jamacha BoulevadBoulevard and Sweetwater Springs Boulevard (LOS F all peak-hours analyzed);

- Willow Glen Drive and Jamacha Road (LOS E Friday p.m. peak-hours);
- Steele Canyon Road and Willow Glen Drive (LOS E weekday a.m. peak-hour);
- Steele Canyon Road and Jamul Drive (LOS F weekday a.m. and p.m. peakhours, LOS E Friday p.m. peak-hour):
- Lyons Valley Road and Jamul Drive (LOS F weekday and Friday p.m. peakhours);
- Jefferson Road and Lyons Valley Road (LOS F weekday a.m. and p.m. peakhours); and
- SR-94 (Campo Road) and Maxfield Road (LOS F weekday and Friday p.m. peak-hours, and LOS D Saturday p.m. peak-hour).

Intersection Analysis (ILV)

Tables 4.9-43 and **4.9-44** display the ILV analysis results for the Caltrans-owned signalized intersections under the Horizon Year (2035) Plus Project Conditions for all peak-hours analyzed. All intersections within the study area would operate at above capacity during one or more peak-hour periods, which is considered a significant impact.

Roadway Segment Analysis

Alternative 1 would have a cumulative<u>ly</u> traffic related impact along Proctor Valley Road between Melody Road and Pioneer Way. The segment of Proctor Valley Road between Melody Road and Pioneer Way is identified as one of the facilities listed for improvements under the County of San Diego's Traffic Impact Fee (TIF) program. The program includes the cost of widening Proctor Valley Road from its current rural light collector classification to a two collector classification. <u>considerable significant traffic</u> related impact along the following roadway segments within the County of San Diego:

- Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS F);
- Lyons Valley Road between Jefferson Road and Jamul Drive (LOS E); and
- Proctor Valley Road between Melody Road and Pioneer Way (LOS E).

HCM Peak-Hour Arterial Analysis

Tables 4.9-48 through **4.9-49** display the peak-hour arterial analysis along SR 94(Campo Road) between Via Mercado and Jefferson Road/Proctor Road under the

Horizon Year (2035) Plus Project Conditions. All roadway segments within the study area would function at LOS D, E, or F with the addition of traffic from Alternative 1, which is considered a significant impact. Alternative 1would have a cumulatively considerable significant traffic related impact along the analyzed arterial during the following time periods:

- Weekday p.m. peak-hour (both directions); and
- Friday p.m. peak-hour (Westbound direction)

HCM Peak-Hour Two-Lane Highway Analysis

Table 4.9-50 displays the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under the Horizon Year (2035) Plus Project Conditions. <u>This All</u>-two-lane facilit<u>yies analyzed</u> would operate at LOS D or E during all peak-hours analyzed, which is considered a <u>cumulatively considerable</u> significant impact.

Proposed Access Evaluation

Based on a preliminary review of the geometric features, the intersection of SR-94 (Campo Road) and Reservation Road would not provide adequate access to the site for any of the project alternatives, unless certain reconstruction, most of which is not within the Tribe's jurisdiction, were completed. This would continue to be true under the Horizon Year (2035) conditions, and would be a significant project related impact that requires mitigation.

Alternative 2

Traffic Volumes

Tables 4.9-47 through **4.9-49** illustrate the Horizon Year (2035) Plus Alternative 1 project peak-hour traffic volumes at the study intersections for a typical weekday and typical Friday/Saturday traffic, as well as the Horizon Year (2035) Plus Alternative 2 project ADT volumes along the roadway segments.

Intersection Analysis (HCM)

Tables 4.9-41 and **4.9-42** presents the peak-hour LOS analysis results for the study intersections under Horizon Year (2035) Plus Project weekday conditions, and the peak-hour LOS analysis results for the typical Friday and Saturday Horizon Year (2035) Plus Project conditions. Under Horizon Year conditions, all intersections within the study area would operate at LOS D, E or F under one or more peak-hours under the

Horizon Year (2035) Plus project conditions, which are considered a significant impact. The following intersections would have one or more peak-hours where Alternative 2 would have a cumulatively significant impact:

- SR-94 (Campo Road) and Via Mercado (LOS F for all the peak-hours analyzed);
- SR-94 (Campo Road) and Jamacha Boulevard (LOS E weekday and Friday p.m. peak-hours);
- SR-94 (Campo Road) and Jamacha Road (LOS E weekday a.m. peak-hour, LOS F weekday and Friday p.m. peak-hours, LOS E Saturday p.m. peakhours);
- SR-94 (Campo Road) and Cougar Canyon Road (LOS D weekday a.m. peakhours);
- SR-94 (Campo Road) and Steele Canyon Road (LOS D weekday a.m. peakhour, LOS E weekday p.m. peak-hours, LOS D Friday p.m. peak-hour);
- SR-94 (Campo Road) and Lyons Valley Road (LOS F weekday a.m. and p.m. peak-hours, LOS F Friday p.m. peak-hour, and LOS E Saturday p.m. peakhour);
- SR-94 (Campo Road) and Jefferson Road (LOS F all peak-hours analyzed);
- SR-94 (Campo Road) and Melody Road (LOS E weekday p.m. peak-hour, LOS D Friday p.m. peak-hours);
- Melody Road and Proctor Valley Road (LOS F a.m. peak-hour, LOS F Saturday p.m. peak-hour);
- SR-94 (Campo Road) and Reservation Road (LOS D weekday a.m. peak-hour, LOS F all other peak-hours analyzed);
- Jamacha Boulevard and Sweetwater Springs Boulevard (LOS F all peak-hours analyzed);
- Willow Glen Drive and Jamacha Road (LOS E Friday p.m. peak-hours);
- Steele Canyon Road and Willow Glen Drive (LOS E weekday a.m. peak-hour);
- Steele Canyon Road and Jamul Drive (LOS F weekday a.m. and p.m. peakhours, LOS E Friday p.m. peak-hour);

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- Lyons Valley Road and Jamul Drive (LOS F weekday and Friday p.m. peakhours);
- Jefferson Road and Lyons Valley Road (LOS F weekday a.m. and p.m. peakhours); and
- SR-94 (Campo Road) and Maxfield Road (LOS E weekday p.m. peak-hour and LOS D Friday p.m. peak-hour).

Intersection Analysis (ILV)

Tables 4.9-43 and **4.9-44** displays the ILV analysis results for the Caltrans-owned signalized intersections under the Horizon Year (2035) Plus Project Conditions for all peak-hours analyzed. All intersections within the study area would operate at above capacity during one or more peak-hour periods, with the exception of SR 94 and Cougar Canyon Road. This which is considered a significant impact

Roadway Segment Analysis

As shown in **Table 4.9-47**, Alternative 2 would not have a cumulative traffic related impact along the roadway segments within the study area. would have a cumulatively considerable significant traffic related impact along the following roadway segment within the County of San Diego:

• Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS F).

HCM Peak-Hour Arterial Analysis

Tables 4.9-48 and **4.9-49** display the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor Road under the Horizon Year (2035) Plus Project Conditions. <u>Alternative 2 would not have a cumulatively</u> considerable significant traffic related impact along the analyzed arterial. <u>All roadway</u> segments within the study area (listed below) would function at LOS D, E, or F with the addition of traffic from Alternative 2, which is considered a significant impact.

SR 94 between Via Mercado and Otay Lakes Road;

Jamacha Boulevard between SR 94 and Sweetwater Springs Boulevard;

Jamacha Road between SR 94 and Fury Lane;

Steele Canyon Road between SR 94 and Jamul Drive;

Lyons Valley Road between SR 94 and Jefferson Road;

Melody Road between SR 94 and Proctor Valley Road;

Proctor Valley Road between SR 94 and Melody Road; and

Proctor Valley Road between Melody Road and Pioneer Way.

HCM Peak-Hour Two-Lane Highway Analysis

Table 4.9-50 displays the peak-hour two-lane highway analysis along SR 94 (Campo Road) between Jefferson Road/Proctor <u>Valley</u> Road and Otay Lakes Road under the Horizon Year (2035) Plus Project Conditions. <u>This All-two-lane facilityies analyzed</u> would operate at LOS D or E during all peak-hours analyzed, which is considered a significant impact.

Proposed Access Evaluation

Based on a preliminary review of the geometric features, the intersection of SR-94 (Campo Road) and Reservation Road would not provide adequate access to the site for any of the project alternatives, unless certain reconstruction, most of which is not within the Tribe's jurisdiction, were completed. This would continue to be true under the Horizon Year (2035) conditions, and would be a significant project related impact that requires mitigation.

No Action Alternative

The No Action Alternative would not result in the addition of traffic to area roadways. No impact would result.

4.9.3 MITIGATION

Mitigation 4.9(1): Construction Traffic

Proposed Project, Alternative 1 and Alternative 2:

The following mitigation measures shall be implemented for the Proposed Project, Alternative 1 or Alternative 2 to further-reduce the short term significant construction related impact at all of the study area intersections and roadway segments. less than significant impact:

- A. The contractor shall implement a construction management plan for the project. This construction management plan shall be implemented as a project feature and shall include the following:
 - Encourage construction workers to rideshare to the site;

- Consider staggering of work hours to avoid all workers arriving at the same time;
- Consider alternative construction work times to avoid the peak hour commuter traffic along SR 94; and
- Schedule truck deliveries or equipment hauling to occur at off-peak times.
- A. To lessen the concentration of construction traffic, the contractor shall implement a Construction Management Plan (CMP) for the project. This CMP shall be implemented as a project feature and shall include the following:
 - Encourage construction workers to rideshare to the site;
 - Stagger work hours to avoid all workers arriving at the same time;
 - Structure construction work hours to avoid the peak-hour commuter traffic along <u>SR-94; and</u>
 - Schedule deliveries or equipment hauling to occur at off-peak times.

The above listed CMP strategies shall be documented in the Transportation Management Plan to be submitted to Caltrans.

- B. To reduce traffic safety impacts related to construction activities, a Traffic Management Plan (TMP) shall be developed, reviewed and approved by Caltrans prior to commencement of construction work. This TMP shall be prepared to demonstrate to Caltrans the ability of the existing SR-94 to safely handle construction traffic in conjunction with existing truck traffic along SR-94. Elements of the TMP shall include the following:
 - Speed reduction signs,
 - Temporary flashing beacons, and
 - Flagger managing the vehicular conflicts along SR-94 (Campo Road) and the construction entrance driveway. The flagger operations will force vehicles traveling along SR-94 (Campo Road) to reduce their speeds to a stop conditions to allow truck traffic to enter the SR-94 facility.
- <u>C.</u> To minimize the impact cause by the construction traffic to SR-94 (Campo Road) the construction truck traffic shall be restricted to the following times:
 - Truck traffic shall be restricted to between 9:00 AM to 2:00 PM and from 5:30 PM to 7:00 PM during a typical weekday, and

• Truck traffic shall be restricted on Fridays to between8:00 AM to 2:00 PM and 5:30 PM to 7:00 PM.

No Action Alternative

No mitigation is necessary.

Mitigation 4.9(2): Existing Plus Project Conditions

Proposed Project, Alternative 1 and Alternative 2

A. Finance and implement the intersection improvements shown in **Tables 4.9-51**, which show the summary of the improvements for the Proposed Project and Alternatives. As mentioned in the Project Description, it is conceivable that an alternative of a size different from any of the three analyzed in detail herein, but within the scope of and smaller than the Proposed Project, could be built. In addition, the Tribe could decide to build a smaller facility at the outset and to expand the facility at a later date, again fully consistent with and within the envelope analyzed in this environmental evaluation. In order to appropriately scale and implement traffic mitigation measures in such event, the project must provide all mitigation measures corresponding to the analyzed alternative that would best represent the actual project. In addition, fair share monetary contributions shall be made, on a prorata basis, according to the actual daily trips generated by the selected project for all identified mitigation measures for the project's cumulatively considerable impacts.

All project related impacts would be mitigated with the mitigation measures identified in **Table 4.9-51**. **Tables 4.9-52** and **4.9-53** show the resulting LOS with improvements.

The HCM Peak-Hour Two-Lane Highway Analysis impact will be mitigated by the installation of traffic signals at the intersection of SR-94 (Campo Road)/Lyons Valley Road and SR-94(Campo Road) and Melody Road. The installation of traffic signals at these two intersections would improve the overall operations of the SR-94 between Proctor Valley Road and Melody Road. In addition, project improvements to SR-94 along the project's frontage will further enhance the operations by providing additional travel lanes between Melody Road and the Projects entrance driveway

However, the responsibility for approval of design and implementation of the intersection improvements resides with Caltrans. The impacts would be less than significant if Caltrans approves and allows construction of the necessary improvements prior to opening of the gaming facility. The impacts would be considered significant and unavoidable if Caltrans does not approve the improvement plans and allow construction of the needed improvements prior to opening of the gaming facility.

TABLE 4.9-51 RECOMMENDED IMPROVEMENTS FOR EXISTING PLUS PROJECT CONDITIONS (UPDATED OCTOBER 2012)

		DESCRIPTION OF IMPROVEMENT								
	FACILITY	NO BUILD (1)	PROPOSED PROJECT	ALTERNATIVE 1	ALTERNATIVE 2					
2	SR 94 (Campo Rd) & Jamacha Blvd (intersection)		Restripe NB through shared left-turn lane to a NB through shared right-turn lane (Including required traffic signal modifications).	Restripe NB through shared left- turn lane to a NB through shared right-turn lane (including required traffic signal modifications).	Impact is less than significant so no mitigation measure is required					
3	SR 94 (Campo Rd) & Jamacha Rd (intersection)		Restripe NB through lane to a NB left-turn lane and northbound right-turn lane to a shared through right-turn lane (including required traffic signal modifications). Add second EB right-turn lane.	Impact is less than significant so not mitigation measure is required	Impact is less than significant so no mitigation measure is required					
5	SR 94 (Campo Rd) & Steele Canyon Rd (intersection)		Add a second EB and WB through lanes.	Add a second EB and WB through lanes.	Impact is less than significant so no mitigation measure is required					
6	SR 94 (Campo Rd) & Lyons Valley Rd (intersection)	Install Traffic Signal	Install Traffic Signal	Install Traffic Signal	Install Traffic Signal					
8	SR 94 (Campo Rd) & Melody Rd (intersection)		Install Traffic Signal. Restripe NB shared left- through-right lane to a through-right lane and add a NB left turn lane. Restripe SB shared left- through-right lane to a through-right lane and add a SB left turn lane.	Install Traffic Signal. Restripe NB shared left-through-right lane to a through-right lane and add a NB left turn lane. Restripe SB shared left-through-right lane to a through- right lane and add a SB left turn lane.	Install Traffic Signal. Restripe NB shared left- through-right lane to a through-right lane and add a NB left turn lane. Restripe SB shared left- through-right lane to a through-right lane and add a SB left turn lane.					
10	SR 94 (Campo Rd) & Reservation Rd. (intersection)		Construct a new access point for the project either at Reservation Road, the adjacent 4-acre parcel north of the Reservation or at Melody Road. ⁽¹⁾	Construct a new access point for the project either at Reservation Road, the adjacent 4-acre parcel north of the Reservation or at Melody Road. ⁽¹⁾	Construct a new access point for the project either at Reservation Road, the adjacent 4-acre parcel north of the Reservation or at Melody Road. ⁽¹⁾					
19	SR 94 (Campo Rd) & Maxfield Rd. (intersection)		Restripe northbound and southbound approaches along SR-94 to include a two- way-left-turn acceleration lane	Restripe northbound and southbound approaches along SR-94 to include a two-way- left-turn acceleration lane	Impact is less than significant so no mitigation measure is required					

Notes:

NB= Northbound; SB= Southbound; EB= Eastbound; WB= Westbound (1) See Chapter 10 for access alternative analysis.

TABLE 4.9-52
EXISTING PLUS PROJECT WEEKDAY WITH IMPROVEMENTS
PEAK-HOUR INTERSECTION LOS
(UPDATED OCTOBER 2012)

			PEAK EXISTING NO BUILD		EXISTING PLUS PROPOSED PROJECT		EXISTING PLUS ALTERNATIVE 1		EXISTING PLUS ALTERNATIVE 2	
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
1	SP 04 (Campo Pd) & Via Marcado	AM	17.8	В	20.7	С	19.1	В	17.8	В
1	SK 94 (Campo Ku) & Via Mercado	PM	17.9	В	24.0	С	21.4	С	18.3	В
2	Lawrence Divid & CD 04 (Campa Dd)	AM	15.3	В	18.6	В	18.2	В	15.3	В
2	2 Jamacha Blvd. & SR 94 (Campo Rd)		29.6	С	29.4	С	27.7	С	29.8	С
2	SP 04 (Campo Pd) & Jamacha Pd	AM	23.8	С	19.3	В	24.6	С	23.9	С
5	SR 94 (Campo Rd) & Jamacha Rd.		21.2	С	21.8	С	26.0	С	21.8	С
4	SP 94 (Campo Rd) & Cougar Canyon Rd	AM	17.9	В	19.5	В	18.5	В	17.9	В
-	4 SR 94 (Campo Rd) & Cougar Canyon Rd.		10.2	В	15.0	В	12.5	В	10.4	В
5	Steele Canyon Rd. & SR 94 (Campo Rd)	AM	28.8	С	19.0	В	18.5	В	29.1	С
	Stele Carlyon Rd. & SR 94 (Campo Rd)	PM	24.7	С	22.0	С	19.8	В	26.5	С
6	Indian Springs Dr /I yons Valley Rd & SR 94 (Campo Rd)	AM	589.6	F	12.0	В	10.7	В	9.7	А
0	indian Springs D1./Eyons vancy Ku. & SK 94 (Campo Ku)	PM	73.6	F	8.3	А	7.5	А	6.7	А
7	7 Proctor Valley Rd./Jefferson Rd. & SR 94 (Campo Rd)		10.9	В	13.3	В	11.8	В	11.1	В
,			10.1	В	13.6	В	12.3	В	10.4	В
8	SR 94 (Campo Rd) & Melody Rd./Peacefull Valley Ranch Rd.	AM	14.5	В	4.8	А	7.7	А	7.7	Α
		PM	14.4	В	6.2	А	7.5	А	7.5	А
9	Melody Rd. & Proctor Valley Rd.	AM	7.7	А	7.7	А	7.7	А	7.7	А
		PM	7.5	А	7.5	А	7.5	А	7.5	А
10	SR 94 (Campo Rd) & Reservation Rd. (c) (c)	AM	Under this s	cenario, this	4.8	А	4.1	А	13.9	В
		PM	conflicting movements.		7.0	А	6.4	А	14.6	В
		AM	12.0	B	13.1	В	12.5	В	12.0	В
11	SR 94 (Campo Rd) & Reservation Rd. (c) (c) SR 94 (Campo Rd) & Honey Springs Rd.	PM	11.0	B	12.3	B	11.6	B	11.1	 B
-		AM	11.2	B	14.5	B	13.0	B	11.5	B
12	SR 94 (Campo Rd) & Otay Lakes Rd.	PM	12.3	B	16.0	C	14.1	B	12.5	B
-		AM	24.9	C	25.2	С	25.0	С	24.9	С
13	Jamacha Blvd. & Sweetwater Springs Blvd.	PM	20.1	C	20.3	С	20.2	С	20.1	С
		AM	45.2	D	46.7	D	46.0	D	45.2	D
14	Willow Glen Dr. & Jamacha Rd.	PM	32.3	С	35.6	D	34.1	С	32.7	С
		AM	38.3	D	39.0	D	38.8	D	38.4	D
15	Steele Canyon Rd. & Willow Glen Dr.	PM	26.6	С	27.5	С	27.0	С	26.7	С
16		AM	16.7	В	16.9	В	16.8	В	16.7	В
16	Steele Canyon Rd. & Jamul Dr.	PM	15.1	В	15.7	В	15.1	В	15.1	В
		AM	12.2	В	12.6	В	12.4	В	12.2	В
17	Lyons Valley Rd. & Jamul Dr.	PM	12.3	В	12.9	В	12.6	В	12.3	В
10	Liffering D.J. & Loope Weller D.J.	AM	10.5	В	10.7	В	10.6	В	10.5	В
18	Jenerson Ka. & Lyons Valley Ka.	PM	11.0	В	11.4	В	11.2	В	11.0	В
10	SP 04 (Commo Pd) & Marfield Pd	AM	12.3	В	13.2	В	11.9	В	12.8	В
19	SK 94 (Campo Kd) & Maxneid Kd.	PM	14.8	В	20.5	С	16.1	С	15.8	С

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

(c) These results assumed that the project access would be maitained at Reservation Road. Results would be the same if access were relocated to the 4-acre site. For the Melody Road access alternative results, see Chapter 10.

		PEAK	EXISTING NO BUILD		EXISTING PLUS PROPOSED PROJECT		EXISTING PLUS ALTERNATIVE 1		EXISTIN ALTERN	NG PLUS IATIVE 2
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
1	SD 04 (Course Dd) & We Mensele	FRI PM	17.3	В	29.8	С	21.0	С	17.5	В
1	SK 94 (Campo Kd) & Via Mercado	SAT PM	11.6	В	15.3	В	13.4	В	12.0	В
	Jamaaka Divid & SD 04 (Commo Dd)		32.9	С	29.6	С	27.6	С	32.5	С
2	Jamacha Bivd. & SR 94 (Campo Rd)	SAT PM	15.8	В	21.5	С	20.0	С	15.9	В
2	SD 04 (Course Dd) & Jourselse Dd		24.5	С	26.9	С	33.2	С	25.6	С
3 SR 94 (Campo Rd) & Jamacha Rd.		SAT PM	21.0	С	22.7	С	26.0	С	21.7	С
	CD 04 (Course Dd) & Courses Courses Dd	FRI PM	10.0	В	16.3	В	12.4	В	10.3	В
4	SR 94 (Campo Rd) & Cougar Canyon Rd.		13.5	В	20.4	С	17.6	В	13.6	В
5	Stoole Convon Dd. & SD 04 (Commo Dd)	FRI PM	27.3	С	23.6	С	22.4	С	30.2	С
3	Steele Canyon Rd. & SK 94 (Campo Rd)	SAT PM	26.2	С	22.9	С	22.8	С	27.1	С
6	Indian Springs Dr. (Lyone Velley Dd. & SD 04 (Comme Dd)	FRI PM	125.3	F	10.1	В	8.1	А	7.0	А
0	Indian Springs DL/Lyons Vaney Ku. & SK 94 (Campo Ku)	SAT PM	40.7	Е	8.2	А	7.5	А	6.3	А
7	Proctor Valley Rd./Jefferson Rd. & SR 94 (Campo Rd)		15.9	В	17.2	В	17.0	В	16.8	В
/	Proctor valley Rd./Jellerson Rd. & SR 94 (Campo Rd)	SAT PM	13.8	В	21.9	С	19.4	В	14.6	В
8	SR 94 (Campo Rd) & Melody Rd./Peacefull Valley Ranch Rd.	FRI PM	16.6	С	6.8	А	7.5	А	7.5	А
		SAT PM	12.9	В	6.8	А	7.6	А	7.6	А
9	Melody Rd & Proctor Valley Rd	FRI PM	7.5	А	7.5	А	7.5	А	7.5	А
	Melody Rd. & Plotiol Valley Rd.	SAT PM	7.6	А	7.7	А	7.6	А	7.6	А
10	SR 94 (Campo Rd) & Reservation Rd. (c) (c)	FRI PM	Under this s	cenario, this	9.0	А	9.0	А	16.6	С
		CATDM	- intersection does not have		77	А	7.8	А	13.6	В
	.,	SAT PM	12.0	novements.	14.2	P	12.1	P	12.2	P
11	Aelody Rd. & Proctor Valley Rd. R 94 (Campo Rd) & Reservation Rd. (c) R 94 (Campo Rd) & Honey Springs Rd. B 04 (Campo Rd) & Oney Lekes Rd	FRIPM	10.5	В	14.2	B	11.1	B	12.2	B
-		5AI PM	12.6	D	17.7	C	14.8	D	12.0	D
12	SR 94 (Campo Rd) & Otay Lakes Rd.		10.6	D	14.2	P	14.0	D	10.0	D
-		EDIDM	21.5	B C	22.0	C	21.8	C	21.5	C
13	Jamacha Blvd. & Sweetwater Springs Blvd.	SAT DM	15.1	P	15.2	B	15.2	B	15.1	B
		FRIPM	36.3	D	40.9	D	38.8	D	36.7	D
14	Willow Glen Dr. & Jamacha Rd.	SAT PM	32.6	C C	37.5	D	36.2	D	34.6	C
		FRIPM	27.9	C	29.2	C	28.8	C	28.3	C
15	Steele Canyon Rd. & Willow Glen Dr.	SAT PM	21.6	C	22.7	C	22.0	C	21.7	C
		FRIPM	12.7	B	12.9	B	12.8	B	12.6	B
16	Steele Canyon Rd. & Jamul Dr.	SAT PM	12.9	B	13.3	B	13.1	B	13.1	B
		FRIPM	11.8	B	12.6	B	12.2	B	11.9	B
17	Lyons Valley Rd. & Jamul Dr.	SAT PM	10.3	B	10.9	B	10.6	B	10.4	B
		FRIPM	10.5	B	11.0	В	10.8	B	10.5	В
18	Jefferson Rd. & Lyons Valley Rd.	SAT PM	9.6	A	9,9	A	14.0	B	9.6	_ A
		FRIPM	14.2	R	23.0	C	17.0	- C	15.4	C
19	SR 94 (Campo Rd) & Maxfield Rd.	SAT PM	11.6	B	17.9	С	14.0	В	12.3	В

TABLE 4.9-53 EXISTING PLUS PROJECT FRIDAY/SATURDAY WITH IMPROVEMENTS PEAK-HOUR INTERSECTION LOS (UPDATED OCTOBER 2012)

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

(c) These results assumed that the project access would be maitained at Reservation Road. Results would be the same if access were relocated to the 4-acre site. For the Melody Road access alternative results, see Chapter 10.

No Action Alternative

No mitigation is necessary.

Mitigation 4.9(3): Near Term (2015) Plus Project Conditions

Proposed Project

- <u>A.</u> The Tribe shall pay to <u>Caltrans</u> its fair share of the traffic improvements shown in **Table 4.9-54**, as well as the mitigation phasing displayed under Mitigation 4.9-2. Tables 4.9-55 and 4.9-56 show intersection operations with improvements <u>of mitigation measures</u> for the Proposed Project.
- <u>B. The Tribe shall pay into the County's Transportation Impact Fee for cumulatively considerable traffic impacts on County of San Diego facilities.</u>

Implementation of each intersection improvement identified prior to operation of the gaming facility would reduce all significant impacts to a less than significant level. The HCM Peak-Hour Two-Lane Highway Analysis impact will be mitigated by the installation of traffic signals at the intersection of SR-94 (Campo Road)/Lyons Valley Road and SR-94(Campo Road) and Melody Road. The installation of traffic signals at these two intersections would improve the overall operations of the SR-94 between Proctor Valley Road and Melody Road. In addition, project improvements to SR-94 along the project's frontage will further enhance the operations by providing additional travel lanes between Melody Road and the Projects entrance driveway. with the exception of SR (Campo Road) and Jamacha _Road during the Friday afternoon peak hour period. Although the project would not fully mitigate this significant impact at this location, with the improvement identified, the intersection would operate at LOS D.

These impacts would be significant without the addition of gaming facility traffic; therefore, the addition of the Tribal project traffic would cause only a percentage of the overall traffic impact at each intersection. Therefore, the Tribe would only be responsible for paying a fair share contribution to the stated improvements. Given that the responsible agencies for overseeing and implementing improvements (Caltrans and SD County) do not have adopted plans or an established funding mechanism to pay for the improvements, and is unlikely to do so by the time the gaming facility opens, the necessary improvements may not be constructed in the foreseeable future. Without construction of these improvements, the impacts would remain significant and unavoidable, notwithstanding the Tribe's commitment to pay its fair share of their cost.

Alternative 1

The Tribe shall pay to Caltrans its fair share of the mitigation shown in **Table 4.9-54**, as well as the mitigation phasing displayed under Mitigation 4.9-2. Tables 4.9-55 and 4.9-56 show the intersection peak-hour operations with the-improvements of mitigation measures for Alternative 1. As shown in the tables, the improvements would mitigate the Alternative 1 significant impacts at all intersections. The HCM Peak-Hour Two-Lane Highway Analysis impact will be mitigated by the installation of traffic signals at the intersection of SR-94 (Campo Road)/Lyons Valley Road and SR-94(Campo Road) and Melody Road. The installation of traffic signals at these two intersections would improve the overall operations of the SR-94 between Proctor Valley Road and Melody Road. In addition, project improvements to SR-94 along the project's frontage will further enhance the operations by providing additional travel lanes between Melody Road and the Projects entrance driveway. Given that these impacts would be significant without the addition of gaming facility traffic, the addition of Alternative 1 traffic would cause only a percentage of the overall traffic impact at each intersection. Therefore, the Tribe would only be responsible for paying a fair share contribution to the stated improvements. Given that the responsible agencies for overseeing and implementing improvements (Caltrans and SD County) do not have adopted plans or an established funding mechanism to pay for the improvements, and is unlikely to do so by the time the gaming facility opens, the necessary improvements may not be constructed in the foreseeable future. Without construction of these improvements the impacts would remain significant and unavoidable, notwithstanding the Tribe's commitment to pay its fair share of their cost.

B –<u>The Tribe shall pay into the County's Transportation Impact Fee for cumulatively</u> considerable traffic impacts on County of San Diego facilities.

Alternative 2

A. The Tribe shall pay to Caltrans its fair share of the mitigation shown in **Table 4.9-54**, as well as the mitigation phasing displayed under Mitigation 4.9-2. **Tables 4.9-55** and **4.9-56** show the intersection peak-hour operations with the improvements of mitigation measures for Alternative 2. As shown in the tables, the improvements would mitigate the Alternative 2 cumulatively significant impacts at all intersections. The HCM Peak-Hour Two-Lane Highway Analysis impact will be mitigated by the installation of traffic signals at the intersection of SR-94 (Campo Road)/Lyons Valley Road and SR-94(Campo Road) and Melody Road. The installation of traffic signals at these two intersections would improve the overall operations of the SR-94 between Proctor Valley Road and Melody Road. In addition, project improvements to SR-94 along the project's frontage will further enhance the operations by providing additional travel lanes between Melody Road and the Projects

TABLE 4.9-54RECOMMENDED IMPROVEMENTS FOR NEAR TERM (2015) PLUS PROJECT/ALTERNATIVE CONDITIONS
(UPDATED OCTOBER 2012)

			DESCRIPTIO	DESCRIPTION OF IMPROVEMENT				
	FACILITY	NO BUILD ⁽¹⁾	PROPOSED PROJECT	ALTERNATIVE 1				
1	SR 94 (Campo Rd) & Via Mercado (intersection)	Add a second SB left-turn lane.	Add second SB left-turn lane.	Add second SB left-turn lane.	Ad			
2	SR 94 (Campo Rd) & Jamacha Blvd (intersection)	Restripe NB thru shared left lane to a NB thru shared right lane	Add a second NB right-turn lane.	Add a second NB right-turn lane.	Ad			
3	SR 94 (Campo Rd) & Jamacha Rd (intersection)	Restripe the NB thru lane to a NB thru shared left-turn lane.	Restripe NB through lane to a NB left-turn lane and northbound right-turn lane to a shared through right- turn lane (including required traffic signal modifications). Add second EB right-turn lane.	Restripe NB through lane to a NB left-turn lane and northbound right-turn lane to a shared through right-turn lane (including required traffic signal modifications). Add second EB right-turn lane.				
4	SR 94 (Campo Rd) & Cougar Canyon Rd (intersection)	Add a second EB and WB thru lanes.	Add a second EB through lane.	Impact is less than significant so no mitigation measure is required	Impact is			
5	SR 94 (Campo Rd) & Steele Canyon Rd (intersection)	Add a second EB and WB thru lanes.	Add a second EB and WB through lanes.	Add a second EB and WB through lanes.	Add a			
6	SR 94 (Campo Rd) & Lyons Valley Rd (intersection)	Install Traffic Signal	Install Traffic Signal	Install Traffic Signal				
7	SR 94 (Campo Rd) & Jefferson Rd (intersection)	Add NB and SB left-turn lanes.	Add a NB and SB left-turn lanes and a second EB through lane.	Add a NB left-turn lane.				
8	SR 94 (Campo Rd) & Melody Rd (intersection)	Add a NB left-turn lane and SB left-turn lane	Install Traffic Signal. Restripe NB shared left-through- right lane to a through-right lane and add a NB left turn lane. Restripe SB shared left-through-right lane to a through-right lane and add a SB left turn lane.	Install Traffic Signal. Restripe NB shared left- through-right lane to a through-right lane and add a NB left turn lane. Restripe SB shared left-through- right lane to a through-right lane and add a SB left turn lane.	Install Tr through- add a N left-thro			
10	SR 94 (Campo Rd) & Reservation Rd. (intersection)		Construct a new access point for the project either at Reservation Road, the adjacent 4-acre parcel north of the Reservation or at Melody Road. ⁽¹⁾	Construct a new access point for the project either at Reservation Road, the adjacent 4-acre parcel north of the Reservation or at Melody Road. ⁽¹⁾	Constru either a acre p			
12	SR 94 (Campo Rd) & Otay Lakes Rd. (intersection)		Add a SB exclusive right-turn lane.	Impact is less than significant so no mitigation measure is required	Impact is			
13	Jamacha Blvd. & Sweetwater Springs Blvd. (intersection)		Pay County of San Diego's TIF so County can add a second EB exclusive right-turn lane and restripe SB right-turn lane to a shared through-right lane.	Pay County of San Diego's TIF so County can add a second EB exclusive right-turn lane and restripe SB right-turn lane to a shared through-right lane.	Impact is			
19	SR 94 (Campo Rd) & Maxfield Rd. (intersection)		Restripe northbound and southbound approaches along SR-94 to include a two-way-left-turn acceleration lane	Restripe northbound and southbound approaches along SR-94 to include a two-way-left-turn acceleration lane	Impact is			

Notes:

NB= Northbound; SB= Southbound; EB= Eastbound; WB= Westbound

(1) See Chapter 10 for access alternative analysis.

(2) The project would be resposible for its fair share contribution toward the improvements listed in this table. The project would be fully responsible for the cost of the improvements listed in Table 5-12.

ALTERNATIVE 2

ld exclusive WB right-turn lane.

dd a second NB right-turn lane.

s less than significant so no mitigation measure is required

second EB and WB through lanes.

Install Traffic Signal

Add a NB left-turn lane.

raffic Signal. Restripe NB shared leftright lane to a through-right lane and NB left turn lane. Restripe SB shared ough-right lane to a through-right lane and add a SB left turn lane.

uct a new access point for the project at Reservation Road, the adjacent 4parcel north of the Reservation or at Melody Road.⁽¹⁾

s less than significant so no mitigation measure is required

s less than significant so no mitigation measure is required

s less than significant so no mitigation measure is required

TABLE 4.9-55 NEAR TERM (2015) PLUS PROJECT WEEKDAY WITH IMPROVEMENTS PEAK-HOUR INTERSECTION LOS (UPDATED OCTOBER 2012)

		DEAV	NEAR TERM NO BUILD		NEAR TERM PLUS PROPOSED PROJECT		NEAR TERM PLUS ALTERNATIVE 1		NEAR TERM PLUS ALTERNATIVE 2	
INTERSECTION		HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
		AM	37.1	D	31.2	C	33.1	С	24.6	C
I	ISR 94 (Campo Rd) & Via Mercado	PM	50.2	D	48.7	D	39.8	D	42.5	D
	Level Di 1 9 CD 04 (Course Di)	AM	17.7	В	18.3	В	17.8	В	17.4	В
2	macha Blvd. & SR 94 (Campo Rd)	PM	40.4	D	35.4	D	34.4	С	28.8	С
	SR 94 (Campo Rd) & Jamacha Rd.	AM	33.7	С	27.9	С	23.4	С	23.5	С
3		PM	68.4	Е	38.0	D	33.4	С	45.5	D
	SP 04 (Campo Pd) & Courser Convon Pd	AM	27.1	С	34.3	С	31.0	С	27.5	С
4	SK 94 (Campo Ku) & Cougar Canyon Ku.	PM	17.7	В	15.0	В	27.3	С	19.1	В
5 Steele Convon P.d. & SP	Steele Canvon Rd. & SR 94 (Campo Rd)	AM	33.9	С	20.8	С	20.2	С	19.9	В
5	Steele Canyon Kd. & SK 94 (Campo Kd)	PM	54.0	D	30.0	С	25.2	С	23.6	С
6	Indian Springs Dr /Lyons Valley Rd & SR 94 (Campo Rd)	AM	ECL	F	27.2	С	22.3	С	19.0	В
0	Indian Springs Dr./Lyons Valley Kd. & SK 94 (Campo Kd)	PM	1392.0	F	20.4	С	12.2	В	9.1	А
7	Proctor Valley Pd / Jefferson Pd & SP 94 (Campo Pd)	AM	42.1	D	34.4	С	33.7	С	31.9	С
/	ribetor valley Ku./Jenerson Ku. & SK 94 (Campo Ku)	PM	31.2	С	33.9	С	29.6	С	25.0	С
8	SR 94 (Campo Rd) & Melody Rd./Peacefull Valley Ranch Rd.	AM	18.9	С	8.9	А	9.7	А	9.7	А
	SK 94 (Campo Ku) & Welouy Ku, reaction valley Kalen Ku.	PM	22.6	С	10.6	В	8.9	А	8.8	А
9	Melody Rd. & Proctor Valley Rd	AM	9.7	А	9.8	А	9.7	А	9.7	А
		PM	8.8	А	8.9	А	8.9	А	8.8	А
10	SR 94 (Campo Rd) & Reservation Rd. (c) (c)	AM	Under this sco intersection do	enario, this es not have	4.8	А	4.0	А	11.6	В
		PM	conflicting m	ovements.	7.1	А	6.5	А	11.9	В
11	SP 04 (Commo Dd) & Honoy Springs Dd	AM	14.8	В	16.8	С	15.8	С	14.9	В
11	4 (Campo Rd) & Honey Springs Rd.	PM	14.3	В	17.2	С	15.8	С	14.5	В
12	SP 94 (Campo Pd) & Otav Lakas Pd	AM	13.1	В	18.1	С	16.5	С	13.6	В
12	SK 94 (Campo Ku) & Olay Lakes Ku.	PM	15.2	С	20.9	С	18.8	С	15.6	С
13	Jamacha Blyd & Sweetwater Springs Blyd	AM	43.0	D	26.7	С	34.5	С	43.1	D
15	Janacha Bivu. & Sweetwater Springs Bivu.	PM	76.4	Е	24.0	С	23.9	С	76.8	Ε
14	Willow Glen Dr. & Jamacha Rd	AM	34.2	С	36.6	D	35.5	D	34.3	С
		PM	36.5	D	41.1	D	39.0	D	36.8	D
15	Steele Canvon Rd & Willow Glen Dr	AM	44.7	D	48.1	D	46.6	D	45.0	D
		PM	25.1	С	26.9	С	26.1	С	25.2	С
16	Steele Canvon Rd & Jamul Dr	AM	26.6	С	26.8	C	26.8	С	26.6	С
		PM	25.5	С	25.3	С	25.3	С	25.5	С
17	Lvons Valley Rd. & Jamul Dr.	AM	16.4	С	17.3	С	16.8	С	16.4	С
- /		PM	38.5	Е	49.2	E	43.9	E	39.2	Е
18	Jefferson Rd. & Lvons Vallev Rd.	AM	33.7	D	42.0	E	37.8	Е	34.2	D
		PM	21.7	С	25.1	D	23.5	С	21.9	С
19	SR 94 (Campo Rd) & Maxfield Rd.	AM	15.0	С	15.7	С	13.2	В	12.0	В
19		PM	21.2	С	23.1	С	20.2	С	15.7	С

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

(c) These results assumed that the project access would be maitained at Reservation Road. Results would be the same if access were relocated to the 4-acre site. For the Melody Road access alternative results, see Chapter 10.

			NEAR TERM	1 NO BUILD	NEAR TERM PLUS PROPOSED PROJECT		NEAR TERM PLUS ALTERNATIVE 1		NEAR TE ALTERN	RM PLUS ATIVE 2
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
	SD 04 (Commo Dd) & Via Manada	FRI PM	39.7	D	39.5	D	33.2	С	30.5	С
1	SK 94 (Campo Ku) & Via Mercado	SAT PM	18.5	В	20.4	С	17.1	В	16.3	В
2	Jamanha Blud, & SB 04 (Campa Bd)	FRI PM	37.8	D	30.6	С	28.6	С	26.7	С
2	2 Jamacha Blvd. & SR 94 (Campo Rd)	SAT PM	19.5	В	20.5	С	19.5	В	18.6	В
3	SP 04 (Commo Dd) & Jamasha Dd	FRI PM	42.9	D	41.1	D	32.1	С	29.3	С
	SR 94 (Campo Ru) & Jamacha Ru.	SAT PM	29.4	С	31.2	С	24.2	С	22.3	С
4	SP 04 (Compo Pd) & Courser Convon Pd	FRI PM	10.4	В	19.9	В	14.2	В	10.8	В
5	SK 94 (Campo Ku) & Cougar Canyon Ku.	SAT PM	6.7	А	7.7	А	8.9	А	7.0	А
5 6 7	Steele Cenven Pd & SP 04 (Cempo Pd)	FRI PM	33.1	С	25.8	С	24.3	С	21.9	С
	Steele Canyon Ku. & SK 94 (Campo Ku)	SAT PM	17.3	В	17.0	В	15.8	В	14.9	В
1 SR 9 2 Jama 3 SR 9 4 SR 9 5 Steel 6 India 7 Proce 8 SR 9 9 Melo 10 SR 9 11 SR 9 12 SR 9 13 Jama 14 15 16 Steel 17 Lyor 18 Jeffer 19 SR 9	Indian Springs Dr /I yons Valley Pd & SP 94 (Campo Pd)	FRI PM	185.2	F	11.5	В	9.0	Α	7.5	А
	indian Springs Dr./Eyons vancy Ku. & SK 94 (Campo Ku)	SAT PM	45.5	Е	8.8	А	7.6	А	6.5	А
7	Proctor Valley Pd /Jafferson Pd & SP 94 (Campo Pd)	FRI PM	21.5	С	16.5	В	18.0	В	14.4	В
	ribetor valley Rassenerson Ra. et SR 94 (Campo Ra)	SAT PM	14.0	В	15.7	В	14.6	В	11.0	В
8	SP 94 (Campo Rd) & Malody Rd /Peacafull Vallay Panch Rd	FRI PM	17.2	С	8.6	Α	8.8	Α	8.7	А
0	SK 94 (Campo Ku) & Welouy Ku 7 caceful valicy Kalen Ku.	SAT PM	12.8	В	8.3	А	9.6	А	9.5	А
0	Melody Rd & Proctor Valley Rd	FRI PM	8.7	А	8.8	А	8.8	А	8.7	А
,	welouy ku. & Flociol Valley ku.	SAT PM	9.4	А	9.6	Α	9.6	А	9.5	А
	SR 94 (Campo Rd) & Reservation Rd. (c) (c)	FRI PM	Under this se	cenario, this	9.4	А	9.5	А	12.9	В
10			intersection d	loes not have	7.8	Δ	7.9	Δ	11.3	в
		SAT PM	conflicting i	novements.	7.0	A	7.5	A	11.5	D C
8 9 10 11 12 13	SR 94 (Campo Rd) & Honey Springs Rd.	FRIPM	16.7	C	22.8	C	19.7	C	17.1	<u> </u>
		SATPM	12.8	В	16.4	C	14.6	В	13.0	В
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	SR 94 (Campo Rd) & Otay Lakes Rd.	FRIPM	16.6	C	23.6	C	21.4	C D	17.1	C
		SATPM	12.0	В	16.0	C	14.8	В	8.7 A 9.5 A 8.7 A 9.5 A 12.9 B 11.3 B 17.1 C 13.0 B 17.1 C 12.4 B 113.6 F 24.0 C 36.1 D	Б
2 1 3 2 4 2 5 2 6 1 7 1 8 2 9 1 10 2 11 2 12 2 13 1 14 1 16 2 17 1 18 1 19 2	Jamacha Blvd. & Sweetwater Springs Blvd.	FRIPM	22.0	F	27.5	D D	27.4	D D	24.0	r C
		SAT PM	25.9	C D	10.5	D	27.0	B	24.0	
14		FRIPM	33.8	D	39.9	D	37.9	D	30.1	D
		SAI PM	47.3	D	30.3	D C	49.0	D C	47.4	D C
15	Steele Canyon Rd. & Willow Glen Dr.	FRIPM	18.0	C D	18.2	D D	24.4	D D	23.0	р
		SATPM	18.0	D	10.2	D D	17.5	d a	18.5	D
16	Steele Canyon Rd. & Jamul Dr.	FRIPM	16.7	D	19.5	D	19.0	D	15.0	D
		SAI PM	14.0	B	15.1	D C	14.9	D	13.0	D
17	Lyons Valley Rd. & Jamul Dr.	FKIPM	14.0	D	13.5	L B	14.0	D P	14.1	B
		SAT PM	11.2	D	12.0	D D	11.0	D D	11.5	D
18	Jefferson Rd. & Lyons Valley Rd.	CAT DM	10.2	D D	10.6	B	10.4	B	10.2	B
		SAT PM	16.2	Б	23.4	с С	10.4	с С	14.2	B
19	SR 94 (Campo Rd) & Maxfield Rd.	SAT DM	12.4	B	19.0	C	14.9	B	11.7	B
		JALL IN	14.7	D D	17.0		17./		11./	B B A C A B A B A B A A B B B B B B B B B B B B B B B B B B B B B B

TABLE 4.9-56 NEAR TERM (2015) PLUS PROJECT FRIDAY/SATURDAY WITH IMPROVEMENTS PEAK-HOUR INTERSECTION LOS (IPDATED OCTOBER 2012)

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

(c) These results assumed that the project access would be maitained at Reservation Road. Results would be the same if access were relocated to the 4-acre site. For the Melody Road access alternative results, see Chapter 10.
<u>entrance driveway.</u> Given that these impacts would be significant without the addition of gaming facility traffic, the addition of Alternative 2 traffic would cause only a percentage of the overall traffic impact at each intersection. Therefore, the Tribe would only be responsible for paying a fair share contribution to the stated improvements. Given that the responsible agencies for overseeing and implementing improvements (Caltrans and SD County) do not have adopted plans or an established funding mechanism to pay for the improvements, and is unlikely to do so by the time the gaming facility opens, the necessary improvements may not be constructed in the foreseeable future. Without construction of these improvements the impacts would remain significant and unavoidable, notwithstanding the Tribe's commitment to pay its fair share of their cost.

<u>B. The Tribe shall pay into the County's Transportation Impact Fee for cumulatively considerable traffic impacts on County of San Diego facilities.</u>

No Action Alternative

No mitigation is necessary.

Mitigation 4.9(4): Horizon Year (2035) Plus Project Conditions

Proposed Project, Alternative 1 and Alternative 2:

A. To mitigate cumulatively considerable significant traffic related impacts at intersections and roadway segments within the Caltrans jurisdiction, pay Caltrans a fair-share contribution toward the construction of the improvements identified The Tribe shall pay its fair share of the mitigation measures shown in Table 4.9-57, as well as the mitigation phasing displayed under Mitigation 4.9-2. Tables 4.9-58 and 4.9-59 show intersection peak-hour operations with the improvements of mitigation measures for the Proposed Project and Alternatives 1 and 2. To mitigate cumulatively considerable significant traffic related impacts at the intersections and roadway segments within the County of San Diego, pay toward the County's Transportation Impact Fee. The TIF program was designed to ensure that adequate transportation facilities are available to meet the projected future access and circulation needs of the unincorporated areas of the County of San Diego. This program was developed to provide a mechanism for future development within the unincorporated areas of the County to mitigate their cumulative impacts on the local, regional and state roadway networks. The improvements shown are consistent with the County of San Diego's Mobility Element approved in 2011.

Implementation of each intersection improvement identified prior to operation of the gaming facility would reduce all Horizon Year (2035) Plus Project/Alternatives 1 and 2 significant impacts to a less than significant. Given that these impacts would be significant

without the addition of gaming facility traffic, the addition of the Tribal project traffic would cause only a percentage of the overall traffic impact at each intersection. Therefore, the Tribe would only be responsible for paying a fair share contribution to the stated improvements. Given that the responsible agency for overseeing and implementing improvements (Caltrans) does not have adopted plans or an established funding mechanism to pay for the improvements, and is unlikely to do so by the time the gaming facility opens the necessary improvements may not be constructed in the foreseeable future. Without construction of these improvements the impacts would remain significant and unavoidable, notwithstanding the Tribe's commitment to pay its fair share of their cost.

Table 4.9-60 and 4.9-61 shows the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Otay Lakes Road with the improvements under all project alternatives. As shown in the tables, all cumulatively considerable impacts would be mitigated with the improvements prior to operation of the gaming facility. However, as stated above, these segment impacts would remain significant due to uncertainty surrounding mitigation implementation and timing.

In order to mitigate its cumulatively considerable impact to Proctor Valley Road within the County of San Diego, a contribution equal to the project's proportional share of traffic impacts should be paid toward the County of San Diego Traffic Impact Fee program.

No Action Alternative

No mitigation is necessary.

TABLE 4.9-57 RECOMMENDED IMPROVEMENTS FOR HORIZON YEAR (2035) PLUS PROJECT/ALTERNATIVE CONDITIONS (UPDATED OCTOBER 2012)

	EACHITY	DESCRIPTION OF IMPROVEMENT						
	FACILITY	NO BUILD ⁽¹⁾	PROPOSED PROJECT	ALTERNATIVE 1	ALTERNATIVE 2			
1	SR 94 (Campo Rd) & Via Mercado (intersection)	Add a second SB left-turn lane.	Add second SB left-turn lane and an exclusive WB right-turn lane.	Add second SB left-turn lane and an exclusive WB right-turn lane.	Add second SB left-turn lane and an exclusive WB right-turn lane.			
2	SR 94 (Campo Rd) & Jamacha Blvd (intersection)	Restripe NB thru shared left lane to a NB thru shared right lane	Add a second NB right-turn lane.	Add a second NB right-turn lane.	Add a second NB right-turn lane.			
3	SR 94 (Campo Rd) & Jamacha Rd (intersection)	Restripe the NB thru lane to a NB thru shared left-turn lane.	Restripe NB through lane to a NB left-turn lane and northbound right- turn lane to a shared through right-turn lane (including required traffic signal modifications). Add second EB right-turn lane. Add a second NB right-turn lane.	Restripe NB through lane to a NB left-turn lane and northbound right-turn lane to a shared through right-turn lane (including required traffic signal modifications). Add second EB right-turn lane. Add a second NB right- turn lane.	Restripe the NB through lane to a NB left-turn lane, the northbound right- turn lane to a shared through right-turn lane (including required traffic signal modifications). Add a second NB right-turn lane.			
4	SR 94 (Campo Rd) & Cougar Canyon Rd (intersection)	Add a second EB and WB thru lanes.	Add a second EB and WB through lanes.	Add a second EB and WB through lanes.	Impact is less than significant so no mitigation measure is required			
5	SR 94 (Campo Rd) & Steele Canyon Rd (intersection)	Add a second EB and WB thru lanes.	Add a second EB and WB through lanes.	Add a second EB and WB through lanes.	Add a second EB and WB through lanes.			
6	SR 94 (Campo Rd) & Lyons Valley Rd (intersection)	Install Traffic Signal	Install Traffic Signal	Install Traffic Signal	Install Traffic Signal			
7	SR 94 (Campo Rd) & Jefferson Rd (intersection)	Add NB and SB left-turn lanes.	Add a NB and SB left-turn lanes and a second EB through lane.	Add a NB left-turn lane.	Add a NB left-turn lane.			
8	SR 94 (Campo Rd) & Melody Rd (intersection)	Add a NB left-turn lane and SB left-turn lane	Install Traffic Signal. Restripe NB shared left-through-right lane to a through-right lane and add a NB left turn lane. Restripe SB shared left-through-right lane to a through-right lane and add a SB left turn lane.	Install Traffic Signal. Restripe NB shared left-through-right lane to a through-right lane and add a NB left turn lane. Restripe SB shared left-through-right lane to a through-right lane and add a SB left turn lane.	Install Traffic Signal. Restripe NB shared left-through-right lane to a through-right lane and add a NB left turn lane. Restripe SB shared left-through-right lane to a through-right lane and add a SB left turn lane.			
9	Proctor Valley Rd and Melody Rd	Add a NB left-turn lane and SB left-turn lane	Pay County of San Diego's TIF to install a traffic signal	Pay County of San Diego's TIF to install a traffic signal	Pay County of San Diego's TIF to install a traffic signal			
10	SR 94 (Campo Rd) & Reservation Rd. (intersection)		Construct a new access point for the project either at Reservation Road, the adjacent 4-acre parcel north of the Reservation or at Melody Road.	Construct a new access point for the project either at Reservation Road, the adjacent 4-acre parcel north of the Reservation or at Melody Road. ⁽¹⁾	Construct a new access point for the project either at Reservation Road, the adjacent 4-acre parcel north of the Reservation or at Melody Road. ⁽¹⁾			
12	SR 94 (Campo Rd) & Otay Lakes Rd. (intersection)		Add a second EB exclusive left-turn lane.	Impact is less than significant so no mitigation measure is required	Impact is less than significant so no mitigation measure is required			
13	Jamacha Blvd. & Sweetwater Springs Blvd. (intersection)		Pay County of San Diego's TIF so County can add a second EB exclusive right-turn lane and restripe SB right-turn lane to a shared through-right lane.	Pay County of San Diego's TIF so County can add a second EB exclusive right-turn lane and restripe SB right-turn lane to a shared through-right lane.	Pay County of San Diego's TIF so County can add a second EB exclusive right-turn lane and restripe SB right-turn lane to a shared through-right lane.			
14	Jamacha Rd. & Willow Glen Dr. (intersection)		Pay County of San Diego's TIF so County can add a second exclusive EB right-turn lane	Pay County of San Diego's TIF so County can add a second exclusive EB right-turn lane	Impact is less than significant so no mitigation measure is required			
15	Steele Canyon Rd. & Willow Glen Dr. (intersection)		Pay County of San Diego's TIF so County can restripe NB through-right lane to a NB through-left lane, add an exclusive NB right-turn lane with overlap (including required traffic signal modifications).	Impact is less than significant so no mitigation measure is required	Impact is less than significant so no mitigation measure is required			
16	Steele Canyon Rd. & Jamul Dr. (intersection)		Pay County of San Diego's TIF so County can add a second SB exclusive left-turn and NB exclusive right-turn lane. Add overlap to WB right-turn (including required traffic signal modifications).	Pay County of San Diego's TIF so County can add a second SB exclusive left-turn and NB exclusive right-turn lane. Add overlap to WB right-turn (including required traffic signal modifications).	Impact is less than significant so no mitigation measure is required			
17	Lyons Valley Rd. & Jamul Dr. (intersection)		Pay County of San Diego's TIF so County can install Traffic Signal	Pay County of San Diego's TIF so County can install Traffic Signal	Pay County of San Diego's TIF so County can install Traffic Signal			
18	Jefferson Rd. & Lyons Valley Rd. (intersection)		Pay County of San Diego's TIF so County can install Traffic Signal	Pay County of San Diego's TIF so County can install Traffic Signal	Impact is less than significant so no mitigation measure is required			
19	SR 94 (Campo Rd) & Maxfield Rd. (intersection)		Restripe northbound and southbound approaches along SR-94 to include a two-way-left-turn acceleration lane. Add an exclusive EB right-turn lane and update striping so that there is an exclusive EB left-turn lane.	Restripe northbound and southbound approaches along SR-94 to include a two-way-left-turn acceleration lane	Restripe northbound and southbound approaches along SR-94 to include a two-way-left-turn acceleration lane			
Notes:								

NB= Northbound; SB= Southbound; EB= Eastbound; WB= Westbound

(1) See Chapter 10 for access alternative analysis.

(2) The project would be responsible for its fair share contribution toward the improvements listed in this table. The project would be fully responsible for the cost of the improvements listed in Table 5-12.

TABLE 4.9-58 HORIZON YEAR (2035) PLUS PROJECT WEEKDAY WITH IMPROVEMENTS PEAK-HOUR INTERSECTION LOS

(UPDATED OCTOBER 2012)

		DEAV	HORIZO	N YEAR	HORIZON Y	EAR PLUS	HORIZON YEAR PLUS		HORIZON YEAR PLUS	
		PEAK	NO BUILD		PROPOSED PROJECT		ALTERNATIVE 1		ALTERNATIVE 2	
	INTERSECTION	носк	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)
1	SR 94 (Campo Rd) & Via Mercado	AM	171.1	F	55.0	E	52.7	D	50.2	D
	ok y (campo ka) a via mercado	PM	268.6	F	108.0	F	103.6	F	91.8	F
2	Jamacha Blyd & SR 94 (Campo Rd)	AM	28.0	С	28.9	С	28.3	С	27.6	С
	sanacha Biva. ee BR 94 (Campo Rd)	PM	67.0	Е	53.4	D	48.2	D	44.3	D
3	SR 94 (Campo Rd) & Jamacha Rd	AM	56.6	Е	38.4	D	37.2	D	36.9	D
	ok 94 (campo ka) & sanacha ka.	PM	147.3	F	120.7	F	113.6	F	124.7	F
4	SR 94 (Campo Rd) & Cougar Canyon Rd	AM	33.8	С	17.2	В	14.3	В	34.3	С
+	SK 94 (Campo Ku) & Cougai Canyon Ku.	PM	20.2	С	10.2	В	9.6	А	21.3	С
5	Steele Canvon Rd & SR 94 (Campo Rd)	AM	41.3	D	22.4	С	20.8	С	21.6	С
	Steele Carlyon Rd. & SR 94 (Carlips Rd)	PM	68.1	Е	29.8	С	26.6	С	26.3	С
6	Indian Springs Dr /Lyons Valley Pd & SP 94 (Campo Pd)	AM	ECL	F	37.2	D	31.7	С	26.8	С
0	indian Springs Dr./Eyons vancy Ku. & SK 94 (Campo Ku)	PM	ECL	F	22.3	С	13.5	В	10.2	В
7	Prostor Valley Dd /Jofferson Dd & SD 04 (Commo Dd)	AM	372.1	F	207.2	F	202.0	F	191.0	F
/	riotor valley Ku./Jenerson Ku. & SK 94 (Campo Ku)	PM	269.0	F	236.3	F	186.6	F	137.0	F
•	8 SR 94 (Campo Rd) & Melody Rd /Peacefull Valley Ranch Rd	AM	19.3	В	12.8	В	9.6	А	16.3	С
0	8 SK 94 (Campo Ku) & Melody Ku/Peacefull Valley Kalch Ku.		24.5	С	16.0	В	11.5	В	18.3	С
0	9 Melody Rd. & Proctor Valley Rd.	AM	195.7	F	30.1	С	27.9	С	26.0	С
9		PM	51.1	F	14.1	В	13.2	В	12.6	В
	SR 94 (Campo Rd) & Reservation Rd. (c)	ΔM	Under this so	enario, this	4.8	А	4.0	А	16.3	С
10		AM	intersection d	oes not have	7.0		6.0		10.2	6
		PM	conflicting r	novements.	7.8	А	A 0.9 A			Ľ
11	SR 94 (Campo Rd) & Honey Springs Rd.	AM	As part of the	County of San	Diego's Genera	l Plan, the inte	rsection of Hon	ey Springs Ro	ad will be realig	ned to form a
		PM		iour-wa	ay intersection	intersection with Otay Lakes Road and the intersection of SR-94				
12	SR 94 (Campo Rd) & Otay Lakes Rd.	AM	17.7	В	18.4	В	18.5	В	17.7	В
		PM	24.2	C	24.0	С	26.8	С	24.4	C
13	Jamacha Blvd. & Sweetwater Springs Blvd.	AM	547.6	F	280.5	F	280.3	F	279.0	F
		PM	641.4	F	290.6	F	285.0	F	284.3	F
14	Willow Glen Dr. & Jamacha Rd.	AM	43.4	D	45.0	D	42.5	D	43.5	D
		PM	49.5	D	48.8	D	42.3	D	49.8	D
15	Steele Canyon Rd. & Willow Glen Dr.	AM	77.6	E	45.6	D	79.4	E	77.8	E
		PM	32.1	С	29.0	С	34.0	С	32.3	С
16	Steele Canyon Rd. & Jamul Dr.	AM	292.2	F	69.5	Е	68.2	Е	292.6	F
		PM	130.9	F	32.0	C	31.7	С	131.2	F
17	Lyons Valley Rd. & Jamul Dr.	AM	28.7	D	7.4	А	7.3	А	7.1	A
		PM	285.2	F	14.0	В	13.6	В	13.1	В
18	Jefferson Rd. & Lyons Valley Rd.	AM	ECL	F	69.1	Е	63.1	Е	ECL	F
		PM	53.8	F	8.9	А	8.6	А	55.3	F
19	SR 94 (Campo Rd) & Maxfield Rd.	AM	16.8	С	16.5	С	13.7	В	12.6	В
17		PM	31.6	D	25.5	D	24.0	С	18.6	С

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

ELC indicates delay exceeds Synchro's calculable limit.

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

(c) These results assumed that the project access would be maitained at Reservation Road. Results would be the same if access were relocated to the 4-acre site. For the Melody Road access alternative results, see Chapter 10.

TABLE 4.9-59 HORIZON YEAR (2035) PLUS PROJECT FRIDAY/SATURDAY WITH IMPROVEMENTS PEAK-HOUR INTERSECTION LOS (UPDATED OCTOBER 2012)

		PEAK	HORIZON YEAR NO BUILD		HORIZON YEAR PLUS PROPOSED PROJECT		HORIZON YEAR PLUS ALTERNATIVE 1		HORIZON YEAR PLUS ALTERNATIVE 2		
	INTERSECTION	HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	
1	SP 94 (Campo Pd) & Via Marcado	FRI PM	217.5	F	73.0	Е	61.5	Е	52.4	D	
1	SK 94 (Campo Ku) & Via Mcreado	SAT PM	108.1	F	28.7	С	24.0	С	21.5	С	
2	2 Jamacha Blvd. & SR 94 (Campo Rd)		67.7	Е	50.3	D	45.1	D	40.8	D	
2	Sanacha Biva. et Bre 94 (Campo Re)	SAT PM	31.9	С	31.2	С	27.3	С	28.5	С	
3	SR 94 (Campo Rd) & Jamacha Rd	FRI PM	108.9	F	108.5	F	98.8	F	90.0	F	
5	ok)+ (Campo ku) & sanacha ku.	SAT PM	59.4	Е	57.9	Е	55.4	Е	49.1	D	
4	SP 94 (Campo Pd) & Cougar Canyon Pd	FRI PM	13.1	В	8.7	Α	8.0	А	13.6	В	
-	ok y (Campo ku) te cougar camyon ku.	SAT PM	7.4	А	6.0	А	6.0	А	7.6	А	
5	Steele Canvon Rd & SR 94 (Campo Rd)	FRI PM	43.7	D	29.8	С	25.2	С	26.0	С	
5	bleete earlyon Rd. et bre 94 (earlipo Rd)	SAT PM	19.7	В	18.5	В	17.9	В	16.2	В	
6	Indian Springs Dr /I yons Valley Rd & SR 94 (Campo Rd)	FRI PM	1035.9	F	18.3	В	12.5	В	9.5	А	
0	indian springs Dr./Lyons vancy Ku. & SK 94 (Campo Ku)	SAT PM	62.8	Е	8.7	А	7.9	А	7.3	А	
7	Proctor Valley Rd / Jefferson Rd & SR 94 (Campo Rd)	FRI PM	277.2	F	216.3	F	171.9	F	139.5	F	
,		SAT PM	109.0	F	50.3	D	38.5	D	29.0	С	
8	8 SR 94 (Campo Rd) & Melody Rd./Peacefull Valley Ranch Rd.	FRI PM	20.1	С	18.2	В	12.5	В	21.5	С	
0	SK 94 (Campo Ru) & Welouy Ru./reacturi vancy Raich Ru.	SAT PM	13.5	В	12.1	В	9.6	А	16.0	С	
0	9 Melody Rd. & Proctor Valley Rd.	FRI PM	28.0	С	13.1	В	12.2	В	11.4	В	
,		SAT PM	122.5	F	21.3	С	30.3	С	16.8	В	
10	SP 94 (Campo Pd) & Paceryation Pd (c)	FRI PM	Under this so	enario, this	11.2	В	11.2	В	21.5	С	
10	(C)	SAT PM	conflicting movements. 8.3 A 8.2 A 16.0 C							С	
11	SP 04 (Campo Pd) & Honey Springs Pd	FRI PM	As part of the O	County of San	Diego's Genera	l Plan, the inte	rsection of Hone	ey Springs Roa	ad will be realig	ned to form a	
11	SK 94 (Campo Ku) & Honey Springs Ku.	SAT PM	four-way intersection with Otay Lakes Road and the intersection of SR-94								
12	SR 94 (Campo Rd) & Otay Lakes Rd	FRI PM	28.3	С	28.6	С	32.0	С	28.5	С	
	on y (campo ne) e ony Lates ne.	SAT PM	15.3	В	14.9	В	16.8	В	15.5	В	
13	Jamacha Blyd, & Sweetwater Springs Blyd.	FRI PM	670.1	F	294.1	F	292.4	F	291.0	F	
		SAT PM	341.9	F	91.6	F	90.7	F	89.8	F	
14	Willow Glen Dr. & Jamacha Rd	FRI PM	53.5	D	46.6	D	45.4	D	53.9	D	
••		SAT PM	38.6	D	39.9	D	40.8	D	38.7	D	
15	Steele Canvon Rd & Willow Glen Dr	FRI PM	39.5	D	33.8	С	41.7	D	39.8	D	
10		SAT PM	22.0	С	19.6	В	22.8	С	22.1	С	
16	Steele Canvon Rd. & Jamul Dr.	FRI PM	68.8	Е	26.1	С	25.7	С	69.4	Е	
		SAT PM	30.5	С	16.5	В	16.4	В	30.5	С	
17	Lyons Valley Rd. & Jamul Dr.	FRI PM	72.1	F	9.8	А	9.5	А	9.3	А	
	· · · · · · · · · · · · · · · · · · ·	SAT PM	17.4	С	8.0	А	7.9	А	7.7	А	
18	Jefferson Rd. & Lvons Vallev Rd	FRI PM	16.9	С	7.0	А	8.2	А	17.1	С	
	······································	SAT PM	12.8	В	7.9	А	7.6	А	12.9	В	
19	SR 94 (Campo Rd) & Maxfield Rd.	FRI PM	27.1	D	27.7	D	24.6	С	18.2	С	
		SAT PM	15.7	С	19.8	С	16.5	С	13.3	В	

Notes:

Bold values indicate Caltrans intersections operating at LOS D, E or F and San Diego County intersections operating at LOS E or F.

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village project.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8.0

(c) These results assumed that the project access would be maitained at Reservation Road. Results would be the same if access were relocated to the 4-acre site. For the Melody Road access alternative results, see Chapter 10.

TABLE 4.9-60 HORIZON YEAR (2035) WEEKDAY PLUS PROJECT CONDITIONS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

		HORIZON	N YEAR	HORIZON	YEAR PLUS	HORIZON	YEAR PLUS	HORIZON YEAR PLUS		
ROADWAY SEGMENT	DIRECTION	BASELINE		PROPOSE	PROPOSED PROJECT		ALTERNATIVE 1		ALTERNATIVE 2	
		SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	
WEEKDAY AM PEAK										
SR 94 (Campo Road)										
	EB	46.5	А	44.9	А	44.0	А	45.6	А	
Via Mercado to Proctor Valley Rd.	WD	20.2	C	22.2	C	22.0	С	22.6	C	
	WD	29.3	C	32.3	C	52.9	C	55.0	C	
			WEE	KDAY PM PE	AK					
SR 94 (Campo Road)										
	ED	22.4	G	22.0		25.2	5	265		
	EB	32.4	C	32.8	С	35.2	В	36.7	В	
Via Mercado to Proctor Valley Rd.	WD	20.1	C	22.7	C	24.0	D	27.0	D	
	WD	29.1	C	32.7	C	54.0	D	57.9	D	
Notes		•								

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village.

Bold values indicate intersections operating at LOS E or F.

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).

(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under construction and is influenced both by the number

of signals per mile and by the intersection control delay.

SOURCE: Kimley-Horn, 2012

TABLE 4.9-61 HORIZON YEAR (2035) FRIDAY-SATURDAY PLUS PROJECT CONDITIONS WITH IMPROVEMENTS PEAK-HOUR ARTERIAL SEGMENT ANALYSIS (UPDATED OCTOBER 2012)

ROADWAY SEGMENT	DIRECTION	HORIZON YEAR CTION BASELINE		HORIZON YEAR PLUS PROPOSED PROJECT		HORIZON YEAR PLUS ALTERNATIVE 1		HORIZON YEAR PLUS ALTERNATIVE 2	
		SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)	SPEED (a)	LOS (b)
AM PEAK									
SR 94 (Campo Road)									
	EB	39.8	В	33.2	С	38.3	В	42.2	А
V1a Mercado to Proctor Valley Rd.	WB	30.8	С	34.2	В	37.6	В	39.1	В
	1		1	PM PEAK]		1	
SR 94 (Campo Road)									
Via Marcado to Proctor Vallay Pd	EB	46.6	Α	44.2	А	44.6	А	46.7	А
via mercado to i locior vaney Ku.	WB	37.9	В	40.8	В	40.7	В	42.3	А
Notes	1	1	1	1. I.		1 1		4	

Shaded boxes indicate intersections with a significant impact from the Jamul Indian Village.

Bold values indicate intersections operating at LOS E or F.

(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).

(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under construction and is influenced both by the number

of signals per mile and by the intersection control delay.

SOURCE: Kimley-Horn, 2012

SECTION 4.10

Noise

4.10 NOISE

4.10.1 ENVIRONMENTAL SETTING

Definition of Terms

Noise is generally defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in the extreme, hearing impairment. The unit of measurement used to describe a noise level is the decibel (dB). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3 dB decrease. The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called "A-weighting" is used to filter noise frequencies that are not audible to the human ear. The A-scale approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Therefore, the "A-weighted" noise scale is used for measurements and standards involving the human perception of noise. In this report, all noise levels are A-weighted and "dBA" is understood to identify the A-weighted decibel.

Average noise levels over a period of minutes or hours are usually expressed as dBA Leq, or the equivalent noise level for that period. The period of time average may be specified; Leq(8) would be a 8-hour average; when no period is specified, a 1-hour average is assumed.

The Community Noise Equivalent Level (CNEL) is the 24 hour A-weighted average for sound, with corrections for evening and nighttime hours. The corrections require an addition of 5 decibels to sound levels in the evening hours between 7 p.m. and 10 p.m. and an addition of 10 decibels to sound levels at nighttime hours between 10 p.m. and 7 a.m. These additions are made to account for the increased sensitivity during the evening and nighttime hours when sound appears louder.

Human perception of noise has no simple correlation with acoustical energy. The perception of noise is not linear in terms of dBA or in terms of acoustical energy. Two noise sources do not sound twice as loud as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease; that a change of 5 dBA is readily perceptible; and that an increase (decrease) of 10 dBA sounds twice (half) as loud (Caltrans 2009). **Table 4.10-1** provides examples of common activities and the sound levels associated with those activities.

From the source to the receiver, noise changes both in level and frequency spectrum. The most obvious change is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on the following important factors: ground absorption,

atmospheric effects and refraction, shielding by natural and man-made features, noise barriers, diffraction and reflection. For a point noise source, such as construction equipment, the attenuation or drop-off in noise level would be 6 to 7.5 dBA for each doubling of unobstructed distance between the source and the receiver. For a line noise source, such as vehicles traveling on a roadway, the attenuation or drop-off in noise level would be approximately 3 to 4.5 dBA for each doubling of unobstructed distance between source and the receiver.

	ICAL NOISE L	
COMMON OUTSOOR ACTIVITIES	NOISE LEVEL (dBA)	COMMON INDOOR ACIVITIES
	110	Rock Band
Jet Fly-over at 300 m (1,000 ft)	100	
Gas Lawn Mower at 1 m (3 ft)	90	
Diesel Truck at 15 m (50 ft),	80	Food Blender at 1 m (3 ft)
at 80 km/hr (50 mph)		Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime	70	Vacuum Cleaner at 3 m (10 ft)
Gas Lawn Mower, 30 m (100 ft)		
Commercial Area	60	Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)		
Quiet Urban Daytime	50	Large Business Office
		Dishwasher in Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room
		(Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall
		(Background)
	10	Broadcast/Recording Studio
Lowest Threshold of Human	0	Lowest Threshold of Human
Hearing		Hearing
SOURCE: Caltrans, 2009	1	-

TABLE 4.10-1 TVPICAL NOISE LEVELS

A large object in the path between a noise source and a receiver can significantly attenuate noise levels at that receiver. The amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense vegetation, as well as man-made features, such as buildings and walls, can significantly alter noise levels. Walls or berms are often specifically used to reduce, or attenuate, noise.

Project Area

The project site is currently undeveloped. A portion of the property west of the project site is occupied by a church and cemetery. The project area is developed mostly with residential, agricultural, and open space land uses. The project site is bordered on the south and west by undeveloped land and on the east by SR 94. North of the project site is partially developed and the remainder of the area is undeveloped.

Land surrounding the project site is zoned A72 (Agriculture) and S88 (Specific Plan), which both allow for residential uses. The corresponding exterior noise level limits specified by the noise ordinance in **Table 4.10-2** are 50 dBA Leq from 7 a.m. to 10 p.m., and 45 dBA Leq from 10 p.m. to 7 a.m.

Sensitive Noise Receptors

Noise sensitive receptors are generally considered humans engaged in activities, or utilizing land uses, that may be subject to the stress of significant interference from noise. Activities usually associated with sensitive receptors include, but are not limited to, talking, reading, and sleeping. Land uses often associated with sensitive receptors include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, education facilities, and libraries.

Existing noise sensitive human receptors in the project vicinity would include the existing fire station and the residential land uses located to the north and east of the project site. The fire station is included as it is used similarly to a residence with sleeping and outdoor recreation activities. The nearest potential noise sensitive receptor is the fire station located east of SR 94 approximately 440 feet north of the Proposed Project. The nearest existing residential land uses are located north and east of the project site approximately 1,400 feet.

Existing Noise Levels

Existing noise level measurements were conducted between the hours of 3:15 p.m. and 4:30 p.m. on September 29, 2010. Noise measurements were taken with a Larson Davis Model 820, Type 1 sound level meter set on "slow" response and "A-weighting." The meter was positioned 5 feet above the existing ground elevation at all measurement locations. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

Noise locations are shown on **Figure 4.10-1**. Locations 2, 3, 4, and 5 are located in close proximity to the nearest noise sensitive receptors to the project site. Location 1 is located at a similar location as the nearest point of the Proposed Project to SR-94 and is representative of the existing on-site noise conditions. The background noise level ranges are based on L90 measurements for each location. L90 measurements represent the noise level value that is exceeded at least 90 percent of the time during the



SOURCE: Digital Globe, 2012, Ldn Consulting, 2012; EDS, 2012

- Jamul Indian Village Draft Final Tribal EE 🗖

Figure 4.10-1 Noise Measurement Locations

COUNTY ZONE	APPLICABLE HOURS	SOUND LEVEL LIMIT Db (1HR)
R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-90, S-92, and R-V	7 a.m. to 10 p.m.	50
and R-U with a density of less than 11 dwelling units per acre.	10 p.m. to 7 a.m.	45
R-RO, R-C, R-M, S-86, V5, and R-V and R-U with a density of 11 or more	7 a.m. to 10 p.m.	55
dwelling units per acre.	10 p.m. to 7 a.m.	50
S-94, V4 and all other commercial zones.	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
V1, V2	7 a.m. to 10 p.m.	60
V1, V2	7 p.m. to 10 p.m.	55
V1	10 p.m. to 7 a.m.	55
V2	10 p.m. to 7 a.m.	50
V3	7 a.m. to 10 p.m.	70
	10 p.m. to 7 a.m.	65
M-50, M-52, and M-54	Anytime	70
S-82, M-56 and M-58	Anytime	75
S-88 (see subsection (c) below)		

TABLE 4.10-2SOUND LEVEL LIMITS

(a) If the measured ambient level exceeds the applicable limit noted above, the allowable 1-hour average sound level shall be the ambient noise level, plus 3 decibels. The ambient noise level shall be measured when the alleged noise violation source is not operating.

(b) The sound level limit at a location on a boundary between two (2) zoning districts is the arithmetic mean of the respective limits for the two zones; provided, however, that the 1-hour average sound level limit applicable to extractive industries, including but not limited to borrow pits and mines, shall be 75 decibels at the property line regardless of the zone where the extractive industry is actually located.

(c) S88 zones are Specific Planning Areas which allow for different uses. The sound level limits in Table 36.404 above that apply in an S88 zone depend on the use being made of the property. The limits in Table 36.404, subsection (1) apply to property with a residential, agricultural or civic use. The limits in subsection (3) apply to property with a commercial use. The limits in subsection (5) apply to property with an industrial use that would

only be allowed in an M50, $\overline{M52}$ or M54 zone. The limits in subsection (6) apply to all property with an extractive use or a use that would only be allowed in an M56 or M58 zone.

(d) A fixed-location public utility distribution or transmission facility located on or adjacent to a property line shall be subject to the sound level limits of this section, measured at or beyond 6 feet from the boundary of the easement upon which the facility is located.

SOURCE: County of San Diego Noise Ordinance, Section 36.404 (County of San Diego 2009); Ldn 2011

course of measurement. A summary of the noise measurements taken at the seven locations is provided in **Table 4.10-3**.

As the table shows, the primary existing noise source near the project site is vehicular traffic on SR-94. Thus, the highest noise levels occur in close proximity to SR 94. Additional existing background noise is associated with traffic on local roads and aircraft flying over the project area. Based on the measurements

SITE ID ₁	LOCATION	DATE TIME	L _{eq} (dB A)	L _{max} (dB A)	L _{min} (dB A)	L ₉₀ (dB A)	NOISE SOURCES
1	North of project site, 50 feet west of SR 94	3:19 PM	66.2	83.4	39.6	52.1	Traffic on SR 94, activity at fire station, aircraft
2	East of project site, 75 feet from edge of SR-94	4:23 PM	62.4	75.6	40.7	47	Traffic on SR-94, aircraft
3	North of Melody Rd., 110 feet east of SR-94	3:30 PM	61.7	70.3	37.7	51	Traffic on SR-94, aircraft
4	50 feet North of Melody Rd., west of SR-94	3:05 PM	56.6	71	37.3	45.2	Traffic on SR-94 and Melody Rd., aircraft
5	North of Las Palmas Rd., 220 feet east of SR-94	4:00 PM	59.8	73.2	41.8	48	Traffic on SR-94, aircraft

TABLE 4.10-3 NOISE MEASUREMENTS

1/ The Site ID corresponds to locations shown in Figure 4.10-1

SOURCE: Ldn Consulting, 2011

at location 1 and 2, on-site background noise levels are estimated to range from 47 to 52 dBA L90. Off-site background noise levels in the Project vicinity were measured between 45 dBA L90 and 51 dBA L90.

4.10.2 ENVIRONMENTAL CONSEQUENCES

Standard of Significance

While the Proposed Project is not subject to the policies and regulations of the County, for purposes of this analysis, the County General Plan noise standards will be considered in determining impacts. Based on the County General Plan, exterior noise and land uses-compatibility levels are established at 60 dBA CNEL for single family, 65 dBA CNEL for multifamily and an interior noise level of 45 dBA CNEL for all residential, with exceptions as identified in the County General Plan Noise Element (County 2011). Noise sensitive land uses include, but are not limited to, residences, schools, hospitals, and libraries. Additionally, a 10 dBA CNEL increase is considered a substantial increase over existing conditions (County 2011).

While the Proposed Project is not subject to the policies and regulations of the County, for purposes of this analysis, the County noise ordinance will be considered in determining impacts. Section 36.404 of the San Diego County Code, indicates a significant impact would result if the project causes noise on the Reservation to exceed the 1-hour average sound level at any point beyond the boundaries of the Reservation, as shown in **Table 4.10-2**, except for emergency work. A significant impact will result if any person operates construction equipment or causes the construction equipment to be operated, exceeding an average sound level of 75 dBA for an 8-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.

Except for emergency work or work on a public road project, a significant impact results if a person produces or causes to be produced an impulsive noise that exceeds the maximum sound level shown in **Table 4.10-4**, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25 percent of the minutes in the measurement period. The maximum sound level depends on the use being made of the occupied property.

TABLE 4.10-4 MAXIMUM SOUND LEVEL (IMPULSIVE) MEASURED AT OCCUPIED PROPERTY IN DECIBLES (dBA)

OCCUPIED PROPERTY USE	DECIBELS (dBA)					
Residential, Village Zoning, or Civic Use	82					
Agriculture, Commercial, or Industrial Use	85					
SOURCE: San Diego County, 2009, Ldn Consulting, 2011						

Vibration

A project that exposes uses listed in **Table 4.10-5** to ground borne vibration and noise levels equal to or in excess of the levels shown, would result in a significant impact.

Impact 4.10(1): Construction Noise

Proposed Project

Noise impacts from construction are a function of the noise generated by the construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Noise levels within and adjacent to the specific construction sites would increase during the construction period. Construction would not cause long-term

impacts since it would be temporary and daily construction activities would be limited to daytime hours which are less noise sensitive. Explosives blasting would be used for construction of the proposed facilities and, thus, potentially significant vibrations or groundborne noise could be associated with construction of the Proposed Project.

In general, construction activities are carried out in phases and each phase has its own noise characteristics based on the mix of construction equipment in use. Typical construction projects, with equipment moving from one point to another, work breaks, and idle time, have long-term noise averages that are lower than loud short-term noise events. For purposes of analysis of this project, a maximum one-hour average noise level of 84 dBA at a distance of 50 feet from the center construction area is assumed to occur for all activities except blasting. Noise levels of some activities, such as framing or paving, are generally lower than site preparation work. Peak noise events may occur during trenching and excavation, when there may be a combination of noise from a several pieces of equipment in close proximity, including the noise of backup alarms.

Blasting involves several different operations, however, due to safety requirements, these activities do not typically overlap with other construction activities. According to the FTA blasting generates noise levels on the order of 74 dBA Leq at 50 feet. Thus, noise from blasting is not anticipated to exceed the significance criteria, however, vibrations and impulsive noise associated with blasting may exceed thresholds and is discussed in greater detail in the impulsive noise and vibration analyses.

Noise levels from construction activities are typically considered as point sources and would drop off at a rate of 6 dB per doubling of distance over hard sites, such as streets and parking lots; the drop-off rate would increase slightly over soft sites, such as grass fields and open terrain with vegetation (FTA 2006). To present a conservative assessment of construction noise, all intervening surfaces between construction and local sensitive receptors was assumed to be acoustically hard, which represents a worst case scenario.

At 440 feet, the occupied property to the Reservation would be the fire station east of SR 94. The fire station would be considered noise sensitive as fire fighters sleep at the station and use a small patio area for outdoor recreation; however, as the fire fighters do not reside at the station only the station and the identified exterior use areas are considered noise sensitive as opposed to the entire property in the case of residential uses. The fire station patio is located approximately 570 feet from the nearest point of proposed construction activity. The nearest residential receptors to the project site are the residences north of project site across Melody Road, east of Calle Mesquite, the nearest property line is approximately 1,400 feet north and east of the nearest potential construction area. These receptors currently have a direct line of sight to the project site and future construction activities.

TABLE 4.10-5 GUIDELINES FOR DETERMINING THE SIGNIFICANCE OF GROUNDBORNE VIBRATION AND NOISE IMPACTS

	Groundborn Impact Levels rms	e Vibration s (inches/sec s)	Groundborne Levels (dB 1 Pasc	Noise Impact ce 20 micro als)	
LAND USE CATEGORY	Frequent Events ₁	Occasional or Infrequent Events 2	Frequent Events ₁	Occasional or Infrequent Events ₂	
Category 1: Buildings where low ambient vibration is essential for interior operations (research & manufacturing facilities with special vibration constraints)	0.0018 ³	0.0018 ³	Not Applicable ⁴	Not Applicable ⁴	
Category 2: Residences and buildings where people normally sleep (hotels, hospitals, residences, & other sleeping facilities) ^{5,6}	0.0040	0.010	35dBA	43dBA	
Category 3: Institutional land uses with primarily daytime use (schools, churches, libraries, other institutions, & quiet offices) ^{5,6}	0.0056	0.014	40dBA	48dBA	

1/ "Frequent Events" is defined as more than 70 vibration events per day.

2/ "Infrequent Events" is defined as fewer than 70 vibration events per day.

3/ This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibrationsensitive manufacturing or research will require detailed evaluation to define acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

4/ Vibration-sensitive equipment is not sensitive to groundborne noise.

5/ There are some buildings, such as concert halls, TV and recording studios, and theaters that can be very sensitive to vibration and noise but do not fit into any of the three categories. Table 9 gives criteria for acceptable levels of groundborne vibration and noise for these various types of special uses.

6⁶ For Categories 2 and 3 with occupied facilities, isolated events such as blasting are significant when the peak particle velocity (PPV) exceeds 1 inch per second. Nontransportation vibration sources such as impact pile drivers or hydraulic breakers are significant when their PPV exceeds 0.1 inch per second. More specific criteria for structures and potential annoyance were developed by Caltrans (2004) and will be used to evaluate these continuous or transient sources in San Diego County. rms = root mean squared

SOURCE: COUNTY OF SAN DIEGO, 2009; Ldn Consulting, 2011

At a distance of 440 feet, maximum, or peak, unshielded noise levels could reach as high as 69 dBA Lmax during peak construction activity. Peak noise construction levels at the nearby residences may be heard above the existing traffic noise levels and could create temporary annoyance, however, it should be noted that peak noise levels would occur only sporadically since not all equipment would be operating at all times. The hourly average noise level at the nearest residential property line, 1,400 feet, would be 55 dBA L_{eq} , or less. The average hourly noise levels at the nearest occupied property line, i.e., the fire station located approximately 440 feet from the site, would be approximately 65 dBA Leq(8), which is below 75 dBA Leq(8) threshold.

Construction traffic noise would increase temporarily during excavation for the gaming facility and parking garage. It is estimated hauling would require an average of 120 truck trips per day during the excavation phase to export all excavated soil. The increase in truck traffic is estimated to result in an approximate 1 dBA increase along SR-94.

Therefore, it may be concluded that construction activities would not cause significant noise impacts at nearby noise sensitive receptors. No construction has been proposed for this project outside the allowed hours. Due to the potential for high short-term and instantaneous noise levels during peak construction activity at nearby residential properties, noise abatement measures have been recommended in Section 4.3, that would reduce annoyance associated with construction noise.

The majority of equipment used in construction does not produce significant impulsive noise events, nor do the events last for substantial periods of time. Exceptions to this are typically from pile drivers, rock breaking, and blasting. No pile driving is anticipated with the Proposed Project, thus the primary impulsive noise sources associated with construction activities generated by project implementation would be rock drilling and blasting to break up bedrock close to the surface on the project site. While blasting would likely produce the most significant maximum noise event, blasting is generally limited to a single blast in an hour and given the distance to the nearest receptor would not exceed the maximum noise level or the number of events in a given hour as specified in the significance criteria.

Rock drilling would generate more events, however, rock drilling would attenuate to less than 69 dBA L_{max} at the nearest receptor, which would not exceed the maximum noise level limit. Thus, the proposed project would not exceed the significance criteria at any local receptor.

Alternative 1

Noise and vibration impacts from construction of Alternative 1 would be the same as under the Proposed Project and all noise abatement measures recommended for construction of the Proposed Project would be required for Alternative 1.

Alternative 2

While likely shorter in duration than the Proposed Project or Alternative 1, noise and vibration impacts from construction of Alternative 2 would be the same as under the Proposed Project and all noise abatement measures recommended for construction of the Proposed Project would be recommended for Alternative 2.

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No Action Alternative

The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.

Impact 4.10(2): Construction Vibration Proposed Project

The most substantial vibration sources associated with the Proposed Project would be the construction equipment used during grading and preparation of the project site and blasting. The effect of construction vibration would depend upon the vibration level, the distance between construction activities and the nearest vibration-sensitive receptor. **Table 4.10-6** shows the results of vibration measurements conducted by Wilson Ihrigg Associates from typical construction equipment. Blasting is not included due to the dynamic nature of vibrations associated with blasting.

TABLE 4.10-6 SUMMARY OF VIBRATION LEVELS MEASURED DURING CONSTRUCTION ACTIVITIES

ACTIVITY	MEASURED PEAK VIBRATION LEVELS (in/sec PPV)				
Moving CAT (Vibrator)	0.059 @ 42 ft.				
Moving CAT (Backhoe)	0.043 @ 40 ft.				
Earth Excavation	0.056 @ 42 ft.				
SOURCE: Weekly Progress Report for Vibration for Richmond Transport, Wilson Ibrigg & Associates 1994 6: Ldn Consulting 2011					

The vibration data provided in **Table 4.10-6** indicates that construction equipment vibration levels are well below the 0.1 in./sec. threshold of annoyance at distances ranging between 30 and 40 feet. The nearest off-Reservation receptors are approximately 570 feet north of the project site. Therefore, the vibration levels from construction equipment would likely not be noticeable even during peak periods. Due to the geologic character of the project site, explosive blasting and/or onsite rock breaking is anticipated during site preparation activities for the Proposed Project. Thus, significant vibrations or groundborne noise impacts may be associated with construction of the proposed project. At the current stage of the project design, a blasting study has not been completed and no specific blasting timelines, blast numbers, or locations are proposed or available.

When explosive charges detonate in rock, almost all of the available energy from the explosion is used in breaking and displacing the rock mass. However, a small portion of the energy is released in the form of vibration waves that radiate away from the charge location. The strength, or 'amplitude', of the waves reduces as the distance from the charge increases. The rate of amplitude decay depends on local geological conditions but can be estimated with a reasonable degree of consistency, which allows regulatory agencies to control blasting operations by means of relationships between distance and explosive quantity. Additionally, while explosives generate low frequency sound waves that can damage buildings, techniques have been developed that allow blasting to be conducted in relative proximity to buildings without causing damage.

The nearest receptor would be the fire station, which is approximately 570 feet from the nearest point of potential blasting. The nearest residential receptor to the blasting activities, a single-family residence northwest of the project site, is approximately 1,400 feet from the nearest potential blasting site. At these distances, it is unlikely that blasting would generate substantial groundborne vibration or noise impacts. However, as no detailed blasting plans have been prepared yet, a significant vibratory impact may occur and a mitigation measure requiring a blasting plan has been included in section 4.10.3.

Alternative 1

Noise and vibration impacts from construction of Alternative 1 would be the same as under the Proposed Project and all mitigation required for construction of the Proposed Project would be required for Alternative 1.

Alternative 2

While likely shorter in duration than the Proposed Project or Alternative 1, noise and vibration impacts from construction of Alternative 2 would be the same as under the Proposed Project and all mitigation required for construction of the Proposed Project would be required for Alternative 2.

No Action Alternative

The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.

Impact 4.10(3): Traffic Noise

Proposed Project

The dominant noise generated by the operation of the Proposed Project would be from traffic; the Proposed Project would contribute to an increase in local traffic volumes, resulting in higher noise levels along local roadways. Traffic noise levels were analyzed along several roadway segments that would be affected by project-generated vehicle trips, as identified in **Table 4.10-7**. The average daily traffic (ADT) was provided by the traffic study in **Appendix 10**.

As shown in **Table 4.10-7**, with the exception of noise levels along Melody Road and Otay Lakes Road, direct traffic noise level increases due to the Proposed Project are estimated to be no greater than 1.29 dBA CNEL, which would not be perceivable. Increases along Melody Road and Otay Lakes Road would be 4.5 and 3 dBA CNEL, respectively. These increases would be considered barely noticeable, and thus would not be considered a significant increase in noise levels. Additionally, under the near-term cumulative traffic conditions, with the exception of Melody Road, traffic noise levels increases would be at, or less than, 7<u>4</u> dBA CNEL. Thus, future increases in noise levels would be considered as a doubling of noise levels. Additionally, this increase would be below the 10 dBA threshold for a substantial increase over existing conditions. Thus, these increases in the cumulative noise environment would not be considered significant.

The cumulative noise level increase along Melody Road is greater than 10 dBA CNEL and is considered significant. However, the project's contribution of 0.5 dBA is not considered cumulatively considerable contribution to the increase. Additionally, based on a conservative traffic noise modeling assumptions⁴, existing traffic noise levels at 100 feet from the center line of Melody Road would be approximately 58 dBA CNEL. As the future noise levels would be compatible with the existing land uses and , the noise levels increases along Melody Road future traffic noise levels affected roadways would not be substantial, direct and cumulative traffic noise level increases associated with the Proposed Project would be considered less-than significant.

Alternative 1

As with the Proposed Project, the dominant noise generated by the operation of Alternative 1 would be from traffic; Alternative 1 would contribute to an increase in local traffic volumes, resulting in higher noise levels along local roadways. Traffic noise levels were analyzed along

⁺ Assumptions: traffic mix of 95 percent automobiles, 3 percent medium trucks and 2 percent heavy trucks, and traffic is traveling at the posted speed limit

several roadway segments that would be affected by project-generated motor vehicle trips, as identified in **Table 4.10-8**.

As shown in **Table 4.10-8**, direct traffic noise level increases due to Alternative 1 are estimated to be no greater than 2.8–1.1_dBA CNEL over the existing condition, which would not be perceivable. Under the near-term cumulative traffic conditions, at the worst-case roadway segment-(Melody Road SR 94 to Proctor Valley Road), traffic noise levels with the project would increase by approximately 13–3.9 dBA CNEL over the existing condition. This is a cumulative noise impact, however, the Proposed Project's contribution to the cumulative increase is 0.2 dBA, which is not cumulatively considerable. An increase of this level would be perceivable; however, Alternative 1 would only contribute 0.6 dBA to the cumulative noise level. Therefore, Alternative 1 would not make a cumulatively considerable contribution to a significant noise impact. No significant cumulative traffic noise impact would occur on any other roadway segment. Additionally, as the total future traffic volumes on Melody Road under Alternative 1 would be lower than the Proposed Project, which would result in lower noise levels, the future noise levels along Melody Road would be compatible with existing uses under Alternative 1. Therefore, direct and cumulative traffic noise level increases due to Alternative 1 would be less-than significant.

Alternative 2

As with the Proposed Project, the dominant noise generated by the operation of Alternative 2 would be from traffic; Alternative 2 would contribute to an increase in local traffic volumes, resulting in higher noise levels along local roadways. Traffic noise levels were analyzed along several roadway segments that would be affected by project-generated motor vehicle trips, as identified in **Table 4.10-9**.

As shown in **Table 4.10-9**, direct traffic noise level increases due to Alternative 2 are estimated to be no greater than 0.8 dBA CNEL over the existing condition, which would not be perceivable. Under the near-term cumulative traffic conditions, at the worst-case roadway segment (Melody Road SR-94 to Proctor Valley Road), traffic noise levels with Alternative 2 would increase by approximately 12 dBA CNEL over the existing condition. This is a significant cumulative noise impact; however, the Proposed Project's contribution to the cumulative increase is 0.1 dBA, which is not cumulatively considerable. No significant cumulative traffic noise impact would occur on any other roadway segment. Additionally, as the total future traffic volumes on Melody Road Under Alternative 2 would be lower than the Proposed Project, which would result in lower noise levels, the future noise levels along Melody Road would be compatible with existing uses under Alternative 2. Therefore, direct and cumulative traffic noise level increases due to Alternative 2 would be less-than significant.

I	Roadway/Segment	Existing (ADT)	Existing + Project (ADT)	Noise Level Increase (dBA CNEL)	Near Term No Project (ADT)	Near Term + Project (ADT)	Total Near Term Increase vs. Existing (dBA CNEL)	Project Contribution to Cumulative (dBA CNEL)
Sweetwater Springs	Jamacha Blvd. to Austin Dr.	15,483	15,573	0.0	17,849	17,939	0.6	0.0
Jamacha Blvd.	SR-94 to Sweetwater Spring Blvd.	16,683	17,133	0.1	18,897	19,347	0.6	0.1
Jamacha Rd. (SR-54)	SR-94 to Fury Rd.	41,605	42,055	0.0	49,234	49,684	0.8	0.0
	Willow Glen Dr. to Barbham St.	23,521	24,331	0.1	25,911	26,721	0.6	0.1
Steele Canyon Rd.	SR-94 to Fury Rd.	6,379	7,009	0.4	7,114	7,744	0.8	0.4
	Jamual Dr. to Willow Glen Dr.	14,028	14,928	0.3	16,499	17,399	0.9	0.2
Jamul Dr.	Steele Canyon Dr. to Lyons Valley Rd.	2,433	2,703	0.5	4,413	4,683	2.8	0.3
Willow Glen Dr.	Jamacha Blvd. to Steele Canyon Rd.	19,986	20,616	0.1	21,399	22,029	0.4	0.1
	Steele Canyon Dr. to Hillsdale Rd.	12,237	12,507	0.1	13,736	14,006	0.6	0.1
Lyons Valley Rd.	SR-94 to Jefferson Rd.	5,522	5,612	0.1	5,938	6,028	0.4	0.1
	Jefferson Rd. to Jamul Dr.	7,008	7,638	0.4	7,126	7,756	0.4	0.4
	Jamul Dr. to Myrtle St.	8,493	8,853	0.2	9,643	10,003	0.7	0.2
Jefferson Rd.	SR-94 to Lyons Valley Rd.	2,685	3,225	0.8	4,560	5,100	2.8	0.5
Melody Rd.	SR-94 to Proctor Valley Rd.	1,374	1,554	0.5	1,884	2,064	1.8	0.4
Proctor Valley Rd.	Melody Rd. to Pioneer Wy.	1,630	1,810	0.5	3,888	4,068	4.0	0.2
Honey Springs Rd.	SR-94 to Mother Grundy Truck Trail	1,579	1,669	0.2	2,126	2,216	1.5	0.2
Otay Lakes Rd.	R-94 to Otay Mountain Truck Trail	2,582	4,022	1.9	4,938	6,378	3.9	1.1
SOURCE: Ldn Consulting	g, 2012	•	•	•	-	•	•	-

TABLE 4.10-7PROPOSED PROJECT – EXISTING MODELED NOISE LEVELS

TABLE 4.10-8 ALTERNATIVE 1 –MODELED NOISE LEVELS

Roadway/Segment		Existing (ADT)	Existing + Project (ADT)	Noise Level Increase (dBA CNEL)	Near Term No Project (ADT)	Near Term + Project (ADT)	Total Near Term Increase vs. Existing (dBA CNEL)	Project Contribution to Cumulative (dBA CNEL)
Sweetwater Springs	Jamacha Blvd. to Austin Dr.	15,483	15,530	0.0	17,849	17,896	0.6	0.0
Jamacha Blvd.	SR-94 to Sweetwater Spring Blvd.	16,683	16,918	0.1	18,897	19,132	0.6	0.1
Jamacha Rd. (SR-54)	SR-94 to Fury Rd.	41,605	41,840	0.0	49,234	49,469	0.8	0.0
	Willow Glen Dr. to Barbham St.	23,521	23,945	0.1	25,911	26,335	0.5	0.1
Steele Canyon Rd.	SR-94 to Fury Rd.	6,379	6,708	0.2	7,114	7,443	0.7	0.2
	Jamual Dr. to Willow Glen Dr.	14,028	14,499	0.1	16,499	16,970	0.8	0.1
Jamul Dr.	Steele Canyon Dr. to Lyons Valley Rd.	2,433	2,574	0.2	4,413	4,554	2.7	0.1
Willow Glen Dr.	Jamacha Blvd. to Steele Canyon Rd.	19,986	20,315	0.1	21,399	21,728	0.4	0.1
	Steele Canyon Dr. to Hillsdale Rd.	12,237	12,378	0.0	13,736	13,877	0.5	0.0
Lyons Valley Rd.	SR-94 to Jefferson Rd.	5,522	5,569	0.0	5,938	5,985	0.3	0.0
	Jefferson Rd. to Jamul Dr.	7,008	7,337	0.2	7,126	7,455	0.3	0.2
	Jamul Dr. to Myrtle St.	8,493	8,681	0.1	9,643	9,831	0.6	0.1
Jefferson Rd.	SR-94 to Lyons Valley Rd.	2,685	2,967	0.4	4,560	4,842	2.6	0.3
Melody Rd.	SR-94 to Proctor Valley Rd.	1,374	1,468	0.3	1,884	1,978	1.6	0.2
Proctor Valley Rd.	Melody Rd. to Pioneer Wy.	1,630	1,724	0.2	3,888	3,982	3.9	0.1
Honey Springs Rd.	SR-94 to Mother Grundy Truck Trail	1,579	1,626	0.1	2,126	2,173	1.4	0.1
Otay Lakes Rd.	R-94 to Otay Mountain Truck Trail	2,582	3,335	1.1	4,938	5,691	3.4	0.6
SOURCE: Ldn Consulting, 2012								

TABLE 4.10-9								
ALTERNATIVE 2 –MODELED NOISE LEVELS (UPDATED)								

Roadway/Segment		Existing (ADT)	Existing + Project (ADT)	Noise Level Increase (dBA CNEL)	Near Term No Project (ADT)	Near Term + Project (ADT)	Total Near Term Increase vs. Existing (dBA CNEL)	Project Contribution to Cumulative (dBA CNEL)
Sweetwater Springs	Jamacha Blvd. to Austin Dr.	15,483	15,495	0.0	17,849	17,861	0.6	0.0
Jamacha Blvd.	SR-94 to Sweetwater Spring Blvd.	16,683	16,742	0.0	18,897	18,956	0.6	0.0
Jamacha Rd. (SR-54)	SR-94 to Fury Rd.	41,605	41,664	0.0	49,234	49,293	0.7	0.0
	Willow Glen Dr. to Barbham St.	23,521	23,628	0.0	25,911	26,018	0.4	0.0
Steele Canyon Rd.	SR-94 to Fury Rd.	6,379	6,462	0.1	7,114	7,197	0.5	0.1
	Jamual Dr. to Willow Glen Dr.	14,028	14,147	0.0	16,499	16,618	0.7	0.0
Jamul Dr.	Steele Canyon Dr. to Lyons Valley Rd.	2,433	2,469	0.1	4,413	4,449	2.6	0.0
Willow Glen Dr.	Jamacha Blvd. to Steele Canyon Rd.	19,986	20,069	0.0	21,399	21,482	0.3	0.0
	Steele Canyon Dr. to Hillsdale Rd.	12,237	12,273	0.0	13,736	13,772	0.5	0.0
Lyons Valley Rd.	SR-94 to Jefferson Rd.	5,522	5,534	0.0	5,938	5,950	0.3	0.0
	Jefferson Rd. to Jamul Dr.	7,008	7,091	0.1	7,126	7,209	0.1	0.1
	Jamul Dr. to Myrtle St.	8,493	8,541	0.0	9,643	9,691	0.6	0.0
Jefferson Rd.	SR-94 to Lyons Valley Rd.	2,685	2,756	0.1	4,560	4,631	2.4	0.1
Melody Rd.	SR-94 to Proctor Valley Rd.	1,374	1,398	0.1	1,884	1,908	1.4	0.1
Proctor Valley Rd.	Melody Rd. to Pioneer Wy.	1,630	1,654	0.1	3,888	3,912	3.8	0.0
Honey Springs Rd.	SR-94 to Mother Grundy Truck Trail	1,579	1,591	0.0	2,126	2,138	1.3	0.0
Otay Lakes Rd.	R-94 to Otay Mountain Truck Trail	2,582	2,772	0.3	4,938	5,128	3.0	0.2
SOURCE: Ldn Consulting, 2012								

No Action Alternative

The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.

Impact 4.10(4): On Site Mechanical Equipment

Proposed Project

Mechanical equipment could be a primary noise source associated with the Proposed Project. The equipment would be mounted on the rooftop of the gaming complex within a mechanical room, as well as in the basement of the parking garage in the case of the wastewater treatment plant. Potential noise sources include fans, pumps, compressors, chillers, and cooling towers. Noise levels from this equipment vary substantially depending on unit efficiency, size, and location, but generally range from 45 to 70 dBA Leq at a distance of 50 feet (EPA 1971). Accounting for typical attenuation rates of 6 dB per doubling of distance, noise levels attributed to unshielded mechanical systems could reach 55 Leq at the nearest property line which would possibly exceed the nighttime noise level limit as identified in the Section 36.404 of the County Code. As the final mechanical plans have not been developed, the potential attenuation associate with the structure cannot be determined. As a result, noise from mechanical equipment under the Proposed Project would be a potentially significant impact and mitigation requiring acoustical louvers capable of achieving a 10 dBA reduction would be required.

Emergency generators may be used to supply necessary power requirements to vital systems within facilities. Emergency generators are typically operated under two conditions: loss of main electrical supply or preventive maintenance/testing. Emergency electrical generators operation is exempt from the County Code and, thus, would not represent an impact. The routine maintenance of the generators requires that they be operated for approximately 15 minutes once to twice per month and would typically be subject to the County noise ordinance. Therefore, this is a potential impact and is discussed further under Impact 4.10(5).

Alternative 1

While potentially fewer and smaller, operation noise sources associated with Alternative 1 would be the same as those identified for the Proposed Project. Thus, all impacts and mitigation from on site activities under Alternative 1 would be the same as under the Proposed Project.

Alternative 2

While potentially fewer and smaller, operation noise sources associated with Alternative 2 would be the same as those identified for the Proposed Project. Thus, all impacts and mitigation from on site activities under Alternative 2 would be the same as under the Proposed Project.

No Action Alternative

The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.

Impact 4.10(5): Emergency Electrical Generators

Proposed Project

Emergency generators may be used to supply necessary power requirements to vital systems within facilities. Emergency generators are typically operated under two conditions: loss of main electrical supply or preventive maintenance/testing. The operation of mechanical equipment associated with emergency operations is exempt from the noise standards outlined in the San Diego County Code; thus, this analysis focuses on routine preventive maintenance and testing operations, which are conducted on a periodic basis.

Reference noise-levels of generators are approximately 75 to 82 dBA at 7 meters (23 feet) (Kohler Power Generation 2008) Based on these reference noise levels, unshielded emergency electrical generators operating for 60 minutes under full load, could exceed the significance criteria for daytime stationary-source noise if located within 800 feet of noise sensitive land uses. In addition, unshielded generators located within 1,650 feet of noise-sensitive land uses could exceed the significance criteria for nightime stationary-source noise. Maintenance for generators typically only requires 15 minutes or less of operating time per month. Therefore, the average hourly noise level for generator would be located within the parking structure in an equipment room, which would attenuate noise levels by approximately 20-30 dBA. Thus, noise levels from generator operations and maintenance would be below the thresholds, resulting in a less-than-significant impact.

Alternative 1

While potentially fewer and smaller, operation noise sources associated with Alternative 1 would be the same as those identified for the Proposed Project. Thus, impacts from emergency electrical generators under Alternative 1 would be the same as under the Proposed Project.

Alternative 2

While potentially fewer and smaller, operation noise sources associated with Alternative 2 would be the same as those identified for the Proposed Project. Thus, impacts from emergency electrical generators under Alternative 2 would be the same as under the Proposed Project.

No Action Alternative

The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.

Impact 4.10(6): Emergency Facilities

Proposed Project

The Proposed Project would include emergency facilities, i.e., a fire station that would generate high noise levels from alarms and vehicle movements when station crews respond to emergency situations. The noise levels associated with the operation of emergency activities are exempt from the County Noise Ordinance and, thus, considered a less-than-significant impact.

Alternative 1

While potentially fewer and smaller, emergency facility noise sources associated with Alternative 1 would be the same as those identified for the Proposed Project. Thus, all impacts under Alternative 1 would be the same as under the Proposed Project.

Alternative 2

While potentially fewer and smaller, emergency facility noise sources associated with Alternative 2 would be the same as those identified for the Proposed Project. Thus, all impacts under Alternative 2 would be the same as under the Proposed Project.

No Action Alternative

The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.

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Impact 4.10(7): Parking Lot Activities

Proposed Project

Activities making up a single parking event include vehicle arrival, limited idling, occupants exiting the vehicle, door closures, conversations among passengers, occupants entering the vehicle, startup, and departure of the vehicle. A representative parking lot with 200 stalls and 400 parking events per hour would produce a noise level that exceeds the significance criteria for the daytime at distances up to 200 feet and exceeds the nighttime noise standard at distances up to 350 feet. Based on the project land use plan no noise sensitive residential land uses would be within 570 feet of parking areas. Therefore, the impact of noise generated from parking lot activities is considered a less-than significant impact.

Alternative 1

While potentially fewer and smaller, parking lot noise associated with Alternative 1 would be the same as those identified for the Proposed Project. Thus, all impacts Alternative 1 would be the same as under the Proposed Project.

Alternative 2

While potentially fewer and smaller, parking lot noise associated with Alternative 2 would be the same as those identified for the Proposed Project. Thus, all impacts Alternative 2 would be the same as under the Proposed Project.

No Action Alternative

The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.

Impact 4.10(8): Loading Dock and Delivery Activity

Proposed Project

Noise sources associated with loading dock and delivery activities can include trucks idling, onsite truck circulation, trailer-mounted refrigeration units, pallets dropping, and the operation of forklifts. Noise monitoring at loading docks previously undertaken indicates that typical hourly average noise levels range from 55 to 60 dBA Leq and from 80 to 84 dBA Lmax at a distance of 50 feet. Based on these previously measured noise levels, the significance criteria would be exceeded at approximately 160 feet from the acoustic center of the loading dock and the nighttime stationary noise criterion would be exceeded approximately 280 feet from the acoustic center of the loading dock. Based on the Proposed project site plan no noise sensitive

land uses would be within 280 feet of proposed loading docks. Therefore, noise generated from loading dock and delivery activities is considered a less-than significant impact.

Alternative 1

While potentially fewer and smaller, loading dock and delivery activity noise sources associated with Alternative 1 would be the same as those identified for the Proposed Project. Thus, all impacts would be the same as under the Proposed Project.

Alternative 2

While potentially fewer and smaller, loading dock and delivery activity noise sources associated with Alternative 2 would be the same as those identified for the Proposed Project. Thus, all impacts would be the same as under the Proposed Project.

No Action Alternative

The No Project Alternative would not result in a change of land use beyond those that currently exist; therefore, noise levels from the No Action Alternative would not increase. No impact would result.

4.10.3 MITIGATION

Noise Abatement Measures 4.10(1 and 2): Construction Noise and Vibration

Proposed Project, Alternative 1, and Alternative 2

The following recommended noise abatement measures would reduce noise associated with project construction:

- 1. Contractors should schedule construction activities to avoid simultaneous use of several pieces of high noise level-emitting equipment, to the extent practicable.
- 2. Construction equipment shall be fitted with manufacturer's standard, or better, noise shielding and muffling devices to reduce noise levels to the maximum extent feasible.
- 3. Equipment maintenance and staging areas shall be located as far away from local residences and hotel uses, as feasible.

Mitigation Measures 4.10(1 and 2): Construction Noise and Vibration

Proposed Project, Alternative 1, and Alternative 2

The following recommended blasting mitigation measures would reduce noise impacts associated with project construction to a less than significant level:

- 1. Prepare and Implement a Blast Plan and Monitor and Record Each Blast Near Sensitive Receptors. To reduce impacts associated with air blast over-pressure generated by project-related construction activities, the project applicant(s) of all project phases shall conform to the following requirements:
 - All blasting shall be performed by a blast contractor and blasting personnel licensed to operate in the County.
 - The blasting plan, including estimates of the air blast over-pressure level and groundborne vibration at the closest residence to the blast, will be submitted to the Tribe for review prior to the first blast. Blasting shall not commence until the Tribe has approved the blast plan.
 - Each blast shall be monitored and recorded with an air blast over-pressure monitor and groundborne vibration accelerometer that is located outside the closest residence to the blast. If a blast exceeds anticipated levels and acceptable levels, blasting will be halted until a new blasting plan to mitigate the impacts is developed. Blasting operations shall comply with the County's Consolidated Fire Code (2011) Section 3301.2 establishing permitting and notification procedures.

Mitigation 4.10(3): Traffic Noise

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.10(4) On Site Mechanical Equipment

Proposed Project, Alternative 1, and Alternative 2

The following measure would reduce noise associated with the use of mechanical equipment to a less than significant level:

 Acoustical louvers capable of a 10 decibel reduction will be installed for all ventilation and when possible orientate the ventilation away from properties developed with noise sensitive uses. <u>Although not required to mitigate the impact</u>, the Tribe will also consider the use of roof top parapet walls, screening barriers, and mechanical enclosures to ensure <u>County Code requirements are met</u>.

Mitigation 4.10(5) Emergency Electrical Generators

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.10(6) Emergency Facilities

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

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No Action Alternative

No mitigation is necessary.

Mitigation 4.10(7) Parking Lot Activities

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.10(8) Loading Dock and Delivery Activity

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

SECTION 4.11

AIR QUALITY

4.11 AIR QUALITY

4.11.1 ENVIRONMENTAL SETTING

Air Pollutants

"Air Pollution" is a general term that refers to one or more chemical substances that degrade the quality of the atmosphere. Individual air pollutants may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation.

Six air pollutants of concern nationwide have been identified by USEPA: carbon monoxide (CO); ozone; nitrogen dioxide (NO₂); sulfur dioxide (SO₂); lead (Pb); and particulate matter (PM), which is subdivided into two classes based on particle size: fine particles ($PM_{2.5}$) and inhalable particles (PM_{10}). These pollutants are collectively referred to as criteria pollutants and are discussed in detail below. The sources of these pollutants, their effects on human health and the nation's welfare, and their final deposition in the atmosphere vary considerably.

In general, ambient concentrations of CO, ozone, and Pb are primarily influenced by motor vehicle activity. Emissions of sulfur dioxides (SO_2) are associated mainly with various stationary sources. Emissions of nitrogen dioxides (NO_2) and PM come from both mobile and stationary sources.

The criteria pollutants that are most important for this air quality impact analysis are those that can be traced principally to motor vehicle operation and earth-moving activities. Of these pollutants, CO, NO_X , and PM are evaluated on a regional or "mesoscale" basis. CO is analyzed on a localized or "microscale" basis in cases of congested traffic conditions. Although PM_{10} and $PM_{2.5}$ have very localized effects, there is no USEPA-approved methodology to evaluate microscale impacts of PM_{10} and $PM_{2.5}$.

In addition to the criteria pollutants, hazardous air pollutants (HAPs) and greenhouse gasses (GHG) are air pollutants of concern.

Carbon Monoxide (CO)

CO is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Other nonroad engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of

CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air (USEPA 2010a).

CO enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, resulting in a drastic reduction in the amount of oxygen available to the cells. Adverse health effects associated with exposure to CO concentrations include such symptoms as dizziness, headaches, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases (USEPA 2010a).

The highest concentrations are generally associated with cold, stagnant weather conditions that occur during the winter. In contrast to problems caused by ozone, which tends to be a regional pollutant, CO problems tend to be localized. Overall, CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program.

$Ozone(O_3)$

Ozone (O_3) is a photochemical oxidant, a substance whose oxygen combines chemically with another substance in the presence of sunlight. Ozone is the primary component of smog. Ozone is not directly emitted into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) and NO_X in the presence of sunlight. VOC emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_X are a group of gaseous compounds of nitrogen and oxygen that results from the combustion of fuels. A highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while high VOC and NO_X levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional scale, ozone is a regional pollutant.

Ozone located in the upper atmosphere (stratosphere) acts in a beneficial manner by shielding the earth from harmful ultraviolet radiation that is emitted by the sun. However, ozone located in the lower atmosphere (troposphere) is a major health and environmental concern. Meteorology and terrain play a major role in ozone formation. Generally, low wind speeds or stagnant air coupled with warm temperatures and clear skies provides the optimum conditions for ozone formation. As a result, summer is generally the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. In general, ozone concentrations over or near urban and rural areas reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry (Godish 2004).

The adverse health effects associated with exposure to ozone pertain primarily to the respiratory system. Scientific evidence indicates that ambient levels of ozone affect not only sensitive receptors,
such as asthmatics and children, but healthy adults as well. Exposure to ambient levels of ozone ranging from 0.10 to 0.40 parts per million (ppm) for 1 to 2 hours has been found to significantly alter lung functions by increasing respiratory rates and pulmonary resistance, decreasing tidal volumes (the amount of air inhaled and exhaled), and impairing respiratory mechanics. Ambient levels of ozone above 0.12 ppm are linked to symptomatic responses that include such symptoms as throat dryness, chest tightness, headache, and nausea. In addition to the above adverse health effects, evidence also exists relating ozone exposure to an increase in permeability of respiratory epithelia; such increased permeability leads to an increased response of the respiratory system to challenges, and a decrease in the immune system's ability to defend against infection (Godish 2004).

Nitrogen Dioxide (NO₂)

 NO_2 is a brownish, highly reactive gas that is present in all urban environments. The major humanmade sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2 (USEPA 2010a). The combined emissions of NO and NO₂ are referred to as NO_X and reported as equivalent NO₂. Because NO₂ is formed and depleted by reactions associated with ozone, the NO2 concentration in a particular geographical area may not be representative of the local NO_X emission sources. Inhalation is the most common route of exposure to NO₂. Because NO₂ has relatively low solubility in water, the principal site of toxicity is in the lower respiratory tract. The severity of the adverse health effects depends primarily on the concentration inhaled rather than the duration of exposure. An individual may experience a variety of acute symptoms, including coughing, difficulty with breathing, vomiting, headache, and eye irritation during or shortly after exposure. After a period of approximately 4 to 12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe, symptomatic NO₂ intoxication after acute exposure has been linked on occasion with prolonged respiratory impairment with such symptoms as chronic bronchitis and decreased lung functions (USEPA 2010a).

Sulfur Dioxide (SO₂)

 SO_2 is a combustion product, with the primary source being power plants and heavy industries that use coal or oil as fuel. SO_2 is also a product of diesel engine combustion. The health effects of SO_2 include lung disease and breathing problems for asthmatics. SO_2 in the atmosphere contributes to the formation of acid rain.

Lead (PB)

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, as discussed in detail below, metal processing is currently the primary source of lead emissions. The highest levels of lead in the air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, USEPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. USEPA banned the use of leaded gasoline in highway vehicles in December 1995 (USEPA 1996). As a result of USEPA's regulatory efforts to remove Pb from gasoline, emissions of Pb from the transportation sector have declined dramatically (95 percent between 1980 and 1999), and levels of Pb in the air decreased by 94 percent between 1980 and 1999. Transportation sources, primarily airplanes, now contribute only 13 percent of Pb emissions. A National Health and Nutrition Examination Survey reported a 78 percent decrease in the levels of Pb in people's blood between 1976 and 1991. This dramatic decline can be attributed to the move from leaded to unleaded gasoline (USEPA 2010a).

Particulate Matter (PM)

PM is a complex mixture of extremely small particles and liquid droplets. PM is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of PM is directly linked to the potential for causing health problems. The USEPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Health studies have shown a significant association between exposure to PM and premature death. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heartbeat (USEPA 2010a). Individuals particularly sensitive to fine particle exposure include older adults, people with heart and lung disease, and children. The USEPA groups PM into two categories, PM_{2.5} and PM₁₀, as described below.

<u>Fine Particulate Matter ($PM_{2.5}$)</u> Fine particles, such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller ($PM_{2.5}$). Sources of fine particles include all types of combustion activities (motor vehicles, power plants, wood burning, etc.) and certain industrial processes. Control of $PM_{2.5}$ is achieved primarily through the regulation of emission sources, such as USEPA's Clean Air Interstate Rule and Clean Air Visibility Rule for stationary sources, the 2004 Clean Air Nonroad Diesel Rule, the Tier 2 Vehicle Emission Standards, and Gasoline Sulfur Program.

<u>Inhalable Particulate Matter (PM_{10})</u> Inhalable particles (PM_{10}) include both fine and coarse dust particles; the fine particles are $PM_{2.5}$. Coarse particles, such as those found near roadways and dusty industries, are larger than 2.5 micrometers and smaller than 10 micrometers in diameter. Sources of coarse particles include crushing or grinding operations, and dust from paved or unpaved roads. The health effects of PM_{10} are similar to $PM_{2.5}$. Control of PM_{10} is achieved primarily through the control

of dust at construction and industrial sites, the cleaning of paved roads, and the wetting or paving of frequently used unpaved roads. The criteria pollutants that are most important for this air quality impact analysis are those that can be traced principally to motor vehicles and to earth-moving activities. FHWA and USEPA released joint guidance for conducting qualitative analyses to evaluate microscale impacts of $PM_{2.5}$ and PM_{10} in March 2006 (FHWA 2006). FHWA and USEPA are currently developing methods and modeling procedures for developing quantitative $PM_{2.5}$ and PM_{10} assessments; however, at the date of this report neither agency has issued quantitative guidance.

Hazardous Air Pollutants (HAPS)

In addition to the criteria air pollutants, USEPA also regulates HAPs. Concentrations of HAPs are also used as indicators of ambient air quality conditions. A HAP is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. HAPs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. In general, for those HAPs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts are not expected to occur. This contrasts with the criteria air pollutants for which acceptable levels of exposure can be determined and for which ambient standards have been established (see Table 2 in Section 4.3). Most HAPs originate from human-made sources, including on-road mobile sources, nonroad mobile sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs). The CAA identified 188 compounds as HAPs. USEPA has assessed this expansive list of toxics and identified a group of 21 as mobile source air toxics (MSATs). MSATs are compounds emitted from highway vehicles and nonroad equipment (e.g., off-road construction equipment). Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. USEPA also extracted a subset of this list of 21 compounds that it now labels as the seven priority MSATs. These are acrolein, benzene, 1,3-butadiene, diesel particulate matter (diesel PM) plus diesel PM organic gases, formaldehyde, naphthalene, and polycyclic organic matter (FHWA 2009). While these MSATs are considered the priority transportation toxics, USEPA has issued a number of regulations that will dramatically decrease MSATs through cleaner fuels and cleaner engines. According to an FHWA analysis, even if the number of vehicle miles traveled (VMT) increases by 64 percent, reductions of 57 to 87 percent in MSATs are projected from 2000 to 2020 (FHWA 2009).

<u>Diesel Exhaust Particulate</u>. In 1999, the California Air Resources Board (ARB) identified particulate emissions from diesel-fueled engines as a toxic air contaminant (TAC)¹. TAC is the term used in California similar to the federal HAP term. Once a substance is identified as a TAC, ARB is required by law to determine if there is a need for further control. This is referred to as risk management (ARB 2001). The process of further studies is ongoing at ARB, with committees meeting to analyze stationary and mobile diesel engine sources, as well as many other aspects of the problem. On September 28, 2000, ARB approved the Proposed Diesel Risk Reduction Plan and the Proposed Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines. ARB programs in progress relating to truck emissions are included in the following paragraphs. There are other programs for risk reduction for off-road diesel engines.

In February 2001, USEPA issued new rules requiring cleaner diesel fuels in 2006 and beyond. However, since 1993, California's regulations have required cleaner diesel fuel than the federal requirements. The 1993 federal regulations reduced particulate emissions by 5%, while the California regulations reduced particulate emissions by 25%.

The control of emissions from mobile sources is a statewide responsibility of ARB that has not been delegated to the local air districts. However, the San Diego APCD is participating in the administration programs to reduce diesel emissions, principally by procurement and use of replacement vehicles powered by natural gas. Some air districts have issued preliminary project guidance for projects with large or concentrated numbers of trucks, such as warehouses and distribution facilities. No standards exist for quantitative impact analysis for diesel particulates.

Greenhouse Gases

Certain gases in Earth's atmosphere, classified as GHGs, play a critical role in determining Earth's surface temperature. Solar radiation enters Earth's atmosphere from space. A portion of the radiation is absorbed by Earth's surface, and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from Earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Earth has a much lower temperature than the sun; therefore, Earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on Earth. Without the greenhouse effect, Earth would not be able to support life as we know it.

¹ TACs, as defined in Section 39657 of the *California Health and Safety Code*, are chemicals that can cause adverse effects to human health or the environment, including substances that cause cancer, neurological, respiratory, and reproductive effects. The list of TACs also include HAPs as defined in subsection (b) of Section 112 of the federal Clean Air Act (42 U.S.C. Section 7412(b)).

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2) , methane (CH_4) , nitrous oxide (N_2O) , hydrofluorocarbons, chlorofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of Earth's climate, known as global climate change or global warming. It is unlikely that global climate change of the past 50 years can be explained without contribution from human activities (IPCC 2007).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors (ARB 2010a). In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Emissions of CO_2 are byproducts of fossil fuel combustion. CH₄, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N₂O is also largely attributable to agricultural practices and soil management. CO2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution, respectively, two of the most common processes of CO_2 sequestration.

Regulatory Setting

Federal Regulations

The CAA (42 U.S. Code [USC] §§ 7401-7671q) requires the adoption of National Ambient Air Quality Standards (NAAQS) to protect the public health and welfare from the effects of air pollution. The NAAQS are updated as needed. Current standards are set for SO₂, CO, NO₂, O₃, PM ₁₀, PM _{2.5}, and Pb, as shown in **Table 4.11-1**.

In addition to criteria pollutants, air quality regulations also focus on hazardous air pollutants (HAPs). USEPA has identified 188 substances as HAPs. For those HAPs that may cause cancer, in general, there is no minimum concentration that does not present some risk, (i.e., there is no threshold level below which adverse health impacts may not be expected to occur). This contrasts with the criteria air pollutants, for which acceptable levels of exposure can be determined and ambient standards have been established (i.e., the NAAQS).

In the 1990 revision of the Clean Air Act, Congress recognized that Indian Tribes have the authority to implement air pollution control programs. USEPA's Tribal Authority Rule gives Tribes the ability to develop air quality management programs, write rules to reduce air pollution and implement and enforce their rules in Indian Country. While state and local agencies are responsible for all Clean Air Act requirements, Tribes may develop and implement only those parts of the Clean Air Act that are appropriate for their lands. USEPA provides technical assistance and resources to help Tribes build their program capacity. USEPA also implements the CAA requirements in Indian country through programs such as the Federal Air Rules for Reservations, Title V permits, and air toxics rules.

National California^b Pollutant Averaging Time Concentration Primary^{c, d} Secondary^{c, c} 1 hour 0.09 ppm (180 µg/m³) Same as Ozone (O₃) 8 hour $0.075 \text{ ppm} (147 \ \mu\text{g/m}^3)$ primary standard 0.070 ppm (137 µg/m³) Respirable 24 hour 150 µg/m³ $50 \,\mu\text{g/m}^3$ Same as particulate matter Annual arithmetic primary standard $20 \,\mu\text{g/m}^3$ (PM_{10}) mean 24 hour 35 µg/m³ No separate state standard Fine particulate Same as Annual arithmetic matter (PM_{2.5}) $15 \,\mu\text{g/m}^3$ primary standard $12 \,\mu\text{g/m}^3$ mean 9 ppm (10 mg/m³) 8 hour 9.0 ppm (10 mg/m³) Carbon monoxide None 1 hour 35 ppm (40 mg/m³) 20 ppm (23 mg/m³) (CO)8 hour (Lake Tahoe) $6 \text{ ppm} (7 \text{ mg/m}^3)$ Annual arithmetic Same as 0.053 ppm (100 µg/m³) $0.030 \text{ ppm} (57 \text{ } \mu\text{g/m}^3)$ Nitrogen dioxide primary standard mean (NO_2) 0.100 ppm 0.18 ppm (339 µg/m³) 1 hour None Annual arithmetic $0.030 \text{ ppm} (80 \mu \text{g/m}^3)$ mean 0.04 ppm (105 µg/m³) $0.14 \text{ ppm} (365 \mu \text{g/m}^3)$ 24 hour Sulfur dioxide (SO₂) 3 hour 0.5 ppm (1,300 µg/m³) $0.25 \text{ ppm} (655 \text{ } \mu\text{g/m}^3)$ 1 hour 30-day average 1.5 μg/m³ ____ Calendar quarter 1.5 µg/m Lead^f (Pb) Same as Rolling 3-month $0.15 \,\mu g/m^3$ primary standard averageg Extinction coefficient of 0.23 per more (0.07 to 30 miles for Lake Visibility-reducing 8 hour Tahoe) because of particles when the particles relative humidity is less than 70%. Method: Beta attenuation and No national standards transmittance through filter tape. Sulfates 25 µg/m³ 24 hour 0.03 ppm (42 µg/m³) Hydrogen sulfide 1 hour Vinyl chloride^f $0.01 \text{ ppm} (26 \mu \text{g/m}^3)$ 24 hour

TABLE 4.11-1

NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Notes: $mg/m^3 = milligrams$ per cubic meter; $PM_{2,5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; <math>PM_{10} = respirable$ particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; $\mu g/m^3 = micrograms$ per cubic meter

- ^a National standards (other than those for ozone and particulate matter and those based on annual averages or 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 in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μ g/m³ is equal to or less than 1. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. Environmental Protection Agency for further clarification and current federal policies.
- ^b California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM₁₀, 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.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on 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.
- ^d National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
- National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- The California Air Resources Board 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.
- ^g National lead standard, rolling 3-month average: final rule signed October 15, 2008.

Source: ARB 2010b.

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State Regulations

The California Air Resources Board (ARB) is the state agency responsible for implementing the CAA in California. The ARB oversees the activities of local and regional air pollution control districts. These districts regulate industrial pollution sources. They also issue permits, develop local plans to attain healthy air quality and ensure that the industries in their area adhere to air quality mandates. ARB has established California Ambient Air Quality Standards (CAAQS) that are generally more restrictive than the NAAQS, as shown in **Table 4.11-1**.

Regional Authority

In San Diego County, the San Diego Air Pollution Control District (APCD) is the regional agency responsible for the administration of federal and state air quality laws, regulations, and policies. Included in the APCD's tasks are monitoring of air pollution, preparation of the Regional Air Quality Strategy (RAQS) for the San Diego Air Basin (SDAB), and promulgation of rules and regulations. The APCD RAQS is plan for attaining the state ozone O_3 standard, which is more stringent than the federal standard. The rules and regulations include procedures and requirements to control the emission of pollutants and to prevent adverse impacts. SDAPCD's air quality plans include the RAQS for ozone and its precursors, and the 2007 Eight-Hour Ozone Attainment Plan. There are no SDAPCD air quality plans for PM₁₀ and PM_{2.5} for which the air basin is in non-attainment for CAAQS. Pursuant to federal requirements, however, the 2007 Eight-Hour Ozone Attainment Plan only applies to non-tribal land and does not apply to Tribal Nations (APCD 2007).

Climate Change

USEPA has not promulgated explicit guidance or methodology to conduct project-level GHG analysis The Council on Environmental Quality (CEQ) issued a draft guidance memorandum in February 2010 for analyzing the environmental effects of GHG emissions and climate change in National Environmental Policy Act (NEPA) documents. Specifically, the guidance states that if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons (MT) or more of CO_2 equivalent (CO_{2e}) GHG emissions on an annual basis, agencies should consider this as an indicator that a quantitative and qualitative assessment may be meaningful to decision-makers and the public. For long-term actions that have annual direct emissions of less than 25,000 MT of CO_{2e} , CEQ encourages federal agencies to consider whether the action's long-term emissions should receive similar analysis. CEQ does not propose this as an indicator of a threshold of significant effects, but rather as an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of GHGs (CEQ 2010).

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by

2020. This reduction would be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012.

Existing Setting

Environmental Setting, Climate and Meteorology

The project site is located in San Diego County, within the SDAB. The climate of the SDAB is characterized by warm, dry summers and mild, wet winters. One of the main determinants of the climatology is a semipermanent high-pressure area (the Pacific High) in the eastern Pacific Ocean. In the summer, the Pacific High is located well to the north, directing storm tracks north of California. The Pacific High maintains clear skies in the region for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation. In San Diego County, the months of heaviest precipitation are November through April; the average total annual precipitation is 10.18 inches. The maximum and minimum average temperatures are 69.9 Fahrenheit (°F) and 56.5°F, respectively (WRCC 2011). The Pacific High also influences the wind patterns of California. The predominant wind directions are westerly and west-southwesterly during all four seasons, and the average annual wind speed is approximately 6 miles per hour.

A common atmospheric condition known as a temperature inversion affects air quality in the SDAB. During an inversion, air temperatures get warmer rather than cooler with increasing height. Subsidence inversions occur during the warmer months (May through October) as descending air associated with the Pacific High comes into contact with cooler marine air. The boundary between the layers of air represents a temperature inversion that traps pollutants below it. The inversion layer is approximately 2,000 feet above mean sea level (AMSL) during the months of May through October. However, during the remaining months (November through April), the temperature inversion is approximately 3,000 feet AMSL. Inversion layers are important elements of local air quality because they inhibit the dispersion of pollutants, thus resulting in a temporary degradation of air quality.

Regional and Local Air Quality

Specific geographic areas are classified as either "attainment" or "nonattainment" areas for each pollutant based on the comparison of measured data with federal and state standards. If an area is redesignated from nonattainment to attainment, the CAA requires a maintenance plan to demonstrate how the air quality standard will be maintained for at least 10 years. The project site is located in the SDAB, which currently meets the federal standards for all criteria pollutants except O_3 (USEPA 2011). The SDAB is a CO attainment-maintenance area following a 1998 redesignation as a CO attainment area. **Table 4.11-2** shows the federal attainment status for the SDAB.

PROJECT AREA FEDERAL ATTAINMENT STATUS					
CRITERIA POLLUTANT	FEDERAL ATTAINMENT STATUS				
Ozone (O ₃)	Nonattainment – Subpart 1				
Nitrogen Dioxide (NO ₂)	Attainment – Unclassified				
Carbon Monoxide (CO)	Maintenance				
Particulate Matter (PM ₁₀)	Attainment – Unclassified				
Particulate Matter (PM _{2.5})	Attainment – Unclassified				
SOURCE: US EPA, 2011; Ldn Consulting	g, 2011				

 TABLE 4.11-2

 PROJECT AREA FEDERAL ATTAINMENT STATUS

USEPA issued the initial designations for the 8-hour O_3 standard on April 15, 2004, and the SDAB was initially classified as a federal nonattainment area for the 8-hour O_3 standard under Subpart 1 – Basic Nonattainment. Basic is the least severe of the six degrees of O_3 nonattainment. However, USEPA was challenged on its justification for these "basic" nonattainment designations, and, in January 2009, published proposed reclassifications for all "basic" nonattainment areas, which resulted in the SDAB considered in "moderate" nonattainment for the 8-hour O_3 standard (USEPA 2009). However, in response to the court decision, USEPA is expected to reclassify the SDAB as a "serious" nonattainment area, with a mandatory statutory attainment date of June 15, 2013 (SANDAG 2011). However, at this time, USEPA has not issued further guidance or information the nonattainment status for the 8-hour O_3 standard.

The boundaries of the 8-hour O_3 nonattainment area are the boundaries of San Diego County. Within the eastern part of the county, there are tribal areas classified as 8-hour O_3 attainment areas; these areas are designated as La Posta Areas #1 and #2, Cuyapaipe Area, Manzanita Area, and Campo Areas #1 and #2 (USEPA 2008). The Jamul Indian Village in not included within these attainment areas. APCD submitted an air quality attainment plan to USEPA in 2007; the plan demonstrated how the 8-hour O_3 standard will be attained by 2009. A decision from USEPA was anticipated in the summer or fall of 2009 (APCD 2008); however, USEPA's decision was delayed (see **Table 4.11-1** for further details). The SDAB currently meets state standards for all criteria pollutants except O_3 , PM ₁₀, and PM _{2.5}. The SDAB is currently classified as a state "serious" O_3 nonattainment area and a state nonattainment area for PM _{2.5} and PM ₁₀ (ARB 2010c).

Ambient air pollutant concentrations in the SDAB are measured at 10 air quality monitoring stations operated by APCD. The monitoring station that represents the project's area, climate, and topography in the SDAB is the El Cajon monitoring station, located at 1155 Redwood Ave., El Cajon, approximately 7 miles northwest of the project site. The station monitors NO₂, O₃, PM ₁₀, and PM _{2.5}.

Table 4.11-3 summarizes the highest pollutant levels recorded at this station from 2008 through 2010, and the number of day the standards were exceeded, if any.

AMDIENT AIK QUALITT SUMMART – EL CA		UNING STAT	
POLLUTANT STANDARDS	2008	2009	2010
Nitrogen Dioxide (NO ₂)			
Maximum 1-hour concentration (ppm) Annual average (ppm)	0.063 0.016	0.054 0.014	0.058 0.013
Number of days standard exceeded CAAQS 1-hour (20 ppm (23 mg/m ³))	0.0	0.0	0.0
Ozone (O ₃)			1
Maximum 1-hour concentration (ppm) Maximum 8-hour concentration (ppm)	0.107 0.093	0.098 0.082	0.102 0.078
Number of days standard exceeded CAAQS 1-hour (>0.09 ppm) CAAQS 8-hour (>0.070 ppm) NAAQS 8-hour (>0.08 ppm)	3.0 12.0 5.0	2.0 5.0 2.0	1.0 6.0 3.0
Particulate Matter (PM ₁₀)			
National maximum 24-hour concentration (μ g/m ³) National second highest 24-hour concentration (μ g/m ³) State maximum 24-hour concentration (μ g/m ³) State second highest 24-hour concentration (μ g/m ³) National annual average concentration (μ g/m ³) State annual average concentration (μ g/m ³)	110.0 58.0 111.0 59.0 30.5 31.2	58.0 54.0 59.0 56.0 28.6 29.3	59.0 53.0 60.0 54.0 28.8 29.4
Number of days standard exceeded NAAQS 24-hour (>150 µg/m ³) CAAQS 24-hour (>50 µg/m ³)	0.0 4.0	$\begin{array}{c} 0.0\\ 4.0\end{array}$	0.0 3.0
Particulate Matter (PM _{2.5})			
National maximum 24-hour concentration ($\mu g/m^3$) National second highest 24-hour concentration ($\mu g/m^3$) State maximum 24-hour concentration ($\mu g/m^3$) State second highest 24-hour concentration ($\mu g/m^3$) National annual average concentration ($\mu g/m^3$) State annual average concentration ($\mu g/m^3$)	30.7 30.2 38.5 36.3 13.3 14.9	56.5 26.6 56.5 40.6 12.1 12.2	27.7 25.5 41.0 29.0 10.8 10.8
Number of days standard exceeded NAAQS 24-houre,g (>35 μ g/m ³)	0.0	3.1	0.0

TABLE 4.11-3 AMBIENT AIR OUALITY SUMMARY – FL CAION MONITORING STATION

ppm = parts per million; ig/m3 = micrograms per cubic meter

SOURCE: ARB, 2011; Ldn, 2011

4.11.2 ENVIRONMENTAL CONSEQUENCES

Standard of Significance

The project would result in a significant impact on air quality or greenhouse gas emission if it would:

- 1. Conflict or obstruct implementation of the applicable air quality plan.
- 2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- 3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- 4. Expose off-Reservation sensitive receptors to substantial pollutant concentrations.
- 5. Create objectionable odors affecting a substantial number of people off-Reservation.
- 6. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- 7. Conflict with an applicable plan policy or regulation adopted for the purpose of reducing the emission of greenhouse gasses.

According to the CEQA guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make significance determinations, where available. The SDAPCD has not adopted significance criteria for a project's construction- or operations-related air quality impacts. However, the County of San Diego (County) has published guidelines for determining significance of air quality under CEQA for projects located in unincorporated San Diego County. The County guidelines are not directly applicable to the Proposed Project but will be considered in the determination of impacts for this analysis. The County screening level thresholds (SLT) are shown in **Table 4.11-4**.

TABLE 4.11-4 SCREENING LEVEL THRESHOLD FOR AIR OUAL ITV IMPACT ANALVSIS

DUREENIN	SCREENING EEVEL TIRESHOLD FOR AIR QUALITT INITACT ANALISIS								
UNITS	VOC	NO _X	СО	SO _X	PM ₁₀	PM _{2.5} ²			
Lbs. per Hour		25	100	25					
Lbs. per Day	75	250	550	250	100	55			
Tons per Year	13.7	40	100	40	15	10			

VOC = volatile organic compounds; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur;

 PM_{10} = suspended particulate matter; $PM_{2.5}$ = fine particulate matter

¹ County of San Diego 2007.

SOURCE: Ldn, 2011

The County Guidelines state the SLT are taken primarily from the APCD, Rule 20.2, New Source Review - Non-major Stationary Sources and Rule 20.3, New Source Review Major Stationary Sources and PSD Stationary Sources. However, the APCD rules do not include guidance for VOC and $PM_{2.5}$, thus the County based these thresholds on the standard of the South Coast Air Basin, which unlike the SDAB is in severe non-attainment for ozone and a federal non-attainment area for $PM_{2.5}$. For determining which thresholds are applicable for CEQA, the guidelines state, "[t]he daily SLTs are most appropriately used for the standard construction and operational emissions. When project emissions have the potential to approach or exceed the SLTs listed below in Table [4.11-4], additional air quality modeling may need to be prepared to demonstrate that ground level concentrations resulting from project emissions (with background levels) will be below Federal and State Ambient Air Quality Standards." Therefore, the Proposed Project would have a less than significant impact, if daily emissions are below the daily thresholds shown in **Table 4.11-4**.

Under significance <u>criterion 4</u>, the project would result in a significant impact if it would expose off-Reservation sensitive receptors to substantial concentrations of CO or TACs. The Tribe does not have any specific GHG reduction thresholds for either construction or operational activities. For shorterterm construction activities, the CEQ guideline of 25,000 MT of CO₂e per year is used. For longerterm operational activities, the project's GHG emissions were evaluated compared to the state's goals under Assembly Bill 32. Assembly Bill 32 requires that by 2020 the State's GHG emissions be reduced to 1990 levels or roughly a 28.3% reduction from business as usual (BAU) conditions. Employing this standard, the project would not have a significant effect to GHG emissions if it would reduce its GHG emissions by at least 28.3% compared to BAU conditions.

Methodology

Temporary (construction) and permanent (operational) criteria pollutant emissions for the Proposed Project were calculated using the URBEMIS2007 Version 9.2.4 computer model (URBEMIS 2007), and data from the URBEMIS2007 Version 9.2.4 *Users Guide* (SCAQMD 2007). Predicted

construction and operational emissions were then compared with applicable significance criteria listed above.

Mobile sources of criteria pollutants calculated by URBEMIS2007 include passenger vehicles; light-, medium-, and heavy duty trucks; buses; motorcycles; and motor homes. For on-road mobile source emissions, URBEMIS2007 relies upon EMFAC2007, Version 2.3, developed by ARB. URBEMIS does not contain EMFAC files for San Diego County; therefore, the California Statewide emission factors were used. The project is assumed to be in a rural location. URBEMIS2007 also incorporates ARB's OFFROAD2007 model for off-road construction and landscape maintenance equipment emissions.²

Area sources are sources of criteria pollutants that individually emit small quantities of pollutants, but can collectively contribute to significant quantities of pollutants. Area source emissions calculated for this project by URBEMIS2007 include natural gas combustion for cooking, heating, and water heaters; fuel combustion from landscape equipment; consumer products, such as hairspray, deodorants, cleaning products, spray paint, and insecticides³; and maintenance architectural coatings.

Point sources of pollutants are stationary, identifiable sources of criteria pollutants and/or HAPs. Minor point sources of pollutants include, among other uses, char broilers, dry cleaners, gas stations, and auto body paint shops. Stationary sources emitting 25 tons or more per year of any criteria pollutant (or its precursor) are considered "major" point sources; examples include power plants, oil and gas field operations, and manufacturing plants. Point sources of pollutants typically require an operating permit by the local air district.

URBEMIS was used to evaluate the construction and operational GHG emissions for the Project. URBEMIS does not currently include emission estimates for GHGs other than CO_2 , and, although emissions of GHGs other than CO_2 , including CH_4 and N_2O , would result from Project-related activities, the emission levels are small in comparison to emission levels in the form of CO_2 .

Impact 4.11(1): Criteria Pollutants - Construction

Proposed Project

Construction may affect air quality as a result of (1) construction equipment emissions; (2) fugitive dust from grading and earthmoving; and (3) emissions from vehicles driven to/from the Project site by construction workers and material delivery trucks. As indicated the

²/OFFROAD2007 calculates emissions from a number of gasoline, diesel, compressed natural gas, and liquefied petroleum gas powered engine and vehicle categories, including agricultural, construction, lawn and garden, and off-road recreation. Not all of these categories are included in URBEMIS2007.

³/Consumer products of concern commonly contain volatile organic compounds (VOCs) that, when emitted into the air, contribute to the formation of ozone. Consumer products may also contain toxic air contaminants and greenhouse gases.

Proposed Project would require approximately 24 months to construct with approximately 69 months dedicated to excavation and site preparation. The assumed maximum daily equipment associated with each activity is provided below:

Mass grading - 1 excavator, 1 grader, 1 dozer, 1 backhoe, and 1 water truck

Utility trenching - 2 trenchers, 1 pipe laying truck, and a backhoe/loader

Final site grading – 1 grader, 1 dozer, 1 backhoe/loader, and 1 water truck.

Building Construction – 1 crane, 2 forklifts, 1 generator set, 1 backhoe/loader, and 3 welders

Paving - 4 cement mixers, 1 paver, 1 paving equipment, 1 roller, 1 backhoe/loader

This equipment list is intended to be representative of the type of equipment that would be used in the construction of the project and is not an exact representation of the equipment that would be in use at any given time. This scenario assumes full buildout of the gaming facility, including restaurants, shops/offices, and support facilities; and structured parking. It also includes on-site grading and excavation for the proposed improvements, hauling of excavated soil, and vehicle emissions associated with construction equipment, transport of building materials to the site, transport of construction workers to the site, and hauling away of construction debris. Therefore, the daily construction traffic is assumed to be comprised of heavy duty trucks hauling construction materials, and construction worker traffic. A detailed list of construction assumptions for this scenario is provided in **Appendix 11**.

Emissions of criteria air pollutants for this construction scenario were modeled based on the above assumptions and other assumptions for construction equipment and architectural coatings as contained in UREBMIS2007. Results of the modeling are summarized in **Table 4.11-5**. As shown, criteria pollutant emissions from the worst case construction scenario would not exceed applicable thresholds and would be less than significant. Construction emissions associated with the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan, violate applicable air quality standards or contribute substantially to an existing or projected air quality violation, lead to a cumulatively considerable net increase in a nonattainment pollutant, or expose off-Reservation sensitive receptors to substantial pollutant concentrations.

Alternative 1

Emissions of criteria air pollutants for the Alternative 1 construction scenario were modeled based on the above assumptions and other assumptions for construction equipment and architectural coatings as contained in UREBMIS2007. Results of the modeling are summarized in **Table 4.11-6**. As shown, criteria pollutant emissions from construction under Alternative 1 would not exceed applicable thresholds and would be less than significant. Thus, construction emissions associated with Alternative 1 would not conflict with or obstruct implementation of the applicable air quality plan, violate applicable air quality standards or contribute substantially to an existing or projected air quality violation, lead to a cumulatively considerable net increase in a nonattainment pollutant, or expose off-Reservation sensitive receptors to substantial pollutant concentrations.

Alternative 2:

Emissions of criteria air pollutants for the Alternative 2 construction scenario were modeled based on the above assumptions and other assumptions for construction equipment and architectural coatings as contained in UREBMIS2007. Results of the modeling are summarized in **Table 4.11-7**. As shown, criteria pollutant emissions from construction under Alternative 2 would not exceed applicable thresholds and would be less than significant. Thus, construction emissions associated with Alternative 2 would not conflict with or obstruct implementation of the applicable air quality plan, violate applicable air quality standards or contribute substantially to an existing or projected air quality violation, lead to a cumulatively considerable net increase in a nonattainment pollutant, or expose off-Reservation sensitive receptors to substantial pollutant concentrations.

TABLE 4.11-5

PROPOSED PROJECT – UNMITIGATED CONSTRUCTION AIR EMISSIONS

	(100					
CONSTRUCTION EMISSION SOURCE	VOC	NO _X	СО	SO _X	PM ₁₀	PM _{2.5}
2012 Maximum Daily Emissions	3.5 <u>6.4</u>	29 <u>60</u> .1	17.3 <u>31.1</u>	0.0	$\frac{29.6^4}{77.41^1}$	$\frac{7.2^4}{18.18^1}$
2013 Maximum Daily Emissions	9.6 <u>13.2</u>	71.5 <u>112.0</u>	71.4 <u>31.1</u>	0. <u>+0</u>	$\frac{61.0^{4}}{94.2^{1}}$	$\frac{14.9^{4}}{23.6^{1}}$
2014 Maximum Daily Emissions	51.1 <u>37.9</u>	28.2 <u>41.18</u>	39.7 <u>64.3</u>	0. <u>+0</u>	2.4 3.1	2. <u>08</u>
Thresholds	75	250	550	250	100	55
Exceeds Thresholds?	No	No	No	No	No	No

(POUNDS/DAY)

VOC = volatile organic compounds; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur;

 PM_{10} = suspended particulate matter; $PM_{2.5}$ = fine particulate matter

Refer to Appendix 11 for detailed assumptions and modeling output files.

¹ Modeling assumes watering site 2 times per day.

SOURCE: Ldn, 20121

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	001011					
CONSTRUCTION EMISSION SOURCE	VOC	NO _X	СО	SO _X	PM_{10}	PM _{2.5}
2012 Maximum Daily Emissions	3.1	27.0	14.6	0.0	22.3	5.6
2013 Maximum Daily Emissions	7.2	59.9	35.5	0.0	39.3	10.2
2014 Maximum Daily Emissions	29.9	27.1	30.8	0.0	2.0	1.8
County Thresholds	75	250	550	250	100	55
Exceeds Thresholds?	No	No	No	No	No	No

TABLE 4.11-6

ALTERNATIVE 1– CONSTRUCTION AIR EMISSIONS (POUNDS/DAY)

VOC = volatile organic compounds; NOX = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur;

PM10 = suspended particulate matter; PM2.5 = fine particulate matter

Refer to Appendix 11 for detailed assumptions and modeling output files.

¹ Modeling assumes watering site 2 times per day.

SOURCE: Ldn, 2011

TABLE 4.11-7

ALTERNATIVE 2- CONSTRUCTION AIR EMISSIONS (POUNDS/DAY)

CONSTRUCTION EMISSION SOURCE	VOC	NO _X	СО	SO _X	PM_{10}	PM _{2.5}
2012 Maximum Daily Emissions	3.4	26.7	16.5	0.0	2.3	1.7
2013 Maximum Daily Emissions	7.5	59.8	37.5	0.0	4.6	3.6
2014 Maximum Daily Emissions	6.9	19.1	17.4	0.0	1.4	1.3
County Thresholds	75	250	550	250	100	55
Exceeds Thresholds?	No	No	No	No	No	No

VOC = volatile organic compounds; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur;

 PM_{10} = suspended particulate matter; $PM_{2.5}$ = fine particulate matter

Refer to Appendix 11 for detailed assumptions and modeling output files.

¹ Modeling assumes watering site 2 times per day.

SOURCE: Ldn, 2011

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No Action Alternative

Under the No Action Alternative, no construction would occur on the Reservation. Therefore, no construction related criteria pollutant impacts would occur.

Impact 4.11(2): Odor – Construction

Proposed Project

Sources of odor during Project construction would be exhaust fumes from diesel-fueled construction equipment and haul trucks, as well as emissions associated with asphalt paving and the application of architectural coatings. These odors may be considered offensive to some individuals. However, these odors would be temporary, would disperse rapidly with distance from the source, and would not affect a substantial number of people off-Reservation. As a result, short-term construction odors at off-Reservation land uses would be less than significant.

Alternative 1

Sources of odor during construction of Alternative 1 would be similar to those under the Proposed Project. As with the Proposed Project, these odors would be temporary, would disperse rapidly with distance from the source, and would not affect a substantial number of people off-Reservation. As a result, short-term construction odors at off-Reservation land uses would be less than significant.

Alternative 2

Sources of odor during construction of Alternative 2 would be similar to those under the Proposed Project. As with the Proposed Project, these odors would be temporary, would disperse rapidly with distance from the source, and would not affect a substantial number of people off-Reservation. As a result, short-term construction odors at off-Reservation land uses would be less than significant.

No Action Alternative

Under the No Action Alternative, no construction would occur on the Reservation and, thus no odor would be generated. Therefore, no odor impact would occur.

Impact 4.11(3): Toxic Air Contaminants - Construction

Proposed Project

Construction activities would result in short-term emissions of diesel particulate matter (PM) from off-road heavy-duty diesel equipment exhaust and diesel-fueled haul trucks. Diesel PM was identified as a TAC by ARB in 1998. Health risks associated with exposure of sensitive receptors to TAC emissions are typically based on the concentration of a substance or substances in the environment (dose) and the duration of exposure to the substance(s). Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period. Project construction, however, would occur over a much shorter period of time, approximately 24 months, or 23 percent of the recommended exposure period. Use of off-road heavy-duty diesel equipment would be temporary, and diesel PM emissions would disperse rapidly with distance from the source. Thus, construction-related TAC emissions would not expose sensitive off-Reservation receptors to substantial concentrations of TACs and impacts would be less than significant.

Construction Related GHG Emissions

Construction-related emissions are based on the previous assumptions and include GHG sources such as construction equipment, material delivery trucks, and construction worker vehicles. Estimated GHG emissions are shown in **Table 4.11-8**. As shown, total construction-related GHG emissions would be 1,849.82-2,703.20 MT CO₂e. The annual and total level of GHG emissions expected to occur from construction of the Proposed Project is well below the level recommended by CEQ for further analysis.

Alternative 1

As with the Proposed Project, construction under Alternative 1 would occur over a much shorter period of time than the exposure period of concern, use of off-road heavy-duty diesel equipment would be temporary, and diesel PM emissions would disperse rapidly with distance from the source. Thus, construction-related TAC emissions under Alternative 1 would not expose sensitive off-Reservation receptors to substantial concentrations of TACs and impacts would be less than significant.

SOURCE	CO ₂ EMISSIONS (METRIC TONS)
Construction, year 2012	387<u>1,080</u>.3
Construction, year 2013	859.4<u>1,053.3</u>
Construction, year 2014	603.12<u>569.5</u>
Total	1,849.82 <u>2,703.20</u>
SOURCE: Ldn Consulting, 201 <u>2</u> +	

 TABLE 4.11-8

 PROPOSED PROJECT – CONSTRUCTION GHG EMISSIONS SUMMARY

Construction Related GHG Emissions

Construction-related emissions are based on the previous assumptions and include GHG sources such as construction equipment, material delivery trucks, and construction worker vehicles. Estimated GHG emissions are shown in **Table 4.11-9**. As shown, total construction-related GHG emissions from construction would be approximately 793.58 MT of CO_2e . The annual and total level of GHG emissions expected to occur from construction of the Alternative 1 is well below the level recommended by CEQ for further analysis.

TABLE 4.11-9					
ALTERNATIVE 1 – CONSTRUCTION GHG EMISSIONS SUMMARY					

SOURCE	CO ₂ EMISSIONS (METRIC TONS)
Construction, year 2012	127.35
Construction, year 2013	441.18
Construction, year 2014	225.05
Total	793.58

SOURCE: Ldn Consulting, 2011

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As with the Proposed Project, construction under Alternative 2 would occur over a much shorter period of time than the exposure period of concern, use of off-road heavy-duty diesel equipment would be temporary, and diesel PM emissions would disperse rapidly with distance from the source. Thus, construction-related TAC emissions under Alternative 2 would not expose sensitive off-Reservation receptors to substantial concentrations of TACs and impacts would be less than significant.

Construction Related GHG Emissions

Construction-related emissions are based on the previous assumptions and include GHG sources such as construction equipment, material delivery trucks, and construction worker vehicles. Estimated GHG emissions are shown in **Table 4.11-10**. As shown, total construction-related GHG emissions from construction would be approximately 556.26 MT of CO2. The annual and total level of GHG emissions expected to occur from construction of the Alternative 2 is well below the level recommended by CEQ for further analysis.

SOURCE	CO ₂ EMISSIONS (METRIC TONS)
Construction, year 2012	116.65
Construction, year 2013	321.61
Construction, year 2014	118.00
Total	556.26
SOURCE: Ldn Consulting, 2011	

 TABLE 4.11-10

 ALTERNATIVE 2 – CONSTRUCTION GHG EMISSIONS SUMMARY

No Action Alternative

Under the No Action Alternative, no construction activities would occur; therefore, no TACs would be generated. Therefore, no TAC impacts would occur.

Impact 4.11(4): Criteria Pollutants – Operational

Proposed Project

Uses proposed under the Proposed Project include a new $228,000 \cdot 203,000$ square foot gaming facility structure, restaurants, a fire station, and $73,300 \cdot 70,000$ square feet of gaming area. Operation of the Proposed Project would result in an increase in emissions primarily from vehicle exhaust (mobile source emissions) and natural gas combustion, landscape equipment, consumer products, and maintenance architectural coatings (area source emissions). The number of trips generated by the proposed Project is based upon the project traffic report (source). At buildout, the Proposed Project would generate 7,936 9,000 new daily trips (Kimley-Horn 2012+). To represent a conservative assessment, all new trips were assumed to occur at project opening.

Operational emissions for Project expansion buildout are based on the Project Description and assumptions using UREBMIS2007. Results of the modeling are provided in **Table 4.11-11**, Unmitigated Buildout Operational Air Emissions. As shown, criteria pollutant emissions from the Proposed Project would not exceed applicable thresholds and would be less than significant. Proposed Project operation emissions would not conflict with or obstruct implementation of the applicable air quality plan, violate applicable air quality standards or contribute substantially to an existing or projected air quality violation, lead to a cumulatively considerable net increase in a nonattainment pollutant, or expose off-Reservation sensitive receptors to substantial pollutant concentrations.

				(/
OPERATIONAL EMISSION SOURCE	voc	NO _X	СО	SO _X	PM ₁₀	PM _{2.5}
Motor Vehicles	34.1 <u>32.5</u>	4 <u>6_43</u> .0	4 <u>17.3</u> 390.56	0.5	92.5<u>83.7</u>	17.8<u>16.2</u>
Area Sources	1. <u>64</u>	1. 5 4	2. <u>87</u>	0.0	0.0	0.0
Total Unmitigated Emissions	35.7 <u>33.9</u>	4 7.5 <u>44.4</u>	4 <u>20.1</u> <u>393.3</u>	0.5	92.5 <u>83.7</u>	17.8<u>16.2</u>
County Thresholds	75	250	550	250	100	55
Exceeds Thresholds?	No	No	No	No	No	No

 TABLE 4.11-11

 PROPOSED PROJECT – OPERATIONAL AIR EMISSIONS (POUNDS/DAY)

VOC = volatile organic compounds; NOX = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur; PM10 = suspended particulate matter; PM2.5 = fine particulate matter

Refer to Appendix 11 for detailed assumptions and modeling output files.

SOURCE: Ldn, 20121

March 2012 January 2013

Uses proposed under Alternative 1 include a new 119,000 square foot facility. While fewer or smaller, operation emission sources under Alterative A would generally be the same as under the Proposed Project. The number of new daily trips generated by the Alternative 1, based upon the project traffic report, would be 3,967 (Kimley-Horn 2011). To represent a conservative assessment, all new trips were assumed to occur at project opening. Operational emissions for Alternative 1 are based on the Project Description and assumptions using UREBMIS2007. Results of the modeling are provided in **Table 4.11-12**. As shown, criteria pollutant emissions from Alternative 1 would not exceed applicable thresholds and would be less than significant. Operation emissions associated with Alternative 1 would conflict with or obstruct implementation of the applicable air quality plan, not violate applicable air quality standards or contribute substantially to an existing or projected air quality violation, lead to a cumulatively considerable net increase in a nonattainment pollutant, or expose off-Reservation sensitive receptors to substantial pollutant concentrations.

OPERATIONAL EMISSION SOURCE	VOC	NO _X	СО	SO _X	PM_{10}	PM _{2.5}
Motor Vehicles	17.1	23.0	208.6	0.3	46.2	8.9
Area Sources	0.9	0.8	2.2	0.0	0.0	0.0
Total Unmitigated Emissions	18.0	23.8	210.8	0.3	46.2	8.9
County Thresholds	75	250	550	250	100	55
Exceeds Thresholds?	No	No	No	No	No	No

 TABLE 4.11-12

 ALTERNATIVE 1 – OPERATIONAL AIR EMISSIONS (POUNDS/DAY)

VOC = volatile organic compounds; NOX = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur; PM10 = suspended particulate matter; PM2.5 = fine particulate matter

Refer to Appendix 11 for detailed assumptions and modeling output files.

SOURCE: Ldn, 2011

Uses proposed under Alternative 2 include a new 17,500 square foot facility. While fewer or smaller, operation emission sources under Alterative A would generally be the same as under the Proposed Project. The number of new daily trips generated by the Alternative 2, based upon the project traffic report, would be 1,138 (Kimley-Horn 2011). To represent a conservative assessment, all new trips were assumed to occur at project opening.

Operational emissions for Alternative 2 are based on the Project Description and assumptions using UREBMIS2007. Results of the modeling are provided in **Table 4.11-13**. As shown, criteria pollutant emissions from Alternative 2 would not exceed applicable thresholds and would be less than significant. Operation emissions associated with Alternative 2 would not conflict with or obstruct implementation of the applicable air quality plan, violate applicable air quality standards or contribute substantially to an existing or projected air quality violation, lead to a cumulatively considerable net increase in a nonattainment pollutant, or expose off-Reservation sensitive receptors to substantial pollutant concentrations.

OPERATIONAL EMISSION SOURCE	VOC	NO _X	СО	SO _X	PM_{10}	PM _{2.5}
Motor Vehicles	4.8	6.6	59.8	0.1	13.3	2.6
Area Sources	0.2	0.1	1.7	0.0	0.0	0.0
Total Unmitigated Emissions	5.0	6.7	61.5	0.1	13.3	2.6
County Thresholds	75	250	550	250	100	55
Exceeds Thresholds?	No	No	No	No	No	No

 TABLE 4.11-13

 ALTERNATIVE 2 – OPERATIONAL AIR EMISSIONS (POUNDS/DAY)

VOC = volatile organic compounds; NOX = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur;

PM10 = suspended particulate matter; PM2.5 = fine particulate matter

Refer to Appendix 11 for detailed assumptions and modeling output files.

SOURCE: Ldn, 2011

No Action Alternative

Under the No Action Alternative, no increased emissions would result from vehicle exhaust (mobile source emissions) and natural gas combustion, landscape equipment, consumer products, and maintenance architectural coatings (area source emissions). Therefore, no impacts to air quality or GHG emissions would occur.

Impact 4.11(5): CO Hotspots - Operational

Proposed Project

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. Under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. Prior to 1995, the SDAB was nonattainment for the 8-hour CO NAAQS; however, by 1995, CO levels in the air basin met the federal air quality test for attainment. The air basin was subsequently designated as a CO maintenance area in 1998 under NAAQS and has a federally approved CO maintenance plan (ARB 2005). Although the air basin is within a CO maintenance area, there is still potential for localized concentrations of CO and CO hotspots.

An appropriate qualitative screening procedure is provided in the procedures and guidelines contained in *Transportation Project-Level Carbon Monoxide Protocol* (Caltrans CO Protocol) to determine whether a project poses the potential for a CO hotspot (UCD ITS 1997). The Caltrans CO Protocol is an EPA approved methodology and meets the requirements of the CAA and the CEQA. According to the Caltrans CO Protocol, a project within an area with an approved CO maintenance plan may be deemed "satisfactory" if it can be determined that it does not lead to a substantial increase in CO emissions. For projects involving more than one intersection or roadway segment, CO emissions must not increase in any of them individually.

A project within an area with an approved CO maintenance plan would be considered satisfactory and have less than significant for CO hotspots if it:

- 1. Would not significantly increase the percentage of vehicles in cold start modes by 2% or more; and
- 2. Would not significantly increase traffic volumes by more than 5% over existing volumes and traffic speeds remain the same; and
- 3. Improves traffic flow, defined for intersection segments as an increase in average speed and as a decrease in average delay (for the purposes of this impact analysis, only

intersection segments operating at Level of Service (LOS) E or F with and without the project are evaluated); and

4. Does not move traffic closer to a receptor site.

According to the project traffic report, with implementation of proposed mitigation measures, all intersections would operate at LOS D or better under the near term conditions with the Proposed Project. Therefore, the Proposed Project would not result in the creation of a new, or contribute to an existing, CO concentration violation and would result in a less than significant impact on local air quality.

Alternative 1

As described under the Proposed Project, under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. According to the project traffic report, with implementation of proposed mitigation measures, all intersections would operate at LOS D or better under the near term conditions with Alternative 1. Therefore, Alternative 1 would not result in the creation of a new, or contribute to an existing, CO concentration violation and would result in a less than significant impact on local air quality.

Alternative 2

As described under the Proposed Project, under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. According to the project traffic report, with implementation of proposed mitigation measures, all intersections would operate at LOS D or better under the near term conditions with Alternative 2. Therefore, Alternative 1 would not result in the creation of a new, or contribute to an existing, CO concentration violation and would result in a less than significant impact on local air quality.

No Action Alternative

Under the No Action Alternative, no traffic would be added to area roadways; therefore, no CO impacts would occur.

Impact 4.11(6): Toxic Air Contaminants - Operational

Proposed Project

The Tribe would obtain any necessary operating permits from the USEPA to ensure proposed new or modified commercial and industrial equipment and operations comply with the federal CAA requirements. USEPA requires that new and/or modified commercial and industrial equipment must be evaluated in accordance with applicable federal New Source Review (NSR) rules⁴. If such equipment will emit 10 or more pounds per day of VOC, NOx, SOx, or PM10, it must employ the Best Available Control Technology (BACT) to reduce emissions⁵. For all sources that emit more than 100 tons per year of any regulated air contaminant and certain other specified sources⁶ a Title V permit is required.

While, the Proposed Project does not include any significant new sources, such as a central energy plant, the Proposed Project would include a central cooling and heating system, which is expected to include a boiler that would utilize natural gas for external combustion, as well as backup diesel-powered generators. The Proposed Project would also include commercial uses that may generate stationary sources of TACs such as restaurants with char broilers and fuel dispensers for casino vehicles.

These uses would be subject to the federal government's NSR and may require permits to ensure compliance with the federal CAA requirements. Where emissions would be 10 or more pounds per day of VOC, NOx, SOx, or PM10, BACT would be required to reduce emissions. For all sources that emit more than 100 tons per year of any regulated air contaminant, a Title V permit would be required. Operating permits would incorporate measures that would reduce potential TAC emissions and associated health risks from Project facilities to within applicable standards. With compliance with applicable rules and regulations, operation-related TAC emissions would not expose sensitive off-Reservation receptors to substantial concentrations of TACs and impacts would be less than significant.

Alternative 1

Alternative 1 would include a central cooling and heating system, which is expected to include a boiler that would utilize natural gas for external combustion, as well as diesel-powered backup generators. Alternative 1 would also include commercial uses that may generate

 $^{^4}$ / The NSR permitting program, established in Congress in 1977, ensures that air quality is not significantly degraded from the addition of new and modified factories, industrial boilers and power plants. In areas with unhealthy air, NSR assures that new emissions do not slow progress toward cleaner air.

toward cleaner air. 5 / Best Available Control Technology is required under the federal Prevention of Significant Deterioration (PSD) program of the Clean Air Act: 40 C.F.R. 52.21(b)(50).

⁶ / Title V applies to each pollutant subject to either a provision in the Clean Air Act or regulation adopted by EPA under the Clean Air Act that requires actual control of emissions of that pollutant (USEPA 2008).

stationary sources of TACs such as char broilers and fuel dispensers. As discussed earlier, these uses would be subject to the federal government's NSR and may require permits to ensure compliance with the federal CAA requirements. With compliance with applicable rules and regulations, operation-related TAC emissions would not expose sensitive off-Reservation receptors to substantial concentrations of TACs and impacts would be less than significant.

Alternative 2

Alternative 2 would include a central cooling and heating system, which is expected to include a boiler that would utilize natural gas for external combustion, as well as diesel-powered backup generators. Alternative 2 would also include commercial uses that may generate stationary sources of TACs such as char broilers and fuel dispensers. As discussed earlier, these uses would be subject to the federal government's NSR and may require permits to ensure compliance with the federal CAA requirements. With compliance with applicable rules and regulations, operation-related TAC emissions would not expose sensitive off-Reservation receptors to substantial concentrations of TACs and impacts would be less than significant.

No Action Alternative

Under the No Action Alternative, no TACs would be generated from operational activities. Therefore, no operational TAC impact would occur.

Impact 4.11(7): Odor - Operational

Proposed Project

The Proposed Project proposes a wastewater treatment plant, which is typically considered a potential odor source. However, the proposed wastewater treatment system and storage system would be a closed (sealed) system located underground and no odor issue is anticipated. The MVC would be located on the roof and would vent odorless steam from the wastewater vaporization process. As the project would not create objectionable odors affecting a substantial number of people off-Reservation, impacts from odors would be less than significant.

Alternative 1

As with the Proposed Project, Alternative 1 proposes a wastewater treatment plant. However, as with the Proposed Project, the wastewater treatment system and storage system would be a closed (sealed) system located underground and no odor issue is anticipated. The MVC would be located on the roof and would vent odorless steam from the wastewater vaporization process. As the project would not create objectionable odors affecting a substantial number of people off-Reservation, impacts from odors would be less than significant.

As with the Proposed Project, Alternative 2 proposes a wastewater treatment plant. However, as with the Proposed Project, the wastewater treatment system and storage system would be a closed (sealed) system located underground and no odor issue is anticipated. The MVC would be located on the roof and would vent odorless steam from the wastewater vaporization process. As the project would not create objectionable odors affecting a substantial number of people off-Reservation, impacts from odors would be less than significant.

No Action Alternative

Under the No Action Alternative, no gaming facility would be constructed. Operational odor would not be generated from operational activities; therefore, no odor impact would occur.

Impact 4.11(8): GHG Emissions - Operational

Proposed Project

Greenhouse Gas (GHG) emissions would be generated throughout the operational life of the Proposed Project via both mobile and area source emissions. Mobile emissions would be related to increased vehicle trips resulting from both employee and patron trips. Area source emissions would occur from stationary sources such as uses within the gaming facility, water conveyance, wastewater treatment plant/MVC and solid waste generation. Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4 , a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N₂O is produced naturally in the soil during the microbial processes and is mainly contributed to agricultural processes, nylon production, fuel-fired power plants, nitric acid production and vehicle emissions. To simplify greenhouse gas calculations, both CH_4 and N₂O are converted to equivalent amounts of CO_2 and are identified as CO_{2e} . In other words, CO_{2e} is an equivalent volume or mass of CO_2 converted from global warming potentials of other gases that may cause equivalent warming.

Transportation Related GHG Emissions

Emissions from daily trips were quantified utilizing emission levels reported in grams/mile from the EMFAC2007 emission model. Vehicle emissions were then calculated using URBEMIS and converted to carbon dioxide equivalent (CO_{2e}) per year. The default setting for vehicle fleet mix was used as the Proposed Project would generate VMTs mostly from workers and patrons commuting to and from the project site. The fleet mix also incorporates buses and heavy truck trips. The Proposed Project would generate 10,325,9,000 ADT at full

build out. Emissions due to new vehicle trips are estimated to be $\frac{8,868,7,730}{2}$ metric tons (MT) of CO_{2e} per year.

Electricity Related GHG Emissions

The generation of CO_2 , CH_4 , and N_2O from electricity is calculated utilizing methodologies within the California Climate Action Registry General Reporting Protocol Version 3.1-January 2009 (Registry Protocol). The Registry Protocol Electricity Emission Factors in pounds of GHG per kilowatt-hour for CO_2 , CH_4 , and N_2O are 0.72412, 0.0000302 and 0.0000081, respectively. The Proposed Project is expected to use up to 6,600,000 KWh per year of electricity for the gaming floor, restaurants, retail shops, wastewater treatment plant and the operation of the mechanical vapor compressor (MVC). This would generate approximately 2,177 MT of CO_{2e} per year.

Water Usage Related GHG Emissions

Water demand from the Proposed Project would indirectly utilize energy associated with the preparation and conveyance of clean water to the project site from the Otay Water District. It is estimated that indirect electricity for water conveyance requires 12,700 kilowatt hours (kWh) per Million Gallons (MG) (Source: http://www.greenbuildingadvisor.com/ book/export/html/18037). Water demand estimated that the proposed Project would require 12,662,580 gallons each year, which would require 160,815 kWh of electrical energy to supply the expected yearly. This energy consumption would generate approximately 53 MT of CO_{2e} per year.

Wastewater Treatment Related GHG Emissions

An additional component of GHGs comes from the natural biochemical breakdown of waste within the water. As water is treated initially, suspended solids are allowed to settle to the bottom while cleaner water on top is siphoned off leaving wastewater sludge. The sludge is then collected where it can be further broken down within anaerobic digesters that are sealed off from ambient air sources. The waste then is further broken down by bacteria creating methane (CH_4) and to a lesser extent Oxides of Nitrogen.

 NO_X (CO_{2e}) emissions from wastewater treatment are estimated to be roughly 22 percent of CH_4 (CO_{2e}) (Source: Draft Methane and Nitrous from Non-Agricultural Sources April 2005). Based on the Project's anticipated water usage of 12,662,580 gallons or 47,933,082 liters of water per year and utilizing California Air Pollution Control Officers Association (CAPCOA's) baseline CO_{2e} approximation, that for each liter of wastewater the Project would produce 2.02 x 10-6 Metric Tons of CO_{2e} . It is estimated that the project would produce 97 MT CO_{2e} from CH_4 . Utilizing the 22% ratio of NO_X to CH_4 , NO_X generation could be as high as 21 MT. Therefore, the proposed 200,000 gpd wastewater treatment plant is estimated to produce approximately 118 MT CO_{2e} per year.

Solid Waste Related GHG Emissions

Solid waste generated from the Proposed Project would ultimately be discarded as trash and then deposited into a landfill. The decomposition of organic matter such as food, paper, yard trimmings and wood are anaerobicly digested by bacteria, which primarily produces GHG's as a bi-product. However, organic decomposition occurs at different rates and is a function of the material content. The Environmental Protection Agency (EPA) published various emission rates with units of Metric Tons of Carbon Dioxide Equivalent per Ton (Source: Solid Waste management and Greenhouse Gases; A Life-Cycle Assessment of Emissions and Sinks). Solid waste generated from the Proposed Project is estimated to generate 1,984 tons of trash each year. Utilizing the EPA emission factors, the CO_{2e} emissions are expected to be approximately 239 MT per year.

Thus, total overall operational GHG emissions resulting from the Proposed Project are estimated to be approximately $\frac{11,455}{10,407}$ -MT CO_{2e} per year. Left unmitigated, this would be considered a significant impact.

Alternative 1

GHG emissions would be generated throughout the operational life of Alternative 1. GHG emissions would be generated by mobile sources associated with increased employee and patron vehicle trips to and from the project site. Area source emissions would occur from stationary sources such as uses within the gaming facility, water conveyance, wastewater treatment plant/MVC and solid waste generation.

Utilizing the same mythologies as for the Proposed Project, Alternative 1 would generate 4,995 ADT at build out. Emissions due to new vehicle trips are estimated to be 4,274 MT CO_{2e} per year. The Electricity Usage for Alternative 1 is expected to use up to 4,500,000 KWh per year which would be expected to generate approximately 1,484 MT CO_{2e} per year. Water generation rates for Alternative 1 and indirect energy consumption would generate approximately 28 MT CO_{2e} per year. Solid Waste generated from Alternative 1 would be expected to produce 1,042 tons of trash each year and have CO_{2e} emissions of approximately 126 Metric Tons per year. The proposed 100,000 gpd wastewater treatment plant would be expected to produce approximately 59 MT CO_{2e} per year. The total operational GHG emissions resulting from Alternative 1 would be approximately 5,971 MT CO_{2e} per year. Left unmitigated, this would be considered a significant impact.

GHG emissions would be generated throughout the operational life of Alternative 2. GHG emissions would be generated by mobile sources associated with increased employee and patron vehicle trips to and from the project site. Area source emissions would occur from stationary sources such as uses within the gaming facility, water conveyance, wastewater treatment plant/MVC and solid waste generation.

Utilizing the same mythologies as for the Proposed Project, Alternative 2 would generate 1,189 ADT after full build out. Vehicle emissions of full implementation of the Proposed Project were then calculated using URBEMIS. Emissions due to new vehicle trips are estimated to be 1,035 MT CO_{2e} per year. The Electricity Usage for Alternative 2 is expected to use up to 1,000,000 KWh per year which would be expected to generate approximately 330 MT CO_{2e} per year. Water generation rates for Alternative 2 and indirect energy consumption would generate approximately 5 MT CO_{2e} per year. Solid Waste generated from Alternative 2 would be expected to produce 275 tons of trash each year and have CO_{2e} emissions of approximately 33 Metric Tons per year. The proposed 25,000 gpd wastewater treatment plant would be expected to produce approximately 15 MT CO_{2e} per year.

Thus, total operational GHG emissions resulting from Alternative 2 would be approximately 1,418 MT CO_{2e} per year. Left unmitigated, this would be considered a significant impact.

No Action Alternative

Under the No Action Alternative, no gaming facility would be constructed. Operational GHG would not be generated from operational activities; therefore, no operational GHG impact would occur.

4.11.3 MITIGATION

Improvement Measures 4.11(1): Criteria Pollutants – Construction

Proposed Project, Alternative 1, and Alternative 2

- A. While no significant impacts would occur, it is recommended that the following improvement measures be incorporated into the project to minimize the emission of fugitive dust, PM10, and PM2.5:
 - Minimize land disturbance,
 - Use watering trucks to minimize dust; watering should be sufficient to confine, dust plumes to the project work areas,
 - Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes,

- Cover all trucks hauling dirt when traveling at speeds greater than 15 miles per hour.
- Stabilize the surface of dirt piles if not removed within 2 days,
- Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.
- Minimize unnecessary vehicular and machinery activities,
- Sweep paved streets at least once per day where there is evidence that dirt has been carried on to the roadway,
- Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities, and
- Remove unused material.

Same as Proposed Project.

Alternative 2

Same as Proposed Project.

No Action Alternative

No mitigation is necessary.

Mitigation 4.11(2): Odor – Construction

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2:

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.11(3): Toxic Air Contaminants – Construction

Proposed Project

No mitigation is necessary.

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.11(4): Criteria Pollutants – Operational

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.11(5): CO Hotspots – Operational

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.11(6): Toxic Air Contaminants – Operational

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.11(7): Odor Operational

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.11(8): GHG Operational

Proposed Project, Alternative 1 and Alternative 2

A. <u>GHG emissions associated with the Proposed Project would be reduced approximately 30 percent from BAU conditions by C</u>combining all regulatory measures such as Pavley_and Low Carbon Fuel Standards (which results in a 30 percent reduction in vehicle emissions), Uutility reduction goals required by the State and recycling requirements under AB 341, along with design features described in Section 2.0 Proposed Project and Alternatives (such as green roof technology) and the following mitigation measures. The reduction would result in a less than significant impact to GHG emissions (see Appendix 11 GHG Generator and Estimated</u>)

<u>*Reductions*</u>):, GHGs would be reduced from the Business as Usual levels to a less than significant level.

- Install solar panels on the roof, where possible, in areas not being utilized for the green roof technologies,
- Provide shuttle and bus services to and from the project to reduce vehicle trips and miles traveled,
- Flare off and burn CH_4 produced at the wastewater treatment plant to reduce CH_4 emissions up to 95%,
- Utilize low flow water devices High Efficiency Toilets (HET) and with specifications meeting or exceeding standards set forth by the EPA,
- Install low energy utilities (i.e., lighting and appliances) to increase building efficiency and reduce power consumption,
- Promote employee and patron ridesharing to help reduce vehicle trips traveled, and
- -___Install dedicated parking stalls and charging stations for electric vehicles.

The Proposed Project would reduce GHG emissions over 3,000 MT per year from BAU conditions with the implementation of the reduction strategies identified above compared. In total, implementation of these measures compared to would result in an overall reduction of GHG emissions associated with the Proposed Project by approximately 30% compared to BAU conditions.



PUBLIC SERVICES
4.12 PUBLIC SERVICES

4.12.1 ENVIRONMENTAL SETTING

Water Supply

Water in San Diego County comes primarily from imported sources; local surface water and groundwater resources are inadequate to supply the population. The water retailer nearest to the project area is the Otay Water District, which is a member agency of the San Diego County Water Authority (SDCWA), which is in turn a member agency of the Metropolitan Water District of Southern California (MWD). The MWD receives water from the Colorado River and from the Sacramento River Delta through the State Water Project. SDCWA recently agreed to a water transfer with Imperial Irrigation District for additional Colorado River water.

The Otay Water District service area encompasses 129 square miles, and serves the communities of southern El Cajon, La Mesa, Rancho San Diego, Jamul, Spring Valley, Bonita, eastern Chula Vista, and the Otay Mesa along the international border with Mexico. The Otay Water District currently obtains its water supply from SDWCA's Otay FCF (Flow Control Facility) No. 11 on Pipeline No. 4 of the Second San Diego Aqueduct. The water supply is conveyed by gravity from FCF No. 11 through 42 inch and 36-inch transmission pipelines to regulatory reservoirs. The water is pumped and stored through a series of pump stations and reservoirs until it reaches Jamul (1296 pressure zone), where it is stored in 3 reservoirs with a combined capacity of 5.03 million gallons. This system delivers flow capacities of 260 to 860 gallons per minute (gpm).

The Otay Water District's Master Plan documents the District's effort to model and anticipate future water demands of its customers. The Master Plan takes into account current transfer and storage facilities, future demand due to build out, and future infrastructure build out. According to the current (2010) Master Plan, the existing emergency water reserves are sufficient to serve the 1296 pressure zone. The Master Plan requires that 10 days of potable water service be maintainable in the event that water supplies from pipeline No. 4 are shut off. The ultimate project water storage requirements for the 1296 pressure zone is 5.71 million gallons. The current capacity for total reservoir storage volume is 5.03 million gallons. This storage deficit can be met with transfer from the adjacent pressure zone 940, which has excess capacity. Furthermore, an additional 10.0-million gallon reservoir will be provided to the 1296 pressure zone by 2016 (during Phase implementation of the District's Master Plan).

Current pumping stations in the 1296 pressure zone are also adequate to meet the pump and pressure requirements for the ultimate buildout of this service area (the town of Jamul and the Reservation). The Otay Water District sums up its capacity in this quote from the Master Plan: "The projected ultimate maximum day demand for the pressure zones to be served by the 1296-1 PS totals 3,017 gpm and it is planned that this demand will be met by expansion of the existing 1296-1 PS. The firm

pumping capacity of the existing 1296-1 PS is 3,300 gpm and is adequate to meet the ultimate needs for this area." (p. 4-74, Otay Water District 2010).

Note that the Master Plan's ultimate storage requirements and pumping requirements were designed for the residential build-out of Village 14 and Village 16 assuming that 960 dwelling units would have been constructed and would be utilizing District services. In reality, Village 14 and 16 are large tracts of land near the Reservation that have been purchased by the California Department of Fish and Game and deed-restricted as wildlife preserves. Therefore, the projected ultimate consumption values are conservative due to the planned usages being decreased by open-space designations.

The Otay Water District distributes high quality water that meets or exceed federal and state requirements for safe drinking water (Otay Water District, 2011a). No additional treatment is recommended for distribution of this water to the various project facilities. Water quality information on Otay's drinking water is available from annual Consumer Confidence Reports published by the Otay Water District (Otay Water District, 2011a).

The Otay Water District currently maintains 2 water mains in the area of the project site: 12-inch water main in Melody Road and a 16-inch water main under SR 94. Currently, the Reservation receives water through a 12-inch diameter main from the 16-inch main under SR 94. The Proposed Project would tap into the existing 12-inch main under Reservation Road with a 6-inch PVC domestic potable water line with a meter and backflow prevention device. The existing 12-inch diameter main would be converted to use for fire suppression.

Wastewater Service

The project area is not within a wastewater treatment service district, and no treatment facilities currently exist on the property. The Otay sewage treatment area ends approximately 1/2 mile east of the junction of State Route 94 and Jamacha Rd (Route 54) or approximately two miles west of the project site on Melody Road (Ripperger, 2001; Coburn-Boyd, 2011). According to the San Diego County Public Works Department, they do not treat wastewater in the Jamul area. Residences in the town of Jamul are all on septic tanks (Ripperger, 2001; Coburn-Boyd, 2011). The 15 residential lots and the Tribal office on the Reservation previously utilized septic systems. These abandoned appurtenances (tanks, distribution lines, leach fields, etc.) would be removed before construction commences on the Proposed Project or Alternatives.

The Otay Water District operates the Ralph W. Chapman Water Recycling Facility in Rancho San Diego just south of SR 94 at the Steele Canyon Bridge (Otay Water District, 2011b). The District provides wastewater collection and treatment services to over 5,000 homes in the Jamacha Basin. The treatment facility produces up to 1.3 million gallons per day of tertiary-treated reclaimed water, which is distributed into the eastern Chula Vista area and used to irrigate landscapes in golf courses, schools, public parks, and along roadways (Coburn-Boyd, 2011; Otay Water District, 2011).

Solid Waste Service

California Integrated Waste Management Act

The management of non-hazardous solid waste in San Diego County is mandated by state law and guided by policies at the state and local levels. In 1989 the State of California enacted Assembly Bill (AB) 939, the California Integrated Waste Management Act, whose purpose is to: reduce, recycle, and reuse solid waste generated in the State to the maximum extent feasible; improve regulation of existing solid waste landfills; ensure that new solid waste landfills are environmentally sound; streamline permitting procedures for solid waste management facilities, and specify the responsibilities of local governments to develop and implement integrated waste management programs. AB 939 requires that all local jurisdictions, cities, and counties divert 50 percent of the total waste stream from landfill disposal. Each local jurisdiction must demonstrate compliance by instituting source reduction programs.

Local solid waste management practices and programs are summarized in the County of San Diego Integrated Waste Management Plan (CIWMP). The CIWMP consists of a Summary Plan and the following four elements: 1) a Source Reduction and Recycling Element, 2) a Household Hazardous Waste Element, 3) A Nondisposal Facility Element, and 4) a Countywide Siting Element (CSE). The County was required to prepare a CSE that demonstrates a remaining disposal capacity of at least 15 years to serve all the jurisdictions within the County.

The San Diego region diverted 55% of its solid waste in 2006 (the most recent reporting year). Unincorporated San Diego County, which includes Jamul, diverted 54% of its solid waste in 2006. Both of these diversion rates are above the mandatory 50% diversion rate required by AB 939 (California Integrated Waste Management Board, 2011).

Local Solid Waste Collection and Disposal

Waste Management, Inc. provides solid waste collection for the project area. Weekly residential and commercial trash pick-up service is provided, and the collected waste is hauled to the Otay landfill and the Sycamore landfill. The Jones Disposal Company (a subsidiary of Waste Management, Inc.) currently provides solid waste service to the Reservation. The Reservation's solid waste is currently shipped to a transfer station in El Cajon, where recyclable materials are removed, and thus reducing the amount of waste sent to one of the following Class III landfills: 1) the Otay Landfill or 2) the Sycamore Sanitary Landfill. These landfills are owned and operated by Universal Refuse Removal (a subsidiary of Waste Management, Inc.) (Allverez, 2011).

The transfer station is located in the City of El Cajon, and can handle a throughput of 2,000 tons of solid waste per day. The transfer station currently receives about 1,500 tons of solid waste per day (San Diego County, 2008). The Otay Landfill, located in the City of Chula Vista, began operations in 1963 and was last expanded in 2001 to increase capacity of solid waste received from 3,800 to 5,830

tons per day. The approximate life expectancy of the Otay Landfill would be 2021, when it is expected to reach capacity. The Sycamore Sanitary Landfill, located in the City of San Diego, has a permitted maximum capacity of 3,965 tons per day. The approximate life expectancy of the Sycamore Sanitary Landfill would be 2031, when it is expected to reach capacity (CIWMB, 2002a; CalRecycle, 2011a,b).

Electricity, Natural Gas, and Telecommunications

Electricity is supplied by the San Diego Gas and Electric Company (SDG&E). SDG&E serves the Jamul area through one circuit via 12 kilovolt above ground power lines along SR 94. This circuit at the Reservation is rated to carry approximately 10 megawatts.

There is no natural gas service to the Reservation or the surrounding area. The nearest gas line is approximately six miles northwest of the project area (Spiedel, 2011). Residences in the Jamul region have individual propane storage tanks, serviced by private propane distribution companies.

Pacific Bell provides all basic telecommunications services, including cellular communications, to the project area. Pacific Bell currently has above ground phone lines along State Route 94, which provides service to the homes in the area. Pacific Bell provides service for local toll calls but does not provide long distance service. Area residents have the option of long-distance service from a wide variety of companies that include MCI, Sprint, and AT&T. Cox communications provides cable TV to the project area.

Law Enforcement

The San Diego County Sheriff's Department is the chief law enforcement agency in the County. The Sheriff's Department is comprised of approximately 4,000 employees, both sworn officers and professional support staff. The Sheriff's Department provides general law enforcement and jail functions in a service area of approximately 4,200 square miles. In addition, the Sheriff's Department provides specialized regional services to the entire County, whether they are needed in incorporated cities within the County or in the unincorporated areas not serviced by a city law enforcement agency (San Diego County Sheriff's Department 2011).

The Law Enforcement Services Bureau of the Sheriff's Department employs 1,317 personnel (Barletta 2011), of which 782 are deputy sheriffs. The Bureau handles law enforcement services in both the unincorporated area of the County and the nine cities that contract for law enforcement services with the Department. Barletta (2011) estimated that the population directly served by the Sheriff's Department in 2011 was approximately 889,900 people; therefore, the Department provides 1 deputy for every 1,137 people. The deputy sheriffs are assigned to patrol, traffic, detective and other necessary support functions.

The San Diego County Sheriff's Department provides general public safety and law enforcement service for the area of the Proposed Project. The services would be provided from the Lemon Grove Station, with jurisdiction over the Lemon Grove Command Area. That station provides service to a portion of the unincorporated area (115,000 people) and has contract services with the City of Lemon Grove (25,000 people). The Jamul/Dulzura communities contain approximately 168 square miles and have a combined population of 10,159 citizens. The Jamul area currently consists of nine beat areas and is patrolled twenty-four hours a day by a one-person patrol unit from the Lemon Grove Station. The southern portion of the town of Jamul is designated Beat # 631 and the Reservation is designated a separate beat—Beat #635 (Porath, 2011). The average response time to calls within Beat 631 during fiscal year 2010/2011 was 17.4 minutes for priority calls and 66.7 minutes for non-priority calls. The statistics for Beat #635 are almost identical (Porath, 2011).

The California Highway Patrol is the chief law enforcement agency for traffic related issues on public highways and roads leading up to the project area. The station that services the Jamul area is located in the City of El Cajon. The El Cajon Station serves an extensive region of San Diego County from the border of the incorporated areas of the City of San Diego, El Cajon, Santee and Poway east to the northeastern, eastern, and southern borders of the County. Approximately 93 officers serve this area; 11 of these officers are on special duty, and 17 officers are in resident post in remote locations of the County including Julian, Ramona, Borrego Springs, and Jacumba. This leaves approximately 65 officers over three shifts to patrol this area. Actual staffing is more accurately placed at 55-60 officers once officers on sick or injury leave are counted (Hagler 2003; Salacup 2011).

California is a Public Law 280 State that allows for state criminal law enforcement jurisdiction within the Reservation; however, this jurisdiction does not include regulatory civil law authority. Depending on the crime (pursuant to Public Law 280), U.S. Marshals may provide support in specified situations.

Fire Protection and Emergency Medical Services

The California Department of Forestry and Fire Protection (CDF), under contract to the BIA, provides wildland fire protection and responds to all wildfires. The nearest CDF stations to the project site are located in Jamul, Dulzura, and El Cajon. Some of these stations are only staffed during what is known as the "fire season"—the months from May to October (Harris 2011). The staff provided at the CDF stations is set by the State of California.

The San Diego Rural Fire Protection District covers 720 square miles in the southeastern portion of San Diego County. The District consists of 14 stations that protect primarily residential areas, and responds to calls for fire and medical emergencies. The majority of responses are for medical emergencies. The fire stations consist of both paid and volunteer staff. The closest station to the project site is the Jamul Station, located on Highway 94 east of the Reservation. The Reservation currently receives fire protection from both the California Department of Forestry and the San Diego Rural Fire Protection District. The San Diego Rural Fire Protection District station typically provides

first response to any fire within the Reservation. The new Jamul Fire Station allows for very quick emergency response times ranging from one to five minutes (Bowers, 2002; Harris, 2011).

Several hospitals within San Diego County provide medical services. The nearest hospital to the project site that would provide standard medical aid is Grossmont Hospital. The nearest hospitals to the site that would provide trauma care are: 1) Scripps Mercy Hospital, 2) UC San Diego Medical Center, and 3) Sharp Memorial Hospital (Chavez, 2011). People requiring emergency medical attention would have the option to be transported to any of these hospitals within the confines of San Diego County's triage system, in which patients are directed to the most appropriate facility based on illness or injury. The ambulance service provided in the area of the project site is a joint venture between the San Diego Rural Fire Protection District and American Medical Response; Mercy Air provides emergency air transportation (Bowers 2002; Harris 2011).

4.12.2 ENVIRONMENTAL CONSEQUENCES

Significance Criteria

A project will be considered to have a significant adverse environmental effect related to public services systems or utilities if:

- The project would result in substantial adverse physical impacts associated with the provision of facilities such as fire protection, law enforcement, or emergency response, or create the need for new or physically altered governmental facilities in order to maintain acceptable service.
- The project's demand for utilities such as water supply, wastewater treatment, or electricity cannot be met with current or planned supplies and infrastructure and/or requires significant alterations to existing utility infrastructure.

Impact 4.12(1): Water Supply

Proposed Project

The following water demand analysis is based on information included in the Subarea Master Plan for Potable Water Service (Martin and Ziemniak, 2006) and the wastewater analysis performed by Dexter Wilson Engineering (2011), included as **Appendix 5 and 2**, respectively. In general, water supply to a proposed development is roughly equivalent to wastewater flows from the proposed development. There are, however, some significant exceptions to this rule. Water that is used for landscape irrigation for instance, is not returned to the wastewater stream, but is instead lost through evaporation, plant transpiration, or percolation through soils. There may also be significant seasonal increases in wastewater flows due to inflow and infiltration. For the purposes of this analysis it was assumed that because all of the facilities, including piping, would be new, system losses and inflow and infiltration would be negligible. Average day potable water demand was estimated assuming that 95% of the water use would ultimately lead to the wastewater system. Thus, the water demands for the gaming facility are estimated using the average wastewater flow plus an additional 5% (Martin and Ziemniak 2006). Water systems must also be designed to meet hourly variations in water demand, such as maximum day demand and peak hour demand. Based on previous gaming facility designs, peaking multiplication factors of 2.0 and 3.0 were used to estimate maximum day and peak hour demand, respectively. These peaking factors are consistent with the American Water Works Association guidelines for water system design. Total water demand volume estimates for the Proposed Project are summarized in Table 4.12-1; design water demand flow rates for determining water supply requirements and for sizing water distribution facilities are also summarized. These estimates are made without consideration of use of reclaimed water for irrigation (1,230 gpd), green roof (2,460 gpd), or cooling towers (20,000 gpd). All of the water associated with irrigation, green roof and cooling towers would be supplied through reclamation and, as such, would not result in additional water demands from the Otay Water District. The gaming facility would require an average water supply volume of approximately 86,730 gpd, and a peak hour demand flow rate of 181 gallons per minute (gpm). The prior adopted Subarea Master Plan for Potable Water Service to the Jamul Reservation (Appendix 5) assumed a buildout average day demand of 143 gpm and peak hour demand of 428 gpm before reclamation. Therefore, the Proposed Project, as revised from the prior 2006 design, reduces average and peak daily potable water demand on the Otay Water District by 58%.

TABLE 4.12-1
ESTIMATED POTABLE WATER DEMANDS FOR THE PROPOSED PROJECT AND
ALTERNATIVES (WITHOUT RECLAMATION)

PROJECT COMPONENT	Average. Wastewater Flow (gpd)	Average Water Day Demand (gpd)	Water Day Demand (gpm)	Maximum Day Demand (gpm)	Peak Hour Demand (gpm)	
Proposed Project						
Gaming Facility	82,600	86,730	60	120	181	
Alternative 1						
Gaming Facility	40,250	42,263	29	59	88	
Alternative 2						
Gaming Facility	11,385	11,954	8	17	25	
No Action Alternative						
	n/a	n/a	n/a	n/a	n/a	
SOURCE: Dexter Wils	on Engineering Inc	2011: FDS Inc. 201	1			

As mentioned above, reclaimed water from the wastewater treatment plant (WWTP) would be used for various purposes. Reclaimed (or recycled) water in this document means wastewater that has been treated sufficiently to meet the California Department of Health Services' (DHS) comprehensive recycled water regulations that define treatment processes, water quality criteria, and treatment reliability requirements for public use of recycled water. These regulations are contained in Title 22, Division 4, Chapter 3, of the California Code of Regulations, commonly referred to as Title 22. Title 22 prescribes recycled water criteria and divides them into several categories based upon the extent of public access or risk of exposure. In general, Title 22 regulations are more stringent for uses with high potential for public contact and less stringent for uses with low potential for public contact.

Depending on the use, Title 22 establishes four levels of treatment required for recycled water: undisinfected secondary, undisinfected secondary-23, undisinfected secondary-2.2, and disinfected tertiary. The proposed wastewater treatment plant would treat to the disinfected tertiary level, the highest level of treatment categorized by Title 22. This category of recycled water includes secondary effluent that has undergone tertiary treatment and has been disinfected to a level such that the median coliform bacteria in the water does not exceed a coliform bacterial density of 2.2 Most Probable Number per 100 mL. Title 22 defines the tertiary treatment process as wastewater that has been oxidized, coagulated, clarified, and filtered. The recycled water turbidity should not exceed a turbidity level of 2 nephelometric turbidity units (NTU) on average, should not exceed 5 NTU more than 5% of the time during any 24-hour period, and should never exceed 10 NTU. Approved uses of tertiary recycled water include: irrigation of food crops, parks and playgrounds, residential landscaping, pasture, and vineyards; supply for non-restricted recreational impoundments and fish hatcheries; toilet flushing; and fire suppression.

If recycled water is to be beneficially re-used, demineralization would be required to prevent the effluent form continually degrading through each use cycle. To be re-used in the toilets/urinals and cooling towers, a portion of the effluent would be demineralized so that the blended effluent has a total dissolved solids concentration of 500 mg/L or less. The Proposed Project's recycled water intended for re-use in toilets and cooling towers would be demineralized as needed by reverse osmosis or electrodialysis reversal. A brine waste stream of 10 to 20% salinity would need to be disposed.

Recycled water would be used for irrigation of landscape and green roofs, cooling tower, and toilet and urinal flushing within the gaming and hotel. All facilities would be double plumbed. An estimated 60% of the water used by gaming patrons would be used for toilet flushing as shown in **Table 4.12-2**. Water uses with potable applications would remain on potable water service. The revised, reduced water demand volumes and flow rates, assuming the use of recycled water, are presented in **Table 4.12-2**. By using recycled water, the total water

demand volume is decreased from 86,730 gallons per day to 34,692 gallons per day and the peak hour day demand flow rate for design capacity is decreased from 181 gpm to 72 gpm. These figures fall well within the Otay District water demand assumed in the Subarea Master Plan (**Otay Water District, 2010**) for the Jamul Reservation, which were designed without consideration for reclaimed water.

The maximum day demand for the Proposed Project with reclamation is 48 gpm (0.07 million gallons per day). The current capacity for total reservoir storage volume for the 1296 Pressure Zone is 5.03 million gallons, according to the Otay Water District Master Plan (Otay Water **District**, 2010). The water demand created by the development of the Proposed Project would result in a negligible increase in demand on Pressure Zone 1296. Furthermore, the District Master Plan would increase total capacity to 10 million gallons by 2016. As well, the District Master Plan planned for the water demand of the future residential build out of two large land tracts-Village 14 and Village 16. These large land tracts will not likely be developed because they are now owned by the California Department of Fish and Game and managed as wildlife preserves. Thus, any increases in the future water demand created by the Proposed Project are more than offset by the future increased capacity of the Pressure Zone and the removal of the planned water demands of Village 14 and Village 16. Likewise, the available maximum pumping capacity of the 1296 Pressure Zone is 3,300 gpm, and the Proposed Project would require a daily design flow of only 24 gpm (and a peak flow of 72 gpm) with reclamation. The projected ultimate maximum day demand for pressure zone 1296 is 3,017 gpm, and another pumping station is planned for Phase III of the District's Master Plan, which will increase capacity to 10,000 gpm. Thus, the 1296 Pressure Zone has more than adequate capacity to handle the water demands of the Proposed Project.

The Otay Water District's 1296 Pressure Zone and the proposed facilities also have the infrastructure to deliver the water. The Proposed Project would tap into the existing 12-inch service under Reservation Road, which is fed by the 16-inch main under SR 94, with a 6-inch PVC domestic potable water line with a meter and backflow prevention device. The existing 12-inch diameter main under Reservation Road would be converted for fire suppression. Distribution piping would be installed to service the various facilities on site. Water provided by the Otay Water District meets federal and state water quality drinking water requirements; therefore, no additional treatment is required. Preliminary analysis of the on-site water system indicates adequate water pressure is available in the existing Otay Water District water main along Highway 94 to service the project. Consequently, a booster station would not be necessary to increase water pressure to the Proposed Project or other customers.

PROJECT COMPONENT	Typ Toilet Flushing % of total water demand	Revised Water Day Demand (gpd)	Water Day Demand (gpm)	Maximum Day Demand (gpm)	Peak Hour Demand (gpm)	
Proposed Project						
Gaming Facility	60%	34,692	24	48	72	
Alternative 1						
Gaming Facility	60%	16,905	12	23	35	
Alternative 2						
Gaming Facility	60%	4,782	3	7	10	
No Action Alternative						
	n/a	n/a	n/a	n/a	n/a	

TABLE 4.12-2 ESTIMATED POTABLE WATER DEMANDS WITH RECLAMATION FOR THE PROPOSED PROJECT AND ALTERNATIVES

SOURCE: Dexter Wilson Engineering, Inc. 2011; EDS, Inc. 2011

According to the Project's fire protection plan, the design water demands for fire suppression are 1,500 gpm for 4 hours for the Proposed Project (National Code Consultants, 2011). This equates to 360,000 gallons for the duration of this designed fire event. The existing water supply system can handle this design volume since the 1296 Pressure Zone has about 1 million gallons of surplus reserve.

Thus, water supply demands and related infrastructure required to construct and operate the Proposed Project would have a less than significant impact upon regional water supply.

Alternative 1

Alternative 1 contains the same project components as the Proposed Project, but on a reduced scale. Water demand estimates and design water demands for this development are summarized in **Table 4.12-1**. The estimates for Alternative 1 are reduced because the facility components are reduced. These estimates are made without consideration of supplemental supply of recycled water for non potable uses.

The use of recycled water from the wastewater treatment plant has been planned for use in Alternative 1, and would significantly reduce potable water demands on-site. The revised water demands for Alternative 1, assuming the use of recycled water in the project, are presented in **Table 4.12-2**. Estimates are based on straight percentage reductions based on the respective square footage reduction of facility components. By using recycled water, the total water volume demand is decreased from 42,263 gpd to 16,901 gpd and the maximum day

demand for design flow rate capacity is decreased from 59 gpm to 23 gpm. The 1296 Pressure Zone has more than adequate capacity to handle the maximum daily volumes and the maximum daily flow rates required to operate Alternative 1. Thus, water supply demands and related infrastructure required to construct and operate Alternative 1 would have a less than significant impact upon regional water supply.

Alternative 2

The proposed gaming complex under Alternative 2 would be 92% smaller than the Proposed Project gaming complex. Water demand estimates and design water demands for this development are summarized in **Table 4.12-1**. The estimates for Alternative 2 are dramatically reduced because the facility components are similarly reduced. These estimates are made without consideration of supplemental supply of recycled water for nonpotable uses. The fire protection facility for Alternative 2 is half the size as the Proposed Project; thus, wastewater generation rates and water demands for the alternatives are reduced accordingly.

The use of recycled water from the wastewater treatment plant has been planned for use in Alternative 2, and would significantly reduce potable water demands on-site. The revised water demands for Alternative 2, assuming the use of recycled water in the project, are presented in **Table 4.12-2**. Estimates are based on straight percentage reductions based on the respective square footage reduction of facility components. By using recycled water, the total water volume demand is decreased from 11,954 gallons per day to 4,782 gallons per day and the maximum day demand for design flow rate capacity is decreased from 17 gallons per minute to 7 gallons per minute. The 1296 Pressure Zone has more than adequate capacity to handle the maximum daily volumes and the maximum daily flow rates required to operate Alternative 2. Thus, water supply demands and related infrastructure required to construct and operate Alternative 2 would have a less than significant impact upon regional water supply.

No Action Alternative

Under the No Action Alternative the Reservation would continue to receive water supply from the Otay Water District. The No Action Alternative would not result in the development of a gaming complex on the Reservation. The No Action Alternative does not increase water demand. No significant water supply impacts would occur under the No Action Alternative.

Impact 4.12(2): Wastewater Service

Proposed Project

As part of the project, a wastewater treatment plant would be constructed to service the project facilities. This WWTP would handle only wastewater produced by the facilities developed on the Reservation; it is not intended to service any other properties.

Wastewater generated from the proposed facilities would flow by gravity through a series of pipes to the WWTP located under the entrance drive to the parking garage. The wastewater would be treated to a level that meets California Title 22 recycled water quality standards. One hundred percent of wastewater flows would be treated to a level that would make it suitable for all recycled water uses and effluent disposal strategies identified for this project. Wastewater would be treated using an immersed membrane bioreactor (MBR) wastewater treatment plant. The MBR system is a state-of-the-art, advanced wastewater treatment process that utilized membrane technology, comparable to that used for production of potable water. This process was selected to achieve high quality tertiary effluent for the purposes of on-site reuse and disposal. The MBR system has been used widely throughout the country to handle flows up to five million gallons per day. The MBR process has the ability to handle high Biological Oxygen Demand and Total Suspended Solids levels typically observed in gaming wastewater. The MBR also handles variations in flow better than typical activated sludge systems. The MBR system is also approved by DHS for Title 22 applications. The MBR system would be designed for nitrification/denitrification in order to reduce the level of nitrates in the effluent. Additionally, the effluent would be disinfected by ultraviolet (UV) light. By selecting UV disinfection, the concern over disinfection byproducts entering the groundwater is eliminated. Typical MBR effluent quality has the following concentrations: Biochemical Oxygen Demand < 1 mg/L, Total Suspended Solids = 0 mg/L, Ammonia < 0.2mg/L, Nitrate = 8 mg/L, Total Coliform < 2.2 MPN/100mL, and Turbidity < 0.1 NTU.

MBR systems are known for high rates of organics removal and can be further designed to target nutrients, including nitrogen and phosphorus. Compared with other wastewater treatment plant designs, the MBR system is more reliable and consistent in producing high quality effluent. The only treatment design that is more advanced is a reverse osmosis system. Reverse osmosis systems are designed for potable water systems and are generally cost-prohibitive.

Biosolids produced by the wastewater treatment plant would be dewatered and stored onsite. After periodic dewatering, the dewatered biosolids would be trucked off-site for disposal at the Otay or Sycamore Sanitary Landfills. The frequency of this operation would depend on the solids wasting frequency in the WWTP. All biosolids dewatering and storage facilities would be contained and the foul air scrubbed to minimize odors.

Table 4.12-3 summarizes projected average and peak wastewater flows for the Proposed Project and Alternatives. A wastewater treatment capacity of approximately 165,200 gallons per day is needed for the wastewater treatment plant to allow for peak wastewater flows. The use of recycled water would not affect the design flow for the treatment and collection system. However, wastewater disposal requirements would be reduced since a portion would be diverted to the reclamation system. As summarized in **Table 4.12-4**, the average wastewater

disposal requirement for the Proposed Project would be reduced from 82,600 to about 9,250 gallons per day after reclamation. This number is an average throughout the year. Breaking the water balance numbers down on a per monthly basis, Table 7 of **Appendix 2** shows that the maximum disposal requirement would be 25,000 gallons per day in the winter. There would be no need for disposal in the summer months.

The proposed recycled water system would include a recycled water storage tank, and the recycled water transmission and distribution pipelines. The proposed facilities would be designed with a dual plumbing system—one for potable water and one for recycled water. Recycled water would be produced by the wastewater treatment plant at the rate that wastewater is received at the plant. The recycled water storage tank would contain, at a minimum, sufficient recycled water at all times to meet the gaming complex's toilet flushing requirements. This storage tank would be located adjacent to, or underneath the WWTP, and the minimum storage capacity would be 200,000 gallons. Recycled water would be used for irrigation of landscape and green roofs, and for evaporation water supply in cooling towers.

TABLE 4.12-3

PROJECTED WASTEWATER GENERATION FOR THE PROPOSED PROJECT AND

DESCRIPTION	QUANTITY	Unit Flow	Total Ave. Flow (gpd)	Max Daily Flow (gpd)	Peak Flow (gpd)
Proposed Project					
TToposeu TTojeci	10.000	7 1/	70.000		
Casino guests	10,000	/ gpd / guest	70,000		
Restaurant	840	15 / gpd /	12,600		
dining seats		seat			
Total			82,600	123,900	165,200
Alternative 1	5 000	7 and /	25.000		
Casino guests	3,000	guest	55,000		
Restaurant dining seats	350	15 / gpd / seat	5,250		
Total			40,250	60,375	80,500
Alternative 2					
Casino guests	1,500	7 gpd / guest	10,500		
Restaurant	59	15 / gpd /	885		
dining seats		seat			
Total			11,385	17,080	22,770

ALTERNATIVES

SOURCE: Dexter Wilson Engineering, Inc. 2011

Surplus recycled water would be evaporated in a mechanical evaporator that has standard evaporation rates ranging from 40 gallons per hour (960 gpd) to 1,800 gallons per hour (43,200 gpd), depending upon facility sizing. For purposes of this analysis, the MVC system is assumed to have an evaporation rate that allows for the elimination of 1,666 gallons per hour (40,000 gallons per day) of treated wastewater. Assuming maximum capacity operation of the MVC during the wetter months, no treated water would need to be removed from the Reservation. Excess treated wastewater would be temporarily stored in the below ground storage tank during maintenance/non-operating periods of the MVC. Because all the wastewater that is generated by the Proposed Project would be collected, treated, and reused or properly disposed, there would be no significant impacts to regional wastewater services.

TABLE 4.12-4

POTENTIAL USES OF RECLAIMED WATER FOR THE PROPOSED PROJECT AND ALTERNATIVES

DESCRIPTION	ESTIMATED WASTEWATER RE-USE (gpd)
Proposed Project	
Toilets/urinals	49,560
Landscaping	1,230
Green Roofs	2,460
Cooling Towers	20,000
Total	73,250
Alternative 1	
Toilets/urinals	24,150
Landscaping	1,230
Green Roofs	1,025
Cooling Towers	10,000
Total	36,405
Alternative 2	
Toilets/urinals	6,800
Landscaping	1,535
Green Roof	420
Total	8,335
No Action Alternative	
	n/a
SOURCE: Lakes Entertainment,	2012

March 2012 January 2013

Alternative 1

Table 4.12-3 summarizes the projected average and peak wastewater flows for Alternative 1. A wastewater treatment capacity of approximately 80,500 gallons per day is needed for the wastewater treatment plant to allow for peak wastewater flows. The use of recycled water would not affect the design flow for the treatment and collection system. However, wastewater disposal requirements would be reduced since a portion would be diverted to the reclamation system. As summarized in Table 8 of **Appendix 2**, Alternative 1 would need to plan for a maximum disposal demand of up to 12,000 gpd during the month of January.

Surplus recycled water from the recycled water storage tank would be disposed of by being evaporated in the on-site MVC. As is the case with the Proposed Project, excess treated wastewater resulting from MVC maintenance would be temporarily stored in the below ground storage tank. Because all the wastewater that is generated by Alternative 1 would be collected, treated, reused, and properly dispose of, there would be no significant impacts to regional wastewater services.

Alternative 2

Table 4.12-3 summarizes the projected average and peak wastewater flows for Alternative 2. A wastewater treatment capacity of approximately 22,770 gallons per day is needed for the wastewater treatment plant to allow for peak wastewater flows. The use of recycled water would not affect the design flow for the treatment and collection system. However, wastewater disposal requirements would be reduced since a portion would be diverted to the reclamation system. As summarized in Table 9 of **Appendix 2**, Alternative 2 would need to plan for a maximum disposal demand of up to 3,500 gpd during the month of January.

Surplus recycled water from the recycled water storage tank would be disposed of by being evaporated in the on-site MVC. As is the case with the Proposed Project, excess treated wastewater resulting from MVC maintenance would be temporarily stored in the below ground storage tank. Because all the wastewater that is generated by Alternative 2 would be collected, treated, reused, and properly dispose of, there would be no significant impacts to regional wastewater services.

No Action Alternative

No increase in wastewater generation, treatment, or discharge would occur under the No Action Alternative. The individual septic systems would continue as the waste water treatment method on the Reservation site. No significant impacts would occur from implementation of the No Action Alternative.

Impact 4.12(3): Solid Waste Service

Proposed Project

Construction of the Proposed Project is expected to result in a temporary increase in waste generation. Potential solid waste streams from construction are expected to include the following:

- Paper, wood, glass, and plastics from packing materials, waste lumber, insulation, and material containers,
- Excavated material from the Reservation (estimated at 22,600 cubic yards),
- Waste concrete from cement casting activities, and
- Excess metal, including steel from welding/cutting operations, packing materials, and material containers, and aluminum from packing materials and electrical wiring.

However, construction waste would be recycled to the fullest extent practicable by diverting green waste and recyclable building materials from the solid waste stream. Waste that cannot be recycled would be disposed of at the Otay Landfill, which accepts construction/demolition materials, and has sufficient excess capacity to handle this small, temporary, additional waste stream. Construction impacts upon solid waste service are less than significant.

Waste generation resulting from operation of the Proposed Project's facilities was estimated to be 5.43 tons per day (**Table 4.12-5**). However, the gaming complex would employ a 30 cubic yard compactor to reduce the volume of trash being produced. To reduce the volume of trash even further, a streamline compactor would be used to reduce the water content of the trash.

Waste sludge and solids residuals (biosolids) generated from operation of the WWTP would be dewatered on-site by means of a belt filter press and ultimately hauled off site for disposal. Both the Otay and Sycamore Sanitary Landfills accept biosolids. The frequency of this operation would depend on the solids wasting frequency in the wastewater plant. Solids wasting at the proposed treatment plant would likely vary between 5,000-10,000 gallons per month at 1.5% solids, resulting in a minimal increase to the regional disposal of solid waste once a month.

The Jones Disposal Company (a subsidiary of Waste Management, Inc.) currently provides solid waste service to the Reservation. The Tribe would enter into a contract with the company to extend service to the gaming complex. The waste would be shipped to a transfer station in El Cajon, where recyclable materials are removed, thus reducing the amount of waste sent to either the Otay Landfill or the Sycamore Sanitary Landfill. The Otay Landfill, located in the City of Chula Vista, has a permitted maximum disposal of 5,830 tons per day and received

approximately 3,241 tons per day in 2009 leaving a spare capacity of 2,589 tons per day (CalRecycle 2011c). The Sycamore Sanitary Landfill, located in the City of San Diego, has a permitted maximum disposal of 3,965 tons per day and received approximately 2,241 tons per day in 2009 leaving a spare capacity of 1,724 tons per day (CalRecycle 2011d).

Category Business Type (Tons/employee/year) Proposed Project	Employment	Jobs	CIWMB	Rate	Tons/year	Tons/day
Proposed Project Gaming 964 38^a 0.9 868 2.38 Food and 130 29^b 3.1 402 1.10 Beverage 402 1.10 103 0.28 Gift Shop 46 33 1.7 103 0.28 Gift Shop 46 33 1.7 117 0.32 Admin. 69 33 1.7 103 0.28 Marketing 61 33 1.7 103 0.28 Maintenance 76 33 1.7 129 0.35 Security 205 38 0.9 184 0.51 Gaming 505 38^a 0.9 455 1.25 Food and 29 ^b 3.1 210 0.58 Entertainment 33 33 ^c 1.7 61 0.17 Beverage 68 210 0.58 0.15 0.15 Gift Shop 24 33	Category		Business Type	(Tons/employee/year)		
Alternative 1 964 38^4 0.9 868 2.38 Food and 130 29^9 3.1	Proposed Project					
Containing Difference Containing Difference </td <td>Gaming</td> <td>964</td> <td>38^a</td> <td>0.9</td> <td>868</td> <td>2.38</td>	Gaming	964	38 ^a	0.9	868	2.38
Iterative 1 10 25 5.1 Beverage 402 1.10 Entertainment 61 33° 1.7 103 0.28 Gift Shop 46 33 1.7 103 0.28 Admin. 69 33 1.7 117 0.32 Marketing 61 33 1.7 103 0.28 Maintenance 76 33 1.7 103 0.28 Maintenance 76 33 1.7 129 0.35 Security 205 38 0.9 184 0.51 Total Waste Disposal 1,984 5.43 5.43 Alternative 1 Total Waste Disposal 1,984 5.43 Beverage 68 210 0.58 Entertainment 33 33° 1.7 41 0.11 Admin. 36 33 1.7 41 0.11 Admin. 36 33 1.7 61 0.17 Marketing 33 33 1.7 55 0.15	Food and	130	20 ^b	3 1	000	2.30
Deverage 402 1.10 Entertainment 61 33° 1.7 103 0.28 Gift Shop 46 33 1.7 103 0.28 Admin. 69 33 1.7 117 0.32 Marketing 61 33 1.7 103 0.28 Maintenance 76 33 1.7 103 0.28 Maintenance 76 33 1.7 129 0.35 Security 205 38 0.9 184 0.51 Image: Soft Structure 205 38° 0.9 184 0.51 Food and 29° 3.1 210 0.58 1.7 Beverage 68 210 0.58 1.7 55 0.15 Gift Shop 24 33 1.7 41 0.11 Admin. 36 33 1.7 61 0.17 Marketing 33 33 1.7 61 0.17 Marketing 33 1.7 68 0.19 Security <td< td=""><td>Pourage</td><td>150</td><td>29</td><td>5.1</td><td>402</td><td>1 10</td></td<>	Pourage	150	29	5.1	402	1 10
Literation 01 33 1.7 103 0.20 Admin. 69 33 1.7 117 0.32 Marketing 61 33 1.7 117 0.32 Marketing 61 33 1.7 117 0.32 Marketing 61 33 1.7 103 0.28 Maintenance 76 33 1.7 103 0.28 Security 205 38 0.9 184 0.51 I.foli Total Waste Disposal 1.984 5.43 Alternative 1 Gaming 505 38 ^a 0.9 455 1.25 Food and 29 ^b 3.1 9 455 1.25 0.58 Entertainment 33 33 ^c 1.7 55 0.15 Gift Shop 24 33 1.7 55 0.15 Maintenance 40 33 1.7 55 0.15 Maintenance 108 38 0.9 97 0.27 R46 Total Waste Disposal <td>Entertainment</td> <td>61</td> <td>33°</td> <td>17</td> <td>402</td> <td>0.28</td>	Entertainment	61	33°	17	402	0.28
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Gift Shop	46	33	1.7	78	0.20
Annuli, Marketing 60 55 1.7 117 0.32 Marketing 61 33 1.7 103 0.32 Maintenance 76 33 1.7 129 0.35 Security 205 38 0.9 184 0.51 Alternative 1 Total Waste Disposal 1.984 5.43 Alternative 1 Total Waste Disposal 1.984 5.43 Beverage 68 210 0.58 Entertainment 33 33^{cc} 1.7 55 0.15 Gift Shop 24 33 1.7 61 0.17 Marketing 33 33 1.7 61 0.17 Marketing 33 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 Marketing 135 38^{a^a} 0.9 122 0.33 Beverage 19 58 0.16 1.042 2.87 Alternative 2 58	Admin	40 69	33	1.7	117	0.21
Maintenance 76 33 1.7 103 0.25 Security 205 38 0.9 184 0.51 Alternative 1 Total Waste Disposal 1,984 5.43 Alternative 1 Total Waste Disposal 1,984 5.43 Gaming 505 38^a 0.9 455 1.25 Food and 29 ^b 3.1 210 0.58 Entertainment 33 33 ^c 1.7 55 0.15 Gift Shop 24 33 1.7 61 0.17 Maintenance 40 33 1.7 55 0.15 Maintenance 40 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 Matternative 2 Gaming 135 38 ^a 0.9 97 0.27 Beverage 19 58 0.16 58 0.16 Entertainment 8 33 ^c 1.7 13 0.04 Gaining 135 38 ^a 0.9 <t< td=""><td>Autiliti. Marketing</td><td>61</td><td>33</td><td>1.7</td><td>117</td><td>0.32</td></t<>	Autiliti. Marketing	61	33	1.7	117	0.32
Maintenance 70 53 1.7 129 0.51 Security 205 33 0.9 184 0.51 Alternative 1 Total Waste Disposal 1.984 5.43 Gaming 505 38^a 0.9 455 1.25 Food and 29^b 3.1 100 0.58 Entertainment 33 33^c 1.7 41 0.11 Admin. 36 33 1.7 41 0.11 Admin. 36 33 1.7 61 0.17 Maintenance 40 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 Referentive 2 33^c 1.7 104 2.87 Alternative 2 33^c 1.7 13 0.04 Gaming 135 38^a 0.9 97 0.27 Recerage 19 58^c 0.16 0.14 0.04 Gaming 135 38^a 0.9 122 0.33 <td>Maintananaa</td> <td>76</td> <td>22</td> <td>1.7</td> <td>105</td> <td>0.28</td>	Maintananaa	76	22	1.7	105	0.28
Security $\frac{203}{1,611}$ 38 0.3 1.64 0.31 Alternative 1 Total Waste Disposal $1,984$ 5.43 Alternative 1 29^b 3.1 $1,984$ 5.43 Beverage 68 210 0.58 $1,984$ 5.43 Beverage 68 210 0.58 210 0.58 Entertainment 33 33^c 1.7 55 0.15 Gift Shop 24 33 1.7 61 0.17 Marketing 33 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 Maintenance 40 33 1.7 68 0.16 Entertainment 8 33^c 1.7 13 0.04 Gaming 135 38^a 0.9 122 0.33 Beverage 19 33 1.7 13 0.04 Gaming 135 33^c 1.7 13	Security	205	33	1.7	129	0.55
Alternative 1 Fodal Waste Disposal 1,00 3.45 Gaming 505 38^a 0.9 455 1.25 Food and 29^b 3.1 210 0.58 Beverage 68 210 0.58 Entertainment 33 33^c 1.7 55 0.15 Gift Shop 24 33 1.7 41 0.11 Admin. 36 33 1.7 61 0.17 Marketing 33 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 R46 Total Waste Disposal $1,042$ 2.87 Alternative 2 66 33 1.7 13 0.04 Gift Shop 6 33 1.7 13 0.04 Gift Shop 6 33 1.7 11 0.03 Acternative 2 58 0.16 58 0.16 6 Entertainment 8 33^c </td <td>Security</td> <td>1.611</td> <td>56</td> <td>0.2 Total Waste Disposal</td> <td>1 08/</td> <td>5.43</td>	Security	1.611	56	0.2 Total Waste Disposal	1 08/	5.43
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Gaming 505 38^a 0.9 455 1.25 Food and 29^b 3.1 210 0.58 Beverage 68 210 0.58 Entertainment 33 33^c 1.7 55 0.15 Gift Shop 24 33 1.7 41 0.11 Admin. 36 33 1.7 61 0.17 Marketing 33 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 Reference 29^b 3.1 0.9 97 0.27 Beverage 19 58 0.16 0.9 1.042 2.87 Alternative 2 633 1.7 13 0.04 0.9 0.9 0.22 0.33 Food and 29^b 3.1 0.9 58 0.16 0.26 0.33 0.16 0.9 0.22 0.33 0.4 0.4 0.4 0.9 0.25	Alternative 1					
Food and 29^b 3.1 Beverage 68 210 0.58 Entertainment 33 33^c 1.7 55 0.15 Gift Shop 24 33 1.7 41 0.11 Admin. 36 33 1.7 61 0.17 Marketing 33 33 1.7 55 0.15 Maintenance 40 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 Referentive 2 $a46$ Total Waste Disposal $1,042$ 2.87 Alternative 2 $a46$ 58 0.16 $a58$ 0.16 Beverage 19 58 0.16 $a58$ 0.16 Entertainment 8 33^c 1.7 13 0.04 Gift Shop 6 33 1.7 11 0.03 Admin. 9 33 1.7 13 0.04 Marketing 8 <t< td=""><td>Gaming</td><td>505</td><td>38^a</td><td>0.9</td><td>455</td><td>1.25</td></t<>	Gaming	505	38 ^a	0.9	455	1.25
Beverage 68 210 0.58 Entertainment 33 33° 1.7 55 0.15 Gift Shop 24 33 1.7 41 0.11 Admin. 36 33 1.7 61 0.17 Marketing 33 33 1.7 61 0.17 Marketing 33 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 Reference 0.9 97 0.27 0.27 Reference 0.9 97 0.27 Reference 0.9 97 0.27 Reference 0.9 97 0.27 Security 108 38^{a} 0.9 97 0.27 Beverage 19 58 0.16 0.9 0.9 0.26 0.33 Beverage 19 58 0.16 0.04 0.33 0.17 11 0.03 Admin.	Food and		29 ^b	3.1		
Entertainment33 33° 1.7550.15Gift Shop24331.7410.11Admin.36331.7610.17Marketing33331.7550.15Maintenance40331.7680.19Security108380.9970.27846Total Waste Disposal1,0422.87Alternative 2Control of the security108 29° 3.1 Beverage19580.16Entertainment833°1.7130.04Gift Shop6331.7110.03Admin.9331.7110.03Admin.9331.716Marketing8331.7180.04Marketing80.9250.0728380.9250.070.90.90.90.90.9	Beverage	68			210	0.58
Gift Shop 24 33 1.7 41 0.11 Admin. 36 33 1.7 61 0.17 Marketing 33 33 1.7 55 0.15 Maintenance 40 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 ReferenceReferenceReferenceReferenceReferenceMaintenance 40 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 Reference 7 $1,042$ 2.87 Alternative 2 6 32^{9b} 3.1 68 Gaming 135 38^a 0.9 122 0.33 Food and 29^{9b} 3.1 604 66 33 1.7 13 0.04 Gift Shop 6 33 1.7 11 0.03 $Admin.$ 9 33 1.7 16 0.04 Marketing 8 33 1.7 13 0.04 $Maintenance$ 11 33 1.7 18 0.05 Security 28 38 0.9 25 0.07 275 0.75	Entertainment	33	33 ^c	1.7	55	0.15
Admin. 36 33 1.7 61 0.17 Marketing 33 33 1.7 55 0.15 Maintenance 40 33 1.7 68 0.19 Security 108 38 0.9 97 0.27 B46Total Waste Disposal $1,042$ 2.87 Alternative 2 66 29^b 3.1 68 0.16 Gaming 135 38^a 0.9 122 0.33 Food and 29^b 3.1 58 0.16 Entertainment 8 33^c 1.7 11 0.03 Admin. 9 33 1.7 11 0.03 Admin. 9 33 1.7 16 0.04 Marketing 8 33 1.7 18 0.05 Security 28 38 0.9 25 0.07	Gift Shop	24	33	1.7	41	0.11
Marketing Maintenance33331.7550.15Maintenance40331.7680.19Security108380.9970.27ReferenceTotal Waste Disposal1,0422.87Alternative 2 Gaming Food and 29^b 3.1 122 0.33Beverage19580.16Entertainment833^c1.7130.04Gift Shop6331.7110.03Admin.9331.7160.04Marketing8331.7130.04Maintenance11331.7180.05Security28380.9250.07	Admin.	36	33	1.7	61	0.17
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Security10838 0.9 97 0.27 Recurity846Total Waste Disposal $1,042$ 2.87 Alternative 2 38^a 0.9 122 0.33 Gaming135 38^a 0.9 122 0.33 Food and 29^b 3.1 58 0.16 Beverage19 58 0.16 Entertainment8 33^c 1.7 13 0.04 Gift Shop6 33 1.7 11 0.03 Admin.9 33 1.7 16 0.04 Marketing8 33 1.7 13 0.04 Maintenance 11 33 1.7 18 0.05 Security 28 38 0.9 25 0.07	Maintenance	40	33	1.7	68	0.19
Alternative 2 Gaming Food and135 38^a 0.91222.87Beverage193.1Entertainment8 33^c 1.7130.04Gift Shop6331.7110.03Admin.9331.7160.04Marketing8331.7180.05Security28380.9250.07	Security	108	38	0.9	97	0.27
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Food and 29 3.1 Beverage19 58 0.16 Entertainment8 33° 1.7 13 Gift Shop6 33 1.7 11 0.03 Admin.9 33 1.7 16 0.04 Marketing8 33 1.7 13 0.04 Maintenance11 33 1.7 18 0.05 Security 28 38 0.9 25 0.07	Gaming	155	20 ^b	0.9	122	0.55
Beverage19 33° 1.7 38 0.10° Entertainment8 33° 1.7 13 0.04 Gift Shop6 33 1.7 11 0.03 Admin.9 33 1.7 16 0.04 Marketing8 33 1.7 16 0.04 Maintenance11 33 1.7 18 0.05 Security28 38 0.9 25 0.07	Povorago	10	29	5.1	59	0.16
Line taiment 6 33 1.7 13 0.04 Gift Shop 6 33 1.7 11 0.03 Admin. 9 33 1.7 16 0.04 Marketing 8 33 1.7 16 0.04 Maintenance 11 33 1.7 13 0.04 Security 28 38 0.9 25 0.07	Entertainment	19	33°	17		0.10
Ont Shop 0 33 1.7 11 0.05 Admin.9 33 1.7 16 0.04 Marketing8 33 1.7 13 0.04 Maintenance 11 33 1.7 18 0.05 Security 28 38 0.9 25 0.07	Cift Shop	0 6	33 33	1.7	13	0.04
Admin. 7 53 1.7 10 0.04 Marketing8 33 1.7 13 0.04 Maintenance11 33 1.7 18 0.05 Security28 38 0.9 25 0.07	Admin	0	22	1.7	11	0.03
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	Security	20		U.7 Total Wasta Dispassi	23	0.07

 TABLE 4.12-5.

 SOLID WASTE DISPOSAL ESTIMATE - PROPOSED PROJECT AND ALTERNATIVES

 Notes:
 ^a Includes SIC code 79 Amusement and Recreation Services

 ^b Includes SIC code 58 Eating and Drinking Places
 ^c Includes SIC code 73 Business Services

SOURCE: EDS, Inc. 2011; CIWMB, 2011

The Proposed Project is expected to generate 5.43 tons per day which represents 0.09% of the Otay Landfill permitted daily intake, and 0.21% of its spare capacity. This estimated daily tonnage represents 0.14% of the Sycamore Landfill permitted daily intake, and 0.31% of its spare capacity. The estimated solid waste generation by the Proposed Project would utilize approximately 0.13% of the combined available daily capacity of 4,313 tons per day between the two landfills. The project's projected solid waste generation is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of either landfill. San Diego County, in consultation with the California Integrated Waste Management Board, regulates landfills through the issuance of permits to ensure that environmental effects to groundwater, soil, and air are minimized. Thus, construction and operation of the Proposed Project would have a less than significant impact upon regional solid waste disposal services.

Litter generated at the project would be handled appropriately through disposal at the aforementioned facilities. Landscaping and maintenance staff would pick up any litter that is dropped on site. Decorative trash and recycling receptacles would be placed strategically throughout the gaming complex to encourage patrons not to litter. The constant presence of roving security guards should also help prevent littering at the gaming complex. The Caltrans Adopt a Highway Program found that all adoptable stretches of Highway 94 around Jamul (from the junction of 94 and 54 south past Daley Ranch) have been adopted and are being maintained free of garbage. The Proposed Project would not result in a significant increase in litter.

Alternative 1

Alternative 1 would generate approximately 2.87 tons per day, which represents 0.05% of the Otay Landfill permitted daily intake, and 0.11% of its spare capacity. This estimated daily tonnage represents 0.07% of the Sycamore Landfill permitted daily intake, and 0.17% of its spare capacity. The estimated solid waste generation by Alternative 1 would utilize approximately 0.07% of the combined available daily capacity of 4,313 tons per day between the two landfills. The projected solid waste generated from Alternative 1 is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of either landfill.

Alternative 2

Alternative 2 is expected to generate 0.75 tons per day, which represents 0.01% of the Otay Landfill permitted daily intake, and 0.04% of its spare capacity. This estimated daily tonnage represents 0.02% of the Sycamore Landfill permitted daily intake, and 0.04% of its spare capacity. The estimated solid waste generation by Alternative 2 would utilize approximately 0.02% of the combined available daily capacity of 4,313 tons per day between the two

landfills. The projected solid waste generated from Alternative 2 is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of either landfill.

No Action Alternative

No new development would take place under this alternative. Thus, the No Action Alternative would not result in increased solid waste production. No significant impacts to solid waste would occur from implementation of the No Action Alternative.

Impact 4.12(4): Electricity, Natural Gas, and Telecommunications

Proposed Project

Underground Service Alert (USA) provides a free "Dig Alert" service to all excavators (contractors, homeowners and others), in Southern California. The excavator's one call to USA would automatically notify all USA Members (utility service providers) who may have underground facilities at their work site. In response, the USA Members would mark or stake the horizontal path of their underground facilities, provide information about, or give clearance to dig. This simple safety service protects the excavator from personal injury and underground facilities from being damaged.

The utility companies would be responsible for the timely removal or protection of any existing utility facilities located within construction areas. The Joint Utilities Coordination Committee has developed procedures to assist cities, counties and utilities in coordinating public improvement projects to alleviate scheduling and construction conflicts.

Past versions of larger gaming facilities proposed by the Jamul Tribe were estimated to potentially have a peak demand load of 6.6 megawatts. This would be a worst case number when applied to the currently proposed gaming facility, but will be used as a conservative estimate for purposes of this analysis. This number was an estimate based on National Electricity Code (NEC) calculations, which generally overestimate project demands to assure adequate power is supplied. The proposed facilities would be designed in compliance with the NEC and all State and County amendments, including the California State Building Code Title 24 regulations for energy-saving design.

The project site is served by one SDG&E circuit via a 12-kilovolt aerial cable along SR 94. This circuit, which serves the Jamul area, is rated to carry approximately 10 megawatts. It is possible that, depending on the peak demand load addition and timing, reconductoring, as well as load transfers among the nearby circuits, may be necessary to serve the Proposed Project. This reconductoring would involve replacing the existing lines with higher capacity lines along the current wooden pole powerline that exist in the project area. If it is determined that

reconductoring is needed at the project site, additional arms or brackets would be installed on the existing poles to support the higher capacity cable.

Emergency generators would be provided to assure full capacity service to the Proposed Project in the event of a loss of service from the SDG&E grid. Use of the generators would be restricted to emergency purposes only. Three 1.5 megawatt diesel generators and one 1.5 megawatt backup generator would provide a total of six megawatts for the gaming. The generators would be located near the loading dock on the entry level of the gaming building and would have noise attenuating housing to minimize noise.

There would be a one-day supply of diesel fuel on-site. However, with refueling, longer periods of grid power failure would not disrupt the operation of the Proposed Project. Diesel fuel for the generators would be stored in four 2,000-gallon tanks. There would also be a liquid propane tank located along with the diesel fuel tanks to provide propane to the kitchen facility. The tanks would be located above ground and would be double-walled to provide for leak-detection and containment. Additionally, the tanks would have a pre-cast concrete encasement to further protect against the possibility of a leak.

When analyzed on a regional level, the Proposed Project would not likely constitute a significant increase in power demand. According to the California Energy Commission, California's massive electricity generation system generates more than 296,000 gigawatt hours each year (California Energy Commission, 2011). San Diego County's current generating capacity is 5,438 megawatts from 68 generation facilities, ranging from nuclear to wind turbine. The Proposed Project's peak demand load of 6.6 megawatts represents only 1% of the County's current generating capacity.

The Tribal Government may need to provide upgraded telecommunication facilities (larger cable) in order to service the proposed facilities. The Jamul Tribal Government would coordinate with the chosen service providers for additional utilities and/or upgrades of existing utilities. As described above, propane would be used instead of natural gas for the kitchen facilities. The Proposed Project would not affect area natural gas facilities or supply. Implementation of the Proposed Project is expected to result in a less than significant off-site effect upon natural gas and telecommunications services.

Alternative 1

Alternative 1 would require 69% less energy than the Proposed Project, and thus Alternative 1 has a corresponding reduction in potential impact upon regional energy supply.

Alternative 2

Alternative 2 would require 92% less energy than the Proposed Project, and thus Alternative 2 has a corresponding reduction in potential impact upon regional energy supply.

No Action Alternative

No new development would take place under this alternative. Thus, the No Action Alternative would not result in additional demands upon service of electricity, natural gas, or telecommunications. No significant impacts to service of electricity, natural gas, or telecommunications would occur from implementation of the No Action Alternative.

Impact 4.12(5): Law Enforcement

Proposed Project

The development of the Proposed Project would result in additional calls for law enforcement services to local law enforcement agencies. The increased demand for public safety services is typical of commercial development. However, consistent with Section 8.0 of the Tribal-State Compact, the Tribe is committed to providing on-site security for gaming operations to reduce and prevent criminal and civil incidents. Impacts would be lessened due to the 24-hour per day presence of Tribal security and monitoring of the casino by video surveillance, which would aid in the deterrence of criminal activity at the gaming facility. However, the potential increased service calls due to operation of the Proposed Project are expected to result in a significant impact upon law enforcement services before mitigation.

Under Public Law 280, the State of California and other local law enforcement agencies have enforcement authority over criminal activities on Tribal land. The Tribe may enter into a service agreement with the San Diego County Sheriff's Department to address criminal issues. The Sheriff's Department does not, however, have authority over civil matters on Tribal lands.

Based on information provided by the CHP, the increase in traffic along SR 94 could increase service demands on the El Cajon Office. The CHP is obligated to provide traffic control assistance, handle disabled vehicles, and to enforce traffic regulations along SR 94, which is a special duty line beat. The SR 94 in the area of the project site is considered to be a low priority area, based on service requirements in other more populated areas of the County. Potential effects to patrol demands are based upon the ability of roadways to safely handle traffic. As noted in Section 4.9 Transportation, the Proposed Project will result in significant effects to the level of service on SR 94. The Tribe has identified fair-share contributions to traffic improvements in order to mitigate effects to SR 94, which would assist in reducing congestion and operation effects.

Alternative 1

Alternative 1 is a significantly reduced gaming complex, which would result in a corresponding reduction in law enforcement needs. Nevertheless, operation of the Alternative 1 gaming complex could still have a significant adverse impact upon regional law enforcement services before mitigation.

Alternative 2

Alternative 2 is a significantly reduced gaming complex, which result in a corresponding reduction in law enforcement needs. Nevertheless, operation of the Alternative 2 gaming complex could still have a significant adverse impact upon regional law enforcement services before mitigation.

No Action Alternative

No new development would take place under this alternative. Thus, the No Action Alternative would not result in additional demands upon law enforcement services. No significant impacts to law enforcement services would occur from implementation of the No Action Alternative.

Impact 4.12(6): Fire Protection and Emergency Medical Services

Proposed Project

Operation of the proposed facilities would occur in an area that is surrounded by grasslands and is highly susceptible to grassfires. The use of electrical or mechanical equipment could result in a structure or grass fire, which in turn could result in a significant off-site impact.

The proposed facilities would be designed to comply with the following codes as detailed in **Appendix 4**:

- 2010 California Building Code (CBC) 2009 International Building Code (IBC) with California State amendments.2010 California Fire Code (CFC) - 2009 International Fire Code (IFC) with California State amendments.
- 2. 2010 California Mechanical Code (CMC) 2009 Uniform Mechanical Code (UMC) with California State amendments.
- 3. 2010 California Plumbing Code (CPC) 2009 Uniform Plumbing Code (UPC) with California State amendments.

- 4. 2010 California Electrical Code (CEC) 2008 National Electrical Code (NEC) with California State amendments.
- 5. National Fire Protection Association Codes and Standards (NFPA):

NFPA 13, Automatic Fire Sprinkler Systems NFPA 10. Potable Fire Extinguishers NFPA 14, Standpipe Systems NFPA 20, Centrifugal Fire Pumps NFPA 72, National Fire Alarm Standard

NFPA 110, Emergency and Standby Power Systems

The Tribe has agreed via a compact with the State to meet the California codes, including the NFPA codes adopted by the State. All enclosed structures would be fitted with features identified in **Appendix 4** of this document.

The automatic fire sprinkler systems, using quick response sprinkler heads where appropriate, would limit fire size and control or extinguish fires with little need for fire fighter intercession. Smoke detectors would be installed in mechanical and electrical rooms, and normally unoccupied spaces. They would not be installed in public areas. Activation of sprinklers provides adequate alarm for these spaces. This fire sprinkler and smoke detector approach meets or exceeds current code requirements.

The facilities would be constructed to meet adequate fire flow requirements. A fire flow of at least 1,500 gallons per minute (after applying sprinkler credits) would be provided by the Otay Water District. In addition, adequate water would be available for firefighting by providing an on-site water storage tank, pump system, and emergency backup system near the proposed wastewater treatment facility, thereby meeting the requirements of the CFC, UFC, and the California Building Code. Standpipe outlets would be provided in the proposed parking garage.

In addition to the features identified above, the Tribe would form an on-site Jamul Indian Village Fire Department as detailed in Section 3.2A.5 of this Tribal EE.

The Jamul Fire Department intends to enter into a Mutual Aid Agreement with various local agencies including San Miguel Consolidated Fire Protection District, San Diego Rural Fire Protection District, the US Department of Forestry, Cal-Fire, and shared resources for

Emergency Dispatch Center the Heartland Communication Facility Authority (HCFA), El Cajon, CA and Emergency Medical Responses. The Jamul Tribe would contract directly with American Medical Services (AMR) for Advanced Life Support (ALS) ambulance services. Subject to the Director of Public Safety (AHJ) review, the ALS would be staffed with an onsite paramedic and Emergency Medical Technician. Detailed fire protection and life safety features of the proposed on-site facilities are included in **Appendix 4** of this Tribal EE. Participation in any mutual or automatic aid agreements is subject to negotiation between the Tribe and those agencies. The mutual aid would provide for an adequate first response to all Reservation alarms with a system of redundancy for augmentation of initial responses when necessary.

The implementation of the program identified above by the Tribe would result in a net beneficial impact to the surrounding community. The compliance with applicable codes and standards such as the fire codes and NFPA standards (implemented with the program above) would assure that adequate, qualified fire protection services are provided for the Reservation. The adoption of mutual aid agreements with other neighboring fire districts would provide additional fire protection to the surrounding community, while at the same time assuring that qualified backup is available if an incident were to occur at the Indian Village.

Public concern has been expressed regarding future traffic congestion and the potential effect of this congestion on the ability of the SDRFPD to maintain adequate response times. Emergency calls to the SDRFPD are dispatched via Code 3 Response, which involves the use of lights and sirens which alerts motorist to divert to the right side of the roadway to allow Emergency Vehicles to utilize the center of the roadway. To provide for the necessary Emergency Vehicles Access Clearances, vehicles need a minimum of eight (8) feet to pull over and away from the main line of traffic flow. One common example utilizing a forty (40) foot of highway Right-of-Way (ROW pavement plus shoulder), would ensure the safe passage of Emergency Vehicles with the capability for motorists to safely pull over on each side of the roadway, in this example 24 feet of Emergency Vehicle Access Width would be available. Since State Route 94 is never less than 40 feet through its entire corridor, ample width for the safe passage for Emergency Vehicles is readily available. Therefore, the additional traffic caused by the Proposed Project will not result in a significant impact to Emergency Vehicles response times due to the ample roadway width of SR 94. Additionally, the new traffic signals installed at Melody/SR 94 and the Reservation Entrance/SR 94 would provide additional control features via the Emergency Vehicle's Opti-com Devices which utilizes a Strobe Light to control and over ride the traffic signals, which will improve response times for the SDRFD.

Alternative 1

The reduced size of facilities under Alternative 1 would result in a corresponding reduction in fire protection and emergency services needs. The risk of grassfire is the same as for the Propose Project. Alternative 1 would include the same design requirements as identified for the Proposed Project. A Jamul Indian Village Fire Department would also be constructed and manned in the same manner as the Proposed Project. Fire Station staffing would be the same as identified for the Proposed Project. The impact to emergency vehicle access is as described for the Proposed Project.

Alternative 2

Alternative 2 is a significantly reduced gaming complex, which would be 92% smaller than the Proposed Project gaming complex. There would be a corresponding reduction in fire protection and emergency services needs. Fire station staffing for Alternative would be reduced to 14 personnel due to the reduced size of the facility to be served. Construction of the Alternative 2 gaming complex could still have a significant grassland impact as identified for the Proposed Project. The impact to emergency vehicle access is as described for the Proposed Project.

No Action Alternative

No new development would take place under this alternative. Thus, the No Action Alternative would not result in additional demands upon fire protection or emergency medical services. No significant impacts to fire protection or emergency services would occur from implementation of the No Action Alternative.

4.12.3 MITIGATION

Mitigation 4.12(1): Water Supply

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

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No Action Alternative

No mitigation is necessary.

Mitigation 4.12(2): Wastewater Service

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.12(3): Solid Waste Service

Proposed Project

No mitigation is necessary.

Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.12(4): Electricity, Natural Gas, and Telecommunications

Proposed Project

No mitigation is necessary.

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Alternative 1

No mitigation is necessary.

Alternative 2

No mitigation is necessary.

No Action Alternative

No mitigation is necessary.

Mitigation 4.12(5): Law Enforcement

Proposed Project

Consistent with Section 8.0 of the Tribal-State Compact, the Tribe shall implement the mitigation measures listed below to reduce potential adverse effects upon law enforcement services.

- 1. Provide on-site security for gaming operations to reduce and prevent criminal and civil incidents.
- 2. All security guards would carry two-way radios so they are able to efficiently respond to back up and emergency related calls. This would aid in the prevention of criminal activity within gaming facilities.
- 3. Adopt a "Responsible Alcoholic Beverage Policy" which would include, but not be limited to, requiring patrons to prove their age and refusing service to those who have had too much to drink. This policy would be coordinated with the San Diego Sheriff's Office.
- 4. All parking areas would be well lit and monitored by parking staff and/or roving security guards at all times during operation. This would aid in the prevention of auto theft and other related criminal activity.
- 5. Areas surrounding the gaming facilities would have "No Loitering" signs in place, would be well lit and would be patrolled regularly by roving security guards. This would aid in the prevention of illegal loitering and all crimes that relate to, or require, loitering.
- 6. Provide traffic control with appropriate signage and the presence of peak-hour traffic control staff. This would aid in the prevention of off-site parking, which could create possible security issues.

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7. <u>The Tribe will make good faith efforts to enter into an agreement with the County</u> regarding law enforcement services. <u>The Tribe may enter into an agreement with the</u> Sheriff to pay for additional law enforcement service.

Under Public Law 280, the State of California and other local law enforcement agencies have enforcement authority over criminal activities on Tribal land. The Tribe may enter into a service agreement with the San Diego County Sheriff's Department to address criminal issues. The Sheriff's Department does not, however, have authority over civil matters on Tribal lands.

Based on information provided by the CHP, the increase in traffic along SR 94 could increase service demands on the El Cajon Office. The Tribe has identified traffic mitigation measures to address impacts to traffic. These measures would assist in reducing congestion and operation effects and thereby are expected to reduce the increased demand for CHP service.

Alternative 1

Same as the Proposed Project.

Alternative 2

Same as the Proposed Project.

No Action Alternative

The No Action Alternative does not require any additional law enforcement services. No mitigation is necessary.

Mitigation 4.12(6): Fire Protection and Emergency Medical Services

Proposed Project

To reduce the risk of starting a wildfire during construction, the Tribe will make a good faith effort to implement the following best management practices during construction:

- 1. use spark arresters on construction equipment,
- 2. restrict vehicular parking to areas devoid of grasses or other fuels,
- 3. designate safe areas for welding and metal cutting operations,
- 4. prohibit smoking,
- 5. properly store flammable or explosive materials, and

6. keep construction areas wetted with water trucks and implement a fire safety / fire response plan

Alternative 1

Same as the Proposed Project.

Alternative 2

Same as the Proposed Project.

No Action Alternative

No mitigation is necessary.



GROWTH INDUCING IMPACTS

4.13 GROWTH-INDUCING EFFECTS

4.13.1 INTRODUCTION

A growth inducing effect is an effect that fosters economic or population growth, or the construction of additional housing, either directly or indirectly. Direct growth would result, for example, if a project involved the construction of new housing. Indirect growth inducement could result if a project established substantial new permanent employment opportunities, which in turn induced housing growth or other additional service, office or other growth. Growth inducing effects could also result if the project would remove obstacles to population growth (e.g., expansion of a waste water treatment plant that could allow more construction in the service area).

4.13.2 ENVIRONMENTAL CONSEQUENCES

The largest amount of employment growth among the development options would come from the Proposed Project, which would result in an estimated 1,043 temporary construction jobs, and an estimated 1,611 permanent jobs (**Table 4.13-1**). For purposes of this analysis, 100 percent of the total permanent jobs are assumed to be new jobs – jobs created in the economy rather than lateral shifts from one job to another without labor force replacement. Thus, the total *new* permanent jobs that would be created are therefore estimated to be 1,611 at full buildout of the gaming complex.

JOBS	PROPOSED PROJECT	ALT 1	ALT 2		
Construction	•	·			
Direct Construction Jobs	1,043	531	103		
Indirect and Induced Construction Jobs	899	456	91		
Total	1,941	987	194		
Operation					
Direct Operation Jobs	1,611	846	223		
Indirect and Induced Operation Jobs	806	423	112		
Total	2,417	1,269	335		
SOURCE: Proforma Advisors LLC, 2012					

TABLE 4.13-1 DIRECT. INDIRECT AND INDUCED JOB CREATION

This analysis assumes that the workforce demands of 1,611 new permanent jobs resulting from the Proposed Project would be met within the geographical area of the San Diego-Carlsbad-San Marcos Metropolitan Statistical Area (MSA) due to the close proximity of populated areas within this area to the project site, and the existing estimated civilian unemployment rate of 9.2% (145,500 unemployed individuals) within this MSA (EDD, 2011). Given existing unemployment and the number of new jobs created by the Proposed Project, the existing labor force within the MSA would also be expected to fill the vast majority of any indirect and induced employment growth. As a result, it is assumed that the majority of new employees for the Proposed Project, Alternative 1 and Alternative 2 would continue to reside at their existing residences within the MSA.

While it is expected that a small percentage of new employees would choose to buy a home or relocate closer to their place of employment, the estimated vacant homes within the area and region are expected to be more than capable of serving this demand. The County's South Suburban major statistical area is estimated to have 118,861 total units with an 8% vacancy rate. The resulting 9,509 vacant units are capable of serving any increased demand from either the Proposed Project or development alternatives (SANDAG, 2011a). Moving closer to the project site, the combined vacant units in the Jamul/Valle De Oro community plan areas total 1,025 units (SANDAG, 2011b). These areas alone could conceivably accommodate a couple thousand new residents without having a residential growth inducing impact (assuming an average household size of 3.00 in these areas).

While the overall demand for housing could increase as a result of the project and alternatives, the demand is not expected to create the need for construction of new housing and would likely be filled by the existing housing stock. Therefore, residential growth inducement resulting from direct and indirect employment is not considered to be significant for the Proposed Project, Alternative 1 and Alternative 2.

The creation of temporary and permanent jobs is expected to result in increased demand for goods and services, which may result in commercial growth within San Diego County. Examples of goods and services include fresh produce, wholesale goods, marketing, and maintenance products and services. Commercial growth would also occur as the result of new employee wages, which would be used to provide the workers with housing, clothes, food, health care, and a range of other goods and services. Visitors who are attracted to the region as a result of the proposed facilities could be expected to spend money on food, transportation, accommodation and entertainment elsewhere in the region. For example, casino patrons may also stop at a local shopping center or service station. Demand for goods and services would be expected to be most significant in the South Suburban areas where the majority of employees are expected to reside.

Assuming that approximately 80% of the development budget would be directly purchased in San Diego County, the indirect and induced growth resulting from construction activities is estimated at 899 jobs for the Proposed Project, 456 jobs for Alternative 1 and 91 jobs for Alternative 2.

The employees of the Proposed Project would constitute only a small portion of total growth in population expected for the South Suburban area. Additionally, commercial growth within the South Suburban areas and other areas of San Diego County are to occur over a wide geographic area, supporting existing businesses as well as new businesses. The vast majority of increased commercial demand generated by the Proposed Project and development alternatives is expected to be absorbed by existing businesses and enterprises. These existing commercial areas have existing infrastructure such as water and wastewater service. It is assumed that any new commercial development within San Diego County would be subject to approval pursuant to County land use plans and ordinances. Therefore, the Proposed Project would not likely induce "disorderly" commercial growth within San Diego County, either directly or indirectly.

4.13.3 MITIGATION

Proposed Project and Alternatives:

No mitigation is necessary.



CUMULATIVE EFFECTS

4.14 CUMULATIVE EFFECTS

4.14.1 INTRODUCTION

Cumulative effects analysis broadens the scope of analysis to include effects beyond those solely attributable to the implementation of the project. Cumulative effects are defined as the effects on the environment which result from the incremental effect of the Proposed Project when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

The cumulative analysis begins with: 1) identifying past, present, and future actions and projects in association with the status of the resources, ecosystems, and human communities that may be affected, and 2) defining geographic borders and time frame of the analysis for each environmental topic addressed.

The geographic boundaries of the cumulative effects zone have been determined by the nature of the resources affected and the distance that effects may travel. As an example, increased sedimentation of waterways that result from a project are limited to the watershed in which they occur. As a result, it is only necessary to examine incremental effects within that watershed. Air quality emissions from a project, however, travel over far greater distances and therefore necessitate analysis on a county, air basin, or regional level. For this analysis, the geographic boundaries of the cumulative effects zone is generally that of San Diego County, although with many resources (water, biological etc.) smaller natural or cultural boundaries are used.

The time frame of the cumulative effects analysis extends to 2035, which is the time frame of SANDAG's Series 11 Regional Transportation Plan. Beyond 2035, information on growth patterns and future activities becomes scarce and uncertainties increase, limiting the usefulness of such analysis.

As recommended by Council on Environmental Quality's (CEQ) *Considering Cumulative Effects*, not all potential cumulative effects issues have been included in this Tribal EE, only those that are considered to be relevant or consequential have been discussed in depth (CEQ, 1997:12).

Section 4.15 *Indirect-Effects* of Mitigation Measures analyzes the impacts of the new Access Options as well as the impacts resulting from the Off-Site Intersection Improvements. The Tribal EE considered the cumulative effects of these elements in connection with the Proposed Project and other past, present and reasonably foreseeable future actions. As a result of this analysis, it was concluded that no new or more severe impacts would occur other than those discussed elsewhere in this document.

4.14.2 ENVIRONMENTAL CONSEQUENCES

LAND USE

The geographic boundary of the cumulative land use analysis is defined as the Jamul/Dulzura community plan area. This analytical boundary is used because potential land use effects would occur primarily within this area due to the location of the project site. While growth and development would occur in other areas of the San Diego County, the Proposed Project is expected to result in negligible land use effects beyond the Jamul/Dulzura community.

The San Diego County General Plan and Jamul/Dulzura Community Plan guide land uses within the unincorporated portion of the county where the project site is located. San Diego County estimates that growth in the Jamul/Dulzura area would increase from approximately 10,159 people in 2009 to 16,000 people at buildout. Growth is managed within this portion of the county by implementation of Goal 1 of the Jamul/Dulzura Community Plan, which states that "Development of the land in such a manner as to retain the rural densities and land uses of the community."

Cumulative land use effects that may occur in the Jamul/Dulzura community as a result of expected growth and development include the following:

- Conflicts with existing land uses, and
- Disruption of access to existing or planned land uses.

The anticipated future growth in the Jamul/Dulzura community would be subject to the policies of the General Plan and Jamul/Dulzura Community Plan, which both were the result of public processes to determine the pattern of land use that would facilitate implementation of both plans. Enforcement of stated goals and policies through review and approval of land use development plan, ensures orderly development within the County. The stated goal above is expected to minimize land use conflicts as growth occurs within this area over the next 20+ years. Therefore, no cumulative land use effects would result from the Proposed Project, Alternative 1 or 2.

AESTHETICS

The transformation of the Jamul valley began when San Diego County approved residential subdivisions and commercial development. Since then, a wide-scale transformation of the northern portion of the Jamul valley has occurred on both sides of SR 94. The development of the various subdivisions identified in near term cumulative projects identified in **Section 4.0** *Transportation* would continue this urbanization trend. Future development under the County's General Plan would also contribute to this continuing transformation of the valley
and surrounding area. San Diego County has estimated the Jamul/Dulzura Subregion buildout potential to be approximately 16,000 people, which is a 57% increase above the 10,159 estimated to be living there in 2009. The planned construction of the Procter Valley Road extension to Melody would open up a large area of undeveloped land southwest of the project site.

The County is attempting to temper the cumulative visual impacts by allowing for the transfer of densities thereby preserving large areas of open space that are situated in sensitive areas. The State also assists in the preservation of the visual character of the Jamul valley by preserving land within the wildlife refuge. The largest tract of this refuge immediately borders the Reservation and encompasses thousands of acres south of the Reservation. However, the continuing visual transformation of the valley would continue into the future. Based on the goals and policies of the County's Jamul/Dulzura Community Plan, the County seeks to minimize: (1) visual effects on recognized scenic vistas, (2) new sources of substantial light and glare, which would adversely affect day or nighttime view of listed historic buildings or recognized views in the area, and (3) damage to recognized scenic resources including trees, rock outcroppings and historic buildings within a state scenic highway. The development on the Reservation would contribute to the visual transformation of the Jamul Valley that was begun by the County and is expected to continue with buildout under the Jamul/Dulzura Community Plan. The surrounding areas would remain open as is the case with the DFG refuge land immediately adjacent to the project site.

Measured against the significance criteria and goals/policies stated in the County's Jamul/Dulzura Community Plan, and the fact that future County development is supported by a public review process to ensure, among other things, that the growth proposal would be consistent with the stated policies within this area of the County, cumulative growth is not expected to significantly impact (1) recognized scenic vistas, (2) provide a new source of substantial light and glare, which would adversely effect day or nighttime views of listed historic buildings or recognized views in the area, or (3) damage recognized scenic resources. The development of the gaming project would not result in building development beyond the boundaries of the Reservation Jamul Indian Village. Therefore, while the Proposed Project would contribute to the visual transformation for this portion of the County, the Proposed Project, Alternatives 1 and 2 would not result in a significant cumulative impact related to scenic vistas, increased light and glare, or scenic resources.

GEOLOGY AND SOILS

Cumulative development in the Jamul/Dulzura community would include land roadway development necessary to accommodate the County's planned growth for this area. The most visible changes to topography would come from clearing and flattening of land to accommodate subdivision development. However, the County has adopted goals/policies

related to the conservation of significant features within the community plan area. Those efforts by the County coupled with the limited grading associated with development of the traffic mitigation measures, results in the project's contribution to cumulative change in topography being less than cumulatively considerable. Soil loss associated with the roadway/intersection improvements would be less than cumulatively considerable through incorporation and implementation of the Erosion Control Plan. The construction of the roadway/intersection improvements would not contribute to a cumulative increase of seismic hazards in the area. All features of the roadway/intersection improvements would be constructed to Caltrans standards. No significant mineral resources are known to exist on the project site. Cumulative effects are therefore considered to be less than significant for the Proposed Project, Alternative 1 and 2.

HYDROLOGY AND WATER QUALITY

Stormwater discharges from residential and roadway areas are a concern in managing water quality. Cumulative growth in the Jamul/Dulzura community would result in increased impervious surfaces, which would increase potential sedimentation, pollution and stormwater flows in the area waterways. Cumulative development within the Jamul/Dulzura community could result in cumulatively considerable effects if off-site flows from future development result in overload of the storm water facilities leading to adverse impacts to downstream water resources. However, cumulative development would be required to comply with County requirements for storm water detention/retention, which are similar to those measures identified for the proposed gaming facility. Compliance with County requirements would reduce adjacent cumulative development potential adverse impacts on the water facilities from off-site flows.

The amount of increased impervious surfaces due to on-site development would be limited to that area necessary to accommodate the gaming facilities. The Reservation would incorporate on-site detention/retention facilities and sediment filtering devices to ensure that cumulative contribution to off-site water resource effects are less than significant. Therefore, the Proposed Project, Alternatives 1 and 2 would not have significant cumulative effects on water quality when it is combined with cumulative conditions in the project area.

HAZARDOUS MATERIALS

There are no existing hazardous materials on the project site. The project would not use significant quantities of hazardous materials and mitigation has been defined to decrease any incidental spills to a less than significant level. Therefore, there are no significant cumulative hazardous materials issues associated with the Proposed Project, Alternative 1 and 2.

BIOLOGICAL RESOURCES

The proposed gaming facility would not block migratory routes or wildlife corridors, nurseries, or fisheries, nor would it impact special status species or protected habitats. Additionally, the Proposed Project would not conflict with policies or adopted habitat conservation plans. Wildlife preserves surrounding the Reservation function as wildlife refuge and movement corridors; however, the project would not significantly impact these preserves. The County MSCP is designed to compensate for cumulative loss of open space and natural habitat by the creation and expansion of nature preserves. Indirect iImpacts to the County MSCP are addressed in Section 4.15. Development of the Proposed Project, Alternative 1 and 2 would not contribute a significant increment to the regional loss of open space or natural habitats.

CULTURAL RESOURCES

Significant cultural resources are non-renewable. The disturbance or alteration of a cultural resource causes an irreversible loss of significant information. Cumulative development in As the County of San Diego and the Jamul/Dulzura Subregion rural communities along SR 94 continue to grow, development projects may contribute to the loss destruction or modification of significant cultural resources in the Project vicinity. The gaming project would not directly adversely affect known significant cultural resources or directly contribute to a cumulative loss of known significant cultural resources. Construction of the roadway improvements has the potential to inadvertently impact subsurface components of known significant cultural resources (CA-SDI-7966/11410 and CA-SDI-11050) or to inadvertently impact undocumented cultural resources. Mitigation is required for all development in San Diego County to comply with eCounty policies, CEQA, and/or Section 106 of the NHPA. Adherence to these frameworks would ensure that potential impacts to cultural resources are considered and mitigated. Implementation of these required mitigation measures would reduce the potential cumulative loss of cultural resources to a less than significant level. Accordingly, no cumulatively significant effects to cultural resources would occur as a result of the Proposed Project, Alternative 1 and 2.

TRANSPORTATION

Near Term (2015) Plus Proposed Project Conditions

As presented in Section 4.9 Traffic and Circulation, the following intersections would have one or more peak-hours where the Proposed Project would cause a cumulatively considerable significant impact:

SR 94 (Campo Road) and Via Mercado (LOS D weekday a.m. peak-hour, LOS F weekday p.m. peak-hour, LOS E Friday p.m. peak-hour);

- SR 94 (Campo Road) and Jamacha Boulevard (LOS E weekday p.m. peak, LOS E Friday p.m. peak);
- SR 94 (Campo Road) and Jamacha Road (LOS D weekday a.m. peak-hour, LOS F weekday p.m. peak-hour, LOS F Friday p.m. peak-hour, LOS D Saturday p.m. peak-hour);
- SR 94 (Campo Road) and Cougar Canyon Road (LOS D weekday a.m. and p.m. peakhours);
- SR 94 (Campo Road) and Steele Canyon Road (LOS D weekday a.m. peak-hour, LOS F weekday p.m. peak-hour, LOS F Friday p.m. peak, LOS D Saturday p.m. peak);
- SR 94 (Campo Road) and Lyons Valley Road (LOS F all peak-hours analyzed);
- SR 94 (Campo Road) and Jefferson Road (LOS E weekday a.m. and p.m. peak-hour, LOS E Friday p.m. peak-hour);
- SR 94 (Campo Road) and Melody Road (LOS F all peak-hours analyzed);
- SR 94 (Campo Road) and Reservation Road (LOS F all peak-hours analyzed); and
- SR 94 (Campo Road) and Otay Lakes Road (LOS D weekday a.m. peak-hour).

Tables 4.9-35 through **4.9-37** present display the roadway segments analysis under Near Term (2015) Plus Project Conditions for a typical weekday for the Proposed Project and Alternatives 1 and 2. As shown in the tables, all roadway segments within the study area would continue to function at LOS D or better with traffic from the Proposed Project, Alternative or Alternative 2. Therefore, this Near Term cumulative impact is considered to be less than significant.

Tables 4.9-38 through **4.9-39** presents the peak-hour arterial analysis along SR 94 (Campo Road) between Via Mercado and Jefferson Road/Proctor Road under Near Term (2015) Plus Project Conditions. The roadway segment would function at LOS C or better with the addition of the Proposed Project and Alternatives 1 and 2 traffic. **Appendix 10** (Appendix G) contains the peak-hour arterial analysis worksheets. This Near Term cumulative impact is considered to be less than significant.

Table 4.9-40 displays the peak-hour two-lane highway analysis along SR-94 (Campo Road) between Jefferson Road/Proctor Road and Otay Lakes Road under Near Term (2015) Plus Project Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. As shown in the table, all two-lane facilities analyzed would continue to operate at LOS D or E during all peak-hours analyzed for the

Proposed Project, Alternative 1 and Alternative 2, which is a significant Near Term Cumulative impact.

Horizon Year (2035) Plus Project Conditions

Table 4.9-41 presents the peak-hour LOS analysis results for the study intersections under Horizon Year (2035) Plus Project weekday conditions, while **Table 4.9-42** the peak-hour LOS analysis results for the typical Friday and Saturday Horizon Year (2035) Plus Project conditions. Under Horizon Year conditions, all intersections within the study area would operate at LOS D, E or F under one or more peak-hours under the Horizon Year (2035) Plus Project conditions. **Appendix 10** (Appendix E) contains the intersections LOS calculation worksheets. This is a significant Horizon Year cumulative impact.

Table 4.9-45 through 4.9-47 presents the roadway segments analysis under the Horizon Year(2035) Plus Project Conditions for a typical weekday for the Proposed Project, Alternative 1and Alternative 2.

The Proposed Project would have a cumulatively considerable significant traffic related impact along the following roadway segments within the County of San Diego:

- Jamacha Road between SR 94 and Fury Lane; and
- Proctor Valley Road between Melody Road and Pioneer Way.

As shown in **Table 4.9-46**, Alternative 1 would have a cumulative traffic related impact along Proctor Valley Road between Melody Road and Pioneer Way.

As shown in Table **4.9-47**, Alternative 2 would not have a cumulative traffic related impact along the roadway segments within the study area.

The County of San Diego's General Plan states that due to special circumstances, the segment of Jamacha Road between SR-94 (Campo Road) and Fury Lane is accepted at LOS F operations. Thus, the Proposed Project would not have a significant impact along this roadway.

The segment of Proctor Valley Road between Melody Road and Pioneer Way is identified as one of the facilities listed for improvements under the County of San Diego's Traffic Impact Fee (TIF) program. The program includes the cost of widening Proctor Valley Road from its current rural light collector classification to a two collector classification.

Tables 4.9-48 and 4.9-49 display the peak-hour arterial analysis along SR-94 (Campo Road)between Via Mercado and Jefferson Road/Proctor Road under the Horizon Year (2035) PlusProject Conditions. Table 4.9-48 shows the results of the weekday conditions, while Table

4.4-49 shows the results of the Friday and Saturday afternoon peak-hour conditions. As shown in the tables, all roadway segments within the study area would function at LOS D, E, or F with the addition of any of traffic from the Proposed Project, Alternative 1 or Alternative 2 during one or more peak-hours. **Appendix 10** (Appendix G) contains the peak-hour arterial analysis worksheets. This is considered a significant Horizon Year cumulative impact.

Table 4.9-50 displays the peak-hour two-lane highway analysis along SR-94 (Campo Road) between Jefferson Road/Proctor Road and Otay Lakes Road under the Horizon Year (2035) Plus Project Conditions. The table shows the results of the weekday conditions and Friday and Saturday afternoon peak-hour conditions. As shown in the table, all two-lane facilities analyzed would operate at LOS D or E during all peak-hours analyzed for the Proposed Project, Alternative 1 and Alternative 2, which is considered a significant Horizon Year cumulative impact. **Appendix 10** (Appendix H) contains the two-way two-lane analysis worksheets.

NOISE

Cumulative noise impacts would be associated with traffic noise. Noise impacts from onsite noise sources would be limited to nearby properties and, based on the analysis, would not exceed the property line standards and thus would not contribute to a cumulative noise impact off the Reservation. Under near term cumulative traffic conditions, with the exception of Melody Road, traffic noise levels increases would be less than 7 dBA CNEL. In the Horizon Year (2035), the traffic volumes along the roadway segment are expected to increase; however, the project related traffic volumes would remain the same. Therefore, the project related increase would be less than significant impact is anticipated. Future increases in noise levels would be considered readily noticeable, but would not be perceived as a doubling of noise levels. Additionally, this increase would be below the 10 dBA threshold for a substantial increase over existing conditions. Thus, these increases in the cumulative noise environment along these roadway segments would not be considered significant.

The cumulative noise level increase along Melody Road, is greater than 10 dBA and may be considered significant if the existing noise levels are already equal to or greater than the 60 dBA standard of significance. Assuming the traffic mix on these roadways is 95 percent automobiles, 3 percent medium trucks and 2 percent heavy trucks, and assuming traffic is traveling at the posted speed limit, existing traffic noise levels at 100 feet from the center line of along Melody Road would be approximately 58 dBA CNEL. As the future noise levels would be compatible with the existing land uses, the noise levels increases along Melody Road future traffic noise levels would be considered less-than significant.

AIR QUALITY

Construction would last two years, and the worst-case scenario of construction would result in the emission of pollutants on both the local and regional scales but would not exceed the screening level thresholds for air quality analysis, as discussed in **Section 4.11** Air Quality. Due to the temporary nature of construction emissions, regional construction emissions from the Proposed Project, Alternative 1 and 2 would not result in a cumulatively significant impact. Additionally, dust associated with construction would be temporary and localized and would not cumulatively interact with dust generated from other projects in the region. Therefore, the Proposed Project, Alternative 1 and 2 would not significantly contribute to cumulative air quality impacts to sensitive receptors.

Operation of the Proposed Project would add area source and mobile emissions, as discussed in **Section 4.11** Air Quality. However, the level of emissions created would not exceed significance screening thresholds. CO emissions due to additional mobile source emissions would not generate conditions that would require an operational hotspot CO concentration analysis. The operational activities of the proposed project would conform to applicable thresholds, would not create a CO hotspot, and would not result in a cumulatively considerable net increase of criteria pollutants. The Proposed Project, Alternative 1 and 2 would not contribute to cumulative air quality impacts.

Past cumulative air pollutant emissions have resulted in a significant cumulative greenhouse gas impact. Moving forward, the cumulative emissions associated with the cumulative project list in this section would also contribute to this significant impact, which is a significant impact. The State's goal is to reduce these emissions back to the 1990 level, or an approximate 28% reduction from current levels. The Proposed Project's contribution to this impact is estimated to be 11,455 metric tons of CO_{2e} per year. Alternative 1 and 2 would contribute approximately 5,971 and 1,418 metric tons of CO_{2e} per year, respectively. Left unmitigated, these levels would contribute to a significant greenhouse gas impact. Mitigation 4.11(8) would assist in the attainment of the State's goal of achieving an overall 28% greenhouse gas reduction and, thus would reduce the project's contribution to the cumulative impact below a level of significance.

Although the Proposed Project, Alternative 1 and 2 would not result in significant impacts to air quality, build-out of the region may contribute to the degradation of regional air quality. Implementation of the tactics presented in the Regional Air Quality Strategy, as adopted by the San Diego Air Pollution Control District, are directed at mitigating regionally significant air quality impacts. The effectiveness of such measures are dependent upon sound land planning, emission reductions through more efficient automobiles, trip reducing techniques and other factors that are outside the control of individual projects.

PUBLIC SERVICES

Although urban growth rates have slowed nationwide due to the economic recession, San Diego County remains one of the most rapidly growing regions in the Unites States. San Diego County has responded by regulating development, promoting smart growth, and by expanding public service infrastructure to meet projected demands. In 2004, the San Diego Association of Governments (SANDAG) adopted the Regional Comprehensive Plan to provide a blueprint for managing the region's growth while preserving natural resources and limiting urban sprawl.

Water Supply

The San Diego County Water Authority and the City of San Diego, along with other urban water suppliers, are required by the state to prepare urban water management plans and update them every five years. The Water Authority's 2010 Urban Water Management Plan identifies a diverse mix of water resources as goals to be developed through 2030 to ensure long-term water supply reliability for the region.

Based on the Otay Water District's Master Plan, the existing emergency reserves are deficient; the current capacity for total reservoir storage volume is 3.04 million gallons, and 3.5 million gallons is required for projected. However, the Otay Water District would address these deficiencies by building two additional reservoirs: a 2 million gallon reservoir that is in design / construction and a 10 million gallon reservoir to be added by 2016. Note that the Master Plan's ultimate storage requirements were designed for the residential build-out of Village 14 and Village 16, which are large tracts of land near the Jamul Indian Village that have been purchased by the California Department of Fish and Game and deed-restricted as wildlife preserves. Therefore, the projected ultimate consumption values are conservative due to the planned usages being decreased by open-space designations.

The proposed project has implemented mitigation by design by incorporating water-saving and water recycling measures into the project design. The water demand created by the development of the proposed project results in an increased demand on Pressure Zone 1296 of 2%. Thus, any increases in the future water demand created by the proposed project would be offset by the future increased capacity of the Pressure Zone and the removal of the planned water demands of Village 14 and Village 16. The available flow of the 1296 Pressure Zone is 1,164 gpm, and the proposed project would require a daily design flow of 40 gallons per minute (and a peak flow of 57 gallons per minute) with reclamation. Thus, the 1296 Pressure Zone has more than adequate capacity to handle the water demands of the proposed project. Thus, water supply demands and related infrastructure required to construct and operate the Proposed Project, Alternative 1 or Alternative 2 would have a less than significant cumulative impact upon regional water supply.

Wastewater Service

The City of San Diego's Metropolitan Wastewater System treats the wastewater from the City and 15 other cities and districts (including the Otay Water District's service area) from a 450-square-mile area with a population of over 2.2 million (City of San Diego 2007). In the 1990s, the City constructed the two water reclamation plants, the biosolids treatment facility, and several pump stations, and made major upgrades to the Point Loma Plant. These facilities provide a treatment system capacity sufficient to meet the projected needs of the 450-square-mile service area through at least 2020 (City of San Diego 2007).

The Reservation is not within a wastewater treatment service district. As part of the project, a wastewater treatment plant would be constructed to service the project facilities. One hundred percent of wastewater flows would be treated to a level that would make it suitable for all recycled water uses and effluent disposal strategies identified for this project. Wastewater would be treated using an immersed MBR wastewater treatment plant. Because all of the wastewater that is generated by the Proposed Project, Alternative 1 or Alternative 2 would be collected, treated, and reused or properly disposed, there would be no cumulatively significant impacts to regional wastewater services.

Solid Waste Service

The management of solid waste in San Diego County is mandated by state law and guided by policies at the state and local levels. The California Integrated Waste Management Act requires that all local jurisdictions, cities, and counties divert 50 percent of the total waste stream from landfill disposal. Unincorporated San Diego County, which includes Jamul, diverted 54% of its solid waste in 2006 (California Integrated Waste Management Board, 2011). Each local jurisdiction must demonstrate compliance by instituting source reduction programs. The County of San Diego Integrated Waste Management Plan includes a Countywide Siting Element, which demonstrates a remaining disposal capacity of at least 15 years to serve all of the jurisdictions within the County.

Waste generation resulting from operation of the Proposed Project's facilities was estimated to be approximately 6 tons per day, and the casino complex would employ a 30 cubic yard compactor to reduce the volume of trash being produced. To reduce the volume of trash even further, a streamline compactor would be used to reduce the water content of the trash. Other mitigation measures include the requirement that the Tribe create, adopt, and implement an effective Solid Waste Management Plan that addresses recycling and solid waste reduction on the Jamul Indian Village in general, and the casino complex in particular. Measures adopted under this plan would be applied to the operation of the casino complex.

The waste generated from the project would be shipped to a transfer station in El Cajon, where recyclable materials are removed, thus reducing the amount of waste sent to either the Otay

Landfill or the Sycamore Sanitary Landfill. Solid waste generation resulting from the project would represent only 0.2% of the landfills' daily intakes and 0.4% to 0.7% of landfills' spare capacity. The project's projected solid waste generation is considered a less than significant contribution to the waste stream. Thus, construction and operation of the Proposed Project, Alternative 1 an Alternative 2 would have a less than significant cumulative impact upon regional solid waste disposal services.

Electricity, Natural Gas, and Telecommunications

The Regional Energy Strategy 2030 prepared by the Regional Energy Office of SANDAG was produced to develop a vision for how energy will be produced and consumed in the region. This strategy developed policies and provided measurable targets to achieve the region's sustainable energy vision. The California Public Utilities Commission has the exclusive power and sole authority to regulate privately-owned or investor-owned public utilities such as San Diego Gas and Electric Company (SDG&E), the energy provider in the Jamul region. This exclusive power allows for the planned growth of utilities to serve expanding service areas and customers. SDG&E exceeded the state-required 20% Renewable Portfolio Standard in 2010.

Based on an electrical load analysis performed for the Proposed Project, it was estimated that the proposed project would have a peak demand load of 6.6 megawatts. When analyzed on a regional level, the proposed project would not likely constitute a significant increase in power demand. According to the California Energy Commission (2011), California's electricity generation system generates more than 296,000 gigawatt hours each year, and San Diego County's current generating capacity is 5,438 megawatts from 68 generation facilities, ranging from nuclear to wind turbine. The proposed project's peak demand load represents 0.1% of the County's current generating capacity. Nevertheless, mitigation measures have been identified to reduce the energy demand of the casino complex. With the implementation of these mitigation measures, cumulative impacts from the proposed project upon regional energy supply would be reduced to a less than significant level.

Pacific Bell (dba ATT) provides telecommunications services to the project area. The Tribal Government may need to provide upgraded telecommunication facilities (larger cable) in order to service the proposed facilities. The Jamul Tribal Government would fund and coordinate with the chosen service providers for additional utilities and/or upgrades of existing utilities. Propane would be used instead of natural gas for the kitchen facilities. The Proposed Project would not affect area natural gas facilities or supply. Implementation of the Proposed Project, Alternative 1 and Alternative 2 would result in a less than significant cumulative effect upon regional natural gas and telecommunications services.

Law Enforcement

The San Diego Sheriff's Department provides general law enforcement and jail functions in a service area of approximately 4,200 square miles, including the Jamul area. In addition, the Sheriff's Department provides specialized regional services to the entire county, whether they are needed in incorporated cities within the county or in the unincorporated areas not serviced by a city law enforcement agency. Operation of the gaming facilities under the Proposed Project may increase demands on the San Diego County Sheriff's Department.

The California Highway Patrol is the chief law enforcement agency for traffic related issues on public highways and roads leading up to the project area. The El Cajon Station serves an extensive region of southern San Diego County. Based on information provided by the CHP, the increase in traffic along SR 94 due to operation of the proposed project could increase service demands on the El Cajon Office. Potential effects to patrol demands are based upon the ability of roadways to safely handle traffic. As noted in the transportation discussion in **Section 3.9** the Proposed Project would result in significant effects to the level of service on SR 94. The Tribe has identified fair-share contributions to traffic improvements in order to mitigate effects to SR 94. These measures would assist in reducing congestion and operation effects; however, as noted in the traffic discussion congestion would remain significant until Caltrans processes and allows for the improvements to be constructed. Therefore, the gaming project's contribution would be considered cumulatively considerable.

The Tribe would provide continuous, on-site security for casino operations to reduce and prevent criminal and civil incidents. The Tribe may enter into a service agreement with the San Diego County Sheriff's Department to address criminal issues on the federal reservation. These mitigation measures would ensure that cumulative impacts upon law enforcement services resulting from project/alternative implementation are less than significant.

Fire Protection and Emergency Medical Services

The California Department of Forestry and Fire Protection (CDF), under contract to the BIA, provides wildland fire protection and responds to all wildfires. The San Diego Rural Fire Protection District covers 720 square miles in the southeastern portion of San Diego County. The majority of responses are for medical emergencies. The new Jamul Fire Station, located directly across State Route 94 from the Jamul Indian Village would allow for very quick emergency response times ranging from one to five minutes. The Jamul Indian Village currently receives emergency medical services from the San Diego Rural Fire Protection District. The Rural Fire Protection District is not obligated to service the Jamul Indian Village, but currently responds to medical emergencies as a courtesy to the Jamul Tribal Government.

Operation of the casino complex would introduce ignition sources and increase the risk of both structure fires and wildfires. The use of the proposed casino by patrons and employees would

result in an increased demand for emergency medical services. The increased demand for fire protection and emergency medical services is a potentially significant impact before mitigation. However, the proposed project has been designed to comply with fire building codes, and the proposed project includes the construction and operation of a fire station and ambulatory services. Implementation of these resources would ensure that the Proposed Project is self-sufficient in terms of fire and emergency response capability. In addition, it is proposed that the Tribe would enter into a Mutual Aid Agreement with San Diego Rural Fire Department and the Grossmont Rural ALS Program. This Mutual Aid agreement would provide the Jamul Indian Village with redundant Fire and ALS ambulance response from the Jamul area and double the ALS unit hours available in the region. The implementation of the program identified above by the Tribe would result in a net beneficial impact to the surrounding community. The compliance with applicable codes and standards would assure that adequate, qualified fire protection services are provided for the Jamul Indian Village. The adoption of mutual aid agreements with other neighboring fire districts would provide additional fire protection to the surrounding community, while at the same time assuring that qualified backup is available if an incident were to occur at the Indian Village. Thus, with these mitigation measures incorporated into the Proposed Project, Alternative 1 and Alternative 2, operation of the casino complex would have a less than significant cumulative impact upon regional fire protection and emergency medical services. No additional mitigation is necessary.

4.14.3 MITIGATION

Mitigation: Traffic - Near Term (2015) Plus Project Conditions

Implement Mitigation 4.9(3) in Section 4.9.

Mitigation: Traffic - Horizon Year (2035) Plus Project Conditions

Implement Mitigation 4.9(4) in Section 4.9.

Mitigation: Air Quality – Greenhouse Gas Operational

Implement Mitigation 4.11(8) in Section 4.11.

SECTION 4.15

EFFECTS OF MITIGATION MEASURES

4.15 INDIRECT EFFECTS OF MITIGATION MEASURES

Indirect impacts are defined as impacts caused by the project that will occur later in time or are farther removed in distance, but are still reasonably foreseeable. Within this section, <u>effects of mitigation measures</u> indirect impacts from traffic mitigation are assessed because they are off-site physical improvements that would be constructed later in time.

4.15.1 OFF-SITE TRAFFIC MITIGATION DESCRIPTION/SETTING

The traffic mitigation addressed in this section includes the following:

- 1. Access Road Improvement Options
 - a. Option 1: Realigned Reservation Road Option
 - b. Option 2: 4-Acre Parcel Access Option
 - c. Option 3: Melody Road Access Option
- 2. Off Site Intersection Improvements
 - a. SR 94 & Via Mercado
 - b. SR 94 & Jamacha Blvd.
 - c. SR 94 & Jamacha Road
 - d. SR 94 & Cougar Canyon Road
 - e. SR 94 & Steele Canyon Road
 - f. SR 94 & Lyons Valley Road
 - g. SR 94 & Jefferson Road
 - h. Proctor Valley Road and Melody Road
 - i. SR 94 & Otay Lakes Road

The three Access Options are identified as mitigation for the non-standard operating conditions that exist at Reservation Road. The three Access Options are currently undergoing parallel engineering/environmental review to identify the best option from an operational/environmental standpoint. At this point, it is too early to know which Access Option is preferred, so all three are assessed within this section. It should be noted that the

exact alignment and configuration for each of the three access locations has not been finalized, so, for the purposes of analyzing environmental impact, footprints of each were approximated with the assistance of the project traffic engineer to encompass an area greater than that likely to be impacted, given information that is known at this time about access designs. **Figures 4.15-1** through **4.15-3** shows the extent of the improvement footprint areas currently identified for the three options; the entirety of each footprint area is analyzed for environmental effects associated with construction of the Access Options.

Without implementation of one of the Access Options listed above (or some other viable means of providing adequate access), the operation of the Project, Alternative 1 and Alternative 2 at Reservation Road would result in a significant impact due to inadequate access to the project site. (see **Appendix 10** for an explanation of the deficiencies). In addition, the level of service at SR 94/Reservation Road would be unacceptable for the Proposed Project and for Alternative 1, thus resulting in a significant impact in both cases. This level of service impact would be mitigated by any of the three Access Options, thus reducing it to a less than significant level. The Tribe would be responsible for working with Caltrans to process an encroachment permit for any Access Option requiring improvements to be made within the SR 94 ROW, and would be responsible for financing 100% of the access improvement.

It should be noted that, in the cumulative scenario, all of the existing off site intersections are expected to have deficient operations with or without the gaming project. As such, mitigation for impacted intersections would occur as fair share contributions to needed improvements, based upon the contribution of traffic by the project as a percentage of the total traffic volume at a given intersection. Given that the fair share mitigation would not result in operating improvements at the various intersections prior to opening of the gaming facility, impacts to these intersections are considered to be indirect, as well as significant and unavoidable.

The discussion below presents descriptions of the Access Options and various off site intersection improvements, as well as a setting/impact/mitigation discussion for these improvements.

OFF SITE TRAFFIC MITIGATION DESCRIPTION

Access Road Improvement Options

Option 1: Realigned Reservation Road Option

This option provides access at the Reservation Road, the location of historical access to the Reservation; however, it is a "normalized" version of the existing access road. This "normalized" (or right-angle) option differs in that the angle at which the new access drive



SOURCE: Digital Globe, 2012; Natural Investigations, Co., 2012; EDS, 2012

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Figure 4.15-1 Access Option 1 Footprint



SOURCE: Digital Globe, 2012; Natural Investigations, Inc., 2012; EDS, 2012

- Jamul Indian Village Draft Final Tribal EE ■ Figure 4.15-2 Access Option 2 Footprint



SOURCE: Digital Globe, 2012; Natural Investigations, Co., 2012; EDS, 2012

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Figure 4.15-3 Access Option 3 Footprint intersects SR 94 is reduced, resulting in a more traditional 4-way intersection. The improvements under this option would result in a 3-way intersection as no roadway or driveway is located opposite (east side of SR 94). SR 94 right-of-way (ROW) improvements would extend from an area approximately 1,500 feet north of Melody Road to an area approximately 1,000 feet south of the Reservation. This option would encompass approximately 6.4 acres. Turning lanes would be constructed and existing lanes would be reconfigured along the highway both northwest and southeast of the Reservation. In addition, a new traffic signal would be constructed at the Reservation Road/SR 94 intersection, as well as the Melody Road/SR 94 intersection. Retaining walls would also be used at various points along the improvement length to avoid riparian habitat and jurisdictional waters.

Option 2: 4-Acre Parcel Access Option

The 4-Acre Parcel Access Option realigns the access road north of the Reservation through the adjacent 4-acre parcel. The connection with SR 94 would be at a 90 degree angle and it could be located near the old fire station driveway on SR 94, which previously served the fire station that has since relocated to the east side of SR 94. SR 94 right-of-way (ROW) improvements would extend from an area approximately 1,000-feet north of the existing Melody Road/SR 94 intersection to an area approximately 1,400 feet south of the Reservation. This option would encompass approximately 7 acres. Improvements include new turning lanes, reconfigured lane alignments, a new signal at the Melody Road / SR 94 intersection and the new access point/SR 94 intersection, and the placement of retaining walls at various locations along the alignment to avoid riparian habitat and jurisdictional waters. A conceptual alignment depicting Access Option 2 is presented in **Figure 4.15-2**. If Access Option 2 is selected, the ultimate roadway alignment may differ from that shown by the conceptual plan. Given the breadth of study area analyzed in this document, the impacts of Access Option 2 would be substantially the same as that described in this Tribal EE irrespective of where the roadway is ultimately placed on the 4 acre parcel.

Option 3: Melody Road Access Option

The Melody Road Access Option is located to the north and west of the Reservation off Melody Road. This option, unlike the other two, does not provide access directly from SR 94; rather, a new driveway is proposed to be constructed off Melody Road, which is a designated County Road. The Melody Road option greatly expands improvements to include additional turning/through lanes on SR 94, new turning/through lanes on Melody Road and the development of a new roadway from Melody through the adjacent vacant 87acre parcel (under County jurisdiction) to the Reservation. This option would also include cut/fill grading, revegetation and the placement of culverts in drainages on the 87-acre parcel. Improvements would be constructed along Melody Road extending approximately 600 feet east of SR 94, with the entrance of the new access road being located approximately 250 feet east of the SR 94 intersection. Improvements along SR 94 would extend from about 1,000 feet north of the Melody Road intersection to approximately 400 feet south of the Melody Road intersection (not extending beyond the Reservation). This option would encompass approximately 12.9 acres. Improvements include new turning lanes, reconfigured lane alignments, a new signal at Melody Road / SR 94, and the placement of retaining walls at various locations along the alignment to avoid riparian habitat and jurisdictional waters. This option, unlike the other two, would require an improvement to the creek crossing at Melody Road and the construction of an additional three new channel crossings for the road that travels from Melody Road to the Reservation.

Off-Site Intersection Improvements

The improvements identified for each of the impacted intersections are identified in **Table 4.15-1** below. Figures 4.15-4 through 4.15-10 show the locations of these intersection improvements.

INTERSECTIONS IMPROVEMENTS ¹	IMPROVEMENTS
SR 94 Via Mercado	Add a second SB left-turn lane and an exclusive westbound right-turn lane.
SR 94/Jamacha Blvd	Add a second northbound right-turn lane.
SR 94/Jamacha Road	Restripe NB thru lane to a NB left-turn lane and northbound right-turn lane to a shared thru right-turn lane (including required traffic signal modifications). Add second EB right-turn lane. Add a second NB right-turn lane.
SR 94/Cougar Canyon	Add a second EB and WB through lanes and add a second SB left-turn lane.
SR 94/Steele Canyon Rd	Add a second EB and WB thru lanes.
SR 94/Lyons Valley Rd	Install Traffic Signal
SR 94/Jefferson Blvd	Add a NB and SB left-turn lanes and a second EB through lane.
Proctor Valley/Melody	Install Traffic Signal and NB, SB, EB, and WB left-turn lanes.
SR 94/Melody	Install a traffic signal
SR 94/Otay Lakes Rd	Add SBB exclusive right turn lane

TABLE 4.15-1INTERSECTION IMPROVEMENTS

1/ The improvements for Melody and Reservation Road intersections are included in the Access Road Options.

SOURCE: Kimley Horn, 2012; EDS, 2012

OFF SITE TRAFFIC MITIGATION SETTING

Access Road Improvement Options

Land Use

The majority of the roadway improvements for Options 1 and 2 are located within pre-existing highway ROW owned by Caltrans. SR 94 is a two-lane undivided highway within this stretch of roadway; the typical cross-section consists of two 12-foot travel lanes, in the north and southbound directions, and two 8-foot shoulders. The roadway is lined with fence posts and utility poles, a number of private driveways, as well as intersecting county roads, including Melody Road. It is expected that a certain portion of work would be on strips of parcels bordering the existing Highway ROW, which is under private ownership.

The Option 1 and 2 improvements would occur primarily on vacant land adjacent to existing SR 94 pavement (inside and outside the existing ROW), as well as vacant privately owned land located on the 4-acre parcel north of the Reservation Road. Some turning improvements would be required to a small segment of Melody Road under both Option 1 and 2. An existing access drive (Daisy Drive) and remnants of the old fire station driveway are located on the adjacent 4-acre parcel north of the Reservation. All three Access Options would temporarily affect several private driveways north of Melody Road during construction. No existing buildings or structures would be affected by any of the three options. Under Option 3, an entirely new roadway from Melody Road to the Reservation would be constructed on land consisting primarily of annual grasslands and riparian/oak woodland.

The segment of SR 94 that makes up the footprint for the three options borders parcels in San Diego County identified by the General Plan for agricultural and low density rural residential uses. Much of the surrounding land is currently used for agricultural purposes, for the preservation of open space, rural residential, or is vacant.

Land affected by the new roadway proposed west of SR 94 under Option 3 would travel through land regulated under the MSCP. Within the access Option 3 alignment exists a Hardline <u>Preserve conservation</u>-area, a Pre-Approved Mitigation Area, and a Take-Authorized Area, as defined by the MSCP.

Please refer to **Section 4.2** *Land Use* for additional information concerning the setting for land use.

Aesthetics

The project footprint for Options 1 and 2 lies primarily in an existing developed State highway corridor. Approximately half of the footprint for Option 3 is located within the highway corridor. This segment of SR 94 is adjacent to parcels in San Diego County occupied by low density rural residential, open space, and vacant land uses. The character of the sparsely developed, mostly rural area is dominated by scrub vegetation, a meandering creek that passes through undeveloped land west of SR 94, the existing state highway (SR 94), all framed by the low surrounding rocky hillsides.

SR 94 and Melody Road are the most prominent developed features within the option footprints. According to the San Diego County Scenic Roadways Element of the General Plan, SR 94 in the vicinity of the project site is eligible for listing as a designated scenic highway (as a Third Priority) on the County's local Scenic Resources list. However, it is not currently listed. State Route 94 is not listed by Caltrans as a State Scenic Highway.

Please refer to Section 4.3 Aesthetics for additional information concerning the setting for affected view sheds.

Geology and Soils

As mentioned in Section 4.4 Geology and Soils, soils of the Access Option project area are eroded coarse sandy loams to loams which have developed from granodiorite, granitic alluvium, basic igneous rock, or metamorphosed sandstone. The Access Option project area is underlain by 10 soil types, but primarily the Cieneba loam (CIE2, CmrG), Escondido loam (Esc), Fallbrook loam (FaD2, FaE2), Friant loam (FxG), Las Posas loam (LpC2, LpE2), Ramona loam (RaC2), and Wyman loam (WmC). Figure 4.4-2 displays these soils in relation to the Access Option project area. The soils are well drained to somewhat excessively drained and have a low to moderately low water-holding capacity and slow to moderately rapid permeability. Runoff is slow to very rapid. Soil depth to bedrock varies with topography (0 to over 70 inches).

Please refer to Section 4.4 Geology and Soils for additional information concerning seismicity and mineral resources.

Hydrology and Water Quality

All storm water originating within the Access Option project area drains by sheet flow along surface grades to Willow Creek or, to a minor extent, to the ditches of the SR 94 right-of-way. The San Diego County Flood Control District currently maintains culverts along Willow Creek at the following locations: 1) a private roadway about 360 feet north of Melody Road with a 12-inch corrugated metal pipe; 2) Melody Road, with a 60-inch concrete pipe; and 3) Reservation Road, which has a 24-inch corrugated metal pipe. A tributary of Willow Creek collects runoff from a residential development (Calle Mesquite) north of Melody Road, and discharges runoff under Melody road via a 24-inch corrugated metal pipe.

The Access Option footprints and vicinity are designated Zone D for areas of undetermined flood risk, according to FEMA Flood Insurance Rate Map Panel Number 06073C1975F. Within the Reservation, Willow Creek has a slope gradient of 3 to 4%, with side slopes having a variable gradient of between 12 and 50% (Martin and Ziemniak 2006; San Dieguito Engineering 2011). Results of hydrologic modeling by Martin and Ziemniak (2006) indicate that the flow within the channel during a 100-year storm event is 392 cubic feet per second. The total rainfall that would occur during a 6-hour 100-year rain event in the Jamul region is 3 inches (Martin and Ziemniak 2006).

Please refer to **Section 4.5** *Hydrology and Water Quality* for additional information concerning ground water and surface water quality setting.

Hazardous Materials

Roads within the Access Option project area are unpaved gravel roads or are paved with asphalt or concrete, and show no suspicious staining. Minor quantities of household debris (consisting of paper refuse, glass bottles, aluminum cans, etc.) were observed to be scattered along the SR 94 right-of-way, in the stream corridor, and other parcels within the Access Option project area. Discarded chemical product containers or drums were not observed within the Access Option project area. No hazardous substances or petroleum product usage or storage were noted within the Access Option project area during the site reconnaissance, other than the former above-ground storage tank concrete pad associated with the former fire station on the 4-acre parcel. The former fire station used two fuel USTs until 1986, then excavated the USTs and installed two ASTs. These ASTs were relocated when the fire station was relocated circa 2006-2007. No staining of the concrete pads or surrounding pavement was evident during the site reconnaissance. The fire station employed a septic system, and it is not known if the septic tanks were removed or left in place. No poly-chlorinated biphenyl (PCB)-containing equipment (electric or hydraulic) was observed during the site reconnaissance.

Please refer to **Section 4.6** *Hazardous Materials* for additional information concerning hazardous materials/waste setting.

Biological Resources

<u>Habitat</u>: The Access Option right-of-way contains four natural community/habitat types: ruderal/developed, annual grassland, coastal scrub, and riparian/oak woodland. Most of the option footprint (66%) can be classified as ruderal or developed areas, and consist of disturbed or converted natural habitat that is now either in a weedy and barren (ruderal) state, recently graded, or urbanized with pavement (e.g., SR 94), landscaping, and structure and utility placement.

Special Status Species:

The CNDDB was queried and any reported occurrences of special-status species with historical occurrences within the Access Option project area were plotted. Within a 5-mile buffer of the Access Option project area, the CNDDB reported 367 special-status species occurrence records.

The County's SanBIOS database was also spatially queried and reported no special-status species with a historical occurrence within the Access Option project area. Several special-status species occurrences were reported by SanBIOS database on adjacent properties.

A federal species list was also generated from the USFWS website using the USGS 7.5-minute quadrangle in which the Access Option project area is located, plus the surrounding quadrangles. The resulting species list from all databases is presented in **Appendix 10**.

The special-status species identified in these databases were further assessed for their likelihood to occur within the Access Option project area based upon previously documented occurrences, field surveys, their habitat requirements, and the quality and extent of any suitable habitat within the Access Option project area. Each species was ranked for its likelihood to occur within the Access Option project area:

• a "high" rank was given for species where current field surveys have positively identified the species, where there have been previously documented occurrences within the Access Option project area, and/or where essential habitat elements exist within the Access Option project area

- a "moderate" rank was given for species that were not detected during current field surveys, but where there have been previously documented occurrences within the Access Option project area or vicinity, and where preferred habitat elements exist within the Access Option project area
- a "low" rank was given for species with no known observations within the Access Option project area or vicinity, and where habitat elements exist within the Access Option project area or vicinity, but the quality of that habitat is degraded or of poor quality, and/or where Access Option project area conditions and land uses deter its use of the Access Option project area
- a "unlikely" rank was given for species with no known observations within the Access Option project area or vicinity, and where no suitable habitat exists within the Access Option project area.

The results of these analyses are summarized in Appendix 10. Twenty eight-nine special-status species were determined to have a moderate likelihood of occurrence within the Access Option project area: Cooper's hawk (Accipiter cooperii), southern California rufous-crowned sparrow (Aimophila ruficeps canescens), arroyo toad (Anaxyrus californicus), golden eagle (Aquila chrysaetos), San Diego sagewort (Artemisia palmeri), orange-throated whiptail (Aspidoscelis hyperythra), coastal western whiptail (A. tigris stejnegeri), Dulzura pocket mouse (Chaetodipus californicus femoralis), western yellow-billed cuckoo (Coccyzus americanus occidentalis), northern red-diamond rattlesnake (Crotalus ruber ruber), Otay tarplant (Deinandra conjugens), yellow warbler (Dendroica petechia brewsteri), Ericameria palmeri var. palmeri (Palmer's goldenbrush), southwestern willow flycatcher (Empidonax traillii extimus), Coronado skink (Eumeces skiltonianus interparietalis), Palmer's grapplinghook (Harpagonella palmeri), Ramona horkelia (Horkelia truncata), decumbent goldenbush (Isocoma menziesii JIV Access Bio. decumbens), Gander's pitcher sage (Lepechinia ganderi), Robinson's pepper-grass (Lepidium virginicum robinsonii), San Diego black-tailed jackrabbit (Lepus californicus bennettii), felt-leaved monardella (Monardella hypoleuca lanata), San Diego desert woodrat (Neotoma lepida intermedia), coast (San Diego) horned lizard (Phrynosoma coronatum blainvillii), coastal California gnatcatcher (Polioptila californica californica), Munz's sage (Salvia munzii), San Miguel savory (Satureja chandleri) and least Bell's vireo (Vireo bellii pusillus).

Note, however, that these species are likely to occur only in the undisturbed and undeveloped portions of the Access Option project area (i.e., riparian corridors and regenerating coastal scrub on hillsides).

USFWS protocol level surveys were conducted in 2011 for coastal California gnatcatcher by Pacific Southwest Biological Services (**Appendix 13A**), and Quino Checkerspot Butterfly and Hermes Copper Butterfly by Forensic Entomology Services (**Appendix 13B**). Both surveys resulted in negative findings for the species; however, the Quino survey did locate the host plant within the 87-acre parcel, which is relevant only to the Melody Road Access Option (Option 3). Botanical surveys conducted in 2011 (**Appendix 14**) did not detect any threatened or endangered species within the Access Option footprints. <u>However, botanical surveys conducted in 2012 did detect one stand of Palmer's goldenbush (Ericameria palmeri var. palmeri) on the 87-acre parcel, within or directly adjacent to the Melody Road Access Option (Option 3) alignment.</u>

Jurisdictional Waters:

Please refer to **Section 4.7** *Biological Resources: Protected Water Resources* for a jurisdictional waters setting discussion.

Habitat Connectivity and Wildlife Corridors:

Please refer to **Section 4.7** *Biological Resources: Habitat Connectivity and Wildlife Corridors* for a jurisdictional waters setting discussion.

Habitat Conservation Plans:

Please refer to **Section 4.7** *Biological Resources: Local Laws, Ordinances, Regulations, and Standards* for a jurisdictional waters setting discussion.

Cultural Resources

Please refer to **Section 4.8** *Cultural Resources* for information concerning cultural and paleontological resource setting.

Noise

Please refer to Section 4.10 Noise for information concerning the noise setting.

Air Quality

Please refer to **Section 4.11** *Air Quality* for information concerning the air quality setting.

Public Services

Please refer to **Section 4.12** *Public Services* for information concerning public service setting.

Off Site Intersection Improvements

State Route 94 at Via Mercado

This intersection is characterized by its suburban setting and rolling topography. A natural drainage channel runs parallel to SR 94 on the south side. The nearest development is the shopping center "Rancho San Diego Village" and a KinderCare daycare located north of the intersection. West of Via Mercado Road to Avocado Boulevard, and east to Jamacha Boulevard, SR 94 is a four-lane expressway. At this intersection SR 94 has two westbound lanes with a right turn "sneaker" lane and two eastbound lanes with one dedicated left turn lane. Via Mercado Road, which terminates at this intersection, has two travel lanes and an additional right turn lane at the intersection.

At the SR 94 / Via Mercado Road Intersection, an unnamed ephemeral drainage runs east toward Sweetwater River. The setting is suburban except for the open space located south of the intersection, which is being used informally as a BMX bicycle race course. An electrical substation is located about 500 feet southeast of the intersection. Habitats in the vicinity consist of ruderal and urbanized areas, with remnants of coastal sage scrub in open areas. The channel to the south contains some willow riparian forest. Naturally occurring soils in the vicinity of this intersection include Placentia sandy loam (PeC, PfC), Friant rocky fine sandy loam (FxG), Diablo-Urban land complex(DcD), Visalia sandy loam (VaB), and Escondido very fine sandy loam (EsE2).

Under the Proposed Project, Alternative 1 and 2, improvements to this intersection would consist of an additional southbound left turn and an exclusive westbound right turn (**Figure 4.15-4**). No additional ROW would be needed to accommodate this lane on Via Mercado Lane. In addition to widening the roadway and restriping the existing lanes, curb and gutters, guardrails, signal poles and signal control boxes may need to be relocated. Utility lines or services encountered during construction may also need to be relocated.

State Route 94 at Jamacha Boulevard

This intersection is characterized by its rural setting and steep topography. A natural drainage channel runs parallel to State Route 94 on the south side. The

nearest development is the recently constructed Skyline Wesleyan Church located north of the intersection. West of Jamacha Boulevard to Avocado Boulevard, SR 94 is a four-lane expressway. East of Jamacha Boulevard to Jamacha Road, SR 94 has six lanes. At this intersection SR 94 has two eastbound lanes and three westbound lanes, and additional dedicated turning lanes. Jamacha Boulevard, which terminates at this intersection, has four travel lanes and an additional left turn lane at the intersection, and is characterized by residential and commercial development. The driveway to the church, which is directly opposite Jamacha Boulevard, has four lanes.

At the SR 94 / Jamacha Boulevard Intersection, topography is rolling, and an unnamed intermittent drainage runs east toward Sweetwater River. The setting is rural except for the recently constructed Skyline Wesleyan Church located north of the intersection. Habitats in the vicinity consist of ruderal and urbanized areas, annual grassland, coastal sage scrub, and coast live oak riparian. Naturally occurring soils in the vicinity of this intersection include Placentia sandy loam (PfC), Friant rocky fine sandy loam (FxG), Diablo Clay (DaE and DaD), and Huerhuero loam (HrD2). Road improvements on SR 94 are already in progress, and a massive sound wall is being constructed in conjunction with the road widening (new eastbound lane) from Via Mercado, past Jamacha Boulevard, to Jamacha Road.

Record searches have revealed the presence of a previously identified cultural resource site within the vicinity of the intersection. The intersection improvement site, while disturbed, is therefore considered to be sensitive with regards to cultural resources.

Under the Proposed Project, Alternative 1 and 2, improvements to this intersection consist of the addition of a second NB right-turn lane, and the restriping of the NB through shared left-turn lane to a NB through shared right-turn lane (**Figure 4.15-5**). These improvements could entail the relocation and expansion of current facilities. It is expected that additional ROW would be needed along the south side of State Route 94 and along the east side of Jamacha Boulevard. In addition to widening the roadways and re-striping the existing lanes, curb and gutters, guardrails, signal poles and signal control boxes may need to be relocated. Utility lines or services encountered during construction may also need to be relocated. The bridge at this intersection may need to be widened. Trees in the riparian corridor may need to be removed.



SOURCE:Digital Globe, 2012; Natural Investigations Co., 2012; EDS 2012

— Jamul Indian Village Draft Final Tribal EE ■ **Figure 4.15-4** SR 94/Via Mercado Intersection



State Route 94 at Jamacha Road

This intersection is characterized by its urban setting and flat topography. A natural drainage channel runs parallel to State Route 94 on the southwest side. Commercial developments surround this intersection. West of this intersection to Jamacha Boulevard, SR 94 is a six-lane expressway. East of this intersection Jamacha Road is a six-lane expressway with two two-way turn lanes. South of this intersection, SR 94 continues as a four-lane expressway with one southbound dedicated turn lane and two northbound dedicated turn lanes. After the commercial district, SR 94 quickly tapers to a four-lane and then a 2-lane conventional highway. At this intersection SR 94 has three eastbound lanes with dedicated left and right turn lanes and three northbound turn lanes with a shared through lane and a right turn "sneaker" lane. Jamacha Road, which terminates at this intersection, has six travel lanes and three dedicated turn lanes on the westbound site.

At the SR 94 / Jamacha Road Intersection, topography is flat, and an unnamed intermittent drainage runs east toward Sweetwater River, but continues under SR 94 as part of the municipal storm sewer system. The setting is urbanized and is surrounded by commercial and retail centers, a gasoline service station, and a San Diego County Department of Public Works corporation yard located southwest of the intersection.

Habitats in the vicinity consist only of ruderal and urbanized areas, with the exception of the intermittent channel, which consists of willow riparian forest. Naturally occurring soils in the vicinity of this intersection include Placentia sandy loam (PfC), Friant rocky fine sandy loam (FxG), Visalia sandy loam (VaA), gravel pits, and Las Posas fine sandy loam (LpD2).

Under the Proposed Project, Alternative 1 and 2, improvements to this intersection would consist of restriping the northbound through lane to a northbound left turn lane and northbound right turn lane to a shared through right turn lane. Also, a second eastbound right turn lane would be added, as well as a second northbound right turn lane (**Figure 4.15-6**). These improvements would entail the relocation and expansion of current facilities. It is expected that additional ROW would be needed. In addition to widening the roadways and re-striping the existing lanes, curb and gutters, guardrails, signal poles and signal control boxes may need to be relocated. The bridge at this intersection may need to be widened. Trees might need to be removed within the riparian corridor.



SOURCE: Digital Globe, 2012; Natural Investigations, Co., 2012; EDS, 2012

Jamul Indian Village Draft Final Tribal EE ■ **Figure 4.15-6** SR 94/Jamacha Road Intersection

State Route 94 and Cougar Canyon Road

This intersection is characterized by a mixture of land uses and is situated in a canyon terrace with variable topography. SR 94 is a two-lane conventional highway with two eastbound left turn lanes and one dedicated westbound right-turn lane to accommodate school traffic. Cougar Canyon has four lanes, and the intersection is signal controlled.

Land uses are a mixture of commercial, educational (Steele Canyon), residential, and transportation and utility corridors. Habitats consist of ruderal and developed/landscaped areas to the north of the intersection, and to the south, riparian forest and coastal sage scrub along the Steele Canyon creek corridor.

Under the Proposed Project, and Alternative 1 and 2, improvements to this intersection would consist of a second eastbound through lane and a second westbound through lane on SR 94, and a second southbound left-turn lane on Cougar Canyon Road (**Figure 4.15-7**). These improvements would entail the relocation and expansion of current facilities. It is expected that no additional ROW would be needed along the south side of State Route 94. In addition to widening the roadways and re-striping the existing lanes, curb and gutters, guardrails, signal poles and signal control boxes may need to be relocated. Utility lines or services encountered during construction may also need to be relocated. Trees on the south side of SR 94 may need to be removed.

State Route 94 and Steele Canyon Road

This intersection and the segment of Steele Canyon Road from SR 94 and Jamul Drive is characterized by commercial and residential land uses and steep topography. SR 94 is a two-lane conventional highway with a two-way left turn lane. Steele Canyon Road, which terminates at this intersection, has two lanes.

Habitats in the vicinity of the intersection and segment of Steele Canyon Road include sparsely vegetated roadside areas, orchard, scrub, and riparian woodland. Naturally occurring soil in the vicinity of the intersection, Ramona sandy loam (RaC), has a slight to moderate erosion hazard. Naturally occurring soil along the segment of Steele Canyon Road also include Vista course sandy loams (VsE and VsG), Fallbrook sandy loam (FaD2), and Placentia sandy loam (PfC), which have a slight to very high erosion potential (USDA, 1973).

Record searches have not revealed the presence of previously identified cultural resource sites within the immediate vicinity of the intersection and segment. However, due to the abundance of known cultural resource sites along Steele



SOURCE: Digital Globe, 2012; Natural Investigations, Co., 2012; EDS, 2012

Canyon, the intersection improvement site is considered to be sensitive with regards to cultural resources.

Under the Proposed Project and Alternatives 1 and 2, improvements at this intersection would consist of additional eastbound and westbound through lanes (**Figure 4.15-8**). It is anticipated that additional ROW would be recommended to provide for road widening and the relocation and expansion of the existing facilities. Utility lines or services encountered during construction may also need to be relocated.

State Route 94 and Lyons Valley Road

This intersection is characterized by a variety of land uses, steep topography, and an adjacent drainage channel. Surrounding land uses include the Taproot Montessori Preschool directly south of the interchange, commercial land uses on the northeast and southwest corners, and residential uses in all directions. SR 94 is two-lane conventional highway with a two-way left turn lane. Lyons Valley Road is a two-lane road with a right turn "sneaker" lane at this intersection.

Habitats in the vicinity of the intersection consist primarily of disturbed roadside areas, coast live oak woodland, coastal sage scrub, and a riparian corridor associated with an intermittent drainage that flows southwest under SR 94. Naturally occurring soil in the vicinity of the intersection, Cieneba very rocky coarse sandy loam (CmrG), has a high to very high erosion hazard (USDA, 1973). Other soils in the vicinity include Fallbrook rocky sandy loam (FaC2, FaD2, FeE2), Ramona sandy loam (RaC2), Placentia sandy loam (PeC2, PfC), and Fallbrook-Vista sandy loam (FvE).

Record searches have revealed the presence of previously identified cultural resource sites within the vicinity of the intersection. The intersection improvement site, while disturbed, is therefore considered to be sensitive with regards to cultural resources.

Under the Proposed Project and Alternatives 1 and 2, improvements at this intersection would consist of the installation of a signal (**Figure 4.15-9**). It is expected that no additional ROW would be needed. Curb and gutters, and flag and light poles may need to be relocated. Utility lines or services encountered during construction may also need to be relocated.



SOURCE: Digital Globe, 2012; Natural Investigations, Co, 2012; EDS, 2012


Figure 4.15-9 SR 94/Lyons Valley Road Intersection

State Route 94 at Jefferson Road

This intersection is characterized by its suburban setting and rolling topography. West of Via Mercado Road to Avocado Boulevard, and east to Jamacha Boulevard, SR 94 is a four-lane expressway. SR 94 is two-lane conventional highway with a two-way left turn lane. Proctor Valley Road and Jefferson Road are two-lane roads, each with a right turn "sneaker" lane at this intersection. This intersection is signal controlled.

At the SR 94 / Jefferson Road Intersection, topography is rolling, and the setting is suburban except for the open space located northeast of the intersection, which is the large lawn of the historic estate "Bartlett House Ranch." Other land uses include a gasoline pump station, automotive service, a shopping center, and Simpson's nursery. Habitats in the vicinity consist of ruderal and urbanized areas, with annual grassland in open areas. Naturally occurring soils in the vicinity of this intersection include Fallbrook rocky sandy loam (FaC2, FeE2), Ramona sandy loam (RaC2), Placentia sandy loam (PeC2), Fallbrook-Vista sand loam (FvE), and Wyman loam (WmC).

Under the Proposed Project, Alternative 1 and 2, improvements to this intersection would consist of the addition of a northbound and southbound left turn lanes and a second eastbound through lane (**Figure 4.15-10**). These improvements would entail the relocation and expansion of current facilities. It is anticipated that no additional

ROW would be needed to accommodate these lanes on Jefferson Road or Proctor Valley Road, but it is possible that additional ROW may be needed on SR 94 for the through lane. In addition to widening the roadway and re-striping the existing lanes, curb and gutters, guardrails, signal poles and signal control boxes may need to be relocated. Utility lines or services encountered during construction may also need to be relocated.

Proctor Valley Road at Melody Road

At the intersection of Proctor Valley Road and Melody Road, the setting is rural residential. Both roads are 2-lane rural roads. At this intersection, the topography is flat. Land uses consist of fenced pasture, and residences (estates and smaller subdivisions).



Under the Proposed Project, Alternative 1 and 2, improvements to this intersection would consist only of the addition of a traffic signal (**Figure 4.15-11**). No additional ROW is needed. Utility lines or services encountered during construction may need to be relocated.

State Route 94 at Otay Lakes Road

This intersection is characterized by its natural setting and flat topography. North and south of Otak Lakes Road, SR 94 is a two-lane conventional highway. Otay Lakes Road is a two-lane conventional road with eastbound and westbound right-turn "sneaker" lanes.

At the SR 94 / Otay Lakes Road Intersection, topography is flat, as it is situated in the Dulzura Creek valley, and the setting is natural except for the northwest corner of the intersection, which is in a ruderal condition and is apparently used as a construction material laydown area. North of the intersection, a cast concrete bridge spans the Dulzura Creek channel. Habitats in the vicinity consist of annual grasslands, with remnants of riparian forest alongside the Dulzura Creek channel. Naturally occurring soils in the vicinity of this intersection include Cieneba rocky loam (CmE2), Fallbrook sandy loam (FaE2), Visalia sandy loam (VaB, VaC), Ramona sandy loam (RaB, RaC), Chino silt loam (CkA), Friant rocky fine sandy loam (FxG).

Under the Proposed Project, improvements to this intersection would consist of the addition of a southbound dedicated right-turn lane. No improvements are needed for Alternative 1 or 2 (**Figure 4.15-12**). This improvement would entail the relocation and expansion of current facilities. No additional ROW would be needed to accommodate this improvement. In addition to widening the roadway and re-striping the existing lanes, curb and gutters, guardrails, and signage would need to be relocated. The bridge over Dulzura Creek may need to be modified and widened. Utility lines or services encountered during construction may also need to be relocated. The bridge may need to be widened.

4.15.2 ENVIRONMENTAL CONSEQUENCES

The assessment of the indirect effects of <u>mitigation measures</u> traffic improvements is presented in two separate discussions below. The first focuses on the impacts resulting from the new Access Options, while the second discussion focuses on the impacts resulting from the intersection improvements.



² Figure 4.15-11 Proctor Valley Road/Melody Road Intersection



SOURCE: Digital Globe, 2012; Natural Investigations Co., 2012; EDS, 2012

Jamul Indian Village Draft Final Tribal EE ■ Figure 4.15-12 SR 94/Otay Lakes Road Intersection

Access Road Improvement Options

Land Use

Construction of the Access Options would enhance a preexisting rural roadway and transportation corridor. The conversion of existing land uses would be limited to the existing highway ROW and strips of land adjacent to the highway ROW. Access Option 1 covers approximately 6.4 acres of land, Access option 2 covers approximately 7 acres of land, and Access Option 3 covers approximately 12.9 acres of land.

Lands proposed to be converted adjacent to the existing Caltrans ROW are part of the Metro-Lakes-Jamul segment of the San Diego County MSCP. North of the intersection of Melody Road on the east and west sides of SR 94 are lands zoned RR1 (Rural Residential). Construction of the Access Options would not conflict with existing land uses, disrupt or divide a community or conflict with land use designations in the vicinity of the project site. These Access Options involve acquiring approximately 20 to 40-feet on the east side of SR 94 and in some instances up to 50-feet on the west side of SR 94.

Additional ROW for Options 1 and 2 would follow the existing alignment of SR 94. Right-of way-needs are concentrated in the following locations; 1) near the existing Melody Road intersection, primarily on the west side of SR 94, both north and south of the intersection, 2) on the west side of SR 94 north of the Reservation owned parcel of land (the "4-Acre Parcel"), and 3) south of the Reservation Road. Only the Melody Road Option requires a significant amount of additional right of way on the site of the Otay Mesa Specific Plan located to the south of Melody Road. As would be the case for Options 1 and 2, Access Option 3 would include the need for additional ROW along SR 94 to an area north of the Reservation; however, new ROW would be needed over undeveloped privately owned land between Melody Road and the Reservation.

The San Diego County General Plan contains minimum parcel sizes for all property types surrounding the project site. The Access Options would not reduce parcel sizes on land designated "SR-1", Residential Low Density, "ER", Estate Residential, or "GA", General Agricultural below the threshold minimums. Therefore, a less than significant land use effect would result from implementation of either Access Option.

The Melody Access Option would bisect the 87 acre Otay Mesa Parcel to complete a roadway connecting Melody Road to the Reservation parcel to the south. The Otay Mesa property is zoned "SPA", Specific Plan, the size and uses having been adopted under separate action and governed by its own SPA regulations. Any change to the specific plan regulations would need to be submitted for approval by the San Diego County Planning Commission and County Board of Supervisors. The failure to acquire a major amendment to the Otay Mesa Specific Plan would be considered a significant land use effect.

Access Option 3 would result in a new connection to Melody Road, which is classified as a collector street. The Jamul/Dulzura Subregional Plan contains Mobility Goal #1, Policy #15, which states:

Encourage the elimination of safety hazards caused by direct access onto major arterial or collector streets. In particular, new commercial development shall have limited access to such roads.... (Jamul/Dulzure Subregional Plan, page 13)

The Option 3 roadway from the Reservation to Melody Road would connect a commercial establishment (proposed gaming facility) into a collector street (Melody Road), which appears to be in contravention to the stated County policy. This is considered a significant land use effect for Access Option 3.

The configuration of the Access Options were analyzed for their impact on other applicable plans and policies, including the San Diego County Regional Transportation Plan, the San Diego County Multi-Species Conservation Plan (MSCP), and the SR 94 Operational Improvement Project (Caltrans Improvement Project).

San Diego County Regional Transportation Plan. The Regional Transportation Plan utilizes a set of broad goals and policy objectives that are applied to the reasonable expected revenue scenario (the expected result) to maintain the goals of the plan. Proposed improvements factored into the plan consider widespread coordination with transit agencies, including Caltrans, to anticipate future improvements. According to San Diego COG staff, as provided in a telephone conversation on June 10, 2010, since the SR 94 Access Options would be undertaken in conjunction with Caltrans and follow established protocols for Livability, Mobility, Efficiency, Accessibility, Reliability, Sustainability, and Equity, the improvements are consistent with the RTP.

<u>San Diego County MSCP (Including Mitigation Ordinance No. 8845)</u>. All of the lands on the east side of SR 94 are located within the unincorporated areas of the Metro/Lakeside/Jamul segment of the plan. Approximately half (western half) of

the 87-acre parcel is located within the take-authorized area, and the eastern half is located in the Hardline preserve area. Half of tThe 4-acre parcel is designated as a Pre-Approved Mitigation Area (in the Metro-Lakeside-Jamul Segment). The connecting road proposed under Option 3 between Melody Road and the Reservation, is located entirely primarily within the Hardline Preserve Area of the MSCP. Development within a Hardline Preserve Area is limited discouraged. Grading, excavation, clearing vegetation, and construction of any building or structure are typically precluded in Hardline Preserve areas. The County has indicated that any encroachment into the Hardline Preserve would require the County to approve a Major Amendment to the MSCP. However, the County's Subarea Plan, which implements the MSCP, explicitly states that new roads can only be approved if "there are no feasible, less environmentally damaging locations, alignments or non-structural alternatives."¹ To approve the Melody Road access, the County may need to make findings in contravention to its adopted policies, as less environmentally damaging alternatives are available. As a result, the County may not be able to approve the development of the Melody Road Access Option, without first amending the policies of the MSCP. This is considered a significant impact.

Development in the unincorporated area of the Metro/Lakeside/Jamul segment is guided by the County's Biological Mitigation Ordinance. Projects should avoid sensitive resources to the maximum extent practicable by siting development in less sensitive areas. Projects are required to mitigate potential effects to covered species and their habitats, including such measures up to and including purchasing offsetting mitigation lands in accordance with the Ordinance. Development activities in the Hardline areas are required to obtain a major amendment to the MSCP, subject to San Diego County approval-and review by the USFWS. Major amendments (per the County MSCP) must be evaluated by the Wildlife Agencies (i.e., U.S. Fish and Wildlife Agency and California Department of Fish and Wildlife). The Wildlife Agencies would fulfill their responsibilities to comment on projects as specified under CEQA and pursuant to their statutory authority under ESA, CESA, and other applicable state and federal laws and regulations. Development in take authorized areas is subject to mitigation ratios contained in the Biological Mitigation Ordinance.

Caltrans addresses potential "highway improvement" impacts to the MSCP through project design (avoidance and minimization) and mitigation. Subject to compliance with appropriate avoidance, minimization, and mitigation standards of the MSCP, Access Options 1 and 2 and a portion of 3 would be compatible,

¹ South County Subarea Plan, Section 1.9.3.2.b

maintaining compliance with the plan. However, development of the new roadway from Melody Road to the Reservation under the Melody Road Access Option would not be considered a "highway improvement". This segment of Option 3 would be considered a local roadway subject to County jurisdiction. As such, this segment of road would require a Major Amendment to the MSCP, subject to approval by San Diego County. The Proposed Project and Alternative 1 would result in less than significant impacts to the MSCP; however, Access Option 3 would result in a significant impact to the MSCP.

<u>SR 94 Operational Improvement Project</u>. Northerly improvements of Access Options 1-3 are located within an 18-mile segment between Melody Lane and SR188. Improvements slated for implementation at mile 20.5 to Mile 24.4 of SR 94 include installing passing lanes, lane widening, and to some extent, the realignment of curves, where necessary. The Access Option improvements are similar in scope and scale to the Operational Improvement Project, and are therefore consistent and compatible for this stretch of SR 94.

Aesthetics

The SR 94 viewshed would be experienced by travelers along SR 94 in both the northbound and southbound directions passing through the project site. The viewshed would also be viewed by stationary observers from viewpoints north and west of the project site. With the exception of occupants of the fire station, views of the project site from the east are obscured by the natural terrain.

The overall visual character and quality of the access routes is moderate. For observers viewing changes associated with Options 1 and 2, the most important consideration remains the question of whether or not their impression of the view shed would be altered post-project, particularly for those stationary and transient pedestrian viewers. In the overall palette of the landscape, little would change subsequent to the installation of access improvements. The view shed would remain an area of transition, primarily consisting of open grazed land surrounded by rocky hillsides, dotted with manmade features, fences, creeks, and scattered buildings.

The project element that is likely to first make an impact on viewers is the wider expanse of pavement associated with wider lanes, added turn lanes, and the new access driveway. However, the visual impact of this new pavement is reduced since the wider roadway is within a corridor already devoted to the existing roadway. Although minor alterations to the bends and curves of the road and slightly wider pavement would be present, viewers already expect to see a roadway in this location. Any increased glare and light associated with the wider portions of the highway would be incremental over that already present.

Remaining elements of project improvements with the potential to alter the appearance are those elements that would introduce changes in elevation to the area, including retaining walls, traffic signals located at intersections, and street lights located along stretches of improved roadway. All of the retaining walls are proposed to be between three (3) and eight (8) feet tall. The height of the walls is low relative to the surroundings, and they would run parallel to the roadway, rather than at right angles; this would help them to be viewed as a unified part of the improvements, making them less visible. Placement of the walls (as well as their height) would help to insure they do not block the visibility of any natural features.

The option most likely to make an impact on viewers is the new roadway associated with Option 3 beginning from Melody Road and proceeding south across the 87-acre parcel to the Reservation. The visual impact of the new intersection and driveway would be partially obscured by the slope of existing topography; however, there is an increased potential for glare and light associated with the new intersection and driveway as no roadway currently exists in that location. However, this roadway would not substantially damage recognized off-reservation resources, including trees, rock outcroppings, and historic buildings. Given that the design and construction of the roadway would go through the County approval process, any associated lighting is expected to be down cast in nature, thereby reducing the night lighting effects to less than significant. Therefore, all three Access Options are expected to have a less than significant aesthetic impact.

Geology and Soils

The majority of the soils existing on the access routes have a low to moderate erosion potential based on soil type and slope gradients. Construction of the Access Options would involve ground disturbing activities such as grubbing, trenching, and grading, which could cause erosion and sedimentation of receiving waterbodies. All three Access Options would be required to go through either the County (Access Option 3) or Caltrans (Access Options 1-3) processes prior to development. Soil erosion would be considered and BMPs would be required to be implemented ensuring that the potential soil erosion impact is less than significant.

Although the Access Option project area is not near any active fault zones, the area could be subject to seismic activity such as severe ground shaking and acceleration from earthquakes in other regions. Improvements would be required to either go through the Caltrans or San Diego County approval process prior to construction, which would ensure that necessary seismic safety features be incorporated into their design. As such, the impact is expected to be less than significant.

The Access Option project area contains a variety of soil types, some of which are considered to be expansive soils. Expansive soils can cause failure of road beds and other project features by cracking, swelling, or subsidence; however, either the County or Caltrans process would ensure that expansive soils be considered prior to construction. A less than significant impact would result.

Hydrology and Water Quality

Each Access Option would result in a temporary uncovering of soils during construction and an increase in impervious surfaces during operation. Construction activities could result in soil erosion and off-site sediment transport from removal of vegetation/grubbing, excavation of materials from cuts, and deposition of excavated material. These activities could result in a significant impact to water quality.

Additional runoff volume to area drainages from the new Access Options is considered minor and could be left in the current flow path without channel improvements. The runoff increase is considered negligible and would not be expected to cause measureable downstream impact. Therefore, additional surface runoff is considered to be a less than significant impact.

The new access road associated with Access Option 3 would result in three new channel crossings on the 87-acre site and possibly require a bridge widening on Melody Road. Access Option 1 and 2 would necessitate improvements to two road culverts. It is not known at this time if the Melody Road Bridge crossing would need to be modified for these two Access Options. The drainage crossing could constrict surface flows and result in potential flooding impacts if not properly designed and constructed. This would be considered a significant impact.

Hazardous Materials

During construction activities, limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, and paints, would be stored and used within the Access Option footprints. The potential for an accidental release exists, and such a release could pose a hazard to construction personnel as well as the environment. However, under state and federal laws, the contractor must apply for coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity (either the statewide version or the Caltrans version). In conjunction with this coverage, a Storm Water Pollution Prevention Plan, Hazardous Materials Management Plan, and Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for accidental release of hazardous materials. Implementation of these measures would ensure that potential impacts of accidental release of hazardous materials during construction are at a less-than-significant level.

No recognized environmental conditions were found from environmental site assessments. However, construction of the Access Options would involve trenching and grading, and such earth-moving activities may uncover a previously unknown underground fuel storage tank, contaminated soil, or other hazardous material issue (especially in proximity to the old fire station). Thus, construction activities could pose a risk to human health for construction personnel if contaminants are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as USTs, piping, or solid waste. This is a potentially significant impact.

Wildfires are a potential hazard in rural San Diego County. Portions of the Access Option project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The Access Option project area is located within an area of moderate to high fire hazard. Construction activities have the potential to initiate a wildfire, which could cause injury or death of people or property losses. This is a potentially significant impact.

Biological Resources

Special-status plants are not expected to thrive in the Access Option 1 and 2 footprints because of the preponderance of pavement, invasive and non-native plants, and habitat degradation associated with cattle grazing and road maintenance; previous botanical surveys did not detect any rare plants in this area. Palmer's Goldenbush (*Ericamaria palmeri* ssp. *palmeri*) is a Narrow Endemic rated by the California Plan Society as 1B (3-2-1) and occurs in the western San Diego and northwestern Baja California region. The taxon occurs as a single clone on the Access Option 3 alignment, about 2 meters in diameter, on the southern portion of the alignment on a southeast facing slope that has been heavily grazed (west of the 4-acre parcel). Apparently the aromatic aspect of the plant has precluded its being grazed by cattle. The construction of the new access road south of Melody Road under Option 3 would impact this plant community, which is considered a significant impact.

Special-status animals are not expected to thrive in the Access Option footprints because of the preponderance of invasive and non-native plants, and habitat degradation associated with cattle grazing and road maintenance; previous surveys did not detect any rare animals. Therefore, impacts to special-status animals are expected to be less than significant.

The following special-status bird species were reported in databases (CNDDB, County, and USFWS) in the vicinity of the Access option footprints and a moderate potential exists for their occurrence with the Access option footprints: Cooper's hawk; southern California rufous-crowned sparrow; golden eagle; western yellow-billed cuckoo; yellow warbler; southwestern willow flycatcher; and least Bell's vireo. The footprints contain suitable nesting habitat for various bird species because of the presence of rock outcrops, large trees, utility poles, and riparian canopy. However, no nests were observed during any field surveys. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal, and indirectly-impacted by noise, vibration, and other construction-related disturbance. Therefore, access road construction is considered a potentially significant adverse impact to specials status birds, primarily via habitat loss or disturbance. Mitigation is provided in Section 4.15-3 to reduce this impact to a less than significant level.

<u>Impacts to Protected Habitats</u>. Coastal scrub, annual grassland, and coast oak riparian woodland occurs within the option footprints and are considered sensitive habitats by the County of San Diego and protected under County ordinances. Construction of all of the Access Road Options will involve destruction of habitats protected by the County's Biological Mitigation Ordinance. The Biological Mitigation Ordinance requires compensatory mitigation for habitat loss using ratios dictated by the Tier category and whether or not the land is in a Biological Resource Core Area. **Table 4.15-3** lists the impacts to natural habitats by implementation of each Access Option. Land within the Access Option 3 corridor would qualify as a biological resource core area because they are ranked "high" or "very high" in the MSCP Habitat Evaluation Model and because they are designated as Hardline Preserve Areas. Thus, loss of these habitats is considered a significant impact.

IABLE 4.15- <u>52</u> IMPACTS TO EXISTING NATURAL HABITATS							
Annual Grassland	Tier 3	0.8	0.4	6.2			
Coastal Scrub	Tier 2	0.05	0	0			
Riparian/Oak Woodland	Tier 1	0	0	0.8			
Total		0.9	0.4	7.0			
SOURCE: Natural I	Investigations, 2012		- 1				

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<u>Drainage Channels</u>. During construction of Access Options 1-3, surface water quality has the potential to be degraded from storm water transport of sediment from disturbed soils or by accidental release of hazardous materials or petroleum products from sources such as heavy equipment servicing or refueling. However, the Tribe and its designated general contractor must enroll under the State Water Board's Construction General Permit prior to the initiation of construction. In conjunction with enrollment under this Permit, a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for erosion, sedimentation, or accidental release of hazardous materials. Implementation of these measures mandated by law would reduce potential construction-related impacts to water quality from sediment to a less than significant level.

Figure 4.15-1311 and 4.15-14 illustrates potential water feature impact areas-those portions of the Access Options that intersect a drainage channel subject to federal or State jurisdiction. The impacts from Access Option 1 and 2 are primarily to gullies and culverts near or under SR 94 that would be affected by road widening; these are very small impacts in terms of square footage, but is nevertheless a potentially significant impact. A few hundred feet south of the SR 94 and Melody Road intersection, Willow Creek meanders very close to SR 94. Road widening under all the Access Options could impact the Willow Creek channel and its riparian corridor; this is a potentially significant impact before mitigation. Road widening for Access Option 1 or 2 also might necessitate the construction of a new bridge, or modification of the existing bridge, on Melody Road, that spans Willow Creek. Access Option 3 would require construction of a new bridge on Melody Road over Willow Creek, as well as necessitate crossing 3 gullies that are jurisdictional. Modification or construction of a new bridge, and other road widening activities are a potentially significant impact upon jurisdictional water resources before mitigation.

Conflicts with Adopted Habitat Conservation Plans

The footprints of all of the Access Option corridors are located within two segments of the MSCP: the South County segment and the Metro/Lakeside/Jamul segment. Implementation of each of the Access Options would impact lands protected by these segments, as enumerated in **Table 4.15-4**<u>3</u>; this is a significant impact before mitigation. Mitigation provided in Section 4.15-3 would reduce this impact to a less than significant level. However, any failure of San Diego County to approve the discretionary requests, which would implement the stated mitigation would make Access Option 3 infeasible. Caltrans addresses potential "highway improvement" impacts to the MSCP through project design (avoidance and minimization) and mitigation. Subject to compliance with appropriate avoidance, minimization, and mitigation standards of the MSCP, Access Options 1 and 2 would be compatible, maintaining compliance with the plan.

INITACID TO MOCI TEANINI (O CATEGORIES						
MSCP SEGMENT	MSCP CATEGORY	OPTION 1 acres	OPTION 2 acres	OPTION 3 acres		
Metro-Lakeside- Jamul	Unincorporated land	6.1	5.9	4.6		
South County	Pre-approved Mitigation Area	0	0.7	1.7		
South County	Take Authorized Area	0	0	0.5		
South County	Hardline Preserve	0.3	0.4	6.1		
SOURCE: Natural Inves	tigations, 2012					

TABLE 4.15-4<u>3</u> IMPACTS TO MSCP PLANNING CATEGORIES

Cultural Resources

<u>Cultural Resources</u>. No historic properties/historical resources have been identified within the existing ROWs for the access improvements, and although the access improvements have been disturbed by prior roadway construction or other activities, the area is considered highly sensitive for the discovery of prehistoric, ethnohistoric or historic cultural material or subsurface features. <u>The Access</u> Options would have no impact on five archaeological sites located adjacent to portions of the roadways that are ineligible for NRHP or CRHR listing. Further, the boundary_boundaries_of multi-component site CA-SDI-7966/11410_and site CA-SDI-11050, which has_have_been determined or recommended_eligible for NRHP and CRHR listing and qualifies_qualify_as a-historic property



Note: Potential Impact Areas (shown in red) to Federally -Jurisdictional Waters from Project Features SOURCE: Digital Globe, 2012, Natural Investigations Co., 2012; EDS, 2012

-Jamul Indian Village Draft Final Tribal EE ■ **Figure 4.15-13** Federal JurisdictionalWaters



Note: Potential Impact Areas (shown in red) to waters of the State from Project Features (shown in green). SOURCE: Digital Globe, 2012, Natural Investigations Co., 2012; EDS, 2012 Jamul Indian Village Draft Final Tribal EE 🔳

Figure 4.15-14 Waters of the State <u>properties</u>/historical resources, is-are mapped immediately adjacent to portions of Access Options 1-3. It is thus possible that components of site CA-SDI-7966/11410, <u>site CA-SDI-11050</u> and/or undocumented cultural resources, including human remains, may be affected during construction or ground-disturbing activities, particularly outside the existing ROWs. This is considered a significant impact. Implementation of the inadvertent discovery mitigation measures that follow would reduce this impact to a less than significant level for adverse effects to historic properties/historical resources.

<u>Paleontological Resources</u>. Geologic formations that underlie the Access Option corridor have an extremely low probability of containing paleontological resources. Therefore, no adverse effects are expected.

Noise

Noise impacts associated with the Access Options would primarily result from traffic noise associated with project operation. Roadway construction noise levels would be similar to construction noise assessed for the Proposed Project in Section **4.10**. Due to the distances and temporary nature of construction, none of the Access Options are anticipated to result in any adverse construction noise or vibration impacts. Noise impacts associated with Option 1 were assessed as part of the noise analysis as it was assumed all traffic would enter and exit at the existing access point, see Section 4.10. Access Option 2 and 3 would create new noise sources where none currently exist and would thus, potentially result in a substantial noise level increase. However, given the distance to local receptors and the low speed limits of the Access Options, noise levels within 100 feet of the Access Options would be compatible with the current zoning and all anticipated future land uses. Under Access Option 3, potential off-reservation impacts would be the result of a redistribution of traffic volumes from SR 94 to the segment of Melody Road west of SR 94 and east of the Access Option. The land adjacent to this segment of Melody Road is currently undeveloped and no development plans currently exist, therefore off-Reservation impacts from the three Access Option alternatives would be similar to the impacts assessed in Section 4.10 and no new substantial adverse impacts would occur.

Air Quality

Air Quality impacts associated with the Access Options would primarily result from changes in traffic operations due to the different access configurations.

Roadway construction emissions would be similar to construction the emissions assessed for the Proposed Project in **Section 4.11**. Additionally, due to the distances and temporary nature of construction, none of the Access Options are anticipated to result in exposure of local sensitive receptors to adverse concentrations of TACs. Access Options 1, 2 and 3 would create new roadways where none currently exist; however, the changes in miles traveled would be minor and would not have a quantifiable effect on the emission estimates provided in **Section 4.11**. Additionally, all Access Option options would result in improved operations on SR 94 and at affected intersections, thus potential off-Reservation traffic would not result in adverse concentrations of CO.

Public Services

Underground Service Alert (USA) provides a free "Dig Alert" service to all excavators (contractors, homeowners and others), in Southern California. The excavator's one call to USA would automatically notify all USA Members (utility service providers) who may have underground facilities at their work site. In response, the USA Members would mark or stake the horizontal path of their underground facilities, provide information about, or give clearance to dig. This simple safety service protects the excavator from personal injury and underground facilities from being damaged.

The utility companies would be responsible for the timely removal or protection of any existing utility facilities located within construction areas. The Joint Utilities Coordination Committee has developed procedures to assist cities, counties and utilities in coordinating public improvement projects to alleviate scheduling and construction conflicts.

Wildfires are a potential hazard in rural San Diego County. Portions of the Access Option project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The Access Option project area is located within an area of moderate to high fire hazard. Construction activities may introduce potential ignition sources that have the potential to initiate a wildfire, which could cause injury or death of people or property losses. This is a potentially significant impact before mitigation.

Construction of the Proposed Project is expected to result in a temporary increase in waste generation. However, construction waste would be recycled to the fullest extent practicable by diverting green waste and recyclable building materials from the solid waste stream. Waste that cannot be recycled would be disposed of at the Otay Landfill, which accepts construction/demolition materials, and has sufficient excess capacity to handle this small, temporary, additional waste stream. Construction impacts upon solid waste service are less than significant.

Off Site Intersection Improvement Impacts

Land Use

Construction of the intersection improvements would enhance a preexisting rural roadway and transportation corridor. The conversion of existing land uses would be limited to the existing highway ROW and strips of land adjacent to the highway ROW. Construction of the intersection improvements would not conflict with existing land uses, disrupt or divide a community or conflict with land use designations in the vicinity of the project site. Additionally, the improved intersections are not expected to reduce parcel sizes below the threshold minimums. Therefore, a less than significant land use effect would result from implementation of the intersection improvements.

Aesthetics

Minor visual effects, such as the addition of a traffic signal, would occur as the result of the expansion of the existing roadway facilities. The improvements would not result in the removal or alteration of significant areas of vegetation, topographic features, or other key visual characteristics. Therefore, a less than significant visual effect is expected.

Geology and Soils

Effects to land resources would consist of grading and the introduction of fill material to extend the existing shoulders and roadbed to provide for the additional facilities. The steepest topography would be encountered at the intersection with Lyons Valley Road where large embankments currently exist. Stable fill material, embankments, and erosion control features would be used to reduce the potential for sloped instability, subsidence, and erosion. However, naturally occurring soils located at the improvement locations have a slight to very high erosion hazard (USDA, 1973). Due to the presence of soils with moderate and high erosion potential, significant slopes, and the proximity of the natural drainage channels, effects from erosion are considered to be significant. Mitigation measures have been identified in Section 4.2.3 to reduce these potential effects to a less than significant level. For construction on non-federal lands in California, the landowner and contractor must enroll for coverage under the State Water Resources Control Board's General Storm Water Discharge Permit for

Construction Activities (Order No. 2009-0009, NPDES No. CAS000002) prior to the initiation of construction. Coverage under either permit requires creation and implementation of an effective storm water pollution prevention plan, erosion control plan, hazardous materials management and spill response plan, and construction best management practices, all of which are designed to minimize or eliminate erosion issues and eliminate sediment discharges. With proper implementation, these plans reduce or eliminate the potential for accidental release of sediment and other pollutants during construction, as well as reduce the potential for erosion. The erosion control plan would be prepared before construction commences, and would identify the location of erosion control features necessary to protect and filter stormwater runoff. Features used during construction may include but are not limited to silt fences, fiber rolls, and gravel bag check dams. The grading plans would meet or exceed standards established by Sections 87.101 through 87.717 of San Diego County Code of Regulatory Ordinances (Grading, Clearing, and Watercourses Ordinance), which requires effective erosion control and compensatory mitigation for natural habitat loss, if applicable. Erosion impacts would be less than significant.

Hydrology and Water Quality

The development of roadway improvements at the identified intersections could affect water quality due to grading and construction activities and an increase in impervious surfaces in close proximity to existing natural drainage channels. Adverse effects to water quality during the construction phase would be mitigated through compliance with Caltrans Storm Water Quality Handbook and implementation of the Erosion Control Plan specified in Impact 4.5(2). The Erosion Control Plan would identify the location erosion control features needed to direct and filter stormwater runoff. Features used during construction may include but are not limited to silt fences, fiber rolls, and rock bag dams. The location of permanent erosion control features such as sediment/grease traps, vegetated drainage swales, and riprap would also be identified. The effects to runoff volumes resulting from the increase of impervious surfaces are expected to be minimal due to the limited extent of the improvements in comparison to the existing facilities. Some existing curb and gutters and drainage inlets would be demolished and relocated along portions of the roadways to provide space for the Curb and gutters, inlets, and other drainage facilities would be improvements. reconstructed to provide adequate facilities to direct stormwater runoff. Due to the implementation of the Erosion Control Plan and the limited extent of the improvements, construction effects to water resources are expected to be less than significant.

Some intersection improvements may require bridge modifications or bridge replacement to allow for improvements (SR 94/Jamacha Road and SR 94/Jamacha Boulevard). Such bridge modification or replacement could constrict surface flows and result in potential flooding impacts if not properly designed and constructed. This would be considered a significant impact.

Hazardous Materials

The accidental release of hazardous materials used during grading and construction activities could pose a hazard to construction employees and the environment. Additionally, equipment used during grading and construction activities could ignite dry grasses and weeds on the project sites. This is considered a significant impact. Mitigation has been identified in Section 4.15.3 to reduce this impact to a less than significant level.

Biological Resources

Disturbance areas associated with the proposed road improvements are located along existing roadsides that are subject to substantial human activity and do not contain

sensitive habitat features. However, some components of the various improvements may involve limited removal of existing vegetation and modification of intermittent drainage channels (e.g. replacement of existing culverts, or the placement of such as bridge abutments or piers). Removal of sensitive native vegetation (e.g. oak trees), vegetation with a potential to provide habitat for special-status species or support nesting migratory birds, and modification of intermittent drainages are considered significant impacts.

Four species with State status were determined to have a medium or high potential to occur in the vicinity of intersection improvement area footprints. Impacts to these species are also analyzed.

Potential Impacts to Least Bell's Vireo

Least Bell's vireo is a small, insectivorous songbird that typically nests in willow thickets and other dense, shrubby vegetation communities found near water at elevations below 2,000 feet (California Department of Fish and Game, 2006c,d). According to the CNDDB, Least Bell's vireo has been reported near the SR 94/Jamacha Boulevard Intersection. The coast live oak riparian habitat occurring at the SR 94/Melody Road Intersection is currently degraded from cattle ranching and generally lacks the habitat structure required by least Bell's vireo for foraging and nesting. Therefore, it is not anticipated that the improvements would result in adverse

direct effects to least Bell's vireo at this location. Coast live oak riparian habitat could be impacted at SR 94/Jamacha Blvd., SR 94/Jamacha Road, SR 94/Cougar Canyon Road Intersection, SR 94 / Steele Canyon Road Intersection, and SR 94/Lyons Valley Road Intersection by construction activities. Least Bell's vireo could be directly affected if nesting habitat is destroyed. Other potential adverse indirect-effects upon Least Bell's vireo associated with implementation of traffic improvements consist of future increase of noise, vehicular traffic, and other human activity within the intersection improvement area footprints. However, given the extent of existing habitat degradation within proposed improvements areas and the existing extent of human activity in the immediate vicinity, it is unlikely that implementation of traffic improvements would result in significant adverse indirect-impacts to this species. Therefore, intersection improvements are not considered a significant adverse impact to Least Bell's vireo.

Potential Impacts to Otay tarplant

The Otay tarplant is a glandular, aromatic, annual herb; the blooming period for this species is May to June (CNPS, 2006). The intersection improvement footprints are outside of the designated critical habitat. Although small amounts of suitable habitat occurs within some of the intersection improvement footprints and vicinity, the known range is over 10 kilometers to the southwest from the intersection improvement footprints, according to the CNDDB. Furthermore, a botanical survey of the intersection improvement areas did not detect this rare plant. Therefore, it is unlikely that project construction activities would encounter the Otay tarplant. Intersection improvements would have a less than significant adverse impact upon Otay tarplant.

Potential Impacts to San Diego Thorn Mint

San Diego thorn mint is an annual herb that occurs in chaparral, coastal scrub, vernal pools with clay soils, and valley and foothill grassland habitats of southern California and northern Baja California, Mexico (CNPS, 2006). The nearest historic occurrence is over 3 kilometers to the northeast and southwest from the intersection improvement footprints, according to the CNDDB. A botanical inventory of the Jamul Reservation and the grassland south of the SR 94/Melody Road Intersection did not detect the presence of San Diego thorn mint. Potentially suitable habitat for San Diego thorn mint occurs within some areas of the intersection improvement footprints. However, a botanical inventory did not detect this species, and the majority of these suitable areas are either developed or severely degraded as a result of cattle grazing, thereby significantly limiting the potential for this species to occur. Destruction of coastal scrub habitat or grassland during intersection improvements could adversely affect this species. This is considered a significant impact.

Potential Impacts to Western Yellow-billed Cuckoo

The yellow-billed cuckoo is a relatively large, insectivorous bird found in riparian This bird uses densely foliaged, deciduous trees and shrubs, especially habitats. willows, for roosting and nesting (California Department of Fish and Game, 2006d). One yellow-billed cuckoo was spotted in the riparian corridor south of the SR 94 / Lyons Valley Road Intersection, but outside of the limits of intersection improvement construction. The nearest reported occurrence is approximately 20 kilometers to the southwest from the intersection improvement footprints, according to the CNDDB. Suitable habitat occurs in riparian corridors adjacent to, or within, the traffic improvement footprints at SR 94/ Jamacha Blvd. Intersection, SR 94/ Jamacha Rd. Intersection, SR 94 / Cougar Canyon Road Intersection, SR 94 / Steele Canyon Road Intersection, and SR 94 / Lyons Valley Road Intersection. The riparian habitat occurring at the SR 94 / Melody Road Intersection is currently degraded from cattle ranching and generally lacks the habitat structure required by this species for foraging and nesting. Coast live oak riparian habitat could be impacted at SR 94/ Jamacha Blvd. Intersection, SR 94/ Jamacha Rd. Intersection, SR 94 / Cougar Canyon Road Intersection, SR 94 / Steele Canyon Road Intersection, and SR 94 / Lyons Valley Road Intersection by construction activities. Yellow-billed cuckoo could be directly affected if nesting habitat is destroyed. This is considered a significant impact.

Other potential adverse indirect effects upon yellow-billed cuckoo associated with implementation of traffic improvements consist of future increase of noise, vehicular traffic, and other human activity within the intersection area footprints. However, given the extent of existing habitat degradation within proposed development areas and the existing extent of human activity in the immediate vicinity, it is unlikely that implementation of traffic improvements would result in significant adverse indirect impacts to this species. Therefore, Project operation is not considered a significant adverse impact.

Potential Impacts From Degradation or loss of Sensitive Habitat

No critical habitat or sensitive habitat designated by federal or State regulations or agencies was identified. However, habitats protected by County ordinances (grasslands, coastal scrub, riparian, etc.) and the MSCP do occur within the construction footprints of the intersection improvements. Construction of intersection improvements would involve operation of heavy equipment, staging of soils, grading and excavation activities that could directly or indirectly impact protected habitats. This is considered a significant impact.

At the SR 94 / Jamacha Boulevard Intersection, direct or indirect-impacts to coast live oaks and riparian vegetation may occur as a result of bridge widening. At the SR 94 / Cougar Canyon Road Intersection, direct or indirect-impacts to mature coast live oaks may occur on the south side of SR 94.At the SR 94 / Steele Canyon Road Intersection, implementation of the Project may require the removal of coast live oaks. At the SR 94 / Lyons Valley Road Intersection, widening of eastbound SR 94 may impact coast live oaks and riparian habitat. At SR 94 / Melody Road Intersection, construction of the intersection improvements may require the removal of coast live oaks and riparian vegetation. Therefore, construction of some of the intersection improvement areas would have a significant impact upon protected habitats.

Potential Impacts to Nesting Birds

Special-status bird species exist in the vicinity of the intersection improvement footprints, including Coastal California gnatcatcher, Least Bell's vireo, and yellowbilled cuckoo. Lands adjacent to the intersection improvement areas contains nesting habitat for various bird species because of the presence of trees, poles, and riparian canopy. However, no nests were observed during field surveys. Migratory birds and raptors are protected by state and federal laws while nesting. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal, and indirectly impacted by noise, vibration, and other construction-related disturbance. Therefore, <u>construction of</u> intersection improvements would result in a significant impact. The mitigation listed below in Section 4.15.3 would reduce this impact to a less than significant level.

Other potential adverse-indirect effects to nesting birds associated with implementation of traffic improvements consist of future increase of noise, vehicular traffic, and other human activity within the intersection improvement footprints. However, given the extent of existing habitat degradation within proposed development areas and the existing extent of human activity in the immediate vicinity, it is unlikely that implementation of traffic improvements would result in significant adverse indirect impacts to nesting birds. Therefore, vehicular operation of the intersections following improvements would not result in a significant impact.

Potential Impacts to Jurisdictional Waters

An informal assessment of the intersection improvement footprints identified several potentially-jurisdictional water features – Sweetwater Creek and its tributaries, Steele Canyon Creek and Jamul Creek (and their tributaries) – in the traffic improvement option footprints. Potential direct adverse impacts to these water resources could occur during construction by modification or destruction of stream banks or riparian

vegetation, particularly by the addition of traffic lanes at SR 94 / Jamacha Blvd. Intersection, SR 94 / Jamacha Road Intersection, SR 94 / Cougar Canyon Road Intersection, SR 94 / Steele Canyon Road Intersection, and SR 94 / Lyons Valley Intersection, and the addition of a northbound right hand turn lane at SR 94 / Lyons Valley Road Intersection and road widening on Melody Road at SR 94. Other adverse impacts include the permanent placement of bridge abutments or piers, that might be needed for bridge widening in several locations. Potential adverse impacts to water resources associated with construction of intersection improvements consist primarily of increased erosion and sedimentation in receiving water bodies due to soil disturbance. This is considered a significant impact.

Cultural Resources

Due to the abundance of cultural resource sites along SR 94, construction of the intersection improvements could potentially result in significant effects to cultural resources. Previously identified or unknown sites may be <u>inadvertently</u> disturbed by construction activities. This is considered a significant impact. Mitigation has been included within **Section 4.15.5** to reduce the significance of the potential cultural resource effects.

Noise

Construction activities would result in short-term increases in the local ambient noise environments. Increases in the existing noise environment would be most noticeable at the intersections of Lyons Valley Road due to the close proximity of residences and businesses. However, because construction activities would be temporary in nature and would occur during normal daytime hours, a less than significant effect is expected. Likewise, operational changes at each of the intersections are not expected to result in substantial noise increases to neighboring sensitive receptors due primarily to the fact that operational improvements are either within the existing Caltrans ROW or immediately adjacent. Thus the intersections are expected to have a less than significant operational impact to noise.

Air Quality

Air Quality impacts associated with the intersection improvements would primarily result from changes in traffic operations due to the modified lane arrangement for select intersections (e.g., *SR 94/Via Mercado, SR 94/Jamacha Blvd., SR 94/Jamacha Road, SR 94/Cougar Canyon Road, SR 94/Steele Canyon Road, and SR 94/Jefferson Road*). Roadway construction emissions would be similar to construction the emissions assessed for the Proposed Project in **Section 4.11**. Additionally, due to the distances and temporary nature of construction, none of the intersection improvements are

anticipated to result in exposure of local sensitive receptors to adverse concentrations of TACs. Additionally, all intersection road options would result in improved operations on SR 94, thus potential off-Reservation traffic would not result in adverse concentrations of CO.

Public Services

Construction of the intersection improvements may entail the relocation of utilities located within the existing ROWs. These utilities include overhead electricity and underground water lines. Relocation of lines could result in a temporary break in service to some homes and businesses in the area. However, because these effects are common when upgrading and maintaining utility services, and because potential service breaks would be temporary, these effects are considered to be less than significant. No effects to fire or emergency medical services are expected as access through the intersections and to adjacent homes and businesses would be maintained during construction of the improvements. Therefore, a less than significant Public Services impact would occur.

4.15.3 MITIGATION

Access Road Improvement Options

Implementation of the following mitigation measures are expected to reduce the significant impacts associated with the Access Option improvements below a level of significance.

Mitigation 4.15(1): Land Use

- A. Prior to any grading activities for Access Option 3, the Tribe shall acquire an amendment to the Otay Mesa Specific Plan allowing for the reconfiguration of parcels to accommodate the Access Option 3 alignment,
- B. Prior to any grading activities for Access Option 3, the Tribe shall acquire an exemption to Mobility Goal #1, Policy #15 of the Jamul/Dulzura Subregional Plan allowing for the connection of a commercial facility to Melody Road, which is a collector street, and
- C. Prior to any grading activities <u>in Hardline Preserve designated areas</u> for Access Option 3, the Tribe shall acquire a Major Amendment to the MSCP allowing for recategorization of lands in the Access Option 3 corridor from Hardline Preserve Area to Take Authorized Area.

Mitigation 4.15(2): Hydrology and Water Quality

- A. Access Options 1-3 shall implement temporary and permanent BMPs including:
 - (1) Temporary BMPs: fiber rolls, hydro-seeding, temporary drainage inlet protection, preserve existing vegetation, stabilized construction entrances, self-contained concrete washout area, and covered material delivery and storage areas, and
 - (2) Permanent BMPs: vegetate all disturbed slopes, implementing biostrips or bioswales, and detention basins. Theses BMPs would be used to prevent pollutants from entering the Waters of the United States.
- B. The drainage crossing plans for access Options 1-3 shall include a design that shows improvements to be located outside of the ordinary high water mark. If unable to design outside of high water make, the Tribe shall acquire a Clean Water Act Section 404 Permit from the USACOE prior to undertaking any grading activities and shall implement all permit requirements during construction and operation. Permit conditions may include the purchase of inlieu credits at a mitigation bank, as well as the implementation of Best Management Practices during construction activities.
- C. Access Options 1-3 shall employ plywood shoring (or a similar temporary construction barrier) and the following erosion and sediment control measures to ensure that sediment does not enter Willow Creek during construction of retaining walls.
 - (1) Existing vegetation will be preserved when feasible,
 - (2) Erosion in concentrated flow paths will be controlled by applying fiber rolls, erosion control / fiber blankets, silt fences, and plastic sheeting, and/or lining swales as required,
 - (3) Concentrated water flows shall be channeled away from disturbed soil areas and stockpiles. Concentrated water flows shall be conveyed in a non-eroding fashion, and
 - (4) Non-active areas, and all finished slopes, will be stabilized with effective soil cover (such as aggregate, paving, or vegetation) as soon as feasible after construction or disturbance is complete and no later than 14 days after

construction or disturbance in that portion of the site has temporarily or permanently ceased.

D. Designate riparian areas with warning signs and fencing and avoid completely, where feasible.

Mitigation 4.15(3): Hazardous Materials

- A. Access Options 1-3 shall implement Mitigation 4.6(2), and
- B. Access Options 1-3 shall implement Mitigation 4.12(6).

Mitigation 4.15(4): Biological Resources

- A. Implement Mitigation Measure 4.7(1).
- B. Implement Mitigation Measure 4.7(1)(B).
- C. A monitoring biologist (approved by CDFW and County of San Diego Director of Planning and Development Services [County PDS]) shall be on site during initial clearing and grubbing of habitat on non-federal lands, and project construction within 300 feet of preserved habitat, to ensure compliance with all conservation measures. The biologist shall be knowledgeable of upland and wetland biology and ecology. The applicant shall submit the biologist's name, address, telephone number, and work schedule on the Project to CDFW and County PDS at least 30 days prior to initiating construction. The biologist shall perform the following duties:
 - Oversee installation of and inspect temporary fencing and erosion control measures within or up-slope of all restoration and/or preservation areas a minimum of once per week and daily during all rain events to ensure that any breaks in the fence or erosion control devices are repaired immediately.
 - Monitor the work area weekly to ensure that work activities do not generate excessive amounts of dust.
 - Train all contractors and construction personnel on the biological resources associated with this project and ensure that training is implemented by construction personnel. At a minimum, training shall include:

i. The purpose for resource protection.

ii. The conservation measures that shall be implemented during project construction, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced project footprint to avoid sensitive resource areas in the field (i.e., avoided areas delineated on maps or on the project site by fencing).

<u>iii. Environmentally responsible construction</u> <u>practices.</u>

iv. The protocol to resolve conflicts that may arise at any time during the construction process.

- Halt work, if necessary on non-federal lands, and confer with CDFW and County PDS to ensure the proper implementation of species and habitat protection measures. The biologist shall report any violation to CDFW and County PDS within 24 hours of its occurrence.
- Submit weekly letter reports (including photographs of impacted areas) to CDFW and County PDS during clearing of habitat and/or construction within 300 feet of preserved habitat on non-federal lands. The weekly reports will document that authorized impacts were not exceeded, and general compliance with all conditions. The reports will also outline the duration of species monitoring, the location of construction activities, the type of construction which occurred, and equipment used. These reports will specify numbers, locations, and sex of sensitive species (if present), observed species behavior (especially in relation to construction activities), and remedial measures employed to avoid, minimize, and mitigate impacts to sensitive species. Raw field notes shall be made available upon request by CDFW and County PDS.
- Submit a final report to CDFW and County PDS within 60 days of the project completion that includes: as-built

construction drawings with an overlay of habitat that was impacted and protected, photographs of habitat areas that were to be avoided, and other relevant summary information documenting that authorized impacts were not exceeded and that general compliance with all conditions was achieved.

- A.D. Plant Species: Prior to grading activities, Access Option 3 shall mitigate for the loss of *Plantago erecta* and *Ericameria palmeri palmeri* in the following ways:
 - Obtain a USFWS permit for the removal of California Plantain (*Plantago erecta*) and implement permit requirements. Mitigation would likely involve compensatory mitigation by land dedication or in-lieu fee payment, and
 - (2) Compensation for the removal of Palmer's Goldenbush (*Ericameria palmeri palmeri*) shall be provided at a 3:1 ratio (either in lieu fee payment to the County or by deed restriction of qualified lands) of this Group A plant population to the satisfaction of the County of San Diego PDS.
 - (2)(3) Should the project require removal of greater than 20% of the Palmer's Goldenbush population, prior to implementation of Access Option 3, the Tribe shall acquire an Exception to the Biological Mitigation Ordinance according to BMO Section 86.509(b) to allow the project to impact more than 20% of the onsite population of Palmer's goldenbush.
- B. <u>Migratory Birds</u>: If construction activities will occur during the nesting season (usually March to September) for Access Options 1-3, preconstruction surveys for the presence of special status bird species or any nesting bird species shall be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, CDFG should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures, to be implemented by all three Access Options, may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site.
- C.<u>E.</u> Habitat Loss: Prior to grading activities of any of the Access Options, the following habitat loss mitigation shall be implemented:

- (1) Prior to development of any of the Access Option roads, the loss of protected habitats (grasslands, coastal scrub, coast live oak riparian forest) must be mitigated with San Diego County and California Department of Fish and Wildlife at the ratios specified by the Biological Mitigation Ordinance, which vary from 0.5:1 to 3:1 depending upon the Tier category and whether or not the land is in a Biological Resource Core Area, either by in lieu fee payment or by deed restriction of qualified lands to the satisfaction of both CDFW and County Director of PDS, and
- D. (2) Implement Mitigation Measure 4.15(1)(C). Prior to development of Access Option 3 acquire a Major Amendment of the MSCP from San Diego County allowing for the location of access Option 3 through the Hardline Preserve designated area.
 - (3) Prior to grading activities, Access Option 3 shall mitigate for the loss of Quino Checkerspot Butterfly habitat by performing a habitat survey to enumerate impacted habitat, and then implementing compensatory mitigation (by land dedication or in-lieu fee payment) to the satisfaction of USFWS.
- E.F. Water Quality: Prior to and during grading activities, Access Options 1-3 shall implement Mitigation 4.15-2.

Mitigation 4.15(5): Cultural Resources

- A. The Tribe shall implement inadvertent discovery measures during all construction activities within the proposed Access Option road <u>and Off-Site</u> <u>Intersection Ii</u>mprovement areas. Measures include:
 - (1) A worker education course for all construction personnel covering immediate work curtailment to protect cultural resources and to be conducted prior to initiation of ground-disturbing activities,
 - (2) Monitoring by a qualified archeologist, who meets the Secretary of the Interior's Standards for archaeologists (found at 36 CFR §61), as well as a JIV tribal monitor, of all earth-disturbing activities in close proximity to site CA-SDI-7966/11410 and CA-SDI-11051, and of all off-site earthdisturbing activities in native soils/sediments; and
 - (3) Procedures for discovery of cultural resources, including human remains, during construction or earth-disturbing activities if an archaeological monitor is not present.

- B. In the event that any prehistoric, historic, or paleontological resources are discovered during construction-related earth-moving activities, all work within 50 feet of the resources shall be halted and a qualified archaeologist or paleontologist, as appropriate, shall be consulted to assess the significance of the find. If any find is determined to be significant by the qualified professional, then appropriate agency and project representatives and the qualified archaeologist and/or paleontologist shall meet to determine the appropriate course of action. All significant cultural or paleontological materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist or paleontologist according to current professional standards.
- C. If human bone or bone of unknown origin is found during construction, all work shall stop within 50 feet of the find and the San Diego County Coroner and the Tribe shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC) who shall identify the most likely descendant. The most likely descendant shall work with the Tribe and the Lead Agency, as appropriate, to develop a plan for re-interment of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the identified actions have been implemented.

Mitigation 4.15(6): Public Services

A. Access Options 1-3 shall implement Mitigation 4.12(6).

Off Site Intersection Improvements

Implementation of the following mitigation measures are expected to reduce the significant impacts associated with the intersection improvements below a level of significance.

- A. Implement mitigation measures identified in Section 4.2.3 to reduce potential Geology and Soils impacts to a less than significant level.
- **B.**<u>A.</u> Implement Mitigation Measures 4.6(2) and 4.12(6) to reduce potential Hazardous Materials impacts to a less than significant level.
- C.B. Prior to grading activities for any intersections impacting jurisdictional waters, the improvement plans shall include a design that shows improvements to be located outside of the ordinary high water mark. If unable to design outside of high water make, the developer shall acquire a Clean Water Act Section 404 Permit

from the USACOE prior to undertaking any grading activities. Permit conditions typically include the purchase of in-lieu credits at a mitigation bank as well as the implementation of Best Management Practices during construction activities

- **D**.<u>C.</u> Prior to development of any of the intersection improvement areas, impacted protected habitats (grasslands, coastal scrub, coast live oak riparian forest) shall be mitigated at the ratio specified by the Biological Mitigation Ordinance, which vary from 0.5:1 to 3:1 depending upon the Tier category and whether or not the land is in a Biological Resource Core Area (either by in lieu fee payment or by deed restriction of qualified lands),
- <u>E.D.</u> Implement Mitigation Measure 4.15(2)(B) to reduce potential Jurisdictional Waters impacts to a less than significant level.
- F. A qualified biologist shall perform general pre-construction surveys for specialstatus plants and animals, and focused pre-construction surveys for Least Bell's vireo, Otay tarplant, and San Diego thorn mint, yellow billed cuckoo. If found during surveys USFWS must be consulted and their Biological Opinion rendered. If the Biological Opinion concludes that adverse impacts (i.e. "take") would occur with project implementation, mitigation measures identified by USFWS must be implemented after a take permit is issued. With the implementation of these mitigation measures, which likely will involve compensatory mitigation by land dedication or in lieu fee payment, adverse impacts upon special status plants and animals would be reduced to a less than significant level.
- G.E. Implement Mitigation 4.15(4) to reduce biological resource impacts to a less than significant level. If construction activities would occur during the nesting season (approximately February to September), pre-construction surveys for the presence of special status bird species or any nesting bird species shall be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, CDFG shall be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site.
- <u>F.</u> Implement Mitigation 4.15-5 to reduce cultural resource impacts to a less than significant level.

 H.G. Prior to development of the intersection improvement areas, any impacted County-protected plants (Group A Plants defined by County PDS), such as San Diego thornmint or Palmer's Goldenbush, shall be compensated at a 3:1 acreage ratio (either in lieu fee payment to the County or by deed restriction of qualified lands) to the satisfaction of the County of San Diego Director of Planning and Development Services.

I.H. The following Best Management Practices shall be implemented to protect water bodies from impacts:

- create and implement a Hazardous Materials Management Plan and Spill Response Plan, including the identification of specific refueling areas,
- create and implement an erosion control plan and a sediment monitoring plan, including the placement of jute mats, straw bales and wattles, sand bags, and vegetative covers (e.g. Hydroseed), weather monitoring, and specific inspection protocols,
- designated concrete washout areas and other filters for construction materials,
- a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs,
- create and implement a Hazardous Materials Management Plan and Spill Response Plan, including the identification of specific refueling areas,
- create and implement an erosion control plan and a sediment monitoring plan, including the placement of jute mats, straw bales and wattles, sand bags, and vegetative covers (e.g. Hydroseed), weather monitoring, and specific inspection protocols,
- designated concrete washout areas and other filters for construction materials, and
- a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs.
SECTION 4.16

SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE EFFECTS

4.16 SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE EFFECTS

This section provides an analysis of the socioeconomic and environmental justice effects of the Proposed Action and each alternative. Effects analyzed within socioeconomics include increased demand for housing, employment and revenue. Impacts on minority and low income populations are analyzed within the environmental justice effects section.

4.16.1 SOCIOECONOMIC SETTING

San Diego County

Population and Housing

The Jamul Indian Village is located in the unincorporated portion of southwestern San Diego County. The site is approximately 4.5 miles south of the northern county line and approximately 1 mile south of the community of Jamul. San Diego County has grown over 25.7% in population from 1990 to 2012 (California, 2012a). During this period, the County grew from 2,498,016 residents to an estimated 3,140,069 residents. Looking at the 2000 to 2012 time period, the population within the sub-regional area of Jamul grew 92.4% compared to 11% for the County. The growth rate for the sub-regional area of Jamul is expected to drop off to 1.2% for the period 2012 to 2020, compared to 7.9% for the County over the same period.

SAN DIEGO COUNTY AND JAMUL SUB-REGION POPULATION						
Location	2000	<u>2010</u>	Current	<u>2020</u>	%Chng	Est %Chng
					2000-2012	<u>2012-2020</u>
San Diego County	2,828,374	3,095,313	3,140,069	<u>3,391,010</u>	11.0%	7.9%
<u>Jamul</u>	<u>9.398</u>	<u>12,258</u>	<u>18,079</u>	<u>18,289</u>	<u>92.4%</u>	<u>1.2%</u>
SOURCE: California, 2012; U.S. Commerce, 2012; SANDAG, 2012a						

<u>TABLE 4.16-1</u> SAN DIEGO COUNTY AND JAMUL SUB-REGION POPULATION

There are currently an estimated 1,165,818 housing units currently in San Diego County, while the subregional area of Jamul has approximately 5,181 units (0.44% of County total). The housing within San Diego County represented approximately 8.5% of all housing units in the State of California as of 2010. San Diego County saw its number of housing units grow by 11.7% from 2000 to 2012, while the subregional area of Jamul's housing stock grew by 28.8% during the same period.

January 2013	4.16-1	Jamul Indian Village
		Final Tribal EE- Socioeconomic Effects

<u>TABLE 4.16-2</u> <u>HOUSING UNIT ESTIMATES</u>							
Location	<u>2000 Units</u>	2000 <u>Vacancy</u> <u>Rate</u>	<u>2010 Units</u>	<u>2010 Vac.</u> <u>Rate</u>	<u>Current</u> <u>Units</u>	Current Vac. <u>Rate</u>	<u>% Change</u> 2000-2012
San Diego County	<u>1,043,606</u>	4.4%	<u>1,164,786</u>	4.4%	<u>1,165,818</u>	<u>5.4%</u>	<u>11.7%</u>
<u>Jamul</u>	4,023	<u>5.0%</u>	<u>5,065</u>	<u>3.4%</u>	<u>5,181</u>	<u>1.7%</u>	28.8%
SOURCE: SANDAG, 2012a							

Employment and Income

January 2013

As of 2010 (year that most recent data is available), there were approximately 2,390,470 people in the County that were 16 years and older. Of that number, approximately 65.9% or 1,575,742 were in the labor force (U.S. Census Bureau, 2012). The civilian labor force accounted for approximately 95% of the labor force, while the armed forces accounted for the remaining 5% of the labor force. Approximately 34.1% of those individuals over 16 years of age were not in the labor force as of 2010. San Diego County had a 7.8% unemployment rate as of 2010. Higher unemployment rates have been recorded since the U.S. Census data was published in 2010. The rate was 9.7% in April 2011, but came down to 8.7% in April 2012; however, both numbers are well higher than the recorded 2010 data.

Approximately 39.5% of the civilian work force in the County are employed in the management, professional, and related occupations. Sales and office jobs comes in second with approximately 25.3% of the civilian work force, while service jobs employ approximately 18.1% of the civilian work force. Private wage and salary workers make up approximately 76.2% of the civilian employment force, while government workers make up 15.4%. Only 8.2% of workers are self-employed workers in the County.

The largest percent of earners in the county (approximately 17.7%) earn between \$50,000 to \$75,000 per year. Only 4.4% earn less than \$10,000 per year, while approximately 6.2% make more than \$200,000 per year. The median household income is estimated to be \$63,069, while the mean household income is estimated to be \$83,941 (U.S. Census Bureau, 2012). Approximately 23% of the population receives social security, while approximately 17% of the population receives retirement income.

The latest employment data provided by SANDAG for the Jamul sub-regional area is for 2009. Of the approximately 4,626 occupied households in 2009, the median household income is \$74,790. Approximately 7.5% of the households make less than \$15,000 (smallest unit of data provided) per year. Sixty-four percent of the households in the Jamul Sub-Regional area make less than \$100,000 per year, while approximately 6.8% make more than \$200,000 per year (SANDAG, 2012b).

4.16-2	Jamul Indian Village
	Final Tribal EE- Socioeconomic Effects

<u>Jamul Indian Village</u>

The Jamul Indian Village is a federally recognized sovereign Indian Tribe that currently has 47 tribal members. The tribal unemployment rate is 63 percent. Approximately 69 percent of the employed work force is living below poverty guidelines. The economic status of individuals in the Jamul Indian Village tribe is well below that of the rest of San Diego County.

4.16.2 ENVIRONMENTAL JUSTICE SETTING

The U.S. Environmental Protection Agency's (EPA) Office of Environmental Justice offers the following definition of environmental justice:

"The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, local, and tribal programs and policies."

The concept of environmental justice is rooted in the Civil Rights Act of 1964, which prohibited discrimination in Federally-assisted programs, and in Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations," issued February 11, 1994. Executive Order 12898 was intended to ensure that Federal actions and policies do not result in disproportionately high adverse effects on minority or low-income populations. It requires each Federal agency to incorporate environmental justice into its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including social or economic effects, of its programs, policies, and activities implemented both directly and indirectly (for which it provides permitting or funding) on minority populations and low-income populations of the United States (President's Council on Environmental Quality 1997). Additional guidance from the President's Council on Environment that produce human health or ecological outcomes, or from adverse social or economic changes.

Environmental justice issues are mandated and regulated at the Federal level, and compliance with NEPA requires analysis of environmental justice effects. As such, environmental justice is considered part of the NEPA process. According to the CEQ's Environmental Justice Guidance, under the National Environmental Policy Act, agencies should consider the composition of the affected area to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by the proposed action, and if so whether there may be disproportionately high and adverse environmental

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effects. Communities may be considered "minority" under the executive order if one of the following characteristics apply:

-	The cumulative	percentage	of	minorities	within	the	affected	environment	is
	greater than 50%	<u>, or</u>							

- The cumulative percentage of minorities within the affected environment is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

<u>Communities may be considered "low-income" under the executive order if one of the following characteristics applies:</u>

- The median household income for a census tract is below the poverty line (primary method of analysis), or
- Other indications are present that indicate a low-income community is present within the census tract (secondary method of analysis).

The 2012 poverty guidelines for the 48 contiguous states and the District of Columbia, as provided by the U.S. Department of Health and Human Services, shows that the poverty level is \$11,170 for a 1-person family/household, \$15,130 for a 2-person household, and \$19,090 for a 3-person household (HHS, 2012).

In 2012, the estimated total population for San Diego County was 3,140,069 people, while the Jamul Sub-Region's population is estimated to be 18,079. The following racial/ethnic breakdown for both areas is presented in Table 4.16-3.

Based on the data in Table 4.16-3, San Diego County and the Jamul Sub-Region would not qualify as a minority population based on the first criterion. However, the Jamul Indian Village would likely qualify as a minority population under the secondary method of analysis.

4.16.3 ENVIRONMENTAL CONSEQUENCES

The assessment of the Socioeconomic and Environmental Justice effects is divided into three topical discussions (1) Housing, (2) Employment and Fiscal Effects, and (3) Environmental Justice.

Significance Criteria

The project would result in a significant socioeconomic and environmental justice impact if it would:

- Significantly increase the need for new housing,
- Significantly increase the fiscal burden on local jurisdictions, or
- Create disproportionately high and adverse effects on minority populations, low-income populations, or Indian tribes that are present in the area.

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Racial/Ethnic Makeup	San Diego County	Jamul Subregion			
	Percent	Percent			
White	<u>77.0</u>	<u>53.6</u>			
Black or African American	<u>5.6</u>	<u>4.6</u>			
American Indian or Alaska Native	<u>1.4</u>	<u>0.3</u>			
Asian	<u>11.4</u>	<u>6.7</u>			
Native Hawaiian or Other Pacific Islander	<u>0.6</u>	<u>0.2</u>			
Two or More Races	<u>4.1</u>	<u>2.3</u>			
Hispanic or Latino ¹	<u>32.5</u>	<u>32.0</u>			
SOURCE: U.S. Commerce, 2012, SANDAG, 2012a					

<u>TABLE 4.16-3</u> <u>SAN DIEGO COUNTYAND JAMUL SUB-REGION RACIAL/ETHNIC BREAKDOWN</u>

Impact 4.16(1): Housing

Proposed Project

The creation of 1,611 new long-term jobs within San Diego County may result in increased housing demand due to the relocation of workers. These employees are expected to occupy vacant housing units available in the region, primarily in the East and South Suburban residential areas where 13,841 vacant units are estimated to be currently available (SANDAG, 2012). SANDAG has estimated that these areas will experience a cumulative growth of 31,110 housing units by 2020 (SANDAG, 2012). Of the 306,706 total housing units projected to exist in 2020 in the East and South Suburban Areas, approximately 12,009 units are projected to be vacant assuming 4.1% and 3.8% vacancy rates for the South Suburban and East Suburban Areas, respectively (SANDAG, 2012). Employment generated housing demand from the proposed development, which would occur over a regional area (including the City of San Diego), would be accommodated by existing and future vacant units in the East and South Suburban Areas and, thus, would not result in significant increases in housing demand to the region.

The amount of vacant housing units in addition to the projected increase in the number of housing units, and the amount of undeveloped residential acres available in the region would provide an ample amount of residential opportunities to the employees of the casino development. A marginally higher employment/housing ratio can be expected in the short term; however, this is not seen as adverse, due to the currently low employment/housing ratio in the Jamul Sub-

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Regional Area. Additionally, it can be assumed that the development of any additional housing within San Diego County would be subject to approval pursuant to County land use plans and ordinances. The County would determine the consistency of proposed housing development with the goals and policies of the San Diego County General Plan. Therefore, the proposed casino development would not likely induce "disorderly" residential growth within San Diego County either directly or indirectly.

<u>Alternative 1</u>

As is the case with the Proposed Project, future housing demand generated by the 846 employees under Alternative 1 would be met with vacant units within the East and South Suburban Areas. Alternative 1 would not induce "disorderly" residential growth within San Diego County either directly or indirectly.

<u>Alternative 2</u>

As is the case with the Proposed Project, future housing demand generated by the 223 employees of the gaming facility would be met with vacant units within the East and South Suburban Areas. Alternative 2 would not induce "disorderly" residential growth within San Diego County either directly or indirectly.

No Action Alternative

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in an adverse impact to housing.

Impact 4.16(2): Employment and Fiscal Effects

Proposed Project

The largest amount of employment growth among the development options would come from the Proposed Project, which would result in an estimated 1,043 temporary construction jobs, and an estimated 1,611 permanent jobs (**Table 4.13-1**). For purposes of this analysis, 100 percent of the total permanent jobs are assumed to be new jobs – jobs created in the economy rather than lateral shifts from one job to another without labor force replacement. Thus, the total of *new* permanent jobs that would be created is estimated to be 1,611 at full buildout of the gaming complex. Compared to the County's current overall employment level, the number of net new jobs is not significant. However, it becomes more significant when compared to the creation of new jobs in the local Jamul area and in the South Suburban and East Suburban Metropolitan Statistical Areas (MSAs).

For purposes of this analysis, it is assumed that a vast majority (90 percent) of the job demand generated by the proposed gaming project would be met within the East Suburban and South

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Suburban planning areas, as well as within the Jamul Planning area. The 2008 (most recent data available) estimate for total jobs within the East-Suburban and South Suburban Statistical Areas is 143,081 and 116,445, respectively (SANDAG, 2012). When compared to the 2008 employment level in the combined areas, new job creation from the proposed casino would represent around 0.55 percent of total jobs available. Projecting out to the year 2020, total new jobs generated by the casino would represent 0.49% of total jobs available. Since the labor force for the Jamul area is small, it is estimated that a small percentage (5 percent) of the workers hired by the gaming project would come from the Jamul Planning area. Thus, 81 net new jobs for the area were estimated to be created for this area at buildout. The 2008 (most recent data available) estimate for total jobs within the Jamul Sub-Regional area is 4.425, while that number is projected to increase to 4,545 by 2020 (SANDAG, 2012). The estimated new jobs represent approximately 1.8% of the 2008 Jamul Sub-Regional Area employment. Projecting out to the year 2020, total new jobs generated by the gaming project would also represent 1.8% of total jobs available within the Jamul Sub-Regional Area.

The Proposed Project would not result in a significant employment demand in San Diego County given the relatively low percentage of overall jobs that the casino facility would represent (when compared to the overall number of jobs provided), coupled with the fact that the current economic climate has resulted in a countywide unemployment rate of 7.8%. This provides an existing pool of labor within the County well beyond the demand created by the Proposed Project. Employment opportunities would be considered a beneficial effect.

Fiscal Effects

The proposed facility is expected to drive increases in economic activity, employment, and income for the San Diego economy with one time effects from the construction of the project, as well as ongoing effects from operation of the project. The project will include a gaming area in addition to associated food and beverage establishments. The construction costs are estimated to be approximately \$200 million and will generate about the same amount in total revenues annually.

Economic effects are described as the sum of the economic activity within a defined geographic region resulting from an initial change in the economy. This initial change spurs a series of subsequent indirect and induced activities (the re-spending of dollars) as a result of interconnected economic relationships. A direct economic effect is the initial change in the economy attributed to the core development of the Jamul development, i.e., new jobs, output, and earnings generated directly by the development. Indirect and induced economic effects, commonly referred to as the "multiplier effect", include earnings and employment generated as a result of the purchases of the industries which supply goods and services to the development.

January 2013 4.16-7 Jamul Indian Village Final Tribal EE- Socioeconomic Effects Induced economic effects include additional output, earnings and employment generated as a result of the purchases made by project employees.

The development of the proposed casino will generate one-time impacts within the San Diego County economy. Construction/development cost purchases do not always occur onsite or within the study geography, so construction costs are adjusted to account for only those goods and services that are projected to be purchased within the region. The analysis assumes:

- Hard construction will be completed by construction firms with local offices and San Diego county residents;
- Gaming machines and fixtures, as specialized equipment, are likely be purchased primarily outside of the County; and
- A portion of the soft costs such as design planning will be completed by firms outside of the local region.

For one time expenditures, development of the project would result in approximately \$150 million in direct goods and service purchases in San Diego County and approximately 1,000 person-year construction-related jobs. Re-spending of this initial expenditure is expected to generate an additional \$120 million in output and an additional 900 person-year jobs throughout the San Diego County economy. Anticipated total one-time expenditures from the Project are thus \$274 million. Of this amount, \$118 million is expected to be paid in earnings, supporting approximately 1,940 person-year jobs.

For annual ongoing expenditures, the ongoing operations are projected to generate direct impacts of \$150 million per year. This includes approximately \$69 million in earnings, supporting about 1,610 jobs onsite. Re-spending of this initial impact is projected to generate an additional \$106 million in output and an additional 810 jobs throughout the San Diego County economy. Anticipated total one-time expenditures from the operations of the Project are \$260 million. Of this amount, \$136 million are projected to be paid in earnings, supporting 2,420 jobs.

Project generated expenditures for both construction and operation would be dispersed and distributed among a variety of different industries and businesses throughout the County. The indirect and induced output for construction and operation would be considered beneficial fiscal effects.

Public services would be provided to the Reservation during construction and operation of the proposed gaming facility. These public service demands would result in costs being expended by the service providers for services such as potable water, solid waste services, emergency medical services, and law enforcement. No impacts to wastewater service providers or fire protection

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providers are expected given the Tribe's proposal to provide those services "in-house." Impacts to select public services are evaluated in Section 4.12 *Public Services*. As applicable, the Tribe would be required to compensate the service provider for services rendered, which will ensure that a less than significant fiscal impact results to those service providers.

<u>Alternative 1</u>

Alternative 1 would result in an estimated 531 temporary construction jobs, and an estimated 846 permanent jobs (**Table 4.13-1**). For purposes of this analysis, 100 percent of the total permanent jobs are assumed to be new jobs – jobs created in the economy rather than lateral shifts from one job to another without labor force replacement. Thus, the total *new* permanent jobs that would be created are therefore estimated to be 846 at full buildout of the gaming complex.

Estimated permanent new jobs to the County after construction is completed would be approximately 846. Compared to the County's current overall employment level, the number of net new jobs is not significant. However, it becomes more significant when compared to the creation of new jobs in the local Jamul area and in the South Suburban and East Suburban Metropolitan Statistical Areas (MSAs).

For purposes of this analysis, it is assumed that a vast majority (90 percent) of the job demand generated by the proposed gaming project would be met within the East Suburban and South Suburban planning areas, as well as within the Jamul Planning area. The 2008 (most recent data available) estimate for total jobs within the East-Suburban and South Suburban Statistical Areas is 143,081 and 116,445, respectively (SANDAG, 2012). When compared to the 2008 employment level in the combined areas, new job creation represents around 0.29 percent. Since the labor force for the Jamul area is small, it was estimated that only 5 percent of the workers hired by the gaming project would come from the Jamul Planning area. Thus, 42 net new jobs for the area were estimated to be created at buildout. The 2008 (most recent data available) estimate for total jobs within the Jamul Sub-Regional area is 4,425, while that number is projected to increase to 4,545 by 2020 (SANDAG, 2012). The estimated new jobs represent approximately 0.95% of the 2008 Jamul Sub-Regional Area employment. Projecting out to the year 2020, total new jobs generated by the gaming project would also represent 0.92% of total jobs within the Jamul Sub-Regional Area.

As is the case with the Proposed Project, Alternative 1 would not result in a significant employment impact in San Diego County given the relative low percentage of overall jobs that the casino facility would represent (when compared to the overall number of jobs provided), coupled with the fact that the current economic climate has resulted in a countywide unemployment rate of 7.8%. This provides an existing pool of labor within the County well

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beyond the demand created by Alternative 1. Employment opportunities would be considered a beneficial effect.

Fiscal Effects

Alternative 1 is expected to drive increases in economic activity, employment, and income for the San Diego economy with one time expenditures from the construction of the project, as well as ongoing expenditures from operation of the project. The project will include a gaming area in addition to associated food and beverage establishments. The construction costs are estimated to be approximately \$100 million and will generate about the same amount in total revenues annually.

For one time expenditures, development of Alternative 1 would result in approximately \$80 million in direct goods and service purchases in San Diego County and approximately 500 person-year construction-related jobs. Re-spending of this initial expenditure would generate an additional \$60 million in output and 460 person-year jobs throughout the San Diego County economy. Anticipated total one-time expenditures from the Project are \$140 million. Of this amount \$60 million is to be paid in earnings, supporting approximately 990 person-year jobs.

For annual ongoing expenditures, the ongoing operations are projected to generate direct expenditures of \$81 million. This includes approximately \$36 million in earnings, supporting about 220 jobs onsite. Re-spending of this initial expenditure is projected to generate an additional \$56 million in output and 420 jobs throughout the San Diego County economy. Anticipated total one-time expenditures from the operations of the Project are \$138 million. Of this amount, \$71 million are to be paid in earnings, supporting 1,270 jobs.

Project generated expenditures for both construction and operation would be dispersed and distributed among a variety of different industries and businesses throughout the County. The indirect and induced output for construction and operation would be considered beneficial fiscal effects.

As is the case with the Proposed Project, public services would be provided to the Reservation during construction and operation of the proposed gaming facility under Alternative 1. Impacts to select public services are evaluated in Section 4.12 *Public Services*. As applicable, the Tribe would be required to compensate the service provider for services rendered, which will ensure that a less than significant fiscal impact results to those service providers.

<u>Alternative 2</u>

Alternative 2 would result in an estimated 103 temporary construction jobs, and an estimated 223 permanent jobs (**Table 4.13-1**). For purposes of this analysis, 100 percent of the total

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permanent jobs are assumed to be new jobs – jobs created in the economy rather than lateral shifts from one job to another without labor force replacement. Thus, the total *new* permanent jobs that would be created are therefore estimated to be 223 at full buildout of the gaming complex.

Estimated permanent new jobs to the County after construction is completed would be approximately 223. Compared to the County's current overall employment level, the number of net new jobs is not significant. However, it becomes more significant when compared to the creation of new jobs in the local Jamul area and in the South Suburban and East Suburban Metropolitan Statistical Areas (MSAs).

For purposes of this analysis, it is assumed that a vast majority (90 percent) of the job demand generated by the proposed gaming project would be met within the East Suburban and South Suburban planning areas, as well as within the Jamul Planning area. The 2008 (most recent data available) estimate for total jobs within the East-Suburban and South Suburban Statistical Areas is 143,081 and 116,445, respectively (SANDAG, 2012). When compared to the 2008 employment level in the combined areas, new job creation represents around 0.08 percent. Since the labor force for the Jamul area is small, it was estimated that only 5 percent of the workers hired by the gaming project would come from the Jamul Planning area. Thus, 11 net new jobs for the area were estimated to be created at buildout. The 2008 (most recent data available) estimate for total jobs within the Jamul Sub-Regional area is 4,425, while that number is projected to increase to 4,545 by 2020 (SANDAG, 2012). The estimated new jobs represent approximately 0.26% of the 2008 Jamul Sub-Regional Area employment. Projecting out to the year 2020, total new jobs generated by the gaming project would also represent 0.25% of total jobs within the Jamul Sub-Regional Area.

As is the case with the Proposed Project, Alternative 2 would not result in a significant employment impact in San Diego County given the relative low percentage of overall jobs that the casino facility would represent (when compared to the overall number of jobs provided), coupled with the fact that the current economic climate has resulted in a countywide unemployment rate of 7.8%. This provides an existing pool of labor within the County well beyond the demand created by Alternative 2. Employment opportunities provided to members of the Jamul Tribe would be considered a beneficial effect.

Fiscal Effects

The Alternative 2 is expected to drive increases in economic activity, employment, and income for the San Diego economy with one time effects from the construction of the project, as well as ongoing effects from operation of the project. The project will include a gaming area in addition

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to associated food and beverage establishments. The construction costs are estimated to be approximately \$25 million and will generate about the same amount in total revenues annually.

For one time expenditures, development of Alternative 2 would result in approximately \$15 million in direct goods and service purchases in San Diego County and approximately 100 person-year construction-related jobs. Re-spending of this initial expenditure would generate an additional \$12 million in output and 91 person-year jobs throughout the San Diego County economy.

The project's ongoing operations are expected to directly generate \$22 million in annual revenues within the San Diego County economy and 220 jobs onsite. Anticipated total annual fiscal expenditures from project operations are \$37 million. Of this amount \$19 million are to be paid in earnings, supporting 340 jobs.

<u>Project generated expenditures for both construction and operation would be dispersed and distributed among a variety of different industries and businesses throughout the County. The indirect and induced output for construction and operation would be considered beneficial fiscal effects.</u>

As is the case with the Proposed Project, public services would be provided to the Reservation during construction and operation of the proposed gaming facility under Alternative 2. Impacts to select public services are evaluated in Section 4.12 *Public Services*. As applicable, the Tribe would be required to compensate the service provider for services rendered, which will ensure that a less than significant fiscal impact results to those service providers.

No Action Alternative

No construction or land alteration would take place under this alternative. Thus, the No Action Alternative would not result in adverse/beneficial fiscal impacts.

Impact 4.16(3): Environmental Justice for Minority and Low Income Populations

Proposed Project

According to the U.S. Census, with the exception of members of the Jamul Indian Village itself, there are no low-income or minority populations within the affected area. All of the geographic areas of measurement have higher household incomes and lower poverty rates than the County as a whole. Therefore, the Proposed Project would not result in environmental justice effects.

The Jamul Indian Village has a very high percentage of low-income and minority tribal members, the majority of whom are Native American. While it could be argued that the project would result in disproportionate effects to this community, as the intensity of development would be

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greatest on site, such an argument would not be consistent with the spirit and intent of *Executive Order 12898*, which considers environmental justice effects on low-income and minority populations rather than from low-income and minority populations. In this case, the Tribe is the minority and low-income community that is seeking project approval. The project would improve the economic status of the Tribe compared to existing levels as the largest portion of revenues generated would be received by the Tribe. Additionally, a portion of new employment opportunities generated by the project would be filled by Tribal members. The purpose and need for the Preferred Project is to improve the overall economic conditions and quality of life of the Tribe. No adverse environmental justice effects are anticipated.

<u>Alternative 1</u>

The location of Alternative 1 is the same as the Proposed Project and, as such and as stated above for the Proposed Project, Alternative 1 would not result in significant environmental justice effects.

<u>Alternative 2</u>

The location of Alternative 2 is the same as the Proposed Project and, as such and as stated above for the Proposed Project, Alternative 2 would not result in significant environmental justice effects.

No Action Alternative

No development would occur under the No Action Alternative; therefore, no environmental justice effects would result. Additionally, this alternative would not improve the quality of life of Tribal members given the lack of future employment opportunities that this alternative would bring to the Jamul Indian Village.

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SECTION 5.0

LIST OF PREPARERS

SECTION 5.0 LIST OF PREPARERS

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SECTION 6.0

REFERENCES

SECTION 6 REFERENCES

- Allverez, M. 2011. Phone conversation with Miguel Allverez, Customer Service Representative, Waste Management -San Diego. October 11, 2011.
- American Society for Testing and Materials. 2005. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Designation E 1527-05. West Conshohocken, Pennsylvania. 35 pp.
- American Society for Testing and Materials. 2008. Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process. Designation E 1528-06. West Conshohocken, Pennsylvania. 26 pp.
- Applied Engineering and Geology. 2003. Results of Soil Mantle and Percolation Tests and Installation of Monitoring Wells - Jamul Indian Village. Prepared for Analytical Environmental Services. Prepared by Applied Engineering and Geology, Inc., Lincoln, California.
- Barletta, M. 2011. Email correspondence with Commander Mike Barletta, San Diego Sheriff's Department (Mike.Barletta@sdsheriff.org).
- Calflora. 2011. Calflora, the on-line gateway to information about native and introduced wild plants in California. Internet database available at <u>http://calflora.org/</u>.
- California Air Resources Board (ARB), 2004. Revision to the California State Implementation Plan for Carbon Monoxide; Updated Maintenance Plan for Ten Federal Planning Areas. July 22. Available at <u>http://www.arb.ca.gov/planning/sip/co/final_2004_co_plan_update.pdf</u>.
- California Air Resources Board (ARB), 2010. Air Quality Data Statistics. Online review August 25, 2010. Available at http://www.arb.ca.gov/adam/.
- California Department of Fish and-<u>Wildlife Game</u>. 2011a. RareFind 3.1, California Natural Diversity Data Base. Sacramento, California (updated monthly by subscription service).
- California Department of Fish and <u>WildlifeGame</u>. 2011b. California's Plants and Animals. Habitat Conservation Planning Branch, California Department of Fish and Game, Sacramento, California. <u>http://www.dfg.ca.gov/hcpb/</u> species/search_species.shtml.

- California Department of Fish and <u>WildlifeGame</u>. 2011c. California's Wildlife. California Wildlife Habitat Relationships System, Biogeographic Data Branch, California Department of Fish and Game. Internet database available at <u>http://www.dfg.ca.gov/whdab/html/</u> cawildlife.html.
- California Department of Transportation (Caltrans), 2009. Traffic Noise Analysis Protocol for New Highway and Reconstruction Projects, including Technical Noise Supplement, October.
- California Department of Transportation (Caltrans),2002 . Transportation Related Earthborne Vibrations, Technical Advisory, Vibration TAV-02-01-R9601, February 20.
- California Energy Commission. 2011. California Electricity Statistics & Data. Internet Address: http://energyalmanac.ca.gov/electricity/index.html. Accessed October 11, 2011.
- California Integrated Waste Management Board, 2011. Jurisdiction Diversion / Disposal Rate Summary. Internet Address: <u>http://www.calrecycle.ca.gov/LGCentral/Tools/mars/</u> DrmcMain.asp?VW=In. Accessed October 11, 2011.
- California Native Plant Society. 2011. Inventory of Rare and Endangered Plants, 7th edition. Rare Plant Scientific Advisory Committee, David P. Tibor, convening editor. California Native Plant Society. Sacramento, California. Internet database available at <u>http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi</u>.
- CalRecycle, 2011c. Active Landfills Profile for Otay Landfill (37-AA-0010): Operations. <u>http://www.calrecycle.ca.gov/Profiles/Facility/Landfill/LFProfile2.asp?COID=37&FACID=37-AA-0010</u>. Accessed January 2012.
- CalRecycle, 2011d. Active Landfills Profile for Sycamore Sanitary Landfill (37-AA-0023): Operations. <u>http://www.calrecycle.ca.gov/Profiles/Facility/Landfill/LFProfile1.asp?COID=37&FACID=37-AA-0023</u>. Accessed January 2012.

Cao, Tianqing et al. 2003. The Revised 2002 California Probabilistic Seismic Hazard Maps, dated June.

- Chavez, M. 2011. Phone conversation with Michael Chavez, Customer Response, American Medical Response. October 10, 2011.
- City of San Diego. 2007. Draft General Plan Final Programmatic Environmental Impact Report. Available electronically at http://www.sandiego.gov/planning/genplan/pdf/peir/
- Construction Testing & Engineering. 2011. Geotechnical Evaluation Jamul Gaming Facility Development Project, Jamul Indian Village, San Diego County, California. Prepared For Jamul Indian Village. Prepared By Construction Testing & Engineering, Inc. Riverside, California.

- County of San Diego. 1997. Multiple Species Conservation Program, County of San Diego Subarea Plan. Prepared by the County of San Diego in conjunction with the U.S. Fish and Wildlife Service, California Department of Fish and Game. Available on the Internet: http://www.sdcounty.ca.gov/dplu/mscp/.
- County of San Diego, 2011. San Diego County General Plan: A Plan for Growth, Conservation and Sustainability. Chapter 3, Land Use Element. Adopted August 3, 2011.
- County of San Diego, 2011a. Jamul/Dulzura Subregional Plan. Page 1. August 2011
- Culver, K. 2011. ken.culver@sdsheriff.org on 10/10/2011
- Dexter Wilson Engineering, Inc. 2011. Jamul Gaming Facility Wastewater Treatment and Disposal Analysis.
- EDD, 2011. State of California, Employment Development Department: San Diego-Carlsbad-San Marcos Metropolitain Statistical Area (San Diego County). Joe Briceno, December 16, 2011. <u>http://www.calmis.ca.gov/file/lfmonth/sand\$pds.pdf</u>.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi. 92 pp.
- Forensic Entomology Services. 2011a. Quino Checkerspot Surveys, 2011, Rancheria Parcel, Jamul Village Site, Jamul, San Diego County, California. Prepared by D. Faulkner, Forensic Entomology Services, San Diego, California. Prepared for Procopio, Cory, Hargreaves & Savitch LLP and the Jamul Indian Village.
- Forensic Entomology Services. 2011b. Quino Checkerspot Surveys, 2011, 4-acre Parcel, Jamul Village Site, Jamul, San Diego County, California. Prepared by D. Faulkner, Forensic Entomology Services, San Diego, California. Prepared for Procopio, Cory, Hargreaves & Savitch LLP and the Jamul Indian Village.
- Forensic Entomology Services. 2011c. Quino Checkerspot Surveys, 2011, All Access Alternatives, Jamul Village Site, Jamul, San Diego County, California. Prepared by D. Faulkner, Forensic Entomology Services, San Diego, California. Prepared for Procopio, Cory, Hargreaves & Savitch LLP and the Jamul Indian Village.
- Harris, A. 2011. Phone conversation with Akilah Harris, Administrative Assistant, San Diego Rural Fire Protection District. October 10, 2011.
- Hickman, J.C., editor. 1993. The Jepson Manual, Higher Plants of California. University of California Press, Berkeley, California. 1,400 pp.
- Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. State of California, The Resources Agency, Nongame Heritage Program, Department of Fish and Game, Sacramento, California. 156 pp.

- HydroScience Engineers, Inc. 2002. Jamul Indian Village —Water, Wastewater, Recycled Water Feasibility Study, Final Report, November 2002. Prepared for Jamul Indian Village and Analytical Environmental Services.
- Law Crandall. 2001. Report of Geotechnical Investigation, Proposed Jamul Casino and Resort, State Route 94 and Melody Road, Jamul, California.
- Law Crandall. 2002. Report of Initial Hydrogeologic Evaluation, Proposed Jamul Casino and Resort, State Route 94 and Melody Road, Jamul, California, dated October 21.
- Lotta, 2012. personal communication with Julia Lotta, January 18, 2012. Data from U.S. Department of the Interior: American Indian/Alaska Native Population and Labor Force Estimate Report.
- Martin and Ziemniak Engineering Inc. 2006. Jamul Casino and Resort Project, Hydrology and Drainage & Flood Storage Study. Prepared for Lakes Gaming Inc. Prepared by Martin and Ziemniak Engineering Inc., San Diego, California. 85 pp.
- Martin and Ziemniak, Inc. 2006. Jamul Indian Village Casino Development Project Subarea Master Plan for Potable Water Service. Prepared for Otay Water District.
- Natural Investigations Company. 2011d. Federal Jurisdictional Waters Delineation Report of the Jamul Indian Village, San Diego County, California. Prepared for EDS Inc. and the Jamul Indian Village.
- Natural Investigations Company. 2006. Jamul Indian Village Off-reservation Biological Resources Assessment. Volume I, Appendix D, in Jamul Indian Village (2006) Final TEIS/R.
- Natural Investigations Company. 2007a. Jamul Access Study. Prepared for the Jamul Indian Village and Environmental Data Systems Incorporated, Sacramento California..
- Natural Investigations Company. 2007b. Delineation of Waters of the United States for the Jamul Indian Village Project. Prepared for the Jamul Indian Village and Environmental Data Systems Incorporated, Sacramento, California.
- Natural Investigations Company. 2009. Technical Memo: Reconnaissance Survey of Biological Resources and Hazardous Materials Issues of Jamul Access Project. Prepared for the Jamul Indian Village and Environmental Data Systems Incorporated, Sacramento, California.
- Natural Investigations Company. 2010. Phase I Environmental Site Assessment for the Jamul Access Project. Prepared for Environmental Data Systems, Inc., and Jamul Indian Village. 27 pp.
- Natural Investigations Company. 2011a. Botanical Survey for the Jamul Indian Village, Jamul, California, San Diego Co., CA. 2011. Prepared for EDS Inc. and the Jamul Indian Tribe.

- Natural Investigations Company. 2011b. Botanical Survey for the 4-acre Parcel, Jamul, California, San Diego Co., CA. 2011. Prepared for EDS Inc. and the Jamul Indian Tribe.
- Natural Investigations Company. 2011c. Botanical Survey for the Jamul Access Project, Jamul, California, San Diego Co., CA. 2011. Prepared for EDS Inc. and the Jamul Indian Tribe.
- Natural Investigations Company. 2011d. Federal Jurisdictional Waters Delineation Report of the Jamul Indian Village, San Diego County, California. Prepared for EDS Inc. and the Jamul Indian Village.
- Natural Investigations Company. 2011e. Federal Jurisdictional Waters Delineation Report for the Jamul Access Project, San Diego County, California. Prepared for EDS Inc. and the Jamul Indian Village. 31 pp.
- Natural Investigations Company. 2011f. 4-acre Parcel, Jamul, California, Biological Resources Assessment, San Diego Co., CA. 2011. Prepared for EDS Inc. and the Jamul Indian Village. 28 pp.
- NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life, Version 7.1. NatureServe, Arlington, Virginia. Internet database available at http://www.natureserve.org/explorer.
- Office of the Federal Register, National Archives and Records Administration (Federal Register), 2006. "PM_{2.5} De Minimis Emission Levels for General Conformity Applicability, Final Rule. Federal Register 71 (17 July 2006): 40420-40427. Print.
- Otay Water District, 2006. Jamul Indian Village Casino Development Project: Subarea Master Plan for Potable Water Service. Prepared for the Otay Water District Project No. D0388. Prepared by Martin and Ziemniak. August, 2006
- Pacific Southwest Biological Services. 2000b. A biological inventory and wetlands delineation of the Jamul Rancheria Parcels in Jamul, San Diego County, California. Prepared by R.M. Beauchamp, Pacific Southwest Biological Services Inc., National City, California.
- Pacific Southwest Biological Services. 2001. Jamul Rancheria Parcels, Jamul, San Diego County, California Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey. Prepared by D.W. Allen, Pacific Southwest Biological Services, Inc., National City, California. 7 pp.
- Pacific Southwest Biological Services. 2002. Jamul Rancheria Casino, Jamul, San Diego, California. California Gnatcatcher (Polioptila californica californica) Impact Study. 4 pp.
- Pacific Southwest Biological Services. 2006. Jamul Rancheria Parcels, Jamul, San Diego County, California. Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey. Prepared by Geoffrey L. Rogers, Pacific Southwest Biological Services, Inc., National City, California. 5 pp.

- Pacific Southwest Biological Services. 2011a. A Botanical Inventory of the 6 acre Jamul Rancheria, Jamul, San Diego County, California. Prepared for Environmental Data Systems, Inc. Prepared by R. Mitchell Beauchamp,
 Pacific Southwest Biological Services, Inc., National City, California.
- Pacific Southwest Biological Services. 2011b. A Botanical Inventory of the 4 acre parcel, Jamul, San Diego County, California. Prepared for Environmental Data Systems, Inc. Prepared by R. Mitchell Beauchamp, Pacific Southwest Biological Services, Inc., National City, California.
- Pacific Southwest Biological Services. 2011c. A Botanical Inventory of Roadways and Proposed Routes Associated with the Jamul Rancheria, Jamul, San Diego County, California. Prepared for Environmental Data Systems, Inc. Prepared by R. Mitchell Beauchamp, Pacific Southwest Biological Services, Inc., National City, California.
- Pacific Southwest Biological Services. 2011d. Jamul Rancheria Access Project, Jamul, San Diego County, California, Study Area 1 (4 Acres), Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey. Prepared for Environmental Data Systems, Inc. and the Jamul Indian Village. Prepared by M. Evans, Pacific Southwest Biological Services, Inc., National City, California.
- Pacific Southwest Biological Services, Inc. 2011e. Jamul Rancheria Access Project, Jamul, San Diego County, California, Study Area 2 (6 Acres), Coastal California Gnatcatcher (Polioptila californica californica)
 Presence/Absence Survey. Prepared for Environmental Data Systems, Inc. and the Jamul Indian Village.
 Prepared by M. Evans, Pacific Southwest Biological Services, Inc., National City, California. [JIV]
- Pacific Southwest Biological Services, Inc. 2011f. Jamul Rancheria Access Project, Roadways and Proposed Routes, Jamul, San Diego County, California, Study Area 3 (20 Acres), Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey. Prepared for Environmental Data Systems, Inc. and the Jamul Indian Village. Prepared by M. Evans, Pacific Southwest Biological Services, Inc., National City, California.
- Porath, M. 2011. Email correspondence with Mary Porath, Crime Analyst (Mary.Porath@SDSheriff.org), San Diego County Sheriff's Department, Sheriff's Lemon Grove Command. October 17, 2011.
- Salacup, T. 2011. Phone conversation with Tanya Salacup, California Highway Patrol, El Cajon Office October 10, 2011.
- SANDAG. 2003. Energy 2030: The San Diego Regional Energy Strategy. May 2003.

SANDAG. 2006. Regional Comprehensive Plan Performance Monitoring Report 2006. September 2006.

- SANDAG, 2011(a). SANDAG Data Warehouse. <u>http://datawarehouse.sandag.org/ Estimate/Housing/2010/3/2</u>. December, 2011.
- SANDAG, 2011(b). SANDAG Data Warehouse. <u>http://datawarehouse.sandag.org/Estimate/ Housing/2010/2/30;</u> <u>http://datawarehouse.sandag.org/Estimate/Housing/2010/8/1919</u>. December, 2011.

SANDAG. 2012. Land Use and Regional Growth. Website

http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome

- San Diego Air Pollution Control District (SDAPCD), 2007 *Eight-Hour Ozone Attainment Plan for San Diego County*. May. Available at http://www.sdapcd.org/planning/8-Hour-O3-Attain-Plan.pdf.
- San Diego Air Pollution Control District (SDAPCD), 2009. Regional Air Quality Strategy Revision. April 22. Available at <u>http://www.sdapcd.org/planning/2009-RAQS.pdf</u>
- San Diego Air Pollution Control District (SDAPCD), 2010a. Fact Sheet; Attainment Status. January. Available at http://www.sdapcd. org/info/facts/attain.pdf.
- San Diego Air Pollution Control District (SDAPCD), 2010b. "Regulation XIV, Title V Operating Permits." Available at <u>http://www.sdapcd</u>. org/rules/reg_14.html.
- San Diego County. 1977. Ground Water Resources of the Jamul Subregion, San Diego County, California. Environmental Analysis Division, Community Services Agency.
- San Diego County Sheriff's Department. 2011. Law Enforcement Services Website. Internet Address: http://www.sdsheriff.net/aboutus.html. Accessed October 10, 2011.
- San Diego Regional Planning Agency (SANDAG), 2010 . Traffic Forecasts, Interactive GIS Maps, available at: http://gis.sandag.org/ tficsr11/
- San Diego Regional Water Quality Control Board. 2007a. Water Quality Control Plan for the San Diego Basin (9), September 8, 1994 (with amendments effective prior to April 25, 2007). California Regional Water Quality Control Board San Diego Region, San Diego, California.
- San Diego Regional Water Quality Control Board. 2007b. Surface Water Ambient Monitoring Program (SWAMP) Report on the Otay Hydrologic Unit, Final Technical Report. Prepared by the Southern California Coastal Water Research Project, Costa Mesa, California.
- San Diego Regional Water Quality Control Board. 2011. San Diego Region Clean Water Act Section 305(b) Surface Water Quality Assessment and Section 303(d) List of Water Quality Limited Segments. Internet site: http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/303d_list/index.shtml.
- San Dieguito Engineering. 2011. Preliminary Detention and Storm Water Analysis Jamul Indian Village Casino Project. 18 pp.
- Sawyer, J.O., and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society, Sacramento, California. Available electronically at <u>http://davisherb.ucdavis.edu/cnpsActiveServer/index.html</u>.

- South Coast Air Quality Management District, 2007. Software User's Guide URBEMIS2007 for Windows, Version 9.2, Emissions Estimation for Land Use Development Projects. November. Available for review at http://www.urbemis.com/software/URBEMIS9% 20Users%20Manual% 20Main %20Body.pdf.
- Spiedel, J. 2001. Phone conversation with Julie Spiedel, San Diego Gas and Electric Company, October 10, 2011.
- Stuart, J.D., and J.O. Sawyer. 2001. Trees and Shrubs of California. California Natural History Guides. University of California Press, Berkeley, California. 467 pp.
- United States Army Corps of Engineers. 2001. Final Summary Report: Guidelines for jurisdictional determinations for waters of the United States in the arid Southwest. South Pacific Division. 12 pp. Available electronically at http://www.spl.usace.army.mil/ regulatory/.
- United States Army Corps of Engineers and United States Environmental Protection Agency. 2007. 2007 Nationwide Permits, Conditions, Further Information, and Definitions (with corrections). Headquarters, US Army Corps of Engineers, Washington, D.C. 38 pp.
- United States Environmental Protection Agency and United States Army Corps of Engineers. 2008. Revised Guidance on Clean Water Act Jurisdiction Following the Supreme Court Decision in Rapanos v. U.S. and Carabell v. U.S. Memorandum available online at <u>http://www.usace.army.mil/cw/cecwo/reg/cwa_guide/cwa_juris_2dec08.pdf</u>.
- United States Environmental Protection Agency, 2008. Johnson, Steven L (December 18). EPA's Interpretation of Regulations that Determine Pollutants Covered By Federal Prevention of Significant Deterioration (PSD) Permit Program. Letter memorandum to Regional Administrators, Washington, D.C. Available at <u>http://www.epa.gov/nsr/documents/ psd_interpretive_</u> memo_12.18.08.pdf.
- United States Environmental Protection Agency, 2009 "Monitor Values Report Criteria Air Pollutants." January 10. Available at <u>http://www.epa.gov/air/data/monvals.html</u>.
- United States Environmental Protection Agency, 2010. General Conformity. "De Minimis Levels." Updated May 6. Available at http://www.epa.gov/air/genconform/deminimis.html
- United States Fish and Wildlife Service. 2010. FWS Endangered and Threatened Species Critical Habitat Portal. Environmental Conservation Online System. Internet database available at http://criticalhabitat.fws.gov/
- United States Fish and Wildlife Service. 2011. National Wetlands Inventory Program, Division of Habitat and Resource Conservation. Internet site at http://www.fws.gov/wetlands/.
- University of California at Berkeley. 2011a. Jepson Online Interchange for California Floristics. Jepson Flora Project, University Herbarium and Jepson Herbarium, University of California at Berkeley. Internet database available at http://ucjeps.berkeley.edu/interchange.html.

- University of California at Berkeley. 2011b. CalPhotos. Biodiversity Sciences Technology Group, University of California at Berkeley. Internet database available at http://calphotos.berkeley.edu/.
- University of California, Davis, Institute of Transportation Studies (UCD ITS), 1997. Transportation Project-Level Carbon Monoxide Protocol (UCD-ITS-RR-97-21). Revised December. Available at <u>http://www.dot.ca.gov/hg/env/air/documents/co_protocol 1997_wLetters.pdf</u>.
- URBEMIS Environmental Management Software (URBEMIS), 2007 EMFAC Databases for Riverside County, SCAQMD. Available for review at http://www.urbemis.com/software/Emfac.html.
- U.S. Department of Transportation, 2004. Federal Highway Administration (FHWA). FHWA Traffic Noise Model, Version 2.5., February.
- U.S. Department of Transportation, 2006. Federal Transit Administration (FTA). Transit Noise and Impact Assessment.
- U.S. Census, 2012. U.S. Census Bureau: State and County Quick Facts. http://quickfacts.census.gov/qfd/states/06/0637120.html
- Western Regional Climate Center 2011. Desert Research Institute, Reno, Nevada. Internet site: http://www.wrcc.dri.edu/.
- Williams, W. 2002. Phone conversation with Wayne T. Williams, Recycling Coordinator, San Diego County Department of Public Works, Solid Waste Management Division. November 13 & 20, 2002.