Draft Environmental Impact Report

Level II Infill Correctional Facilities Project

Volume 2

Site-Specific Evaluation of Level II Infill Correctional Facilities at R.J. Donovan Correctional Facility

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CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION

STATE CLEARINGHOUSE NUMBER 2012122038

June 2013

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ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
ADT	average daily traffic
afy	acre-feet per year
AIA	airport influence area
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
ALUCP	Airport Land Use Compatibility Plan
ANSI	American National Standards Institute
APCO	Air Pollution Control Officer
AQMP	air quality management plan
ARB	California Air Resources Board
ATC	Authority to Construct
BAAQMD	Bay Area Air Quality Management District
BMPs	best management practices
B.P	before present
Basin Plan	Water Quality Control Plan
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCA	Corrections Corporation of America
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDCR	California Department of Corrections and Rehabilitation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Fish and Game Code, California Endangered Species Act
CHCF	California Health Care Facility
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
County	County of San Diego

CRA	Colorado River Aqueduct
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSRI	Cultural Systems Research, Inc.
CUWCC	California Urban Water Conservation Council
CVWD	Coachella Valley Water District
CWA	Clean Water Act
dB	decibel
dBA	A-weighted sound levels
DCG	Design Criteria Guidelines
DEIR	draft environmental impact report
Delta	Sacramento–San Joaquin River Delta
DHCCP	Delta Habitat Conservation and Conveyance Program
DOT	Department of Transportation
DTSC	California Department of Toxic Substances Control
DWA	Desert Water Agency
EDD	California Employment Development Department
EDR	Environmental Data Resources
EPA	U.S. Environmental Protection Agency
EO	Executive Order
ESA	Federal Endangered Species Act
ESAs	California Endangered Species Acts
FCF	OWD Otay Mesa system Flow Control Facility
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	greenhouse gas
gsf	gross square feet
HAPs	hazardous air pollutants
HCP	Habitat Conservation Plan
HMD	DEH Hazardous Materials Division
HMTA	Hazardous Materials Transportation Act
HRA	health risk assessment
HWCA	Hazardous Waste Control Act

Hz	hertz
I-805	Interstate 805
IID	Imperial Irrigation District
LAFCO	Local Agency Formation Commission
lb/day	pounds per day
LDL	Larson Davis Laboratories
L_{dn}	Day-Night Average Noise Level
LEED	Leadership in Energy and Environmental Design
LEF	lethal electrified fence
L_{eq}	Equivalent Noise Level
LID	low-impact development
L_{max}	Maximum Noise Level
L_{min}	Minimum Noise Level
L_x	Statistical Descriptor
M&I	municipal and industrial
MCB	Marine Corps Base
mgd	million gallons per day
MOU	Memorandum of Understanding
mph	miles per hour
MRZ	Mineral Resource Zone
MSCP	Multiple Species Conservation Program
MWD	Metropolitan Water District of Southern California
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NESHAP	national emissions standards for HAPs
NO_2	nitrogen dioxide
NOA	Notice of Availability
NOP	Notice of Preparation
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Department of Agriculture, Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSR	New Source Review
OWD	Otay Water District

PDS	County of San Diego Planning and Development Services
PM_{10}	respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
$PM_{2.5}$	fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPV	peak particle velocity
PRC	California Public Resources Code
psi	pounds per square inch
PTO	Permit to Operate
PUD	City of San Diego Public Utilities Department
RAQS	regional air quality strategy
RCRA	Resource Conservation and Recovery Act
RJD	Richard J. Donovan Correctional Facility
RMS	root-mean-square
ROG	reactive organic gases
ROW	right-of-way
RWCWRF	Ralph W. Chapman Water Recycling Facility
RWQCB	Region Regional Water Quality Control Board
RYBP	Radiocarbon Years Before Present
SAM	San Diego County Site Assessment and Mitigation
SANDAG	San Diego Association of Governments
San Diego PUD	San Diego's Public Utilities Department
SBWRP	San Diego's South Bay Water Reclamation Plant
SCAQMD	San Diego Air Pollution Control District
SCIC	South Coastal Information Center
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas & Electric
SDRFPD	San Diego Rural Fire Protection District
SDRWQCB	San Diego Regional Water Quality Control Board
SEL	Sound Exposure Level
SLMs	sound level meters
SMAQMD	Sacramento Air Quality Management District
SO_2	sulfur dioxide
SOI	sphere of influence
SR	State Route

SUHSD	Sweetwater Union High School District
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
T-BACT	best available control technology for TACs
TDS	total dissolved solids
TNM	Highway Traffic Noise Model
TPH	total petroleum hydrocarbons
UBC	Uniform Building Code
UMWP	2010 Urban Water Management Plan
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VAP	SAM's Voluntary Assistance Program
VdB	vibration decibels
VOC	volatile organic compound
WDR	Wastewater Discharge Requirement
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

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1 INTRODUCTION

This volume (Volume 2) of the draft environmental impact report (DEIR) evaluates the potential physical environmental impacts associated with development of a level II infill correctional facility at the Richard J. Donovan Correctional Facility (RJD) in San Diego. As noted in Volume 1 of this EIR, the RJD Infill Site has been designated by CDCR as the proposed site for a 792-bed (single) level II correctional facility. This volume evaluates the proposed single facility, as well as an alternative 1,594-bed level II infill correctional facility complex at an equal level of detail. Either the proposed single facility or the alternative complex may be approved by CDCR. This chapter provides an overview of the purpose, focus, and use of this volume of the DEIR; a summary of the public review and participation process; and a description of the terminology used herein. A detailed description of the overall project is provided in Chapter 3, "Project Description," in Volume 1 of this DEIR, and is incorporated by reference herein; site-specific project information for the RJD Infill Site is provided in Chapter 3 of this volume.

It should be noted that, although two previous projects were contemplated at CDCR's RJD property, a California Health Care Facility and a 500-bed Reentry Facility, these projects are no longer under consideration by CDCR or the Medical Receiver. The proposed level II facilities are the only new inmate bed facilities under consideration at RJD. However, it should be noted that a Health Care Facility Improvement Program (HCFIP) project is planned for the existing RJD facilities. This project only involves improvements to meet health care treatment needs within the grounds of the RJD prison. The HCFIP project consists of structural improvements such as new clinical and medical administrative space, storage and distribution of medications, associated building code renovations, etc. The Improvement Project results in the addition of only one staff member to the existing RJD employee base and there would be no increase in inmates. The proposed level II correctional facilities would include all necessary medical/mental health care clinical space and related special facilities to support the inmates in this new correctional complex (CDCR 2013ab).

1.1 PROJECT BACKGROUND

RJD opened in 1987 on approximately 780 acres of land. RJD is principally a Level III (medium security) facility, although it does have one Level IV, Sensitive Needs Yard facility (CDCR 2013b). RJD is designed as a training- and work-oriented facility that provides vocational, academic, and industrial programs for inmates. With respect to RJD's inmate population, and as noted in Chapter 2, "Introduction," of Volume 1 of this DEIR, CDCR's correctional facilities have historically been faced with severe inmate crowding conditions. The state's adult prison institutions, including RJD, have operated for years above their operational capacity. By the early 2000s the housing of the inmate population throughout California had exceeded the operational capacity (the inmate capacity of a particular facility, taking into account the capacity of supporting programs rather than focusing only on available bed space) of institutions and had affected the physical facilities and operations. Beginning in October 2011, when changes to the Penal Code for certain felonies took effect, the inmate population housed at CDCR correctional facilities has been gradually reduced. Table 1-1 identifies the prison population at RJD from 2004 to 2012. During that period, RJD's inmate population decreased by 925 inmates (20.6 percent). CDCR's long-term plan of operations, as detailed in the *Future of California Corrections* ("Blueprint"), call for further decreases in the population at RJD, with a long-term operational goal (staffed capacity) of 3,138 inmates (CDCR 2012a). There are no plans to again increase inmate levels at the existing RJD facilities above that goal.

Table 1-1 RJD Prison Population (2004–2012)

Year	Prison Population[1]	Percentage Change Compared to Previous Year
2004	4,484	--
2005	4,470	(0.3%)
2006	4,234	(5.3%)
2007	4,673	10.4%
2008	4,773	2.1%
2009	4,710	(1.3%)
2010	4,337	(7.9%)
2011	3,845	(11.3%)
2012	3,559	(7.4%)
Percent decrease in RJD population since 2004		(20.6%)
CDCR Blueprint target population[2]	*3,138*	*(11.8%)*

Notes:
[1] Prison population statistics for each year are derived from the December monthly report of population prepared for that calendar year.
[2] CDCR The Future of California Corrections, Appendix B, Richard J. Donovan Correctional Facility Housing Plan (April 2012)
Source: CDCR 2005, 2006, 2007b. 2008, 2009, 2010. 2011, 2012b, 2013c

In evaluating currently unused land outside of the existing secure perimeter at RJD, it was determined that the existing state-owned CDCR property could accommodate either a 792-bed correctional facility or a complex that combines two 792-bed correctional facilities (a total of 1,584 beds). No additional land would be needed outside of the existing boundaries of the state-owned parcel that contains the RJD prison. The level II infill facilities, whether using a single facility or complex design, would meet all CDCR correctional facility design and security requirements, including the use of lethal electrified perimeter fencing, and would be operated by and under the authority of RJD. Either proposed level II facility would be configured as a stand-alone, semi-autonomous, prison; the existing perimeter of the RJD prison would not be modified to connect the existing and new facilities together.

1.2 PURPOSE AND INTENDED USE OF THE ENVIRONMENTAL IMPACT REPORT

For a detailed description of the purpose and intended use of this DEIR, refer to Chapter 2 in Volume 1. This volume addresses the project-level environmental impacts associated with development of a single, level II infill correctional facility or a level II infill correctional facility complex at RJD. If CDCR selects the RJD Infill Site for development of a level II facility, this volume would serve as the environmental review document under the California Environmental Quality Act (CEQA) required for that approval.

1.3 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES AND APPLICABLE PERMITS

CDCR is the lead agency with primary authority for approval of the Level II Infill Correctional Facilities Project. The agencies listed below with potential permit authority over the project, or elements thereof, will have the opportunity to review this document during the public and agency review period, and will use this information when considering the issuance of any permits required for the project.

Public agencies with discretionary authority, known permits, other approvals, or jurisdiction by law over resources related to the project at RJD include (but may not be limited to) the agencies listed below.

1.3.1 LEAD AGENCY

- CDCR (Overall project approval, including certification of the adequacy of this EIR)

1.3.2 FEDERAL AGENCIES (POTENTIAL PERMITTING AUTHORITY)

- U.S. Army Corps of Engineers (Consideration of jurisdictional wetlands and/or water quality certification or waiver under Clean Water Act Section 404 and/or 401)
- U.S. Fish and Wildlife Service (Sensitive species review/permitting under the federal Endangered Species Act)

1.3.3 STATE RESPONSIBLE AGENCIES

- California Department of Fish and Wildlife (California Endangered Species Act review/permitting)
- California Department of Toxic Substances Control (Environmental site assessment)

1.3.4 LOCAL RESPONSIBLE AGENCIES

- San Diego Regional Water Quality Control Board (Clean water Act Section 401 Water Quality certification, wastewater treatment plant operation, and National Pollutant Discharge Elimination System permit)
- San Diego Air Pollution Control District (Authority to construct and operate)
- Otay Water District (Water supply)
- City of San Diego (Wastewater treatment)
- County of San Diego (Right-of-way impacts; potential take of species covered by the San Diego Multi-Species Habitat Conservation Plan)

1.4 SCOPE OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

According to Section 15143 of the State CEQA Guidelines, a lead agency should limit a DEIR's discussion of environmental effects to specific issue areas where significant effects on the environment may occur. CDCR used a variety of information to determine which issue areas could result in significant impacts on the environment. This information included field surveys of the RJD Infill Site; review of published studies related to the RJD Infill Site; review of project design characteristics; review of comments submitted during agency consultation; and review of comments received on the Notice of Preparation (NOP) and during public scoping meetings.

An NOP was circulated to public agencies and members of the public on December 19, 2012, for a review period that concluded on February 4, 2013. The NOP notified the public that a DEIR was to be prepared for the project and described the basic elements of the project and the scope of the DEIR's environmental analysis. The NOP also requested that public agencies and members of the public provide their comments on the scope and content of the DEIR that was to be prepared. Twelve public scoping meetings were held between January 14, 2013, and January 31, 2013. Scoping meetings were held in the vicinity of each potential infill site, including RJD. The NOP and comments received on the NOP are included in Volume 1, Appendix 1A. Review of the NOP and public scoping comments and preliminary analysis indicated that a full-scope EIR is required for the Level II Infill Correctional Facilities Project. All issue areas outlined in Appendix G of the State CEQA Guidelines are addressed in this volume (Volume 2) of this DEIR for the potential construction of infill facilities at RJD.

1.4.1 COMMUNITY/AGENCY ISSUES AND CONCERNS

The following issues are known and/or were raised by agencies or interested parties during the NOP public review period that are specific to development of level II infill correctional facilities at RJD:

- the perceived need (or lack thereof) for level II beds;
- secondary access and secondary emergency access to RJD;
- water/wastewater infrastructure and capacity to support the project;
- the addition of construction- and operation-related traffic to the local roadway system and impacts to level of service;
- construction impacts to roads, facilities, and/or open space;
- analysis of fire risk, building safety standards, and defensible space;
- impacts to migratory birds and sensitive biological resources, in particular those at the Otay Ranch Preserve and Otay Valley Regional Park;
- consistency with San Diego County's MSCP;
- impacts on public services, including emergency medical resources, as a result of additional employees and inmates; and
- visual impacts, including light and glare, in particular to eastern Chula Vista.

Refer to Section 2.4.1 in Chapter 2, Volume 1 of this DEIR for a discussion of economic and social impacts, and the need for additional level II correctional facilities. Regarding public noticing, all persons so requesting will receive notice of the availability of all CEQA documents. All other issues raised above are addressed in the analysis herein.

1.5 PUBLIC REVIEW AND PARTICIPATION PROCESS

Consistent with the requirements of CEQA, efforts have been made during the preparation of this DEIR to contact affected agencies, organizations, and individuals who may have an interest in the construction of a level II infill facility at RJD. As described above, these efforts included circulation of the NOP on December 19, 2012, including posting a scoping notice in the *Union Times San Diego* newspaper. Two public scoping meetings were then held on January 29, 2013 (at 3:00 p.m. and 5:00 p.m.) at the City of Chula Vista City Council Chambers, located at 276 Fourth Avenue, Chula Vista.

CDCR has filed a Notice of Completion with the State Clearinghouse of the Governor's Office of Planning and Research, indicating that this DEIR has been completed and is available for review and comment by the public. The public review period will last 45 days, beginning on June 21, 2013, and ending on August 8, 2013**.**

1.5.1 DEIR PUBLIC MEETINGS

A total of 12 public meetings on the Level II Infill Correctional Facilities Project DEIR will be held during the public review period. In the vicinity of RJD, two meetings will be held on July 22, 2013, at 3:00 p.m and 5:00 p.m. at the City of Chula Vista City Council Chambers, located at 276 Fourth Avenue, Chula Vista. Additional public meetings may be scheduled in response to requests from local agencies or other parties.

A public Notice of Availability of the DEIR, which also includes the date, times, and specific location for the public meetings in the vicinity of RJD, has been published in the *Union Times San Diego* newspaper.

1.5.2 WRITTEN COMMENTS

Comments on the DEIR, including this volume (Volume 2), may be made either in writing before the end of the comment period (5:00 p.m. on August 8, 2013) or orally at the aforementioned public meetings. Written comments should be mailed or e-mailed to the address provided below. After the close of the public comment period, responses to the comments received on the DEIR will be prepared and published. These responses, together with this DEIR, will constitute the Final EIR.

Please mail, e-mail, or fax comments on the DEIR by the deadline to:

California Department of Corrections and Rehabilitation
Facility Planning, Construction and Management

Project Management Branch
Attn: Robert Sleppy
9838 Old Placerville Road, Suite B
Sacramento, CA 95827
email: CDCR_infill@ascentenvironmental.com
fax: (916) 255-1141

Copies of the DEIR can be reviewed at the locations in the San Diego area listed below or at the website provided below. Technical studies can be reviewed at the following CDCR address or online at the website provided below.

California Department of Corrections and Rehabilitation
Facility Planning, Construction and Management
Environmental Planning Section
9838 Old Placerville Road, Suite B
Sacramento, CA 95827

Available online at:
http://www.cdcr.ca.gov/Reports_Research/Environmental/index.html

Otay Ranch Branch Library
2015 Birch Road #409
Chula Vista, CA 91915
(619) 397-5740

San Ysidro Library
101 W. San Ysidro Boulevard
San Diego, CA 92173
(619) 424-0475

1.6 ORGANIZATION OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

As noted in Volume 1, the Level II Infill Correctional Facilities Project DEIR has been divided into five volumes, of which four (Volumes 2 through 5) include site-specific evaluations of level II infill correctional facilities at RJD (Volume 2); Mule Creek State Prison (Volume 3); Folsom State Prison/California State Prison, Sacramento (Volume 4); and California Medical Facility/California State Prison, Solano (Volume 5). This volume of the DEIR, which presents the site-specific evaluation of RJD, is organized into chapters, as identified and described briefly below.

Chapter 1, "Introduction": Chapter 1 describes the purpose and organization of this volume, as well as known community/agency issues and concerns related to development of the RJD infill site.

Chapter 2, "Project Description": Chapter 2 describes the project location, background, project objectives, project design characteristics, and construction for the RJD infill site.

Chapter 3, "Environmental Setting, Thresholds of Significance, Environmental Impacts, and Mitigation Measures": In a separate section for each environmental issue (e.g., Section 3.2, "Biological Resources"), this chapter describes the existing environmental conditions, regulatory background, thresholds to determine significance of impacts, and discussion of the environmental impacts associated with project construction and operation. Mitigation measures are identified for significant impacts.

Chapter 4, "Cumulative Impacts": This chapter discusses cumulative impacts that would result from the project in combination with impacts from past, present, and reasonably foreseeable projects in the project area.

Chapter 5, "Other CEQA Sections": The potential for the project to foster economic or population growth, or to remove obstacles to growth, is evaluated in Chapter 5. Project-level and cumulative impacts that cannot be mitigated to a less-than-significant level are also documented in this chapter.

Chapter 6, "References": This chapter sets forth a comprehensive listing of all sources of information used in the preparation of the DEIR.

Appendices: The appendices contain various technical reports, letters, and other documentation summarized or otherwise used for preparation of this volume of the DEIR. Volume 2 appendices are identified as Appendix 2A, 2B, 2C, and so on, and are provided in electronic format on a CD.

The evaluation of alternatives related to the proposed project and the equal-level alternatives, including the development of RJD with a single, level II infill correctional facility or a level II infill correctional facility complex, is included as part of Chapter 5, "Alternatives," of Volume 1 of this DEIR.

1.7 TERMINOLOGY USED IN THE DRAFT ENVIRONMENTAL IMPACT REPORT

This DEIR includes the following terminology to denote the significance of environmental impacts of the project:

Less-than-Significant Impact: A less-than-significant impact is one that would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.

Significant Impact: Section 21068 of CEQA (Pub. Resources Code §21068) defines a significant impact as one that causes "a substantial, or potentially substantial, adverse change in the environment." Feasible mitigation measures or alternatives to the project must be considered to reduce the magnitude of significant impacts to less-than-significant levels.

Potentially Significant Impact: A potentially significant impact is one that, if it were to occur, would be considered a significant impact as described above, but for which the occurrence of the impact cannot be definitely determined. For CEQA purposes, a potentially significant impact is treated as a significant impact.

Significant and Unavoidable Impact: A significant and unavoidable impact is a substantial adverse effect on the environment that cannot be feasibly mitigated to a less-than-significant level. A project with significant unavoidable impacts can still be approved, but CDCR would be required to prepare a statement of overriding considerations, in accordance with State CEQA Guidelines Section 15093,

explaining the social, economic, or other benefits of the project that outweigh the significant environmental impacts.

Thresholds of Significance: Significance thresholds are criteria that define at what level impacts would be considered significant. A criterion is defined based on examples found in CEQA or the State CEQA Guidelines, scientific and factual data, the policy/regulatory environment of affected jurisdictions, professional judgment, and other factors.

1.8 TECHNICAL AND OTHER STUDIES CONSIDERED IN THIS DRAFT ENVIRONMENTAL IMPACT REPORT

Several studies or reports have been prepared in support of the analysis presented in this DEIR and are included in the appendices (on CD). In addition, the studies and reports that were prepared in connection with, or that are applicable to, the project are available for review at the CDCR, Facility Planning, Construction, and Management, Environmental Planning Section, 9838 Old Placerville Road, Suite B, Sacramento, CA 95827.

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2 PROJECT DESCRIPTION

2.1 PROJECT OBJECTIVES

For a detailed description of the Level II Infill Correctional Facilities Project objectives, refer to Section 3.1 of Chapter 3, “Project Description,” in Volume 1 of this draft environmental impact report (DEIR). Those project objectives apply to construction of a level II infill facility at the Richard J. Donovan Correctional Facility (RJD).

2.2 PROJECT LOCATION

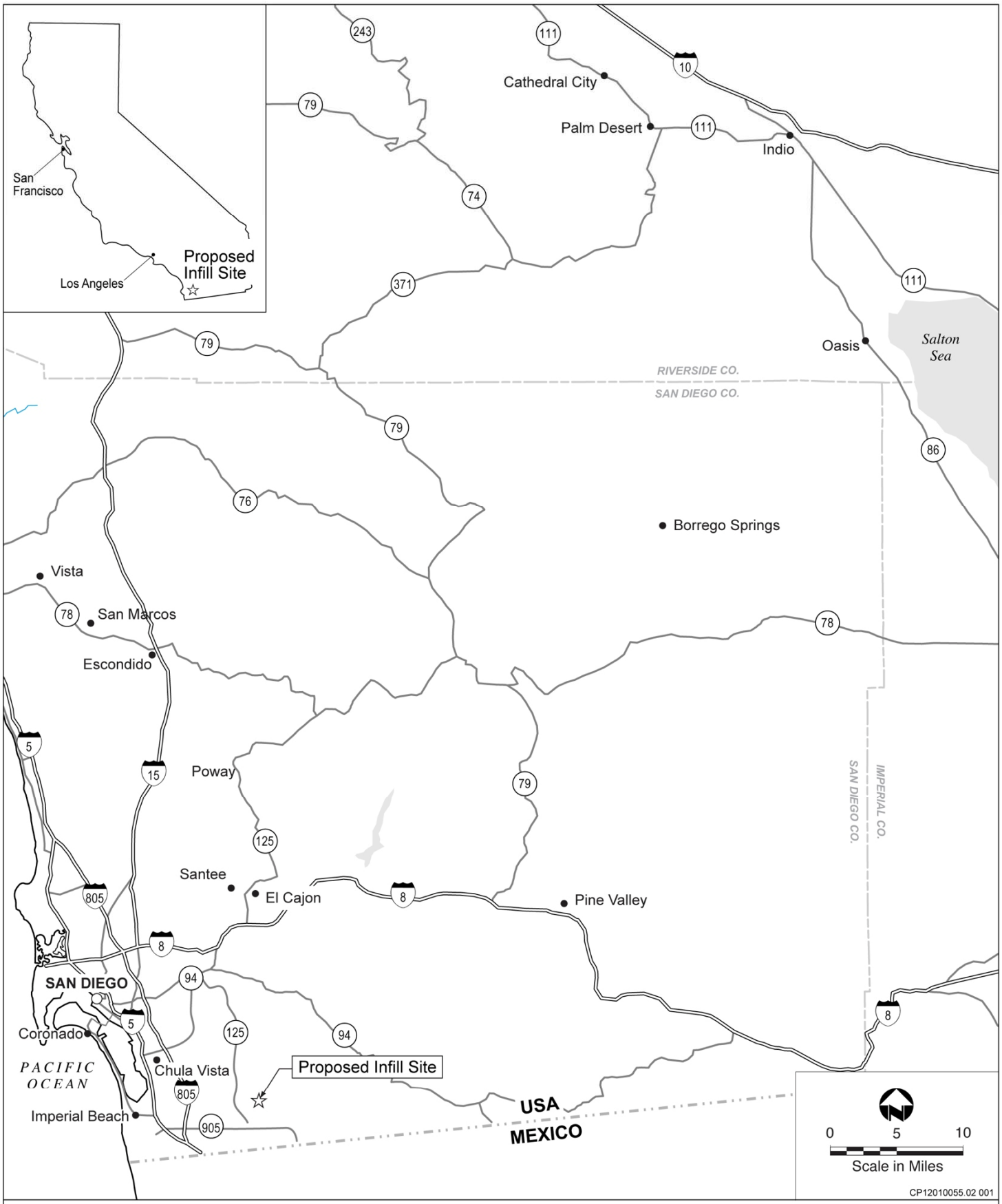
The existing RJD Correctional Facility, at 480 Alta Road, San Diego, California, is located on approximately 780 acres owned by the State of California. RJD is located in the unincorporated Otay area of San Diego County, approximately 18 miles southeast of downtown San Diego, less than 1 mile east of the boundaries of the cities of San Diego and Chula Vista, and 2 miles north of the United States/Mexico border. Primary local access to RJD is provided by Alta Road. Regional access to RJD is provided via Interstate 805 (I-805) and State Route 905 (SR-905). Exhibit 2-1 and 2-2 show RJD’s regional location and project vicinity, including access roads.

Land uses surrounding RJD are identified in Exhibits 2-3 and 2-4. RJD is bounded by two Otay River tributary canyons: O’Neal Canyon to the north and Johnson Canyon to the south. San Diego County operates the George F. Bailey and East Mesa Detention Facilities, located just north of O’Neal Canyon on Alta Road. The Otay Ranch Open Space Preserve is located adjacent to and west of RJD. Other nearby land uses include the lower Otay Reservoir, located approximately 2 miles north of RJD, and Brown Field Municipal Airport (owned by the City of San Diego), located approximately 2 miles southwest of RJD.

The majority of lots along Alta Road south of RJD are graded to some degree, but otherwise not yet developed. An automobile storage yard and a restaurant are located approximately 0.5 mile east of RJD and Alta Road. The Otay Mesa Energy Center is situated approximately 0.5 mile south of RJD and east of Alta Road. The George F. Bailey and East Mesa Detention Facilities are located approximately 0.5 mile northeast of RJD off of Alta Road and a new 2,868-bed minimum/medium security correctional facility is proposed for construction approximately 1.25 miles to the south of RJD and east of Alta Road (north of Otay Mesa Road). Industrial developments along Otay Mesa Road and the East Otay Mesa border crossing are located approximately 2 miles to the south. Light industrial uses in this area include technology facilities, defense component manufacturers, and food manufacturers. Also, the newly developed Otay Ranch community in Chula Vista is situated approximately 3 miles north of RJD.

2.2.1 DESCRIPTION OF THE INFILL SITE

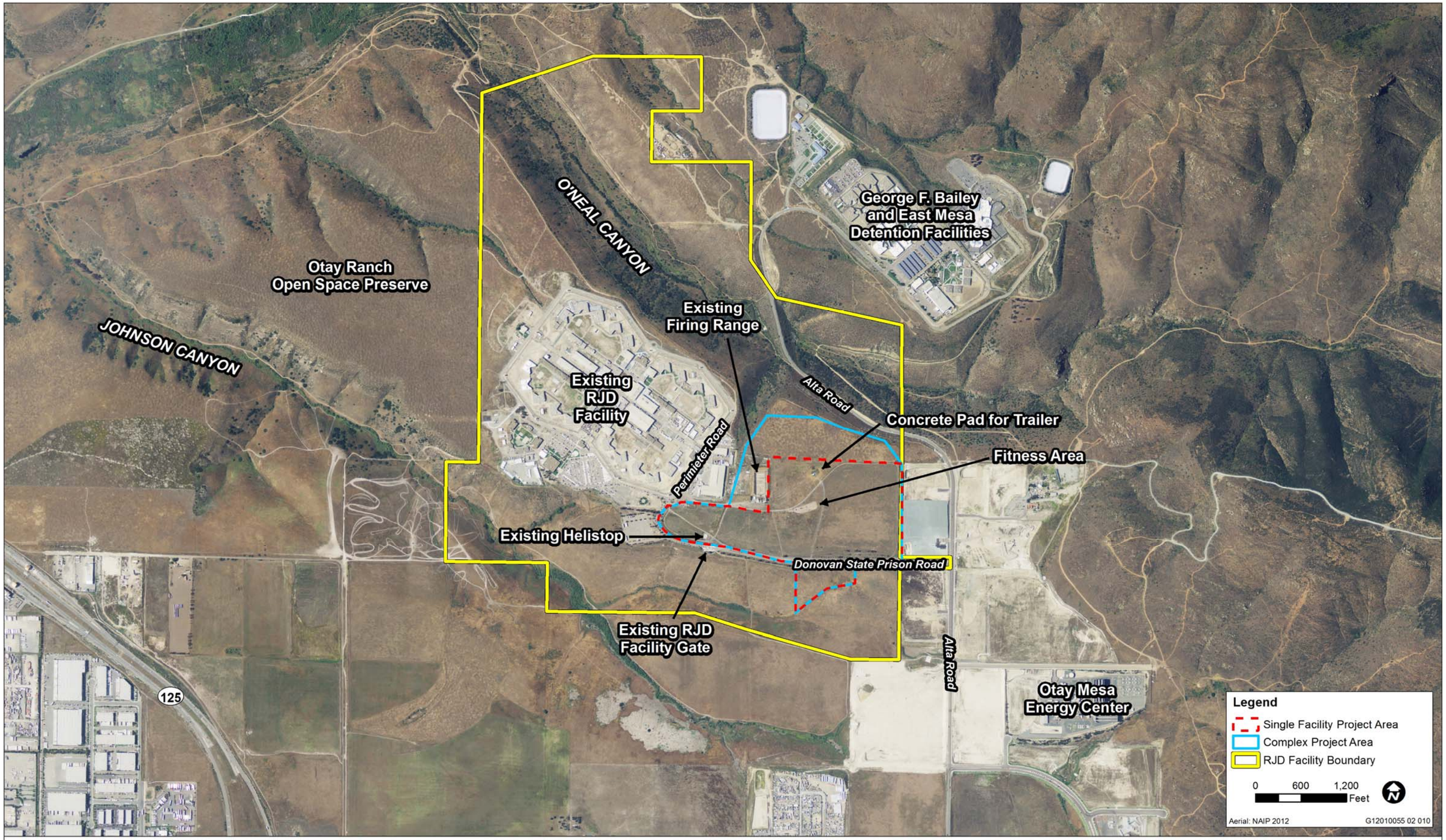
The RJD Infill Site is located within the State-owned property at RJD, directly southeast of the existing prison facilities near the entrance to RJD, north of Donovan State Prison Road. The majority of the RJD Infill Site is previously disturbed, undeveloped land that was used for agricultural purposes before a prison was developed on the property many years ago. The infill site now includes an approximately 10-foot by 20-foot concrete pad, a fitness area, and an active firing range used for training and certification of correctional employees (Exhibit 2-2). Single-lane, unpaved roads throughout the infill site provide access to the concrete pad, fitness area, and firing range. The firing range is approximately 650 feet long and 250 feet wide, and also includes a small classroom and parking area. The concrete pad is used as a parking location for a trailer, which has periodically been used to house paroled inmates on a temporary basis. Both of these facilities would need to be relocated to accommodate a complex; only the trailer would need to be relocated to accommodate a single facility.



Source: Adapted by Ascent in 2013

Exhibit 2-1

RJD Regional Location



Source: Adapted by Ascent Environmental in 2013

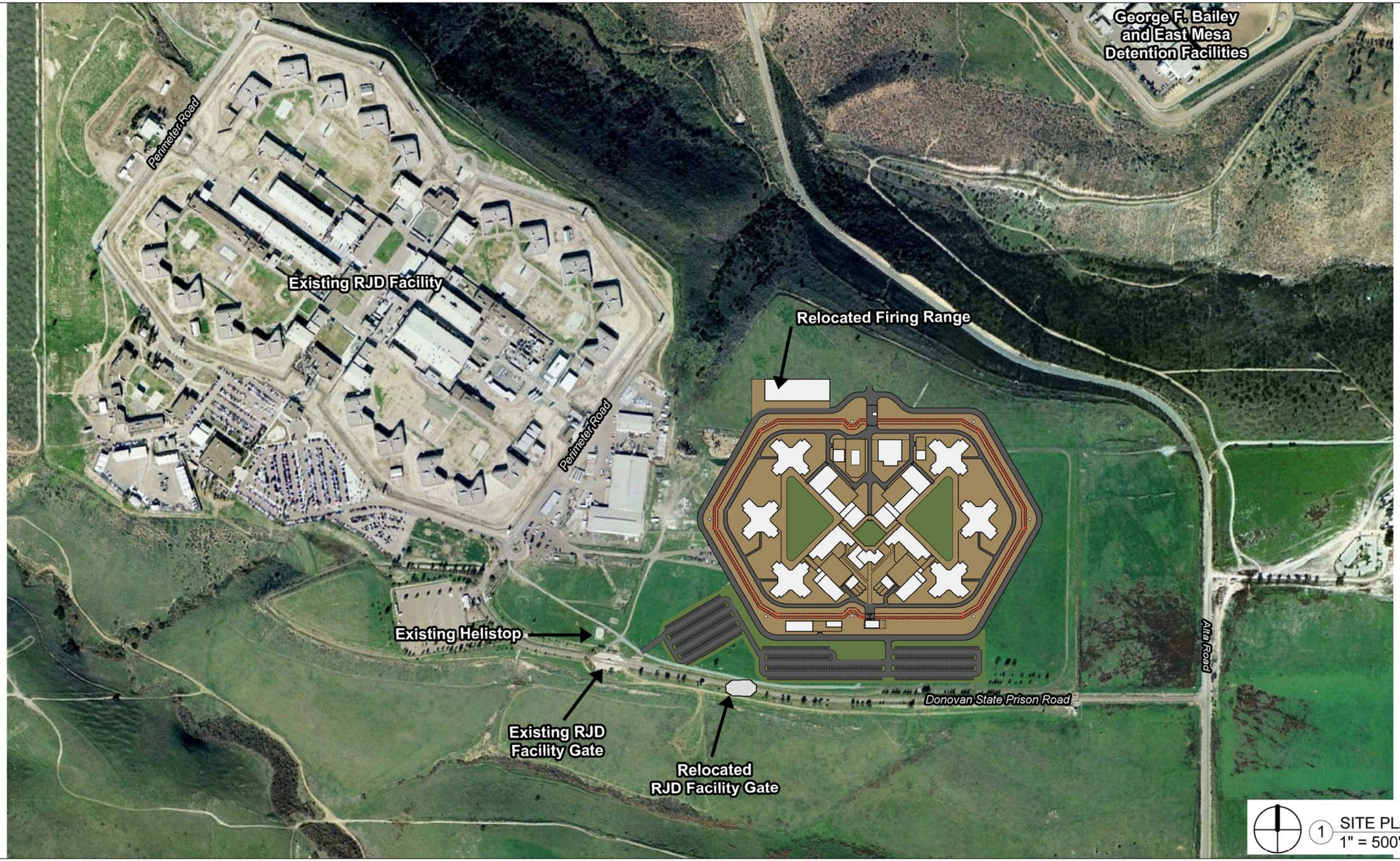
Exhibit 2-2

Boundary of Potential Disturbance and Existing Land Uses

Source: CDCR 2012; Adapted by Ascent Environmental in 2012

Exhibit 2-3

Conceptual RJD Single, Level II Infill Correctional Facility Site Plan



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Source: CDCR 2012; Adapted by Ascent Environmental in 2012

Exhibit 2-4

Conceptual RJD Level II Infill Correctional Facility Complex Site Plan

The boundaries of potential disturbance (approximately 79 acres for a single facility and 105 acres for a complex) include not only the level II correctional facilities but also utility connections, detention basins, and construction disturbance and staging areas (Exhibit 2-2). Upon completion of construction, approximately 35 acres would be developed with a single, level II correctional facility or approximately 55 acres would be developed under a complex, including parking and supporting structures. In addition, the complex would include approximately 4 to 5 acres of development for the relocated firing range. The remainder of disturbance area acreage (44 acres under a single facility and 45 acres under a complex) would be returned to pre-construction conditions and/or revegetated.

2.3 DESCRIPTION OF THE PROPOSED PROJECT

As noted in Volume 1 of this EIR, the RJD Infill Site has been designated by CDCR as the proposed site for a 792-bed facility. Within the context of this EIR the RJD Infill Site is also being considered for a potential alternative facility that would consist of a 1,584-bed level II infill correctional facility complex. A single facility, which would be generally pentagonal in shape, would cover approximately 35 acres (within the 79-acre disturbance area described above) (Exhibit 2-3) and would include three separate housing units with an operational capacity of 792 beds. A complex would cover approximately 55 acres (within the 105-acre disturbance area described above) (Exhibit 2-4) and would include six separate dormitory housing units (three on either side of the facility) with 264 level II beds per structure for a total of 1,584 level II beds. Although the new level II facility would be operated by, and under the authority of, RJD, the facility would be independent and self-contained, with all necessary related support buildings and inmate programming space to meet the needs of various inmates, including, but not limited to, those with disabilities, intermediate medical needs, or mental health treatment needs. Neither the single facility nor the complex would be physically connected with the existing RJD prison.

Section 3.3, “Description of Proposed Project,” of Chapter 3 in Volume 1 provides detailed descriptions of single and complex facilities, including the housing units, support facilities, staffing, parking, operations, lighting, security, and construction schedule. Refer to Section 3.3 of Volume 1 for a full description of these project elements, which are common to all of the potential infill sites.

The following project elements are specific to the RJD Infill Site.

2.3.1 FACILITY RELOCATIONS

Several facilities at RJD would need to be relocated if a level II infill correctional facility were to be constructed at the infill site.

Concrete Pad for Trailer: As noted above, the RJD Infill Site includes a 10-foot by 20-foot concrete pad with fencing, security cameras, and utilities, used as a parking location for a trailer that periodically is used to house paroled inmates on a temporary basis. This pad would be relocated within the RJD property as part of the project.

Firing Range: RJD operates a firing range for training and certification of correctional employees at the facility. The range is located on the western portion of the project site, near the existing warehouse space. The firing range is approximately 650 feet long and 250 feet wide, and is surrounded by berms on all sides that are approximately 25 feet high. The firing range also includes a small classroom and parking area.

Construction of a single, level II facility at the RJD Infill Site would not require relocation of the existing firing range; however, additional height would be added to the berms of the firing range, for protection against ricochets, by constructing railroad tie walls on top of the existing berms.

Construction of a complex would require relocation of the firing range. The firing range would be demolished and a new firing range, small classroom, and maximum of 58 parking spaces would be constructed on approximately 4–5 acres in the northwest portion of the State-owned RJD property on undeveloped land (Exhibit 2-4). The new range would include multiple firing lanes, with targets set at a 200-yard distance. Training and certification require that berms be constructed on three sides, and they would be similar in size to the existing berms. Soil for the new berms would come from onsite soils generated from grading of the existing firing range berms as well as onsite grading for the complex. The firing range would include a rifle tower, pistol platform, classroom/office building, parking area, and exterior lighting for evening training. The new firing range would also include bullet traps, which are not present in the existing firing range.

RJD Facility Gate: The existing RJD security gate on Donovan State Prison Road includes a gatehouse in the middle of the road for a correctional officer and a widened concrete pad on either side of the roadway to allow vehicles to stop for security clearance and turn-around (Exhibit 2-2). The existing security gate would be removed and relocated to accommodate either a single, level II correctional facility or a level II infill correctional facility complex at RJD. The gate would move approximately 500 feet to the east, but would remain on Donovan State Prison Road. In either location, the footprint of the gate facility would remain the same as the existing gate.

24-inch Water Pipeline: An existing Otay Water District 24-inch water delivery pipeline runs directly west through the RJD Infill Site approximately 0.25 mile north of Donovan State Prison Road, from the 30-inch water transmission main under Alta Road then turns south to an existing meter at RJD before crossing Donovan State Prison Road. Construction of a single facility would not require relocation of this pipeline. However, construction of a complex would necessitate relocating this 24-inch water line. The existing water line under the infill site would be capped and abandoned in place, and a new 24-inch line would be constructed under Donovan State Prison Road. From there, a new 16-inch waterline would connect to the onsite RJD distribution system.

2.3.2 PARKING AND SERVICE ROADS

As described in Chapter 3 of Volume 1, the number of parking spaces required for a level II facility is based on a combined estimate of the staff totals for the second and third watches (see Table 3-1 in Chapter 3 of Volume 1) plus 15 percent of the inmate population for weekend/holiday visitation, which is based on visitation patterns at other facilities of the California Department of Corrections and Rehabilitation (CDCR) across the state. Therefore, the proposed single, level II infill correctional facility would include a total of 207 spaces and a complex would include a total of 417 spaces.

The parking, circulation system, and service roads for the level II infill correctional facility are identified in Exhibit 2-3 for the proposed single facility and in Exhibit 2-4 for a complex. For either a single facility or a complex, the parking area would generally be south/southwest of the new facility and north of Donovan State Prison Road, which would be widened within its existing road corridor as needed to improve access to and from RJD and the new level II infill facility. The road corridor is within the area of potential disturbance and the potential effects of widening are analyzed throughout Chapter 3 of Volume 2 of this EIR.

2.3.3 UTILITIES AND SERVICE SYSTEMS

POTABLE WATER

Potable water is provided to RJD by the Otay Water District (OWD). OWD currently meets all its potable water demand with imported, treated water from the San Diego County Water Authority (SDCWA). RJD receives water from OWD Otay Mesa System Flow Control Facility (FCF) 13.

Two existing OWD potable water pipelines serve RJD:

- A 30-inch water transmission main lies under Alta Road and delivers potable water to a 24-inch water line, which connects approximately 0.25 mile north of Donovan State Prison Road and runs directly west north of the RJD Infill Site before turning south to an existing meter.

  As described above, construction of a complex would require relocation of this 24-inch water line. The existing water line would be capped and abandoned in place and a new 24-inch line would be constructed under Donovan State Prison Road, which would connect to the 30-inch transmission main under Alta Road.

- A second 30-inch water transmission main lies under Johnson Canyon and runs along the CDCR southern property boundary, then turns northward to deliver water to RJD through the same meter, connecting with the 24-inch line to form a closed-system loop.

From the existing meter, water is delivered throughout RJD via a 16-inch private water pipeline and branching 12-inch water lines to final use locations.

The onsite potable water delivery system to existing RJD facilities would remain unchanged under the project. Under the proposed single, level II correctional facility, water transmission would be provided through a new pipeline, which would connect to the existing 24-inch line running westward through the infill site. Under a complex, a new line would connect to the new 24-inch line relocated under Donovan State Prison Road. In either case, the new line would then branch into 12-inch lines to final use locations. In addition, a new domestic service meter and backflow preventer would be installed for the new level II facility with capacity to meet the peak hour domestic demands of the new facility. In addition, CDCR would construct a water storage tank system (approximately 3,500,000 gallons in capacity) adjacent to the level II infill correctional facility and within the infill site to provide redundant supplies to the infill site, and MCSP, in the event that supplies are temporarily unavailable via the existing pipeline system.

CDCR assumes an average daily water demand factor of 150 gallons per inmate per day (gpid) based on existing RJD demand and the level II correctional facility design, which would include water conservation devices. Although this factor is based on the number of inmates, it encompasses potable-water demand for the entire facility, such as landscaping, and staff demands. Given this demand factor, water demands for a single, level II correctional facility are estimated to be 118,800 gallons per day (gpd) at buildout and a complex would have an estimated demand of 237,600 gpd.

WASTEWATER

The City of San Diego Public Utilities Department's (PUD's) sewage system provides wastewater collection and treatment services for RJD, with an agreement for receipt of up to 0.826 million gallons per day (mgd). All wastewater from RJD is conveyed to the Point Loma Wastewater Treatment Plant (WWTP), located approximately 20 miles northwest of RJD. Two main sewer trunk lines serve the Otay Mesa region before reaching the main delivery lines at the Grove Avenue pump station, approximately 10 miles west of RJD. The Point Loma WWTP has a treatment capacity of 240 million gallons per day (mgd) and currently treats approximately 175 mgd. The WWTP discharges advanced primary treated effluent via the Point Loma Ocean Outfall, which is 4.5 miles long and operates via gravity-feed, ending 320 feet below the ocean surface.

After passing through a bar screen and sewage grinder, wastewater flows are conveyed from RJD by a series of trunk sewers beginning at the western edge of the existing RJD facilities. Wastewater flows are then conveyed downstream via gravity flow along Johnson Canyon Road, ultimately to the WWTP. The onsite 15-inch sewer main at RJD would need to be extended up Donovan State Prison Road to connect service to the RJD Infill Site.

CDCR assumes an average daily wastewater flow rate of 130 gpid based on the existing RJD wastewater flows and the level II correctional facility design, which would include water conservation devices. Based on this flow rate, the single, level II correctional facility would generate approximately 102,960 gpd (0.103 mgd) and the complex would generate approximately 205,920 gpd (0.206 mgd) of wastewater.

ELECTRICITY

As described in Chapter 3 of Volume 1, the level II infill correctional facility (either the proposed single or the complex alternative) would incorporate the appropriate onsite electricity equipment, such as substation switchgear, transformers, and backup power generators. The anticipated point of connection is anticipated to be in a utility enclosure located southwest of the existing firing range.

NATURAL GAS

As with electricity, the point of connection for natural gas service is anticipated to be in a utility enclosure located southwest area of the existing firing range. A new onsite gas line would be needed, most likely to be installed within existing roads and adjacent to the potential sanitary sewer connection.

STORMWATER DRAINAGE

Implementation of either the proposed single, level II infill correctional facility or a level II infill correctional facility complex at RJD would involve onsite drainage improvements Storm gutters and drains would be constructed to direct and control runoff from the level II correctional facility. Stormwater from the infill facility would be conveyed to new onsite detention basins designed to handle a 100-year flood event, maintain offsite stormwater flows at pre-project levels, and allow sediment and other pollutants to settle and prevent them from reaching the watershed. CDCR would ensure that onsite detention facilities adhere to the requirements of the existing NPDES permit for RJD, including the associated monitoring and reporting program. Although the final sizes and exact locations of the detention basins would be determined in final site plans and drainage plans, the area of site disturbance analyzed throughout this volume of the EIR accounts for the construction and operation of detention basins.

2.3.4 STAFFING

Development of either the proposed single, level II infill correctional facility or a level II infill correctional facility complex at RJD would result in an increase in onsite staffing, as described in Chapter 3 of Volume 1. The level of staffing increase would be dependent on whether a single facility or complex would be constructed at the infill site. The proposed single facility would employ 193 new staff (Table 3-1 in Volume 1) and a complex would employ 377 new staff (Table 3-2 in Volume 1).

2.4 CONSTRUCTION

As described in greater detail in Section 3.3.4 of Chapter 3 in Volume 1, construction of the level II infill correctional facilities is anticipated to begin in spring 2014, with an estimated completion date of spring 2016. Construction would generally occur between 6 a.m. and 4 p.m., Monday through Friday. Noise-generating construction activities could occur between 7 a.m. and 7 p.m., Monday through Friday, but would likely end by 4 p.m., consistent with typical construction hours of operation.

All construction staging for either the proposed single, level II infill correctional facility or a level II infill correctional facility complex at RJD would be provided on State-owned property, as identified in Exhibit 2-3. All construction-related traffic would access the infill site via Otay Mesa Road, Alta Road, and Donovan State Prison Road. Parking for construction vehicles, including construction worker commute vehicles would be provided onsite, either within the disturbance area shown in Exhibit 2-2.

3 ENVIRONMENTAL SETTING, THRESHOLDS OF SIGNIFICANCE, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

Chapter 3 of this volume (Volume 2) of the Draft Environmental Impact Report (DEIR) evaluates the potential environmental impacts associated with development of a Level II infill correctional facility at the Richard J. Donovan Correctional Facility (RJD) Infill Site, located in southern San Diego County. As noted in Volume 1 of this EIR, the RJD Infill Site has been selected by CDCR as the proposed site for a 792-bed (single) level II correctional facility, and is being considered as an alternative site for a complex. It contains a discussion of existing conditions, thresholds above which an impact is considered significant, the significance of environmental impacts, measures to mitigate significant impacts to the degree feasible, and the level of significance after mitigation. Issues evaluated in these sections consist of the full range of potential environmental topics originally identified for review in the Notice of Preparation (NOP) of the DEIR. Appendix 1A of Volume 1 contains the NOP and comments received on the NOP. Each section in this chapter (Sections 3.1 through 3.13) of this DEIR is organized into the following major components:

Introduction: This subsection offers a brief introduction to the section and provides information regarding the scope and purpose of the environmental issue section.

Environmental Setting: According to Section 15125 of the State of California Environmental Quality Act (CEQA) Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of the project, which is normally used as the “baseline condition” against which project-related impacts are compared. The baseline condition is typically the physical condition that exists when the NOP is published. The NOP for the proposed project was published on December 19, 2012. For analytical purposes, impacts associated with implementation of the proposed project are generally derived from the existing baseline environmental setting, unless otherwise explained and substantiated.

Regulatory Considerations: This section of each chapter provides the federal, State, and local regulatory framework, plans, and policies that would apply to the proposed project and that could reduce or eliminate potentially significant impacts. The impact analyses assume compliance with these regulations.

Impacts and Mitigation Measures: This section analyzes both project-specific and cumulative environmental impacts and proposed mitigation measures. Information included in this section is described in more detail below.

- Significance Criteria: The criteria used to define significant effects on the environment are expressed as thresholds, above which the project would have a significant effect. Thresholds may be quantitative or qualitative and may be based on agency standards or legislative or regulatory requirements as related to the impact analysis. For this analysis, impacts are based largely on the thresholds identified in Appendix G of the State CEQA Guidelines and thresholds identified in the *County of San Diego Environmental Impact Report Format and General Content Requirements* (County of San Diego 2006). Specifically, County guidelines were referenced in the assessment of traffic, air quality, and noise impacts.
- Project Impacts and Mitigation Measures: The project impact and mitigation measure subsection analyzes the environmental impacts of the project. This subsection describes the potential environmental impacts of the proposed project and, based on the identified thresholds of significance, concludes whether each environmental impact would be considered significant,

potentially significant, or less than significant. Each impact is summarized in an "impact statement," followed by a more detailed discussion of the potential impact and the significance of each impact before mitigation. Because RJD is being considered for either a single facility or a complex, the impacts of both designs are evaluated under the same impact statement, but separate significance conclusions are identified for a single facility and a complex.

The impact number consists of the section of the EIR in which that impact is identified followed by the number of the impact in that section. For example, Impact 3.1-1 is the first impact identified in Section 3.1.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed project. As required by Section 15126.2(a) of the State CEQA Guidelines, direct and indirect significant effects, including short-term, long-term, onsite, and/or offsite impacts are addressed, as appropriate, for the environmental issue area being analyzed.

A "significant effect" is defined by Section 15382 of the State CEQA Guidelines as

> a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment…[but] may be considered in determining whether the physical change is significant.

This DEIR uses the terminology described in Section 2.7 of Volume 1 to describe the level of significance of impacts identified during the course of the environmental analysis.

Mitigation measures are provided to reduce significant or potentially significant effects of the proposed project to the extent feasible. CEQA Guidelines Section 15370 defines mitigation as:

a. avoiding the impact altogether by not taking a certain action or parts of an action;

b. minimizing impacts by limiting the degree or magnitude of the action and its implementation;

c. rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d. reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or

e. compensating for the impact by replacing or providing substitute resources or environments.

The mitigation measures are identified numerically, corresponding to the number of the impact being addressed. For example, Impact 3.1-1 would be mitigated with Mitigation Measure 3.1-1.

This subsection also describes the status of all significant impacts following application of mitigation measures. The impact may be reduced to a level below the significance threshold (mitigated to a less-than-significant level), or feasible mitigation may not be available or may be insufficient to reduce the impact to a less-than-significant level. In this case, the impact would be a "significant and unavoidable" effect on the environment.

3.1 AIR QUALITY

This section includes a description of existing air quality in the local area around the Richard J. Donovan Correctional Facility (RJD), a summary of applicable regulations, and analyses of potential short-term and long-term air quality impacts of the proposed project. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. The methods of analysis for short-term construction, long-term regional (operational), local mobile-source, odor, and toxic air contaminant (TAC) emissions are consistent with the guidelines of the County of San Diego Planning and Development Services (PDS) Department (County of San Diego 2007) and the San Diego Air Pollution Control District (SDAPCD). Mitigation measures are recommended as necessary to reduce significant air quality impacts. Impacts associated with greenhouse gas emissions and climate change are discussed in Chapter 4, "Cumulative Impacts of the Proposed Project," in Volume 1 of this draft environmental impact report (DEIR).

3.1.1 ENVIRONMENTAL SETTING

The infill site is located in the unincorporated Otay area of San Diego County, approximately 18 miles southeast of downtown San Diego, less than 1 mile east of the city limits of San Diego and Chula Vista, and 2 miles north of the international United States/Mexico border. For air quality purposes, the project site is located in the San Diego Air Basin (SDAB); the boundaries of the SDAB are the same as the boundaries of the county. Ambient concentrations of air pollutants are determined by the amount of emissions released by pollutant sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

TOPOGRAPHY, METEOROLOGY, AND CLIMATE

The SDAB encompasses approximately 4,260 square miles and is bounded on the north by Orange and Riverside Counties, on the east by Imperial County, on the west by the Pacific Ocean, and on the south by the Mexican state of Baja California. The coastal region is made up of coastal terraces that rise from the ocean into wide mesas, which transition into the Laguna Foothills farther east. The Laguna Mountains run approximately parallel to the coast about 45 miles inland and separate the coastal area from the desert portion of the county. On the east side of the SDAB, the mountains drop off rapidly to the Anza-Borrego Desert, which is characterized by several broken mountain ranges with desert valleys in between. North of the county are the Santa Ana Mountains, which join with the Laguna Mountains near the San Diego County–Orange County border.

REGIONAL CLIMATE

The climate of the county is characterized by warm, dry summers and mild, wet winters. One of the main determinants of the climate is a semi-permanent high-pressure area (the Pacific High) in the eastern Pacific Ocean. In the summer, this pressure center is located well to the north, causing storm tracks to be directed north of California. This high-pressure cell maintains clear skies 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. Average annual precipitation ranges from approximately 10 inches on the coast to more than 30 inches in the mountains to the east.

The desert regions of San Diego County generally receive between 4 and 6 inches of precipitation per year (County of San Diego 2007).

A common atmospheric condition known as a temperature inversion sometimes affects air quality in San Diego. During an inversion, air temperatures get warmer rather than cooler with increasing height. Inversion layers are an important element of local air quality because they inhibit the dispersion of pollutants, thus resulting in a temporary degradation of air quality.

LOCAL MICROCLIMATE

Meteorological data are recorded in Chula Vista, at a monitoring station approximately 15 miles northwest of the project site. Chula Vista's annual average high temperatures range from 74.2°F in August to 64.2°F in January. Low temperatures range from 43.8°F in January to 64.2°F in August. Annual precipitation in Chula Vista is approximately 9.7 inches, which occurs mostly between November and April (WRCC 2013).

EXISTING AIR QUALITY – CRITERIA AIR POLLUTANTS

Concentrations of the following air pollutants are used as indicators of ambient air quality conditions: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health, and because there is extensive documentation available on health effect criteria for these pollutants, they are commonly referred to as "criteria air pollutants."

A brief description of each criteria air pollutant, including source types, health effects, and future trends, is provided below, along with current attainment area designations and monitoring data for the project area and vicinity.

OZONE

Ozone 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 reactive organic gases (ROG) and oxides of nitrogen (NO_X) in the presence of sunlight. ROG are volatile organic compounds that are photochemically reactive. ROG 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 result 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 ROG and NO_X levels are high to sustain the ozone formation process. Once the precursors have been depleted, ozone levels decline rapidly. Because these reactions occur on a regional (rather than site-specific or local) scale, ozone is considered 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 provide 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 people with asthma and children, but healthy adults as well. Exposure to ambient levels of ozone ranging from 0.10 to 0.40 part per million (ppm) for 1–2 hours has been found to substantially 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 such as throat dryness, chest tightness, headache, and nausea. In addition to these adverse health effects, evidence also exists that ozone exposure is related 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).

Ozone precursor emissions of ROG and NO_X have decreased over the past several years because of more stringent motor vehicle standards and cleaner burning fuels. Ozone exceedance days in the SDAB have declined at a faster rate than peak ozone levels. From 1988 to 2007, peak levels declined by 26 percent while the number of California and national 8-hour exceedance days declined by 66 percent and 81 percent, respectively (ARB 2009).

CARBON MONOXIDE

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 non-road 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, 85–95 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 (EPA 2012).

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 (EPA 2012).

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.

NITROGEN DIOXIDE

NO_2 is a brownish, highly reactive gas that is present in all urban environments. The major human-made 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 (EPA 2012). The combined emissions of NO and NO_2 are referred to as NO_X and are reported as equivalent NO_2. Because NO_2 is formed and

depleted by reactions associated with ozone, the NO_2 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 NO_2. Because NO_2 has relatively low solubility in water, the principal site of toxicity in the human body is in the lower respiratory tract. The severity of 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 approximately 4–12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe, symptomatic NO_2 intoxication after acute exposure has been linked on occasion to prolonged respiratory impairment with such symptoms as chronic bronchitis and decreased lung functions (EPA 2012).

SULFUR DIOXIDE

SO_2 is produced by such stationary sources as combustion of coal and oil, steel mills, refineries, and pulp and paper mills. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract. SO_2 is a respiratory irritant, and constriction of the bronchioles occurs with inhalation of SO_2 at 5 ppm or more. On contact with the moist mucous membranes, SO_2 produces sulfurous acid, which is a direct irritant. Concentration rather than duration of the exposure is an important determinant of respiratory effects. Exposure to high SO_2 concentrations may result in edema of the lungs or glottis and respiratory paralysis.

PARTICULATE MATTER

Respirable particulate matter, or PM_{10}, consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, and natural windblown dust and particulate matter formed in the atmosphere by condensation and/or transformation of SO_2 and ROG (EPA 2012). Fine particulate matter ($PM_{2.5}$) is a subgroup of PM_{10} consisting of smaller particles (ARB 2009).

The adverse health effects associated with PM_{10} depend on the specific composition of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons, and other toxic substances adsorbed onto fine particulate matter (referred to as the “piggybacking effect”), or with fine dust particles of silica or asbestos. Generally, adverse health effects associated with PM_{10} may result from both short-term and long-term exposure to elevated concentrations and may include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, alterations to the immune system, carcinogenesis, and premature death (EPA 2012). $PM_{2.5}$ poses an increased health risk because the particles can be deposited deep in the lungs and may contain substances that are particularly harmful to human health.

Direct emissions of PM_{10} in the SDAB are projected to almost double from 1975 levels by 2020. This increase is due to growth in emissions from area-wide sources, primarily fugitive dust from vehicle travel on unpaved and paved roads, dust from construction and demolition operations, and particulates from residential fuel combustion (including wood). The growth in these area-wide sources is primarily attributable to population growth and increases in vehicle miles traveled (VMT). However, PM_{10} concentrations in the SDAB have changed little during the years for which reliable data are available. The annual average exceeded the State annual standard in 2007 and, in previous years, has been higher than the 1989 value. During 1989, the State standard was calculated to be exceeded on 114 days, compared with 159 days during 2007. During 2007, the 24-hour national standard was calculated to be exceeded on 6 days. A substantial amount of variability is seen from year to year in the 24-hour statistics. This variability is a reflection of meteorology, the 1-in-6-day sampling schedule, and changes in monitoring location. Although ambient PM_{10} concentrations in the SDAB are not as high as in some

other areas of the state, additional emission controls will be needed to bring this area into attainment with the State standards (ARB 2009).

Annual average $PM_{2.5}$ concentrations (national and state) in the SDAB have declined during the period 1999–2007. The highest maximum 24-hour concentrations, 239 micrograms per cubic meter (µg/m^3) measured in 2003 and 151 µg/m^3 measured in 2007, were caused by severe wildfires that occurred in Southern California. The 98th percentile of 24-hour $PM_{2.5}$ concentrations showed substantial variability within this period, reflecting changes in meteorology and the influence of the 2003 and 2007 wildfires (ARB 2009).

LEAD

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 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, the U.S. Environmental Protection Agency (EPA) set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. EPA banned the use of leaded gasoline in highway vehicles in December 1995 (EPA 2012).

As a result of EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector have declined dramatically (95 percent between 1980 and 1999), and levels of lead in the air decreased by 94 percent between 1980 and 1999. Transportation sources, primarily airplanes, now contribute only 13 percent of lead emissions. A National Health and Nutrition Examination Survey reported a 78 percent decrease in the levels of lead in people's blood between 1976 and 1991. This dramatic decline can be attributed to the move from leaded to unleaded gasoline (EPA 2012).

The decrease in lead emissions and ambient lead concentrations over the past 25 years is California's most dramatic success story with regard to air quality management. The rapid decrease in lead concentrations can be attributed primarily to phasing out the lead in gasoline. Since the phase-out began during the 1970s, subsequent California Air Resources Board (ARB) regulations have virtually eliminated all lead from gasoline now sold in California. Only the South Coast Air Basin portion of Los Angeles County is currently designated as a nonattainment area for the federal and state lead standards. Although the ambient lead standards are no longer violated in the SDAB, lead emissions from stationary sources still pose "hot spot" problems in some areas. As a result, ARB identified lead as a TAC.

MONITORING STATION DATA AND ATTAINMENT AREA DESIGNATIONS

Criteria air pollutant concentrations are measured at several monitoring stations in the SDAB. The closest station to the project site is the Paseo International Station, located in a parking lot at the Otay Mesa Port of Entry, approximately 4 miles southwest of the infill site. When this monitoring station was first established, the dual intent of this site was to provide representative data for this portion of the SDAB and to capture data on northbound transport of air pollutants into the SDAB. With more than 1.4 million truck crossings per year, the Otay Mesa Port of Entry is now the largest commercial crossing on the California/Mexico border and handles the second highest volume of trucks of all U.S./Mexico border crossings. Consequently, NO_X and PM concentrations are inordinately high, primarily from diesel emissions. The impact of this huge influx of traffic is that ambient data collected here are no longer representative for the larger region. The SDAPCD plans to relocate this site (SDAPCD 2012). The

extraordinarily high levels of particulate pollutant concentrations observed at this monitoring station dissipate over the distance between the monitoring station and the project site and are, therefore, not representative of the typical air quality conditions at the project site. Therefore, monitoring data from the next closest station, located on East J Street in Chula Vista, were used to characterize existing air quality in the area. This station is located approximately 14 miles northwest of the infill site. Table 3.1-1 summarizes the air quality data from this station for the most recent 3 years, 2009–2011.

Table 3.1-1 Summary of Annual Ambient Air Quality Data (2009–2011)[a]

	2009	2010	2011
Ozone			
Maximum concentration (1-hour/8-hour, ppm)[b]	0.098/0.075	0.107/0.083	0.083/0.057
Number of days state standard exceeded (1-hour/8-hour)	1/3	1/3	0/0
Number of days national standard exceeded (1-hour/8-hour)	0/0	0/2	0/0
Nitrogen Dioxide (NO_2)			
Maximum concentration (1-hour, ppm)	0.065	0.050	0.057
Annual average (ppm)	0.013	0.012	0.012
Number of days state standard exceeded (1-hour)	0	0	0
Fine Particulate Matter ($PM_{2.5}$)			
Maximum concentration (µg/m^3)[b]	43.7	22.7	27.9
Number of days national standard exceeded (measured/estimated[c])	1/3.1	0/*	0/*
National/California annual average (µg/m^3)[b]	11.4	*	*
Respirable Particulate Matter (PM_{10})			
Maximum concentration (µg/m^3) (national/California[b])	57.0/58.0	43.0/45.0	45.0/46.0
Number of days state standard exceeded (measured/estimated[c])	2/12.2	0/0.0	0/0.0
Number of days national standard exceeded (measured/estimated[b])	0/0.0	0/0.0	0/0.0
Carbon Monoxide (CO)			
Maximum concentration (8-hour, ppm)	1.43	1.56	*
Number of days state standard exceeded (8-hour)	0	0	0
Number of days national standard exceeded (8-hour)	0	0	0

Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million; * = data not available

[a] Measurements were recorded at the Chula Vista monitoring station.

[b] California and national statistics may differ for the following reasons: California statistics are based on California-approved samplers, whereas national statistics are based on samplers using national reference or equivalent methods. State and national statistics may therefore be based on different samplers. California statistics are based on local conditions and national statistics are based on standard conditions. California criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

[c] Measured days are those days on which an actual measurement exceeded the respective standard. Measurements are typically collected every 6 days. Estimated days are the mathematically derived number of days that a measurement would have been greater than the applicable standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

Sources: ARB 2013a

Both ARB and EPA use this type of monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. The “unclassified” designation is used in areas that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation called “nonattainment-transitional.” This designation is given to nonattainment areas that are progressing and nearing attainment. The most current attainment designations for the SDAB are shown in Table 3.1-2 for each criteria air pollutant. The SDAB currently

meets the national standards for all criteria pollutants except ozone and meets state standards for all criteria pollutants except ozone, PM_{10}, and $PM_{2.5}$.

On April 15, 2004, EPA designated the SDAB as nonattainment for the 1997 8-hour ozone standard. This designation took effect on June 15, 2004. The SDAB was initially classified as a basic nonattainment area under Subpart 1 of the Clean Air Act (CAA), and the attainment date for the 8-hour ozone standard was set as June 15, 2009. However, on April 27, 2012, in response to a court decision, EPA ruled that the San Diego basic nonattainment area should be reclassified as a Subpart 2 moderate nonattainment area, with an attainment deadline of June 15, 2010. This reclassification became effective on June 13, 2012. Air quality monitoring data for 2009, 2010, and 2011 demonstrate that the SDAB is currently attaining the 1997 ozone standard. SDAPCD is currently working on a maintenance plan, with a request for redesignation to attainment/maintenance (SANDAG 2013).

The SDAB is currently classified as a “serious” ozone nonattainment area under State standards. For $PM_{2.5}$, the SDAB is currently classified as a national attainment area and State nonattainment area. The SDAB is classified a state nonattainment area for PM_{10}. The SDAB currently falls under a national “maintenance plan” for CO, following a 1998 redesignation as a CO attainment area.

EXISTING EMISSIONS

With respect to the SDAB, mobile sources are the largest contributor to the estimated annual average air pollutant levels of ROG, CO, and NO_X. Mobile sources account for approximately 53 percent, 93 percent, and 92 percent, respectively, of the total emissions. Areawide sources account for approximately 83 percent and 52 percent of the SDAB’s PM_{10} and $PM_{2.5}$ emissions, respectively (ARB 2013b).

EXISTING AIR QUALITY — TOXIC AIR CONTAMINANTS

Concentrations of TACs, or (in federal parlance) hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. A TAC 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. TACs 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.

According to the *California Almanac of Emissions and Air Quality* (ARB 2009), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, with the most important of these being PM from diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

Unlike other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, ARB has made preliminary concentration estimates based on a PM exposure method. This method uses the ARB emissions inventory’s PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, data are available for several other TACs that pose a high existing ambient risk in California: benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, *para*-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Table 3.1-2 Ambient Air Quality Standards and Designations for San Diego County

Pollutant	Averaging Time	California [a]		National Standards [b]		
		Standards[c]	Attainment Status[i]	Primary[c,d]	Secondary[c,e]	Attainment Status[k]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	N (Severe)	–	Same as Primary Standard	–
	8-hour	0.070 ppm (137 µg/m^3)	–	0.075 ppm (147 µg/m^3)		N (Moderate) [j]
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	N	150 µg/m^3	Same as Primary Standard	U
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)	24-hour	–	–	35 µg/m^3	Same as Primary Standard	U/A
	Annual Arithmetic Mean	12 µg/m^3	N	12 µg/m^3		
Carbon Monoxide (CO)	8-hour	9 ppm (10 mg/m^3)	A	9 ppm (10 mg/m^3)	–	U/A
	1-hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8-hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–	–	–
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	–	0.053 ppm (100 µg/m^3)	Same as Primary Standard	U/A
	1-hour	0.18 ppm (339 µg/m^3)	A	0.100 ppm [f]	–	–
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	–	0.030 ppm (for certain areas) [g]	–	U
	24-hour	0.04 ppm (105 µg/m^3)	A	0.14 ppm (for certain areas) [g]	–	
	3-hour	–	–	–	0.5 ppm (1300 µg/m^3) [g]	
	1-hour	0.25 ppm (655 µg/m^3)	A	0.075 ppm (196 µg/m^3) [g]	–	–
Lead [h]	30-day Average	1.5 µg/m^3	A	–	–	–
	Calendar Quarter	–	–	1.5 µg/m^3	Same as Primary Standard	A
	Rolling 3-Month	–	–	0.15 µg/m^3		A

Table 3.1-2 Ambient Air Quality Standards and Designations for San Diego County

Pollutant	Averaging Time	California [a]		National Standards [b]		
		Standards[c]	Attainment Status[i]	Primary[c,d]	Secondary[c,e]	Attainment Status[k]
	Average					
Visibility-Reducing Particulate Matter	8-hour	Extinction coefficient of 0.23 per kilometer — visibility of 10 miles or more	U	No National Standards		
Sulfates	24-hour	25 µg/m^3	A			
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	U			
Vinyl Chloride [h]	24-hour	0.01 ppm (26 µg/m^3)	A			

Notes: µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; ppm = parts per million

[a] California standards for ozone, CO (except Lake Tahoe), SO_2 (1- and 24-hour), NO_2, particulate matter, 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.

[b] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) 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. The PM_{10} 24-hour standard is attained when 99 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration is expressed first in the units in which it was promulgated (i.e., parts per million [ppm] or micrograms per cubic meter [µg/m^3]). Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius (°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.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

[g] On June 2, 2010, EPA established a new 1-hour SO_2 standard effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm effective August 23, 2010. The secondary SO_2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA. Note that the new standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the new primary national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is equal to 0.075 ppm.

[h] ARB has identified lead and vinyl chloride as toxic air contaminants with no threshold 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.

[i] California attainment status:
Unclassified (U): The data are incomplete and do not support a designation of attainment or nonattainment.
Attainment (A): The state standard for that pollutant was not violated at any site in the area during a 3-year period.
Nonattainment (N): There was at least one violation of a state standard for that pollutant in the area.

[j] On April 27, 2012, in response to a court decision, EPA ruled that the San Diego basic nonattainment area should be reclassified as a Subpart 2 moderate nonattainment area, with an attainment deadline of June 15, 2010. This reclassification became effective on June 13, 2012.

[k] Federal attainment status:
Nonattainment (N): Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.
Attainment (A): Any area that meets the national primary or secondary ambient air quality standard for the pollutant.
Unclassifiable (U): Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

Sources: ARB 2012a; ARB 2012b

Diesel PM poses the greatest health risk among these 10 TACs. Based on receptor modeling techniques, ARB estimated the diesel PM health risk in the SDAB in 2000 to be 420 excess cancer cases per million people. Since 1990, the health risk of diesel PM in the SDAB has been reduced by 52 percent (ARB 2009).

According to ARB's Community Health Air Pollution Information System, no major existing stationary sources of TACs are located within 3 miles of the project site (ARB 2013c). Vehicles on Interstate 805 (I-805), State Route (SR) 905, SR 125, Alta Road, and Otay Mesa Road are sources of diesel PM and other TACs associated with vehicle exhaust.

EXISTING AIR QUALITY — ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor, after which recognition occurs only with an alteration in intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as "flowery" or "sweet," then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

No existing concentrated sources of objectionable odors are located within 1 mile of the project site. No major agriculture-related odor sources (e.g., livestock operations) are located within 2 miles.

3.1.2 REGULATORY CONSIDERATIONS

Air quality within the vicinity of the RJD Infill Site is regulated by EPA, ARB, and SDAPCD. Additionally, San Diego County has provided regulations and emission thresholds that are considered in this DEIR. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent. A list of the applicable federal, state, and local plans, policies, regulations, laws, and ordinances is provided below. Complete summaries of the federal and state regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

CRITERIA AIR POLLUTANTS

- Clean Air Act – CAA required EPA to establish National Ambient Air Quality Standards (NAAQS) (Table 3.1-2) for the protection of public health and welfare.

TOXIC AIR CONTAMINANTS

- Federal Hazardous Air Pollutant Programs – Amendments to the CAA directed EPA to identify and regulate HAPs through the promulgation of national emissions standards for HAPs (NESHAP). Separate standards apply to stationary and mobile sources.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

CRITERIA AIR POLLUTANTS

- California Clean Air Act – The California Clean Air Act (CCAA) required ARB to establish California Ambient Air Quality Standards (CAAQS) (Table 3.1-2) for the protection of public health and welfare. These standards are generally more stringent than the NAAQS. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources, and provides air districts with the authority to regulate indirect sources.
- California Health and Safety Code: Chapters 3 (Emission Limitations) and 4 (Enforcement) include the provisions of the air emissions control and permit system established in the State. The following specific sections are relevant to the project:
  - Section 41700: A person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.
  - Section 41701: No person shall discharge into the atmosphere from any source whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is:
    (a) As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
    (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subdivision (a).
  - Section 42301 establishes the requirements for the air quality permit system established pursuant to Section 42300 of the California Health and Safety Code. This section forms the basis for permit requirements for local air districts.

TOXIC AIR CONTAMINANTS

- Tanner Air Toxics Act – The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. Once a TAC is identified, ARB is then responsible for the adoption of an Airborne Toxics Control Measure for sources that emit that particular TAC.
- Air Toxics Hot Spots Information and Assessment Act of 1987 – This act requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, the California Department of Corrections and Rehabilitation (CDCR) is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

CRITERIA AIR POLLUTANTS

San Diego Air Pollution Control District

SDAPCD seeks to improve air quality conditions in the San Diego region through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SDAPCD includes preparing plans and programs for the attainment of ambient air quality standards, adopting and enforcing rules and regulations, and issuing permits for stationary sources. SDAPCD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA, CAAA, and CCAA.

Regional Air Quality Strategy

The SDAB is designated as a nonattainment area for ozone for both national and State standards. For each nonattainment area within the state, the CCAA has specified air quality management strategies that must be adopted by the agency responsible for the nonattainment area. Each area must prepare and adopt an air quality management plan (AQMP) or regional air quality strategy (RAQS), which lays out programs for attaining the CAAQS and NAAQS for all criteria pollutants. (At present, no attainment plan for $PM_{2.5}$ or PM_{10} is required by the state regulations.) Accordingly, the San Diego RAQS was developed by the SDAPCD in accordance with CCAA requirements and identifies feasible emission control measures to provide expeditious progress in San Diego County toward attaining the State ozone standard. The pollutants addressed are ROG and NO_X, precursors to the photochemical formation of ozone.

The RAQS control measures focus on emission sources under the SDAPCD's authority, specifically stationary emission sources and some areawide sources. However, the emission inventories and emission projections in the RAQS reflect the impact of all emission sources and all control measures, including those under the jurisdiction of ARB (e.g., on-road motor vehicles, off-road vehicles and equipment, and consumer products) and EPA (e.g., aircraft, ships, trains, and pre-empted off-road equipment). Thus, while legal authority to control different pollution sources is separated, SDAPCD is responsible for reflecting national, State, and local measures in a single plan to achieve ambient air quality standards in San Diego County. Achieving ambient air quality standards requires a cooperative partnership of governmental agencies at the federal, State, and local levels. The San Diego County RAQS for the SDAB was initially adopted in 1991 and subsequently revised in 1995, then in 1998, again in 2001 and 2004, and most recently in 2009 (SDAPCD 2013).

Rules and Regulations

As mentioned above, SDAPCD adopts rules and regulations. All projects are subject to SDAPCD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the proposed project may include, but are not limited to, the following:

- Rule 51, Nuisance, states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health or safety of any such persons or the public; or which cause or have a natural tendency to cause injury or damage to business or property.

- Rule 55, Fugitive Dust, states that a person shall not engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than three minutes in any 60-minute period and visible roadway dust shall be minimized and removed at the conclusion of each work day.
- Regulation II, which includes Rules 10 through 27, describes the permitting process for stationary sources. The permits are called Authority to Construct and Permit to Operate. Among other rules, Regulation II states that permits are required for central boilers used for heating and hot water, kitchen equipment, emergency generators, and similar equipment that would have the potential to emit pollutants.
- Rule 361.145, Standard for Demolition and Renovation, requires notification to SDAPCD of planned demolitions of structures involving the presence of regulated asbestos-containing material. A notice of intention is required for all demolitions regardless of whether there is presence of asbestos-containing material.
- Rule 67, Architectural Coatings, requires that a person shall not manufacture, blend, repackage, supply, sell, offer for sale, apply, or solicit the application of any architectural coating for use within San Diego County which at the time of sale or manufacture contains more than 250 grams of volatile organic compounds (VOCs) per liter of coating. The Rule specifies different VOC limits for certain specialty coatings.

County of San Diego

The County PDS has prepared the *Guidelines for Determining Significance* for air quality as guidance for preparing environmental documents for discretionary projects in accordance with the California Environmental Quality Act (CEQA). The guidelines present a range of quantitative, qualitative, and performance levels for particular environmental effects. Specifically, the document addresses the thresholds of significance correlated to State CEQA Guidelines Appendix G. PDS has developed screening-level thresholds of significance to determine any adverse environmental impacts that a project may have on air quality. These thresholds are discussed in Section 3.1.3.

The San Diego County Grading, Clearing and Watercourses Ordinance also includes the following provisions that should be considered with the proposed project:

- Sec. 87.428, Dust Control Measures, requires all clearing and grading to be carried out with dust control measures adequate to prevent creation of a nuisance to persons or public or private property. Clearing, grading or improvement plans shall require that measures such as the following be undertaken to achieve this result: watering, application of surfactants, shrouding, control of vehicle speeds, paving of access areas, or other operational or technological measures to reduce dispersion of dust. These project design measures are to be incorporated into all earth-disturbing activities to minimize the amount of PM emissions from construction.

TOXIC AIR CONTAMINANTS

At the local level, air pollution control or management districts may adopt and enforce ARB control measures. Under SDAPCD Regulations II, XI, and XII, all sources that possess the potential to emit TACs are required to obtain permits from the appropriate district. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new-source review standards and air toxics control measures.

SDAPCD limits emissions and public exposure to TACs through a number of programs. SDAPCD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors.

Sources that require a permit are analyzed by SDAPCD (e.g., HRA) on the basis of their potential to emit toxics. If it is determined that the project would emit toxics in excess of SDAPCD's threshold of significance for TACs, as identified in Section 3.1.3, sources must implement the best available control technology for TACs (T-BACT) to reduce emissions. If a source cannot reduce the risk below the threshold of significance, even after T-BACT has been implemented, SDAPCD will deny the permit required by the source. This helps to prevent new problems and reduces emissions from existing sources by requiring them to apply new technology with respect to TACs when retrofitting. It is important to note that SDAPCD's air quality permitting process applies to stationary sources; properties that are exposed to elevated levels of non-stationary-type sources of TACs, and the non-stationary-type sources themselves (e.g., on-road vehicles), are not subject to air quality permits. Further, for reasons of feasibility and practicality, mobile sources (e.g., cars and trucks) are not required to implement T-BACT, even if they do have the potential to expose adjacent properties to elevated levels of TACs. Rather, emission controls on such sources (e.g., vehicles) are subject to regulations implemented at the federal and State levels.

ODORS

SDAPCD Rule 51 (Public Nuisance) and California Health and Safety Code, Division 26, Part 4, Chapter 3, Section 41700 prohibit the emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent the occurrence of public nuisance.

Two situations can increase the potential for odor problems. The first occurs when a new odor source is located near existing sensitive receptors. The second occurs when new sensitive receptors are developed near existing sources of odor. Because of the subjective nature of odor issues, the County recommends the review of each project on an individual basis, focusing on the existing and potential surrounding uses and the location of sensitive receptors.

3.1.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with the State CEQA Guidelines (Appendix G) and the County PDS (County of San Diego 2007), the level II infill correctional facility at the RJD Infill Site would result in a significant air quality impact if it would result in any of the following:

- short-term construction-related emissions of criteria air pollutants or precursors violate any air quality standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations (e.g., for criteria pollutants and ozone precursors, if emissions exceed the County-recommended thresholds in Table 3.1-3);
- long-term operational (regional) emissions of criteria air pollutants or precursors violate any air quality standard or contribute substantially to an existing or projected air quality violation, expose sensitive receptors to substantial pollutant concentrations, or conflict with or obstruct implementation of the applicable air quality plan (i.e., for criteria pollutants and ozone precursors, if emissions exceed the County-recommended thresholds in Table 3.1-3);
- long-term operational (local) emissions concentrations of criteria air pollutants or precursors violate any air quality standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations (i.e., for CO, if emissions would result in concentrations that would exceed the 20 ppm [1-hour] or 9 ppm [8-hour] standards)

- short-term construction-related or long-term operational emissions of TACs expose sensitive receptors to substantial pollutant concentrations (i.e., if exposure to an ARB and/or EPA-identified TAC exceeds 10 in 1 million for excess cancer risk or a hazard index of 1 for noncancer risk at the Maximally Exposed Individual [MEI]); or
- short-term construction or long-term operations create objectionable odors affecting a substantial number or people (i.e., if project implementation would locate receptors near an existing odor source where one confirmed complaint per year averaged over a three year period, or three unconfirmed complaints per year averaged over a 3-year period has been experienced by existing receptors as close as the project to the odor source; or by existing receptors in the vicinity of a similar facility considering distance, frequency, and odor control, where there is currently no nearby development and for proposed odor sources near existing receptors).

Table 3.1-3 Regional Pollutant Emissions – Screening Level Thresholds of Significance

Pollutant	Total Emissions		
	Pounds per Hour	Pounds per Day	Tons per Year
ROG	–	75	13.7
NO_X	25	250	40
CO	100	550	100
SO_X	25	250	40
PM_{10}	–	100	15
$PM_{2.5}$	–	55	10

Notes: – no threshold proposed
The County recommends the use of daily thresholds for the standard construction and operational emissions for development projects.
Source: County of San Diego 2007

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

Sensitive receptors near the infill site include the existing employees and inmates at RJD. The nearest sensitive receptors outside RJD are inmates at the George F. Bailey and East Mesa Detention facilities, located approximately 0.5 mile northeast of the infill site across Alta Road. Otay Mesa Road would be the principal access road to the infill site for construction and post-construction (operation) traffic, and four residences are adjacent to the north side of Otay Mesa Road, west of Enrico Fermi Drive. These residences are located approximately 0.9 mile south of the infill site.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.1-1a: Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors [Single Facility]

Construction-related emissions are described as “short term” or temporary in duration but have the potential to represent a significant impact with respect to air quality. Construction-related activities would result in project-generated emissions of criteria air pollutants (e.g., PM_{10} and $PM_{2.5}$) and

precursors (e.g., ROG and NO_X). Construction-related emissions anticipated from development of the level II infill correctional facility were modeled using the CalEEMod (Version 2011.1.1) computer program. CalEEMod is designed to model construction emissions for land use development projects using emission factors developed and published by ARB, and allows for the input of project-specific information.

Construction of the level II infill correctional facility is expected to commence in spring 2014. A single facility is estimated to take approximately 26 months to complete and a complex is estimated to take approximately 28 months to complete. Overall, construction of the level II infill facilities is estimated to be completed by spring 2016. Construction would be phased as follows:

- demolition and site preparation: approximately 2 months,
- grading: approximately 3 months (1 month would be concurrent with demolition),
- utilities: approximately 8 months (1 month would be concurrent with grading), and
- building construction: approximately 23 months (6 months would be concurrent with utilities).

In addition, it was assumed that architectural coating and paving would occur during the last 6 months, concurrent with building construction. The estimated peak number of construction workers onsite at any given time would be 355 during construction of a single facility. Anticipated monthly variation in construction workers present onsite during construction of a single facility is reported in Chapter 2, Project Description.

Earth-moving equipment, including graders, scrapers, backhoes, jackhammers, front-end loaders, generators, water trucks, and dump trucks, would be used during excavation for utilities and building foundations. Concrete trucks and pumpers would be onsite during concrete pours for foundations and slabs; forklifts would be used during erection of walls and delivery of materials from storage yards; and cranes would be operated for installation of precast panels, structural steel framing members, and metal decking. Fill required for site grading and construction of the building pads and berm for the observation post would be obtained onsite.

Emissions of NO_X would be primarily associated with off-road (e.g., gas and diesel) construction equipment exhaust; secondary sources would include on-road trucks for import and export of materials and worker vehicles for commuting. Worker commute trips in gasoline-fueled vehicles, off-gassing from asphalt application, and application of architectural coatings would be the principal sources of ROG, with additional ROG coming from off- and on-road construction equipment.

Emissions of fugitive PM or dust (PM_{10} and $PM_{2.5}$) are associated primarily with ground-disturbance activities during site preparation, demolition, and grading, and may vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT onsite and offsite. Exhaust emissions from diesel equipment and worker commute trips also contribute to short-term increases in PM_{10} and $PM_{2.5}$ emissions, but to a much lesser extent.

Table 3.1-4 summarizes the modeled construction-related emissions of criteria air pollutants and ozone precursors for the single, level II infill correctional facility. The significance of construction-related air quality impacts was determined by comparing these modeling results with applicable significance thresholds. Refer to Appendix 2A in this volume for detailed modeling input parameters and results.

Table 3.1-4 Summary of Modeled Daily Emissions of Criteria Air Pollutants and Precursors from Construction of the Single, Level II Infill Correctional Facility (Unmitigated)

Year	Emissions (lbs/day)					
	ROG[1]	NO_X[1]	CO	SO_X	PM_{10}	$PM_{2.5}$
Total Unmitigated Emissions—2014	20.9	153.9	116.9	0.3	**102.4**	13.8
Total Unmitigated Emissions—2015	14.6	66.6	100.3	0.2	18.1	5.0
Total Unmitigated Emissions—2016	41.1	63.7	97.4	0.2	17.8	4.9
Threshold of Significance (lbs/day)	*75*	*250*	*550*	*250*	*100*	*55*

Notes: CO = carbon monoxide; lbs/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; ROG = reactive organic gases; SO_X = oxides of sulfur
1 ROG and NO_X are precursors to ozone.
Bold indicates a value that exceeds the significance threshold.
Refer to Appendix 2A in this volume for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

As shown in Table 3.1-4, unmitigated emissions of ROG, NO_X, CO, SO_X, and $PM_{2.5}$ would be below the applicable thresholds of significance in 2014, 2015, and 2016. However, construction-related activities in 2014 would result in daily unmitigated PM_{10} emissions that would exceed the significance thresholds. Thus, construction-related emissions of PM_{10} associated with the single, level II infill correctional facility could violate the standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the nonattainment status of San Diego County.

Emissions of PM_{10} in 2014 (i.e., 102.4 lbs/day) would exceed the daily significance threshold of 100 lbs/day, and dust control measures that are contained in SDAPCD Rule 55 and the San Diego County Grading, Clearing and Watercourses Ordinance, along with other applicable SDAPCD-recommended controls, are not currently part of the project description. Thus, PM_{10} emissions from construction of the single, level II infill correctional facility at the RJD Infill Site could violate a standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering San Diego County's nonattainment status for PM_{10}. As a result, this impact would be significant.

Mitigation Measures

Mitigation Measure 3.1-1

The following control measures, which are consistent with measures recommended by San Diego County, will be implemented by CDCR to reduce PM_{10} emissions during construction:

- Grading areas will be watered three times a day to minimize fugitive dust.
- Land disturbance will be minimized to the extent feasible.
- Haul trucks will be covered when loaded with fill.
- Paved streets will be swept at least once per day where there is evidence of dirt that has been carried onto the roadway.
- Inactive disturbed areas will be revegetated as soon as feasible to prevent soil erosion.
- For disturbed surfaces that will be left inactive for 4 or more days and that will not be revegetated, a chemical stabilizer will be applied per manufacturer's instruction.
- For unpaved roads, chemical stabilizers will be applied or the roads will be watered once per hour during active operation.

- Vehicle speed on unpaved roads will be limited to 30 miles per hour (mph).
- For open storage piles that will remain onsite for 2 or more days, water will be applied daily or coverings will be installed.
- For paved road track-out, all haul vehicles will be covered, as needed, or will comply with vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
- During high wind conditions (wind speeds in excess of 25 mph), all earthmoving activities will cease or water will be applied to soil not more than 15 minutes prior to disturbing such soil.

Significance after Mitigation

Implementation of Mitigation Measure 3.1-1 would lead to a reduction in PM_{10} emissions during the period of greatest earth-disturbing activity during construction year 2014. Table 3.1-5 shows the PM_{10} emissions before and after the incorporation of the control measures identified under Mitigation Measure 3.1-1. As summarized in Table 3.1-5, PM_{10} emissions would be reduced by approximately 75 percent with control measures implemented, and would therefore be reduced below the applicable significance threshold. As a result, this impact related to generation of construction-related PM_{10} emissions would be reduced to a **less-than-significant** level with mitigation incorporated.

Table 3.1-5 Summary of Modeled Daily Emissions of Criteria Air Pollutants and Precursors from Construction of the Single, Level II Infill Correctional Facility (Mitigated)

Year	Emissions (lbs/day)					
	ROG[1]	NO_X[1]	CO	SO_X	PM_{10}	$PM_{2.5}$
Total Mitigated Emissions—2014	20.9	153.9	116.9	0.3	24.5	13.8
Total Mitigated Emissions—2015	14.6	66.6	100.3	0.2	5.0	5.0
Total Mitigated Emissions—2016	41.1	63.7	97.4	0.2	4.9	4.9
Threshold of Significance (lbs/day)	*75*	*250*	*550*	*250*	*100*	*55*

Notes: CO = carbon monoxide; lbs/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; ROG = reactive organic gases; SO_X = oxides of sulfur
[1] ROG and NO_X are precursors to ozone.
Refer to Appendix 2A in this volume for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

Impact 3.1-2a: Long-Term Operation-related (Regional) Emissions of Criteria Air Pollutants and Precursors [Single Facility]

Regional area- and mobile-source emissions of nonattainment pollutants and precursors (i.e., ROG, NO_X, PM_{10}, and $PM_{2.5}$) generated by development of the level II infill correctional facility were also modeled using CalEEMod. CalEEMod allows land use selections that include project location specifics and trip generation rates. CalEEMod calculates area-source emissions from the usage of natural gas, landscape maintenance equipment, and consumer products and calculates mobile-source emissions associated with vehicle trip generation.

Regional area- and mobile-source emissions were modeled based on proposed land use types and sizes as described in the project description, trip generation data presented in the traffic analysis prepared for this project (Section 3.11 and Appendix 2D in this volume), and default CalEEMod settings to estimate reasonable maximum emission conditions. CalEEMod does not contain a land use type corresponding to an infill correctional facility; therefore, a hospital was used as a close approximation of facility operational characteristics. This is considered appropriate as both land use types are associated

with 24-hour facilities with a greater level daytime versus nighttime operations. CalEEMod input parameters were adjusted with development-specific information where available.

The total estimated floor area for a single facility would be 257,916 gross square feet (gsf), of which an estimated 90,000 gsf would be program space. As reported in Section 3.11, "Transportation," the single, level II infill correctional facility is projected to generate a total of 396 daily trips. Refer to Appendix 2A in this volume for detailed modeling input parameters and results.

Table 3.1-6 summarizes the modeled operation-related emissions of criteria air pollutants and ozone precursors under buildout conditions in 2017, the earliest possible full year of operation of the single, level II infill correctional facility. As shown in Table 3.1-6, area- and mobile-source emissions resulting from operation of the single, level II infill correctional facility would be well below the County of San Diego's applicable operational significance thresholds. In addition, emission rates of vehicles in California are anticipated to improve each year as older vehicles are retired and newer, lower emission vehicles are added. For this reason, emission levels associated with operation of the single, level II infill correctional facility are expected to decrease over time.

Table 3.1-6 Summary of Modeled Daily Emissions of Criteria Air Pollutants and Precursors from Operation of the Single, Level II Infill Correctional Facility

	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	7.6	4.0	3.4	<0.1	0.3	0.3
Mobile Sources	2.3	4.8	21.2	<0.1	4.7	0.4
Total Unmitigated Emissions	9.9	8.8	24.6	0.1	5.0	0.5
Threshold of Significance (lbs/day)	*75*	*250*	*550*	*250*	*100*	*55*

Notes: CO = carbon monoxide; lbs/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; ROG = reactive organic gases; SO_X = oxides of sulfur
Numbers may not sum exactly to totals due to rounding.
Refer to Appendix 2A in this volume for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

It should be noted that operation of the single, level II infill correctional facility could also result in the generation of criteria air pollutant and precursor emissions from the long-term operation of onsite stationary sources (e.g., emergency generators). These types of sources would be subject to SDAPCD Rule 10, Permits Required, under which any construction, alteration, replacement, or operation of a source that will emit or may emit air pollutants must obtain an Authority to Construct (ATC) and/or a Permit to Operate (PTO). Emergency generators would be used only in the event of a power outage, although they would also be turned on occasionally to ensure their reliability.

More specifically, the use of any stationary source that may cause emissions is required by law to first obtain an ATC from the Air Pollution Control Officer (APCO). Before the operation of any new source, a PTO is also required from the APCO. No PTO will be granted by either the APCO or the Hearing Board for the operation of any source constructed or installed without these authorizations until the information required is presented to the APCO and conforms to the standards set forth in Rule 20, Standards for Granting Permits.

According to Rule 20, the construction and operation of any source must comply with Rule 20.1, New Source Review (NSR) – General Provisions, and Rule 10.1, New Source Performance Standards (NSPS) & National Emission Standard for Hazardous Air Pollutants (NESHAPS) Requirements, as well as obtaining the ATC and PTO. The APCO will deny any ATC or PTO if the construction and operation of the source is not shown to be designed, controlled, or equipped with such an air pollution control article, machine, equipment, or other contrivance in a manner not to cause emissions in violation of

Section 41700, 41701, or 42301 of the California Health and Safety Code, which were codified in performance of the CCAA, and the other SDAPCD-applicable rules mentioned above (e.g., compliance with NSR standards).

According to SDAPCD, new permitted sources emitting more than 10 lbs/day of ROG, NO_X, PM_{10}, or SO_X must provide BACT, and all sources emitting more than the NSR thresholds must offset all emissions in excess of the thresholds. Emissions for these sources would not be allowed to exceed the numeric thresholds of significance for ozone precursors. Generally, stationary sources of air pollutant emissions that comply with applicable regulations pertaining to BACT and offset requirements are not considered to have significant air quality impacts.

Operation of the single, level II infill correctional facility at the RJD Infill Site would result in area- and mobile-source emissions that would not exceed the County of San Diego's applicable operational significance thresholds. Although project-generated stationary-source emissions would be additive, such emissions would be controlled and limited through SDAPCD's permit process. Thus, operation-related regional emissions of criteria air pollutants and precursors would not violate a standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.1-3a: Long-Term Operation-Related (Local) Mobile-Source Emissions of Carbon Monoxide [Single Facility]

CO concentration is a direct function of meteorological conditions and motor vehicle activity (e.g., idling time and traffic flow conditions), particularly during peak commute hours. 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. As a result, it is recommended that CO be analyzed at the local level. San Diego County is designated as an attainment area for the CAAQS and a maintenance area for the NAAQS for CO. The SDAB has consistently met the air quality test for CO attainment since 1995 (ARB 2004).

Several air districts in California recently adopted screening criteria for analyzing local CO impacts, including the Sacramento Air Quality Management District (SMAQMD) and Bay Area Air Quality Management District (BAAQMD). San Diego County has not adopted screening criteria for local CO impacts; therefore, guidance from these other air districts is used. Criteria applicable to the development of a level II infill correctional facility are listed separately below. These screening criteria have been developed in a manner such that, if they are met, project-generated, long-term operation-related local mobile-source emissions of CO would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations.

According to BAAQMD, a proposed project would result in a less-than-significant CO impact if the following criterion is met (BAAQMD 2010):

- Project traffic would not increase volumes at affected intersections to more than 44,000 vehicles per hour.

According to SMAQMD, a proposed project would result in a less-than-significant CO impact if the following criterion is met (SMAQMD 2011):

- The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour.

According to the traffic analysis (attached as Appendix 2D in this volume and discussed in Section 3.11, "Transportation"), none of the maximum peak-hour traffic volumes resulting from development of the single, level II infill correctional facility at the RJD Infill Site would exceed BAAQMD's or SMAQMD's respective screening criteria of 44,000 and 31,600 vehicles per hour. As a result, project-generated, long-term operation-related local mobile-source emissions of CO would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations. This impact would be less than significant.

Long-term operation-related local mobile-source emissions of CO generated by the single, level II infill correctional facility at the RJD Infill Site would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.1-4a: Exposure of Sensitive Receptors to Emissions of Toxic Air Contaminants [Single Facility]

The exposure of sensitive receptors to emissions of TACs from onsite project-generated construction-related and operation-related sources for the proposed single facility is discussed below.

Onsite Construction-Related Equipment Emissions

Construction of the single, level II infill correctional facility would result in short-term, project-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment used for site preparation (e.g., excavation, grading, and clearing); paving; application of architectural coatings; and other miscellaneous activities. Diesel PM was identified as a TAC by ARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed below, outweighs the potential non-cancer health impacts (ARB 2003). Neither SDAPCD nor the County has adopted a methodology for analyzing such impacts, and neither agency has recommended that health risk assessments be completed for construction-related emissions of TACs because construction activities typically take place in the short term, whereas health risk assessments are based on long-term (extending over several decades) exposure.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., the potential exposure to TACs being compared to applicable standards). Dose is a function of the concentration of a substance in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the MEI. Thus, the risks estimated for the MEI are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period or duration of activities associated with the project. Consequently, it is important to consider that the use of off-road, heavy-duty diesel equipment would be limited to the construction period, which is approximately 26 months for the single, level II infill correctional facility. Also, studies show that diesel PM is highly dispersive (i.e., concentration decreases 70 percent at 500 feet from source) (ARB 2005, Zhu and Hinds 2002).

The nearest offsite sensitive receptors in the infill site vicinity are inmates at the George F. Bailey and East Mesa Detention Facilities, located approximately 0.5 mile northeast of the infill site across Alta Road. Otay Mesa Road would be the principal access road to the infill site for construction and post-construction (operation) traffic, and four residences are adjacent to the north side of Otay Mesa Road, west of Enrico Fermi Drive. These residences are located approximately 0.9 mile south of the infill site. These distances represent distances from the reasonable center of construction activity at the infill site

to common areas of the nearby receptors. Because the use of off-road, heavy-duty equipment would be temporary and the nearest sensitive receptor is more than 500 feet from the infill site (the distance associated with a 70 percent decrease in emissions), project-generated, construction-related emissions of TACs would not result in the exposure of sensitive receptors to substantial pollutant concentrations.

Onsite Operation-Related Stationary-Source Emissions

Development of the single, level II infill correctional facility would include stationary sources of TACs, such as diesel- or natural gas–fueled backup generators, to provide backup utility services to the main facility. These types of stationary sources, in addition to any other stationary sources that may emit TACs, would be subject to SDAPCD's rules and regulations, including Regulations II (Permits), XI (National Emission Standards for Hazardous Air Pollutants), and XII (Toxic Air Contaminants); Rules 40 (Permit and Other Fees) and 1202 (Hexavalent Chromium – Cooling Towers); and maximum achievable control technology (MACT) and T-BACT requirements. Thus, as discussed above, SDAPCD would analyze such sources (e.g., prepare a health risk assessment, if deemed necessary) based on their potential to emit TACs. If it is determined that the sources would emit TACs in excess of SDAPCD's applicable significance threshold, MACT or T-BACT would be implemented to reduce emissions. If the implementation of MACT or T-BACT would not reduce the risk below the applicable threshold, SDAPCD would deny the required PTO.

More specifically, the siting of new stationary sources of TACs would be subject to SDAPCD rules, and each new stationary source is evaluated to determine whether it has the potential to emit TACs. SDAPCD assesses the impact from TACs based on its own guidance, as well as guidance documents from OEHHA, ARB, and the California Air Pollution Control Officers Association. SDAPCD requires TAC emission controls (T-MACT or T-BACT) as deemed necessary.

In addition to T-MACT and T-BACT requirements, permits for stationary equipment that may emit TACs may also contain conditions required by NESHAPs and ATCMs promulgated by EPA and ARB, respectively. In short, a new stationary source of TACs would not receive the ATC or PTO if it would result in:

- an incremental increase in cancer risk greater than 10 in 1 million at any offsite receptor or
- an offsite, ground-level concentration of non-carcinogenic TACs generated from the project that would result in a Hazard Index greater than 1 (unless approved by OEHHA).

These permitting requirements reflect SDAPCD's thresholds of significance for TACs generated by stationary sources. Therefore, lead agencies can conclude that a new stationary source of TACs that attains the ATC and PTO from SDAPCD would not exceed the applicable TAC thresholds of significance.

With regard to proposed sensitive receptors (e.g., inmates onsite), ARB's Community Health Air Pollution Information System identifies no major stationary sources of TACs within 3 miles of the infill site. Thus, development of the single, level II infill correctional facility would not result in the placement of sensitive receptors (inmates) within ARB-recommended separation distances. Consequently, development of the single, level II infill correctional facility would not result in the exposure of sensitive receptors (existing or proposed) to substantial pollutant concentrations from stationary sources.

With regard to construction-related activities, the use of off-road, heavy-duty equipment would be temporary and the nearest sensitive receptor is more than 500 feet from the RJD Infill Site (i.e., sufficient distance from emission sources that excessive concentrations of diesel PM would not occur at the receptor). For any proposed stationary sources of TACs, CDCR would comply with applicable SDAPCD rules and regulations for permitted stationary sources, and development of the single, level II infill correctional facility would not locate any proposed sensitive receptors within ARB-recommended separation distances from emission sources. As a result, development of the single, level II infill

correctional facility at the RJD Infill Site would not result in the exposure of sensitive receptors (existing or proposed) to substantial pollutant concentrations. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.1-5a: Exposure of Sensitive Receptors to Odors [Single Facility]

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause physical harm, they may still be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

No existing major sources of objectionable odors (e.g., landfill, wastewater treatment plant, food processing facility) are located within 1 mile of the infill site. No major agriculture-related odor sources (e.g., livestock operations) are located within 2 miles. Development of the single, level II infill correctional facility would not introduce new, permanent odor-generating facilities, nor would it place receptors substantially closer to existing sources of odors. Any onsite odor sources (e.g., fryers, charbroilers, solid waste disposal areas) would be controlled under SDAPCD nuisance regulations and California Department of Public Health emission reduction mandates that limit exhaust emissions from cooking sources. Thus, development of the single, level II infill correctional facility would not expose nearby existing receptors to objectionable odors.

Construction of the single, level II infill correctional facility would result in odors from exhaust emissions from onsite diesel equipment, asphalt paving, and painting. Such emissions would be intermittent in nature and would dissipate rapidly with increasing distance from the source.

Development of the single, level II infill correctional facility at the RJD Infill Site would not involve the construction or operation of any major odor sources, and no existing sources of objectionable odors are located within 1 mile of the project site. Thus, development of the single, level II infill correctional facility would not be anticipated to result in the exposure of sensitive receptors to objectionable odors. As a result, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.1-1b: Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors [Complex]

As discussed above under Impact 3.1-1a, construction activities at the infill site would generate emissions due to onsite equipment, materials movement to and from the infill site, and construction worker commutes. As discussed in Impact 3.1-1a, the complex is estimated to take approximately 28 months to complete and the estimated peak number of construction workers onsite at any given time would be 795. Anticipated monthly variation in construction workers present onsite during construction of a complex is reported in Chapter 2, Project Description.

Table 3.1-7 summarizes the modeled construction-related emissions of criteria air pollutants and ozone precursors for the complex. The significance of construction-related air quality impacts was determined by comparing these modeling results with applicable significance thresholds. Refer to Appendix 2A in this volume for detailed modeling input parameters and results.

Table 3.1-7 Summary of Modeled Daily Emissions of Criteria Air Pollutants and Precursors from Construction of the Level II Infill Correctional Facility Complex (Unmitigated)

Year	Emissions (lbs/day)					
	ROG[1]	NO_X[1]	CO	SO_X	PM_{10}	$PM_{2.5}$
Total Unmitigated Emissions—2014	29.6	202.9	199.7	0.4	**198.9**	16.4
Total Unmitigated Emissions—2015	23.7	92.3	187.4	0.4	35.4	6.1
Total Unmitigated Emissions—2016	64.9	94.5	183.7	0.4	36.6	7.4
Threshold of Significance (lbs/day)	*75*	*250*	*550*	*250*	*100*	*55*

Notes: CO = carbon monoxide; lbs/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; ROG = reactive organic gases; SO_X = oxides of sulfur
1 ROG and NO_X are precursors to ozone.
Bold indicates a value that exceeds the significance threshold.
Refer to Appendix 2A in this volume for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

As shown in Table 3.1-7, unmitigated emissions of ROG, NO_X, CO, SO_X and $PM_{2.5}$ would be below the applicable thresholds of significance in 2014, 2015, and 2016. However, construction-related activities in 2014 would result in daily unmitigated PM_{10} emissions that would exceed the significance thresholds. Thus, construction-related emissions of PM_{10} associated with the level II infill correctional facility complex could violate the standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the nonattainment status of San Diego County.

Emissions of PM_{10} in 2014 (i.e., 198.9 lbs/day) would exceed the daily significance threshold of 100 lbs/day, and dust control measures that are contained in SDAPCD Rule 55 and the San Diego County Grading, Clearing and Watercourses Ordinance, along with other applicable SDAPCD-recommended controls, are not currently part of the project description. Thus, PM_{10} emissions from construction of the level II infill correctional facility complex at the RJD Infill Site could violate a standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering San Diego County's nonattainment status for PM_{10}. As a result, this impact would be significant.

Mitigation Measures

Implement Mitigation Measure 3.1-1.

Significance after Mitigation

Implementation of Mitigation Measure 3.1-1 would lead to a reduction in PM_{10} emissions during the period of greatest earth-disturbing activity during construction year 2014. Table 3.1-8 shows the PM_{10} emissions before and after the incorporation of the control measures identified under Mitigation Measure 3.1-1. As summarized in Table 3.1-8, PM_{10} emissions would be reduced by approximately 58 percent with control measures implemented, and would therefore be reduced below the applicable significance threshold. As a result, this impact related to generation of construction-related PM_{10} emissions would be reduced to a **less-than-significant** level with mitigation incorporated.

Table 3.1-8 Summary of Modeled Daily Emissions of Criteria Air Pollutants and Precursors from Construction of the Level II Infill Correctional Facility Complex (Mitigated)

Year	Emissions (lbs/day)					
	ROG[1]	NO_X[1]	CO	SO_X	PM_{10}	$PM_{2.5}$
Total Mitigated Emissions—2014	29.6	202.9	199.7	0.4	82.9	13.8
Total Mitigated Emissions—2015	23.7	92.3	187.4	0.4	35.4	6.1
Total Mitigated Emissions—2016	64.9	94.5	183.7	0.4	36.6	7.4
Threshold of Significance (lbs/day)	*75*	*250*	*550*	*250*	*100*	*55*

Notes: CO = carbon monoxide; lbs/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; ROG = reactive organic gases; SO_X = oxides of sulfur
1 ROG and NO_X are precursors to ozone.
Refer to Appendix 2A in this volume for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

Impact 3.1-2b: Long-Term Operation-Related (Regional) Emissions of Criteria Air Pollutants and Precursors [Complex]

Similar to analysis of the single facility under Impact 3.1-2a above, regional area- and mobile-source emissions of nonattainment pollutants and precursors (i.e., ROG, NO_X, PM_{10}, and $PM_{2.5}$) generated by development of the complex were modeled using CalEEMod. CalEEMod input parameters were adjusted with development-specific information where available. Refer to Impact 3.1-2a above for a full description of modeling used.

The total estimated gross square footage for a complex would be 580,851 gsf, of which an estimated 124,000 gsf would be program space. As reported in Section 3.11, “Transportation,” the level II infill correctional facility complex is projected to generate a total of 764 daily trips. Refer to Appendix 2A in this volume for detailed modeling input parameters and results.

Table 3.1-9 summarizes the modeled operation-related emissions of criteria air pollutants and ozone precursors under buildout conditions in 2017, the earliest possible full year of operation of the level II infill correctional facility complex. As shown in Table 3.1-9, area- and mobile-source emissions resulting from operation of the level II infill correctional facility complex would be well below the County of San Diego’s applicable operational significance thresholds. In addition, emission rates of vehicles in California are anticipated to improve each year as older vehicles are retired and newer, lower-emission vehicles are added. For this reason, emission levels associated with operation of the level II infill correctional facility complex are expected to decrease over time.

Table 3.1-9 Summary of Modeled Daily Emissions of Criteria Air Pollutants and Precursors from Operation of the Level II Infill Correctional Facility Complex

	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	17.1	9.1	7.6	0.1	0.7	0.7
Mobile Sources	4.4	9.2	40.9	0.1	9.1	0.7
Total Unmitigated Emissions	21.6	18.3	48.5	0.2	9.8	1.4
Threshold of Significance (lbs/day)	*75*	*250*	*550*	*250*	*100*	*55*

Notes: CO = carbon monoxide; lbs/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; ROG = reactive organic gases; SO_X = oxides of sulfur
Numbers may not sum exactly to totals due to rounding.
Refer to Appendix 2A in this volume for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

Similar to the single facility, operation of the level II infill correctional facility complex could also result in the generation of criteria air pollutant and precursor emissions from the long-term operation of onsite stationary sources (e.g., emergency generators and boilers located at the central plant). These types of sources would be subject to SDAPCD Rule 10, Permits Required, under which any construction, alteration, replacement, or operation of a source that will emit or may emit air pollutants must obtain an ATC and/or a PTO.

More specifically, the use of any stationary source that may cause emissions is required by law to first obtain an ATC from the APCO. Before the operation of any new source, a PTO is also required from the APCO. No PTO will be granted by either the APCO or the Hearing Board for the operation of any source constructed or installed without these authorizations until the information required is presented to the APCO and conforms to the standards set forth in Rule 20, Standards for Granting Permits.

According to Rule 20, the construction and operation of any source must comply with Rule 20.1, New Source Review (NSR) – General Provisions, and Rule 10.1, New Source Performance Standards (NSPS) & National Emission Standard for Hazardous Air Pollutants (NESHAPS) Requirements, as well as obtaining the ATC and PTO. The APCO will deny any ATC or PTO if the construction and operation of the source is not shown to be designed, controlled, or equipped with such an air pollution control article, machine, equipment, or other contrivance in a manner not to cause emissions in violation of Section 41700, 41701, or 42301 of the Health and Safety Code, and the other SDAPCD-applicable rules mentioned above (e.g., compliance with NSR standards).

According to SDAPCD, new permitted sources emitting more than 10 lbs/day of ROG, NO_X, PM_{10}, or SO_X must provide BACT, and all sources emitting more than the NSR thresholds must offset all emissions in excess of the thresholds. Emissions for these sources would not be allowed to exceed the numeric thresholds of significance for ozone precursors. Generally, stationary sources of air pollutant emissions that comply with applicable regulations pertaining to BACT and offset requirements are not considered to have significant air quality impacts (SMAQMD 2011).

Operation of the level II infill correctional facility complex at the RJD Infill Site would not result in area- and mobile-source emissions that would exceed the County of San Diego's applicable operational significance thresholds. Although development-generated stationary-source emissions would be additive, such emissions would be controlled and limited through SDAPCD's permit process. Thus, operation-related regional emissions of criteria air pollutants and precursors would not violate a standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.1-3b: Long-Term Operation-Related (Local) Mobile-Source Emissions of Carbon Monoxide [Complex]

Please refer to Impact 3.1-3a above for a discussion of CO concentration and why it is recommended that CO be analyzed at the local level. San Diego County is designated as an attainment area for the CAAQS and a maintenance area for the NAAQS for CO. The SDAB has consistently met the air quality test for CO attainment since 1995 (ARB 2004).

Several air districts in California recently adopted screening criteria for analyzing local CO impacts, including the Sacramento Air Quality Management District (SMAQMD) and Bay Area Air Quality Management District (BAAQMD). San Diego County has not adopted screening criteria for local CO impacts; therefore, guidance from these other air districts is used. Please refer to Impact 3.1-3a above for a list of criteria applicable to the development of a level II infill correctional facility. These screening

criteria have been developed in a manner such that, if they are met, project-generated, long-term operation-related local mobile-source emissions of CO would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations.

According to the traffic analysis, none of the maximum peak-hour traffic volumes resulting from development of the level II infill correctional facility complex at the RJD Infill Site would exceed BAAQMD's or SMAQMD's respective screening criteria of 44,000 and 31,600 vehicles per hour. As a result, project-generated, long-term operation-related local mobile-source emissions of CO would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations. This impact would be less than significant.

Long-term operation-related local mobile-source emissions of CO generated by the level II infill correctional facility complex at the RJD Infill Site would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.1-4b: Exposure of Sensitive Receptors to Emissions of Toxic Air Contaminants [Complex]

The exposure of sensitive receptors to emissions of TACs from onsite project-generated construction-related and operation-related sources for the complex is discussed below.

Onsite Construction-Related Equipment Emissions

Similar to the single facility, construction of the level II infill correctional facility complex at the RJD Infill Site would result in short-term, project-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment used for site preparation (e.g., excavation, grading, and clearing); paving; application of architectural coatings; and other miscellaneous activities. Refer to Impact 3.1-4a for discussion of Diesel PM and how its health risk (i.e., the potential exposure to TACs being compared to applicable standards) is determined. The use of off-road heavy-duty diesel equipment would be limited to the construction period, which is approximately 28 months for the level II infill correctional facility complex. Studies show that diesel PM is highly dispersive (i.e., concentration decreases 70 percent at 500 feet from source) (ARB 2006, Zhu and Hinds 2002).

The nearest offsite sensitive receptors in the infill site vicinity are described under Impact 3.1-4a above. Because the use of off-road, heavy-duty equipment would be temporary and the nearest sensitive receptor is more than 500 feet from the infill site (the distance associated with a 70 percent decrease in emissions), project-generated, construction-related emissions of TACs would not result in the exposure of sensitive receptors to substantial pollutant concentrations.

Onsite Operation-Related Stationary-Source Emissions

Similar to the proposed single facility, development of the level II infill correctional facility complex at the RJD Infill Site would include stationary sources of TACs, such as diesel- or natural gas–fueled backup generators, to provide backup utility services to the main facility (see Impact 3.1-4a above). A general discussion of stationary sources of TACs is provided under Impact 3.1-4a above.

With regard to proposed sensitive receptors (e.g., inmates onsite), ARB's Community Health Air Pollution Information System identifies no major stationary sources of TACs exist within 3 miles of the infill site. Thus, development of the level II infill correctional facility complex would not result in the

placement of sensitive receptors within ARB-recommenced separation distances considered for the information system. Consequently, development of the level II infill correctional facility complex would not result in the exposure of sensitive receptors (existing or proposed) to substantial pollutant concentrations from stationary sources.

With regard to construction-related activities, the use of off-road, heavy-duty equipment would be temporary, and the nearest sensitive receptor is more than 500 feet from the RJD Infill Site (i.e., sufficient distance from emission sources that excessive concentrations of diesel PM would not occur at the receptor). For any proposed stationary sources of TACs, CDCR would comply with applicable SDAPCD rules and regulations for permitted stationary sources, and development of the level II infill correctional facility complex would not locate any proposed sensitive receptors within ARB-recommended separation distances from emission sources. As a result, development of the level II infill correctional facility complex at the RJD Infill Site would not result in the exposure of sensitive receptors (existing or proposed) to substantial pollutant concentrations. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.1-5b: Exposure of Sensitive Receptors to Odors [Complex]

Similar to the proposed single facility (Impact 3.1-5a above), no existing major sources of objectionable odors (e.g., landfill, wastewater treatment plant, food processing facility) are located within 1 mile of the infill site and no major agriculture-related odor sources (e.g., livestock operations) are located within 2 miles. Development of the level II infill correctional facility complex would not introduce new, permanent odor-generating facilities, nor would it place receptors substantially closer to existing sources of odors. Any onsite odor sources (e.g., fryers, charbroilers, solid waste disposal areas) would be controlled under SDAPCD nuisance regulations and California Department of Public Health emission reduction mandates that limit exhaust emissions from cooking sources. Thus, development of the level II infill correctional facility complex would not expose nearby existing receptors to objectionable odors.

Similar to the proposed single facility (Impact 3.1-5a above), construction of the level II infill correctional facility complex would result in odors from exhaust emissions from onsite diesel equipment, asphalt paving, and painting. Such emissions would be intermittent in nature and would dissipate rapidly with increasing distance from the source.

Development of the level II infill correctional facility complex at the RJD Infill Site would not involve the construction or operation of any major odor sources, and no existing sources of objectionable odors are located within 1 mile of the infill site. Thus, development of the level II infill correctional facility complex would not be anticipated to result in the exposure of sensitive receptors to objectionable odors. As a result, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

3.2 BIOLOGICAL RESOURCES

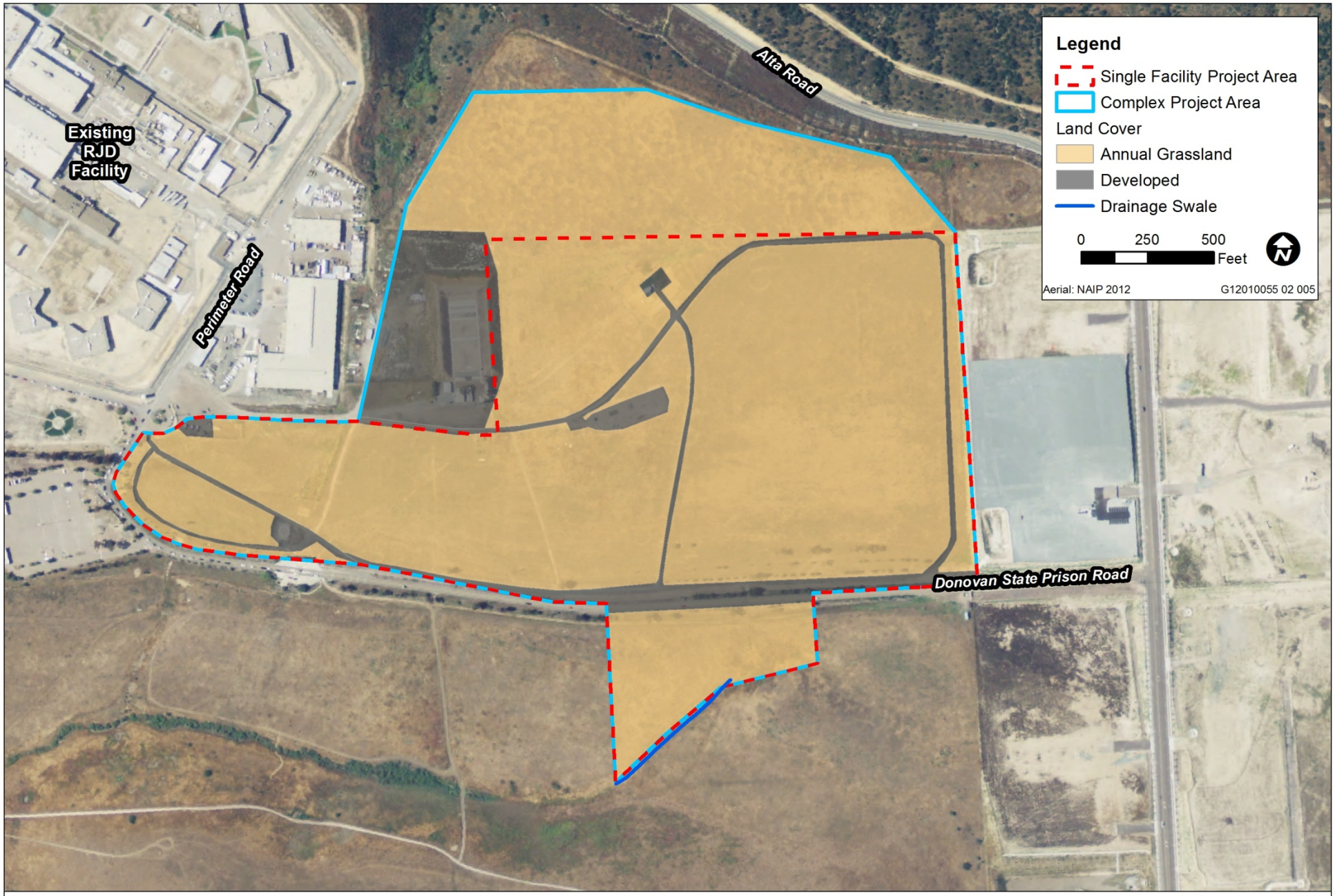
This section describes the biological resources on and in the vicinity of the Richard J. Donovan (RJD) Infill Site; describes relevant regulations pertaining to biological resources; and addresses potential impacts on biological resources that could result from construction and operation of the project. The analysis includes a description of the existing environmental conditions, the methods used for assessment, the impacts associated with developing a level II infill correctional facility at RJD, and the mitigation measures that would address significant impacts. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. Information in this section is based on data collected during reconnaissance-level field surveys, biological database searches, and review of other relevant documentation for the infill site and surrounding area, including the following documents:

- *Draft Environmental Impact Report, California Health Care Facility (San Diego)* (California Prison Health Care Receivership Corporation 2008: 4.7-1 - 4.7-32)
- *San Diego Multiple Species Conservation Program – South County Subarea Plan* (County of San Diego 1997)
- *Baseline Biological Resources Report for the Chula Vista Central City Preserve* (RECON 2004)
- California Natural Diversity Database (CNDDB) Search (CNDDB 2013)
- California Native Plant Society (CNPS) Inventory (CNPS 2013)

3.2.1 ENVIRONMENTAL SETTING

The infill site is located within the existing RJD property in the Otay subregion of San Diego County two miles north of the United States/Mexico border and 18 miles southeast of downtown San Diego. The site is situated on a mesa between two canyons (O'Neal Canyon to the north and Johnson Canyon to the south) and is within the Otay River watershed in the eastern foothills of the San Ysidro Mountains. Drainage is split between two subwatersheds: O'Neal Canyon watershed to the north and Johnson Canyon watershed to the south. The majority of the infill site is flat, but becomes sloped near the northern boundary as it approaches O'Neal Canyon, and the elevation ranges from approximately 610 to 670 feet. Native soils on the site consist of Stockpen gravelly clay loam, which has high shrink swell potential and is partially friable when dry, and fill soils up to 2 feet deep are also present on the site.

Vegetation on the RJD Infill Site is characterized by annual grassland with scattered California sage shrubs near the northern boundary and ornamental trees along the north side of Donovan State Prison Road. The infill site is mowed periodically to control vegetation and reduce fire risk and the entire site has been subjected to past disturbances from historical agricultural uses. There are dirt roads traversing the site and a residential trailer site and firing range are also present. The infill site contains a single drainage swale south of Donovan State Prison Road that would be used to construct a detention basin. The drainage swale is formed from surface water infiltration and flows into Johnson Canyon. This feature does not have a defined bed and bank and does not support riparian or hydrophytic vegetation. There are two concrete-lined gutters on the infill site, one along the north side of Donovan State Prison Road and one at the toe of the firing range berm along the eastern boundary, used to capture stormwater runoff. Exhibit 3.2-1 shows the vegetation and habitat types on the RJD Infill Site, including developed areas. The infill site is surrounded by the existing RJD State Prison Facilities to the west, and open space, including the Otay Ranch Open Space Preserve, O'Neal Canyon, and Johnson Canyon Open Space Preserve, to the north, east, and south. Scattered rural residential, mixed industrial, and other institutional land uses are also present in the surrounding area.



Source: adapted by Ascent Environmental 2013

Exhibit 3.2-1

Habitat Types at RJD Infill Site

COMMON VEGETATION AND WILDLIFE

Vegetation on the infill site consists of annual grassland. This community is characterized by a diverse mixture of annual grasses and forbs and dominated by nonnative species including foxtail barley (*Hordeum murinum* ssp. *leporinum*), Italian ryegrass (*Festuca perennis*), red brome (*Bromus madritensis* ssp. *rubens*), filaree (*Erodium* spp.), black mustard (*Brassica nigra*), tumbleweed (*Salsola tragus*), and Australian saltbush (*Atriplex semibaccata*). A few broom baccharis (*Baccharis sarothroides*) and coast goldenbush (*Isocoma menziesii* var. *menziesii*) shrubs are scattered throughout the annual grassland near the northern perimeter of the site and rows of ornamental trees, including eucalyptus (*Eucalyptus* spp.), Chinese tallowtree (*Triadica sebifera*), and Peruvian pepper tree (*Schinus molle*), line the southern boundary along Donovan State Prison Road. Although the site is mowed or dragged annually to clear vegetation, vegetative cover in the annual grassland is fairly dense, especially in the northern portion of the site.

Annual grassland provides habitat for a wide variety of wildlife species. Some of the common wildlife species observed or expected on the infill site include lesser goldfinch (*Carduelis psaltria*), red-tailed hawk (*Buteo jamaicensis)*, Cassin's kingbird (*Tyrannus vociferans*), savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), house finch (*Carpodacus mexicanus*), mourning dove (*Zenaida macroura*), gopher snake (*Pituophis catenifer*), western fence lizard (*Sceloporus occidentalis*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), raccoon (*Procyon lotor*), desert cottontail (*Sylvilagus audubonii*), and coyote (*Canis latrans*).

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under the California Environmental Quality Act (CEQA), California Fish and Game Code, California Endangered Species Act (CESA), Federal Endangered Species Act (ESA), Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

SPECIAL-STATUS SPECIES

Special-status species include plants and animals in the following categories:

- species officially listed by the State of California or the Federal government as endangered, threatened, or rare;
- candidates for state or Federal listing as endangered, threatened, or rare;
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- species identified by the California Department of Fish and Wildlife (CDFW) as species of special concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local or regional planning documents; and
- taxa considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR). The CDFW system includes five rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:
  - CRPR 1A - Plants presumed to be extinct in California;
  - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
  - CRPR 2 - Plants that are rare, threatened, or endangered in California but more common elsewhere;
  - CRPR 3 - Plants about which more information is needed (a review list); and
  - CRPR 4 - Plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW’s California Natural Diversity Database (CNDDB), regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, and 2 may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines CCR Section 15380. CDFW recommends that CRPR 1A, 1B, and 2 species be addressed in CEQA projects. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Section 15380; however, these species may be evaluated by the lead agency on a case by case basis to determine significance criteria under CEQA.

The term “California species of special concern” is applied by CDFW to animals not listed under the federal ESA or CESA, but that are nonetheless declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist.

A list of special-status species that could potentially occur on the RJD Infill Site or immediate vicinity was developed primarily through review of California Natural Diversity Database (CNDDB 2013) and California Native Plant Society (CNPS) Inventory (CNPS 2013) records of previously documented occurrences of special-status species in the Dulzura, Imperial Beach, Jamul Mountains, National City, Otay Mesa, and Otay Mountain, U.S. Geological Survey 7.5-minute quadrangles (quads).

Special-Status Plants

The RJD Infill Site is located in a region rich in habitat diversity and many rare and endemic plant species are known to occur in the region. Eighty special-status plant species have been documented in the CNDDB and CNPS Inventory nine-quad search area; however, most of these species do not have potential to occur on the infill site due to a lack of suitable habitat. Table 3.2-1 lists the 70 plant species that were immediately eliminated from further evaluation in this document because they are restricted to particular soil types (e.g., serpentinite, gabbroic, or metavolcanic) or habitat types (e.g., cismontane woodland, closed-cone coniferous forest, chaparral, coastal scrub, sand dunes, desert scrub, riparian scrub or woodland, coastal salt marsh, freshwater marsh, and vernal pool) that are not present on the RJD Infill Site.

Table 3.2-1 Special-Status Plant Species Considered but Eliminated from Further Evaluation Due to a Lack of Suitable Habitat or Microhabitat on the RJD Infill Site

Species	Species	Species
San Diego thornmint *Acanthomintha ilicifolia*	Orcutt’s bird’s-beak *Dicranostegia orcuttiana*	Mud nama *Nama stenocarpum*
Shaw’s agave *Agave shawii* var. *shawii*	Orcutt’s dudleya *Dudleya attenuata* ssp. *orcuttii*	Spreading navarretia *Navarretia fossalis*
San Diego bur-sage *Ambrosia chenopodiifolia*	Blochman’s dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	Prostrate vernal pool navarretia *Navarretia prostrata*
Singlewhorl burrobrush *Ambrosia monogyra*	Palmer’s goldenbush *Ericameria palmeri* var. *palmeri*	Coast woolly-heads *Nemacaulis denudata* var. *denudata*
Aphanisma *Aphanisma blitoides*	San Diego button-celery *Eryngium aristulatum* var. *parishii*	Slender cottonheads *Nemacaulis denudata* var. *gracilis*
Otay manzanita *Arctostaphylos otayensis*	Cliff spurge *Euphorbia misera*	Dehesa nolina *Nolina interrata*
Dean’s milk-vetch *Astragalus deanei*	Palmer’s frankenia *Frankenia palmeri*	California orcutt grass *Orcuttia californica*
San Diego milk-vetch *Astragalus oocarpus*	Chaparral ash *Fraxinus parryi*	Baja California birdbush *Ornithostaphylos oppositifolia*

Table 3.2-1 Special-Status Plant Species Considered but Eliminated from Further Evaluation Due to a Lack of Suitable Habitat or Microhabitat on the RJD Infill Site

Species	Species	Species
South Coast saltscale *Atriplex pacifica*	Mexican flannelbush *Fremontodendron mexicanum*	Gander's ragwort *Packera ganderi*
Encinitas baccharis *Baccharis vanessae*	Desert bedstraw *Galium proliferum*	Brand's star phacelia *Phacelia stellaris*
Golden-spined cereus *Bergerocactus emoryi*	Tecate cypress *Hesperocyparis forbesii*	Otay Mesa mint *Pogogyne nudiuscula*
Orcutt's brodiaea *Brodiaea orcuttii*	Beach goldenaster *Heterotheca sessiliflora* ssp. *sessiliflora*	Cedros Island oak *Quercus cedrosensis*
Dunn's mariposa lily *Calochortus dunnii*	Ramona horkelia *Horkelia truncata*	Nuttall's scrub oak *Quercus dumosa*
Lakeside ceanothus *Ceanothus cyaneus*	Otay Mountain lotus *Hosackia crassifolia* var. *otayensis*	Moreno currant *Ribes canthariforme*
Otay Mountain ceanothus *Ceanothus otayensis*	Decumbent goldenbush *Isocoma menziesii* var. *decumbens*	Santa Catalina Island currant *Ribes viburnifolium*
Wart-stemmed ceanothus *Ceanothus verrucosus*	San Diego marsh-elder *Iva hayesiana*	Small-leaved rose *Rosa minutifolia*
Orcutt's pincushion *Chaenactis glabriuscula* var. *orcuttiana*	Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Munz's sage *Salvia munzii*
Salt marsh bird's-beak *Chloropyron maritimum* ssp. *maritimum*	Gander's pitcher sage *Lepechinia ganderi*	Chaparral ragwort *Senecio aphanactis*
Delicate clarkia *Clarkia delicata*	Robinson's pepper-grass *Lepidium virginicum* var. *robinsonii*	Purple stemodia *Stemodia durantifolia*
San Miguel savory *Clinopodium chandleri*	Sea dahlia *Leptosyne maritima*	Oil nestraw *Stylocline citroleum*
Summer holly *Comarostaphylis diversifolia* ssp. *diversifolia*	Nuttall's lotus *Lotus nuttallianus*	Estuary seablite *Suaeda esteroa*
San Diego sand aster *Corethrogyne filaginifolia* var. *incana*	Felt-leaved monardella *Monardella hypoleuca* ssp. *lanata*	Parry's tetracoccus *Tetracoccus dioicus*
Snake cholla *Cylindropuntia californica* var. *californica*	Jennifer's monardella *Monardella stoneana*	
Tecate tarplant *Deinandra floribunda*	Willowy monardella *Monardella viminea*	

The potential for occurrence of the remaining 10 special-status plant species was evaluated further based on habitat requirements, geographic distribution, and elevation range, as described in Table 3.2-2. On May 9, 2013 an Ascent botanist conducted a survey for the special-status plant species identified in Table 3.2-2 as having potential to occur on the RJD Infill Site. The survey was conducted according to guidelines established by the USFWS and CDFW. No special-status plants were found during the survey, but a single gumplant (*Grindelia* sp.) that was not yet flowering was identified. Because the survey was conducted outside of the blooming period of San Diego gumplant, this species cannot be ruled out and a second survey will be required when the plant is blooming. The potential for any special-status plants to occur on the RJD Infill Site is fairly low because the site is regularly mowed to

reduce fire risk. No special-status plants were found during previous botanical surveys of potentially suitable habitat conducted in late May 2008 (California Prison Health Care Receivership Corporation 2008: 4.7-1). The 2008 survey was conducted by a qualified botanist and included focused surveys for perennial shrub and cactus species as well as Otay tarplant. Because multiple surveys have been conducted during the appropriate blooming periods when target species, besides San Diego gumplant, would have been clearly identifiable, all special-status plant species except for San Diego gumplant are considered to be absent from the RJD Infill Site at this time.

Table 3.2-2 Special-Status Plant Species with Potential to Occur in Grassland Habitats in the Vicinity of the RJD Infill Site

Species	Status[1]			Habitat and Blooming Period	Potential to Occur on the Infill Site
	ESA	CESA	CRPR		
California adolphia *Adolphia californica*	–	–	2.1	Clay soils in chaparral, coastal scrub, and grassland habitat; 150 to 2,500 feet elevation. Blooms December-May.	Low potential; marginally suitable habitat is present. This species was not found during protocol-level surveys.
San Diego ambrosia[2] *Ambrosia pumila*	E	–	1B.1	Sandy loam or clay soils in chaparral, coastal scrub, or grassland habitats; often in disturbed areas; sometimes alkaline; 65 to 1,400 feet elevation. Primarily found on upper terraces of rivers and drainages, but also within the watershed of a large vernal pool in Riverside County (USFWS 2010: 2). Blooms April-October.	Unlikely to occur because the site is not on a river or other drainage terrace and there are no vernal pools on the site. This species was not found during protocol-level surveys.
Coulter's saltbush *Atriplex coulteri*	–	–	1B.2	Alkaline or clay soils in coastal bluff scrub, coastal scrub, coastal dunes, or annual grassland; often in disturbed habitats 10 to 1,500 feet elevation. Blooms March-October.	Low potential; marginally suitable habitat is present. This species was not found during protocol-level surveys.
San Diego goldenstar[2] *Bloomeria clevelandii*	–	–	1B.1	Clay soils in chaparral, coastal scrub, and grassland; 165 to 1,500 feet elevation. Blooms April-May.	Low potential; marginally suitable habitat is present. This species was not found during protocol-level surveys.
Round-leaved filaree *California macrophylla*	–	–	1B.1	Clay soils in cismontane woodland and grassland; 50 to 4,000 feet elevation. Blooms March-May.	Low potential; marginally suitable habitat is present. This species was not found during protocol-level surveys.

Table 3.2-2 Special-Status Plant Species with Potential to Occur in Grassland Habitats in the Vicinity of the RJD Infill Site

Species	Status[1]			Habitat and Blooming Period	Potential to Occur on the Infill Site
	ESA	CESA	CRPR		
Long-spined spineflower *Chorizanthe polygonoides* var. *longispina*	–	–	1B.2	Chaparral, coastal scrub, and grassland habitats on clay lenses with little to no competing vegetation. Sometimes on the periphery of vernal pools and meadows; 100 to 5,000 feet elevation. Blooms April-July.	Unlikely to occur; the specific microhabitat conditions required for this species are not found on the infill site.
Otay tarplant[2] *Deinandra conjugens*	T	E	1B.1	Clay soils in coastal scrub and grassland habitats; 80 to 1,000 feet elevation. Blooms May-June.	Low potential; marginally suitable habitat is present. This species was not found during protocol-level surveys.
Variegated dudleya[2] *Dudleya variegata*	–	–	1B.2	Clay soils in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland; below 1,500 feet elevation. Blooms April-June.	Low potential; marginally suitable habitat is present. This species was not found during protocol-level surveys.
San Diego barrel cactus[2] *Ferocactus viridescens*	–	–	2.1	Sandy to rocky sites in chaparral, valley grassland, and coastal scrub; 10 to 1,500 feet elevation.	Unlikely to occur, suitable soils are not present and no cactus species have been observed on the site. This species was not found during protocol-level surveys.
San Diego gumplant *Grindelia hallii*	–	–	1B.2	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland; 600 to 6,000 feet elevation. Blooms July-October.	Low potential; marginally suitable habitat is present. A single gumplant was found during surveys but could not be identified to the species level because it was not flowering during a survey in May. An additional survey during the blooming period will be conducted.

Notes: USFWS = U.S. Fish and Wildlife Service; CDFW = California Department of Fish and Wildlife; CRPR=California Rare Plant Rank; CNDDB = California Natural Diversity Database; ESA = Federal Endangered Species Act; CESA = California Endangered Species Act

[1] Legal Status Definitions

Federal Endangered Species Act (ESA):
E Endangered (legally protected)
T Threatened (legally protected)

California Endangered Species Act (CESA):
T Endangered (legally protected)

California Rare Plant Ranks:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
.1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat)
.2 Fairly endangered in California (20 to 80% of occurrences are threatened)

[2] Species covered under the San Diego County Multiple Species Conservation Program (MSCP).

Sources: CNDDB 2013; CNPS 2013; data compiled by Ascent in 2013

Special-Status Wildlife

Forty-seven special-status wildlife species have been documented in the CNDDB nine-quad search area and past biological survey of the RJD Infill Site. The following 20 of these species were immediately eliminated from further evaluation in this document because they are restricted to particular habitat types (e.g., chaparral, coastal sage scrub, vernal pools, streams, ponds, marsh, riparian woodland and forest) that are not present on the RJD Infill Site:

- San Diego fairy shrimp (*Branchinecta sandiegoensis*),
- Riverside fairy shrimp (*Streptocephalus woottoni*),
- Arroyo toad (*Anaxyrus californicus*),
- Western spadefoot (*Spea hammondii*),
- Silvery legless lizard (*Anniella pulchra pulchra*),
- Orangethroat whiptail (*Aspidoscelis hyperythra*),
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*),
- Two-striped garter snake (*Thamnophis hammondii*),
- Green turtle (*Chelonia mydas*),
- Western pond turtle (*Emys marmorata*),
- Coastal cactus wren (*Campylorhyncus brunneicapillus sandiegensis*),
- Western snowy plover (*Charadrius alexandrius nivosus*),
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*),
- Yellow warbler (*Dendroica petechial brewsteri*),
- Southwestern willow flycatcher (*Empidonax traillii extimus*),
- Yellow-breasted chat (*Icteria virens*),
- California black rail (*Laterallus jamaicensis coturniculus*),
- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*),
- Light-footed clapper rail (*Rallus longirostris levipes*), and
- California least tern (Sternula antillarum browni).

The potential for the remaining 27 special-status wildlife species to occur on the RJD Infill Site is evaluated in Table 3.2-3 based on habitat requirements, geographic distribution, and elevation range.

Table 3.2-3 Special-Status Wildlife with Potential to Occur in the Vicinity or the RJD Infill Site

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Invertebrates				
Quino checkerspot butterfly *Euphydryas editha quino*	E	–	Sunny openings within chaparral & coastal sage shrublands. Needs high densities of its food plants *Plantago erecta*, *Plantago insularis*, and *Orthocarpus purpurascens.*	Unlikely to occur; suitable habitat and food plants not present. There are numerous CNDDB records of this species within 5 miles of the infill site.

Table 3.2-3 Special-Status Wildlife with Potential to Occur in the Vicinity or the RJD Infill Site

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Amphibians and Reptiles				
Red-diamond rattlesnake *Crotalus ruber*	–	SC	Rocky outcrops, heavy brush, or areas of rugged terrain in chaparral, sage scrub, or desert scrub on coastal or desert slopes (SDCWA and USFWS 2010: Appendix B, pg. 219). Needs rodent burrows, rock crevices, or surface cover objects.	Unlikely to occur; no suitable habitat is present. There are no CNDDB records of this species within 5 miles of the infill site; however, this species was documented in Chula Vista during surveys conducted for the Central City Preserve (RECON 2004:3,5).
Coast horned lizard[2] *Phrynosoma blainvillii*	–	SC	Lowlands along sandy washes with scattered low bushes, open areas for sunning, patches of loose soil for burial, and abundant supply of ants and other insects.	Unlikely to occur; no suitable habitat is present. There are 5 CNDDB records of this species within 5 miles of the infill site, the nearest being approximately 1 mile southeast. This species has also been documented adjacent to the East Mesa Detention Facility site approximately 1 mile north of the infill site (Stantec 2004: 3.31).
Coronado Island skink *Plestiodon skiltonianus interparietalis*	–	SC	Generally found in rocky areas close to streams or on dry hillsides in grassland, chaparral, pinyon-juniper, juniper sage woodland, pine-oak and pine forests in Southern coast ranges. Prefers early successional stages or open areas.	Unlikely to occur; the particular microhabitat preferred by this species is not present on the infill site. There are no CNDDB records of this species within 5 miles of the infill site.
Birds				
Tricolored blackbird[2] *Agelaius tricolor* (nesting colony)	–	SC	Forages in agricultural lands and grasslands, especially in areas with high insect production; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs.	No suitable nesting habitat is present on the infill site, but species could forage onsite. There are no CNDDB records of this species within 5 miles of the infill site. A tricolored blackbird LEF mortality was recorded on the RJD site in 2005.
Grasshopper sparrow *Ammodramus savannarum* (nesting)	–	SC	Nests and forages in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs.	Could nest in annual grassland habitat on the infill site. Detected on site in April and June 2009 (EDAW/AECOM 2009) and May 2013.
Golden eagle[2] *Aquila chrysaetos* (nesting and wintering)	–	FP	Forages in large open areas of foothill shrub and grassland habitats and occasionally croplands. Nest primarily in cliff-walled canyons.	Unlikely to nest onsite; migrating and nonbreeding individuals could forage in the grasslands onsite. There are no CNDDB records of this species within 5 miles of the infill site.
Burrowing owl[2] *Athene cunicularia* (burrow sites)	–	SC	Nests and forages in dry, open grasslands, agricultural lands, and desert and scrub habitats with low-growing vegetation and existing ground squirrel burrows or friable soils.	Known to occur; in May 2013 a pair was occupying a burrow at the firing range

Table 3.2-3 Special-Status Wildlife with Potential to Occur in the Vicinity or the RJD Infill Site

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Northern harrier[2] *Circus cyaneus* (nesting)	–	SC	Nests and forages in grasslands, agricultural fields, and marshes.	Could nest and forage in the grassland on the infill site. Species was observed foraging over the site during the reconnaissance survey in January 2013. There are no CNDDB records of this species within 5 miles of the infill site; however, this species was documented in Chula Vista during surveys conducted for the Central City Preserve (RECON 2004: 4, 5).
White-tailed kite *Elanus leucurus* (nesting)	–	FP	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.	Could occur; suitable grassland foraging habitat and suitable nest trees present. A white-tailed kite was observed roosting on the infill site during the reconnaissance survey in January 2013 and foraging on the site in April 2013. There are no CNDDB records of this species within the nine quads containing and surrounding the infill site; however, this species was documented in Chula Vista during surveys conducted for the Central City Preserve (RECON 2004: 4, 5).
Coastal California gnatcatcher[2] *Polioptila californica californica*	T	–	Coastal sage scrub in arid washes, on mesas, and on slopes.	Unlikely to nest on the site. Scattered shrubs near the northern site boundary are unlikely to support nesting because the habitat is more characteristic of grassland and chaparral communities.. Focused surveys for this species were conducted on the infill site and surrounding area in 2009 and the species was not found. There are numerous CNDDB records of this species within 5 miles of the infill site.
Least Bell's vireo[2] *Vireo bellii pusillus* (nesting)	E	E	Nests placed along margins of bushes or on twigs projecting into pathways. Usually nests in willow, Baccharis, or mesquite shrubs in low riparian habitat near water or in dry river bottoms.	Unlikely to nest onsite; no riparian habitat is present on the infill site. Focused surveys for this species were conducted on the infill site and surrounding area in 2009 and the species was not found. There are several CNDDB records of this species within 5 miles of the infill site.
Mammals				
Pallid bat *Antrozous pallidus*	–	SC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats. Roosts in rock crevices, oak hollows, bridges, or buildings.	Unlikely to occur; no suitable roosting habitat is present. There are no CNDDB records for this species within 5 miles of the infill site.
Mexican long-tongued bat *Choeronycteris mexicana*	–	SC	Roosts in well-lit caves or buildings. Forages on night-blooming succulents.	Unlikely to occur; no suitable roosting or foraging habitat is present. There are no CNDDB records for this species within 5 miles of the infill site.

Table 3.2-3 Special-Status Wildlife with Potential to Occur in the Vicinity or the RJD Infill Site

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Townsend's big-eared bat *Corynorhinus townsendii*	_	SC	Typically roosts in caves; however, colonies of <100 individuals occasionally nest in buildings or bridges and hollow trees. Forages in all habitats except alpine and subalpine, though most commonly in moist forests and woodlands.	Unlikely to occur; no suitable roosting habitat is present. There are no CNDDB records for this species within 5 miles of the infill site.
Western mastiff bat *Eumops perotis californicus*	_	SC	Roosts in crevices in cliff faces, high buildings, trees & tunnels. Forages in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral.	Unlikely to occur; no suitable roosting habitat is present. There is one CNDDB record for this species within 5 miles of the infill site (approximately 1.5 miles north along the Otay River at Dam Canyon).
Western red bat *Lasiurus blossevill*	_	SC	Roosts primarily in tree foliage, especially in cottonwood, sycamore, and other riparian trees or orchards. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging, including grasslands, shrublands, and open woodlands.	Unlikely to occur. The infill site does not contain riparian habitat with suitable roost trees. There is one CNDDB record for this species within 5 miles of the infill site (approximately 1 mile north along the Otay River at Dam Canyon).
Western yellow bat *Lasiurus xanthinus*	_	SC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees; especially palm trees, and forages over water or among trees.	Unlikely to occur. The infill site does not contain riparian habitat or palm oases with suitable roost trees or open water for foraging. There are no CNDDB records for this species within 5 miles of the infill site.
California leaf-nosed bat *Macrotus californicus*	_	SC	Desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub, and palm oasis habitats. Roosts in mines or caves.	Unlikely to occur; no suitable habitat is present. There are no CNDDB records for this species within 5 miles of the infill site.
Pocketed free-tailed bat *Nyctinomops femorosaccus*	_	SC	Roosts in rocky areas with high cliffs within a variety of arid habitats including pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian.	Unlikely to occur; no suitable habitat is present. There is one CNDDB record for this species within 5 miles of the infill site (approximately 1.25 miles north along the Otay River at Dam Canyon).
Big free-tailed bat *Nyctinomops macrotus*	_	SC	Roosts in high cliffs or rocky outcrops in arid habitats.	Unlikely to occur; no suitable roosting habitat is present. There are no CNDDB records for this species within 5 miles of the infill site.

Table 3.2-3 Special-Status Wildlife with Potential to Occur in the Vicinity or the RJD Infill Site

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	–	SC	Intermediate canopy stages of shrub habitats, grassland, and herbaceous openings and edges of coastal scrub.	Known to occur; suitable habitat is present and species has been observed onsite in 2003 and 2005 and during the reconnaissance survey in January 2013. There are several CNDDB records for this species within 5 miles of the infill site.
San Diego woodrat *Neotoma lepida intermedia*	–	SC	Coastal scrub with moderate to dense canopy cover, especially in rock outcrops, rocky cliffs, and slopes.	Unlikely to occur; no suitable habitat is present on the infill site. There is one CNDDB record of this species within 5 miles of the infill site from west of Brown Field Naval Air Station.
Dulzura pocket mouse *Chaetodipus californicus femoralis*	–	SC	Generally found in chaparral-covered slopes (SDCWA and USFWS 2010: Appdx B, pg. 289), also grassland-chaparral edges.	Unlikely to occur; no chaparral habitat is present. There is only one CNDDB record in the nine-quad search area and it is a 1917 record from Dulzura. There are no CNDDB records for this species within 5 miles of the infill site.
Northwestern San Diego pocket mouse *Chaetodipus fallax fallax*	–	SC	Sandy, herbaceous areas within coastal scrub, chaparral, and grassland, usually in association with rocks or coarse gravel.	Unlikely to occur; the particular microhabitat conditions (sandy soils) preferred by this species are not found on the infill site. There is one CNDDB record for this species within 5 miles of the infill site from west of Brown Field Naval Air Station.
Pacific pocket mouse *Perognathus longimembris pacificus*	E	–	Narrow coastal plains from the Mexican border north to el Segundo. Seems to prefer alluvial sands near the ocean.	Unlikely to occur; no suitable habitat is present on the infill site. There are no CNDDB records for this species within 5 miles of the infill site.
American badger[2] *Taxidea taxus*	–	SC	Drier open shrub, forest, and herbaceous habitats with friable soils.	Although soils onsite are friable and the site is contiguous with other grassland areas, it is unlikely to den on the infill site due to the level of human activity and lighting in the area. No potential den areas were observed during burrowing owl surveys of the site in April 2013. There is one CNDDB record for this species within 5 miles of the infill site from Poggi Canon approximately 4.5 miles northwest.

Note: CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service

[1] Legal Status Definitions

Federal:
PD Proposed for Delisting
D Delisted (no ESA protection)
E Endangered (legally protected)
T Threatened (legally protected)

State:
FP Fully protected (legally protected)
SC Species of special concern (no formal protection other than CEQA consideration)
E Endangered (legally protected)
T Threatened (legally protected)

[2] Species covered under the San Diego County Multiple Species Conservation Program (MSCP).

Sources: CNDDB 2013; EDAW/AECOM 2009, Shuford and Gardali 2008; USFWS 2008; data compiled by Ascent in 2013

SENSITIVE HABITATS AND SPECIAL-STATUS PLANT COMMUNITIES

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, Section 404 of the CWA, and the State's Porter-Cologne Act, as discussed under "Regulatory Background" below. Sensitive natural habitat may be of special concern to these agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species.

CDFW maintains a list of plant communities that are native to California. Within that list, CDFW identifies special-status plant communities (a.k.a. sensitive natural communities), which they define as communities that are of limited distribution statewide or within a county or region and often vulnerable to environmental effects of projects (CNDDB 2013: ix). These communities may or may not contain special-status species or their habitat. Special-status plant communities are tracked in the CNDDB, a statewide inventory of the locations and conditions of the state's rarest plant and animal taxa and vegetation types. None of the plant communities present on the RJD Infill Site are included on CDFW's list of special-status plant communities and there are no streams or other aquatic resources that would potentially be subject to regulation under Section 1602 of the California Fish and Game Code or Section 404 of the CWA. There are ditches and an erosional drainage swale on the site that may be considered waters of the state subject to regulation under the Porter-Cologne Act; however, the ditches were constructed in uplands and are lined with concrete and, therefore, provide no wetland habitat value. The drainage swale does not have a defined channel and does not support wetland or riparian vegetation and likewise provides no wetland habitat value. Potential water quality and runoff impacts associated with these ditches and the drainage swale are addressed in section 3.7, "Hydrology and Water Quality," of this volume.

Wetlands and Other Waters of the United States

There are no wetlands or other waters of the United States on the RJD Infill Site. Although the National Wetlands Inventory shows a freshwater emergent wetland in the southwest corner of the site there are no topographical, hydrological, or vegetative indicators of any kind of wetland present at this location and a review of historical aerial imagery dating back to 1994 did not reveal any wetland signatures. The drainage swale feature does not have a defined bed and bank and does not support wetland or riparian vegetation; therefore, this feature would not be considered a water of the United States.

3.2.2 REGULATORY CONSIDERATIONS

A list of the applicable biological-resource-related federal and state plans, policies, regulations, and laws is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Federal Endangered Species Act - Persons and parties subject to ESA are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under Federal jurisdiction or in violation of state law.
- Clean Water Act
  - Section 404 - Section 404 of the CWA requires a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of the U.S., including wetlands. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.

  - Section 401 - Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine RWQCBs.
- Migratory Bird Treaty Act - The Migratory Bird Treaty Act (MBTA) provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- California Endangered Species Act - The California Endangered Species Act (CESA) directs state agencies not to approve projects that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of a species.
- California Fish and Game Code
  - Lake and Streambed Alteration (Section 1602) - Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by CDFW, or use any material from the streambeds, without first notifying DFG and obtaining a final agreement authorizing such activity.
  - Fully Protected Species - Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code describe the take prohibitions for fully protected birds, mammals, reptiles and amphibians, and fish. Species listed under these statutes may not be taken or possessed at any time and no incidental take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.
  - Protection of Bird Nests and Raptors - Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors. Typical violations include destruction of active raptor nests as a result of tree removal and failure of nesting attempts, resulting in loss of eggs and/or young, because of disturbance of nesting pairs by nearby human activity.
- Porter Cologne Water Quality Control Act - Under the Porter-Cologne Act, California must adopt water quality policies, plans, and objectives to ensure that the state's beneficial uses for water are reasonably protected. Each RWQCB must prepare and update basin plans to set forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, the California Department of Corrections and Rehabilitation (CDCR) is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of potential conflicts with relevant local plans and policies is provided because such conflicts could indicate the potential occurrence of other physical environmental effects.

SAN DIEGO COUNTY

San Diego County General Plan

The following General Plan Conservation and Open Space Element goals and policies related to biological resources are relevant to the RJD Infill Site:

- **Policy COS-2.1: Protection, Restoration, and Enhancement.** Protect and enhance natural wildlife habitat outside of preserves as development occurs according to the underlying land use designation. Limit the degradation of regionally important natural habitats within the Semi-Rural and Rural Lands regional categories, as well as within Village lands where appropriate.
- **Policy COS-2.2: Habitat Protection through Site Design.** Require developments to be sited in the least biologically sensitive areas and minimize the loss of natural habitat through site design.
- **Policy COS-3.1: Wetland Protection.** Require development to preserve existing natural wetland areas and associated transitional riparian and upland buffers and retain opportunities for enhancement.
- **Policy COS-3.2: Minimize Impacts of Development.** Require development projects to:
  - Mitigate any unavoidable losses of wetlands, including habitat functions and values and
  - Protect wetlands, including vernal pools, from a variety of discharges and activities, such as dredging or adding fill material, exposure to pollutants such as nutrients, hydromodification, land and vegetation clearing, and the introduction of invasive species.

San Diego County Multiple Species Conservation Program

The San Diego County Multiple Species Conservation Program (MSCP) (1998) is a comprehensive, long-term habitat conservation plan which addresses the needs of multiple species and the preservation of natural vegetation communities in San Diego County. The MSCP addresses the potential impacts of urban growth, natural habitat loss and species endangerment and creates a plan to mitigate for the potential loss of Covered Species and their habitat due to the direct impacts of future development of both public and private lands within the MSCP area. The MSCP is a subregional plan under the Natural Communities Conservation Program, which will be implemented through local subarea plans. The County's Subarea Plan and its associated Implementing Agreement establish the conditions under which the County, for the benefit of itself and of public and private landowners and other land development project proponents within its Subarea boundaries, will receive from the U.S. Fish and Wildlife Service (USFWS) and CDFW certain long-term take authorizations (and an acknowledgment that the MSCP satisfies conditions established in the Section 4(d) Special Rule for the coastal California gnatcatcher) which will allow the taking of certain Covered Species incidental to land development and other lawful land uses which are authorized by the County. The MSCP provides coverage for 85 species.

The RJD Infill Site is located within the MSCP area, South County Subarea, for which a Subarea Plan was approved in 1997. The RJD Infill Site is within an area identified as a "take authorized area." Preservation of habitat as a part of the MSCP was designed to offset impacts within such areas to mitigate for the loss of any covered plant and animal species. Development in take authorized areas, as identified in the MSCP and County Subarea Plan, may proceed consistent with the terms of the MCSP with no further biological mitigation. Immediately west of RJD is the Otay Ranch Open Space Preserve, which is identified as a "hardline preserve area" in the MSCP, indicating that the land has been dedicated as open space in perpetuity. The infill developments do not include any uses that would be adjacent to the preserve.

San Diego County Biological Mitigation Ordinance

The County's Biological Mitigation Ordinance (BMO) enables the County of San Diego to implement the MSCP described above, and sets out specific mitigation requirements for impacts to covered species. The ordinance states that no project requiring a discretionary permit shall be approved unless a finding is made that the project is consistent with the MSCP, the County Subarea Plan, and the provisions of this ordinance. However, the ordinance sets forth a number of exemptions including an exemption for take authorized areas identified in the MSCP. Because the infill site is within a take authorized area, it is exempt from the measures outlined in the BMO.

STATEWIDE ELECTRIFIED FENCE PROJECT HABITAT CONSERVATION PLAN

Development of level II infill correctional facilities at the infill site would include a lethal electrified fence (LEF) similar to those found at state prisons throughout California. Contact with the LEF can result in accidental wildlife electrocution and mortality. CDCR prepared a statewide EIR to assess impacts on wildlife resulting from operation of the LEFs at 25 existing state prisons and four future planned facilities and to identify feasible mitigation measures. CEQA documents prepared for the Statewide Electrified Fence Project include the Draft Environmental Impact Report (DEIR), Statewide Electrified Fence Project (CDC 1996a); Final Environmental Impact Report (FEIR), Statewide Electrified Fence Project (CDC 1997); and FEIR Addendum, Statewide Electrified Fence Project (CDC 1999). Annual monitoring reports have been prepared in compliance with the incidental take permits, which summarize the implementation and monitoring of compensatory mitigation and document the results of wildlife mortality monitoring (CDC 2003, 2004 and CDCR 2005-2012).

Impacts of the LEF on species covered by ESA and CESA, and migratory birds, were evaluated further in 1999 when CDCR prepared a Habitat Conservation Plan (HCP) for the Statewide Electrified Fence Program. USFWS and CDFW issued threatened and endangered species take permits covering 62 wildlife species to CDCR for the 27 prisons in the project on June 12, 2002. The permits expire in 2052. The Statewide Electrified Fence Program's HCP covers mortality of species protected by ESA, CESA, and the Migratory Bird Treaty Act (MBTA), caused by accidental electrocution on the LEF. The HCP does not cover prison construction of any kind and does not address habitat loss or degradation.

The approved HCP for the Statewide Electrified Fence Program includes numerous mitigation measures designed to minimize wildlife use in areas near the LEFs and to deter wildlife from making contact with the LEFs. An extensive feasibility evaluation was conducted over several years by CDCR to determine which mitigation measures were biologically effective, cost effective, and viable based on weather, security, maintenance, and operational issues. Mitigation in the HCP was organized and implemented in three tiers. Tier 1 includes operational measures designed to modify or remove habitat or other attractants to wildlife from the secured perimeter area of each prison. Tier 2 involves installing exclusion and deterrent devices on LEFs and in the perimeters. Tier 3 includes a compensation package designed to offset the residual loss of wildlife resources at each prison as a result of electrocution risks that remain even after Tiers 1 and 2 have been implemented. The plan also includes a wildlife mortality monitoring program. In this program a qualified biologist visits each institution that has an operational LEF 3 times per year and identifies carcasses of animals collected from the perimeter of the LEF by CDCR staff and inspects compliance with Tier 1 and Tier 2 measures.

Operation of the LEFs has been monitored intensively and regularly, in coordination with USFWS and CDFW, since 1993. No endangered or threatened species have been electrocuted by any of CDCR's fences (per annual monitoring reports CDC 2003, 2004 and CDCR 2005 – 2012). Because of this record, and supporting biological analyses in the locations of these facilities, CDCR constructed LEFs around four additional facilities not covered by the HCP (after consultation with USFWS and CDFW). CDCR has implemented the same three-tier mitigation approach and the same intensive monitoring at these additional prisons as was implemented with the 27 facilities (26 operational fences) covered by the HCP. No take of endangered species has occurred at the facilities not covered by the HCP. Although the electrified fence associated with the contemplated development of level II infill correctional facilities at RJD would not be covered under the Statewide Electrified Fence HCP, the HCP provides a useful framework for assessing impacts and determining appropriate mitigation approaches for the development of the infill site.

3.2.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact related to biological resources if it would do any of the following:

- have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan; and
- 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; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

The State CEQA Guidelines (Section 15064.5) define “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Riparian habitats and other sensitive natural communities: No riparian communities or other sensitive natural communities are present on the infill site. Development of a level II infill correctional facility at the RJD Infill Site would not result in direct removal of any sensitive natural community or riparian habitat and would not include alteration of any streams or development or uses adjacent to any streams or other sensitive natural communities. Therefore, developing a level II infill correctional facility at the infill site would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS. This issue is not discussed further.

Wetlands: No wetlands or other potential waters of the United States are present on the infill site. Therefore, developing a level II infill correctional facility at the infill site would not result in a substantial adverse effect on Federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means. This issue is not discussed further.

Wildlife nurseries and migratory routes: No native wildlife nursery sites or established migratory routes pass through the infill site that are vital for the movement of any resident or migratory fish or wildlife species or population. Development of a level II infill correctional facility at the infill site would not interfere substantially with the movement of native resident or migratory wildlife species because the site is surrounded by open space that provides ample wildlife movement opportunities and the site

does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated. The site is not within a core linkage area, as identified in the MSCP that could provide important connections between preserves or core populations of covered species. Common and sensitive wildlife species are expected to continue to use O'Neal Canyon, Johnson Canyon and other open space areas surrounding the prison property after development of a level II infill correctional facility. Therefore, developing a level II infill correctional facility at the RJD Infill Site would not have an impact on wildlife movement or nursery sites. This issue is not discussed further.

Local policies: County General Plan policies regarding biological resources are specifically focused on protection, restoration, and enhancement of natural habitats and wetlands. Because the infill site is located on an existing prison facilities site that is mowed periodically and does not currently and has not historically supported wetlands, developing a level II infill correctional facility at the infill site would not conflict with policies to protect, restore, and enhance natural habitats and wetlands. Furthermore, developing a level II infill correctional facility at the infill site would not conflict with the County's BMO because it is within a take authorized area and these areas are exempt from the BMO. Therefore, developing a level II infill correctional facility at the infill site would not conflict with any local policies or ordinances protecting biological resources. This issue is not discussed further.

Habitat conservation plan: The RJD Infill Site is located within a take authorized area of the adopted South County Subarea of the San Diego County MSCP. Areas designated for take authorization under the MSCP were considered as likely to be developed in the foreseeable future. Loss of covered plant and animal species within take authorized areas have been offset through the preservation in perpetuity of habitat within MSCP hardline preserve areas, such as the Otay Ranch Open Space Preserve, with no additional mitigation requirements. Development and operation of a level II infill correctional facility at the RJD Infill Site would not result in development or uses adjacent to MSCP preserve lands and all development would occur within take authorized areas. Therefore, development and operation of a level II infill correctional facility at the RJD Infill Site would not conflict with the provisions of the adopted MSCP If covered species are not observed during focused surveys, then no further participation in the MSCP is necessary as part of the development of level II correctional facilities at the RJD Infill Site If covered species are observed on the RJD Infill site, then avoidance and minimization measures will be implemented as described below, including coordination with the MSCP through the administrative permit process . This issue is not discussed further.

Survival of species: The infill site provides limited value to wildlife species and development of the site would not eliminate any habitat important to the long-term survival of any species or community and would not substantially reduce the number or restrict the range of any species. This issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.2-1a: Impacts on Special-Status Plants [Single Facility]

A protocol-level survey was conducted at the RJD Infill Site for the following seven special-status plant species determined to have low potential to occur in the onsite annual grassland habitat: California adolphia, Coulter's saltbush, San Diego goldenstar, Round-leaved filaree, Otay tarplant, varigated dudleya, and San Diego gumplant, as described in Table 3.2-2. All of these species were determined to

be absent except for San Diego gumplant. Gumplant that could not be identified beyond the genus level since surveys were conducted outside of the blooming period for San Diego gumplant was found outside the northern firing range berm. Construction of a single, level II infill correctional facility at the infill site could result in direct mortality of this gumplant, which could potentially be San Diego gumplant, a CRPR 1B species.

Construction of a single, level II infill correctional facility at RJD could result in the removal of a special-status plant. Loss of special-status plants would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-1

CDCR will implement the following measures to reduce impacts on special-status plants:

- Prior to any vegetation removal or ground disturbance, and during the blooming period of San Diego gumplant (July-October), a qualified botanist will visit the infill site and make a positive identification of the gumplant.
- If the gumplant is determined not to be San Diego gumplant, the botanist will document the findings in a letter report to USFWS, CDFW, and CDCR and no further mitigation will be required.
- If the gumplant is determined to be San Diego gumplant and it cannot be avoided during construction CDCR will consult with CDFW to determine the appropriate mitigation measures for direct and indirect impacts that could occur as a result of developing a level II infill correctional facility and will implement the agreed-upon mitigation measures. Mitigation measures may include preserving and enhancing existing populations, creation of offsite populations on mitigation sites through seed collection or transplantation, and/or restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat or individuals. A mitigation and monitoring plan will be developed describing how unavoidable losses of special-status plants will be compensated. San Diego gumplant is not covered under the MSCP.
- If relocation efforts are part of the mitigation plan, the plan will include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements.

Success criteria for preserved and compensatory populations will include:

- The extent of occupied area and flower density in compensatory populations will be equal to or greater than the affected occupied habitat.
- Compensatory and preserved populations will be self-producing. Populations will be considered self-producing when:
  - plants reestablish annually for a minimum of 5 years with no human intervention such as supplemental seeding; and
  - reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the infill vicinity.

If offsite mitigation includes dedication of conservation easements, purchase of mitigation credits, or other offsite conservation measures, the details of these measures will be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above, and other details as appropriate to target the preservation of long term viable populations

Significance after Mitigation

Implementing Mitigation Measure 3.2-1 would reduce significant impacts on special-status plants (San Diego gumplant) to a **less-than-significant** level because it would require CDCR to provide compensation for loss of San Diego gumplant through creation of offsite populations, conservation easements, or other appropriate measures based on consultation with CDFW.

Impact 3.2-2a: Impacts on Raptors [Single Facility]

Based on a review of the vegetation on and near the infill site, large ornamental trees on the infill site along the north side of Donovan State Prison Road could provide potential nest sites for white-tailed kite and common raptors, such as red-tailed hawk, red-shouldered hawk, American kestrel, and great horned owl, which are protected under Section 3503.5 of the Fish and Game Code. Additionally, approximately 72 acres of onsite annual grassland habitat could be temporarily disturbed during construction. This grassland habitat could provide nesting habitat for northern harriers, which are ground-nesting raptors. As noted in Chapter 2, “Project Description” of this volume of the DEIR, only 35 acres would be permanently impacted as a result of development of the infill site.

During surveys of the infill site, a pair of burrowing owls were observed in May 2013 occupying a burrow in the firing range. No other burrowing owl or sign of burrowing owl were observed on the infill site. The grassland vegetation on the infill sites was taller (between 12 and 36 inches) and more dense than is typically suitable for burrowing owl, which tend to prefer sparsely vegetated, open habitats. No other raptors are currently nesting on the project site. An unoccupied stick nest was observed during surveys on April 11 and May 9, 2013 surveys in a eucalyptus tree along Donovan State Prison Road. Although a red-tailed hawk and a white tailed kite were observed foraging on the infill site, neither species perched on or near the nest tree and neither exhibited behavior typical during breeding (e.g., vocalizations, circling). Additional focused surveys will be conducted as the 2013 breeding season progresses for burrowing owls and other nesting raptors. Although no other raptors besides burrowing owl are currently nesting on the infill site, there is suitable nesting habitat and raptors could nest on the site in the future.

Construction of the single, level II infill correctional facility at the RJD Infill Site would require removal of approximately five nonnative eucalyptus and Chinese tallow trees that are landscaping along the existing entrance road. If trees, burrows, or grassland vegetation would be removed during the raptor breeding season (February–August), and if an active nest were present, mortality of eggs and chicks could result. In addition, construction on the infill site could disturb active nests near the construction site or in trees or other vegetation not yet removed from the infill site, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Burrowing owls need burrows at all times to survive and displacing individuals from their burrows can result in indirect impacts such as predation, increased energetic costs, increased stress, and risks associated with having to find and compete for burrows, all of which can lead to take or reduced reproduction.

Construction of a single, level II infill correctional facility at the RJD Infill Site may disturb nesting raptors located on or near the infill site, resulting in nest abandonment by adult birds and abandonment of chicks and eggs, causing mortality. The potential loss of an active raptor nest and the loss of a burrowing owl would be considered significant.

Mitigation Measures

Mitigation Measure 3.2-2a

CDCR will implement the following measures to reduce impacts on nesting raptors (white-tailed kite, northern harriers, and common raptors, such as red-tailed hawk, red-shouldered hawk, American kestrel, and great horned owl):

- Tree removal will be completed outside of the breeding season (between September 1 and February 15).

- For construction activities occurring between February 16 and August 31, consistent with CDFW protocol, CDCR will retain a qualified biologist to conduct preconstruction surveys for nesting raptors (white-tailed kite, northern harriers, and common raptors, such as red-tailed hawk, red-shouldered hawk, American kestrel, and great horned owl) to identify active nests on and within 500 feet of the infill site. The surveys will be conducted no more than 30 days before the beginning of construction activities that could remove trees or otherwise disturb nesting raptors.

- If active nests are found, impacts on nesting raptors will be avoided by establishing a 500-foot buffer around the nests. No development activity will commence within the buffer area until a qualified biologist confirms that any young have fledged and the nest is no longer active. The size of the buffer may be adjusted if a qualified biologist, in consultation with CDFW, determines that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist will be required if the activity has potential to adversely affect the nest.

Mitigation Measure 3.2-2b

CDCR will implement the following measures to reduce impacts on burrowing owl:

- CDCR will retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 1,500 feet of the infill site. Surveys will be conducted prior to the start of construction activities and in accordance with Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (2012). Two of four surveys to be conducted during the 2013 breeding season were conducted on April 11 and May 9. A pair of burrowing owls have initiated a nest site within the existing firing range. Two additional surveys will be conducted on May 31, 2013 and June 28, 2013, which will determine if the nesting attempt is successful. CDCR will consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion and relocation plan will be developed in consultation with CDFW. Owls will be relocated outside of the impact area using passive or active methodologies developed *i*n consultation with CDFW and may include active relocation to MSCP preserve areas if approved by CDFW and the County preserve managers. No burrowing owls will be excluded from occupied burrows until the burrowing owl exclusion and relocation plan is approved by CDFW.

- During the breeding season (February 1 through August 31), any occupied burrows will not be disturbed/destroyed and will be provided with a 150- to 1,500-foot protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer will depend on the time of year and level disturbance as outlined in the CDFW Staff Report (2012, pg 9).The size of the buffer may

be reduced if a broad-scale, long-term, scientifically- rigorous monitoring program is implemented to ensure burrowing owls are not detrimentally affected. Once the fledglings are capable of independent survival, the owls will be relocated outside the impact area and the burrow will be destroyed to prevent owls from reoccupying it.

- If active burrows would be destroyed by development of the infill facility outside of the breeding season, CDCR will obtain an administrative permit under the MSCP and comply with the measures in the exclusion and relocation plan. Because the infill site is within an MSCP take authorized area, impacts to covered species, including burrowing owl, have been compensated through creation of the MSCP preserves and no further compensatory mitigation would be required. Implementation of the MSCP conserves approximately 5,770 acres of potential burrowing owl habitat and 4,000 acres of known suitable burrowing owl habitat.

Significance after Mitigation

Implementing Mitigation Measures 3.2-2a and 3.2-2b would reduce significant impacts on northern harrier, burrowing owl, and other raptors to a **less-than-significant** level because it would ensure that these species are not disturbed during nesting so that construction would not result in nest abandonment and loss of eggs or young. Because the RJD Infill Site is within a take authorized area of the MSCP, loss of burrowing owl and northern harrier habitat removed from the infill site has been compensated through creation of hardline preserves, including O'Neal Canyon to the northeast, that preserve high-quality habitat for these species in perpetuity.

Impact 3.2-3a: Impacts on Nesting Birds [Single Facility]

As described in Table 3.2-3, California gnatcatcher is not expected to nest on or adjacent to the RJD Infill Site. There is no coastal sage scrub on the site and the scattered shrubs present near the northern perimeter of the infill site and adjacent vegetation in O'Neal Canyon are not likely to provide suitable nesting habitat. No gnatcatchers were documented in the infill site during previous protocol-level surveys. However, grasshopper sparrow, a ground-nesting species that is a California species of special concern, was documented in the grasslands at the northern edge of the site during the breeding season (EDAW/AECOM 2009) and was seen and heard singing in the same area in May 2013.

Vegetation removal and ground disturbances associated with construction and operation of a new level II infill correctional facility could result in direct destruction of active nests of grasshopper sparrow or other birds protected under the MBTA. Project construction could also result in disturbance of breeding birds causing nest abandonment by the adults and mortality of chicks and eggs. While loss of some nests of common migratory bird species (e.g., mourning dove, western meadowlark) would not be considered a significant impact because it would not result in a substantial effect on their populations locally or regionally, destruction of any migratory bird nest is a violation of the MBTA and Section 3503 of the California Fish and Game Code.

Implementation of a single, level II infill correctional facility at the RJD Infill Site could result in the loss of grasshopper sparrow nests. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-3

CDCR will implement the following measures to avoid or minimize loss of grasshopper sparrow nests:

a. To minimize the potential for loss of active grasshopper sparrow a nests, project activities will commence during the nonbreeding season (September 1-February 31), including removal of grassland and shrub vegetation. If all suitable nesting habitat is removed during the nonbreeding season, no further mitigation will be required.

b. If it is not feasible to remove vegetation prior to the breeding season (March 1-August 31), CDCR will retain a qualified biologist to conduct preconstruction surveys for grasshopper sparrow on and within 50 feet of the infill site. The surveys will be conducted no more than 7 days before construction commences.

c. If active grasshopper sparrow nests are found, a 50-foot no-disturbance buffer will be established around the nest site until the breeding season has ended or a qualified biologist determines the young have fledged.

Significance after Mitigation

Implementation of Mitigation Measure 3.2-3 would reduce significant impacts on grasshopper sparrow to a **less-than-significant** level because it would require preconstruction surveys to identify active nests and measures to avoid or minimize disturbances of active nests so that project construction would not result in nest abandonment and loss of eggs or young.

Impact 3.2-4a: Impacts on San Diego Black-Tailed Jackrabbit [Single Facility]

Annual grassland habitat on the RJD Infill Site is suitable for San Diego black-tailed jackrabbit and this species has been observed on the infill site. However, the site is routinely mowed or dragged to remove vegetation and this disturbance likely precludes San Diego black-tailed jackrabbit from depending on the site as important habitat. Therefore, impacts on San Diego black-tailed jackrabbits from construction of the single facility that results in the temporary disturbance of up to approximately 72 acres of annual grassland is considered a less-than-significant impact.

*Construction and operation of a single, level II infill correctional facility at the RJD Infill Site is not likely to result in loss of important habitat for black-tailed jackrabbits. This would be a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.2-5a: Mortality of Wildlife Species from the Lethal Electrified Fence [Single Facility]

Development of the infill site with a single, level II infill correctional facility at the RJD Infill Site would include installation and operation of an LEF within the prison's security perimeter, which would likely result in the death of an undetermined number of animals. Lethal electrocution would result when an animal touches two wires simultaneously or touches one wire and an electrical ground. Based on monitoring data collected at the operational LEF at RJD, a number of native birds and mammals are likely to be killed on the electrified fence. Birds are by far the most common wildlife group electrocuted, with mammals making up a relatively small percentage.

Based on 10 years of mortality monitoring data, approximately 36 individuals of native birds and mammals are killed per year at RJD. Most of these are species protected under the MBTA and California Fish and Game Code. Approximately 8 percent of the species killed at these locations are considered "sensitive" species, but none are protected by the ESA or CESA. Sensitive species include those that meet the definition of special-status described above (i.e., wildlife species identified by DFW as species of special concern), as well as common raptor species, and are covered by CDCR's Statewide Electrified Fence HCP. Mortality of sensitive species at RJD for ten years between June

2002 and June 2012 included 12 American kestrels, one barn owl, two San Diego black-tailed jackrabbits, two burrowing owls, eight great horned owls, and one tricolored blackbird.

The existing LEF is 9,130 feet in length at RJD. The contemplated LEF around the single, level II infill facility would be 3,566 feet in length, or 39 percent of total length of the existing fence at RJD. Although expected wildlife mortality should not be calculated strictly on a per-linear foot basis due to considerations of surrounding land uses, adjacent habitat types, species behavior, and other ecological factors at a particular site, it is anticipated that mortality of native wildlife species from a LEF would be approximately 14 individuals per year on average. Less than one individual is expected to be a sensitive species. Based on comparison with mortality data from the operational LEF at RJD sensitive species that could be killed by the LEF at the infill site include American kestrel, great horned owl, black-tailed jackrabbit, and burrowing owl. Common native species likely to be killed by the LEF at the infill site include desert cottontail, house finch, red-winged blackbird, and California ground squirrel.

Implementation of a single, level II infill correctional facility at RJD could result in mortality of sensitive and common wildlife species due to electrocution by contacting the lethal electrified fence, which could result in a substantial reduction of the local populations of the affected species over time. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-5

CDCR will consult with USFWS and CDFW regarding development of a level II infill correctional facility at the infill site and anticipated wildlife mortality and will take appropriate actions to minimize wildlife electrocutions to the extent feasible and compensate for impacts on native wildlife species. It is anticipated that this will be accomplished by following the mitigation approached in the Statewide Electrified Fence HCP although the development of a level II infill correctional facility at the infill site would not be covered by the HCP, as it was not contemplated at the time the HCP was prepared. A monitoring program consistent with the monitoring program established in the Statewide Electrified Fence HCP (CDC 1999b) would be developed to document wildlife mortality and ensure compliance with Tier 1 and Tier 2 measures. The tiered mitigation approach used by the HCP to offset potential adverse effects on birds protected under MBTA and the California Fish and Game Code is outlined below.

Tier 1: These mitigation measures are designed to eliminate or reduce wildlife attractants near the prison perimeter by implementing specific maintenance and operation procedures. By making the perimeter less hospitable, wildlife will frequent this area less often, thus reducing their exposure to accidental electrocution. Tier 1 maintenance and operation procedures will include:

- Minimization of vegetation in the vicinity of the electrified fence perimeter. This will include removal of vegetation growing between and adjacent to chain link fences that surround electrified fences and keeping the first 100 feet of vacant land outside the perimeter and patrol road free of vegetation. Landscaping vegetation near the electrified fence will be minimized and will be trimmed or mowed to reduce its attractiveness to wildlife. Facility landscaping will be designed to provide as little cover and as few foraging and nesting opportunities as possible. Detailed information, including recommended landscape plantings that are less attractive to wildlife, can be found in the Handbook to Reduce Wildlife Use (CDC1996b).

- Minimization of standing water near the fence perimeter. Rainwater will not be allowed to stand in or near the perimeter for more than 24 hours after a storm. Localized recontouring, excavation of ditches, and placement of gravel will occur to prevent ponding. Weeds, grasses, or emergent vegetation will be removed from ditches regularly.

- Timely correction of erosion gaps and spaces under fencing. Inner and outer chain link fences will be inspected weekly to ensure that no gaps or spaces have formed. All eroded areas will be filled with soil or gravel as soon as feasible to prevent animals from entering electrified-fence areas.

- Proper storage of materials and waste. To the extent feasible, equipment, supplies, rubble, or pallets will not be stored (temporarily or permanently) within 200 feet of either side of the fence perimeter. Garbage cans and dumpsters will be covered at all times and emptied as often as required to prevent overflow. The area within 200 feet of the fence perimeter will be kept free of all trash, litter, and loose food waste.

Tier 2: These mitigation measures consist of both exclusion and deterrent devices. Tier 2 measures to be installed on the contemplated electrified fence are listed below.

- Vertical netting. Past analysis of the locations of carcasses has shown that wildlife kills were typically the result of animals contacting the lowest nine wires, because wires are vertically closer together, resulting in more opportunities for birds to contact two lethal wires or a wire and a ground. Install three-quarter-inch mesh vertical netting enveloping both sides of the lower section of the electrified fence, which will prevent most birds from contacting the fence.

- Anti-perching wire. Several birds have been electrocuted as a result of contacting electrified wires while perching, or attempting to perch, on the grounding brackets and fence posts of the electrified fence. Anti-perching wires, which consist of 2- to 4- inch pieces of stiff wire connected to an aluminum base, will be strategically attached to the tops of perching sites in and near the perimeter. Once installed, this wire will reduce the ability of birds to perch near the electrified fence, thus reducing exposure to accidental electrocutions.

Tier 3: These mitigation measures compensate for residual wildlife mortality impacts. CDCR will contribute funds to an existing non-profit organization that creates and manages habitat enhancement areas that would improve opportunities for reproductive success of birds likely to be adversely affected by the infill facility. Based on the mortality of sensitive species at RJD for ten years between June 2002 and June 2012, bird species that may be adversely affected include, but are not limited to, American kestrels, barn owl, burrowing owls, great horned owls, and tricolored blackbird. Mechanisms for implementing the mitigation will be similar to those previously utilized by CDCR for the Statewide and Six Prison Electrified Fence Projects and may include additional funding for a project to which CDCR has already contributed as part of these existing projects. The Sacramento valley will be targeted, but mitigation could be implemented at federal, state, or private lands located anywhere in California if the lands support a large percentage of the species at risk of electrocution at the infill site. The amount of funding contributed would depend on the acreage of habitat that would benefit from the mitigation. The mitigation acreage required would be determined based on the anticipated annual mortality of native birds and the area required to support an equivalent number of individuals of the species at greatest risk of electrocution.

Significance after Mitigation

With the implementation of tiered mitigation measures as described in the mitigation for Impact 3.2-5, impacts on wildlife would be reduced by minimizing the number of animals killed by the electrified fence and compensating for unavoidable mortalities by preserving breeding habitat that will increase the reproductive success of affected species. As a result, this impact would be reduced to a **less-than-significant** level.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.2-1b: Impacts on Special-Status Plants [Complex]

Similar to construction of a single facility (see Impact 3.1-1a above), construction of a level II infill correctional facility complex at RJD would result in the temporary disturbance of approximately 91 acres of annual grassland habitat that has low potential to support seven special-status plant species. Although the acreage of annual grassland disturbance due to a complex at RJD would be approximately 20 acres greater than that of a single facility, the types of potential impacts to special-status plant species that would occur with development of a complex would be the same as for the single-facility because the same types of habitat would be disturbed. The annual grassland habitat has low potential to support seven special-status plant species: California adolphia, Coulter's saltbush, San Diego goldenstar, Round-leaved filaree, Otay tarplant, varigated dudleya, and San Diego gumplant, as described in Table 3.2-2. Therefore, the disturbance and/or removal of annual grassland could result in the loss of associated special-status plants.

Temporary disturbance of approximately91acres of annual grassland habitat associated with construction of a level II infill correctional facility complex at RJD could result in loss of special-status plants if they are present. Loss of special-status plants would be a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.2-1 (above).

Significance after Mitigation

Implementing Mitigation Measure 3.2-1 would reduce significant impacts on special-status plants to a **less-than-significant** level because it would require CDCR to identify and avoid special-status plants or provide compensation for loss of special-status plants not covered under the MSCP through creation of offsite populations, conservation easements, or other appropriate measures based on consultation with CDFW and/or USFWS. Because the infill site is within a take authorized area of the MSCP, loss of special-status plants covered under the MSCP has been compensated through creation of hardline preserves that preserve core populations of these species and their habitat in perpetuity.

Impact 3.2-2b: Impacts on Raptors [Complex]

Although the acreage of disturbance for a level II infill correctional facility complex at RJD would be greater than that of a single facility (see Impact 3.1-1a above), the potential impacts to nesting raptors that would occur with development of a complex would be the same as for the single-facility option because the same types of habitat (the ornamental trees along the north side of Donovan State Prison Road and annual grassland) and potential for nesting raptors to occur are present.

Construction and operation of a level II infill correctional facility complex at the RJD Infill Site may disturb nesting raptors located on or near the infill site, resulting in nest abandonment by adult birds and abandonment of chicks and eggs, causing mortality. The potential loss of an active raptor nest and the loss of a burrowing owl would be considered significant.

Mitigation Measures

Implement Mitigation Measures 3.2-2a and 3.2-2b (above).

Significance after Mitigation

Implementing Mitigation Measures 3.2-2a and 3.2-2b would reduce significant impacts on northern harrier, burrowing owl, and other raptors to a **less-than-significant** level because it would ensure that these species are not disturbed during nesting so that construction would not result in nest abandonment and loss of eggs or young. Because the RJD Infill Site is within a take authorized area of the MSCP, loss of burrowing owl and northern harrier habitat removed from the infill site has been compensated through creation of hardline preserves, including O'Neal Canyon to the northeast, that preserve high-quality habitat for these species in perpetuity.

Impact 3.2-3b: Impacts on Nesting Birds [Complex]

Although the acreage of a level II infill correctional facility complex at RJD would be greater than that of a single facility (see Impact 3.2-3a above), the potential impacts to nesting birds that would occur with development of a complex would be the same as for the single-facility option because the same types of habitat and potential for grasshopper sparrow to occur are present.

Construction and operation of a level II infill correctional facility complex at the RJD Infill Site may remove active nests or disturb nesting grasshopper sparrow located on or near the infill site resulting in nest abandonment by adult birds and abandonment of chicks and eggs causing mortality. The potential loss of an active nest would be considered a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.2-3 (above).

Significance after Mitigation

Implementing Mitigation Measure 3.2-3 would reduce potentially significant impacts on grasshopper sparrow to a **less-than-significant** level because it would ensure that nests are not disturbed so that construction would not result in nest abandonment and loss of eggs or young.

Impact 3.2-4b: Impacts on San Diego Black-Tailed Jackrabbit [Complex]

Although the acreage of annual grassland habitat impacted by construction of a level II infill correctional facility complex at RJD would be approximately 20 acres greater than that of a single facility, the potential impacts to black-tailed jackrabbit that would occur with development of a complex would be the same as for the single-facility option because the same types of habitat (annual grassland that provides suitable habitat for black-tailed jackrabbit) would be removed. Because this grassland is routinely disturbed to remove vegetation, the project would not result in loss of important habitat for black-tailed jackrabbit.

*Implementation of a level II infill correctional facility complex at RJD would not result in the loss of important habitat for black-tailed jackrabbit. This is a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.2-5b: Mortality of Wildlife Species from the Lethal Electrified Fence [Complex]

This impact would be greater than the single facility option (see Impact 3.2-5a above) because the contemplated LEF length would be 4,569 feet, which is 50 percent of the existing fence length at RJD. Based on the anticipated fence length of the level II infill correctional facility complex, wildlife mortality is

estimated to be 18 individuals per year, of which approximately one individual could be sensitive. The same types of species could be affected.

Implementation of a level II infill correctional facility complex at RJD could result in mortality of sensitive and common wildlife species due to electrocution by contacting the lethal electrified fence, which could result in a substantial reduction of the local populations of the affected species over time. This would be a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.2-5 (above). It should be noted that the compensatory mitigation that would be required would be greater than that of the single facility design to offset the greater loss of individuals.

Significance after Mitigation

With the implementation of tiered mitigation measures as described in the mitigation under Impact 3.2-5a, impacts on wildlife would be reduced by minimizing the number of animals killed by the electrified fence and compensating for unavoidable mortalities by preserving breeding habitat that will increase the reproductive success of affected species. As a result, this impact would be reduced to a **less-than-significant level**.

3.3 CULTURAL RESOURCES

This section discusses potential impacts on cultural resources that could result from development of a level II correctional facility at the R. J. Donovan (RJD) Infill Site. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. Cultural resources generally include buildings, sites, districts, structures, and objects significant in history, architecture, archaeology, culture, or science. Historic resources are generally defined as properties that are listed or have been determined eligible for listing on the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), or a local register or inventory of resources.

The analysis includes a description of the existing environmental conditions, research methods, impacts associated with development of a level II infill correctional facility at RJD, and recommended mitigation measures to address significant impacts. This section is based on a review of the following information:

- *Draft EIR for the California Health Care Facility at the R. J. Donovan Correctional Facility* (California Prison Health Care Receivership Corporation 2008) (because the evaluation conducted for the proposed California Health Care Facility [CHCF] at RJD covered the same area as the analysis for the RJD Infill Site (single-facility and complex options), it is appropriate to use this previous evaluation to support the following analysis),
- *Cultural Resources Technical Report for the Environmental Impact Report for Richard J. Donovan Correctional Facility at Rock Mountain San Diego County, California* (EDAW, Inc. 2008).
- a 2012 updated records search of the South Coastal Information Center (SCIC) of the California Historical Resources Information System (CHRIS), and
- an updated search of the Native American Heritage Commission (NAHC) Sacred Lands File

3.3.1 ENVIRONMENTAL SETTING

REGIONAL PREHISTORY

The prehistoric cultural sequence in San Diego County is generally conceived as comprising three basic periods: the Paleoindian, dated between about 12,500 and 8,000 years ago and manifested by the artifacts of the San Dieguito complex; the Archaic, lasting from about 8,000 to 1,500 years ago and manifested by the cobble and core technology of the La Jolla and Pauma complexes; and the Late Prehistoric, lasting from about 1,500 years ago to historic contact and marked by the appearance of ceramics, small arrow points, and cremation burial practices.

PALEOINDIAN PERIOD

The Paleoindian period in San Diego County is most closely associated with the San Dieguito Complex. The basal assemblages that make up the San Dieguito Complex are characterized by scraper planes, choppers, scraping tools, crescentics, elongated bifacial knives, and well-made leaf-shaped points. The best dated and most thoroughly investigated San Dieguito component was found at CA-SDI-149 (the C.W. Harris site), located on a terrace overlooking the San Dieguito River 55 kilometers (km) north of the present RJD site. Here, distinctive San Dieguito materials were found stratigraphically below materials characteristic of the early and late Archaic, and dated to more than 9,000 years before present (B.P.). The San Dieguito artifacts from the Harris site are “indistinguishable” from those of the Lake Mojave Complex of the Mojave Desert, with the exception of the absence of stemmed points. Like

the Lake Mojave materials, the San Dieguito complex materials are thought to represent an early emphasis on hunting. Aside from the Harris site, however, well-dated San Dieguito assemblages are uncommon, and the relationship between the San Dieguito and the subsequent La Jolla pattern of the Archaic is far from clear.

The large flake and cobble assemblages typical near Otay Mesa are somewhat reminiscent of the Harris Site assemblage, leading some researchers to provisionally assign a variety of Otay sites to the San Dieguito, though some argued that few Otay Mesa assemblages show the distinctive technological traits found at the Harris Site. This conclusion would seem to be supported by a compilation of radiocarbon dates from Otay Mesa and vicinity. Only a single site, CA-SDI-11079, yielded a suite of radiocarbon dates that suggests a San Dieguito time frame. This site had six dates ranging from 8,250 to 9,400 Radiocarbon Years Before Present (RYBP). One additional site, CA-SDI-10452, yielded a single pre-8,000 RYBP radiocarbon date.

ARCHAIC PERIOD

The economy of the Archaic period (8,000 B.P. to 1,500 B.P.) is usually thought to have had a more generalized subsistence pattern, possibly the result of environmental changes and population stress, with an emphasis on gathering shellfish, fish, and vegetal resources. This is indicated by the increased frequency of groundstone implements and the adoption of a mixed cobble/core-based tool assemblage, as well as heavy use of shellfish along the coast. In general, the Archaic artifact assemblage of coastal San Diego County is typified by the La Jolla Complex, a local manifestation of the widespread Millingstone Horizon. Although major technological change within the Archaic in San Diego County appears limited mainly to the introduction of Elko Series projectile points, there seems to have been some reorientation in settlement to inland settings during the latter portion of this period. This settlement shift appears to have occurred around 4,000 years ago and is thought to relate to the final phases of Holocene sea-level rise and resultant siltation of the formerly productive coastal lagoons. Archaic assemblages in interior northern San Diego County have been designated as the Pauma Complex, and this term has been applied to similar assemblages in the southern portion of San Diego County as well.

Gallegos' overview indicates that Otay Mesa was most intensively utilized during the Archaic period. Of 12 radiocarbon-dated localities on the mesa, 10 fall squarely within the generally accepted age range of the Archaic; one is earlier and one later. Although formal, temporally diagnostic tools are rare on the mesa, the lithic assemblages are generally consistent with this dating. It appears that Otay Mesa served primarily as a source of toolstone for Archaic groups that exploited coastal and riparian resources in the Otay and Tijuana River valleys and estuaries. Terrestrial subsistence resources on the mesa were probably also taken by these groups. The radiocarbon data would suggest that this pattern was much reduced by around 3,500 years ago and gone by about 2,000 years ago.

LATE PREHISTORIC PERIOD

The Late Prehistoric period shows evidence of technological changes, as evidenced by the appearance of small projectile points and ceramics. Projectile points commonly found in Late Prehistoric assemblages include Cottonwood Triangular and Desert Side-notched forms, both thought to mark the introduction of bow-and-arrow technology into the region. Ceramics, typically consisting of Tizon Brownware, may have been introduced slightly later than arrow points. These traits, together with the appearance of cremation burials, are thought to derive from desert areas to the east, either by population movement, diffusion, or a combination of both. The reason for the influx of cultural traits from the east is unclear, but desiccation of Lake Cahuilla in the Imperial Valley has been advanced as a partial explanation. The movement of some of these traits across the Takic/Yuman linguistic boundary, however, suggests that diffusion may also have played an important role in these shifts. In any case,

most settlement and subsistence data from San Diego County indicate that Late Prehistoric economy was oriented primarily toward terrestrial habitats, as opposed to the more maritime focus of the Archaic.

The increasing diversification and intensification was likely a result of environmental change, siltation of lagoons, or population increases. In general, it is thought that increasing emphasis was placed on plant collection and processing in the Late Prehistoric, as evidenced by abundant bedrock milling stations in the foothills and interior mountains. In the vicinity of Otay Mesa, the Late Prehistoric period seems to be best represented by sites in the Otay and Tijuana River valleys, where habitation sites were located. Exploitation of the mesa top is indicated by small arrow points and occasional ceramic shards, but no Late Prehistoric–period long-term habitation sites have been found there. It appears that the mesa was utilized by logistically organized groups operating out of habitation sites located in the river valley.

ETHNOGRAPHY

By the time Spanish colonists began to settle in California, the RJD Infill Site was within the territory of the Kumeyaay people, a group of intermarrying territorial bands, who spoke a Yuman language of the Hokan linguistic stock. The closely related Paipai inhabited northern Baja California, and the Takic-speaking Luiseño occupied a territory centered on the San Luis Rey River to the north. Three named Kumeyaay villages have been identified in the vicinity of Otay Mesa: *La Punta* near the mouth of the Otay River, *Otai* on the north side of the Otay River valley, and *Melejo* near the mouth of the Tijuana River.

The Kumeyaay were the first Alta California Native American group to be brought into the mission system, beginning in 1769, but they have maintained their cultural identity to a large degree. They are a federally recognized Indian tribe with active interest in the management of cultural resources. The Kumeyaay currently occupy several reservations in San Diego County, including Jamul, Campo, Sycuan, Viejas, Barona, Mesa Grande, and Santa Ysabel.

REGIONAL HISTORY

The Spanish period (1769–1821) began in San Diego with the establishment of the first mission in Alta California on Presidio Hill in 1769, but there is no record of historical developments on Otay Mesa during this period. After Mexico won its independence, the rancho system was expanded during the Mexican period (1821–1848). Otay Rancho was established east of the infill site but did not include the infill site itself. The infill site may have been used for stock grazing during this time. After California was ceded to the United States, the population of San Diego County increased substantially, although Otay Mesa was one of the last areas of San Diego to be developed due to the lack of water. Agricultural development of the Otay Mesa was spurred initially by the development of improved transportation systems in the late 19th century but was generally quite limited until after World War II. Technological improvements and regional population growth made truck farming on the mesa more attractive at that time. Nearby Brown Field was originally developed as a landing field during World War I and was much improved during World War II, when the runway was paved and most of the existing structures first built.

SITE INVESTIGATION

SCIC RECORDS SEARCH

Investigations to identify architectural and archaeological resources began with a records search for information about the RJD Infill Site. The records search was conducted at the SCIC and the Museum of Man and indicated a total of 87 reports that relate to the area within a 1-mile radius of the infill site. The entire infill site has been previously surveyed and archaeological resources have been previously identified. This included resources listed in the NRHP, CRHR, California Historical Landmarks,

California Points of Historic Interest, and the Historic Property Directory. Historic maps were also provided by the SCIC.

The results of the record search identified 105 archaeological sites and 28 isolates within a 1-mile radius of the infill site. Of the archaeological sites, 82 are prehistoric, 13 are historic, four are multicomponent sites, and six are unknown. The prehistoric sites consist of 59 lithic scatters, nine quarry areas and lithic scatters, four groundstone and lithic scatters, three open habitation sites, two village sites, two artifact scatters, one shell and lithic scatter, one temporary camp site, and one ceramics scatter. The historic sites consist of six refuse disposals, two homesteads, a filtration plant, a firing range, a flume, a rock wall, and a trough. The multicomponent sites include two temporary campsites and historic cisterns; a water tank and milling site; and a refuse disposal and lithic scatter.

Native American Consultation and Other Interested Parties

The NAHC was contacted regarding sacred sites in the area. They indicated there were no sacred sites listed for the area and provided a list of individuals to be contacted. All individuals on the list were sent a letter describing the project as well as a map of the location, and as of this date, no responses have been received.

Pedestrian Surveys

On June 4, 2008, field personnel performed a site visit to verify the previously recorded sites. Surface artifacts were relocated within the boundary of CA-SDI-8654 in the vicinity of the infill site. These included nine flakes and two cores, all of a metavolcanic material. These artifacts were either located within the dirt roads or in areas of only partial vegetation cover. No artifacts were relocated at CA-SDI-10069 or CA-SDI-10070, which was as expected since these two sites had been completely collected in 2003.

Resources on or Adjacent to the RJD Infill Site

The 2008 records search revealed that the entire project footprint has been previously surveyed for cultural resources using methods that are consistent with current standards (ICF International). Of the 133 cultural resources within a 1-mile radius of the RJD Infill Site, four cultural resources were identified within the infill site; these are described below. In June 2012, an updated records search of the SCIC, an updated search of the NAHC Sacred Lands File, and a review of aerial imagery of the infill housing facility sites were conducted. The updated SCIC records search identified six cultural resources that had been recorded subsequent to the previous (2008) records search within a 1-mile radius of the RJD Infill Site. None of these subsequently recorded sites were located on or within 0.25 mile of the RJD Infill Site.

CA-SDI-7214

This site, originally recorded in 1979, was described as a sparse lithic scatter. In 1990, the site boundary of CA-SDI-8654 (see below) was extended to incorporate the extent of CA-SDI-7214.

CA-SDI-8654

Also known as the Kuebler Ranch Site, CA-SDI-8654 is an expansive site that was first located in 1972 by Waters, and subsequently updated by WESTEC in 1979 (Gallegos and Flenniken 2000b). Prior to any archaeological study, the area encompassed by the site boundary was used for agricultural purposes and had been disturbed by plowing. The site was originally described as containing a dense assemblage of lithics and milling implements. The archaeological work performed on varying portions of the site has been well documented (Kyle et al. 1990, Kyle and Gallegos 1994, Gallegos et al. 1998, Gallegos and Flenniken 2000b). Those investigations are summarized below.

In 1982 and 1983, Cultural Systems Research, Inc. (CSRI) performed subsurface investigations on the northeastern portion of the site. Because of the data potential of the site, CSRI recommended that the site be eligible for the National Register of Historic Places. The mitigative data recovery effort indicated that the majority of the artifacts were located between ground level and 20 centimeters below ground surface. Despite the disturbances from agricultural practices, the results of this investigation indicate that the site had been occupied over a long period of time (CSRI 1983 in Kyle et al. 1990).

Smaller subsequent studies by WESTEC (1982) and RECON (1987) identified surface artifacts on the west side of Alta Road. There were conflicting accounts of the amount of subsurface material located within the right-of-way for the widening of Alta Road, since testing by RECON indicated that there was none. RECON's testing program consisted of two test excavation units located on the southern end of the portion of Alta Road that is within the site.

A data recovery program designed to mitigate the development impacts during the widening of Alta Road for the East Mesa Detention Facility project was undertaken in 1990 by Kyle et al. This large-scale effort included unit and backhoe trench excavation along the entire length of Alta Road north of Donovan State Prison Road up to the Otay Water District Gate. The site was redefined as a habitation site with food processing and tool-making areas. Based on dates obtained from shell and charcoal, the main occupation occurred 7,000 years B.P. In addition to the 11 hearth features that were recovered, the data recovery effort located a living floor and thousands of cultural artifacts on the east side of Alta Road. This portion of the site is a significant resource, as defined by Gallegos et al. (1998). The significant portion of the site is located outside the infill site. The investigators determined that the impacts resulting from construction to the road had been adequately mitigated and determined that no further work was needed for the southern portion of the site (Kyle et al. 1990).

Additional testing of the site was conducted in 1994 for a proposed expansion of RJD. Survey results from this field effort expanded the boundary to nearly twice its original size. Test excavation units, numerous backhoe trenches, and surface scrapes were collected to determine the significance of the site on the west side of Alta Road. Although an intact cultural deposit was discovered on a knoll east of Alta Road, it was determined that all portions of the site west of Alta Road are not significant under the definition provided in California Environmental Quality Act (CEQA). This work was reviewed by EDAW in 2008, which concurred with the conclusions that there is an absence of significant cultural materials onsite and that the area does not meet CEQA significance criteria.

A portion of the cultural deposit that was identified during the 1994 testing effort was then subject to archaeological investigation in 2000. This area was bounded on the north by Kuebler Ranch Road, on the west by Alta Road, and on the east and south by a seasonal drainage. The investigation consisted of surface collection, 31 backhoe trenches, and one test excavation unit. No artifacts were present in the subsurface deposits, and surface finds consisted of 40 lithic artifacts. Therefore, this portion of the site was deemed not significant under CEQA and not eligible to the CRHR.

CA-SDI-10069

The site record gives no information other than the location of the site. The site was tested in 2003 to determine its significance (Gallegos et al. 2003). The testing program included surface collection and the excavation of three shovel test pits. Limited lithic materials were recovered. Because the lack of artifacts greatly limits the data potential of a site, this site was seen as not significant. This work was reviewed by EDAW in 2008, which concurred with the conclusions that there is an absence of significant cultural materials onsite and that the work demonstrates that the area does not meet CEQA significance criteria.

CA-SDI-10070

The site record for this site gives no information other than the location of the site. The site was tested in 2003 to determine its significance (Gallegos et al. 2003). The testing program included surface collection and excavation of 12 shovel test pits and two 1-meter by 1-meter units. A total of 376 artifacts

were recovered, with the majority of those being lithic tools and debitage. Additional artifacts include groundstone, bone, and shell. The lithic analysis indicated that the site was used for procuring and processing vegetal resources. It was determined that this site would not produce any new data with research potential and, therefore, is not significant. This work was reviewed by EDAW in 2008, which concurred with the conclusions that there is an absence of significant cultural materials onsite and that the work demonstrates that the area does not meet CEQA significance criteria.

3.3.2 REGULATORY CONSIDERATIONS

A list of the applicable cultural resource-related federal and state plans, policies, regulations, and laws applicable to the RJD Infill Site is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- National Historic Preservation Act - The NHPA of 1966 established the National Register of Historic Places which guarantees recognition in planning for federal or federally-assisted projects. Section 106 of the NHPA requires that federal agencies consider the effects of their actions on significant archaeological properties prior to implementing a project or “undertaking.”

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- California Environmental Quality Act - Under CEQA, public agencies must consider the effects of their actions on both “historical resources” and “unique archaeological resources.” lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a proposed project’s impacts to historical resources. Section 15064.5 (e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains.
- California Native American Historical, Cultural, and Sacred Sites Act - The Act requires that upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are of a Native American, the coroner must notify the NAHC.
- Public Resources Code Section 5024-State-Owned Resources - Section 5024(f) requires state agencies to submit to SHPO documentation for any project having the potential to affect historical resources under its jurisdiction listed in or potentially eligible for inclusion in the NRHP, or are registered or eligible for registration as California Historical Landmarks.
- California Health and Safety Code - Section 7050.5 (b) of the California Health and Safety code specifies protocol when human remains are discovered.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, the California Department of Corrections and Rehabilitation (CDCR) is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

SAN DIEGO COUNTY LOCAL REGISTER OF HISTORICAL RESOURCES

According to County Ordinance 9493 (2002) and Section 396.7 of the County Administrative Code, the County requires that a resource be assessed for importance at the local level as well as the State level. If a resource meets any one of the criteria outlined in the Local Register, it will be considered important:

1. If a resource is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;
2. If a resource is associated with the lives of persons important to the history of San Diego County or its communities;
3. If a resource embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value; or
4. If a resource has yielded, or may likely yield, information important in prehistory or history.

RESOURCE PROTECTION ORDINANCE

The County's Resource Protection Ordinance (RPO) protects significant cultural resources. The RPO definition of a "Significant Prehistoric or Historic Site" is as follows:

> Location of past intensive human occupation where buried deposits can provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious or other ethnic value of local, regional, State or Federal importance. Such locations shall include, but not be limited to: any prehistoric or historic district, site, or object included in or eligible for inclusion in the National Register of Historic Places or the State Landmark Register; or included or eligible for inclusion, but not previously rejected, for the San Diego County Historical Site Bead List; any area of past human occupation located on public or private lands where important prehistoric or historic activities and/or events occurred; and any location of past or current sacred, religious or ceremonial observances protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures, and natural rocks or places which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

The RPO does not allow nonexempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. The only exempt activity is scientific investigations authorized by the County. All discretionary projects are required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites.

OTAY MESA COMMUNITY MANAGEMENT PLAN

Due to the abundance of flaked lithic material on Otay Mesa, a management plan for Otay Mesa prehistoric cultural resources was produced to provide archaeologists, local and federal agencies, and future researchers with recommendations for future work in the area (Gallegos et al. 1998). This management plan identifies the types of sites that should be considered significant and subjected to mitigation measures. The majority of sites on Otay Mesa fall into the following categories: habitation sites, temporary camps, quarries, and nonsites (including sparse lithic scatters with no subsurface component). The plan clarifies that significant site types should be able to answer research questions regarding chronology, subsistence and paleo-environmental reconstruction, settlement patterns, trade and travel, and technology. The plan identifies quantifiable significance thresholds in terms of surface and subsurface artifact density. Additionally, when determining the significance of a site, the plan recommends that site integrity be taken into account, as much of Otay Mesa has been disturbed by agricultural activities.

3.3.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact related to cultural resources if it would do any of the following:

- cause a substantial adverse change in the significance of an historical resource or an archaeological resource as defined in Section 15064.5 of the State CEQA Guidelines, or
- disturb any human remains, including those interred outside of formal cemeteries.

The State CEQA Guidelines (Section 15064.5) define “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the re source or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

The cultural resources records search and the pedestrian survey revealed no properties on or adjacent to the RJD Infill Site that qualify as historic resources under CEQA. Therefore, historic resources require no further discussion.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.3-1a: Impacts on Archaeological Resources [Single Facility]

The archaeological resources located within the RJD Infill Site have been adequately investigated for previous projects and have been found to not meet the CEQA criteria for a significant resource as defined by CEQA Guidelines Section 15064.5. There have been no changes to the cultural setting in the area and no new information made available that would change this conclusion. In addition, field reconnaissance showed the infill site conditions to be as described by the previous investigations.

Because onsite archaeological resources have been determined not to meet the CEQA criteria for a significant resource and no further investigations of the site are recommended, construction and operation of a single, level II correctional facility at the RJD Infill Site would not cause a substantial adverse change in the significance of an archaeological resource as defined by CEQA. This impact is ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.3-2a: Impacts on Human Remains [Single Facility]

The RJD Infill Site has been subjected to intensive archaeological investigations, including numerous controlled backhoe trenches and manual excavation. This work has yielded no evidence that would suggest the presence of human remains. There have been no changes to the cultural setting in the

area and no new information made available that would change this conclusion. In addition, field reconnaissance showed the site conditions to be as described by the previous investigations.

Because extensive onsite, subsurface investigations have been performed at the infill site and no evidence of buried human remains was found, development of a single, level II correctional facility at the RJD Infill Site would not disturb any human remains, including those interred outside of formal cemeteries. This impact is ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.3-1b: Impacts on Archaeological Resources [Complex]

As discussed above for a single facility (see Impact 3.3-1a), the entire RJD Infill Site has been subject to numerous archaeological investigations and have been found not to meet the CEQA criteria for a significant resource. There have been no changes to the cultural setting in the area and no new information made available that would change this conclusion. In addition, field reconnaissance showed the infill site conditions to be as described by the previous investigations.

Because onsite archaeological resources have been determined not to meet the CEQA criteria for a significant resource and no further investigations of the site are recommended, construction and operation of a level II correctional facility complex at the RJD Infill Site would not cause a substantial adverse change in the significance of an archaeological resource as defined by CEQA. This impact is ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.3-2b: Impacts on Human Remains [Complex]

As discussed under Impact 3.3-2a above, the RJD Infill Site has been subjected to numerous archaeological investigations, including controlled backhoe trenches and manual excavation. This work has yielded no evidence that would suggest the presence of human remains. There have been no changes to the cultural setting in the area and no new information made available that would change this conclusion. In addition, field reconnaissance showed the site conditions to be as described by the previous investigations.

Because extensive onsite, subsurface investigations have been performed at the infill site and no evidence of buried human remains were found, development of a level II correctional facility complex at the RJD Infill Site would not disturb any human remains, including those interred outside of formal cemeteries. This impact is ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

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3.4 EMPLOYMENT, POPULATION, AND HOUSING

This section evaluates the potential employment, population, and housing impacts attributable to development of either a single, level II infill correctional facility or a level II infill correctional facility complex at Richard J. Donovan Correctional Facility (RJD), including effects on regional population and employment trends, regional housing supplies, and employment opportunities. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site.

3.4.1 ENVIRONMENTAL SETTING

The RJD Infill Site is located in the unincorporated Otay area of San Diego, California (see Exhibit 2-1 in Chapter 2 of this volume). San Diego County is the southwestern-most county in California and is bordered to the north by Orange and Riverside Counties; to the east by Imperial County; to the south by Baja California, Mexico; and to the west by the Pacific Ocean. In 2010, the county had a population of approximately 3.1 million people with 1.16 million housing units in an area of 4,206 square miles (U.S. Census Bureau 2013a).

The study area for this analysis was determined based on the existing distribution of California Department of Corrections and Rehabilitation (CDCR) employees and their families. Based on current zip code data that identify the residential communities where RJD employees reside, of 1,447 employees, approximately 92 percent (1,337) reside in San Diego County. The cities with the highest percentages of RJD employees and their families are San Diego (32 percent) and Chula Vista (31 percent).

Because the type of staff required for the level II infill facility is similar to the employment profile at RJD, it is reasonable to assume that the staff for the level II infill facility, whether single or complex in design, would also predominantly reside in San Diego County (with a focus on San Diego and Chula Vista). Therefore, this area constitutes the study area for the employment, population, and housing analysis provided below. Other locations are not considered in this analysis because the number of RJD employees who currently reside, and would be expected to reside, in other communities is low (8 percent) and would not have a measurable impact on employment, population, and housing characteristics in these communities.

EMPLOYMENT

Information about the employed civilian labor force, unemployment rates, and employment opportunities for San Diego County, as well as the cities of San Diego and Chula Vista, is summarized briefly below based on the most recent information collected by the U.S. Census Bureau and California Employment Development Department (EDD) statistics. Published in 2011, census data were based on the American Community Survey Three-year Estimates from data collected between January 2009 and December 2011. County and state employment statistics reflect conditions in December 2012 as published by EDD in 2013.

SAN DIEGO COUNTY

In December 2012, the employed civilian labor force in San Diego County (including the cities of San Diego and Chula Vista) was 1,479,200 people, and the unemployment rate was 8.1 percent, which was lower than the state average of 9.7 percent (EDD 2013). According to the U.S. Census Bureau (2011a, civilian employment in San Diego County was distributed among the following sectors:

- management, business, science, and arts occupations – 28.2 percent;
- sales and office occupations – 26.4 percent;

- service occupations – 19.1 percent;
- production, transportation, and material moving occupations – 15.6 percent; and
- natural resources, construction, and maintenance occupations – 10.8 percent.

CITY OF SAN DIEGO

In 2011, the employed civilian labor force in San Diego was 681,127 people, and the unemployment rate was 6.3 percent (U.S. Census Bureau 2011a), which is lower than the statewide average (9.7 percent at the end of 2012) (EDD 2013). According to the U.S. Census Bureau (2011a), civilian employment in San Diego was distributed among the following sectors:

- management, business, science, and arts occupations – 44.6 percent;
- sales and office occupations – 24 percent;
- service occupations – 18.4 percent;
- production, transportation, and material moving occupations – 7.1 percent; and
- natural resources, construction, and maintenance occupations – 6 percent.

CITY OF CHULA VISTA

In 2011, the employed civilian labor force in Chula Vista was 119,708 people, and the unemployment rate was 8.9 percent (U.S. Census Bureau 2011a), which is lower than the statewide average (9.7 percent at the end of 2012) (EDD 2013). According to the U.S. Census Bureau (2011a), civilian employment in Chula Vista was distributed among the following sectors:

- management, business, science, and arts occupations – 33.3 percent;
- sales and office occupations – 29.1 percent;
- service occupations – 20 percent;
- production, transportation, and material moving occupations – 9.5 percent; and
- natural resources, construction, and maintenance occupations – 8.1 percent.

POPULATION

Most of the current employees at RJD reside in communities within San Diego County. Table 3.4-1 presents the geographic distribution of RJD employees and the regional population estimates for the major cities that support these employees.

Table 3.4-1 Geographic Distribution of Current RJD Employees

County/City	2000 Population	2010 Population	Projected 2025 Population	Number (Percent) of Resident RJD Employees [1]
San Diego County	2,813,833	3,095,313	3,531,831	1,337 (92%)
Other counties	N/A	N/A	N/A	110 (8%) [2]
County Total				**1,447 (100%)**
City of San Diego	1,223,400	1,307,402	1,614,654	456 (32%)
City of Chula Vista	173,556	243,916	278,656	453 (31%)
Other cities	N/A	N/A	N/A	538 (37%) [3]
City Total				**1,447 (100%)**

Notes:
[1] Number is approximate; zip code survey data do not match number of employees due to various factors. Numbers were adjusted to match the employment count.
[2] Less than 8% of RJD employees reside in nine other counties.
[3] Approximately 37% of RJD employees reside in 77 other jurisdictions, each of which represents less than 4% of total employee population.
Sources: U.S. Census Bureau 2013a, 2013b, 2013c; California Department of Finance 2012; SANDAG 2013; zip code data provided by CDCR in 2013

SAN DIEGO COUNTY

The population of San Diego County (including San Diego and Chula Vista) was 3,095,313 people in 2010, which was a 10 percent increase from 2000 (U.S. Census Bureau 2013a). As indicated in Table 3.4-1, approximately 92 percent of current RJD employees reside in San Diego County.

By 2025, the California Department of Finance (2012) projects the population of San Diego County to be 3,531,831 people, an increase of approximately 20 percent from 2000.

CITY OF SAN DIEGO

The population of San Diego was 1,307,402 people in 2010, which was a 6.4 percent increase from 2000 (U.S. Census Bureau 2013b). As indicated in Table 3.4-1, approximately 32 percent of current RJD employees reside in San Diego.

By 2025, the San Diego Association of Governments (SANDAG) projects the population of San Diego to be 1,614,654 people, an increase of approximately 24 percent from 2000 (SANDAG 2013).

CITY OF CHULA VISTA

The population of Chula Vista was 243,916 people in 2010, which was a 29 percent increase from 2000 (U.S. Census Bureau 2013c). As indicated in Table 3.4-1, approximately 31 percent of current RJD employees reside in Chula Vista.

By 2025, SANDAG (2013) projects the population of Chula Vista to be 278,656 people, an increase of approximately 38 percent from 2000.

HOUSING

The California Department of Housing and Community Development defines a housing shortage as a vacancy rate of less than 5 percent. The vacancy rate is the percentage of total owner-occupied residential units that are for sale and unoccupied. Data on housing availability and vacancy rates (combined for total owner-occupied and renter-occupied housing units) for the county and the cities of San Diego and Chula Vista in 2011 are provided in Table 3.4-2. As shown, there is a general availability of housing within these areas; the city of San Diego has the lowest vacancy rate (8.4 percent) and the city of Chula Vista has the highest (11.3 percent).

Table 3.4-2 Vacant Units per Jurisdiction

County/City	Total Housing Units	Occupied Housing Units	Vacant Housing Units	Vacancy Rate
San Diego County	1,165,610	1,063,605	102,005	8.8%
County Total	**1,165,610**		**102,005**	
City of San Diego	516,251	472,656	43,595	8.4%
City of Chula Vista	84,570	74,993	9,577	11.3%
City Total	**600,821**		**53,172**	

Notes: N/A = not applicable
Source: U.S. Census Bureau 2011b

3.4.2 REGULATORY CONSIDERATIONS

No federal, state, or local plans, policies, regulations, or laws related to employment, population, and housing are applicable to the development of level II correctional facilities at the RJD Infill Site.

3.4.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Population and employment growth associated with implementation of the proposed Level II Infill Correctional Facilities Project would not, in and of itself, result in significant environmental impacts. However, project-related growth could result in significant impacts in communities where growth occurs, through the construction of housing and increased demand for community services. These secondary effects could result in significant environmental impacts and are appropriately addressed in other sections (e.g., air quality, noise, and transportation) of this draft environmental impact report (DEIR) (Volume 2).

The discussion of employment, population, and housing impacts focuses on where project-related employees and their families would reside; the removal of existing housing; and availability of housing supplies for new employees, their families, and other potential new residents in the area.

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact related to employment, population, and housing if it would do any of the following:

- induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure);
- displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Displacement of existing housing or people: The proposed level II infill facility would be located on undeveloped land that has historically been used for agricultural purposes, on State-owned property. The site also contains a concrete pad that is used as a parking location for a trailer, which is periodically used to house paroled inmates on a temporary basis. Under the single design option, the trailer would need to be relocated to another site within the RJD property, and it is anticipated that it would continue to provide temporary housing for paroled inmates (under the complex option, the trailer would remain in its current location). Because the existing trailer would continue to provide the same type and amount of temporary housing, the proposed level II infill facility would not displace existing housing or people. Therefore, these issues are not discussed further.

Impacts of increased inmate population: Although a level II infill facility at RJD would include the construction of either 792 or 1,584 new level II beds (depending on whether a single facility or complex design is selected) at the RJD Infill Site, the inmates would not participate in or have access to social or economic aspects of the surrounding communities. Therefore, the increased number of inmates would not directly affect population or housing in surrounding communities. Further, inmate population growth

is not, in itself, a physical environmental effect, although it has implications related to increased demand for public utilities, such as water and wastewater, which are addressed in Section 3.12, "Utilities," of this DEIR (Volume 2). For these reasons, this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.4-1a: Substantial Population Growth [Single Facility]

Development of a single, level II infill correctional facility at RJD would provide both short-term and permanent employment opportunities. The number of short-term jobs required during project construction would peak at 355. The proposed project would be constructed over a 26-month period. Of these 355 required jobs, 335 would last for a minimum of 15 months. More than 81,000 construction workers were living in San Diego County in 2011 (U.S. Census Bureau 2011a). Because the supply of general construction labor in the project vicinity () is not constrained, it is expected that workers would be available from the region to meet the proposed project's construction needs. Therefore, implementation of a single, level II infill correctional facility at RJD would not generate employment opportunities that would require in-migration of construction personnel from outside the region.

Project operation would require 193 new correctional officers, medical/mental health personnel, vocational and educational staff, facility maintenance personnel, and administrative support staff (see Table 2-1 of Chapter 2, Volume 1). More than half of these positions would be correctional staff, and the remaining positions would be in support services. More than 1.47 million people are in the county's labor force, and the unemployment rate is relatively high (8.1 percent) (EDD 2013). While many of these new employment positions require a certain level of experience that may necessitate in-migration by some existing correctional staff from other facilities, it is unlikely that a large number of employees would need to relocate from outside the region because of the County's large labor pool. (.

To provide a conservative analysis of potential project-related population growth, this analysis assesses the population impact if all 193 new employees and their families were to migrate into the region from outlying areas, even though some or most are likely to already reside within the region. Using a statewide average household size of 2.91 (U.S. Census Bureau 2013a), implementation of a single, level II infill correctional facility at RJD could result in a population increase of 562 people.

If this population increase occurs, it is anticipated that these 562 people would distribute themselves in a pattern similar to the existing regional RJD employee distribution pattern. That is to say, the overwhelming majority (92 percent) of employees would be anticipated to reside in San Diego County, and the remainder (8 percent) would be anticipated to reside in other outlying counties. As indicated in Table 3.4-1, San Diego and Chula Vista would be expected to receive the largest portion of any project-related population increase (approximately 180 [32 percent] and 174 [31 percent] of the 562 people, respectively). The remaining employees and their families would be distributed throughout other adjacent and outlying communities. The maximum project-generated population increase of 562 people would be indistinguishable from other projected growth in the region and is planned for in regional growth plans in each of these communities (e.g., general plans, community plans). For example, project-related population growth in San Diego County of 517 people would represent 0.00015 percent of the County's projected 2025 population of 3,531,831 people (California Department of Finance

2012). This level of growth, by itself, would not stimulate any new development, the construction of which could result in significant environmental impacts.

Implementation of a single, level II infill correctional facility at the RJD Infill Site would result in both short-term and permanent employment opportunities in a region with a large labor pool. It is anticipated that these new employment opportunities would be largely met by the existing regional labor force without resulting in substantial in-migration from outside the region. Project-related population growth would not stimulate any new development, the construction of which could result in significant environmental impacts, and the population growth would be absorbed in growth projections of regional and local communities (San Diego County, including the cities of San Diego and Chula Vista). Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.4-2a: Increased Demand for Housing [Single Facility]

As discussed in Impact 3.4-1a above, a maximum in-migration of new employees and their families from areas outside the identified study area for operation of a single, level II infill correctional facility at RJD would increase population by 562 people, which would in turn increase housing demand in the communities near RJD. For the purposes of this analysis, it is assumed that every new employee who relocates to the region would require one housing unit. The distribution of new housing needs would correspond to the distribution of existing employee residences, as shown in Table 3.4-1. Because the project would increase the number of job opportunities at RJD by 193 positions, the project would result in a demand for 193 housing units as follows: approximately 62 (32 percent) housing units in San Diego, approximately 60 (31 percent) housing units in Chula Vista, and approximately 71 (37 percent) housing units in other communities (overwhelmingly in San Diego County). Because no single community would receive a substantial number of new residents or corresponding demand for housing, and because the region offers a large housing base (Table 3.4-2), the project would not substantially decrease the available housing stock in the region and would not result, in and of itself, in the construction of new housing in the study area. Further, this assumes that all employees would relocate to these communities and none would be hired from the local population, which is not realistic given the large labor pool (described in Impact 3.4-1).

Because no single community would receive a substantial number of new residents or corresponding demand for housing, and because the region offers a large housing base, construction and operation of a single, level II infill correctional facility at RJD would not substantially decrease the available housing stock in the region and would not result, in and of itself, in the construction of new housing in the study area. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.4-1b: Substantial Population Growth [Complex]

Implementation of a level II infill correctional facility complex at RJD would provide more short-term and permanent employment opportunities than provided by the proposed single facility (refer to Impact 3.4-1a for single facility analysis). The number of short-term jobs required during project construction of a complex would peak at 795 and construction would occur over an approximately 28-month period. Of these 795 required jobs, 745 would last for a minimum of 17 months. As described above, San Diego County contained more than 81,000 construction workers in 2011 (U.S. Census Bureau 2011a), and,

therefore, it is expected that workers would be available from the region to meet the proposed project's construction needs. As such, construction of a level II infill correctional facility complex at RJD would not generate employment opportunities that would require in-migration of construction personnel from outside the region.

Operation of a complex would require 377 new correctional officers, medical/mental health personnel, vocational and educational staff, facility maintenance personnel, and administrative support staff (see Table 2-2 of Chapter 2, Volume 1). More than half of these positions would be correctional staff, and the remaining positions would be in support services. For the same reasons discussed under Impact 3.4-1a above, it is unlikely that a large number of employees would need to relocate from outside of the region because of the County's large labor pool and high unemployment rate. However, if all 377 new employees and their families were to migrate into the region from outlying areas (even though some or most are likely to already reside within the region), implementation of a level II infill correctional facility complex at RJD could result in a population increase of 1,097 people (using a statewide average household size of 2.91 [U.S. Census Bureau 2013a]).

If this population increase occurs, it is anticipated that these 1,097 people would distribute themselves in a pattern similar to the existing regional RJD employee distribution patterns, as discussed above for a single facility. As indicated in Table 3.4-1, San Diego and Chula Vista would be expected to receive the largest portion of a project-related population increase (approximately 351 [32 percent] and 340 [31 percent] of the 1,097 people, respectively). The remaining employees and their families would be distributed throughout other adjacent and outlying communities. The maximum project-generated population increase of 1,097 people would be indistinguishable from other projected growth in the region and is planned for in regional growth plans in each of these communities (e.g., general plans, community plans). For example, project-related population growth in San Diego County of 1,009 people would represent 0.00028 percent of the County's projected 2025 population of 3,531,831 people (California Department of Finance 2012). This percentage of growth, by itself, would not stimulate any new development, the construction of which could result in significant environmental impacts.

Implementation of a level II infill correctional facility complex at the RJD Infill Site would result in both short-term and permanent employment opportunities, which would be anticipated to be largely met by the existing, large regional labor force without resulting in substantial in-migration from outside the region. Project-related population growth would not stimulate any new development, the construction of which could result in significant environmental impacts, and the population growth would be absorbed in growth projections of regional and local communities (San Diego County, including the cities of San Diego and Chula Vista). Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.4-2b: Increased Demand for Housing [Complex]

As discussed in Impact 3.4-1b, operation of a level II infill correctional facility complex at RJD (assuming maximum in-migration of new employees and their families from areas outside the identified study area) would increase population by approximately 1,097 people, which would in turn increase housing demand in the communities near RJD. For the purposes of this analysis, it is assumed that every new employee who relocates to the region would require one housing unit. The distribution of new housing needs would correspond to the distribution of existing employee residences, as shown in Table 3.4-1. Because operation of a complex would increase the number of job opportunities at RJD by 377 positions, the project would result in a demand for 377 housing units as follows: approximately 121 (32 percent) housing units in San Diego, approximately 117 (31 percent) housing units in Chula Vista, and approximately 139 (37 percent) housing units in other communities (overwhelmingly in San Diego County). Because no single community would receive a substantial number of new residents or

corresponding demand for housing, and because the region offers a large housing base (Table 3.4-2), the operation of a complex would not substantially decrease the available housing stock in the region and would not result, in and of itself, in the construction of new housing in the study area. Further, this assumes that all employees would relocate to these communities and none would be hired from the local population, which is not realistic given the large labor pool (described in Impact 3.4-1).

Because no single community would receive a substantial number of new residents or corresponding demand for housing, and because the region offers a large housing base, construction and operation of a level II infill correctional facility complex at RJD would not substantially decrease the available housing stock in the region and would not result, in and of itself, in the construction of new housing in the study area. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

3.5 GEOLOGY, SOILS, SEISMICITY, MINERALS, AND PALEONTOLOGICAL RESOURCES

This section identifies existing geology, soils, seismic conditions, minerals, and paleontological resources at the Richard J. Donovan Correctional Facility (RJD) Infill Site and analyzes the potential for the development of level II correctional facilities at RJD (single facility and complex designs) to affect those resources. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. Although the acreage of disturbance for a complex at RJD Infill Site would be greater than that for a single facility, the physical characteristics underlying the RJD Infill Site are the same throughout these development areas. Information presented in this section was drawn from the *Geotechnical Investigation Report – CDC Emergency Bed Program, R.J. Donovan Correctional Facility, San Diego, California* (Kleinfelder, Inc. 1995) and the *Geotechnical Report for the R.J. Donovan Correctional Facility, Substance Abuse Treatment Facility* (ENGEO 2002).

3.5.1 ENVIRONMENTAL SETTING

REGIONAL TOPOGRAPHY AND GEOLOGY

RJD is located in San Diego County immediately west of the San Ysidro Mountains and approximately 11.5 miles from the Pacific Ocean. The San Ysidro Mountains are part of the Peninsular Ranges, which are composed of Mesozoic-aged, metamorphosed, volcanic and sediment rocks, as well as plutonic rocks such as granite. The Peninsular Ranges are separated by faults that are subparallel to the San Andreas Fault. The geology is dominated by coastal marine sedimentary rocks of Oligocene to Miocene age (approximately 34–5 million years ago) (Tan and Kennedy 2002). The area was episodically uplifted above sea level in about the last 2–3 million years. RJD is on a low-relief terrace that has subsequently been incised by various stream and river systems with localized deposition of stream-related (alluvial) deposits. The site is immediately south of Otay Valley.

INFILL SITE TOPOGRAPHY AND GEOLOGY

TOPOGRAPHY

The RJD Infill Site lies approximately 600 feet above sea level on the low-relief terrace of Otay Mesa. The infill site is bounded on the northeast by the incised O'Neal Creek/Canyon and on the southwest by the incised Johnson Creek/Canyon. To the immediate northwest of the infill site, a gully in the mesa surface drains to O'Neal Creek. In the vicinity of the infill site, the bottom of O'Neal Canyon is more than 200 feet below the mesa surface, and the canyon slopes are steep. Johnson Canyon is less deeply incised; its bottom is about 80 feet below the mesa surface, although the canyon walls are steep. O'Neal and Johnson Creeks drain approximately northwest to the Otay River/Otay Valley. The Otay River drains west and also forms the western boundary of the local terrace upon which RJD is built. At the site, the horizontal terrace is approximately 2,000 feet wide and bounded by the steep slopes that lead to the local canyons.

GEOLOGY

The bedrock at the RJD Infill Site is the Oligocene-age (37–24 million years old) Otay Formation (Tan and Kennedy 2002). This formation contains very pale gray, massive to thin-bedded sandstones. There are three main sedimentary rock types in the formation: gravel or conglomerate, silt-sized, and

sandstone-mudstone; as well as beds of bentonite clay (Walsh and Demere 1991, Tan and Kennedy 2002, California Prison Health Care Receivership Corporation 2008).

SOILS

Surface Soils

The soils at the RJD Infill Site have been mapped by the Natural Resources Conservation Service (NRCS) (formally called the U.S. Soil Conservation Service) (NRCS 2013). According to the soil survey three soils are mapped at the infill site: Stockpen gravelly clay loam, Diablo clay, and Huerhero loam (Table 3.5-1, Exhibit 3.5-1).

Table 3.5-1 Soil Characteristics of the RJD Infill Site

Soil Map Unit	Shrink-Swell Potential	Erosion Hazard	Runoff Rate
Stockpen gravelly clay loam	High	Slight	High
Diablo clay	High	Moderate	High
Huerhero loam	High	Moderate	High

Source: NRCS 2013.

Based on the soil survey data (Table 3.5-1), all three soils are underlain by weathered bedrock. The depth to weathered bedrock varies slightly with the Stockpen, Diablo, and Huerhero soils; up to 60, 40, and 72 inches deep, respectively. At depth, all three soils have a high shrink-swell potential. The Stockpen erosion hazard is slight, while the Diablo and Huerhero erosion hazard is moderate. All three soils have a high runoff rate. At the adjacent RJD site, a previous geotechnical investigation found these soils to be expansive (Kleinfelder, Inc. 1995).

Soil Corrosion Potential

Based on the soil survey data (NRCS 2013), the Stockpen, Diablo, and Huerhero soils have a high risk of corrosion for uncoated steel but a low corrosion risk for concrete. The previous geotechnical investigations for the RJD site found these soils to be corrosive (Kleinfelder, Inc. 1995 and ENGEO 2002).

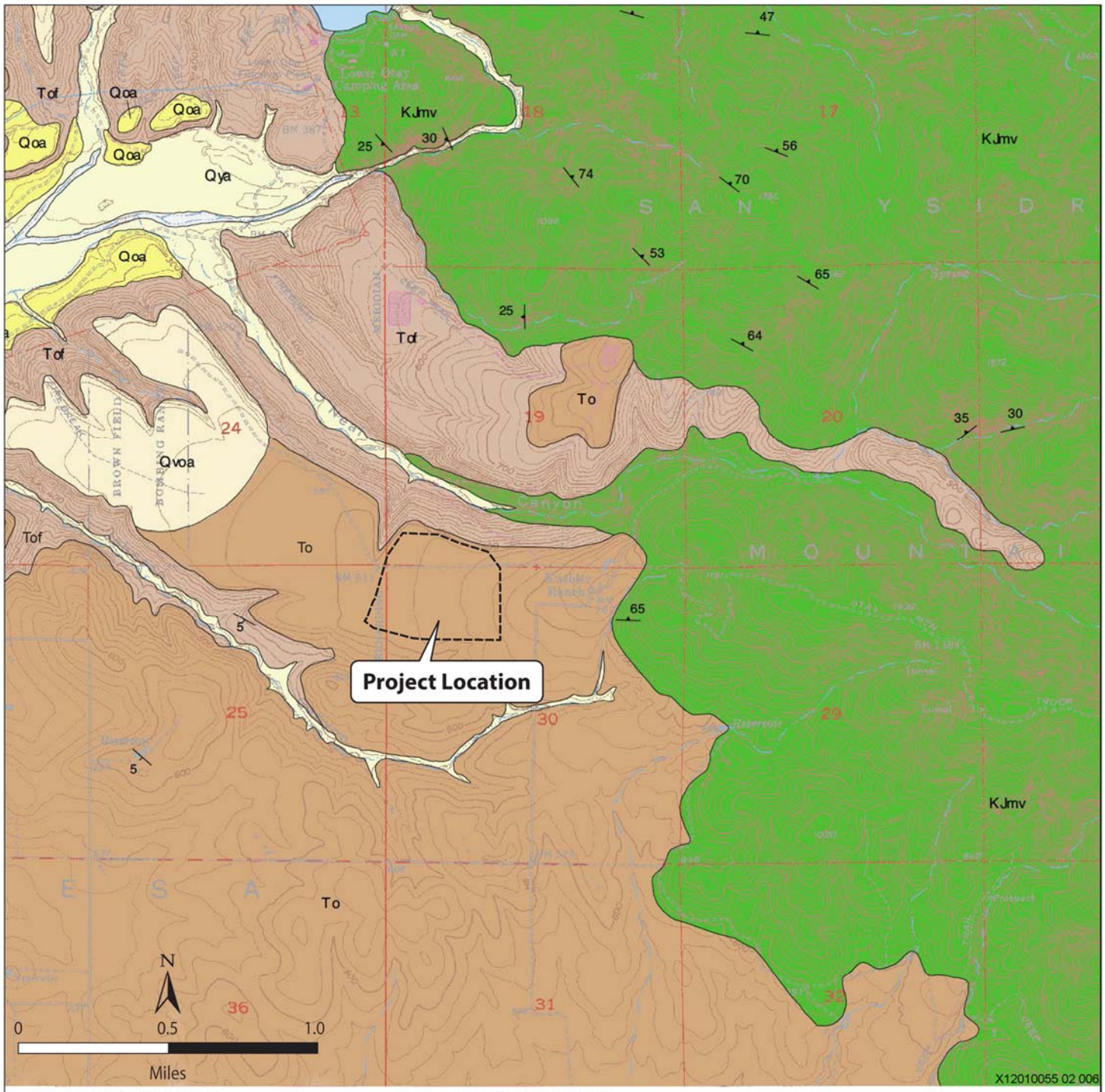
SEISMICITY AND FAULTS

Seismic hazards are earthquake fault ground (surface) rupture and ground shaking (primary hazards) and liquefaction and earthquake-induced slope failure (secondary hazards).

Surface Rupture and Faulting

The purpose of the Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) is to regulate development in the immediate vicinity of active faults to mitigate the hazard of surface rupture. Faults in an Alquist-Priolo Earthquake Fault Zone are typically active faults. As defined under the Alquist-Priolo Act, an *active fault* is one that has had surface displacement within the Holocene epoch (the last 11,000 years); an *early Quaternary fault* is one that has had surface displacement during Quaternary time (the last 1.6 million years); and a *pre-Quaternary fault* is one that has had surface displacement before the Quaternary period.

The RJD Infill Site is not identified as being located in an Alquist-Priolo Fault Zone Study Zone (Bryant and Hart 2007). There is no evidence of recent (i.e., Holocene) faulting within the infill site, and no faults are mapped to cut at or near the infill site (Bryant and Hart 2007, International Conference of Building Officials 1997, Jennings and Bryant 2010). A total of 12 faults were identified as potential seismic sources within a 64-mile radius of the RJD Infill Site. The nearest active fault is the Rose Canyon fault, which is about 15 miles to the northwest (Jennings and Bryant 2010). Accordingly, the infill site is not likely to be affected by surface fault rupture.



CORRELATION OF MAP UNITS

Qw	Holocene	QUATERNARY	CENOZOIC
Qya	Holocene	QUATERNARY	CENOZOIC
Qls	Holocene	QUATERNARY	CENOZOIC
Qoa	Pleistocene	QUATERNARY	CENOZOIC
Qvoa	Pleistocene	QUATERNARY	CENOZOIC
Tsd	Pliocene	TERTIARY	CENOZOIC
To	Oligocene/ Miocene	TERTIARY	CENOZOIC
Tof	Oligocene/ Miocene	TERTIARY	CENOZOIC
KJmv	CRETACEOUS / JURASSIC	MESOZOIC	

DESCRIPTION OF MAP UNITS

- **Qw** — Late Holocene active channel and wash deposits; unconsolidated sand, silt, gravel and clay. Deposits along smaller drainage channels are included in Qya.
- **Qya** — Holocence alluvial deposits; unconsolidated to poorly consolidated silt, clay, sand and gravel. Includes modern active sedments along small drainage channels.
- **Qls** — Landslide deposits (Holocene and Late Pleistocene); landslide slump and rock fall deposits. On map, the deposit is depicted by landslide arrows (see "MAP SYMBOLS")
- **Qoa** — Alluvial deposits (late to middle Pleistocene); moderately consolidated, poorly sorted flood plain deposits consisting of gravelly sandy silt and clay.
- **Qvoa** — Alluvial deposits (middle to early Pleistocene); well consolidated, poorly sorted flood plain deposits consisting of gravel, sand, silt and clay.
- **Tsd** — San Diego Formation (Pliocene); poorly indurated, fine- to medium-grained sandstone, typically yellowish light brown.
- **To** — Otay Formation (Oligocene to Miocene); poorly indurated massive light-colored sandstone, siltstone and claystone, interbedded with bentonite lenses.
- **Tof** — Otay Formation-fanglomerate facies (Oligocene to Miocene); poorly cemented bouldery conglomerate and coarse-grained sandstone. Interfingered with overlying To.
- **KJmv** — Metavolcanic rocks (Jurassic and Cretaceous); mildly metamorphosed volcanic, volcaniclastic and sedimentary rocks. Volcanic rocks range from basalt to rhyolite, but are predominantly andesite and dacite. In general, metavolcaniclastic rocks are most abundant.

Source: Tan, S. S. and M. P. Kennedy. Digital Preparation by K. Corriea and S. Jorgensen. 2002. Geologic Map of the Otay Mesa 7.5' Quadrangle San Diego County, California: A Digital Database.

Source: NRCS 2006; Adapted by Ascent Environmental in 2013

Exhibit 3.5-1 RJD Infill Site Surficial Geology

Table 3.5-2 Regional Seismic Sources (Faults)

Fault Name	Approximate Distance, Miles	Maximum Earthquake Magnitude
Rose Canyon	15.3	6.9
Coronado Bank	20.9	7.4
Elsinore-Julian	40.6	7.1
Elsinore-Coyote	41.9	6.8
Earthquake Valley	44.1	6.5
Newport-Inglewood (offshore)	49.6	6.9
Elsinore-Temecula	55.3	6.8
San Jacinto-Borrego	60.0	6.6
San Jacinto-Coyote Creek	60.0	6.8
Laguna Salada	61.1	7.0
San Jacinto-Anza	64.4	7.2
Superstition Mountain (San Jacinto)	64.6	7.2

Sources: Jennings and Bryant 2010; California Prison Health Care Receivership Corporation 2008

Ground-Shaking Hazard

The RJD Infill Site is located within Uniform Building Code (UBC) Seismic Hazard Zone 4 (International Code Council 1997). The Zone 4 designation indicates that earthquakes in the region have the potential to create the greatest effects, and seismic design must meet the most stringent requirements.

The infill site is located in a region of California characterized by moderate historical seismic activity. As described above, the risk of surface rupture at the infill site is low because of its distance from active faults. Earthquake-induced ground shaking, however, poses a more significant hazard.

The measurement of the energy released at the point of origin, or epicenter, of an earthquake is referred to as the magnitude, which is generally expressed in the Richter Magnitude Scale or as moment magnitude. The scale used in the Richter Magnitude Scale is logarithmic so that each successively higher Richter magnitude reflects an increase in the energy of an earthquake of about 31.5 times. Moment magnitude is the estimation of an earthquake magnitude by using seismic moment, which utilizes rock rigidity, amount of slip, and area of rupture.

The greater the energy released from the fault rupture, the higher the magnitude of the earthquake. Earthquake energy is most intense at the fault epicenter; the farther an area is from an earthquake epicenter, the less likely it is that ground shaking will occur there. Geologic and soil units comprising unconsolidated, clay-free sands and silts can reach unstable conditions during ground shaking, which can result in extensive damage to structures built on them (described in “Liquefaction and Associated Hazards” below).

Ground shaking is described by two methods: ground acceleration as a fraction of the acceleration of gravity, expressed in units of “g,” and the Modified Mercalli scale, which is a more descriptive method involving 12 levels of intensity denoted by Roman numerals. Modified Mercalli intensities range from I (shaking that is not felt) to XII (total damage).

The intensity of ground shaking that would occur at the infill site as a result of an earthquake is partly related to the size of the earthquake, its distance from the infill site, and the response of the geologic materials within the infill site. As a rule, the greater the earthquake magnitude and the closer the fault rupture is to the site, the greater the intensity of ground shaking will be. When various earthquake scenarios are considered, ground-shaking intensities reflect both the effects of strong ground accelerations and the consequences of ground failure.

Estimates of Earthquake Shaking

The RJD Infill Site is located in a region of California characterized by a moderate ground-shaking hazard. The Safety Element of the General Plan for San Diego County (County of San Diego 2011) shows the infill site in the low severity zone for shaking intensity. Based on a probabilistic seismic hazard map depicting the peak horizontal ground acceleration values exceeded at a 10 percent probability in 50 years (Cao et al. 2003, California Geological Survey 2008a), the probable peak horizontal ground acceleration values at the infill site range from 0.2 to 0.3g, where 1g equals the force of gravity, thus indicating that the ground-shaking hazard at the infill site is low. Farther to the east, the ground-shaking hazard increases, coinciding with the increase in abundance of associated faults and fault complexes (Cao et al. 2003, California Geological Survey 2008a).

LIQUEFACTION AND ASSOCIATED HAZARDS

Liquefaction is a phenomenon in which the strength and stiffness of unconsolidated sediments are reduced by earthquake shaking or other rapid loading. Poorly consolidated, water-saturated, fine sands and silts have low plasticity and, when located within 50 feet of the ground surface, are typically considered to be the most susceptible to liquefaction. Soils and sediments that are not water-saturated and that consist of coarser or finer materials are generally less susceptible to liquefaction. Geologic age also influences the potential for liquefaction. Sediments deposited within the most recent millennia are generally more susceptible to liquefaction than older, early Holocene sediments; Pleistocene sediments are even more resistant; and pre-Pleistocene sediments are generally not susceptible to liquefaction (California Geological Survey 2008b).

Two types of potential ground failure associated with liquefaction in the region are lateral spreading and differential settlement. In lateral spreading, a layer of ground at the surface is carried on an underlying layer of liquefied material over a gently sloping surface toward a river channel or other open face. In differential settlement (also called ground settlement and, in extreme cases, ground collapse), soil compacts and consolidates after the ground-shaking ceases when the layers that liquefy are not of uniform thickness, which is a common problem when liquefaction occurs in artificial fills. Settlement can range from 1 percent to 5 percent, depending on the cohesiveness of the sediments (Tokimatsu and Seed 1984).

Based on the geologic age of the earth materials, average relative density of the subsurface material, relative lack of shallow groundwater (as discussed in Section 3.7, “Hydrology and Water Quality,” of this draft environmental impact report [DEIR] [Volume 2]), and anticipated ground-shaking hazard for the infill site, the potential for liquefaction, dynamic compaction, or seismically induced settlement or bearing loss are considered low. A geotechnical investigation for this site did not identify liquefaction as an issue (Kleinfelder, Inc. 1995).

LANDSLIDES AND SEISMICALLY INDUCED SLOPE FAILURES

Within the limits of ground disturbance of the infill site, there is no risk of naturally occurring large landslides, due to the stable, cemented nature of the underlying geology. Additionally, the overall vicinity is categorized as having low landslide potential (County of San Diego 2011). In addition, proposed footprint of a single, level II facility would be set back an estimated minimum distance of 250 feet from the slopes of O’Neal Canyon to the north. A complex would be setback a minimum of 100 feet from the slopes of O’Neal Canyon. In addition, either a single facility or a complex would be setback a minimum of 100 feet from the edge of the nearest Johnson Canyon tributary.

OTHER HAZARDS

Several other geologic and seismic hazards (i.e., land subsidence, volcanic activity, tsunami, seiche, and mudflow) that could be experienced in the larger region are unlikely to affect the infill site. Land

subsidence occurs in deep, unconsolidated sedimentary deposits, commonly when deep groundwater is withdrawn, allowing compaction and subsidence. These types of deposits do not underlie the infill site. There are no volcanoes near the infill site. The site is not on a large body of water and could not be affected by a tsunami or seiche. There are no steep areas that have the potential to generate mudflows that would affect the infill site. Naturally occurring asbestos is discussed in Section 3.6, "Hazards and Hazardous Materials," of this DEIR (Volume 2).

MINERAL RESOURCES

The California Geological Survey and the State Mining and Geology Board are the state agencies responsible for the classification and designation of areas containing, or potentially containing, significant mineral resources. Areas known as Mineral Resource Zones (MRZs) are classified on the basis of geologic factors, without regard to existing land use and land ownership. The primary objective of the process is to provide local agencies with information on the location, need, and importance of minerals within their respective jurisdictions. Areas are categorized into four general classifications (MRZ-1 through MRZ-4), as defined in Volume 1, Appendix 1B.

As reported in the County of San Diego's guidelines for determining the significance of mineral resources (2008), the RJD Infill Site is classified as MRZ-3, an area containing mineral deposits, the significance of which cannot be evaluated from available data. A wide variety of mineral resources are produced in San Diego County (County of San Diego 2008). Within the proximity of the RJD site, developed mineral resources are sand and gravel (County of San Diego 2008).

PALEONTOLOGICAL RESOURCES

Paleontological resources (such as fossils) are considered limited, nonrenewable, and sensitive scientific resources. The RJD Infill Site is underlain by marine sedimentary rocks of the Oligocene-age Otay Formation, which are known to be fossiliferous (Walsh and Demere 1991, County of San Diego 2009). In the Eastlake area near Chula Vista (approximately 5.5 miles northwest of the RJD Infill Site), a wide variety of fossil vertebrates have been found in the Otay Formation. These included terrestrial reptiles (tortoise and lizards), birds, mammals (gophers, mice, beavers, dogs, rhinoceros, camels), as well as sparse impressions of fossil plants (County of San Diego 2009). Therefore, the infill site is located within an area of moderate to high paleontological resource sensitivity.

3.5.2 REGULATORY CONSIDERATIONS

A list of the applicable federal and state plans, policies, regulations, and laws related to geology, soils, seismicity, minerals, and paleontological resources is provided below. Complete summaries of the federal and state regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

GEOLOGY AND MINERALS

- Clean Water Act 402/National Pollutant Discharge Elimination System - The 1972 amendments to the CWA established the NPDES permit program to control discharges of pollutants from point sources. The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual permits.
- International Building Code - The design and construction of engineered facilities in the state of California must comply with the requirements of the International Building Code and the adoptions to that code adopted by the State of California.

- U.S. Geological Survey Landslide Hazard Program - The U.S. Geological Survey created the National Landslide Hazards Program to reduce long-term losses from landslide hazards by improving understanding of the causes of ground failure and suggesting mitigation strategies.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

GEOLOGY AND MINERALS

- Alquist-Priolo Earthquake Fault Zoning Act - California's Alquist-Priolo Act is intended to reduce the risk to life and property from surface fault rupture during earthquakes. It prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults.
- Seismic Hazards Mapping Act - The Seismic Hazards Mapping Act addresses identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones.
- California Building Code - The CBC is based on the International Building Code and has been modified for California conditions with numerous, more detailed or more stringent regulations. The California Building Code requires extensive geotechnical analysis and engineering for grading, foundations, retaining walls, and other structures, including criteria for seismic design.
- Surface Mining and Reclamation Act of 1975 - The purpose of SMARA is to provide a comprehensive surface mining and reclamation policy that will encourage the production and conservation of mineral resources while ensuring that adverse environmental effects of mining are prevented or minimized.

PALEONTOLOGICAL RESOURCES

- State CEQA Guidelines Section 15064.5(a)(3) - State CEQA Guidelines Section 15064.5(a)(3) provides protection for paleontological resources by requiring that they be identified and mitigated as historical resources.
- California Public Resource Code (*PRC 21000 et seq.*) - California requires identification of the environmental consequences of proposed projects to any object or site important to the scientific annals of California.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, the California Department of Corrections and Rehabilitation (CDCR) is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

GEOLOGY AND MINERALS

Geotechnical Investigations

Local jurisdictions typically regulate construction activities through a multistage permitting process that may require a site-specific soil investigation. The purpose of the soil investigation is to provide a basis for the development of appropriate construction design. The site-specific soil report is generally based on adequate test borings or excavations in the area where construction would occur and are prepared by a civil engineer who is registered with the State.

Geotechnical reports were completed for the adjacent RJD site for previous projects (Kleinfelder, Inc. 1995 and ENGEO 2002), and the EIR prepared by the California Prison Health Care Receivership

Corporation (2008) provided additional information on geotechnical conditions at the infill site. Relevant recommendations from those reports have been incorporated into the facility design or are included as mitigation measures below.

County of San Diego General Plan

Geological and soil issues are addressed in the County of San Diego General Plan in Chapter 7, Safety Element, in the Geological Hazards section (County of San Diego 2011).

- **Policy S-7.1 Development Location.** Locate development in areas where the risk to people or resources is minimized. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.
- **Policy S-7.2 Engineering Measures to Reduce Risk.** Require all development to include engineering measures to reduce risk in accordance with the California Building Code, Uniform Building Code, and other seismic and geologic hazard safety standards, including design and construction standards that regulate land use in areas known to have or potentially have significant seismic and/or other geologic hazards.
- **Policy S-7.4 Unreinforced Masonry Structures.** Require the retrofitting of unreinforced masonry structures to minimize damage in the event of seismic or geologic hazards.
- **Policy S-8.2 Risk of Slope Instability.** Prohibit development from causing or contributing to slope instability.

3.5.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact relating to geology, soils, seismicity, minerals, or paleontological resources if it would do any of the following:

- expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from seismic hazards including earthquake fault rupture, strong seismic ground-shaking, seismic-related ground failure, including liquefactions, landslides, or inundation by seiche, tsunami, or mudflow;
- result in substantial soil erosion or the loss of topsoil;
- 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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse;
- be located on expansive soil, as defined in Table 18-1-B of the California Building Code (CBC), creating substantial risks to life or property;
- have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;
- 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, or 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; or
- directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Geological and Seismic Hazards: As discussed above, several geologic and seismic hazards (including land subsidence, volcanic activity, tsunami, seiche, and mudflow) could be experienced in the larger region but are unlikely to affect the infill site. Therefore, these issues are not discussed further.

Fault rupture: The RJD Infill Site is not located in an Alquist-Priolo Earthquake Fault Study Zone and the closest active fault zone is 15.3 miles away. Consequently, fault rupture at the infill site from an earthquake is not anticipated.

Liquefaction: Liquefaction or seismic compaction/subsidence are considered unlikely to occur at the infill site because of the lack of shallow groundwater and the generally dense nature of the underlying soils and the shallow consolidated bedrock.

Septic systems: No septic systems or other infiltrating wastewater disposal systems are included as part of the infill site. The City of San Diego Public Utilities Department sewage system provides wastewater collection and treatment services for RJD and would also provide services for the infill facility. Because no septic systems are proposed for the RJD Infill Site, this issue is not evaluated further.

Mineral resources: The RJD Infill Site is classified as MRZ-3, an area containing mineral deposits, the significance of which cannot be evaluated from available data. Although there are developed sand and gravel resources within the proximity of RJD (County of San Diego 2008), the infill site is not located within these mineral resource areas. Therefore, construction of a new level II correctional facility would not result in the loss of availability of a known mineral resource. Therefore, this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.5-1a: Seismic Hazard Impacts [Single Facility]

Although the RJD Infill Site is not identified as being within an Alquist-Priolo Fault Zone Study Zone (Bryant and Hart 2007), the site may experience ground shaking as a result of nearby fault activity that could affect the site or facility stability. Consistent with State requirements, CDCR is required to design facilities to meet CBC standards to minimize the potential of ground-shaking hazards, and structures must be designed to meet the regulations and standards associated with CBC seismic design categories. CDCR has prepared geotechnical studies for the infill site (Kleinfelder, Inc. 1995 and ENGEO 2002), which identify design guidelines that would meet CBC criteria and that would be incorporated into the final design and construction of the facility.

Within the limits of ground disturbance of the RJD Infill Site, there is no risk of naturally occurring large landslides because of the stable, cemented nature of the underlying geology, and the overall vicinity is in a low landslide category (County of San Diego 2011). However, the slopes leading to O'Neal Canyon to the north and Johnson Canyon to the south of the infill site are quite steep and locally unstable

(California Prison Health Care Receivership Corporation 2008). The proposed footprint of a single level II facility would be set back an estimated minimum distance of 250 feet from the slopes of O'Neal Canyon to the north. Furthermore, consistent with State requirements, CDCR is required to design facilities to meet CBC standards, which are protective of human health and would minimize hazards associated with landslide or slope failure. All design standards would be incorporated into the final design and construction of the facility.

The single, level II correctional facilities at the RJD Infill Site would be designed to comply with the most recent requirements of the CBC, which has provisions for seismic safety. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.5-2a: Soil Erosion Impacts [Single Facility]

Development of a single, level II correctional facility at the RJD Infill Site would involve grading, removal of vegetation cover, and excavating activities that would result in the temporary disturbance of soil such that wind and rain events could cause erosion, runoff, sedimentation, and downstream water quality degradation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at the construction sites and staging areas.

Consistent with State requirements and as discussed in Impact 3.7-1 in Section 3.7, "Hydrology and Water Quality," of this DEIR (Volume 2), a Stormwater Pollution Prevention Plan (SWPPP) would be developed for the project by a qualified engineer or erosion control specialist. The objectives of the SWPPP are to identify pollutant sources that may affect the quality of stormwater associated with construction activity and identify, construct, and implement stormwater pollution prevention measures to reduce pollutants in stormwater discharges during and after construction. Therefore, the SWPPP would include a description of potential pollutants, the management of dredged sediments, and hazardous materials present on the site during construction (including vehicle and equipment fuels). The SWPPP would also include details of how best management practices (BMPs) for sediment and erosion control would be implemented. Implementation of the SWPPP would comply with state and federal water quality regulations.

Furthermore and as noted above, CDCR is required to construct all new facilities in accordance with CBC standards. These standards require that appropriate soil and geotechnical reports be prepared and that site-specific engineering design measures, including those related to general site grading, clearing and grubbing, soil stabilization, and general erosion control, be implemented to appropriately minimize potential adverse impacts related to erosion at the infill site. This, coupled with preparation of a site-specific SWPPP, would minimize potential adverse impacts related to erosion and loss of topsoil at the infill site.

Because CDCR would implement appropriate stormwater controls in accordance with federal and state requirements that would reduce potential runoff, development of a single, level II correctional facility at the RJD Infill Site would result in ***less-than-significant*** *impacts related to erosion.*

Mitigation Measures

No mitigation measures are required.

Impact 3.5-3a: Expansive and Corrosive Soil Impacts [Single Facility]

Expansive soils have the potential to compromise the structural integrity of infill site features. The soil survey and geotechnical report (Kleinfelder, Inc. 1995) indicate that there is high shrink-swell potential in the soil and rock underlying the RJD Infill Site. The previous geotechnical investigation for the RJD site also found these soils to be corrosive (Kleinfelder, Inc. 1995).

Measures to reduce or eliminate problematic soils would be implemented at the RJD Infill Site, which could include excavation and replacement with engineered backfill, ground treatment processes, and direction of surface water and drainage away from foundation soils (Kleinfelder, Inc. 1995). Consistent with State requirements, CDCR is required to construct all new facilities in accordance with CBC standards, including specifications for construction within expansive and corrosive soils. Conformance to these standards would minimize adverse impacts related to expansive and corrosive soils.

The single, level II correctional facilities at the RJD Infill Site would be designed and constructed in accordance with CBC design standards, which regulate grading activities, including construction on expansive and corrosive soils. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.5-4a: Paleontological Resources Impacts [Single Facility]

The RJD Infill Site is underlain by marine sedimentary rocks of the Otay Formation, which has yielded significant terrestrial and other fossils (County of San Diego 2009). Therefore, the infill site is located within an area of moderate to high paleontological resource sensitivity. Construction-related excavation into these rocks for the single, level II correctional facility foundations or utility trenches could disturb potentially significant paleontological resources.

Construction of the single, level II correctional facilities at the RJD Infill Site, which is located on a paleontologically sensitive formation, could disturb previously undiscovered paleontological resources. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.5-4

CDCR will retain a qualified paleontologist to alert all construction personnel involved with earthmoving activities, including the site superintendent, about the possibility of encountering fossils. The appearance and types of fossils likely to be seen during construction will be described. Construction personnel will be trained about the proper notification procedures should fossils be encountered.

If paleontological resources are discovered during earthmoving activities, the construction crew will be directed to immediately cease work in the vicinity of the find and notify the CDCR Project Director. CDCR will retain a qualified paleontologist that will be readily available for quick identification and salvage of fossils so that construction delays can be minimized. If large specimens are discovered, the paleontologist will have the authority to halt or divert grading and construction equipment while the finds are removed. The paleontologist will be responsible for implementing all tasks required by the County of San Diego (2009), as summarized below.

- In the event of discovery, salvage of unearthed fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster-jacketing of large and/or fragile specimens, or more elaborate quarry excavations of richly fossiliferous deposits
- Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting
- Laboratory preparation (cleaning and repair) of collected fossil remains to a point of curation, generally involving removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens
- Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database
- Transferal, for storage, of cataloged fossil remains to an appropriate repository
- Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.

Significance after Mitigation

Implementation of Mitigation Measure 3.5-4 would reduce potentially significant impacts concerning damage to unique paleontological resources to a **less-than-significant** level because construction workers would be alerted to the possibility of encountering paleontological resources and, if resources were encountered, fossil specimens would be recovered and recorded and would undergo appropriate curation.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.5-1b: Seismic Hazard Impacts [Complex]

Although the acreage of disturbance for a level II infill correctional facility complex at RJD Infill Site would be greater than that for a single facility [see Impact 3.5-1a above], the potential risks due to ground shaking would be the same as those for the single facility design option because development would occur in the same seismically active area. Consistent with State requirements, CDCR is required to design facilities to meet CBC standards to minimize the potential of ground-shaking hazards. and structures must be designed to meet the regulations and standards associated with CBC seismic design categories.

Although the acreage of disturbance for a complex at RJD Infill Site would be greater than that of a single facility, the potential risks of landslide or slope failure would be the same as for a single facility. The overall RJD Infill Site vicinity is in a low landslide category (County of San Diego 2011). However, the slopes leading to O'Neal Canyon to the north and Johnson Canyon to the south of the infill site are quite steep and locally unstable (California Prison Health Care Receivership Corporation 2008). The facility would be set back from the slope breaks to avoid these unstable slopes and, consistent with State requirements, CDCR is required to design facilities to meet CBC standards, which are protective of human health and would minimize hazards associated with landslide or slope failure. All design standards would be incorporated into the final design and construction of the facility.

The level II infill correctional facility complex at the RJD Infill Site would be designed to comply with the most recent requirements of the CBC, which has provisions for seismic safety. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.5-2b: Soil Erosion Impacts [Complex]

Although the acreage of disturbance for a level II infill correctional facility complex at RJD Infill Site would be greater than that for a single facility (See Impact 3.5-2a above), the types of potential impacts from erosion that would occur with development of a complex would be the same as those for the single facility option because the same types of construction activities would occur. CDCR would construct a complex at the RJD Infill Site in accordance with CBC standards, which require incorporation of engineering design measures, including those related to general site grading, clearing and grubbing, soil stabilization, and general erosion control. This, coupled with preparation of a site-specific SWPPP, would minimize potential adverse impacts related to erosion and loss of topsoil at the infill site, and impacts would be less than significant.

Because CDCR would implement appropriate stormwater controls in accordance with federal and state requirements that would reduce potential runoff, development of a level II infill correctional facility complex at the RJD Infill Site would result in ***less-than-significant*** *impacts related to erosion.*

Mitigation Measures

No mitigation measures are required

Impact 3.5-3b: Expansive and Corrosive Soil Impacts [Complex]

Although the acreage of disturbance for a level II infill correctional facility complex at RJD Infill Site would be greater than that for a single facility (see Impact 3.5-3a above), the potential impacts from expansive and corrosive soils that would occur with development of a complex would be the same as those for the single facility option because the same soils would be affected. However, consistent with State requirements, CDCR is required to construct all new facilities in accordance with CBC standards. Conformance to these standards would minimize adverse impacts related to expansive and corrosive soils.

The level II infill correctional facility complex at the RJD Infill Site would be designed and constructed in accordance with CBC design standards, which regulate grading activities, including construction on expansive and corrosive soils. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.5-4b: Paleontological Resources Impacts [Complex]

Although the acreage of disturbance for a level II infill correctional facility complex at RJD Infill Site would be greater than that for a single facility (see Impact 3.5-4a above), the potential impacts to paleontological resources would be the same because construction would occur in the same geologic units. The RJD Infill Site is located within an area of moderate to high paleontological resource sensitivity, and construction-related excavation into these rocks for the level II infill correctional facility complex foundations or utility trenches could disturb potentially significant paleontological resources.

Construction of a level II infill correctional facility complex at the RJD Infill Site, which is located on a paleontologically sensitive formation, could disturb previously undiscovered paleontological resources. This would be a potentially significant impact.

Mitigation Measures

Implement Mitigation Measure 3.5-4 (above).

Significance after Mitigation

Implementation of Mitigation Measure 3.5-4 would reduce potentially significant impacts concerning damage to unique paleontological resources to a **less-than-significant** level because construction workers would be alerted to the possibility of encountering paleontological resources and, if resources were encountered, fossil specimens would be recovered and recorded and would undergo appropriate curation.

3.6 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential for development of a level II infill site at the Richard J. Donovan Correctional Facility (RJD) to expose construction workers and future occupants to existing hazards and hazardous materials. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. The analysis contained herein was taken, in part, from the *Draft Environmental Impact Report: California Health Care Facility (San Diego)* prepared for California Prison Health Care Receivership Corporation in November of 2008 and a records review conducted by Environmental Data Resources (EDR) in June 2012 (provided in Appendix 2B, Volume 2). This records review included searches of the U.S. Environmental Protection Agency (EPA) and California Department of Toxic Substances Control (DTSC) databases for known hazardous materials in the vicinity of the RJD Infill Site.

Impacts related to fire protection and emergency response at the RJD Infill Site are addressed in Section 3.10, “Public Services” of this draft environmental impact report (DEIR) (Volume 2). For more information on geologic hazards associated with development of the RJD Infill Site, refer to Section 3.5, “Geology, Soils, Seismicity, Minerals, and Paleontological Resources,” of this volume. In addition, for information related to flooding and water quality at this site, refer to Section 3.7, “Hydrology and Water Quality,” of this volume.

3.6.1 ENVIRONMENTAL SETTING

RJD opened in July 1987. The RJD Infill Site is mostly undeveloped but includes an existing trailer to temporarily house parolees and a firing range used for training and certification of correctional employees. The trailer is located on a paved pad near the center of the site. The 5-acre firing range includes a small classroom and parking area and is located at the western boundary of the infill site (refer to Exhibit 2-3 in Chapter 2 of this volume).

A review of aerial photographs (dated 1953, 1963, 1974, 1989, 1994, and 2005) and topographic maps (dated 1903, 1904, 1943, 1955, 1971, 1975, 1991, and 1996) indicate that the property now owned by the California Department of Corrections and Rehabilitation (CDCR) may have been used for agricultural purposes prior to development of the RJD facilities in the late 1980s. The land immediately west and south of the RJD Infill Site is believed to have been cultivated in row crops between approximately 1964 and 1987 (California Prison Health Care Receivership Corporation 2008: 4.10-8). Historical use of the RJD property has included a dry cleaning facility (from approximately 1990 to 2001) and installation of underground storage tanks (California Prison Health Care Receivership Corporation 2008: 4.10-11).

An automobile storage yard and a restaurant are located approximately 0.5 mile east of RJD and Alta Road. The Otay Mesa Energy Center is situated approximately 0.5 mile south of RJD and east of Alta Road. Industrial developments along Otay Mesa Road and the East Otay Mesa border crossing are located approximately 2 miles to the south. Light industrial uses include technology facilities, defense component manufacturers, and food manufacturers.

HAZARDOUS MATERIALS

For the purposes of this assessment, a “hazardous material” is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment, if released. Hazardous materials include, but

are not limited to, hazardous substances, hazardous wastes, and any material that a handler or the administering regulatory agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment (California Health and Safety Code, Section 25501 [o]). Several characteristics may cause a substance to be considered hazardous, including toxicity, ignitibility, corrosivity, or reactivity. Although often treated separately from hazardous materials, petroleum products (including crude oil and refined products such as fuels and lubricants), and natural gas are considered in this analysis because they may also pose a potential hazard to human health and safety if released into the environment.

NATURALLY OCCURRING HAZARDS

Asbestos is naturally occurring as fibrous minerals found in certain types of rock formations. Weathering or human disturbance can break naturally occurring asbestos down to microscopic fibers that are suspended easily in air. When airborne asbestos is inhaled, these thin fibers irritate tissues and resist the body's natural defenses. According to the California Department of Conservation, Division of Mines and Geology (2000), naturally occurring asbestos is not common in San Diego County.

Soils in the area of the RJD Infill Site are known to have elevated levels of chloride, making them corrosive (Ninyo & Moore 2012). Concrete is particularly susceptible to corrosion when it is in contact with soil or water that contains high concentrations of soluble sulfates. Impacts related to corrosive soil properties are addressed in Section 3.5, "Geology, Soils, Seismicity, Minerals, and Paleontological Resources," of this volume.

SITES OF POTENTIAL ENVIRONMENTAL CONCERN

Sites of potential concern are identified where there is the possible presence of any hazardous material or waste under conditions that indicate the possibility of an existing release, a past release, or a threat of a release into structures on the property or into the ground, groundwater, or surface water of the property that could substantially affect the infill site's environmental conditions. This analysis considered potential effects based on proximity of the RJD Infill Site to known hazardous material sites identified through general site research and environmental database record searches conducted by EDR in 2012.

RJD Facilities

Leaking underground storage tanks (USTs) associated with the existing prison facility resulted in localized contamination of perched groundwater with benzene. Contaminated soils were removed and the site was remediated by San Diego County Department of Environmental Health in 2006. Further investigation, including borings, indicated that the groundwater is more than 40 feet below the ground surface in the area and is unlikely to have been adversely affected by the release (California Prison Health Care Receivership Corporation 2008: 4.10-13–4.10-14).

The existing RJD facilities use and store hazardous materials, including motor oil, lubricating oil, and propane, as well as small quantities of muriatic acid and other cleaning supplies, in dedicated garage and maintenance areas. Gasoline and diesel are stored in aboveground tanks with secondary containment and leak detection systems, as appropriate (California Prison Health Care Receivership Corporation 2008: 4.10-2–4.10-4).

East Mesa Firing Range

The existing firing range on the western side of the RJD Infill Site is approximately 650 feet long and 250 feet wide, and is surrounded by berms approximately 25 feet tall on all sides. The firing range facility includes a classroom building and a parking area. It is used as a training tool for CDCR, U.S. Border Patrol, San Diego Police Department, California Highway Patrol, Chula Vista SWAT, National City Police Department, and National City Police Department. Live ammunition is stored in a locked,

metal storage trailer. RJD staff members perform weapon cleaning activities within a separate metal storage trailer (located above concrete). The cleaning solution used to clean the weapons is then transferred to the hazardous materials storage area near the fire house prior to offsite disposal (California Prison Health Care Receivership Corporation 2008: 4.10-4–4.10-5).

During a site reconnaissance on January 5, 2010, discolored soil and free-standing liquid (no sheen) were observed at the firing range. Based on these observations, staff from the County of San Diego Department of Environmental Health's (DEH's) Occupational Health Program collected three surface soil samples and one surface water sample. The soil and water samples were analyzed for total petroleum hydrocarbons (TPH). The soil samples were also screened for lead using an x-ray fluorescence analyzer. The x-ray analysis did not indicate that lead was present at levels of concern. Elevated levels of diesel in the water sample, however, triggered site investigations beginning in February 2010. Soil samples were collected from 15 locations at depths ranging from 0.1 foot to 10 feet. Surface water samples were collected from five locations. All chemical constituents analyzed for the soil and water samples were reported to be below laboratory detection limits. The elevated concentration of TPH as diesel detected in the surface water sample is probably attributable to the heavy equipment used to recover bullets. Based on the results of the investigation, the firing range was determined not to pose a threat to human health, the environment, or any nearby receptors.

Otay Mesa Bombing Range

Although the infill site is not located within its boundaries, a portion of the RJD property (on the western side) is located within the boundaries of the Former Brown Field Bombing Range, also identified as the Otay Mesa Bombing Range or Otay Bombing Target #32, which was used by the US Navy as a dive-bombing and aerial rocket practice range from 1942 to 1960. A 2007 evaluation of the Otay Bombing Range found surface soils to be contaminated with munitions constituents, including aluminum, copper, iron, lead, potassium, manganese, and zinc. Explosives were not detected (California Prison Health Care Receivership Corporation 2008).

SAFETY HAZARDS

PROXIMITY TO SCHOOLS

Children are particularly sensitive to hazardous materials exposure, and additional protective regulations apply to projects that could use or disturb potentially hazardous products near schools. The nearest school to the RJD Infill Site is the Olympian High School at 1925 Magdalena Avenue, Chula Vista, which is located approximately 3 miles northwest of the infill site.

PROXIMITY TO AIRPORTS

There are no airspace hazards for the RJD Infill Site. The nearest airports to the infill site are the Brown Field Municipal Airport, located a little more than 2 miles west of the site, and the Tijuana International Airport, located approximately 3 miles southwest of the site. The RJD Infill Site is not within Brown Field's Land Use Compatibility Zone, as identified in the *Brown Field Municipal Airport Land Use Compatibility Plan* (San Diego County Regional Airport Authority 2010).

An existing helistop is located north of Donovan State Prison Road near the existing security gate, just outside of the infill site boundary. The helistop is a concrete-paved helicopter landing pad approximately 40 feet wide by 60 feet long. No fueling, defueling, or maintenance activities, repairs, or storage take place on the helistop. It is used only in emergencies (generally between three and five times per year). There are no known private airstrips in the vicinity of the RJD Infill Site (California Prison Health Care Receivership Corporation 2008: 3-43, 4.10-22).

FIRE HAZARD

The RJD Infill Site has a high potential for fire-related hazards because it is located in a remote, wildland area. The infill site is located near a chaparral plant community, which is one of the most fire-prone plant communities in North America. Wildland fires pose a serious threat to human life and property when homes and urban facilities are built in fire-prone ecosystems (California Prison Health Care Receivership Corporation 2008: 3-43–3.44).

San Diego County's topography is characterized by a semi-arid coastal plain and rolling highlands. This topography, when fueled by shrub overgrowth, occasional Santa Ana winds, and high temperatures, creates an ever-present threat of wildland fire. Extreme weather conditions such as high temperature, low humidity, and/or winds of extraordinary force may cause an ordinary fire to expand into one of massive proportions (San Diego County 2010: 4-43). The infill site is located in an area designated by the San Diego County Multi-Jurisdictional Hazard Mitigation Plan as having a very high risk of wildland fires.

RJD has existing emergency response services in place that respond to potential wildland fire hazards at the infill site. A CDCR-operated fire station, referred to as RJD Fire Station 26, is located on the western perimeter of the existing RJD facility. RJD Fire Station 26 has two fire engine trucks and provides 24-hour fire response to the facility (California Prison Health Care Receivership Corporation 2008: 4.10-7). In addition, RJD is located with the San Diego Rural Fire Protection District (SDRFPD). The closest SDRFPD station to the RJD Infill Site is Station No. 11, located at Highway 94 in Jamul, which would have a response time to the infill site of approximately 25 minutes (California Prison Health Care Receivership Corporation 2008). Although SDRFPD provides supplemental service to RJD under a mutual aid agreement, the CDCR fire station is not a mutual responder.

For more information on fire protection and emergency service to the RJD Infill Site, refer to Section3.10, "Public Services," of this volume

3.6.2 REGULATORY CONSIDERATIONS

A list of the applicable federal and state plans, policies, regulations, and laws related to hazards and hazardous materials at the RJD Infill Site is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Resource Conservation and Recovery Act (42 United States Code [U.S.C.] Section 6901 et seq.) - RCRA established a framework for national programs to achieve environmentally sound management of both hazardous and non-hazardous wastes. The Hazardous Waste Management subchapter of the RCRA deals with issues including the export of hazardous waste, inspections of hazardous waste disposal facilities, and the identification and listing of hazardous waste.
- Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. Section 9601 et seq.) - CERCLA created a tax on the chemical and petroleum industries and provided federal authority to respond directly to releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste; and established a trust fund to provide for cleanup when no responsible party could be identified.
- Emergency Planning and Community Right to Know Act (40 Code of Federal Regulations [CFR] Parts 350–372) - EPCRA establishes requirements for federal, state and local governments, Indian tribes, and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals.

- Hazardous Materials Transportation Act (49 U.S.C. Sections 1801–1819 and 49 CFR Parts 101, 106, 107, and 171–180) - The transportation of hazardous materials is regulated by HMTA, which provides the U.S. Department of Transportation (DOT) with a broad mandate to regulate the transport of hazardous materials, with the purpose of adequately protecting the nation against risk to life and property which is inherent in the commercial transportation of hazardous materials.
- Chemical Accident Prevention Provisions (40 CFR Part 68) - This regulation sets forth the list of regulated substances, the petition process for adding to or deleting from the list, the requirements for owners or operators of stationary sources concerning the prevention of accidental releases, and the state accidental release prevention programs.
- Clean Air Act (42 U.S.C. Section 7401) - This act protects the general public from exposure to airborne contaminants that are known to be hazardous to human health. Under the Clean Air Act, EPA established National Emissions Standards for Hazardous Air Pollutants, which are emissions standards for air pollutants, including asbestos.
- Clean Water Act (Section 402(p)) - The CWA is the primary federal legislation governing water quality whose objective is “to restore and maintain the chemical, physical, and biological integrity of the nation’s waters,” which includes oceans, bays, rivers, lakes, ponds, and wetlands. This act regulates discharges and spills of pollutants, including hazardous materials, to surface waters and groundwater.
- Safe Drinking Water Act (42 U.S.C. Section 300(f) et seq.) - This act regulates discharges of pollutants to underground aquifers.
- Toxic Substances Control Act (15 U.S.C. Section 2601 et seq.) - This act regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials.
- Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Section 136, 40 CFR Parts 152–171] - This act regulates the manufacturing, distribution, sale, and use of pesticides.
- Uniform Fire Code - The UFC is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage for hazardous materials at fixed facilities. To ensure that these safety measures are met, the UFC employs a permit system based on hazard classification.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- California Health and Safety Code: Hazardous Materials Release Response Plans and Inventory Law (Section 25500 et seq.) - Under this law, facilities using hazardous materials are required to prepare Hazardous Materials Business Plans.
- Hazardous Waste Control Act (Section 25100 et seq.) - Similar to RCRA, the Hazardous Waste Control Act regulates the identification, generation, transportation, storage, and disposal of materials the State of California has deemed hazardous.
- California Public Resources Code (Section 21151.4) - The Public Resources Code requires the lead agency to consult with any school district with jurisdiction over a school within 0.25 mile of a proposed project about potential impacts on the school if the project might reasonably be anticipated to emit or handle hazardous substances.
- Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.) - Under the Porter-Cologne Act, California must adopt water quality policies, plans, and objectives to ensure that the state’s beneficial uses for water are reasonably protected. Each RWQCB must prepare and update basin plans to set forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards.
- Safe Drinking Water and Toxic Enforcement Act (Proposition 65) - The Safe Drinking Water and Toxic Enforcement Act regulates the discharge of contaminants to groundwater.
- California Government Code Section 65962.5 - Requires the California Department of Toxic Substances Control DTSC to compile and maintain lists of potentially contaminated sites located throughout the State of California.

- Fire Hazard Severity Zones (Public Resources Code Sections 51175–51189, Government Code Sections 51175–51189) - Require identification of fire hazard severity zones within the state of California. The hazard ranges are measured quantitatively, based on: vegetation, topography, weather, crown fire potential, and ember production and movement within the area of question.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

SAN DIEGO COUNTY

San Diego County, Site Assessment and Mitigation Program

The San Diego County Site Assessment and Mitigation (SAM) Program, within the Land and Water Quality Division of the San Diego County DEH, consists of project managers, field technicians, supervisors, and support staff whose primary purpose is to protect human health, water resources, and the environment within San Diego County by providing oversight of assessments and cleanups in accordance with the California Health and Safety Code and the CCR. The SAM Voluntary Assistance Program also provides staff consultation, project oversight, and technical or environmental report evaluation and concurrence (when appropriate) on projects pertaining to properties contaminated with hazardous substances.

County of San Diego, Underground Storage Tank Program

The DEH Hazardous Materials Division's (HMD's) UST Program administers and enforces federal and state laws and regulations and local ordinances for the construction, installation, modification, upgrade, and removal of USTs in San Diego County. If contamination is discovered or likely to be present, owners or operators of USTs are required by law to report the contamination to the DEH HMD and SAM programs and to take corrective action.

County of San Diego Consolidated Fire Code

The County Fire Code includes the Consolidated Fire Code and adopts by reference the California Fire Code, 2001 edition (24 CCR, Part 9). The Consolidated Fire Code consists of local fire protection district ordinances that have modified the fire code portion of the State Building Standards Code and any County modification to the fire districts' amendments. The purpose of the County Fire Code is protect the public health and safety, which includes permit and inspection requirements for the installation, alteration, or repair of new and existing fire protection systems, and penalties for violations of the code. The code provides the minimum requirements for access, water supply and distribution, construction type, fire protection systems, and vegetation management. Additionally, the fire code regulates hazardous materials and associated measures to ensure that public health and safety are protected from incidents relating to hazardous substance releases.

San Diego County General Plan, Public Facilities Element (Part XII)

Hazardous substances are addressed in the Public Facilities Element of the County of San Diego General Plan in the discussion of fire protection and emergency services. Fire protection and emergency services personnel are charged with the emergency response to hazardous materials incidents through the Hazardous Incident Response Team.

3.6.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact relating to hazards and hazardous materials if it would do any of the following:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- create a significant hazard to the public or the environment as a result of being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5;
- result in a safety hazard for people residing or working in the project area for those projects located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport;
- result in a safety hazard for people residing or working in the project area for those projects within the vicinity of a private airstrip; or
- expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Hazards to Schools: Impacts to school sites are not addressed further because no existing or proposed schools have been identified within 0.25 mile of the RJD Infill Site.

Airport Hazards: Impacts to public and private airstrips are also not addressed further because the site is not within the airport land use plan for Brown Field and no private airstrips have been identified in the vicinity of the infill site.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.6-1a: Construction-Related and Operational Hazardous Materials Impacts [Single Facility]

Construction and operation of a single, level II correctional facility at the RJD Infill Site would increase the regional transportation, use, storage, and disposal of hazardous materials and petroleum products (such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or

acidic chemicals). Standard accident and hazardous materials recovery training and procedures are enforced by the State and followed by private state-licensed, certified, and bonded transportation companies and contractors. Further, 40 Code of Federal Regulations (CFR) 112 requires that a spill prevention, containment, and countermeasures plan or, for smaller quantities, a spill prevention and response plan, that identifies best management practices (BMPs) for spill and release, and disposal of any spills or releases, must be established for construction of the infill site. As required under state and federal law, plans for notification and evacuation of site workers and local residents in the event of a hazardous materials release would be in place throughout construction.

Development of the infill site would conform to spill prevention plans prepared under a Construction General Permit (2009-0009 DWQ as updated by Order 2010-0014-DWQ and Order 2012-0006-DWQ), required by the State Water Resources Control Board, to avoid spills and releases of hazardous materials and wastes. Inspections would be conducted to verify consistent implementation of general construction permit conditions, and BMPs would be required to minimize the potential for spills and releases and help ensure the immediate cleanup and response thereto. BMPs include, for example, the designation of special storage areas and labeling, containment berms, coverage from rain, and concrete washout areas.

Operation of a single, level II correctional facility at the RJD Infill Site would comply with the State of California Division of Occupational Safety and Health's (Cal OSHA's) regulations for the use of hazardous materials in the workplace, as detailed in CCR Title 8. These regulations include requirements for safety training, availability of safety equipment, accidents and illness prevention programs, hazardous substance exposure warnings, and preparation of an emergency action and fire prevention plan. Cal OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that Material Safety Data Sheets be available to employees and that employee information and training programs be documented.

Operation of level II correctional facilities would involve the routine transport of common hazardous materials. Facility maintenance activities would require the use of various common hazardous materials, including cleaners, paints, fuels, and oils and lubricants. The development-related effects of hazardous materials handled onsite would generally be limited to the immediate areas where materials would be located because this is where exposure would most likely occur. Accordingly, the individuals most at risk would be the facilities and maintenance employees or others in the immediate vicinity of hazardous materials. The routes through which these individuals could be exposed include inhalation, contact, ingestion, and injection. Exposure could occur as a result of an accident involving hazardous materials. Aside from accidents possibly occurring onsite, accidents during hazardous materials or hazardous waste transport to and from the site could expose individuals and the environment to risks at some distance from the site. However, transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and California Department of Transportation, whereas use of these materials is regulated by DTSC under CCR Title 22.

Hazardous materials specific to correctional uses are generally limited to firearms, ammunition, and other miscellaneous weaponry, such as tear gas and pepper spray canisters. The level II infill facility would include an armory for the safe and secure storage of firearms, ammunition, and miscellaneous weaponry. The armory would be constructed to meet the "safe storage" requirements of Dangerous Weapons Control Laws (Title 2, Part 4 of the California Penal Code) as regulated by the California Department of Justice. Therefore, because firearms and ammunition would be used and stored according to state regulations, the level II correctional facilities would not result in a safety risk related to the storage of weapons on the site.

Compliance with federal and state laws setting occupational safety standards and with the emergency preparedness plan and any other safety plans prepared for the level II correctional facilities to minimize worker safety risks from both physical and chemical hazards in the workplace would reduce impacts to a less-than-significant level. With implementation of the regulations and procedures outlined above and standard Cal OSHA procedures, impacts associated with hazards to the public or environment through the routine transport, use, or disposal of hazardous materials would be reduced to a less-than-significant level.

Because development of a single, level II correctional facility at the RJD Infill Site would comply with applicable laws and regulations regarding the routine transport, use, and disposal of hazardous materials during construction and operation, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.6-2a: Site Contamination Impacts [Single Facility]

No recognized environmental concerns or known contamination sites have been identified on the RJD Infill Site. Although historical UST leaks have been present at the adjacent RJD facility, all cases have been closed by the regulatory agencies and cleanup is complete. The firing range, which could be a site of localized contamination, would not be disturbed for construction of a single, level II facility. Although the RJD Infill Site may have been used for agriculture in the past, the potential for chemicals associated with this land use to persist in the site soils after more than 20 years of disturbance is low. The relocation of the trailer from the infill site to another location on the RJD property is not expected to result in the upset of hazardous materials.

No known contamination sites are located within the RJD Infill Site. Further, no nearby hazardous material sites have the potential to result in environmental concerns at the infill site. Upset or release of hazardous materials due to development of a single, level II correctional facility at the RJD Infill Site is not reasonably foreseeable. This impact is ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.6-3a: Wildland Fire Impacts [Single Facility]

The RJD Infill Site is located in an area designated by the San Diego County Multi-Jurisdictional Hazard Mitigation Plan as having a very high risk of wildland fires. Defensible space is maintained by periodic mowing to control vegetation and reduce fire risk. An onsite CDCR-operated fire station (Fire Station 26) is located on the western perimeter of the exiting RJD facility and has capacity to provide direct and timely service to the existing prison as well as the contemplated level II infill correctional facility. Supplemental fire protection service would continue to be provided by the San Diego Rural Fire Protection District (SDRFPD). The closest SDRFPD station to the RJD Infill Site is Station No. 11, located at Highway 94 in Jamul, with an approximate response time of 25 minutes to the infill site. In addition, the buildings that would be constructed would be designed to meet all fire code requirements, such as ignition-resistive construction, interior fire sprinklers, and/or sufficient water supply (volume) and pressure. The facility would include other features, such as a vegetation-free clearing associated with the fenced building perimeter, which would create defensible space and minimize the risk of damage in the event of a wildland fire.

Although the RJD Infill Site is located in an area of high fire hazard, CDCR has appropriate fire protection services and measures in place to prevent the loss, injury, or death of people or structures

*as a result of a wildfire. Implementation of a single, level II correctional facility at the RJD Infill Site would have a **less-than-significant** impact with regard to fire hazards.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.6-1b: Construction-Related and Operational Hazardous Materials Impacts [Complex]

As discussed under Impact 3.6-1a above, construction of a level II correctional facility will likely involve the transportation, use, and disposal of hazardous materials. Although the acreage of disturbance for a level II infill correctional facility complex at RJD would be greater than that for a single facility, the potential risks related to hazards and hazardous materials from construction, including hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials, would be the same as for the single facility option because the same types of activities would occur onsite. As with a single facility, these potential impacts would be reduced through compliance with the federal and state plans, policies, regulations, and laws related to hazardous materials that are identified above.

Operation and maintenance of a complex at the RJD Infill Site would involve the routine transport and use of various common hazardous materials, including cleaners, paints, fuels, and oils and lubricants. Although the acreage of disturbance for a complex at RJD Infill Site would be greater than that for a single facility, the same operational activities would occur at the site and operations would comply with Cal OSHA's regulations for the use of hazardous materials in the workplace, as detailed in CCR Title 8. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and the California Department of Transportation, whereas use of these materials is regulated by DTSC under CCR Title 22. In addition, firearms and ammunitions would be used and stored according to state regulations. Therefore, the level II correctional facilities would not result in a risk related to the storage of weapons on the site.

*Because development of a level II infill correctional facility complex at the RJD Infill Site would comply with applicable laws and regulations regarding the routine transport, use, and disposal of hazardous materials during construction and operation, this impact would be **less than significant**.*

Mitigation Measures

No mitigation measures are required.

Impact 3.6-2b: Site Contamination Impacts [Complex]

As discussed under Impact 3.6-2a above, remediated sites on the existing RJD facility, past use of the property, and relocation of the trailer from the infill site to another location on the RJD property are not anticipated to result in reasonably foreseeable upset or release of hazardous materials. Construction of a level II infill correctional facility complex would, however, require the relocation of the existing firing range. Although no evidence of contamination has been discovered during recent (2010) investigations of the firing range, there is potential for lead accumulation in the soils of the firing range.

If soils associated with the firing range are determined to be contaminated, excavation and removal of the contaminated soil would be conducted prior to or during construction of the complex. Transportation of the contaminated soil offsite would be completed in accordance with the U.S. Department of Transportation (DOT) and Hazardous Materials Transportation Act (HMTA) requirements, and disposal of the contaminated soil would occur in an appropriate landfill (based on the level of contamination identified) in accordance with Resource Conservation and Recovery Act (RCRA) and Hazardous Waste Control Act (HWCA) regulations.

Training exercises at the relocated firing range would use non-lead bullets, consistent with California Department of Fish and Wildlife regulations.

While no known contamination sites are located within the RJD Infill Site, relocation of the firing range for construction of a level II infill correctional facility complex at the RJD Infill Site could result in the release of hazardous materials, including lead. This impact would be significant.

Mitigation Measures

Mitigation Measure 3.6-2

To assess potential impacts related to lead contamination associated with the demolition and relocation of the existing firing range, CDCR will prepare a focused Phase II Environmental Site Assessment that samples onsite soils to identify where lead concentrations exceed applicable regulatory criteria. If lead concentrations do not exceed applicable regulatory criteria, no further action is necessary. For areas where lead is present at levels above regulatory criteria, the Phase II Environmental Site assessment will identify the appropriate removal actions (i.e., area to be excavated, depth to excavation, and disposal of contaminated material at an appropriately licensed landfill) that would ensure that remaining soils would not contain lead concentrations that exceed applicable regulatory criteria for the uses proposed onsite. All applicable regulatory requirements (as described in Impact 3.6-2 of Volume 2 of the DEIR) will be adhered to.

Significance after Mitigation

Implementation of Mitigation Measures 3.6-2 would ensure that any lead contamination identified in soil at the firing range site is identified and abated before demolition and construction activities begin, which would reduce the impacts to people and the environment due to potential release of hazardous materials to a **less-than-significant** level.

Impact 3.6-3b: Wildland Fire Impacts [Complex]

The RJD Infill Site is located in a very high-risk category for wildland fire hazards. However, defensible space is maintained, the existing CDCR fire prevention operations at RJD have capacity to provide direct and timely service to the existing prison as well as the contemplated level II infill facility, and supplemental protection service would continue to be provided by SDRFPD. In addition, the buildings that would be constructed would be designed to meet all fire code requirements, such as ignition-resistive construction, interior fire sprinklers, and/or sufficient water supply (volume) and pressure. The complex would also include features, such as a vegetation-free clearing associated with the fenced building perimeter, which would create defensible space and minimize the risk of damage in the event of a wildland fire.

Although the RJD Infill Site is located in an area of high fire hazard, CDCR has appropriate fire protection services and measures in place to prevent the loss, injury, or death of people or structures as a result of a wildfire. Implementation of a level II infill correctional facility complex at the RJD Infill Site would a ***less-than-significant*** *impact with regard to fire hazards.*

Mitigation Measures

No mitigation measures are required.

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3.7 HYDROLOGY AND WATER QUALITY

This section describes the existing hydrological setting at the Richard J. Donovan Correctional Facility (RJD) Infill Site, including runoff, storm drainage, and flood control. Regulations and policies affecting local hydrology and water quality are discussed, and impacts are identified that may result from project implementation. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. Mitigation measures are recommended to reduce potential impacts, where appropriate.

Impacts associated with water supply (including surface supplies and groundwater) are discussed in Section 3.12, “Utilities,” of this draft environmental impact report (DEIR) (Volume 2). Potential impacts related to seiches, tsunamis, or mudflows, which is often analyzed in the context of hydrology and water quality, are discussed in Section 3.5, “Geology, Soils, Seismicity, Minerals, and Paleontological Resources,” of this volume.

3.7.1 ENVIRONMENTAL SETTING

REGIONAL SETTING

The RJD Infill Site is situated in unincorporated San Diego County, in the southern portion of the Otay River watershed. The surrounding topography of the facility consists of a gently sloping mesa between two dominant canyons, Johnson Canyon and O’Neal Canyon. The two canyons form the major drainage conveyances in the region. The infill site is located adjacent to the existing RJD facilities on mainly undeveloped terrain that is relatively flat and has been previously disturbed.

The infill site is in a semi-arid, steppe climate characterized by mild and sunny weather for most of the year. Over the 1980–2012 water years, the average annual precipitation in the area is 12.72 inches (PRISM 2013). More than 95 percent of precipitation in the area falls from October to April.

AREA HYDROLOGY

SURFACE WATER

The RJD Infill Site is located within the U.S. Geological Survey’s HUC-12 Poggi Canyon–Otay River hydrologic basin, which has a total watershed area of 142 square miles measured from San Miguel Mountain to the point where it empties into San Diego Bay (Natural Resources Conservation Service 2012). The major Upper and Lower Otay Reservoirs are located upstream of the infill site. The Lower Otay Reservoir is about 2.9 miles upstream of the infill site and is used for water storage by the City of San Diego Water Utilities Department. IT supplies domestic water to the residents of the South San Diego Bay area. Savage Dam, which impounds Lower Otay Lake, is approximately 5 miles north of RJD, although the site is not located within the dam’s inundation area. In the lower elevations near Interstate 5 (I-5), groundwater surfaces in the Otay River channel and flows to the San Diego Bay. Aside from this, there is only ephemeral flow between the Lower Otay Reservoir and the San Diego Bay (CDCR 1995). Most of the Otay River channel has been subject to current and past sand and gravel mining activities. Unconsolidated fill from past mining activities is present in many locations along the river valley (CDCR 1995).

Elevations at the RJD Infill Site range from 648 feet above mean sea level at the eastern boundary to 615 feet above mean sea level in the southwestern portion of the site. The RJD Infill Site consists of nonnative grassland and is almost entirely undeveloped. The mesa surface in the area of the infill site is mapped as the soil unit SuA Stockpen gravelly clay loam, 0-2 percent slopes (National Cooperative Soil Survey 2013). The soils are generally described as having very slow infiltration properties. The hydrologic group for these soils is Type D, exhibiting high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

FLOODPLAINS

The existing RJD facility drains to both Johnson Canyon and O'Neal Canyon; both canyon floors are wide and nearly flat, although the active stream channels are incised a few feet into the alluvial cover. The channel floors are, on rare occasion, prone to flooding as evidenced by the scour and width of the active channels. Both canyons have their headwaters within the San Ysidro Mountains that lie within a few thousand feet east of the infill site (CDCR 1995).

Flood zones at the RJD Infill Site are mapped by the Federal Emergency Management Agency (FEMA). The infill site is not mapped in a FEMA flood zone (FEMA 2013).

ONSITE DRAINAGE

The drainage divide[1] between Johnson Canyon to the south and O'Neal Canyon to the north goes through the RJD Infill Site. Approximately 12 acres of the infill site are located in the Johnson Canyon drainage, which has a drainage area of 2.2 square miles and empties into the Otay River. The remainder of the infill site is located in the O'Neal Canyon drainage, which has a drainage area of 5.4 square miles and also empties into the Otay River.

Examination of available site improvement plans, aerial photography, and topography indicates that the existing RJD facilities have two distinct drainage systems, along with two other smaller discharges (one to the north and one to the south). One underground drainage system collects water in the northern portions of RJD and discharges into a channel that drains into the unnamed canyon between Johnson Canyon and O'Neal Canyon. The outfall for this system appears to be approximately 75 feet northwest of the northwesterly perimeter road, discharging into an open channel that runs approximately 1,250 feet toward the western property boundary.

A second drainage system collects water from the southern portion of RJD and discharges into a detention basin near the staff parking lot for the central administration building; the detention basin then releases flows into Johnson Canyon.

A third drainage collects water in the eastern half of the existing RJD facility and routes it northward to an outfall into O'Neal Canyon.

A fourth drainage collects water from the undeveloped lands southeast of the infill site in a concrete-lined temporary conveyance gutter, which runs along the length of Donovan State Prison Road. This drainage crosses under the road through a culvert located approximately 500-feet east of the RJD facility gate and then discharges into Johnson Canyon to the south.

Additional drainage facilities located onsite and offsite include site sloping, energy dissipaters, curbs, gutters, brow ditches on the steep slopes surrounding RJD, and drainage culverts at road crossings (CDCR 1995).

[1] Watershed delineated from U.S. Geological Survey 1/9 Arc Second National Elevation Dataset (NED) files. The horizontal resolution of the data is approximately 11 feet, and the vertical accuracy is ± 3 feet.

SURFACE WATER QUALITY

Section 303(d) of the federal Clean Water Act (CWA) requires states to identify water bodies that do not meet established water quality standards (known as total maximum daily loads [TMDLs]) and are not supporting their beneficial uses. The State Water Resources Control Board (SWRCB) published a Statewide 2008–2010 303(d) list of impaired water bodies (SWRCB 2010) that was subsequently amended with additional listings and approved by the U.S. Environmental Protection Agency (EPA) (EPA 2011). The Otay River is not listed on the final EPA list of impaired water bodies.

The San Diego Regional Water Quality Control Board (RWQCB) considers beneficial uses as critical to water quality management in California. California state law defines beneficial uses of California's waters that may be protected against quality degradation to include "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (California Water Code Section 13050(f)). Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning. The beneficial uses of any specifically identified water body generally apply to its tributary streams to the extent that they could also support similar beneficial uses. The Water Quality Control Plan (Basin Plan) for the San Diego Basin defines the beneficial uses that the San Diego RWQCB has specifically designated for water bodies in the Otay River watershed, along with specific water quality objectives to be met to protect those uses (San Diego RWQCB 2011).

GROUNDWATER

The primary water-bearing formation in the area is the San Diego Formation. Groundwater in the RJD vicinity has characteristically high concentrations of chloride and total dissolved solids. The use of groundwater in the vicinity of the infill site is limited by its poor quality. Groundwater in the vicinity of RJD is used for sand and gravel washing and crop irrigation in the floodplain of the Otay River downstream of the infill site. Borings drilled at the infill site to a depth of 40.5 feet below the mesa surface did not encounter groundwater (CDCR 1995). Although the groundwater is used by a few households, its quality does not meet current potable water standards. Based on historical well yields and water quality data, groundwater in the San Diego Formation within the infill site vicinity is not likely to occur in either large enough quantities or adequate quality for potable use.

3.7.2 REGULATORY CONSIDERATIONS

A list of the federal and state, plans, policies, regulations, and laws related to hydrology and water quality applicable to the RJD Infill Site is provided below. Complete summaries of the federal and state regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Clean Water Act Section 402 - National Pollution Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources.
- Clean Water Act Section 404 - regulation of discharge of dredged and fill materials into waters of the United States.
- National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 - These acts reduce the need for large publicly funded flood control structures and disaster relief by providing flood insurance and restricting development on floodplains, respectively.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- Porter-Cologne Water Quality Control Act of 1969 - Under the Porter-Cologne Act, California must adopt water quality policies, plans, and objectives to ensure that the state's beneficial uses for water are reasonably protected. Each RWQCB must prepare and update basin plans to set forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards.
- Recycled Water Policy – State Board Resolution No. 2009-0011 - The Policy is intended to encourage the beneficial use of recycled water instead of sole disposal. The purpose of this Policy is to provide direction to the RWQCBs, proponents of recycled water projects, and the public regarding the appropriate criteria to be used by the State Water Board and the Regional Water Boards in issuing permits for recycled water projects.
- California State Nondegradation Policy - The nondegradation policy states that the disposal of wastes into State waters shall be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the state and to promote the peace, health, safety, and welfare of the people of California.
- Senate Bill 5: 200-Year Flood Protection - SB 5 requires DWR and the Central Valley Flood Protection Board to accomplish all tasks set forth in the Central Valley Flood Protection Act of 2008 which include adopting a flood protection plan, requiring counties to develop flood emergency plans, and producing preliminary maps for 100-year and 200-year floodplains protected by project levees.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, the California Department of Corrections and Rehabilitation (CDCR) is not subject to local land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

EAST OTAY MESA COMPREHENSIVE FLOOD CONTROL MASTER PLAN

The County of San Diego generally controls flood impacts through the prevention of development within designated floodplains. The generally recognized storm event threshold is the 1 percent chance (100-year) runoff event established by FEMA (Nolte Associates 2008). Generally recognized standards in San Diego County include mitigation of storm drainage flows from new construction to match pre-construction storm drainage flows, which require attenuation of peak flow discharges from the developed site to generally match the pre-project, 10-year, and 100-year runoff events (Nolte Associates 2008).

SAN DIEGO MUNICIPAL STORMWATER PERMIT

Municipal Separate Storm Sewer Systems (also known as MS4 jurisdictions) within the San Diego region are required to obtain coverage under the NPDES program, which regulates stormwater discharges from such municipalities under the municipal permit program (San Diego County 2003, San Diego County 2007).The County of San Diego operates under the San Diego RWQCB's waste discharge requirements (WDRs) (Order R9-2007-0001, NPDES CAS0108758), reissued in 2007. As required by the reissued permit, the co-permittees (including San Diego County) prepared an updated countywide model standard urban water mitigation plan in 2008 (San Diego County 2008). This model was designed for participating municipalities to use in updating their local urban water mitigation plans so that they implement the requirements of the NPDES.

3.7.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact relating to hydrology and water quality if it would do any of the following:

- violate any water quality standards or waste discharge requirements;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite;
- create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map (FIRM) or other flood hazard delineation map;
- place within a 100-year flood hazard area structures that would impede or redirect flood flows; or
- expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a levee or dam.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Potential impacts related to seiches, tsunamis, or mudflows, which is often analyzed in the context of hydrology and water quality, are discussed in Section 3.5, “Geology, Soils, Seismicity, Minerals, and Paleontological Resources,” of this volume.

Groundwater recharge: Construction and operation of a level II correctional facility at the RJD Infill Site would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge to the extent that it would create a net deficit in aquifer volume or a lowering of the local groundwater table level because, based on historical well yields and water quality data, groundwater in the San Diego Formation within the RJD Infill Site vicinity is not likely to occur in large quantities and would not be used as a source of water for the level II correctional facility. In addition, although construction of level II correctional facilities would result in additional impervious surfaces, it is not anticipated to substantially affect groundwater supplies because sufficient stormwater infrastructure would be constructed as part of site development to detain and infiltrate stormwater runoff. Although groundwater recharge would occur over a smaller surface area compared to the baseline condition, infrastructure would be designed to allow infiltration to occur over a longer duration and, thus, would not result in substantial change to overall groundwater supplies. Therefore, development of level II correctional facilities would have no impact on groundwater supply or quality, and this issue is not discussed further.

Housing or structures in a 100-year flood hazard area: Construction and operation of level II correctional facility at RJD would not place housing in a 100-year flood hazard area or place structures in a 100-year flood hazard area that would redirect flood flows because the infill site is not located in a 100-year flood hazard area according to FEMA. Thus, these issues are not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.7-1a: Short-Term, Construction-Related Water Quality Degradation [Single Facility]

Construction of a single, level II correctional facility at the RJD Infill Site, as well as the demolition and relocation of existing facilities, would include extensive ground-disturbing activities on up to 79 acres, such as earth removal, grading, trenching, construction staging, and restoration. Construction is proposed to begin in spring 2014 and would be scheduled for completion by spring 2016. Depending on scheduling, construction could occur during two rainy seasons (October 1 through April 30). Because of the increase in exposed surfaces and the earth-moving activities, the potential for erosion and sedimentation runoff is higher during the rainy season.

Activities related to construction at the infill site and relocation of existing structures would create the potential for soil erosion and possible increases in sedimentation of stormwater facilities, both onsite and downstream of the infill site. Construction activities also increase the potential for accidental release of pollutants that could affect not only surface waters, but the beneficial uses associated with them. Such pollutants include oil and gas from machinery, chemicals associated with construction, and waste material. Many construction-related pollutants have the potential to degrade water quality by increasing constituent levels in surface waters that exceed water quality standards. Proposed construction activities could violate these standards if mitigation measures are not implemented and can cause harm to surrounding habitats and their associated plant and animal life.

Localized erosion hazards are regarded as relatively low because the project site is generally flat and the soil types on the site are known to have little erosion hazard (see Section 3.5, “Geology, Soils, Seismicity, Minerals, and Paleontological Resources,” of this volume). However, rainfall and associated stormwater runoff could result in periods of sheet erosion within areas of exposed or stockpiled soils. If uncontrolled, erosion of these soil materials could cause sedimentation and blockage of drainage channels. Further, the compaction of soils by heavy equipment may reduce their infiltration capacity and increase the potential for runoff and erosion. Stormwater runoff could also wash construction materials into receiving waterbodies and adversely affect water quality. Non-stormwater discharges could result from activities such as construction dewatering procedures, as well as discharge or accidental spills of hazardous substances such as fuels, oils, concrete, paints, solvents, cleaners, or other construction materials.

As part of the design and implementation of a level II infill correctional facility at RJD, CDCR or its contractor would retain a Qualified SWPPP Developer to prepare a Storm Water Pollution Prevention Plan (SWPPP) that would include site-specific best management practices (BMPs) and any other necessary site-specific Waste Discharge Requirements (WDRs) or waivers under the Porter-Cologne Act. The following list identifies standard BMPs that will be incorporated into the SWPPP for development of a level II correctional facility at RJD. These BMPs are based on practices outlined in

the California Stormwater Quality Association's (CASQA) *Best Management Practice Handbook Portal* (California Stormwater Quality Association 2010):

- *Desilting basin and sediment trap:* Construction of a temporary basin designed to remove sediment from runoff will prevent constituents from reaching existing on- and offsite drainages by allowing sediment to settle before discharging water to natural drainages.
- *Erosion control blankets/mats, geotextiles, plastic covers:* These erosion control methods will be used on flat or sloped surfaces to keep soil in place and can be used to cover disturbed soil to prevent runoff.
- *Gravel/sandbag barrier:* A temporary sediment barrier will be constructed using gravel or sand filled bags to prevent sediment from disturbed areas from reaching existing drainages by reducing the volume of sheet flows.
- *Hydraulic, straw, and wood mulch:* The use of these various mulches will temporarily stabilize soil on surfaces with little or no slope.
- *Preservation of existing vegetation:* Preserving the existing vegetation to the maximum extent possible will provide protection of exposed surfaces from erosion and can keep sediment in place. Sensitive areas defined in Section 3.2, "Biological Resources," of this volume will be clearly indicated and protected during and after construction.

The following list identifies additional BMPs that may be incorporated into the SWPPP for development of a level II infill correctional facility at RJD. These BMPs are also based on practices outlined in the California Stormwater Quality Association's (CASQA) *Best Management Practice Handbook Portal* (California Stormwater Quality Association 2010):

- *Runoff control BMPs:* These measures include grading surfaces to control sheet flow, barriers or berms that force sheet flows around protected areas, and stormwater conveyances such as channels, drains, and swales. These practices and features collect runoff and redirect it to prevent contamination to surface waters. Calculations would be made for anticipated runoff, and the stormwater conveyances would be constructed, designed, and located to accommodate these flows.
- *Scheduling and planning:* Appropriate scheduling and planning provide ways to minimize disturbed areas, which reduces the amount of activity that requires protection and minimizes the duration of exposure of disturbed soils to erosion.
- *Stabilized construction entrance/exit*. A graveled area or pad can be built at points where vehicles enter and leave a construction site. This BMP provides a buffer area where vehicles can drop their mud and sediment to avoid transporting it onto public roads, to control erosion from surface runoff, and to help control dust.
- *Storm drain inlet protection:* Protection consists of devices and procedures that detain or filter sediment from runoff, thereby preventing them from reaching drainage systems that would be used following construction, as well as surface waters.

Additional concerns include potential pollutant exposure related to improper material storage and handling, as well as non-stormwater discharges. The following BMPs address these potential problems and may be incorporated into CDCR's SWPPP:

- *Concrete waste management:* Excess or leftover concrete would be properly disposed of in designated concrete waste facilities.
- *Material delivery and storage practices:* All materials, especially toxic or hazardous materials, would be covered to prevent exposure to stormwater and runoff. Toxic or hazardous materials would also be stored and transferred on impervious surfaces that would prevent immediate exposure to soils. Vehicles and equipment used for material transport and storage, as well as any other vehicles, would be parked in clearly designated areas.

- *Street sweeping and maintenance:* Regular cleaning would occur at the entrances and exits to and from the infill site to avoid contamination of offsite areas.
- *Solid waste management:* An appropriate amount of conveniently located trash and waste containers would be placed around the infill site for proper disposal of solid wastes. All receptacles would have lids or covers that will not blow off in windy conditions.
- *Spill prevention and control:* Any spills or releases of materials would be cleaned up immediately and comprehensively. Appropriate and easily accessible cleanup equipment, including spill kits containing absorbents, would be located in several areas around the site. Used cleanup materials would be disposed of properly and in accordance with applicable regulations. Hazardous or toxic material spills must be treated as hazardous waste and be treated and disposed of accordingly.
- *Vehicle and equipment cleaning and refueling:* Vehicles and equipment that regularly enter and leave the infill site would be cleaned. Additionally, refueling of vehicles and equipment would occur offsite whenever possible. An onsite designated fueling area with appropriate containment and cleanup materials would be used when offsite refueling is impractical.
- *Vehicle and equipment maintenance:* Offsite maintenance facilities would be used whenever possible. Whenever onsite maintenance is necessary, designated maintenance areas would be protected from stormwater runoff and provided with proper spill cleanup and containment materials.

CDCR's SWPPP would also identify the following:

- pollutants likely to be used during construction activities or that could be present in stormwater and non-stormwater discharges, as well as any other type of materials included in equipment operation;
- personnel training requirements and procedures to ensure that all workers are aware of the applicable regulations regarding the permit requirements and are made aware of the BMPs designated and specified in the SWPPP;
- site inspection and maintenance responsibilities;
- spill prevention measures, including those mentioned above;
- a monitoring program to be implemented and carried out by CDCR's contractor, which would include site inspections during dry and wet weather conditions to ensure personnel are following SWPPP conditions, and which would include a sampling analysis plan, as required by the General Construction Permit; and
- appropriate supervisory personnel who would be responsible for carrying out implementation of the SWPPP.

Because CDCR would implement adequate measures to control onsite stormwater and protect water quality as part of the planning and design phase of implementation, no adverse construction-related stormwater impacts would occur.

Construction activities during development of a single, level II infill correctional facility at the RJD Infill Site would involve grading and soil movement. These activities could result in erosion or runoff of sediment and other nonpoint source pollutants in onsite stormwater, which could drain to offsite areas, thereby potentially degrading local water quality. However, CDCR would prepare and implement a SWPPP with site-specific BMPs and any other necessary site-specific WDRs to reduce temporary construction-related drainage and water quality effects and maintain surface water quality in adjacent receiving waters. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.7-2a: Stormwater System Impacts [Single Facility]

Development of a level II correctional facility at the RJD Infill Site would result in an increase in impervious surfaces at the site. The completed facility footprint of the single, level II infill correctional facility would be approximately 35 acres, approximately half of which would be impervious surfaces. Of this acreage, approximately 2 acres is currently developed with impervious surfaces.

Approximately 12 acres of the infill site are located in Johnson Canyon, which has a drainage area of 2.2 square miles and empties into the Otay River. The remaining 23 acres are located in O'Neal Canyon, which has a drainage area of 5.4 square miles where it empties into the Otay River. No hydromodification or alteration is proposed of any of the nearby drainages, including Johnson or O'Neal Canyons. Development at the RJD Infill Site would increase stormwater runoff due to the decrease of permeable surfaces onsite. To reduce the impact of increased runoff, a level II facility would include up to two detention basins. Although the final sizes and exact locations of the detention basins would be determined in final site plans and drainage plans, the area of site disturbance analyzed throughout this volume of the EIR accounts for the construction and operation of detention basins.

Storm drains would be constructed to direct runoff from the infill site to the detention basins. Detention basins temporarily retain stormwater runoff which also allows sediment particles and certain pollutants to settle before entering the watershed. Properly designed detention systems release runoff slowly enough to reduce downstream peak flows to their pre-project levels, allow fine sediment to settle, and allow uptake of dissolved nutrients from the runoff where vegetation is included. Detention systems are most appropriate for areas where water percolates poorly through the soil. Therefore, the proposed detention basins would likely alleviate the potential for flooding onsite and in receiving waters. The detention basins would be designed so that pre-project and post-project runoff conditions would be substantially the same.

Other low-impact development (LID) methods to maintain pre-project runoff levels, including design considerations when planning roads, parking lots, buildings, or landscaping, would be incorporated. The proposed detention basins would be designed to provide adequate stormwater storage capacity for a 100-year storm and control stormwater discharge rates. In accordance with San Diego RWQCB requirements, the project must also consider and incorporate LID techniques to minimize runoff from the RJD Infill Site. Additional information about the drainage characteristics (including runoff volume, time of concentration, and detention volume) and information on proposed detention basins (such as capacity, design, and detention times) would need to be available to further evaluate compliance with the appropriate flood control requirements.

Because final drainage design specifications have not been completed, including stormwater flow paths and magnitudes based on a finalized site plan, development of a single, level II infill correctional facility at the RJD Infill Site has the potential to increase flow rates and volumes to receiving waters (Johnson Canyon and O'Neal Canyon) by increasing impervious areas and reducing infiltration capacity in the project area. Changes to the hydrology, including volume, rate, time of concentration, and travel time of runoff, create the potential for downstream flooding and would result in a significant impact.

Mitigation Measures

Mitigation Measure 3.7-2

To minimize the potential impact related to on- and offsite flooding as a result of a new level II infill correctional facility at the RJD Infill Site, prior to final project design, CDCR shall assess drainage patterns and potential downstream flooding impacts, including increased flow rates and volume and flood potential. Final project design will include design features to ensure that all runoff will leave the project site at rates similar to pre-project conditions.

The detention basins will be designed to contain and control the project peak-flow discharge rates to pre-project levels and to improve runoff water quality. Runoff will be discharged through a water quality outlet designed to minimize concentrated flows, turbulence, and scour. The water quality outlet will be designed to empty the detention basins within 24–72 hours, with 40 hours as the preferred drawdown time. The 24-hour minimum limit provides adequate settling time; the 72-hour maximum limit mitigates vector control concerns.

The final drainage plan will include, but is not limited to, the following items:

- an accurate calculation of pre-project and post-project runoff scenarios, obtained using appropriate engineering methods, that evaluates potential changes to runoff, including increased surface runoff;
- documentation of how the system meets necessary requirements, such as that 100-year flood flows be appropriately channeled and contained, such that the risk to people or damage to structures within or down gradient of the infill site does not occur;
- a description of any treatments necessary to protect earthen channels from erosion, and modifications that may be needed to existing underground pipe and culvert capacities; and
- a description of the proposed maintenance program for the onsite drainage system and project-specific standards for installing drainage systems.

Significance after Mitigation

Implementation of Mitigation Measure 3.7-2 would reduce the significant impact related to on- and offsite flooding at the RJD Infill Site because of increased impervious surfaces and altered site drainage to a **less-than-significant** level by controlling post-project peak-flow discharge rates at or below pre-project levels.

Impact 3.7-3a: Long-Term Water Quality Degradation [Single Facility]

Construction and operation of a single, level II correctional facility at the RJD Infill Site would increase the footprint of development on the site and add substantial amounts of impervious surfaces, including roadways and parking areas, which could potentially increase the level of urban contaminants discharged into the stormwater drainage system.

Approximately 35 acres of the infill site would be developed (of which approximately 2 acres is already developed) with permanent uses associated with the new level II correctional facility. Development of the RJD Infill Site has the potential to increase the pollutant load of stormwater discharges as a result of proposed land uses. Anticipated pollutants include trash, debris, heavy metals, and hydrocarbons from parking areas, as well as sediment from pervious areas that would not be landscaped, pesticides from potential pest control activities, nutrients, fertilizers, oxygen-demanding substances such as green waste from landscaped areas, and organic compounds from uncovered parking areas and roadway/driveway systems.

There are currently no water courses or waterbodies associated with the project that are on SWRCB's 303(d) list, and no TMDLs have been identified in receiving waters. In other words, no receiving waterbodies have been found to exceed water quality standards promulgated by the San Diego RWQCB to protect beneficial uses.

In accordance with federal and state stormwater management regulations, new construction and substantial redevelopment must maintain pre-project hydrology, incorporate proper pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through proper BMPs when

source control or exposure protection are insufficient to reduce runoff pollutant loads. In accordance with San Diego RWQCB compliance guidelines, CDCR would be required to incorporate BMPs and LID stormwater management principles into project design. Therefore, CDCR would prepare a SWPPP that includes the incorporation of source control, site design, and treatment control BMPs to address anticipated and potential pollutants. The proposed detention basins would provide some treatment of total suspended solids, phosphorus, particulate metals, and litter, as well as maintaining pre-project hydrology, if properly designed. However, additional treatment would be required to address potential increased pollutant loads anticipated from the addition of the proposed buildings and parking areas.

The project would incorporate post-construction BMPs that include, but are not limited to, the following recommended measures identified by the San Diego RWQCB:

Source Control. Source control BMPs would reduce pollutant loads in runoff. The following source control measures would be implemented at the RJD Infill Site:

- All storm drain inlets and catch basins will be stenciled or have a tile placed with prohibitive language and/or graphical icons to discourage illegal dumping.
- Waste collection areas will (1) be paved with an impervious surface, designed not to allow runoff from adjoining areas, and screened or walled to prevent offsite transport of trash; and (2) contain attached lids on all trash containers that exclude rain; or (3) contain a roof or awning to minimize direct precipitation. Waste will be collected by a servicing company on a routine basis. This will minimize direct contact of trash and debris with precipitation.
- Drought-tolerant native or naturalized landscaping will be used to reduce the need for pesticides, fertilizers, and irrigation.
- Maintenance personnel will be educated on environmentally friendly pesticides and herbicides and will be encouraged to reduce or eliminate the need for pesticides. Personnel will also be required to be familiar with and to apply the principles of integrated pest management.
- Maintenance personnel will be educated on effective and efficient use of fertilizers and encouraged to minimize their application.
- Maintenance personnel will inspect the site routinely for trash and debris to reduce the potential discharge of materials into the storm drain system. Maintenance personnel will also monitor storm drain inlets and catch basins for trash and debris.
- Efficient landscape irrigation systems with rain sensors will be used to minimize runoff of excess irrigation water to the stormwater conveyance system. Irrigation systems will be designed to each landscape area's specific water requirements. Flow reducers or shutoff valves triggered by a pressure drop will be used to control water loss in the event of broken sprinkler heads or lines.
- Maintenance personnel will be trained to inspect the facilities for signs of plumbing and sewer problems. A routine monitoring schedule will be put in place to check cleanouts and other facility controls for maintenance needs.

Site Design. The following site design BMPs would be implemented to at this site:

- Runoff from roofs will be directed to landscaped areas or infiltration basins to allow for infiltration and reduced runoff.
- Pavers or other porous surfaces such as grass paver systems, gravel paver systems, porous concrete, porous asphalt, or granular surfaces will be used to reduce impervious areas.
- The project will maintain existing flow patterns and control runoff from impervious areas, particularly from pavement, by directing flow to an engineered stormwater drain system that will control runoff from the development.

Treatment Control. Detention basins are systems that detain runoff to reduce flow velocities and allow particles to settle out of runoff prior to discharge. Pollutants are removed by sedimentation, adsorption

to soil particles, and infiltration through the soil. Detention basins have high removal efficiency for sediments and trash and debris; medium removal efficiency for nutrients, heavy metals, oxygen-demanding substances such as green waste, and oil and grease; they have unknown removal efficiency for organic compounds, bacteria, and pesticides.

The proposed detention basins onsite would be designed with the following general design parameters:

- basins must drain within 24–72 hours (48-hour optimal drawdown),
- inlet/outlet dissipation must be included to reduce velocity,
- length-to-width ratio should be at least 1.5:1 (may use internal baffling or berms),
- optimal basin depths range from 2 to 5 feet, and
- maintenance access ramp and perimeter access should be provided.

While the potential for development of a single, level II correctional facility at the RJD Infill Site to cause or contribute to long-term discharges of urban contaminants into the stormwater drainage system could increase compared to existing conditions, CDCR would be required to comply with federal and state stormwater management regulations. These regulations require the incorporation of appropriate BMPs into the design of the development to prevent long-term water quality degradation. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.7-1b: Short-Term, Construction-Related Water Quality Degradation [Complex]

Although the acreage of construction disturbance for a level II infill correctional facility complex at RJD (up to 105 acres) would be greater than that for a single facility (see Impact 3.7-1a), the potential construction impacts related to water quality degradation that would occur with development of a complex would be the same as those for a single facility because the same types of ground disturbance and construction activities would occur. Activities related to construction of the RJD Infill Site and relocation of existing structures would create the potential for soil erosion, an increase in sedimentation of stormwater facilities, and accidental release of pollutants, which could affect surface water quality both onsite and downstream. However, as part of the design and implementation of a level II infill correctional facility complex at RJD, CDCR or its contractor would retain a Qualified SWPPP Developer to prepare and implement a SWPPP that would include site-specific BMPs (described under Impact 3.7-1a above) and any other necessary site-specific WDRs or waivers under the Porter-Cologne Act.

Construction activities for development of a level II infill correctional facility complex at the RJD Infill Site would involve grading and soil movement. These activities could result in erosion or runoff of sediment and other nonpoint source pollutants in onsite stormwater, which could drain to offsite areas, thereby degrading local water quality. However, CDCR would prepare and implement a SWPPP with site-specific BMPs and any other necessary site-specific WDRs to reduce temporary construction-related drainage and water quality effects and maintain surface water quality in adjacent receiving waters. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.7-2b: Stormwater System Impacts [Complex]

The footprint of a level II infill correctional facility complex at RJD would cover 55 acres, approximately 20 acres greater than that for a single facility (see Impact 3.7-2a above). However, the potential impacts related to increased surface runoff that would occur with development of a complex would be the same as those for a single facility because the same type of facilities would be developed, resulting in stormwater discharges. Development of a level II infill correctional facility complex at the RJD Infill Site would result in an increase of impervious surfaces; the facility footprint would be approximately 55 acres, with approximately half of this area being impervious surfaces. Of this acreage, approximately 2 acres is currently developed with impervious surfaces. The increase in impervious land would increase runoff into the existing drainage network, including earthen channels that deliver water to the canyon tributaries.

As described under Impact 3.7-2a above for a single, level II facility, storm drains would be constructed to direct runoff from the infill site to detention basins, which release runoff slowly enough to reduce downstream peak flows to their pre-project levels, allow fine sediment to settle, and uptake dissolved nutrients in the runoff where vegetation is included. In addition, LID methods would be implemented for the new facilities to maintain pre-project runoff levels. Additional information about the drainage characteristics (including runoff volume, time of concentration, and detention volume) and information on proposed detention basins (such as capacity, design, and detention times) would need to be available to further evaluate compliance with the appropriate flood control requirements.

The level II infill correctional facility complex at the RJD Infill Site has the potential to increase flow rates and volumes to receiving waters (Johnson Canyon and O'Neal Canyon) by increasing impervious areas and reducing infiltration capacity in the project area. Changes to the hydrology, including volume, rate, time of concentration, and travel time of runoff, create the potential for downstream flooding and would result in a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.7-2 (above).

Significance after Mitigation

Implementation of Mitigation Measure 3.7-2 would reduce the significant impacts related to on- and offsite flooding at the RJD Infill Site because of increased impervious surfaces and altered site drainage to a **less-than-significant** level by controlling post-project peak-flow discharge rates at or below pre-project levels.

Impact 3.7-3b: Long-Term Water Quality Degradation [Complex]

Similar to a single facility, construction and operation of a level II infill correctional facility complex at the RJD Infill Site would increase the footprint of development on the site and add substantial amounts of impervious surfaces, including roadways and parking areas, which could potentially increase the level of urban contaminants discharged into the stormwater drainage system. Approximately 55 acres of the infill site would be developed (of which approximately 2 acres is already developed) with permanent uses, which has the potential to increase the pollutant load of stormwater discharges. However, in accordance with federal and state stormwater management regulations, new construction and significant redevelopment must maintain pre-project hydrology, incorporate proper pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through proper BMPs when source control or exposure protection are insufficient to reduce runoff pollutant loads. In accordance with San Diego RWQCB compliance guidelines, CDCR would be required to incorporate BMPs and LID stormwater management principles. As described under Impact 3.7-3a above, these would include detention systems and other suitable stormwater pollutant control BMPs to reduce the discharge of pollutants into stormwater.

While the potential for development of a level II infill correctional facility complex at the RJD Infill Site to cause or contribute to long-term discharges of urban contaminants into the stormwater drainage system could increase compared to existing condition, CDCR would be required to comply with federal and state stormwater management regulations. These regulations require the incorporation of appropriate BMPs into the design of the development to prevent long-term water quality degradation. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

3.8 LAND USE, AGRICULTURE, AND FORESTRY RESOURCES

This section describes the existing onsite and surrounding land uses and evaluates the potential effect of development of a single, level II infill correctional facility or a level II infill correctional facility complex at Richard J. Donovan Correctional Facility (RJD) on existing land uses, agriculture, and forestry resources. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. The analysis provided in this section is based on a review of local land use policies, including the San Diego County General Plan and Otay Subregional Plan, the San Diego Multiple Species Conservation Program, and the California Department of Conservation (CDC) Farmland Mapping data. As a state agency, the California Department of Corrections and Rehabilitation (CDCR) must consider relevant federal or state land use policies. However, CDCR is generally not subject to local plans, policies, and ordinances. Nevertheless, CDCR has provided a discussion of relevant plans and policies because conflicts with these policies could result in environmental impacts and sometimes the local standards can provide guidance in the development of mitigation measures. The discussion does not imply that CDCR would be subject to local plans or ordinances, either directly or through the California Environmental Quality Act (CEQA) environmental review process.

3.8.1 ENVIRONMENTAL SETTING

ONSITE LAND USES

The existing RJD, as well as support and ancillary facilities and operations, are located in San Diego County, approximately 18 miles southeast of downtown Chula Vista, less than 1 mile east of the boundaries of the cities of San Diego and Chula Vista, and 2 miles north of the United States/Mexico border. RJD is located on a mesa bounded by two Otay River tributary canyons, O'Neal Canyon to the north and Johnson Canyon to the south. RJD is situated on 780 acres of State-owned land, comprising four CDCR-owned parcels, identified by the San Diego Assessor's Office as Assessor's Parcel Numbers 646-040-20, 646-08-16, 648-04-26, and 648-011-04. The project site is situated on RJD at the end of Donovan State Prison Road, which is accessed from Alta Road. Regional access to RJD is provided via Interstate 805 (I-805) and State Route 905 (SR 905).

The RJD Infill Site (either single facility or complex) would be developed on the eastern portion of the State-owned property at RJD, on up to approximately 105 acres of disturbed, undeveloped land that was used for agricultural purposes before RJD was constructed. Minor improvements are present on the infill site, including an electrical substation, trailer, firing range, and fitness area. The firing range is used for training and certification of correctional employees. It is approximately 650 feet long and 250 feet wide, and includes a small classroom and parking area. The trailer and firing range would need to be relocated to accommodate a complex; only the trailer would need to be relocated to accommodate a single facility.

Additionally, two concrete pads with utility service are present on the site where a temporary trailer is sometimes located (to provide temporary housing for paroled inmates). Wire-strand fencing along the eastern boundary of the project site separates the site from the privately owned property to the east. A row of mature, nonnative trees is located on the southern portion of the site parallel to Donovan State Prison Road.

SURROUNDING LAND USES

RJD is bounded by O'Neal Canyon to the north and Johnson Canyon to the south. The land uses surrounding RJD include a variety of industrial, institutional, and open space areas.

An automobile storage yard and a restaurant are located approximately 0.5 mile east of the project site and Alta Road. Industrial developments along Otay Mesa Road and the East Otay Mesa border crossing are located approximately 2 miles to the south. Light industrial uses include technology facilities, defense component manufacturers, and food manufacturers. The Otay Mesa Energy Center, a power-generation facility, is situated approximately 0.5 mile south of RJD and east of Alta Road. The City of San Diego's Lower Otay Reservoir and associated water filtration plant are located approximately 2 miles to the north. Also, the newly developed Otay Ranch community in Chula Vista is situated approximately 3 miles north of RJD.

The San Diego County Sheriff's Department George F. Bailey Detention Facility and the East Mesa Detention Facilities, supported by the Corrections Corporation of America, are located approximately 0.5 mile northeast of RJD. In addition, a Corrections Corporation of America 2,868 bed minimum/medium security correctional facility is proposed east of Alta Road (as shown as site number 2 on Exhibit 4-1 of this volume). The U.S. Department of Homeland Security's Brown Field Border Patrol Station is located approximately 3.5 miles to the southeast. Brown Field Municipal Airport, a general aviation airport, is located approximately 2.5 miles to the southwest.

Both Otay Valley Regional Park and Otay Lakes County Park are located 1 mile north of the project site. The remaining land surrounding the project site to the north and east is largely open space, punctuated by undeveloped native terrain. Most of these undeveloped, open space areas to the north and east are designated as Multiple Species Conservation Program (MSCP) preserve lands and may contain biologically sensitive wetland and drainage areas. Steep canyons, valleys, and mesas separate developed areas from open space. The Otay Ranch Open Space Preserve is adjacent to the northeastern part of the State-owned property and is classified as "authorized take area" by the MSCP (County of San Diego 1997).

AGRICULTURAL DESIGNATIONS

The California Department of Conservation (CDC) Farmland Mapping and Monitoring Program (FMMP) was designed to inventory, map, and monitor the acreage of California farmland to document how much agricultural land was being converted to nonagricultural land or transferred into (or out of) Williamson Act contracts. (The Williamson Act is explained in Volume 1, Appendix 1B.) CDC's classifications are as follows (CDC 2013a):

- Prime Farmland—land that has the best combination of features for the production of agricultural crops
- Farmland of Statewide Importance—land other than Prime Farmland that has a good combination of physical and chemical features for the production of agricultural crops, but that has more limitations than Prime Farmland, such as greater slopes or less ability to store soil moisture
- Unique Farmland—land of lesser quality soils used for the production of the state's leading agricultural cash crops
- Farmland of Local Importance—land of importance to the local agricultural economy
- Grazing Land—existing vegetation that is suitable to grazing
- Urban and Built-Up Land—land occupied by structures in density of at least one dwelling unit per 1.5 acres
- Land Committed to Nonagricultural Use—vacant areas; existing land that has a permanent commitment to development but has an existing land use of agricultural or grazing lands

- Other Land— land not included in any other mapping category, common examples of which include low-density rural developments, brush, timber, wetland, and vacant and nonagricultural land surrounded on all sides by urban development

Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are defined as Important Farmland in Appendix G of the State CEQA Guidelines. The RJD Infill Site does not contain any lands classified as Important Farmland under this definition. The CDC FMMP designates the land on the RJD Infill Site as Farmland of Local Importance. The existing RJD facility is designated as Urban and Built-Up Land. Land surrounding the RJD Infill Site is primarily designated as Grazing Land and Farmland of Local Importance. A review of the parcels within the project site revealed that there are no current Williamson Act contracts or County Agricultural Preserves located on the infill site (CDC 2013b).

FORESTRY RESOURCES

Appendix G of the State CEQA Guidelines defines forestland as land that can support 10 percent native tree cover and woodland vegetation of any species—including hardwoods—under natural conditions, and that allows for management of one or more forest resources—including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation—and other public benefits (California Public Resources Code [PRC] 12220[g]).

The RJD Infill Site is primarily disturbed/maintained, undeveloped land, with a firing range, a concrete pad for a trailer, and nonnative trees at the southern boundary near Donovan State Prison Road. The infill site does not contain native tree cover that would be classified as forestland under PRC Section 12220(g).

3.8.2 REGULATORY CONSIDERATIONS

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws related to land use planning are applicable to the RJD Infill Site.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

A list of the state land use plans, policies, regulations, and laws related to land use, agriculture, and forestry applicable to the RJD Infill Site is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

- California Important Farmland System and Farmland Mapping and Monitoring Program - The FMMP was designed to inventory, map, and monitor the acreage of California farmland to document how much agricultural land was being converted to nonagricultural land or transferred into (or out of) Williamson Act contracts. Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are defined as Important Farmland in Appendix G of the State CEQA Guidelines.
- California Land Conservation Act (Williamson Act) - The California Land Conservation Act (Williamson Act) was enacted in 1965 when population growth and rising property taxes were recognized as a threat to the viability of valuable farmland in California. The State is not subject to the Williamson Act.
- Statewide Electrified Fence Habitat Conservation Plan (HCP) (also described in Section 3.2, “Biological Resources,” in this volume of the DEIR) - The approved HCP for the Statewide Electrified Fence Program includes numerous mitigation measures designed to minimize wildlife use in areas near the lethal electrified fences and to deter wildlife from making contact with the lethal electrified fences. The plan also includes a wildlife mortality monitoring program.

LOCAL PLANS, POLICIES, AND ORDINANCES

The State of California requires each city and county to prepare a general plan to guide all physical planning in its jurisdiction. General plans contain land use diagrams, descriptions of existing and long-term goals for orderly growth and development, and policies and implementation programs to meet stated goals. As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

The RJD Infill Site and land in the project area are situated within San Diego County. The project site is located in the vicinity of three different jurisdictions: the City of San Diego, the City of Chula Vista, and other unincorporated lands within the County of San Diego. The following provides a summary of specific land use plans and designations of each jurisdiction.

COUNTY OF SAN DIEGO GENERAL PLAN

The County of San Diego General Plan land use designation for the RJD Infill Site is public/semi-public facilities (County of San Diego 2011a). This designation identifies major facilities built and maintained for public use, such as institutional uses, academic facilities, governmental complexes, and community service facilities (e.g., County airports, public schools, correctional institutions, solid waste facilities, water facilities, and sewer facilities). This designation may also include privately owned facilities built and maintained for public use, such as hospitals, cemeteries, and landfills. Current land uses in the vicinity of RJD consist primarily of vacant land; however, other planned land use designations in the vicinity include open-space parks and reserves to the west and northeast, rural residential uses to the east, and industrial uses to the south (Exhibit 2-3 in Chapter 2 of this volume of the DEIR). The general plan land use element (County of San Diego 2011a) does not contain any goals or policies that specifically address development on the infill site.

COUNTY OF SAN DIEGO ZONING

RJD and the infill site are zoned as a holding zone (S-90). In accordance with the County of San Diego's zoning ordinance, the holding zone designation is consistent with the land use designation of public/semi-public lands. The holding zone designation is intended to prevent isolated or premature land uses from occurring in areas where (1) adequate public services and facilities are unavailable; (2) the determination of the appropriate zoning regulations are precluded by proposed or adopted planning proposals; or (3) economic, demographic, geographic, and other data are lacking. It is intended that the holding zone designation would be replaced by other designations when the aforementioned conditions no longer exist. Permitted uses in the holding zone designation include community services (such as essential civic and fire protection services), family residential, and agricultural uses (such as field crops).

COUNTY OF SAN DIEGO OTAY SUBREGIONAL PLAN

The County's Otay Subregional Plan (County of San Diego 2011b) was amended in July 1994 to reflect the approval of a general plan amendment for the Otay Ranch project. Otay Ranch, located approximately 4 miles northwest of the project site, is an approximately 23,000-acre area occupying three large parcels that generally surround the Otay Lakes. Land use designations for the area west of Lower Otay Lake, according to the amended Otay Subregional Plan, include a large urban core, a potential university site, and more than 15,000 dwelling units. Rural residential, estate residential, and resort uses are designated in the Otay Subregional Plan for the area east of Lower Otay Lake, including portions of the Jamul and San Ysidro Mountains. The Otay Subregional Plan does not contain any goals or policies that specifically address development on the infill site.

BROWN FIELD AIRPORT LAND USE COMPATIBILITY PLAN

Brown Field Municipal Airport is located within the City of San Diego's jurisdictional boundaries along Heritage Road and Otay Mesa Road, approximately 2.5 miles southwest of the project site, 3 miles east of I-805, and less than 0.25 mile north of SR 905. The City of San Diego owns and operates the airport; however, the County of San Diego retains some control of areas that are within the airport influence area (AIA). The Brown Field AIA was determined by using the projected 60-decibel (dB) community noise equivalent level (CNEL) contour because there are no easily recognizable features such as streets, public right-of-ways, or landmarks north and west of Brown Field. According to the Compatibility Policy Map provided in the Airport Land Use Compatibility Plan (ALUCP), the RJD Infill Site is located outside the AIA by approximately 1 mile (Ricondo & Associates 2010).

3.8.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact relating to land use, agriculture, or forest resources if it would do any of the following:

- physically divide an established community;
- conflict with any applicable habitat conservation plan or natural community conservation plan;
- 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;
- 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 nonagricultural use;
- conflict with existing zoning for agricultural use, or a Williamson Act contract;
- conflict with existing zoning for, or cause rezoning of, forest land (as defined in California 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));
- result in the loss of forest land or conversion of forest land to non-forest use; or
- involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

The State CEQA Guidelines (Section 15064.5) define a "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Division of an established community: Development of level II infill correctional facilities at RJD would not result in any physical barriers that would divide an established community. The level II correctional facility would be located on State-owned property adjacent to existing prison facilities. The County of San Diego General Plan land use designation for the infill site is public/semi-public facilities. Therefore, there is no potential for the development of level II infill correctional facilities at RJD to physically divide an established community or affect the land uses in the vicinity of the site because the project would continue existing land uses (i.e., institutional facilities) and would be located entirely on State-owned property. There would be no impact, and this issue is not evaluated further.

Habitat or natural community conservation plans: Impacts related to potential conflicts with applicable habitat conservation plans or natural community conservation plans are addressed in Section 3.2, "Biological Resources," in this volume of the DEIR, and are not discussed further within this section.

Conflicts with planning efforts: The RJD Infill Site is located entirely within CDCR property, and development of the infill site would be consistent with the existing land use designation and zoning for the greater RJD property, as outlined in the County of San Diego Otay Subregional Plan (designated as Public/Semi-Public Use and zoned as Holding Zone [S-90]), which conforms to the County General Plan. The project would not conflict with any general plan policies and would not cause any offsite land use impacts, defined as creating conflicts which would not allow properties in the vicinity of the project site to fully develop under the land use designation assigned to them. In addition, the RJD Infill Site is located approximately one mile outside of the Brown Field Airport Land Use Compatibility Plan Airport Influence Area. Furthermore, and as noted above, CDCR is not subject to the goals, policies, and ordinances of local agencies. Nonetheless, no conflicts with existing City planning efforts would occur. No impact is anticipated, and this issue is not discussed further.

Forestry resources: The RJD Infill Site does not contain forestry resources that would be defined as forestland under PRC Section 12220(g) and State CEQA Guidelines Appendix G. Therefore, the development of level II infill correctional facilities at the RJD Infill Site would not result in conversion of forest land to non-forest use. No impact would occur, and this issue is not evaluated further.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.8-1a: Important Farmland Conversion or Conflicts with Williamson Act Zoning [Single Facility]

The FMMP designates the lands on the RJD Infill Site as "Farmland of Local Importance" (CDC 2012a). The designations for the lands surrounding the infill site are Urban and Built Up, Grazing Land, and Farmland of Local Importance. Although the CEQA significance criterion for this issue focuses on the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, the San Diego County General Plan EIR considers impacts to a broader category of farmland, including not only Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, but also Farmland of Local Importance or other agricultural resources, so as to include many small farms in San Diego County that the FMMP does not include due to the 10-acre minimum criterion. The County of San Diego accounts for areas that are suitable for agricultural use, but are not necessarily currently in active operation.

Historical aerial photographs of the RJD Infill Site show no signs of agricultural activity since 1981, and no farming has been conducted onsite since the property was purchased by the State in 1983. Although the county considered areas of historical agricultural use in the General Plan EIR, as stated above, the County of San Diego General Plan land use designation for RJD and the infill site is public and semi-public use, with which the existing RJD prison and the proposed level II infill correctional facility are consistent. In addition, farming on this site is not considered to be feasible for commercial purposes due to site access and demand for irrigation water. Furthermore, the RJD Infill Site is not on or near any land with the FMMP designation of Prime or Unique Farmland or Farmland of Statewide Importance. There are also no known agricultural operations or lands under Williamson Act contract

within 2 miles of the infill site (CDC 2012b). Therefore, the development of a single, level II correctional facility at the RJD Infill Site would not convert Important Farmland, as defined by CEQA, to nonagricultural use.

Development of a single, level II correctional facility at the RJD Infill Site would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; would not conflict with existing zoning for agricultural use of a Williamson Act contract; and would not involve any changes in the existing environment that could result in conversion of farmland to nonagricultural use. The impact is ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.8-1b: Important Farmland Conversion or Conflicts with Williamson Act Zoning [Complex]

As described under Impact 3.8-1a above, the RJD Infill Site is not on or near any land with the FMMP designation of Prime or Unique Farmland or Farmland of Statewide Importance (CDC 2012a). Although development of a level II infill correctional facility complex would result in loss of Farmland of Local Importance, the infill site has had no agricultural activity since 1981; it is designated as public and semi-public use in the County of San Diego General Plan; it is not on or near any Prime or Unique Farmland or Farmland of Statewide Importance; and there are no known agricultural operations or lands under Williamson Act contract within 2 miles of the infill site (CDC 2012b). Therefore, the development of a level II infill correctional facility complex at the RJD Infill Site would not convert Important Farmland, as defined by CEQA, to nonagricultural use.

Development of a level II infill correctional facility complex at the RJD Infill Site would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; would not conflict with existing zoning for agricultural use of a Williamson Act contract; and would not involve any changes in the existing environment that could result in conversion of farmland to nonagricultural use. The impact is ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

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3.9 NOISE

This section describes ambient noise conditions in the vicinity of the Richard J. Donovan Correctional Facility (RJD) Infill Site and summarizes applicable regulations. Noise impacts associated with the development and implementation of a level II infill correctional facility at the infill site adjacent to the existing RJD facilities are analyzed, including a discussion of short-term construction and long-term operational noise sources, and compatibility of surrounding land uses with onsite noise levels. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. Information and modeling related to traffic noise levels are based on data provided in Section 3.11, “Transportation,” and modeling results provided by Fehr & Peers in Appendix 2D of this volume of the draft environmental impact report (DEIR). Noise modeling inputs and results are provided in Appendix 2C of this volume.

3.9.1 ENVIRONMENTAL SETTING

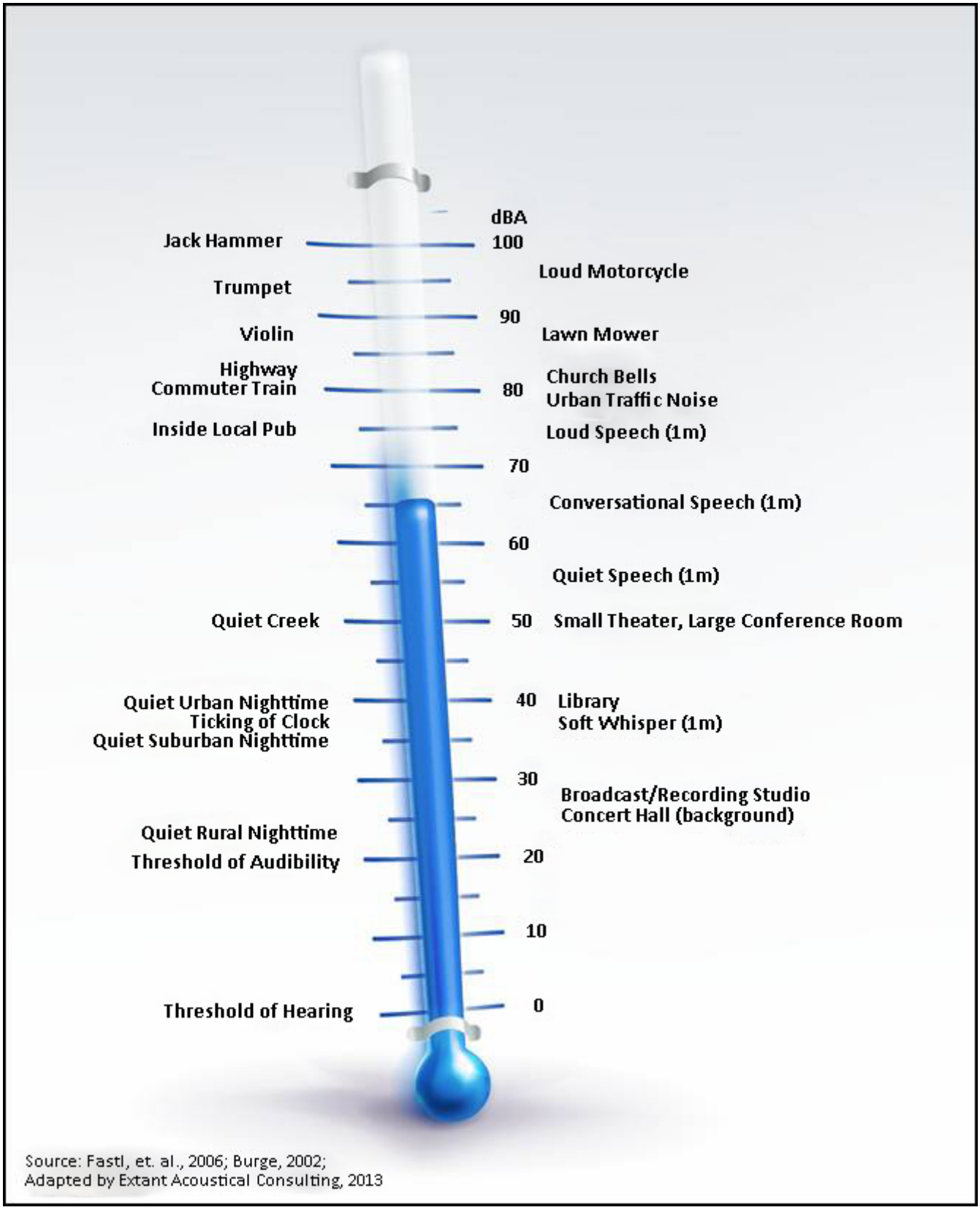
NOISE FUNDAMENTALS

Acoustics is the scientific study that evaluates perception, propagation, absorption, and reflection of sound waves. Sound is a mechanical form of radiant energy, transmitted by a pressure wave through a solid, liquid, or gaseous medium. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise; consequently, the perception of sound is subjective in nature and can vary substantially from person to person. Common sources of environmental noise and noise levels are presented in Exhibit 3.9-1.

A sound wave is initiated in a medium by a vibrating object (e.g., vocal chords, the string of a guitar, the diaphragm of a radio speaker). The wave consists of minute variations in pressure, oscillating above and below the ambient atmospheric pressure. The number of pressure variation cycles occurring per second is referred to as the frequency of the sound wave and is expressed in hertz (Hz); 1 Hz is equivalent to one complete cycle per second.

Directly measuring sound pressure fluctuations would require the use of a very large and cumbersome range of numbers. To avoid this and have a more useable numbering system, the decibel (dB) scale was introduced. A sound level expressed in decibels is the logarithmic ratio of two like pressure quantities, with one pressure quantity being a reference sound pressure. The use of the decibel is a convenient way to handle the million-fold range of sound pressures to which the human ear is sensitive. A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly added. For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB-source, results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy.

The loudness of sound perceived by the human ear depends primarily on the overall sound pressure level and frequency content of the sound source. The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. The standard weighting networks are identified as A through E. There is a strong correlation between the way humans perceive sound and A-weighted sound levels (dBA). For this reason, the dBA can be used to predict community response to noise from the environment, including noise from transportation and stationary sources.



Source: Fastl, et. al., 2006; Burge, 2002;
Adapted by Extant Acoustical Consulting, 2013

Exhibit 3.9-1 Common Noise Sources and Levels

Noise can be generated by various sources, including mobile sources (transportation noise) such as automobiles, trucks, and airplanes and stationary sources (non-transportation noise) such as construction sites, machinery, and commercial and industrial operations. As acoustic energy spreads through the atmosphere from the source to the receiver, noise levels attenuate (decrease) depending on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers (e.g., walls, building façades, berms). Noise generated from mobile sources generally attenuates at a rate of 3 dBA (typical for hard surfaces, such as asphalt) to 4.5 dBA (typical for soft surfaces, such as grasslands) per doubling of distance, depending on the intervening ground type. Stationary noise sources spread with more spherical dispersion patterns that attenuate at a rate of 6–7.5 dBA per doubling of distance for hard and soft sites, respectively.

Atmospheric conditions such as wind speed, turbulence, temperature gradients, and humidity may additionally alter the propagation of noise and affect levels at a receiver. Furthermore, the presence of a large object (e.g., barrier, topographic feature, or intervening building façade) between the source and the receptor can provide substantial attenuation of noise levels at the receiver. The amount of noise level reduction or “shielding” provided by a barrier primarily depends on the size of the barrier, the location of the barrier in relation to the source and receivers, and the frequency spectra of the noise. Natural barriers such as berms, hills, or dense woods, and human-made features such as buildings and walls, may be used as noise barriers.

NOISE DESCRIPTORS

The intensity of environmental noise fluctuates over time, and several different descriptors of time-averaged noise levels can be used. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors most often used to describe environmental noise are defined below.

- ***L_{max} (Maximum Noise Level):*** The maximum instantaneous noise level during a specific period of time. The L_{max} may also be referred to as the “peak (noise) level.”
- ***L_{min} (Minimum Noise Level):*** The minimum instantaneous noise level during a specific period of time.
- ***L_x (Statistical Descriptor):*** The noise level exceeded X percent of a specific period of time. For example, L_{50} is the median noise level, or level exceeded 50 percent of the time.
- ***L_{eq} (Equivalent Noise Level):*** The average noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value is calculated, which is then converted back to dBA to determine the L_{eq}. In noise environments determined by major noise events, such as aircraft over-flights, the L_{eq} value is heavily influenced by the magnitude and number of single events that produce the high noise levels.
- ***L_{dn} (Day-Night Average Noise Level):*** The 24-hour L_{eq} with a 10-dBA “penalty” for noise events that occur during the noise-sensitive hours between 10 p.m. and 7 a.m. In other words, 10 dBA is “added” to noise events that occur in the nighttime hours, and this generates a higher reported noise level when determining compliance with noise standards. The L_{dn} attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.
- ***CNEL (Community Noise Equivalent Level):*** The CNEL is similar to the L_{dn} described above, but with an additional 5-dBA “penalty” added to noise events that occur during the noise-sensitive hours between 7 p.m. and 10 p.m., which are typically reserved for relaxation, conversation, reading, and television. When the same 24-hour noise data are used, the reported CNEL is typically approximately 0.5 dBA higher than the L_{dn}.
- ***SEL (Sound Exposure Level):*** The cumulative exposure to sound energy over a stated period of time.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level L_{eq}, which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually 1 hour). The L_{eq} is the foundation of the composite noise descriptors such as L_{dn} and CNEL, as defined above, and shows very good correlation with community response to noise.

ADVERSE EFFECTS OF NOISE ON HUMANS

Excessive and chronic exposure to elevated noise levels can result in auditory and non-auditory effects on humans. Auditory effects of noise on people are those related to temporary or permanent hearing loss caused by loud noises. Non-auditory effects of exposure to elevated noise levels are those related to behavioral and physiological effects. The non-auditory behavioral effects of noise on humans are associated primarily with the subjective effects of annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communications, sleep, and learning. The non-auditory physiological health effects of noise on humans have been the subject of considerable research attempting to discover correlations between exposure to elevated noise levels and health problems, such as hypertension and cardiovascular disease. The mass of research indicates that noise-related health issues are predominantly the result of behavioral stressors and not a direct noise-induced response. The extent to which noise contributes to non-auditory health effects remains a subject of considerable research, with no definitive conclusions to date.

The degree to which noise results in annoyance and interference is highly subjective and may be influenced by several non-acoustic factors. The number and effect of these non-acoustic environmental and physical factors vary depending on individual characteristics of the noise environment, such as sensitivity, level of activity, location, time of day, and length of exposure. One key aspect in the prediction of human response to new noise environments is the individual level of adaptation to an existing noise environment. The greater the change in the noise levels that are attributed to a new noise source, relative to the environment an individual has become accustomed to, the less tolerable the new noise source will be to the individual.

With respect to how humans perceive and react to changes in noise levels, a 1-dBA increase is imperceptible, a 3-dBA increase is barely perceptible, a 6-dBA increase is clearly noticeable, and a 10-dBA increase is subjectively perceived as approximately twice as loud (Egan 1988: 21). These subjective reactions to changes in noise levels were developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. This information is probably most applicable to noise levels in the range of 50–70 dBA, as this is the usual range of voice and interior noise levels. For these reasons, a noise level increase of 3 dBA or more is typically considered substantial in terms of the degradation of the existing noise environment.

VIBRATION

Vibration is similar to noise in that it is a pressure wave traveling through an elastic medium, such as air; however, vibration relates to the excitation of a structure or surface, such as buildings or the ground. As is the case with airborne noise, structural and groundborne vibrations can be described according to amplitude and frequency content. The vibratory motion can be depicted in terms of displacement, velocity, or acceleration. Human and structural response to different vibration levels is influenced by various factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous

(e.g., operating factory machinery) or transient (e.g., explosions) in nature. Vibration levels can be depicted in terms of amplitude and frequency relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal, or the quantity of displacement measured from peak to trough of the vibration wave. Root-mean-square is defined as the positive and negative statistical measure of the magnitude of a varying quantity. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a period of 1 second. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (Federal Transit Administration [FTA] 2006, California Department of Transportation [Caltrans] 2004). PPV and RMS vibration velocity are normally described in inches per second (in/sec).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. The response of the human body to vibration relates well to average vibration amplitude; therefore, vibration impacts on humans are evaluated in terms of RMS vibration velocity. Similar to airborne sound, vibration velocity can be expressed in decibel notation as vibration decibels (VdB). The logarithmic nature of the decibel serves to compress the broad range of numbers required to describe vibration.

Typical outdoor sources of perceptible groundborne vibration include construction equipment, steel-wheeled trains, and traffic on rough roads. Although the effects of vibration may be imperceptible at low levels, effects may result in detectable vibrations and slight damage to nearby structures at moderate and high levels, respectively. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in damage to structural components. The range of vibration that is relevant to this analysis occurs from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings (FTA 2006: 8-1–8-8).

EXISTING NOISE ENVIRONMENT

The existing noise environment within the area of the RJD Infill Site is influenced primarily by transportation noise emanating from vehicular traffic on Otay Mesa Road, which travels east-west approximately 4,000 feet south of the infill site’s southern boundary. Traffic on Alta Road, which travels north-south approximately 650 feet east of the infill site’s eastern boundary, also contributes to the noise environment. When noise measurements were recorded for this analysis (as described below), heavy-duty construction equipment was in operation at parcels adjacent to and east of the infill site. This existing noise source is considered temporary and short term. Aircraft flyovers emanate from Brown Field Municipal Airport southwest of the infill site intermittently contribute to the existing noise environment. Existing RJD daily operational activities consist of vehicle trips along Donovan State Prison Road, mechanical systems, public address loudspeaker announcements, and firing range activities, and these activities influence the noise environment within the immediate vicinity of the infill site.

EXISTING NOISE-SENSITIVE LAND USES

Noise-sensitive land uses are generally considered to include those uses for which noise exposure could result in health-related risks to individuals, as well as uses for which quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. A cluster of noise-sensitive, rural residences is located along Otay Mesa Road, approximately 5,000 feet south of the infill site (Exhibit 3.9-2). Additional land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. Schools, health

care facilities, places of worship, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest onsite noise-sensitive land uses to the RJD Infill Site are residential uses (inmate housing units) at the existing RJD facility approximately 900 feet west of the infill site. The nearest offsite residential dwelling is approximately 5,000 feet south along Otay Mesa Road. Additional institutional uses include the East Mesa Detention Facility and the San Diego County Juvenile Detention Facility north of infill site.

AMBIENT NOISE SURVEY

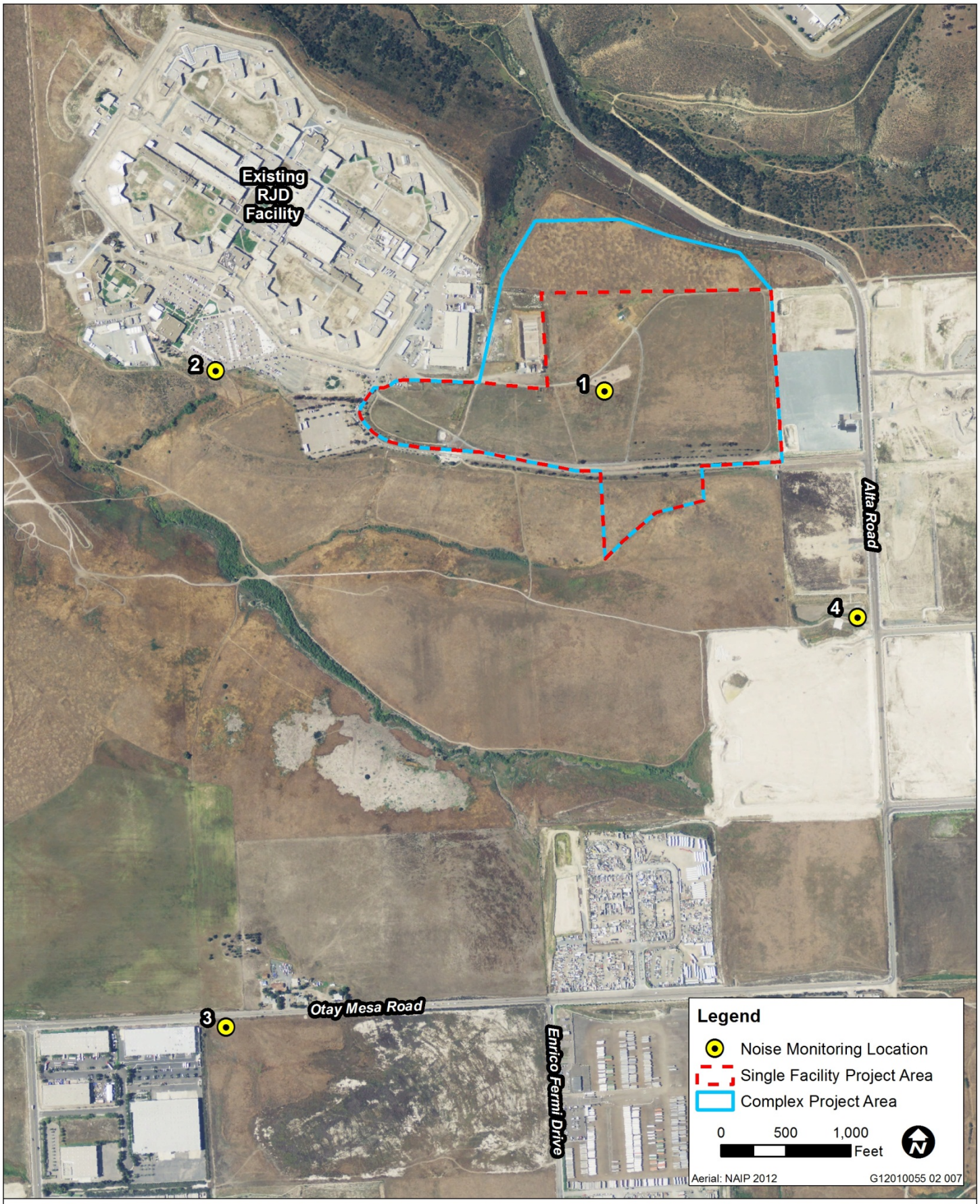
An ambient noise survey was conducted by Ascent on January 29, 2013, to document the existing noise environment at various locations in the project vicinity. Noise level measurements were taken in accordance with American National Standards Institute (ANSI) standards at four locations using Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters (SLMs). The SLMs were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the ANSI for Type 1 SLMs (ANSI S1.4-1983 [revised 2006]). Survey locations are shown in Exhibit 3.9-2. The L_{eq} and L_{max} values taken at each location are presented in Table 3.9-1.

Table 3.9-1 Summary of Results of the Short-Term Daytime Community Noise Survey, January 29, 2013

Time	Noise Sources	A-Weighted Sound Level (dBA)	
		L_{eq}	L_{max}
1 – Center of Considered Infill Site			
9:55–10:10 a.m.	Wildlife, construction, firing range 400 feet away	54.9	61.1
2 – South of Existing RJD Facility Administration Offices			
10:19–10:34 a.m.	Wildlife, construction, firing range, airplane	50.0	68.8
3 – Otay Mesa Road			
10:48–11:03 a.m.	Roadway traffic, airplane	61.0	80.2
4 – Alta Road			
11:03–11:18 a.m.	Roadway traffic, construction, wildlife	56.6	70.3

Notes: dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
Source: Ascent Environmental 2013.

Average daytime hourly noise levels measured during the survey ranged from approximately 46 to 61 dBA $L_{eq,}$ with maximum noise levels that ranged from 61 to 80 dBA L_{max}. The primary noise sources influencing noise measurement locations were vehicular traffic on Otay Mesa Road and construction activities adjacent to Alta Road. Noise generated by operational activities associated with the RJD facility and administration buildings, such as onsite generators, pumps, lift stations, mechanical operations, and loudspeakers, was not audible during the measurement period. Meteorological conditions during the measurement period were favorable, with clear skies, temperatures ranging from 55°F to 60°F, and a breeze from the southeast at 7 miles per hour (mph).



Source: Ascent Environmental 2013

Exhibit 3.9-2

Noise Monitoring Locations

EXISTING TRAFFIC NOISE

Existing traffic noise levels were modeled for roadway segments in the project vicinity based on the Federal Highway Administration's (FHWA's) Highway Traffic Noise Model (TNM) prediction methodologies (FHWA 1998) and on traffic data provided in the traffic impact study prepared for the project (Fehr & Peers 2013). The FHWA TNM incorporates state-of-the-art sound emissions and sound propagation algorithms, based on well-established theory or on accepted international standards. The acoustical algorithms contained within the FHWA TNM have been validated with respect to carefully conducted noise measurement programs and show excellent agreement in most cases for sites with and without noise barriers. The noise modeling accounted for such factors as traffic volume, vehicle speed, roadway configuration, distance to the receiver, and propagation over different types of ground (acoustically soft and hard ground). Truck usage and speeds on study area roadways were estimated from field observations, vehicle mixes indicative of roadway types, and truck count data where available.

Table 3.9-2 summarizes the modeled levels of existing traffic noise at a representative distance of 100 feet from the centerline of each major roadway in the project vicinity and lists distances from roadway centerlines to the 60-dBA, 65-dBA, and 70-dBA L_{dn} traffic noise contours. Traffic noise modeling results are based on existing average daily traffic (ADT) volumes. As shown in Table 3.9-2, the location of the 60-dBA L_{dn} traffic noise contour along the local roadway network ranges from 21 feet to 323 feet from the centerline of the modeled roadways. The extent to which existing land uses in the project area are affected by existing traffic noise depends on their respective proximity to the roadways and their individual sensitivity to noise. Refer to Appendix 2C in this volume for complete modeling inputs and results.

Table 3.9-2 Summary of Modeled Existing Traffic Noise Levels

Roadway	Segment		L_{dn} (dBA) 100 feet	Distance (feet) from Roadway Centerline to L_{dn} Contour		
				70 dBA	65 dBA	60 dBA
Otay Mesa Road	La Mesa Road	Piper Ranch Road	68	70	150	323
Otay Mesa Road	Harvest Road	Sanyo Avenue	67	61	132	285
Otay Mesa Road	Sanyo Avenue	Enrico Fermi Drive	65	44	95	204
Otay Mesa Road	Enrico Fermi Drive	Alta Drive	64	39	85	183
Donovan State Prison Road	Alta Road	Facility Access	50	5	10	21
La Media Road	Otay Mesa Road	SR 905	61	25	53	114
Alta Road	Pasco De La Fuente	Donovan State Prison Road	64	36	78	168

Notes: dBA = A-weighted decibels; L_{dn} = day-night average noise level; SR = State Route.
Source: Traffic data provided by Fehr & Peers 2013; modeling performed by Extant Acoustical Consulting, 2013.

EXISTING AIRCRAFT NOISE

Brown Field Municipal Airport is located approximately 2 nautical miles southwest of the infill site. The infill site is not located within the airport's 60 dBA CNEL noise contour according to the most recent noise contours in the Brown Field Municipal Airport Land Use Compatibility Plan (San Diego County 2010a: Exhibit III-1, p. 15-41). Existing aircraft overflights occur at the infill site; however, the 60 dBA CNEL noise contour is approximately 4,000 feet from the southwestern property line of the existing RJD facility.

EXISTING FIRING RANGE NOISE

The California Department of Corrections and Rehabilitation (CDCR) currently operates a firing range for training and certification of correctional employees at the existing RJD facilities; this range is located in the southeastern corner of the facility, outside the secure perimeter. The existing firing range is

approximately 36 yards wide and 100 yards long. Three separate firing positions are located at 25, 50, and 100 yards from the target stand. The firing range backs up to and is partially cut into a hillside. The firing range is used for practice, training, and qualification of correctional officers and law enforcement agency personnel in communities surrounding the facility. During the ambient noise survey, the firing range was not available for observation or measurement. As a result, this analysis uses noise measurement data performed on similar facilities at other CDCR locations.

Firing range operations vary from day to day but are assumed to be similar to other CDCR firing ranges currently in operation. Similar CDCR facilities elsewhere are available for operation from 7:00 a.m. to 7:00 p.m. and are not expected to operate during nighttime hours. Officers most frequently use.38 and 9 millimeter (mm) pistols, shotguns, Mini-14 or AR-15 style rifles, and 40mm launchers (used for riot control rounds and chemical dispersion arms).The firing range would be most heavily used during quarterly and annual officer qualification courses. Based on typical qualification days at similar facilities, a maximum-use day would include five courses of fire by 30 officers per course (150 courses total). Each course consists of 36 rounds of .38 or 9mm pistol ammunition and 25 rounds of 0.223 rifle ammunition (Mini-14/AR-15) fired per officer (approximately 61 total rounds per officer). This results in an approximate maximum of 9,150 rounds per day that could be fired (61 rounds per officer x 5 courses x 30 officers per courses) (Jones 2010). While other types of firing and training occur at the firing range, it is assumed for this analysis that the loudest noise levels would be generated during qualification days because of the intensity of use during these days.

Noise levels from the firing range were modeled within the SoundPLAN three-dimensional noise simulation model based on reference noise level data obtained from previous CDCR projects and noise level data from the Small Arms Range Noise Assessment Model v2.6 (SARNAM2). SARNAM2 was developed by the U.S. Army Corps of Engineers for assessment of noise impacts created by firing ranges (USACE 2003). Predicted exposure of onsite noise-sensitive receptors in the vicinity of the RJD Infill Site to existing firing range noise levels was modeled based on the assumptions outlined above (Table 3.9-3). It should be noted that, because of the distance between the firing range and the nearest offsite receptor, modeling of existing firing range noise levels to offsite receptors was not conducted.

Table 3.9-3 Modeled Existing Firing Range Noise Levels

Description	Exterior Noise Levels (dBA)		Interior Noise Levels (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}
RJD-Existing- HU-01	72	73	47	48
RJD-Existing-HU-02	73	75	48	50
RJD-Existing-HU-03	73	74	48	49
RJD-Existing-HU-04	72	73	47	48
East Mesa Detention Facility	61	61	36	36
San Diego County Juvenile Detention	58	59	33	34

Notes: dBA = A-weighted decibels; HU = housing unit; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
Source: Extant Acoustical Consulting 2013.

3.9.2 REGULATORY CONSIDERATIONS

Various private and public agencies have established noise guidelines and standards to protect citizens from potential hearing damage and other adverse physiological and social effects associated with noise. A list of the applicable federal, state, and local plans, policies, regulations, laws, and ordinances is provided below. Complete summaries of the federal and state regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Federal Noise Control Act of 1972 - The Federal Noise Control Act was issued by the U.S. Environmental Protection Agency (EPA) in 1972 and established programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- Title 24 – Title 24 of the California Code of Regulations, also known as the California Building Standards Code, establishes acoustical regulations and standards for both exterior and interior sound levels and insulation.

LOCAL PLANS, POLICIES, AND ORDINANCES

Because CDCR, a state agency, is the project proponent, compliance with local standards is not required. However, CDCR considers local noise standards as they relate to the compatibility between the infill project and various land uses adjacent to the infill sites. Local noise standards are used as guidelines for what CDCR considers acceptable noise levels in noise-sensitive areas.

SAN DIEGO COUNTY GENERAL PLAN 2010 NOISE ELEMENT

The following relevant policies are considered in this DEIR:

- **N-1.1. Noise Compatibility Guidelines**. Use the noise compatibility guidelines Table N-1 [reprinted as Table 3.9-4 of this document] and the noise standards Table N-2 [reprinted as Table 3.9-5 of this document] as a guide in determining the acceptability of exterior and interior noise for proposed land use it.
- **N-1.2. Noise Management Strategy.** Requiring the following strategies as higher priorities then construction of conventional noise barriers were no he's a basement is necessary.
  - Avoid placement of noise sensitive uses within no easy areas.
  - Increase setbacks between noise generators and noise sensitive use.
  - Orient building such that the noise sensitive portions of a project for shielded from the noise sources.
  - Use sound attenuating architectural design and building features.
  - Employ technologies when appropriate that reduce noise generation) i.e., alternative pavement materials on roadways).
- **N-1.3. Sound Walls.** Discourage the use of noise walls. In areas where the use of noise walls cannot be avoided, evaluate and require where feasible, a combination of walls and earthen berms and require the use of vegetation or other visual screening methods to soften the visual appearance of the wall.
- **N-2.1. Development Impacts to Noise Sensitive Land Uses.** Require an acoustical study to identify inappropriate noise level where development may directly result in any existing or future noise sensitive land uses being subject to noise levels equal to or greater than 60 [dBA] CNEL and require mitigation for sensitive uses in compliance with the noise standards listed in Table N-2 [Table 3.9-5 of this document].
- **N-3.1. Groundborne Vibration.** Use the Federal Transit Administration and Federal Railroad Administration guidelines, where appropriate, to limit the extent of exposure that sensitive uses may have to groundborne vibration from trains, construction equipment, and other sources.

- **N-4.9. Airport Compatibility.** Assure the noise compatibility of any development projects that may be affected by noise from public or private airports and helipads during project review by coordinating, as appropriate, with appropriate agencies such as the Sand Diego County Regional Airport Authority [SDCRAA] and the Federal Aviation Administration [FAA].
- **N-6.2. Recurring Intermittent Noise.** Minimize impacts from noise in areas where recurring intermittent noise may not exceed the noise standards listed in Table N-2 [Table 3.9-5 of this document], but can have other adverse effects.

Table 3.9-4 Noise Compatibility Guidelines

	Land Use Category	Exterior Noise Level CNEL 55	60	65	70	75	80
A	Residential – single family residences, mobile homes, senior housing, convalescent homes						
B	Residential – multi-family residences, mixed-use (commercial/residential)						
C	Transient lodging: motels, hotels, resorts						
D*	Schools, churches, hospitals, nursing homes, child care facilities						
E*	Passive recreational parks, nature preserves, contemplative spaces, cemeteries						
F*	Active parks, golf courses, athletic fields, outdoor spectator sports, water recreation						
G*	Office/professional, government, medical/dental, commercial, retail, laboratories						
H*	Industrial, manufacturing, utilities, agriculture, mining, stables, ranching, warehouse, maintenance/repair						

Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal construction, without any special noise insulation requirements

Conditionally Acceptable - – New construction or development should be undertaken only after a detailed analysis is conducted to determine if noise reduction measures are necessary to achieve acceptable levels for land use. Criteria for determining exterior and interior noise levels are listed in Table N-2, Noise Standards [Table 3.9-5 of this document]. If a project cannot mitigate noise to a level deemed Acceptable, the appropriate county decision-maker must determine that mitigation has been provided to the greatest extent practicable or that extraordinary circumstances exist.

Potentially Unacceptable

Unacceptable – New construction or development should not be undertaken.

Source: San Diego County 2010b: General Plan Noise Element Table N-1.
*Denotes facilities used for part of the day; therefore, an hourly standard would be used rather than CNEL (refer to Table N-2 [Table 3.9-5 of this document]).

Table 3.9-5 Noise Standards	
1	The exterior noise level (as defined in Item 3) standard for Category A shall be 60 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.
2	The exterior noise level standard for Category B and C shall be 65 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.
3	The exterior noise level standard for Categories D and G shall be 65 CNEL and the interior noise level standard shall be 50 dBA L_{eq} (one hour average).
4	For single-family detached dwelling units, "exterior noise level" is defined as the noise level measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum net lot area: (i) for lots less than 4,000 square feet in area, the exterior area shall include 400 square feet, (ii) for lots between 4,000 square feet to 10 acres in area, the exterior area shall include 10 percent of the lot area, (iii) for lots over 10 acres in area, the exterior area shall include 1 acre.
5	For all other residential land uses, "exterior noise level" is defined as noise measured at exterior areas which are provided for private or group usable open space purposes. "Private Usable Open Space" is defined as usable open space intended for use of occupants of one dwelling unit, normally including yards, decks, and balconies. When the noise limit for Private Usable Open Space cannot be met, then a Group Usable Open Space that meets the exterior noise level standard shall be provided. "Group Usable Open Space" is defined as usable open space intended for common use by occupants of a development, either privately owned and maintained or dedicated to a public agency, normally including swimming pools, recreation courts, patios, open landscaped areas, and greenbelts with pedestrian walkways and equestrian and bicycle trials, but not including off-street parking and loading areas or driveways.
6	For non-residential noise sensitive land uses, exterior noise level is defined as noise measured at the exterior area provided for public use.
7	For noise sensitive land uses where people normally do not sleep at night, the exterior and interior noise standard may be measured using either CNEL or the one-hour average noise level determined at the loudest hour during the period when the facility is normally occupied.
8	The exterior noise standard does not apply for land uses where no exterior use area is proposed or necessary, such as a library.
9	For Categories E and F the exterior noise level standard shall not exceed the limit defined as "Acceptable" in Table N-1 [Table 3.9-4 of this document] or an equivalent one-hour noise standard.

Source: San Diego County 2010b: General Plan Noise Element Table N-2.
Note: Exterior noise level compatibility guidelines for Land Use Categories A-H are identified in Table N-1 [Table 3.9-4 of this document], Noise Compatibility Guidelines.

SAN DIEGO COUNTY CODE OF REGULATORY ORDINANCES

The following objectives and policies in the *San Diego County Code* are related to potential noise impacts and are relevant to the infill project.

Sec. 36.404. General sound level limits.

(a) Except as provided in section 36. 409 of this chapter, it shall be unlawful for any person to cause or allow the creation of any noise, which exceeds the one-hour average sound level limits in Table 36.404 [reprinted as Table 3.9-6 of this document], when the one-hour average sound level is measured at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise.

Table 3.9-6 Sound Level Limits in Decibels (dBA)		
Zoning Designations	Time	One-Hour Average Sound Level Limits (dBA)
(1) RS, RD, RR, RMH, A70, A72, S80, S81, S87, S90, S92 and RV and RU with a density of less than 11 dwelling units per acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45
(2) RRO, RC, RM, S86, V5 and RV and RU with a density of 11 or more dwelling units per acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50
(3) S94, V4 and all commercial zones.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55
(4) V1, V2 V1, V2 V1 V2 V3	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m. 10 p.m. to 7 a.m. 7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55 55 50 70 65
(5) M50, M52 and M54	Anytime	70
(6) S82, M56 and M58.	Anytime	75
(7) S88	(see subsection (d) below)	
Source: Section 1, Title 3, Division 6, Chapter 4 of the San Diego County Code of Regulatory Ordinances, Table 36.404.		

(d) If the measured ambient noise level exceeds the applicable limit in Table 36.404 [Table 3.9-6], the allowable one-hour average sound level shall be the one-hour average ambient noise level, plus three decibels. The ambient noise level shall be measured when the alleged noise violation source is not operating.

Sec. 36.409. Sound level limitations on construction equipment.

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

Sec. 36.410. Sound level limitations on impulsive noise.

In addition to the general limitations on sound levels in section 36.404 and the limitations on construction equipment in section 36.409, the following additional sound level limitations shall apply:

(a) Except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in Table 36.410A [reprinted as Table 3.9-7a of this document], 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, as described in subsection (c) below. The maximum sound level depends on the use being made of the occupied property. The uses in Table 36.410A [reprinted as Table 3.9-7a of this document] are as described in the County Zoning Ordinance.

Table 3.9-7a (Table 36.410A. of the San Diego County Code) Maximum Sound Level (Impulsive) Measured at Occupied Property in Decibels (dBA)	
Occupied Property Use	Decibels
Residential, village zoning or civic use	82
Agricultural, commercial or industrial use	85
Source: Section 1. Title 3, Division 6, Chapter 4 of the San Diego County Code of Regulatory Ordinances, Table 36.410A.	

b) Except for emergency work, no person working on a public road project shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in Table 36.410B [reprinted as Table 3.9-7b of this document], 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, as described in subsection (c) below. The maximum sound level depends on the use being made of the occupied property. The uses in Table 36.410B [reprinted as Table 3.9-7b of this document] are as described in the County Zoning Ordinance.

Table 3.9-7b (Table 36.410B. of the San Diego County Code) Maximum Sound Level (Impulsive) Measured at Occupied Property in Decibels (dBA)	
Occupied Property Use	Decibels
Residential, village zoning or civic use	85
Agricultural, commercial or industrial use	90
Source: Section 1. Title 3, Division 6, Chapter 4 of the San Diego County Code of Regulatory Ordinances, Table 36.410B.	

(c) The minimum measurement period for any measurements conducted under this section shall be one hour. During the measurement period a measurement shall be conducted every minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise, exceeds the maximum sound level for any portion of any minute it will deemed that the maximum sound level was exceeded during that minute.

Vibration Regulations

The California Environmental Quality Act (CEQA) states that the potential for excessive groundborne noise and vibration levels must be analyzed; however, it does not define the term “excessive” vibration. Numerous public and private organizations and governing bodies have provided guidelines to assist in the analysis of groundborne noise and vibration; however, federal and State agencies have yet to establish specific groundborne noise and vibration requirements. Publications of FTA and Caltrans are two of the seminal works for the analysis of groundborne noise and vibration relating to transportation and construction-induced vibration. Caltrans guidelines recommend that a standard of 0.2 in/sec PPV not be exceeded for the protection of normal residential buildings, and that 0.08 in/sec PPV not be exceeded for the protection of old or historically significant structures (Caltrans 2004: 17). With respect to human response within residential uses (i.e., annoyance), FTA recommends a maximum acceptable vibration standard of 80 VdB (FTA 2006: 7-5–7-8).

3.9.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact relating to noise if it would do any of the following:

- expose persons to or generate noise levels in excess of relevant standards (e.g., exterior and interior noise level standards from the *San Diego County General Plan 2010* and *San Diego County Code* as presented above in Section 3.9.2, "Regulatory Considerations");
- result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, as listed in Tables 3.9-1 and 3.9-2 or modeled for the existing noise environment;
- result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, as listed in Tables 3.9-1 and 3.9-2 or modeled for the existing noise environment;
- expose people residing or working in the area to excessive noise levels, for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport;
- expose people residing or working in the project area to excessive noise levels, for a project within the vicinity of a private airstrip; or
- expose persons to or generate excessive groundborne vibration or groundborne noise levels in excess of applicable standards (specifically considering Caltrans' recommended standard of 0.2 in/sec PPV with respect to the prevention of structural damage for normal buildings or FTA's maximum acceptable vibration standard of 80 VdB with respect to human response i.e., annoyance at nearby vibration-sensitive land uses [i.e., residential]).

The State CEQA Guidelines (Section 15064.5) define a "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

Generally, a project may have a significant effect on the environment with regard to noise if it would substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been implemented. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses.

METHODOLOGY

For this analysis, the significance of anticipated noise effects is based on a comparison between predicted noise levels and noise criteria defined by San Diego County. Noise impacts are considered significant if existing or future noise-sensitive land uses would be exposed to noise levels in excess of the *San Diego County General Plan* Noise Element or *San Diego County Code* standards as described above (see Section 3.9.2, "Regulatory Considerations"), or if implementation of the infill project would result in an increase in ambient noise levels at noise-sensitive land uses in excess of those listed in Table 3.9-8.

Table 3.9-8 Significant Change in Ambient Noise Levels	
Existing Ambient Noise Level, L_{dn}/CNEL	Significant Increase
< 60 dBA	+ 5 dBA or greater
> 60 dBA	+ 3 dBA or greater

Note: dBA = A-weighted decibels; CNEL = Community Noise Equivalent Level; L_{dn} = day-night average noise level
Sources: Adapted from FICON 1992: 31-32, Caltrans 1998: 40-43

Data included in Chapter 2, “Project Description,” and obtained during onsite noise surveys in January 2013 were used to determine potential locations of sensitive receptors and potential noise- and vibration-generating land uses associated with the development of an infill facility at the RJD Infill Site. Noise-sensitive land uses and major noise sources near the infill site were identified based on existing documentation and site reconnaissance data.

Traffic noise modeling was conducted based on average daily traffic volumes obtained from the traffic analysis prepared by Fehr & Peers for the contemplated development at the RJD Infill Site, as discussed in Section 3.11, “Transportation” of this volume. Predicted traffic noise levels along affected roadways in the project vicinity were modeled based on the FHWA TNM modeling program. The infill facility’s contribution to the existing traffic noise levels along area roadways was determined by comparing the predicted noise levels at a reference distance of 100 feet from the roadway centerline, for the baseline, existing plus approved projects, and cumulative (2020) conditions with and without project-generated traffic.

The SoundPLAN® computer noise model was used for computing short-term construction-related and long-term operational sound levels.

To assess the impacts of potential short-term construction noise on sensitive receptors, the sensitive receptors and their relative exposure to construction noise were identified (considering intervening building façades and distance). The construction noise that would be generated by the infill project was predicted by using the Federal Transit Administration Noise and Vibration Impact Assessment methodology (FTA 2006: 12-1–12-15). The emission noise levels referenced and the usage factors were based on the Federal Highway Administration Roadway Construction Noise Model. The noise levels at sensitive receptors were calculated for the specific construction equipment that would be used.

Potential noise impacts from long-term (operation-related) stationary sources were assessed based on existing documentation (e.g., equipment noise levels) and site reconnaissance data. This analysis also included an evaluation of the project’s noise-generating uses that could affect noise-sensitive receptors near the infill site.

To assess the land use compatibility of a level II infill correctional facility with existing on- and offsite noise levels, predicted traffic noise contours were used to determine if development of the infill site would exceed the relevant noise criteria.

Groundborne vibration impacts were qualitatively assessed based on existing documentation (e.g., vibration levels produced by specific construction equipment operations) and the distance of sensitive receptors from the given source.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the

evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.9-1a: Short-Term Construction-Generated Noise Levels [Single Facility]

Construction noise levels in the project vicinity would fluctuate depending on the particular type, number, and duration of usage of the various pieces of equipment. The effects of construction noise depend largely on the types of construction activities occurring on any given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment in the vicinity of the receiver. Construction generally occurs in several discrete stages, with the equipment mix and associated noise characteristics varying for each operation. These stages alter the characteristics of the noise environment generated on the infill site and in the surrounding community for the duration of the construction process. Development of the infill site assumed the construction equipment fleet mixes and utilization based on four separate construction phases (described in further detail in Chapter 3, “Project Description,” of Volume 1 of this DEIR): demolition and site preparation (Phase 1), grading (Phase 2), utilities (Phase 3), and construction (Phase 4). Construction of the level II infill correctional facilities is expected to begin in spring 2014 and would be completed by spring 2016.

Phase 2, grading, is anticipated to generate the most substantial noise levels due to onsite equipment associated with grading, compacting, and excavation operations. Grading and site preparation equipment typically includes backhoes, bulldozers, and loaders; excavation equipment such as graders and scrapers; and compaction equipment. Erecting large structural elements and mechanical systems, as occurs in the construction phase (Phase 4), could require the use of a crane for placement and assembly tasks, which may also generate substantial noise. Table 3.9-9 lists the noise levels typically generated by various types of construction equipment.

Table 3.9-9 Noise Emission Levels from Construction Equipment

Equipment Type	Typical Noise Level (dBA) at 50 feet
Air Compressor	78
Asphalt Paver	77
Backhoe	78
Compactor	83
Concrete Pump	81
Crane, Mobile	81
Dozer	82
Front-End Loader	79
Generator	81
Grader	85
Pneumatic Tools	85
Rock Drill	81
Scraper	84
Trucks	74–81
Water Pump	81

Notes: dBA = A-weighted decibels.
All equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacturer-specified noise levels for each piece of heavy construction equipment.
Source: FHWA RCNM 2006, FTA 2006

To assess noise levels associated with the various equipment types and operations, construction equipment can be considered to operate in two modes, mobile and stationary. Mobile equipment sources move around a construction site performing tasks in a recurring manner (e.g., loaders, graders, dozers). Stationary equipment operates in a given location for an extended period of time to perform continuous or periodic operations. Thus, it is necessary to determine the location of stationary sources during specific phases, or the effective acoustical center of operations for mobile equipment during various phases of the construction process. Operational characteristics of heavy construction equipment are additionally typified by short periods of full-power operation followed by extended periods of operation at lower power, idling, or powered-off conditions. These characteristics are accounted for through the application of typical usage factors to the reference noise levels.

Based on the reference noise levels, usage rates, fleet mixes, and operational characteristics discussed above, overall hourly average noise levels attributable to construction activities at the infill site were predicted at existing onsite and offsite noise-sensitive receptors. Onsite noise-sensitive receptors are primarily the main inmate housing units at the existing RJD Correctional Facility. Distances from the approximate acoustical center of construction activities for the infill site to noise-sensitive receptors at RJD range from 1,500 feet to nearly 5,000 feet. Additional offsite institutional land uses in the vicinity of the infill site include the East Mesa Detention Facility and the San Diego County Juvenile Detention Facility north of the RJD Infill Site. The East Mesa Detention Facility is approximately 2,800 feet from the acoustical center of the anticipated infill construction operations; the San Diego County Juvenile Detention Facility is immediately north of the East Mesa facility and approximately 3,000 feet from the acoustical center of the infill construction operations.

The nearest offsite noise-sensitive receptor is a single-family residence located approximately 5,000 feet southwest of the infill site, adjacent to Otay Mesa Road. Table 3.9-10 shows the predicted hourly average noise levels from construction activities associated with the development of a single, level II infill correctional facility at existing onsite and offsite noise-sensitive receptors, accounting for the usage factor of individual pieces of equipment, topographical shielding, and absorption effects.

Table 3.9-10 Predicted Single Facility Construction Noise Levels by Phase

Location	Hourly Average Noise Level, L_{eq} (dBA)			
	Phase 1	Phase 2	Phase 3	Phase 4
RJD-Existing HU-01	50	52	48	51
RJD-Existing HU-02	50	52	49	51
RJD-Existing HU-03	49	51	48	50
RJD-Existing HU-04	48	50	46	49
East Mesa Detention Facility	42	44	41	43
San Diego County Juvenile Detention	40	42	38	41
Nearest residence located along Otay Mesa Road	35	37	33	36

Notes: dBA = A-weighted decibels; HU = housing unit; L_{eq} = equivalent noise level.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation would be provided by building façades.
Source: Extant Acoustical Consulting 2013.

Construction noise at offsite institutional receptors in the vicinity of the RJD Infill Site is predicted to reach hourly noise levels of 43 dBA L_{eq}.

As presented in Section 3.9.3, “Regulatory Considerations,” Title 24 regulations establish interior criteria of 70 dBA L_{eq} during active hours and 45 dBA L_{eq} during sleeping hours within noise-sensitive institutional uses. Building façades constructed with a wood frame and a stucco or wood sheathing exterior typically provide a minimum exterior-to-interior noise reduction of 25 dBA with windows closed, whereas a building constructed of a steel or concrete frame, a curtain wall or masonry exterior wall, and

fixed plate-glass windows of ¼-inch thickness typically provides an exterior-to-interior noise reduction of 30–40 dBA with windows closed (Paul S. Veneklasen & Associates 1973, cited in Caltrans 2002: 7-37).

As shown in Table 3.9-10, construction operations and related activities during Phase 2 are predicted to generate maximum exterior hourly noise levels of 52 dBA L_{eq} at the nearest onsite noise-sensitive receptors (HU-01 and HU-02). Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels would not exceed the Title 24 criteria of 70 dBA L_{eq} onsite or offsite noise-sensitive institutional receptors during Phase 2.

Construction operations and related activities during Phase 2 are predicted to generate maximum exterior hourly noise levels of 37 dBA L_{eq} at the nearest offsite non-institutional noise-sensitive receptor; rural residence along Otay Mesa Road. Noise levels generated from the operation of the single, level II infill correctional facility would not exceed the San Diego County Code exterior noise level criteria of 50 dBA L_{eq} during daytime hours (7 a.m. to 10 p.m.) or 45 dBA L_{eq} during nighttime hours (10 p.m. to 7 a.m.).

While construction of a single, level II infill correctional facility at the RJD Infill Site would involve short-term construction activities, these construction activities would not expose onsite or offsite sensitive receptors to substantial, temporary noise levels that exceed the applicable noise standards. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-2a: Groundborne Noise and Vibration Levels at Sensitive Receptors from Construction Activities [Single Facility]

Construction activities for the single, level II infill correctional facility on the RJD Infill Site may result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Groundborne vibration levels caused by various types of construction equipment are summarized in Table 3.9-11. The representative vibration levels identified for various construction equipment types show that sensitive receptors could be exposed to groundborne vibration levels exceeding recommended Caltrans and FTA thresholds of significance for exposing existing residential areas to peak particle velocities.

Table 3.9-11 Representative Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 feet (in/sec)	Approximate Lv (VdB) at 25 feet
Large Bulldozer	0.089	87
Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Notes: Lv = RMS velocity expressed in vibration decibels (VdB), assuming a crest factor of 4; PPV = peak particle velocity.
Source: Federal Transit Administration 2006.

To evaluate vibration impacts at rural residential receptors, the construction activity generating the highest PPV (large bulldozer) was analyzed. The distance from grading activities to the nearest onsite sensitive receptor would be approximately 1,025 feet. The resulting groundborne vibration levels resulting from construction activities are predicted to be completely attenuated before reaching the nearest onsite residential receptor. Therefore, groundborne vibration levels attributable to construction activities would not exceed the Caltrans-recommended threshold of significance of 0.2 PPV in/sec for exposing residential uses to vibration PPV from construction.

Implementation of the single, level II infill correctional facility at the RJD Infill Site would not expose sensitive receptors to groundborne noise and vibration levels that could exceed the Caltrans-recommended threshold of significance. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-3a: Long-Term Increase in Traffic Noise Levels at Existing Noise-sensitive Receptors [Single Facility]

Long-term operation of the single, level II infill correctional facility would result in an increase in ADT volumes on the local roadway network and, consequently, an increase in noise levels from traffic sources along affected segments. To examine the traffic noise impacts, traffic noise levels associated with the project were modeled for roadway segments in the project study area based on the FHWA TNM vehicle noise-level emissions and sound propagation algorithms. Traffic noise levels were modeled under the following conditions: existing (see Table 3.9-2), existing plus single facility and complex, cumulative (2020), cumulative (2020) plus single facility and complex, buildout (2030), and buildout (2030) plus single facility and complex. ADT volumes and distributions of those volumes were obtained from the transportation impact analysis prepared for this project (Fehr & Peers 2013; refer to Section 3.11 and Appendix 2D of this volume). Vehicle speeds and truck volumes on local area roadways were determined from field observations conducted on January 29, 2013.

Tables 3.9-12 through 3.9-14 summarize modeled CNEL noise levels at 100 feet from the roadway centerline for affected roadway segments in the project vicinity under modeled conditions, with and without project implementation. The traffic noise levels presented in Tables 3.9-12 through 3.9-14 represent an application of conservative traffic noise modeling methodologies, which assume no natural or artificial shielding from existing or proposed structures or topography. Actual traffic noise exposure levels at noise-sensitive receptors in the project vicinity would vary depending on a combination of factors such as variations in daily traffic volumes, shielding provided by existing and proposed structures, and meteorological conditions. Refer to Appendix 2C in this volume for complete modeling inputs and results.

Table 3.9-12 Predicted Traffic Noise Levels – Existing Conditions and Existing Conditions plus Single Facility

Roadway	Segment Location		CNEL at 100 Feet, dBA			
	From	To	Existing Conditions	Existing plus Infill	Net Change	Significant Impact?
Otay Mesa Road	La Mesa Road	Piper Ranch Road	67	68	1	No
Otay Mesa Road	Harvest Road	Sanyo Avenue	67	67	>1	No
Otay Mesa Road	Sanyo Avenue	Enrico Fermi Drive	65	65	>1	No
Otay Mesa Road	Enrico Fermi Drive	Alta Drive	64	64	>1	No
Donovan State Prison Road	Alta Road	Facility Access	50	51	1	No
La Media Road	Otay Mesa Road	SR 905	61	61	>1	No
Alta Road	Pasco De La Fuente	Donovan State Prison Road	64	64	>1	No

Notes: dBA = A-weighted decibels; CNEL = Community Noise Equivalent Level.
* Traffic noise levels are predicted at a standard distance of 100 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
Source: Extant Acoustical Consulting 2013.

Based on the modeling results (Tables 3.9-12 through 3.9-14), development and operation of a single facility at the RJD Infill Site would result in changes in traffic noise levels ranging from approximately 1 dBA to more than 1 dBA CNEL, relative to noise levels without the project. A change in noise levels of less than 3 dBA CNEL is not typically perceived as a substantial change in noise levels by humans; furthermore, a noise level change of 1 dBA is considered the smallest change perceivable by the human ear in a controlled environment. As such, changes in traffic noise levels related to the implementation of a single facility at the RJD Infill Site are not anticipated to be perceived by noise-sensitive receptors in the project vicinity.

Table 3.9-13 Predicted Traffic Noise Levels – Cumulative (2020) Conditions and Cumulative (2020) Conditions plus Single Facility

Roadway	Segment Location		CNEL at 100 Feet, dBA			
	From	To	2020 Conditions	2020 plus Infill	Net Change	Significant Impact?
Otay Mesa Road	La Mesa Road	Piper Ranch Road	71	71	>1	No
Otay Mesa Road	Harvest Road	Sanyo Avenue	72	72	>1	No
Otay Mesa Road	Sanyo Avenue	Enrico Fermi Drive	65	65	>1	No
Otay Mesa Road	Enrico Fermi Drive	Alta Drive	69	69	>1	No
Donovan State Prison Road	Alta Road	Facility Access	50	51	1	No
La Media Road	Otay Mesa Road	SR 905	64	64	>1	No
Alta Road	Pasco De La Fuente	Donovan State Prison Road	67	67	>1	No

Notes: dBA = A-weighted decibels; CNEL = community noise equivalent level
* Traffic noise levels are predicted at a standard distance of 100 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
Source: Extant Acoustical Consulting 2013

Table 3.9-14 Predicted Traffic Noise Levels – Buildout (2030) Conditions and Buildout (2030) Conditions plus Single Facility

Roadway	Segment Location		CNEL at 100 Feet, dBA			
	From	To	2030	2030 plus Infill	Net Change	Significant Impact?
Otay Mesa Road	La Mesa Road	Piper Ranch Road	72	72	>1	No
Otay Mesa Road	Harvest Road	Sanyo Avenue	73	73	>1	No
Otay Mesa Road	Sanyo Avenue	Enrico Fermi Drive	70	70	>1	No
Otay Mesa Road	Enrico Fermi Drive	Alta Drive	68	69	1	No
Donovan State Prison Road	Alta Road	Facility Access	50	51	1	No
La Media Road	Otay Mesa Road	SR 905	62	62	>1	No
Alta Road	Pasco De La Fuente	Donovan State Prison Road	68	68	>1	No

Notes: dBA = A-weighted decibels; CNEL = Community Noise Equivalent Level.
* Traffic noise levels are predicted at a standard distance of 100 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
Source: Extant Acoustical Consulting 2013.

Implementation of the single, level II infill correctional facility at the RJD Infill Site would not result in a significant (3 dBA or greater) increase in traffic noise levels, as shown in Tables 3.9-12 through 3.9-14. The largest increase in roadway noise would be more than 1 dBA on Otay Mesa Road, which would

barely be perceptible. Furthermore, implementation of the infill site would not cause traffic noise levels on Otay Mesa Road to exceed the San Diego County transportation noise level criteria of 65 dBA (see Table 3.9-5, above) for that segment as shown in Table 3.9-14.

While implementation of the single, level II infill correctional facility at the RJD Infill Site could result in an increase of average daily vehicle trips in the project vicinity, the increased traffic volumes would not result in a noticeable (3 dBA or greater) increase in traffic noise along roadways in the vicinity of the RJD Infill Site, and would not cause an exceedance of the San Diego County transportation noise level criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-4a: Long-Term Increase in Onsite Noise Levels from Operation of Stationary Noise Sources [Single Facility]

Development of a single, level II infill correctional facility at the RJD Infill site could introduce several onsite stationary noise sources associated with support and operation of the facility. Stationary noise sources associated with operations of similar CDCR facilities often include heating, ventilation, and air conditioning (HVAC) equipment; mechanical equipment; emergency electrical generators; and loading dock operations. Correctional facilities generally incorporate outdoor public address (PA) systems, multiple alarms, and outdoor recreation facilities for inmates. The noise levels associated with operation of these sources are described separately below.

Support infrastructure for the single facility that are typically handled at a central plant, such as HVAC, mechanical systems, emergency generators, and utility distribution areas, will be facilitated through the existing infrastructure support of RJD. As such, this analysis does not incorporate further discussion or evaluation of noise levels typically associated with the operation of a central utility plant or associated infrastructure support services.

Public Address System
Implementation of a single, level II infill correctional facility at the infill site would include the installation of a PA system throughout the facility. The number and orientation of PA system components have not yet been determined. Based on reference noise measurements conducted at similar correctional facilities, noise levels for outdoor PA systems can reach intermittent levels of approximately 70–90 dBA L_{max} at 50 feet. Operation of PA systems is generally intermittent and limited in nature (i.e., less than 1 minute in duration), typically involving announcements, daily instructions, or other communications necessary for the safety of inmates and correctional staff.

The inmates and personnel associated with the contemplated facility are the intended audience for information distributed over the PA system when it is in use, and PA system sound levels will be loud enough to allow clear intelligibility and effective communication. Because inmates and personnel within the development are considered the intended audience and users of the PA system, onsite receptors within the infill facility are not considered to be “noise sensitive” with respect to this noise source, just as inmates at the existing RJD detention facility are not considered “sensitive” with respect to existing PA system noise levels.

Offsite noise-sensitive land uses in the vicinity of the RJD Infill Site include institutional uses (the East Mesa Detention Facility and San Diego County Juvenile Detention Facility); additionally, the nearest offsite noise-sensitive residential land use is 5,000 feet southwest of the infill site, adjacent to Otay Mesa Road. Modeled noise levels at these noise-sensitive receptors are presented in Table 3.9-15 for the single facility.

Table 3.9-15 Modeled Public Address System Noise Levels – Single Facility		
Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
RJD-Existing HU-01	42	54
RJD-Existing HU-02	43	54
RJD-Existing HU-03	42	54
RJD-Existing HU-04	41	53
East Mesa Detention Facility	35	46
San Diego County Juvenile Detention	33	44
Nearest residence located along Otay Mesa Road	26	39

Notes: dBA = A-weighted decibels; HU = housing unit; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation (typically 25 dBA or greater) would be provided by building façades.
Source: Extant Acoustical Consulting 2013.

As presented in Table 3.9-15, exterior noise levels generated by operation of a PA system at the RJD Infill Site would be 33–43 dBA L_{eq} and 44–54 dBA L_{max} at offsite institutional land uses in the vicinity of the infill site. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels would not exceed the Title 24 regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours at offsite noise-sensitive institutional receptors.

Exterior noise levels associated with the operation of a PA system as part of a single, level II infill correctional facility are anticipated to be approximately 26 dBA L_{eq} and 39 dBA L_{max} at the nearest offsite residential land use. Noise levels would not be anticipated to exceed the San Diego County Code criteria of 50 dBA L_{eq} during daytime hours (7 a.m. to 10 p.m.) or 45 dBA L_{eq} during nighttime hours (10 p.m. to 7 a.m.). Additionally, noise levels generated by the single facility's noise levels would largely be masked by other ambient noise in the immediate vicinity of the residential receptor.

Firing Range

RJD currently operates and maintains a firing range, located east of the main facility. The firing range is used for practice, training, and qualification of correctional officers and law enforcement agency personnel in communities surrounding the facility. Although the firing range at RJD was not available for noise measurements during the January 2013 noise survey, similar CDCR facilities are known to be available for operation from 7:00 a.m. to 7:00 p.m. and are not expected to operate during nighttime hours.

Development of a single, level II infill correctional facility at the RJD Infill Site would not affect the location, configuration, or operation of the existing firing range. It is expected that operations of the existing firing range would continue during and following development of the single facility at the RJD Infill Site. As such, exposure of existing onsite and offsite noise-sensitive receptors to firing range noise would remain consistent with existing conditions, and no further evaluation is warranted.

Parking Lot Activities

Development of a single, level II infill correctional facility at the RJD Infill Site would require additional parking for staff and visitors of the infill facility. Parking would be located directly adjacent to the infill facility, bounded by Donovan State Prison Road to the south and the infill facility to the north. Reference noise level measurements have been collected previously of parking lot activities, including average sound exposure levels associated with a single parking event(consisting of vehicle arrival, limited idling, occupants exiting the vehicle, door closures, conversations among passengers, occupants entering the vehicle, startup, and departure of the vehicle). Based on those measurements,

average SEL associated with a single parking event are approximately 71 dB SEL at a distance of 50 feet.

As described in detail in Section 3.11, "Transportation," the single facility is anticipated to have an estimated staff of 193 personnel. The number of parking spaces planned for the project is based on the total number of staff for the second and third watches; additional spaces are included for weekend visitation, assumed for 15 percent of the inmate population. Therefore, the single facility is planned to include approximately 207 parking stalls. These assumptions were used as input to the SoundPLAN noise simulations model created for the project. The resultant parking lot noise levels at noise-sensitive uses in the vicinity are shown in Table 3.9-16.

Table 3.9-16 Modeled Parking Lot Noise Levels – Single Facility

Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
RJD-Existing HU-01	16	19
RJD-Existing HU-02	17	20
RJD-Existing HU-03	19	22
RJD-Existing HU-04	19	22
East Mesa Detention Facility	--[1]	--[1]
San Diego County Juvenile Detention	--[1]	--[1]
Otay Mesa Road	--[1]	--[1]

Notes: dBA = A-weighted decibels; HU = housing unit; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
1 – Parking operation noise levels at this location are predicted to be well below, and will be dominated by, the ambient noise environment; as such, they are not reported. All predicted noise levels presented are exterior noise levels. Additional noise level attenuation (typically 25 dBA or greater) would be provided by building façades.
Source: Extant Acoustical Consulting 2013.

Exterior noise levels generated from the parking operations at the single level II infill correctional facility would be 16–19 dBA L_{eq} and 19–22 dBA L_{max} at offsite institutional land uses in the vicinity of the RJD Infill Site. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels would not exceed the Title 24 regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours at offsite noise-sensitive institutional receptors.

Exterior noise levels generated from the parking operations at the single, level II infill correctional facility are anticipated to be considerably less than those reported above at the nearest offsite residential land use and would be dominated by the existing ambient noise. Noise levels would not be anticipated to approach or exceed the San Diego County Code criteria of 50 dBA L_{eq} during daytime hours (7 a.m. to 10 p.m.) or 45 dBA L_{eq} during nighttime hours (10 p.m. to 7 a.m.).

Other Stationary Noise Sources

Additional intermittent noise sources attributable to operation of the infill site include the opening and closing of entries, adult voices, ancillary mechanical equipment, and the use of maintenance equipment. Such noise-generating activities occur infrequently and are generally intermittent. Because of the infrequent and intermittent nature of these noise sources, it is not feasible to address the individual noise impacts. Such noise events occur infrequently and would be similar to noise events and noise levels already occurring in the project vicinity; therefore, significant noise level increases (3–5 dBA or greater) at nearby noise-sensitive receptors would not occur. Additionally, equipment, vehicles, devices, and activities used in an emergency capacity are considered exempt under the San Diego County Code.

Operation of a single, level II infill correctional facility at the RJD Infill Site would result in additional onsite stationary-source noise being introduced in the project vicinity. Operational and stationary noise sources associated with the development of level II infill correctional facilities would not result in a noticeable (3 dBA or greater) increase in noise levels in the vicinity of the RJD Infill Site, and would not cause an exceedance of the San Diego County stationary source noise level criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measure

No mitigation measures are required.

Impact 3.9-5a: Potential for Incompatibility of Proposed Onsite Land Uses with the Ambient Noise Environment [Single Facility]

The State has established noise compatibility standards for prisons in Title 24 of the California Code of Regulations. The section states, "Housing areas [for inmates] shall be designed and constructed so that the average noise level does not exceed 70 decibels during periods of activity and 45 decibels during sleeping hours." (Part 1, Title 24, CCR 2001:143)

Based on the noise monitoring conducted at the infill site, average daytime noise levels currently range from approximately 50 to 55 dBA L_{eq} (Table 3.9-1). Development of the single, level II infill correctional facility at the RJD Infill Site would not result in a perceptible increase of traffic noise levels from Otay Mesa Road and Alta Road (adjacent to the infill site), as shown in Tables 3.9-12 through 3.9-14. Therefore, traffic noise level increases associated with implementation of the project are not anticipated to result in overall traffic noise levels that would be considered incompatible with the noise environment.

The infill site is also located approximately 2 nautical miles from the Brown Field Municipal Airport and is more than 4,000 feet from the 60 dBA CNEL noise contours, measured from the southwestern property line to the existing facility. As a result, aircraft noise may be audible, depending on varying environmental effects and flight paths, but it is not anticipated to contribute substantially to the ambient noise environment on the infill site.

Development of the single, level II infill correctional facility at the RJD Infill Site would not affect the location, configuration or operation of the existing firing range. It is expected that operations of the existing firing range would continue during and following the development of the infill correctional facility. As such, exposure of existing onsite noise-sensitive receptors to firing range noise will remain consistent with existing conditions. Exposure of inmates within the single facility was modeled based on the assumptions previously outlined and is presented in Table 3.9-17.

Table 3.9-17 Modeled Firing Range Noise Levels – Single Facility

Description	Exterior Noise Levels (dBA)		Interior Noise Levels (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}
Single Infill HU-01	86	87	61	62
Single Infill HU-02	71	72	46	47
Single Infill HU-03	75	76	50	51
Single Facility – Family Visiting	83	84	58	59
Single Facility – Activity Field	71	72	46	47

Notes: dBA = A-weighted decibels; HU = housing unit; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
Source: Extant Acoustical Consulting 2013.

Modeled firing range noise levels at the single, level II infill correctional facility under consideration would be 71–86 dBA L_{eq} and 72–87 dBA L_{max} at the exterior building façades of the inmate housing

units. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels at onsite noise-sensitive institutional receptors would not be anticipated to exceed the Title 24 regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours.

Implementation of a single, level II infill correctional facility at the RJD Infill Site would not expose onsite noise-sensitive land uses to noise levels exceeding applicable criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measure

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.9-1b: Short-Term Construction-Generated Noise Levels [Complex]

Implementation of the complex facility at the RJD Infill Site would include the generation of construction noise. Construction equipment and the associated generated noise would be similar to that described for the single facility option under Impact 3.9-1a above. Table 3.9-18 shows the predicted hourly average noise levels from construction activities associated with the development of the level II infill correctional facility complex at existing onsite and offsite noise-sensitive receptors in the vicinity of the infill site.

Table 3.9-18 Predicted Complex Construction Noise Levels by Phase

Prediction Location	Hourly Average Noise Level, L_{eq} (dBA)			
	Phase 1	Phase 2	Phase 3	Phase 4
RJD-Existing HU-01	51	52	48	53
RJD-Existing HU-02	51	53	49	53
RJD-Existing HU-03	50	52	48	52
RJD-Existing HU-04	49	51	46	51
East Mesa Detention Facility	41	43	38	43
San Diego County Juvenile Detention	44	45	41	45
Nearest residence located along Otay Mesa Road	36	37	33	38

Notes: dBA = A-weighted decibels; HU = housing unit; L_{eq} = equivalent noise level.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation would be provided by building façades.
Source: Extant Acoustical Consulting 2013

As shown in Table 3.9-18, construction operations and related activities during Phases 2 and 4 are predicted to generate maximum exterior hourly noise levels of 53 dBA L_{eq} at the nearest onsite noise-sensitive receptor. Construction noise levels during Phases 2 and 4 at offsite institutional receptors in the vicinity of the RJD Infill Site are predicted to reach maximum hourly noise levels of 45 dBA L_{eq}. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels would not be anticipated to exceed the Title 24 criteria of 70 dBA L_{eq} onsite or offsite noise-sensitive institutional receptors during Phases 2 and 4.

Construction operations and related activities during Phase 4 are predicted to generate maximum exterior hourly noise levels of 38 dBA L_{eq} at the nearest offsite non-institutional noise-sensitive receptor, a rural residence along Otay Mesa Road. Noise levels generated from the operation of the level II infill correctional facility complex would not exceed the San Diego County Code exterior noise level criteria of 50 dBA L_{eq} during daytime hours (7 a.m. to 10 p.m.) or 45 dBA L_{eq} during nighttime hours (10 p.m. to 7 a.m.).

While construction of a level II infill correctional facility complex at the RJD Infill Site would involve short-term construction activities, these construction activities would not expose onsite or offsite noise-sensitive receptors to substantial, temporary noise levels that exceed the applicable noise standards This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-2b: Groundborne Noise and Vibration Levels at Sensitive Receptors from Construction Activities [Complex]

Construction activities associated with a level II infill correctional facility complex at the RJD Infill Site would be similar to those associated with construction of a single facility. For example, the distance from the nearest sensitive receptor to the complex would be 830 feet. Therefore, the same vibration analysis presented above for a single, level II infill correctional facility would apply to the complex.

To evaluate vibration impacts at residential receptors, the construction activity generating the highest PPV (large bulldozer) was analyzed. The distance from grading activities to the nearest onsite sensitive receptor would be 5,000 feet. The resulting groundborne vibration levels resulting from construction activities are predicted to be completely attenuated before reaching the nearest onsite residential receptor. Therefore, groundborne vibration levels attributable to construction activities would not exceed the Caltrans-recommended threshold of significance of 0.2 PPV in/sec for exposing residential uses to vibration PPV from construction.

Implementation of the level II infill correctional facility complex at the RJD Infill Site would not expose sensitive receptors to groundborne noise and vibration levels that could exceed the Caltrans-recommended threshold of significance. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-3b: Long-Term Increase in Traffic Noise Levels at Existing Noise-Sensitive Receptors [Complex]

Traffic modeling for a level II infill correctional facility complex at RJD was conducted with the same methodology and background information as described above for a single facility (see Impact 3.9-3a above). Tables 3.9-19 through 3.9-21 summarize modeled CNEL noise levels at 100 feet from the roadway centerline for affected roadway segments in the project vicinity under modeled conditions, with and without implementation of a level II infill correctional facility complex at the RJD Infill Site.

Table 3.9-19 Predicted Traffic Noise Levels – Existing Conditions and Existing Conditions plus Complex

Roadway	Segment Location		CNEL at 100 Feet, dBA			
			Existing Conditions	Existing plus Infill	Net Change	Significant Impact?
Otay Mesa Road	La Mesa Road	Piper Ranch Road	68	68	>1	No
Otay Mesa Road	Harvest Road	Sanyo Avenue	67	67	>1	No
Otay Mesa Road	Sanyo Avenue	Enrico Fermi Drive	65	65	>1	No
Otay Mesa Road	Enrico Fermi Drive	Alta Drive	64	64	>1	No
Donovan State Prison Road	Alta Road	Facility Access	50	51	1	No
La Media Road	Otay Mesa Road	SR 905	61	61	>1	No
Alta Road	Pasco De La Fuente	Donovan State Prison Road	64	64	>1	No

Notes: dB = A-weighted decibels; CNEL = Community Noise Equivalent Level
* Traffic noise levels are predicted at a standard distance of 100 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
Source: Extant Acoustical Consulting 2013.

Table 3.9-20 Predicted Traffic Noise Levels – Cumulative (2020) Conditions and Cumulative (2020) Conditions plus Complex

Roadway	Segment Location		CNEL at 100 Feet, dBA			
			2020 Conditions	2020 plus Infill	Net Change	Significant Impact?
Otay Mesa Road	La Mesa Road	Piper Ranch Road	71	71	>1	No
Otay Mesa Road	Harvest Road	Sanyo Avenue	76	76	>1	No
Otay Mesa Road	Sanyo Avenue	Enrico Fermi Drive	65	65	>1	No
Otay Mesa Road	Enrico Fermi Drive	Alta Drive	68	68	>1	No
Donovan State Prison Road	Alta Road	Facility Access	50	51	1	No
La Media Road	Otay Mesa Road	SR 905	64	64	>1	No
Alta Road	Pasco De La Fuente	Donovan State Prison Road	67	67	>1	No

Notes: dB = A-weighted decibels; CNEL = community noise equivalent level
* Traffic noise levels are predicted at a standard distance of 100 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
Source: Extant Acoustical Consulting 2013.

Table 3.9-21 Predicted Traffic Noise Levels for Buildout (2030) Conditions and Buildout (2030) Conditions plus Complex

Roadway	Segment Location		CNEL at 100 Feet, dBA			
			2030	2030 plus Infill	Net Change	Significant Impact?
Otay Mesa Road	La Mesa Road	Piper Ranch Road	72	72	>1	No
Otay Mesa Road	Harvest Road	Sanyo Avenue	72	73	1	No
Otay Mesa Road	Sanyo Avenue	Enrico Fermi Drive	70	70	>1	No
Otay Mesa Road	Enrico Fermi Drive	Alta Drive	68	69	1	No
Donovan State Prison Road	Alta Road	Facility Access	50	51	1	No
La Media Road	Otay Mesa Road	SR 905	62	62	>1	No
Alta Road	Pasco De La Fuente	Donovan State Prison Road	68	68	>1	No

Notes: dB = A-weighted decibels; CNEL = Community Noise Equivalent Level
* Traffic noise levels are predicted at a standard distance of 100 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
Source: Extant Acoustical Consulting 2013.

Based on the modeling conducted, implementation of a level II infill correctional facility complex would result in changes in traffic noise levels ranging from 1 dBA to more than 1 dBA CNEL, relative to noise levels without the project. A change in noise levels of less than 3 dBA is not typically perceived as a substantial change in noise levels by humans; furthermore, a noise level change of 1 dBA is considered the smallest change perceivable by the human ear. As such, changes in traffic noise levels related to implementation of the complex at the RJD Infill Site are not anticipated to be perceived by noise-sensitive receptors in the project vicinity.

Implementation of a level II infill correctional facility complex at the RJD Infill Site would not result in a significant (3 dBA or greater) increase in traffic noise levels, as shown in Tables 3.9-19 through 3.9-21. The largest increase in roadway noise would be more than 1 dBA, which would not be perceptible. As a result, this impact would be less than significant.

While implementation of a level II infill correctional facility complex at the RJD Infill Site could result in an increase of average daily vehicle trips in the project vicinity. The increased traffic volumes would not result in a noticeable (3 dBA or greater) increase in traffic noise along roadways in the vicinity of the RJD Infill Site, and would not cause an exceedance of the San Diego County transportation noise level criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measure

No mitigation measures are required.

Impact 3.9-4b: Long-term Increase in Onsite Noise Levels from Operation of Stationary Noise Sources [Complex]

Similar to the proposed single facility (see Impact 3.9-4a), development of a level II infill correctional facility complex at the RJD Infill Site could introduce several onsite stationary noise sources associated with support and operation of the facility. Stationary noise sources associated with operations of similar CDCR facilities often include heating, ventilation, and air conditioning (HVAC) equipment; mechanical equipment; emergency electrical generators; and loading dock operations. Correctional facilities generally incorporate outdoor public address (PA) systems, multiple alarms, and outdoor recreation facilities for inmates. The noise levels associated with operation of these sources are described separately below.

Support infrastructure for a complex are typically handled at a central plant, such as HVAC, mechanical systems, emergency generators, and utility distribution areas, and would be facilitated through the existing infrastructure support of RJD. As such, this analysis does not incorporate further discussion or evaluation of noise levels typically associated with the operation of a central utility plant or associated infrastructure support services.

Public Address System

As presented below in Table 3.9-22, exterior noise levels generated from the operation of a PA system at the level II infill correctional facility complex would be 36–46 dBA L_{eq} and 45–56 dBA L_{max} at offsite institutional land uses in the vicinity of the infill site. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels would not exceed the Title 24 regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours at offsite noise-sensitive institutional receptors.

Table 3.9-22 Modeled Public Address System Noise Levels – Complex

Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
RJD-Existing HU-01	45	55
RJD-Existing HU-02	46	56
RJD-Existing HU-03	45	54
RJD-Existing HU-04	43	53
East Mesa Detention Facility	37	45
San Diego County Juvenile Detention	36	45
Otay Mesa Road	30	39

Notes: dBA = A-weighted decibels; HU = housing units; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation would be provided by building facades.
Source: Extant Acoustical Consulting 2013.

Exterior noise levels associated with the operation of a PA system at the level II infill correctional facility complex are anticipated to be approximately 30 dBA L_{eq} and 39 dBA L_{max} at the nearest offsite residential land use. Noise levels would not exceed the San Diego County Code criteria of 50 dBA L_{eq} during daytime hours (7 a.m. to 10 p.m.) or 45 dBA L_{eq} during nighttime hours (10 p.m. to 7 a.m.). Additionally, noise levels generated by the infill correctional facility would largely be masked by other ambient noise in the immediate vicinity of the nearest residential receptor.

Firing Range

Development of the level II infill correctional facility complex at the RJD Infill Site would require the relocation of the existing firing range to the area immediately north of the infill site. The configuration and operation of the relocated firing range would be similar in nature to that of the existing range and noise generated from the relocated range would be essentially the same as the noise from the existing range. The distance from the new range to the nearest onsite and offsite noise sensitive receptors would be similar to the distance from the existing range. Additionally, the relocation of the firing range is anticipated to provide considerably more shielding of firing range operational noise caused by intervening buildings of the level II infill correctional facility complex. Thus, noise generated from the operation of the relocated firing range associated with development of the level II infill correctional facility complex is not anticipated to result in increased noise levels at nearby noise-sensitive receptors.

Parking Lot Activities

Development of a level II infill correctional facility complex at the RJD Infill Site would require additional parking to support staff and visitors of the infill facility. Parking would be located directly adjacent to the contemplated infill facility, bounded by Donovan State Prison Road to the south and the infill facility to

the north. Previously conducted reference noise level measurements of parking lot activities indicate that average sound exposure levels associated with a single parking event are approximately 71 dB SEL at distance of 50 feet. 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. The level II infill correctional facility complex would have an estimated staffing of 377 personnel. The number of parking spaces planned for the project is based on the total number of staff for the second and third watches; additional spaces are included for weekend visitation, based on 15 percent of the inmate population. Therefore, a complex is planned to include approximately 417 parking stalls. These assumptions were used as an input to the SoundPLAN noise simulations model created for the project. The resultant parking noise levels at noise-sensitive uses in the vicinity are shown in Table 3.9-23.

Table 3.9-23 Modeled Parking Lot Noise Levels –Complex

Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
RJD-Existing HU-01	18	21
RJD-Existing HU-02	20	23
RJD-Existing HU-03	21	24
RJD-Existing HU-04	21	24
East Mesa Detention Facility	--[1]	--[1]
San Diego County Juvenile Detention	--[1]	--[1]
Otay Mesa Road	--[1]	--[1]

Notes: dBA = A-weighted decibels; HU = housing unit; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
[1] Parking operation noise levels at this location are predicted to well below, and will be dominated by the ambient noise environment; as such, they are not reported.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation (typically 25 dBA or greater) would be provided by building facades.
Source: Extant Acoustical Consulting 2013.

Exterior noise levels generated from the maximum parking operations at the level II infill correctional facility complex would be 18–21 dBA L_{eq} and 21–24 dBA L_{max} at offsite institutional land uses in the vicinity of the infill site. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels at offsite noise-sensitive institutional receptors would not exceed the Title 24 regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours.

Exterior noise levels generated from the parking operations at the level II infill correctional facility complex are anticipated to be considerably less than those reported above and would be dominated by the existing ambient noise at the nearest offsite residential land use. Noise levels would not exceed the San Diego County Code criteria of 50 dBA L_{eq} during daytime hours (7 a.m. to 10 p.m.) or 45 dBA L_{eq} during nighttime hours (10 p.m. to 7 a.m.).

Other Stationary Noise Sources

Additional intermittent noise sources attributable to operation of the infill site include the opening and closing of entries, adult voices, ancillary mechanical equipment, and the use of maintenance equipment. Such noise-generating activities occur infrequently and are generally intermittent. Because of the infrequent and intermittent nature of these noise sources, it is not feasible to address the individual noise impacts. Such noise events occur infrequently and would be similar to noise events and noise levels already occurring in the project vicinity; therefore, significant noise level increases (3–5 dBA or greater) at nearby noise-sensitive receptors would not occur. Additionally, equipment, vehicles, devices, and activities used in an emergency capacity would be considered exempt under the San Diego County Code.

Operation of a level II infill correctional facility complex at the RJD Infill Site would result in additional onsite stationary-source noise being introduced in the project vicinity. Operational and stationary noise sources associated with the development of a level II infill correctional facility complex would not result in a noticeable (3 dBA or greater) increase in noise levels in the vicinity of the RJD Infill Site, and would not cause an exceedance of the San Diego County stationary source noise level criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measure

No mitigation measures are required.

Impact 3.9-5b: Potential for Incompatibility of Proposed Onsite Land Uses with the Ambient Noise Environment [Complex]

Development of a level II infill correctional facility complex at the RJD Infill Site would be similar to the single facility (see Impact 3.9-5a above). Noise from traffic, aircraft, and other sources would be similar at the complex to those presented for the single facility. The same analysis presented above for a single facility would apply to a complex, excepting the firing range.

As previously mentioned, development of a level II infill correctional facility complex at the RJD Infill Site would require the relocation of the firing range from the existing location to the area immediately northwest of the infill facility. Preliminary firing range design and firearms (as described previously) were input into the computer noise simulation model, and resulting noise levels at the onsite noise-sensitive receivers were calculated.

Modeled firing range noise levels at the level II infill correctional facility complex would be 46–80 dBA L_{eq} and 49–83 dBA L_{max} at the exterior building façades of the inmate housing units of the infill facility. With respect to offsite receptors, the relocation of the firing range would not substantially alter the distance between offsite receptors and the firing range under existing conditions. As such, changes in potential noise levels associated with its operation are not anticipated to be substantial. As mentioned previously, operation of the firing range is restricted to daytime hours; therefore, firing range noise levels would not affect nighttime noise levels at the infill facility. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels at onsite and offsite noise-sensitive institutional receptors would not be anticipated to exceed the Title 24 regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours in the vicinity of the level II infill correctional facility complex.

Implementation of a level II infill correctional facility complex at the RJD Infill Site would not expose onsite noise-sensitive land uses to noise levels exceeding applicable criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measure

No mitigation measures are required.

3.10 PUBLIC SERVICES

This section describes the existing public services provided to the Richard J. Donovan (RJD) Infill Site, including police services, fire protection services, emergency medical response, schools, and parks. Impacts are evaluated in relation to increased demand for public services associated with the development of the level II infill correctional facilities at the RJD Infill Site and actions needed to provide increased services that could lead to physical environmental effects. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. The information presented herein is derived, in part, from the *Draft Environmental Impact Report: California Health Care Facility (San Diego),* which evaluated the same footprint as the infill site (California Prison Health Care Receivership Corporation 2008). Public utilities (i.e., water supply, wastewater treatment and disposal, solid waste disposal, and electricity and natural gas supply) are discussed in Section 3.12, "Utilities," of this draft environmental impact report (DEIR) (Volume 2).

3.10.1 ENVIRONMENTAL SETTING

POLICE/SHERIFF SERVICES

California Department of Corrections and Rehabilitation (CDCR) staffs the existing RJD correctional facilities with 745 correctional officers equipped to manage site security (CDCR 2010). CDCR handles most law enforcement needs at its facilities, and RJD rarely requires assistance from the San Diego County Sheriff's Department. The sheriff's department provides generalized patrol and investigative services in unincorporated San Diego County, while the California Highway Patrol has primary jurisdiction for traffic services in unincorporated areas (San Diego County Sheriff's Department 2013). When needed, police services may also be provided by the San Diego Police Department. It is also noted that RJD and the adjacent San Diego County Sheriff's Department's George F. Bailey Detention Facility provide mutual aid to each other in case of emergencies at either respective facility.

FIRE PROTECTION

The RJD Infill Site is located in an area designated by the San Diego County Multi-Jurisdictional Hazard Mitigation Plan as having a very high risk of wildland fires. Defensible space is maintained by periodic mowing to control vegetation and reduce fire risk. A CDCR-operated fire station (Fire Station 26) is located on the western perimeter of the existing RJD facility and provides first response to the site. Fire Station 26 has two fire engine trucks and provides 24-hour-a-day fire response to the prison property. The station is staffed with one correctional fire chief, four correctional fire captains, one associate hazardous materials specialist, and eight inmate fire fighters (California Prison Health Care Receivership Corporation 2008: 4.10-7).

The RJD Infill Site is located in the San Diego Rural Fire Protection District (SDRFPD), but is not a mutual responder except in unusual circumstances. The closest SDRFPD station to the infill site is Station 11, located at Highway 94 in Jamul. Station 11 consists of three personnel, one fire engine, and one medium rescue vehicle. Response time from Station 11 to the infill site is approximately 25 minutes (California Prison Health Care Receivership Corporation 2008).

In the event of a major firefighting effort, at least four City of San Diego fire stations are within proximity to RJD. Station 6 is located on Palm Avenue and consists of a three- to four-person crew, paramedic, engine, brush rig, and structural rig; this is the closest station to the existing RJD facility and has a response time to the site of approximately 8–10 minutes. Station 29, located on San Ysidro Boulevard,

consists of a four-person crew, one engine, and one truck company. Station 30, located in the Coronado-Nestor area, consists of a four-person crew, one crash apparatus, and one paramedic. Response times to RJD for Stations 29 and 30 are 15 minutes and 15–20 minutes, respectively. Station 43, located on the corner of La Media Road and Otay Mesa Road, consists of one engine, one truck company, one crash apparatus, and one brush apparatus; response time to RJD from Station 43 is anticipated to be 5–10 minutes (California Prison Health Care Receivership Corporation 2008: 4.10-8).

Fire Station 26 receives approximately 15–25 emergency calls per year from the existing RJD facility, primarily for life rescue assistance rather than fire suppression. Most emergency situations at RJD have been handled exclusively by the onsite fire department; however, a mutual aid agreement is in place between RJD and SDRFPD for additional fire protection services (California Prison Health Care Receivership Corporation 2008). Emergency access into the site is controlled by the guard station on Donovan State Prison Road from Alta Road.

EMERGENCY SERVICES

Emergency medical support services at the RJD property are handled onsite by Fire Station 26, as described above. Some life support services have been handled through contracted life-flight landings at the onsite helipad, which transport critical-needs patients to one of a few local emergency health care facilities. Private ambulance services also assist in first response and patient transport. In addition, Fire Station 22 is an offsite facility jointly operated by SDRFPD and the California Department and Forestry and Fire Protection (CAL FIRE) that provides services to RJD for all 911 medical emergency calls. Station 22 is located on Alta Road north of Donovan State Prison Road. SDRFPD oversees a system of medical services for the infill site area, organized to provide rapid response to serious medical emergencies, including immediate medical care and patient transport to the appropriate hospital setting (California Prison Health Care Receivership Corporation 2008).

SCHOOLS

The RJD Infill Site is located in unincorporated San Diego County. Several school districts serve this general area: Chula Vista Elementary School District, Sweetwater Union High School District (SUHSD), San Ysidro School District, and San Diego Unified School District.

The Chula Vista Elementary School District covers approximately 100 square miles between San Diego and the United States/Mexico International Border and includes 44 schools (Chula Vista Elementary School District 2012). The SUHSD provides educational services to approximately 41,000 students in grades 7–12 and 24,000 adult learners on 32 campuses.

The San Ysidro School District is a preschool–grade 8 district with 16 preschool classes, a childcare center, six elementary schools, and one middle (grades 7–8) school. The district serves more than 5,550 students and is projected to double in population in the next 10 years (San Ysidro School District 2012). The district serves the San Ysidro and Otay Mesa communities. Many middle school students and all high school–aged children move to SUHSD upon graduating from San Ysidro School District.

San Diego Unified School District serves more than 133,000 students in preschool through grade 12 in the district's various educational facilities, which include 118 traditional elementary schools, nine kindergarten–grade 8 schools, 24 traditional middle schools, 26 high schools, 44 charter schools, and 14 atypical/alternative schools. The district boundaries stretch from Mira Mesa in the north to the Paradise Hills area west of the infill site (San Diego Unified School District 2013).

PARKS

Recreational use of the land in the vicinity of the RJD Infill Site generally consists of dispersed, low-impact activities such as hiking. The only park in the area is Otay Valley Regional Park, which is an extensive parkway located north and east of the infill site. Otay Valley Regional Park was established by the City of San Diego, the County of San Diego, and the City of Chula Vista in 1990 and is operated through a joint powers agreement. The planning area includes nearly 9,000 acres of land, extending approximately 13 miles through the Otay Valley along the Otay River from the San Diego Bay National Wildlife Refuge to Upper and Lower Otay Lakes. The park consists of a trail system through open space/preserve, complemented by isolated recreation areas (County of San Diego n.d. a).

Otay Lakes County Park is a 78-acre park located on the southern shore of Lower Otay Lake, approximately 1.75 miles north of the RJD Infill Site in Otay Valley Regional Park. The park has one group site available for reservation that can accommodate up to 100 people and four additional sites for walk-in visitors. The park includes a playground, horseshoe courts, hiking trails, lawn area, and a native plant/demonstration garden and is a popular location for bird watching (San Diego County n.d. b).

The Otay Mountain Truck Trail runs between Alta Road and Otay Lakes Road, bordering the southern and eastern edges of the Otay County Open Space Preserve west of the infill site.

3.10.2 REGULATORY CONSIDERATIONS

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal regulations or laws related to public services apply to development of the level II correctional facility at the RJD Infill Site.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

A list of the applicable public service–related state plans, policies, regulations, and laws is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

- Fire Safe Regulations (California Code of Regulations Title 14 and Title 19) - Title 14 establishes minimum wildfire protection standards in conjunction with building construction and development in the State Responsibility Area. Title 19 contains regulations that have been developed by the State Fire Marshal for the purpose of establishing additional fire protection for group occupancies, such as places of assembly, schools, high rise buildings, hospitals and organized camps.
- California Building Standards Codes - Title 24 Part 9, the California Fire Code, is based on the International Fire Code, with the express purpose of prescribing regulations governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises.
- California Emergency Services Act - The California Emergency Services Act of 1970 established authority for the preparation of an emergency preparedness plan for prisons. All institutions are required to ensure preparedness in dealing with disasters such as earthquakes, fires, and floods.
- Senate Bill 50 - Senate Bill 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. This legislation imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. It also provided the authority for school districts to levy fees at three different levels.

- California Education Code (Section 17620) - authorizes school districts to levy a fee, charge, dedication, or other requirement against any development project for the construction or reconstruction of school facilities, provided that the district can show justification for levying of fees.
- California Government Code (Section 65995) - limits the fee to be collected by school districts under the Education Code to the statutory fee unless a school district conducts a Facility Needs Assessment and meets certain conditions.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

COUNTY OF SAN DIEGO GENERAL PLAN

Goals of the County of San Diego General Plan Safety Element include enhanced public safety and the protection of public and private property; effective emergency response; reduction of fire hazards; regional coordination among fire protection agencies; and adequate fire and medical services. Policies included in the Land Use Element state the county's commitment to ensure that growth is limited to areas where adequate public facilities exist or can be efficiently provided.

SAN DIEGO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

The Multi-Jurisdictional Hazard Mitigation Plan (2004) was prepared with input from county residents, responsible officials, the San Diego County Water Authority, the Rancho Santa Fe Fire Protection District, the California Emergency Management Agency, and the Federal Emergency Management Agency. The plan includes goals to reduce the possibility of damage and losses to existing assets, including public facilities, due to structural fires and wildfires. To meet this objective, the county updates the Emergency Operations Plan and continually evaluates level of service impacts and needs. The county also supports and maintains a Community Emergency Response Team.

3.10.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact relating to geology, soils, seismicity, minerals, or paleontological resources if it would do any of the following:

- result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or in the 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;
- impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan;
- increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

The State CEQA Guidelines (Section 15064.5) define a "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Recreational facilities: As described in Section 3.4, "Employment, Population, and Housing," of this DEIR (Volume 2), new staff at the RJD Infill Site would reside primarily in San Diego County and would be distributed among several cities and unincorporated communities in the county. Any increase in the use of recreational facilities that may result from the hiring of new employees would be minimal and dispersed such that they would not be expected to cause substantial deterioration of any one facility, or require the construction of new facilities. Therefore, no significant recreational impacts would occur and this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.10-1a: Impacts on Police/Sheriff Services [Single Facility]

Development of a single, level II correctional facility at the RJD Infill Site would increase the number of employees at the RJD prison facilities by up to 193 new staff members, 104 of whom would be correctional officers. These new correctional officers, along with the existing police and correctional officers at the existing RJD facilities, would provide police protection at the new level II infill facility. To provide additional police presence when support is needed, CDCR would continue to implement mutual aid agreements with the San Diego County Sheriff's Office and San Diego Police Department.

As described in Section 3.4, "Employment, Population, and Housing," of this DEIR (Volume 2), the additional employee population would be expected to come largely from the existing regional workforce. In the event that some of these new employees are new residents to the area, they would likely be dispersed throughout the surrounding areas and would not cause a substantial increase in demand for police protection services. Further, there is no known connection between prisons and increased crime rates in the surrounding communities. Therefore, demand on police services in the neighboring communities is not expected to increase as a result of the development of level II correctional facilities at the RJD Infill Site.

Development of the single, level II correctional facility at the RJD Infill Site would not create substantial demand for new police protection facilities in any one community; would provide for onsite security needs through the employment of 104 new correctional officers; and would likely result in a relatively small increase in the volume of calls to the San Diego County Sheriff or San Diego Police Department. No new police facilities or personnel would be required. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.10-2a: Impacts on Fire Protection Services [Single Facility]

The development of a single, level II correctional facility at the RJD Infill Site would result in an increase in the number of employees at the prison site by up to 193 staff. As described in Section 3.4, "Employment, Population, and Housing," of this DEIR (Volume 2), the additional employee population would not generate a substantial number of new residents or concentrate new residents within any one community. Rather, new staff would likely be distributed throughout the area. Therefore, development

of a level II correctional facility at the RJD Infill Site would not create substantial demand for new fire protection service facilities in any one community, and adverse physical impacts associated with such facilities would not occur.

Onsite fire protection services at the new level II correctional facility would be served by the onsite CDCR-operated fire station (Fire Station 26). Supplemental service would continue to be provided by SDRFPD under the existing mutual aid agreement. While the number of calls generated by the new level II facility cannot be precisely projected, it is reasonable to assume, based on the existing volume of calls from RJD (15–25 calls per year) and the size of the proposed infill facility (792 beds) in relation to the size of RJD (3,559 as of December 2012), that there would not be a large increase in the annual number of calls to SDRFPD.

As with the existing RJD correctional facilities, development of the proposed 792-bed level II facility would not increase the potential for a wildfire nor would it be considered at risk during a wildfire. The grounds at RJD, especially near the secure perimeter and administrative support buildings outside the perimeter, are consistently maintained in a condition that minimizes wildfire danger. In addition, all areas within a 200-foot radius of the secure perimeter, which contains the lethal electrified fence, are maintained in nearly a weed-free condition to reduce wildfire risk. Because of the onsite fire protection services and the maintained perimeter, the State Fire Marshal has indicated that CALFIRE wildland fire managers do not consider the RJD facility at risk during a wildfire (Guarino pers.comm., 2013).

In response to NOP comments from local fire officials, CDCR consulted with Mr. Steve Guarino, the Supervising Deputy State Fire Marshal in regard to concerns that construction of the proposed 792-bed level II facility would require the development of an additional entrance road that would provide a direct connection to the south to Enrico Fermi Road, which would connect to the proposed State Route 11 extension from State Route 909. However, the State Fire Marshal affirmed that a second entrance to RJD was not needed to enhance fire protection (Guarino pers.comm., 2013). RJD has an existing onsite fire station that can adequately function as a first responder to fire alarms within the RJD property and is capable of providing fire protection services to the proposed level II correctional facility. Consistent with State requirements, CDCR is required to construct all new facilities in accordance with California Building Code standards. Conformance to these standards would minimize adverse impacts related to fire safety. Furthermore, the State Fire Marshal noted that in accordance with Title 14 all new correctional facilities employ Type I concrete construction, which is highly fire resistant. This type of construction allows a “defend in place” strategy because, to the degree feasible, inmates must be kept inside the secure perimeter even during fires. The Type I construction is further supplemented by the use of a fire alarm system that is connected to a central monitoring station and the facilities always have full fire sprinklers. Accordingly, there is no need for a second RJD access road for increased fire protection. Nonetheless, CDCR has considered an alternative that provides this secondary access road south to Enrico Fermi Road in the alternatives analysis provided in Volume 1, Chapter 5, of this EIR.

Although a formal fire protection plan has not been prepared for submittal to San Diego County, CDCR will be responsible for developing the infill site in a manner consistent with all applicable wildland fire regulations. CDCR has and will continue to consult with the State Fire Marshall to ensure that structures are designed to be resistant to wildfire, including proper landscaping practices, construction standards and techniques, adequate emergency water supply needs, and access.

Implementation of the single, level II correctional facilities at the RJD Infill Site would not create substantial demand for new fire facilities in any one community; would generate few calls for offsite fire protection services; and would be designed consistent with State fire regulations. Therefore, no new fire facilities or personnel would be required. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.10-3a: Impacts on Emergency Services [Single Facility]

The California Emergency Services Act of 1970 established authority for the preparation of an Emergency Preparedness Plan for prisons. Each CDCR institution must prepare an Emergency Preparedness Plan for submission to the Director of Corrections for review and approval and must assign an emergency coordinator to implement this plan. In accordance with the act, such a plan was developed for RJD according to the requirements of the State Office of Emergency Services and organized according to the specific site needs for this institution. All institutions are required to ensure preparedness in dealing with disasters such as earthquakes, fires, and floods. The emergency plan for RJD includes contingency plans to respond to the following types of emergency situations: war, flood, civil disturbance, pollution, earthquake, and fire. The plan provides detailed routes of egress to more secure buildings and/or areas in the event of an emergency evacuation of buildings and/or other areas within RJD. Employees are trained to follow specific instructions and precautionary measures for emergencies, and in the use of emergency equipment and medical aids. Development of the single, level II correctional facility at the RJD Infill Site would not interfere with plan compliance. Following the existing Emergency Preparedness Plan for RJD would address any potential impairment to the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan.

Emergency medical support services to the RJD property are handled onsite by Fire Station 26, described above. In addition, SDRFPD /CAL FIRE Station 22 on Alta Road provides services to RJD for all 911 medical emergency calls. Furthermore, SDRFPD oversees a system of medical services for the infill site area, organized to provide rapid response to serious medical emergencies, including immediate medical care and patient transport to the appropriate hospital setting (California Prison Health Care Receivership Corporation 2008). These services are supplemented by onsite medical staff that work at RJD. As discussed above for fire protection services, these facilities would be capable of supporting the development of the single, level II correctional facilities at the RJD Infill Site.

Development of the single, level II infill correctional facilities at the RJD Infill Site would not result in increased emergency service requirements or physically interfere with or impair implementation of the emergency response plan. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.10-4a Impacts on Schools [Single Facility]

Any potential impact related to the provision of school services is related to an increase in community population as a result of the employment opportunities. As discussed in Section 3.4, “Employment, Population, and Housing,” of this DEIR (Volume 2), most of the RJD Infill Site employees would likely be dispersed throughout San Diego County, similar to the distribution of existing RJD employees and their families: San Diego (32 percent) and Chula Vista (31 percent). To the degree that employees would reside in new housing in the region, this housing would be subject to school impact fees. Although these fees are not typically sufficient to fully fund construction costs, California Government Code Section 65996 has deemed that payment of school fees is full mitigation of school impacts under CEQA. In addition to school impact fees, school districts have a variety of other funding sources that offset the construction of new schools, including matching state funds and various local bond fund opportunities.

Of the 193 new employees for a single, level II facility at the RJD Infill Site, 178 would be assumed to reside in San Diego County (based on calculations provided in Section 3.4, “Employment, Population, and Housing”). Of those, 62 individuals would reside in the City of San Diego and another 60 individuals would reside in the City of Chula Vista. Conservatively assuming that every new employee decides to relocate to the area and assuming that one school-age child per employee household is

enrolled in public education, this would result in an increase of 62 students in the City of San Diego and 60 students in the City of Chula Vista. Even under these worst-case assumptions, this represents a small (less than 1 percent) increase in enrollment in area schools. Further, for direct impacts on schools, California Government Code Section 65996 has deemed that payment of school fees by residential developers is full mitigation of school impacts under CEQA.

In accordance with AB 900 (2007) and California Government Code Section 15819.403, local mitigation costs will be provided by CDCR to local government and school districts to offset potential increases in demand as required by California Penal Code Section 7005.5(c)–(d) (these local mitigation costs are unrelated to CEQA requirements). Under this section of the penal code, CDCR would provide $800 per bed being constructed as part of the Level II Infill Correctional Facilities Project. Of this, CDCR will pay $400 per bed directly to the San Diego County superintendent of schools for allocation among affected local education agencies. CDCR would pay the remaining $400 per bed to the City of San Diego and County of San Diego upon receipt of resolutions adopted by the governing bodies indicating agreement by these entities regarding the specific allocations to each entity.

A concentrated increase in school-age children is not anticipated as a result of the employment opportunity presented by the development of a single, level II correctional facility at the RJD Infill Facility. Increases in population resulting from new positions created by the infill facilities would be accommodated in the existing planned housing within the surrounding communities. New housing developments would be required to pay school impact fees. Further, for direct impacts on schools, California Government Code Section 65996 has deemed that payment of school fees by residential developers is full mitigation of school impacts under CEQA. In accordance with AB 900 and Government Code Section 15819.403, CDCR would also contribute $317,200 to the superintendent of San Diego County schools for distribution to school districts affected by implementation of the single, level II infill correctional facility at RJD. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.10-1b: Impacts on Police/Sheriff Services [Complex]

Development of a level II infill correctional facility complex at the RJD Infill Site would include employment of 377 new staff, 207 of whom would be correctional officers. As discussed above for the single facility (see Impact 3.10-1a above), these new correctional officers, along with the existing police and correctional officers at the existing RJD facilities, would provide police protection at the new level II infill facility. Furthermore, CDCR would continue mutual aid agreements with the San Diego County Sheriff's Office and San Diego Police Department for additional support when needed.

Because the additional employee population for the level II correctional facility complex at the RJD Infill Site would likely come from the existing regional workforce and because there is no known connection between prisons and increased crime rates in the surrounding communities, the demand on police services in the neighboring communities is not expected to increase as a result of the development of a level II infill correctional facility complex at RJD.

Development of a level II infill correctional facility complex at the RJD Infill Site would not create substantial demand for new police protection facilities in any one community; would provide for onsite security needs through the employment of 207 new correctional officers; and would likely result in a relatively small increase in the volume of calls to the San Diego County Sheriff or San Diego Police Department. No new police facilities or personnel would be required. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.10-2b: Impacts on Fire Protection Services [Complex]

Development of a level II infill correctional facility complex at the RJD Infill Site would include employment of 377 new staff. However, as discussed above for a single facility (see Impact 3.10-2a), the additional employee population would be distributed throughout the surrounding area and would not create substantial demand for new fire protection service facilities in any one community. Therefore, adverse physical impacts associated with such facilities would not occur. Onsite fire protection would be provided by Fire Station 26, which would have sufficient capacity to serve a level II infill correctional facility complex at the RJD Infill Site in most situations. As required, the SDRFPD would provide fire services to the site through an existing mutual aid agreement. Furthermore, a level II infill correctional facility complex would include defensible space and structures would be designed as described above for a single facility based on consultation with the State Fire Marshall (Guarino, pers. comm., 2013). Because of the onsite fire protection services and the maintained perimeter, the State Fire Marshal has indicated that CALFIRE wildland fire managers do not consider the RJD facility at risk during a wildfire and there is no need for a second RJD access road for increased fire protection.

Implementation of the level II infill correctional facility complex at the RJD Infill Site would not create substantial demand for new fire facilities in any one community; would generate few calls for offsite fire protection services; and would be designed consistent with State fire regulations. Therefore, no new fire facilities or personnel would be required. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.10-3b: Impacts on Emergency Services [Complex]

As with development of a single, level II correctional facility, following the existing Emergency Preparedness Plan for RJD would address any potential impairment to the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan. The impacts to emergency services as a result of constructing the level II infill correctional facility complex would be similar to those discussed above for the single facility; however, because the complex would have twice the number of inmates, there could be twice the potential for emergency service calls. Nevertheless, the potential increase in emergency service calls would likely be small in the overall volume of calls and would be sufficiently served by onsite Fire Station 26 and SDRFPD under the existing mutual aid agreement.

Development of the level II infill correctional facility complex at the RJD Infill Site would not result in increased emergency service requirements or physically interfere with or impair implementation of the emergency response plan. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.10-4b: Impacts on Schools [Complex]

Similar to the single facility option (see Impact 3.10-4a above), most of the new employees for a level II infill correctional facility complex at the RJD Infill Site would likely reside in San Diego County. Conservatively assuming that every new employee decides to relocate to the area and would be enrolling a student in public education, there would be an increase of 121 students in the City of San Diego and 117 students in the City of Chula Vista. In the event that employees would reside in new

housing in the region, these new housing developments would be required to pay school impact fees. Further, for direct impacts on schools, California Government Code Section 65996 has deemed that payment of school fees by residential developers is full mitigation of school impacts under CEQA. In addition to school impact fees, school districts have a variety of other funding sources that offset the construction of new schools, including matching state funds and various local bond fund opportunities.

Finally, in accordance with AB 900 (2007) and California Government Code Section 15819.403, local mitigation costs will be provided by CDCR to local government and school districts as required by California Penal Code Section 7005.5(c)–(d) (these local mitigation costs are unrelated to CEQA requirements). Under this section of the penal code, CDCR would provide $800 per bed being constructed as part of the Level II Infill Correctional Facilities Project. Of this, CDCR will pay $400 per bed directly to the San Diego County superintendent of schools for allocation among affected local education agencies. CDCR would pay the remaining $400 per bed to the City of San Diego and County of San Diego upon receipt of resolutions adopted by the governing bodies indicating agreement by these entities regarding the specific allocations to each entity.

A concentrated increase in school-age children is not anticipated as a result of the employment opportunity presented by the development of a level II infill correctional facility complex at the RJD Infill Site. Increases in population resulting from new positions created by the complex would be accommodated in the existing planned housing within the surrounding communities. New housing developments would be required to pay school impact fees. Further, for direct impacts on schools, California Government Code Section 65996 has deemed that payment of school fees by residential developers is full mitigation of school impacts under CEQA. In accordance with AB 900 (2007) and California Government Code Section 15819.403, CDCR would also contribute $633,600 to the superintendent of San Diego County schools for distribution to school districts affected by implementation of the level II infill correctional facility complex at RJD. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

3.11 TRANSPORTATION

This section describes the existing circulation patterns in the vicinity of the Richard J. Donovan Correctional Facility (RJD) and evaluates transportation impacts due to construction and operation of either a single, level II infill correctional facility or a level II infill correctional facility complex at RJD based on a traffic analysis conducted by Fehr & Peers (2013). The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. The analyses in this section are based on traffic volume data collected in January 2013; site visits conducted in January 2013; and incorporation (where appropriate) of data from local and regional transportation studies. Impacts related to potential hazards from aircraft operations are addressed in Section 3.7, "Hazards and Hazardous Materials," of this volume of the draft environmental impact report (DEIR).

3.11.1 ENVIRONMENTAL SETTING

EXISTING ROADWAY NETWORK

Exhibit 3.11-1 illustrates the existing street system serving the RJD study area. State Route 95 (SR 95), SR 125, and Otay Mesa Road provide the primary regional access to the study area. Access to the RJD Infill Site would be via Donovan State Prison Road, which is the access road to the existing RJD facility. Brief descriptions, including physical characteristics of principal roads serving the study area, are provided below.

Otay Mesa Road is an east-west roadway that connects the cities of Chula Vista and San Diego in the west to the unincorporated community of Otay to the east. Otay Mesa Road is constructed with the following configurations within the project study area:

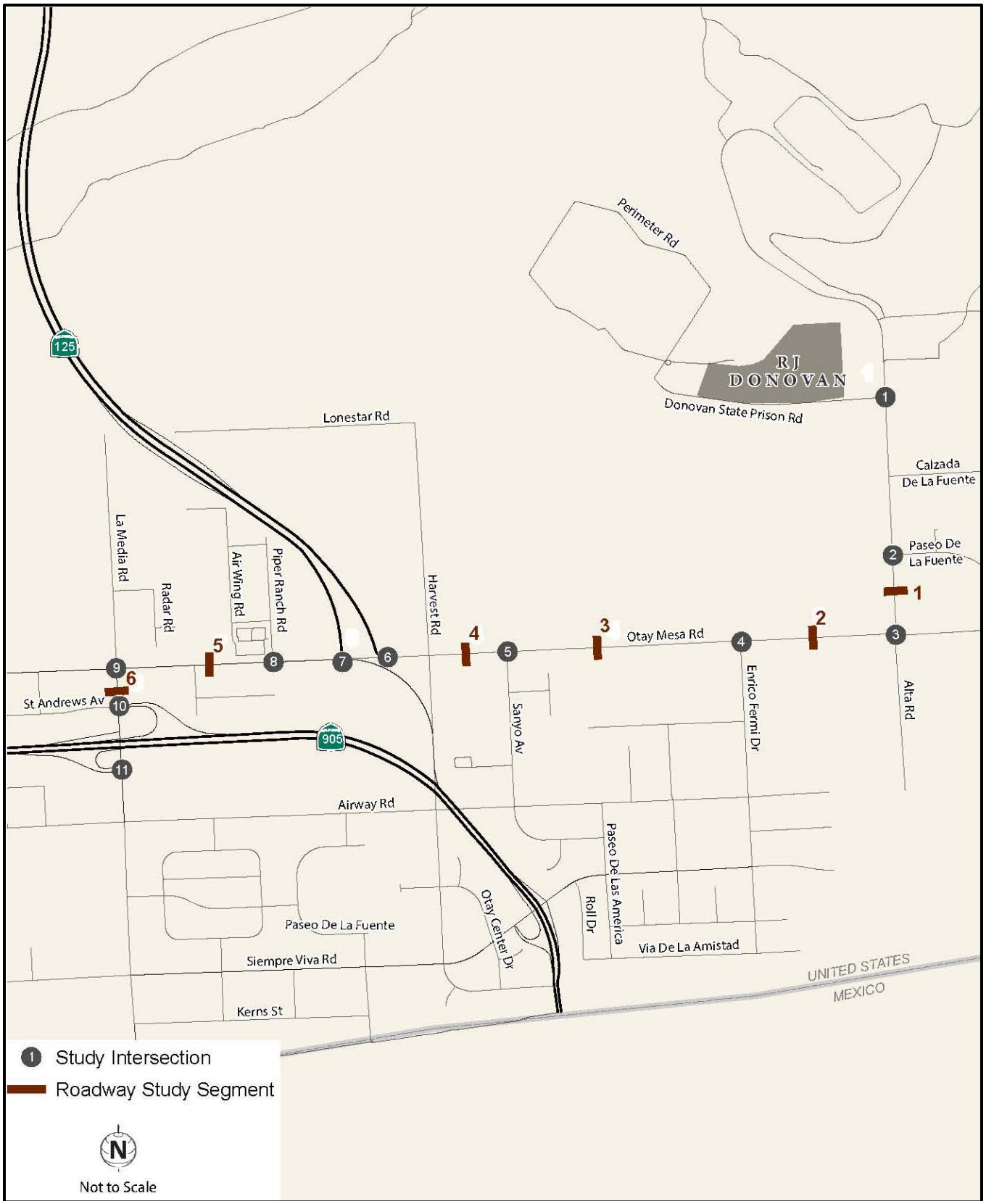
- six-lane roadway divided by a raised median between the study area boundary (La Media Road) and the SR 125 northbound (NB) on-ramp;
- four-lane roadway divided by a painted median between the SR 125 NB on-ramp and Sanyo Avenue; and
- undivided, two-lane roadway between Sanyo Avenue and Alta Road.

The posted speed limit on Otay Mesa Road within the project study area is 55 miles per hour (mph). This street is classified as a six-lane prime arterial by the County of San Diego General Plan Mobility Element (County of San Diego 2011a) between the county boundary and Enrico Fermi Drive, and as a four-lane major roadway between Enrico Fermi Drive and Alta Road.

Alta Road is a north-south roadway that extends from George F. Baily Detention Center in the north to south of Otay Mesa Road. Alta Road is currently constructed as a two-lane (three-lane at portions), undivided roadway and includes a posted speed limit of 55 mph. This roadway is classified as a four-lane major roadway by the County of San Diego Mobility Element.

Enrico Fermi Drive is a north-south roadway that extends between Otay Mesa Drive and Via De La Amistad. Enrico Fermi Drive is currently constructed as a two-lane, undivided roadway within the project study area. Enrico Fermi Drive is classified as a four-lane major roadway by the County Mobility Element. The first phase of the new SR 11 freeway, connecting Enrico Fermi Drive and SR 905, has been fully funded[1] by the State of California and is anticipated to be completed by 2015.

[1] In January 2012, the California Transportation Commission (CTC) approved the implementation of the SR 11 project. The CTC allocated $75 million in Prop. 1B TCIF funds for the construction of Phase 1 of the project. The TCIF funds require award of the construction contract by December 2013.



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-1 Existing Roadway Network and Traffic Study Locations

La Media Road currently extends between Otay Mesa Road to the north and the Otay Mesa International Port of Entry to the south; it is the predominant border crossing (between the United States and Mexico) for truck freight traffic. La Media Road is currently constructed with the following configurations in the project study area:

- five-lane roadway (three lanes NB, two lanes southbound [SB]) divided by a painted median between Otay Mesa Road and the SR 905 westbound [WB] ramps;
- five-lane roadway (two lanes NB, three lanes SB) divided by a painted median between the SR 905 WB ramps and the SR 905 eastbound [EB] ramps;
- two-lane, undivided roadway between the SR 905 EB ramps and Airway Road.

The posted speed limit of La Media Road is 30 mph. Class II bike lanes and sidewalks are located on both sides of the roadway between Otay Mesa Road and the SR 905 EB ramps.

EXISTING FREEWAY FACILITIES

Freeway facilities were not analyzed as a part of this effort. The amount of project traffic expected to utilize the surrounding freeways was found to be negligible, and thus did not warrant analysis based on the standards set by the SANDAG CMP guidelines (SANDAG 2011).

EXISTING TRANSIT FACILITIES

San Diego Metropolitan Transit System (MTS) bus route 905 is the only transit service provided within the project study area. Route 905 currently runs on La Media Road between Otay Mesa Road and the SR 905 ramps. A bus stop is located at the La Media Road/Airway Road intersection.

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Otay Mesa Road does not have dedicated bicycle facilities within the project study area. Sidewalks are located on the north side of the roadway between the SR 125 ramps, and on the south side of the roadway between Harvest Road and one-quarter mile east of Sanyo Avenue. The East Otay Mesa Specific Plan Amendment, approved in September 2010, proposes the implementation of Class II bike lanes along Otay Mesa Road between the City of San Diego city limits and Lone Star Road.

Alta Road does not have any bicycle or pedestrian facilities within the project study area. The East Otay Mesa Specific Plan Amendment proposes the implementation of Class II bike lanes along Alta Road between the City of San Diego city limits and Lone Star Road.

Enrico Fermi Drive does not have any bicycle or pedestrian facilities within the project study area. The East Otay Mesa Specific Plan Amendment proposes the implementation of Class II bike lanes along Enrico Fermi Drive and Alta Road between the City of San Diego city limits and Lone Star Road.

La Media Road currently has Class II bike lanes and sidewalks on both sides of the roadway between Otay Mesa Road and the SR 905 EB ramps.

PROPOSED PROJECT TRAFFIC ELEMENTS

The extent of the analysis in this transportation section was determined based on an evaluation of the area within which traffic generated by construction and operation of a level II infill correctional facility at RJD may be sufficient to cause traffic conditions to degrade. The trip generation associated with a new single, level II correctional facility or a level II infill correctional facility complex at the RJD Infill Site is based on the number of new employees, their corresponding shift times, and the increase in delivery and service vehicle trips to the site.

EMPLOYEE TRAFFIC

The RJD Infill Site would include new custody and support staff (non-custody or administrative) employees. Custody staff generally works in three shifts:

- First Watch - 10:00 p.m. to 6:00 a.m.,
- Second Watch - 6:00 a.m. to 2:00 p.m., and
- Third Watch - 2:00 p.m. to 10:00 p.m.

Most support staff generally work a second-watch shift from 8:00 a.m. to 5:00 p.m. A small number of support staff works a first- or third-watch shift. For analysis purposes, it was assumed that the first- and third-watch support staff would work from 10:00 p.m. to 6:00 a.m. and from 2:00 p.m. to 10:00 p.m., respectively. The first- and third-watch support staff would not work an 8:00 a.m. to 5:00 p.m. shift, and therefore would not generate a.m. and p.m. peak-hour trips. By assuming that these trips are made in conjunction with the first and third watches of the custody employees, the trips are still accounted for in the daily trip generation estimates.

Single Facility Design

The single, level II correctional facility would employ 193 additional weekday staff:

- 16 new custody employees during the first watch (10:00 p.m. to 6:00 a.m.),
- 57 new custody employees during the second watch (6:00 a.m. to 2:00 p.m.),
- 31 new custody employees during the third watch (2:00 p.m. to 10:00 p.m.),
- 2 new support staff employees during the first watch (10:00 p.m. to 6:00 a.m.),
- 81 new support staff employees during the second watch (8:00 a.m. to 5:00 p.m.), and
- 6 new support staff employees during the third watch (2:00 p.m. to 10:00 p.m.).

Complex Design

The level II infill correctional facility complex would employ 377 additional weekday staff:

- 28 new custody employees during the first watch (10:00 p.m. to 6:00 a.m.),
- 113 new custody employees during the second watch (6:00 a.m. to 2:00 p.m.),
- 66 new custody employees during the third watch (2:00 p.m. to 10:00 p.m.),
- 7 new support staff employees during the first watch (10:00 p.m. to 6:00 a.m.),
- 149 new support staff employees during the second watch (8:00 a.m. to 5:00 p.m.), and
- 14 new support staff employees during the third watch (2:00 p.m. to 10:00 p.m.).

The staffing spreadsheets provided by the California Department of Corrections and Rehabilitation (CDCR) are provided in Appendix 2D in this volume (Volume 2) of the DEIR.

Estimates of potential trips generated by these employees were developed using the following key assumptions:

- all employees would arrive within 1 hour of the beginning of their shift and leave within 1 hour of the end of their shift only (i.e., all employees arrive and leave within 1 hour of the other employees on their watch);
- all employees would make two trips per day (i.e., one trip to work and one trip from work); and
- all employees would arrive to the site individually by personal vehicle.

INMATE TRANSFERS

The increase in inmate transfers due to operation of either a single, level II correctional facility or a level II infill correctional facility complex at the RJD Infill Site would generate a negligible number of additional weekday a.m. and p.m. peak-hour trips (i.e., less than five per day). The transfer of inmates would be conducted in accordance with CDCR's existing inmate transfer system, and therefore is not considered a part of the proposed project requiring evaluation under CEQA. Therefore, the trip generation estimates from the level II correctional facility do not specifically address these trips.

VISITOR TRAFFIC

Visiting hours are limited to weekends and holidays; therefore, these trips would not affect the weekday a.m. and p.m. peak-hour analyses.

DELIVERY AND SERVICE VEHICLES

Based on the projected increase in inmate population, a total of five additional service and delivery vehicles have been projected for a typical weekday during peak operating conditions. Because each vehicle would generate two daily trips, a total of 10 additional daily trips would be generated by operation of either a single, level II infill correctional facility or a level II infill correctional facility complex. While under typical operating conditions the deliveries would be spaced out throughout the day, to present a conservative analysis in this DEIR, it was assumed that three service/delivery trips would occur during the a.m. peak hour and three trips would occur during the p.m. peak hour.

ANALYSIS METHODOLOGY

This transportation section assesses the operation of street segments, key intersections, and freeway ramps in the project study area, based on the anticipated distribution of traffic related to the construction and operation of a single, level II infill correctional facility or a level II infill correctional facility complex at RJD.

TRAFFIC STUDY LOCATIONS

Exhibit 3.11-1 shows the study intersections and roadway segments. Intersection and roadway operations were evaluated to determine any potential impacts on the surrounding roadway network. Based on past studies in the RJD area and consultation with County of San Diego (County) staff, the following 13 intersections and seven roadway segments were selected for analysis in this volume of the DEIR:

Intersections

1. Donovan State Prison Road/Alta Road
2. Paseo De La Fuente/Alta Road
3. Otay Mesa Road/Alta Road
4. Otay Mesa Road/Enrico Fermi Drive
5. Otay Mesa Road/Sanyo Avenue
6. Otay Mesa Road/SR 125 NB On-Ramp
7. Otay Mesa Road/SR 125 SB Off-Ramp
8. Otay Mesa Road/Piper Ranch Road
9. Otay Mesa Road/La Media Road
10. SR 905 WB Ramps/La Media Road
11. SR 905 EB Ramps/La Media Road
12. SR 11 WB Ramps/Enrico Fermi Drive (Future)
13. SR 11 EB Ramps/Enrico Fermi Drive (Future)

Roadway Segments

1. Alta Road between Donovan State Prison Road and Paseo De La Fuente
2. Otay Mesa Road between Alta Road and Enrico Fermi Drive
3. Otay Mesa Road between Enrico Fermi Drive and Sanyo Avenue
4. Otay Mesa Road between Sanyo Avenue and SR 125
5. Otay Mesa Road between SR 125 and La Media Road
6. La Media Road between Otay Mesa Road and SR 905 WB Ramps
7. Enrico Fermi Drive between Otay Mesa Road and SR 11 (Future)

LEVEL OF SERVICE

The quality of roadway facility operations is described with the term “level of service” (LOS). LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined with LOS A representing the best operating conditions (minimal vehicular congestion) and LOS F representing the worst operating conditions (substantial vehicular congestion). LOS E represents “at capacity” operations. When traffic volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F. Two methods were used to evaluate the study intersections: one method for signalized intersections and another method for unsignalized intersections, as described below.

Signalized Intersections

For signalized intersections, the LOS methodology described in Chapter 16 of the Transportation Research Board’s (TRB’s) Highway Capacity Manual (HCM) (TRB 2000) was applied. (This reference is commonly referred to as the *HCM 2000.*) This methodology determines LOS by comparing the average control delay for all vehicles approaching the intersection to the delay thresholds in Table 3.11-1.

Unsignalized Intersections

Operations of the unsignalized study intersections (i.e., stop-sign controlled) were evaluated using the methodology contained in Chapter 17 of the *HCM 2000*. The LOS rating is based on the average control delay expressed in seconds per vehicle. At all-way stop-controlled intersections, LOS is based on the average delay for vehicles on all approaches. At side-street stop-controlled intersections, LOS is calculated for the stopped movements and the left-turn movements from the major street. Typically, the movement (or lane, if more than one movement occurs in a lane) with the worst LOS rating is reported. Table 3.11-1 shows the LOS thresholds for unsignalized intersections.

Table 3.11-1 Intersection Level of Service Definitions

Level of Service	Description	Signalized Intersection Average Delay per Vehicle (seconds)	Unsignalized Intersection Average Delay per Vehicle (seconds)
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.	≤ 10.0	< 10.0
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.	10.1 to 20.0	> 10.0 to 15.0
C	Stable flow, but the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	20.1 to 35.0	> 15.0 to 25.0
D	Represents high-density, but stable flow.	35.1 to 55.0	> 25.0 to 35.0
E	Represents operating conditions at or near the capacity level.	55.1 to 80.0	> 35.0 to 50.0
F	Represents forced or breakdown flow.	> 80.0	> 50.0

Source: Transportation Research Board 2000

Roadway Segments

LOS for roadway segments was evaluated by comparing the measured average daily traffic (ADT) volumes for the study roadway segments to the volume thresholds presented in the *County of San Diego Public Road Standards* (County of San Diego 2011b). Table 3.11-2 presents threshold volumes for various roadway types. These threshold volumes include adjustments for divided and undivided facilities and for roadways with left-turn lanes.

Table 3.11-2 Level-of-Service Definitions for Urban/Suburban Roadways

No.	Travel Lanes	Design Speed	Road Classification	LOS (in ADT)				
				A	B	C	D	E
6.1	6	65 mph	Expressway	36,000	54,000	70,000	86,000	108,000
6.2	6	65 mph	Prime Arterial	22,200	37,000	44,600	50,000	57,000
4.1A	4	55 mph	Major Road with Raised Median	14,800	24,700	29,600	33,400	37,000
4.1B			Major Road with Intermittent Turn Lanes	13,700	22,800	27,400	30,800	34,200
4.2A	4	40 mph	Boulevard with Raised Median	5,700	12,500	19,000	27,000	32,500
4.2B			Boulevard with Intermittent Turn Lane	5,000	10,900	17,200	25,000	30,000
2.1A	2	45 mph	Community Collector with Raised Median	2,800	6,500	10,300	15,000	20,500
2.1B			Community Collector w/ Continuous Turn Lane	3,000	6,000	9,500	13,500	19,000
2.1C			Community Collector w/ Intermittent Turn Lane	3,000	6,000	9,500	13,500	19,000
2.1D			Community Collector with Improvement Options	3,000	6,000	9,500	13,500-15,000	19,000
2.1E			Community Collector	1,900	4,100	7,100	10,900	16,200
2.2A	2	40 mph	Light Collector with Raised Median	3,000	6,000	9,500	13,500	19,000
2.2B			Light Collector with Continuous Turn Lane	3,000	6,000	9,500	13,500	19,000
2.2C			Light Collector with Intermittent Turn Lanes	3,000	6,000	9,500	13,500	19,000
2.2D			Light Collector with Improvement Options	3,000	6,000	9,500	13,500	19,000
2.2E			Light Collector	1,900	4,100	7,100	10,900	16,200
2.2F			Light Collector with Reduced Shoulder	1,550	3,300	5,600	8,700	16,200
2.3A	2	35 mph	Minor Collector with Raised Median	1,400	3,000	5,100	8,000	12,900
2.3B			Minor Collector with Intermittent Turn Lane	1,400	3,000	5,100	8,000	12,900
2.3C			Minor Collector	1,350	2,700	4,500	7,000	11,300

Source: County of San Diego Public Road Standards 2011b

This planning-level analysis determines whether the study roadway segments are operating below or over capacity. Because this type of analysis is general in nature and does not take into account delays related to intersection operations and other factors affecting capacity, impacts usually defer to a more detailed operational analysis (i.e., intersection LOS).

LEVEL OF SERVICE STANDARDS

INTERSECTIONS AND ROADWAY SEGMENTS

As noted in the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements, Transportation and Traffic*(County of San Diego 2010a), the County maintains LOS D as the minimum acceptable LOS for intersections and roadway segments (i.e., LOS E and F are considered unacceptable operations for both intersections and roadway segments).

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

EXISTING TRAFFIC VOLUMES

Daily traffic volume data was collected using machine counting equipment (hoses) on the study roadway segments in January 2013. Weekday a.m. (7:00 to 9:00 a.m.) and p.m. (1:00 to 3:00 p.m.) peak-period intersection turning movement counts were also collected at the study intersections on a weekday in January 2013. Peak-hour intersection turning movement counts were conducted to coincide with the shift changes from the existing RJD facility, which represent the peak traffic flow periods within the project study area, as indicated in the daily traffic count worksheets provided in Appendix 2D in this volume of the DEIR. These periods also represent the projected peak times during which the level II infill correctional facility would generate vehicular traffic. Exhibit 3.11-2 displays the existing peak-hour intersection turning movement volumes and lane configurations at the study intersections.

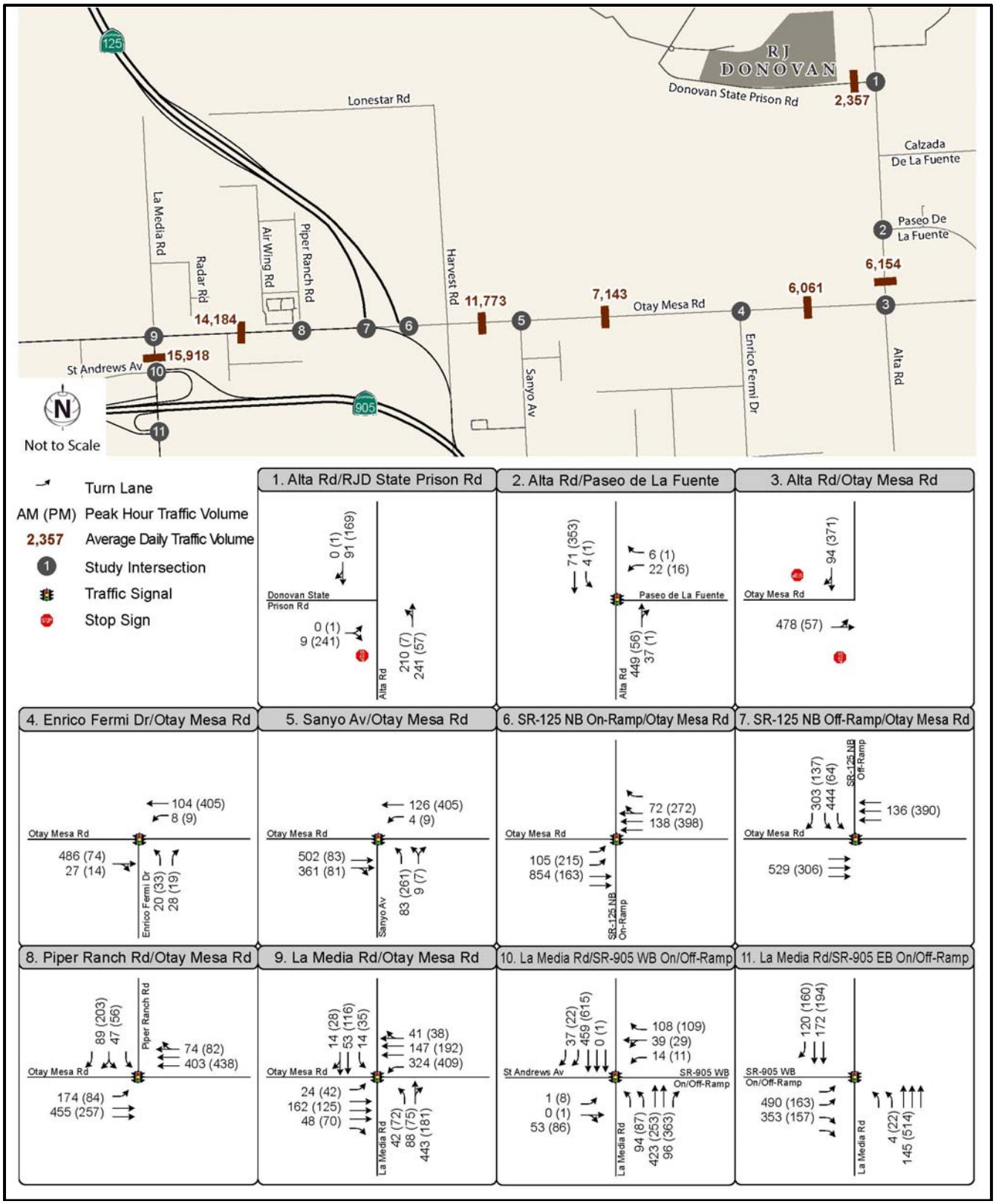
EXISTING INTERSECTION LEVELS OF SERVICE

Peak-hour (a.m. and p.m.) intersection delay and LOS were determined using SYNCHRO 8.0 traffic analysis software, which utilizes *HCM 2000* methodology. Intersection peak-hour factors (PHF) were determined based on the count data collected at each study intersection, and heavy vehicles were assumed to be 2 percent of vehicular traffic. Table 3.11-3 summarizes the existing LOS results at the study intersections. The technical calculations are provided in Appendix 2D. As indicated in Table 3.11-3, all of the analyzed intersections currently operate at acceptable LOS.

Table 3.11-3 Intersection Level of Service Results – Existing Conditions

Intersection	Traffic Control[1]	AM Peak[2]		PM Peak[2]	
		Delay[3]	LOS[4]	Delay[3]	LOS[4]
Donovan State Prison Road/Alta Road	SSSC	8.9	A	12.4	B
Paseo De La Fuente/Alta Road	Signal	9.9	A	7.0	A
Otay Mesa Road/Alta Road	SSSC	23.8	C	9.9	A
Otay Mesa Road/Enrico Fermi Drive	Signal	8.7	A	11.2	B
Otay Mesa Road/Sanyo Avenue	Signal	14.2	B	13.0	B
Otay Mesa Road/SR 125 NB On-Ramp	Signal	1.7	A	5.6	A
Otay Mesa Road/SR 125 SB Off-Ramp	Signal	8.5	A	6.9	A
Otay Mesa Road/Piper Ranch Road	Signal	9.5	A	10.2	B
Otay Mesa Road/La Media Road	Signal	51.0	D	44.5	D
SR 905 WB Ramps/La Media Road	Signal	11.1	B	11.8	B
SR 905 EB Ramps/La Media Road	Signal	8.8	A	7.3	A

Notes:
1 SSSC = Side-Street Stop Control
2 AM Peak = 7:00 a.m. to 9:00 a.m., PM Peak = 1:00 p.m. to 3:00 p.m.
3 Delay is reported in seconds per vehicle for the overall intersection for signalized and all-way stop-controlled intersections. Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side-street stop-controlled intersections.
4 LOS = level of service.
Source: Fehr & Peers 2013.



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-2 Existing Traffic Volumes

EXISTING ROADWAY SEGMENT LEVEL OF SERVICE

The existing roadway segment LOS was determined by comparing daily traffic volumes to the thresholds in Table 3.11-2. Table 3.11-4 summarizes the existing LOS along the analyzed roadway segments. As indicated in Table 3.11-4, all of the analyzed roadway segments currently operate at acceptable levels (LOS D or better).

Table 3.11-4 Existing Roadway Segment Level of Service Results

Roadway	Location	Roadway Type[1]	LOS D Capacity	Volume[2]	LOS[3]
Alta Road	Donovan State Prison Road and Paseo De La Fuente	2.1E	10,900	6,154	C
Otay Mesa Road	Alta Road and Enrico Fermi	2.1E	10,900	6,061	C
	Enrico Fermi and Sanyo Avenue	2.1E	10,900	7,143	D
	Sanyo Avenue and SR 125 NB Ramps	4.1A	33,400	11,773	A
	SR 125 SB Ramps and La Media Road	6.2	50,000	14,184	A
La Media Road	Otay Mesa Road and SR 905 WB Ramps	4.1A	33,400	15,918	B

Notes:
[1] Roadway segment classifications are defined in Table 3.11-2.
[2] Daily traffic volume data were collected in January 2013.
[3] LOS = level of service
Source: Fehr & Peers 2013

3.11.2 REGULATORY CONSIDERATIONS

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws related to transportation are applicable to the construction and operation of level II infill correctional facilities at RJD.

STATE AND REGIONAL PLANS, POLICIES, REGULATIONS, AND LAWS

The following state guidelines are applicable to the construction and operation of level II correctional facilities at RJD:

- California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies—The Caltrans Guide for the Preparation of Traffic Impact Studies provides guidance on the evaluation of traffic impacts to State highway facilities. The document outlines when a traffic impact study is needed and what should be included in the scope of the study. (Caltrans 2002)

LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

The RJD Infill Site is located on land that is owned or controlled by the State. As a state agency, CDCR is not subject to land use plans, policies, and regulations adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

COUNTY OF SAN DIEGO GENERAL PLAN MOBILITY ELEMENT

The County of San Diego General Plan was adopted by the County Board of Supervisors in August 2011 (County of San Diego 2011a). The Mobility Element includes a Transportation Plan with the

proposed circulation system to support existing and planned development in the Land Use Element. As noted above, the Mobility Element includes the following policy related to acceptable LOS at county intersections and roadway segments:

- **Policy M-2.1: Level of Service Criteria.** Require development projects to provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County… When development is proposed on roads where a failing level of serve has been accepted, require feasible mitigation in the form of road improvements or a fair share contribution to a road improvement program, consistent with the Mobility Element road network.

The Policy Plan "sets out goals, policies, and implementation measures for mobility, roadways, transit, bicycle and pedestrian facilities, transportation systems management, rail transportation, and air transportation." These include the following:

- **Policy M-5.1: Regional Coordination.** Coordinate with regional planning agencies, transit agencies, and adjacent jurisdictions to provide a transportation system with the following: sufficient capacity consistent with the County General Plan Land Use Map; travel choices, including multiple routes and modes of travel to provide the opportunity for reducing vehicle miles traveled; facilities sited and designed to be compatible with the differing scales, intensities, and characteristics of the unincorporated communities while still accommodating regional, community, and neighborhood travel demands; and, maximized efficiency to enhance connectivity between different modes of travel.
- **Policy M-5.2: Impact Mitigation for New Roadways and Improvements.** Coordinate with Caltrans to mitigate negative impacts from existing, expanded, or new State freeways or highways and to reduce impacts of road improvements and/or design modifications to State facilities on adjacent communities.
- **Policy M-8.1: Maximize Transit Service Opportunities.** Coordinate with SANDAG, the CTSA, NCTD, and MTS to provide capital facilities and funding, where appropriate, to: maximize the speed and efficiency of transit service through the development of transit priority treatments such as transit signal priority, transit queue jump lanes, and dedicated transit only lanes; provide for transit-dependent segments of the population, such as the disabled, seniors, low income, and children, where possible; and, reserve adequate rights-of-way to accommodate existing and planned transit facilities including bus stops.

EAST OTAY MESA SPECIFIC PLAN AMENDMENT

The East Otay Mesa Plan Amendment (SPA10-001) was approved by the County Board of Supervisors on September 15, 2010, and is the most current approved amendment for the East Otay Mesa Area (County of San Diego 2010b). The East Otay Mesa Specific Plan Amendment identifies the land uses and transportation network needs within the East Otay Mesa neighborhood of the Otay community in which the RJD Infill Site is located.

SAN DIEGO ASSOCIATION OF GOVERNMENTS 2050 REGIONAL TRANSPORTATION PLAN

The San Diego Association of Governments (SANDAG) is an association of local governments from 19 jurisdictions within the San Diego Region. SANDAG provides planning and funding for all major transportation infrastructure projects within the San Diego region.

The *2050 Regional Transportation Plan* (RTP) (SANDAG 2011) is a long-range plan for major transportation improvements in the region. The plan identifies future transportation infrastructure needs (roadway, transit, air, freight, and bicycle) based on projections for growth in population, housing, and jobs. The plan also identifies the projected timing of the improvements and required funding.

TRANSPORTATION IMPACT FEE (TIF) PROGRAM

The County of San Diego collects development impact fees to mitigate cumulative transportation-related impacts associated with future growth in the unincorporated portions of San Diego County. The objective of the TIF program is to ensure that adequate transportation facilities are available to meet the projected future access and circulation needs of the unincorporated areas. The County adopted the inaugural TIF program in January 2005, with subsequent updates in January 2008 and January 2013. The 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 current TIF program was adopted in accordance with the Mitigation Fee Act, otherwise referred to as Assembly Bill (AB) 1600. AB 1600 created Section 66000 et seq. of the California Government Code and was enacted by the California State Legislature in 1987. It allows jurisdictions to impose fees as a condition of approval for projects involving the issuance of a permit.

3.11.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, and based on the criteria developed for Fehr & Peers' transportation impact analysis, the level II infill correctional facilities at the RJD Infill Site would result in a significant impact relating to transportation or traffic if it would do any of the following:

- cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- exceed, either individually or cumulatively, an LOS standard established by the county congestion management agency for designated roads or highways;
- 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;
- substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- result in inadequate emergency access;
- result in inadequate parking capacity; or
- conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

The State CEQA Guidelines (Section 15064.5) define a "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

The specific criteria used to determine whether an impact would be significant are described below.

TRAFFIC OPERATIONS

The *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements, Transportation and Traffic* (County of San Diego 2010) outlines the following standards to identify significant transportation-related impacts.

Signalized Intersections

The construction and operation of level II correctional facilities at the RJD Infill Site would cause a significant traffic volume or LOS traffic impact at a signalized intersection if it would:

- increase congestion on a signalized intersection currently operating at LOS E or LOS F, as identified in Table 3.11-5, or cause a signalized intersection, which previously operated at an acceptable level of service, to operate at LOS E or LOS F.

Table 3.11-5 Measures of Significant Project Impacts to Congestion on Intersections: Allowable Increases on Congested Intersections

Level of Service	Signalized	Unsignalized
LOS E	Delay of 2 seconds	20 peak-hour trips on a critical movement
LOS F	Delay of 1 second, or 5 peak-hour trips on a critical movement	5 peak-hour trips on a critical movement

Notes: A critical movement is one that is experiencing excessive queues.
By adding infill facility trips to all other trips from a list of projects, this same table is used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
The County may also determine that impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable LOS, when such traffic uses a substantial amount of the remaining road capacity.
Source: County of San Diego 2010

Unsignalized Intersections

The construction and operation of level II correctional facilities at the RJD Infill Site would cause a significant traffic volume or LOS traffic impact on a road segment if it would:

- add 20 or more peak-hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate below LOS D (see Table 3.11-5);
- add 20 or more peak-hour trips to a critical movement of an unsignalized intersection currently operating at LOS E (see Table 3.11-5);
- add five or more peak-hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F (see Table 3.11-5);
- add five or more peak-hour trips to a critical movement of an unsignalized intersection currently operating at LOS F (see Table 3.11-5); or
- substantially affect the operations of the intersection, based on an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance, or other factors, even though the project's generation rate is less than those specified above.

The County of San Diego only requires a peak-hour intersection impact analysis under Existing Plus Level II Infill Correctional Facility and Cumulative (Opening Year) Plus Level II Infill Correctional Facility conditions, and does not require it under long-term or buildout conditions.

Roadway Segments

The construction and operation of level II correctional facilities at the RJD Infill Site would cause a significant traffic volume or LOS traffic impact on a road segment if it would:

- increase congestion on a Circulation Element Road or State Highway currently operating at LOS E or LOS F, as identified in Table 3.11-6, or cause a Circulation Element Road or State Highway to operate at LOS E or LOS F; or
- cause a residential street to exceed its design capacity (LOS D).

Table 3.11-6 Measures of Significant Project Impacts to Congestion on Road Segments: Allowable Increases on Congested Road Segments

Level of Service	Two-Lane Road	Four-Lane Road	Six-Lane Road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

Notes: ADT = average daily trips
By adding Infill Site trips to all other trips from a list of projects, this same table is used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
The County may also determine that impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable LOS, when such traffic uses a substantial amount of the remaining road capacity.
Source: County of San Diego 2010

Congestion Management Plan Facilities

Projects that generate an ADT volume of more than 2,400 trips or more than 200 peak-hour trips must comply with the traffic study requirements of SANDAG's Congestion Management Plan (CMP) (SANDAG 2011). As noted in Tables 3.11-7 and 3.11-8, implementation of either a single facility or complex at the RJD Infill Site is anticipated to generate ADT volumes of less than 2,400 trips and fewer than 200 peak-hour trips; therefore, neither the single facility or complex requires a CMP analysis.

Construction Traffic

The construction and operation of level II infill correctional facilities at RJD would cause a significant impact if intersection LOS would be temporarily degraded from an acceptable LOS (LOS A–D) to an unacceptable LOS (LOS E or F) due to the presence of construction traffic. While the daily construction trip generation was estimated, the number of peak hour construction trips would be based on a variety of unknown factors, including shift schedules, haul routes, the origins and destinations of equipment and fill dirt, etc. For that reason, construction impacts are addressed qualitatively.

ISSUES NOT DISCUSSED FURTHER

Impacts related to potential hazards due to the continued operation of Brownfield Municipal Airport, located approximately 2.5 miles southeast of the infill site, are addressed in Section 3.7, "Hazards and Hazardous Materials," in this volume of the DEIR.

Congestion management plan: As noted above and with respect to SANDAG's CMP requirements (SANDAG 2011), projects that generate an ADT volume of more than 2,400 trips or more than 200 peak-hour trips must comply with the traffic study requirements outlined in the CMP. It should be noted that this would only apply to the contemplated development of the infill site and not the entire RJD facility that is currently operational. As noted in Tables 3.11-7 and 3.11-8, implementation of either a single facility or complex at RJD would not generate ADT volumes greater than 2,400 trips or more than 200 peak-hour trips; therefore, neither the single facility or complex require a CMP analysis. No impacts related to standards established by a congestion management agency are anticipated, and this issue is not discussed further.

Pedestrian and bicycle facilities: Implementation of a single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would not be expected to generate demand for pedestrian and bicycle facilities. Given the rural nature of the infill site and surrounding land uses and the nature of the potential development, including the fact that correctional officers are required to carry a large amount of equipment, the RJD Infill Site is anticipated to generate little to no pedestrian or bicycle demand. Further, there are currently no bicycle facilities and only limited pedestrian facilities on both Alta Road and Otay Mesa Road, which makes accessing the existing RJD site challenging for both bicycle and pedestrian modes. According to the East Otay Mesa Specific Plan Amendment (County of San Diego 2010), Class II bicycle lanes are planned along Alta Road, Otay Mesa Road, Enrico Fermi Drive, and Lone Star Road. These facilities would provide a more direct means for bicyclists to access the CDCR property, but overall demand is expected to be negligible because of limited connectivity and

for the reasons described above. Regardless, implementation of a level II infill correctional facility at RJD would not preclude the implementation of any existing or planned pedestrian and bicycle facilities. Therefore, construction and operation of a level II correctional facility at the RJD Infill Site would not affect bicycle and pedestrian facilities and this issue is not discussed further.

Public transit: Implementation of a single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site could generate demand for public transit services. However, no public transit facilities currently serve or are available within a ¼-mile walking distance from RJD. MTS, the agency responsible for the planning and implementation of transit services within the San Diego region, does not currently have any plans for new transit facilities or services along Alta Road that could serve potential level II correctional facilities at the RJD infill site. Therefore, construction and operation of a level II correctional facility at the RJD Infill Site would not affect transit services and this issue is not discussed further.

Hazardous design features: Implementation of a single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would not modify the existing RJD facility access point via Donovan State Rison Road from Alta Road, or the surrounding roadway network. The Donovan State Prison Road/Alta Road intersection does not include any sharp curves, and includes an eastbound right-turn pocket, a westbound left-turn pocket, and a northbound–to-westbound acceleration lane to reduce turning movement conflicts. Therefore, implementation of a level II infill correctional facility at the RJD Infill Site would not result in hazardous design features and this issue is not discussed further.

Emergency access: Emergency vehicle access to the RJD Infill Site would be provided via the main RJD entry point on Donovan State Prison Road. This access point can accommodate large emergency vehicles (i.e., fire trucks) and provides an adequate turning radius for such vehicles. No modifications to the width or alignment of Donovan State Prison Road would occur with development of the infill site. In addition, the level II correctional facility driveway and internal roadways would be designed to accommodate emergency vehicles in accordance with California Fire Code requirements.

CDCR received scoping comments on the Notice of Preparation (NOP) that indicated a second access road to the proposed level II correctional facility at RJD was needed for not only improved fire and emergency response but also to improve community safety. The comments suggested that a second entrance could be implemented by extending Enrico Fermi Road north from Otay Mesa Road to RJD. However, CDCR has a long-standing practice of providing only a single public entrance road to state prisons. While not an adopted policy, CDCR has consistently followed this practice for many decades. For example, all of the new prisons constructed since the early 1980's (approximately 20) have a single entrance. Furthermore, the older state prisons, such as the facilities in Soledad and Tehachapi, also maintain a single entrance road even though they may have multiple prisons served by the historic entrance. CDCR maintains this practice in the interest of public safety because a single gate poses a lower risk to facility security. Nonetheless, a secondary access running south from RJD to Enrico Fermi Road has been analyzed in the alternatives analysis in Volume 1, Chapter 5, of this EIR.

Specifically at RJD, (1) it is preferable to maintain the current single entrance road because it provides direct access between the state prison and the adjacent County Jail, which is an advantage during circumstances that require mutual aid; (2) a second entrance on Enrico Fermi Road would require 24/7 operation and staffing of an additional gatehouse; (3) construction of the proposed second entrance poses significant additional construction costs to CDCR, and; (4) a new road would result in additional impacts to native habitat and potential jurisdictional wetlands that occur within the proposed right-of-way.

In response to NOP comments from local fire officials, CDCR consulted with Mr. Steve Guarino, the Supervising Deputy State Fire Marshal in regard to concerns that an additional entrance road would be necessary for fire protection. However, the State Fire Marshal affirmed that a second entrance to RJD was not needed to enhance fire protection (pers.comm., Guarino 2013). RJD has an existing onsite fire station that can adequately function as a first responder to fire alarms within the RJD property and is capable of providing fire protection services to the proposed level II correctional facility. Consistent with

State requirements, CDCR is required to construct all new facilities in accordance with California Building Code standards. Conformance to these standards would minimize adverse impacts related to fire safety. Furthermore, the State Fire Marshal noted that in accordance with Title 14 all new correctional facilities employ Type I concrete construction, which is highly fire resistant. This type of construction allows a “defend in place” strategy because, to the degree feasible, inmates must be kept inside the secure perimeter even during fires. The Type I construction is further supplemented by the use of a fire alarm system that is connected to a central monitoring station and the facilities always have full fire sprinklers. Accordingly, there is no need for a second RJD access road for increased fire protection and implementation of a level II infill correctional facility at the RJD Infill Site would include adequate emergency vehicle access to the existing CDCR property, and no impacts are anticipated. This issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

This section presents an analysis of the following project scenarios:

- Existing plus Single Facility,
- Existing plus Complex,
- Cumulative Year 2020,
- Cumulative Year 2020 plus Single Facility,
- Cumulative Year 2020 plus Complex,
- Buildout,
- Buildout plus Single Facility, and
- Buildout plus Complex.

Detailed descriptions of each scenario are provided below. It should be noted that the number and types of scenarios analyzed in this volume may differ from the evaluations of the other infill sites contained in Volumes 3, 4, 5, and 6. This is due to preferences expressed by the local agency responsible for managing local traffic volumes, which have been accommodated by CDCR in the EIR analysis to the extent practicable and feasible.

TOTAL PROJECT TRIP GENERATION

The daily a.m., and p.m. peak-hour trip generation estimates for a single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site are summarized in Tables 3.11-7 and 3.11-8, respectively.

The single, level II infill correctional facility is projected to generate a total of 396 daily trips, with 84 trips occurring during the a.m. peak hour (typically between 7:00 a.m. to 9:00 a.m.) on adjacent street traffic and 84 trips occurring during the p.m. peak hour on adjacent street traffic (typically between 4:00 p.m. to 6:00 p.m.). During the p.m. peak hour on the infill site (i.e., the peak hour in which project generates the most traffic, 1:30 p.m. to 2:30 p.m.), the operation of a single, level II correctional facility is expected to generate 94 trips. However it should be noted, based on observed counts the p.m. peak hour for Otay Mesa Road coincides with the p.m. peak hour of the infill site (1:00 p.m. to 3:00 p.m.)

The complex is projected to generate a total of 764 daily trips, with 152 trips occurring during a.m. peak hour of adjacent street traffic, and 152 trips occurring during the p.m. peak hour of adjacent street traffic. During the p.m. peak hour on the infill site, the operation of a level II infill correctional facility complex is expected to generate 193 trips.

Table 3.11-7 Estimated Project Trip Generation – Single, Level II Infill Correctional Facility at RJD

Trip Type	Number of People	Number of Vehicles	Daily Trips	5:30 a.m. to 6:30 a.m.			AM Peak Hour of Adjacent Street Traffic[1]			1:30 p.m. to 2:30 p.m.			PM Peak Hour of Adjacent Street Traffic[2]		
				Trips In	Trips Out	Total Trips	Trips In	Trips Out	Total Trips	Trips In	Trips Out	Total Trips	Trips In	Trips Out	Total Trips
Employee Trips															
Custody Employees															
1st Watch (10p.m.-6a.m.)	16	16	32	0	16	16	0	0	0	0	0	0	0	0	0
2nd Watch (6a.m.-2p.m.)	57	57	114	57	0	57	0	0	0	0	57	57	0	0	0
3rd Watch (2p.m.-10p.m.)	31	31	62	0	0	0	0	0	0	31	0	31	0	0	0
Custody Subtotal	*104*	*104*	*208*	*57*	*16*	*73*	*0*	*0*	*0*	*31*	*57*	*88*	*0*	*0*	*0*
Support Staff Employees															
1st Watch (10p.m.-6a.m.)	2	2	4	0	2	2	0	0	0	0	0	0	0	0	0
2nd Watch (6a.m.-2p.m.)	81	81	162	0	0	0	81	0	81	0	0	0	0	81	81
3rd Watch (2p.m.-10p.m.)	6	6	12	0	0	0	0	0	0	6	0	6	0	0	0
Support Staff Subtotal	*89*	*89*	*178*	*0*	*2*	*2*	*81*	*0*	*81*	*6*	*0*	*6*	*0*	*81*	*81*
Employee Trip Total	***193***	***193***	***386***	***57***	***18***	***75***	***81***	***0***	***81***	***37***	***57***	***94***	***0***	***81***	***81***
Delivery/Service Vehicle Trips															
Delivery/Service Trucks	--	5	10	0	0	0	2	1	3	0	0	0	1	2	3
Delivery/Service Trip Total	***--***	***5***	***10***	***0***	***0***	***0***	***2***	***1***	***3***	***0***	***0***	***0***	***1***	***2***	***3***
Total Project Trips			**396**	**57**	**18**	**75**	**83**	**1**	**84**	**37**	**57**	**94**	**1**	**83**	**84**

Notes:
[1] The a.m. peak hour of adjacent street traffic corresponds with the morning commute peak hour and falls between 7:00 a.m. and 9:00 a.m.. For analysis purposes it was assumed that all employees that arrive during the a.m. peak hour arrive within one hour of each other.
[2] The p.m. peak hour of adjacent street traffic corresponds with the morning commute peak hour and falls between 4:00 p.m. and 6:00 p.m.. For analysis purposes it was assumed that all employees that arrive during the p.m. peak hour arrive within one hour of each other.
Source: Fehr & Peers, 2013

Table 3.11-8 Estimated Project Trip Generation –Level II Infill Correctional Facility Complex at RJD

Trip Type	Number of People	Number of Vehicles	Daily Trips	5:30 a.m. to 6:30 a.m.			AM Peak Hour of Adjacent Street Traffic[1]			1:30 p.m. to 2:30 p.m.			PM Peak Hour of Adjacent Street Traffic[2]		
				Trips In	Trips Out	Total Trips	Trips In	Trips Out	Total Trips	Trips In	Trips Out	Total Trips	Trips In	Trips Out	Total Trips
Employee Trips															
Custody Employees															
1st Watch (10p.m.-6a.m.)	28	28	56	0	28	28	0	0	0	0	0	0	0	0	0
2nd Watch (6a.m.-2p.m.)	113	113	226	113	0	113	0	0	0	0	113	113	0	0	0
3rd Watch (2p.m.-10p.m.)	66	66	132	0	0	0	0	0	0	66	0	66	0	0	0
Custody Subtotal	*207*	*207*	*414*	*113*	*28*	*141*	*0*	*0*	*0*	*66*	*113*	*179*	*0*	*0*	*0*
Support Staff Employees															
1st Watch (10p.m.-6a.m.)	7	7	14	0	7	7	0	0	0	0	0	0	0	0	0
2nd Watch (6a.m.-2p.m.)	149	149	298	0	0	0	149	0	149	0	0	0	0	149	149
3rd Watch (2p.m.-10p.m.)	14	14	28	0	0	0	0	0	0	14	0	14	0	0	0
Support Staff Subtotal	*170*	*170*	*340*	*0*	*7*	*7*	*149*	*0*	*149*	*14*	*0*	*14*	*0*	*149*	*149*
Employee Trip Total	***377***	***377***	***754***	***113***	***35***	***148***	***149***	***0***	***149***	***80***	***113***	***193***	***0***	***149***	***149***
Delivery/Service Vehicle Trips															
Delivery/Service Trucks	--	5	10	0	0	0	2	1	3	0	0	0	1	2	3
Delivery/Service Trip Total	***--***	***5***	***10***	***0***	***0***	***0***	***2***	***1***	***3***	***0***	***0***	***0***	***1***	***2***	***3***
Total Project Trips			**764**	**113**	**35**	**148**	**151**	**1**	**152**	**80**	**113**	**193**	**1**	**151**	**152**

Notes:
[1] The a.m. peak hour of adjacent street traffic corresponds with the morning commute peak hour and falls between 7:00 a.m. and 9:00 a.m.. For analysis purposes it was assumed that all employees that arrive during the a.m. peak hour arrive within one hour of each other.
[2] The p.m. peak hour of adjacent street traffic corresponds with the morning commute peak hour and falls between 4:00 p.m. and 6:00 p.m.. For analysis purposes it was assumed that all employees that arrive during the p.m. peak hour arrive within one hour of each other.
Source: Fehr & Peers, 2013

TRIP DISTRIBUTION

Project-generated traffic was distributed to the external roadway network and study intersections based on existing employee zip code data and traffic counts at the driveway of the existing facility. The following distribution was used:

- 60 percent travels to/from west on SR 905 (via SR 11 under cumulative conditions),
- 25 percent travels to/from west on Otay Mesa Road,
- 10 percent travels to/from north on SR 125 (toll road), and
- 5 percent travels to/from south on SR 905 (via Enrico Fermi Drive).

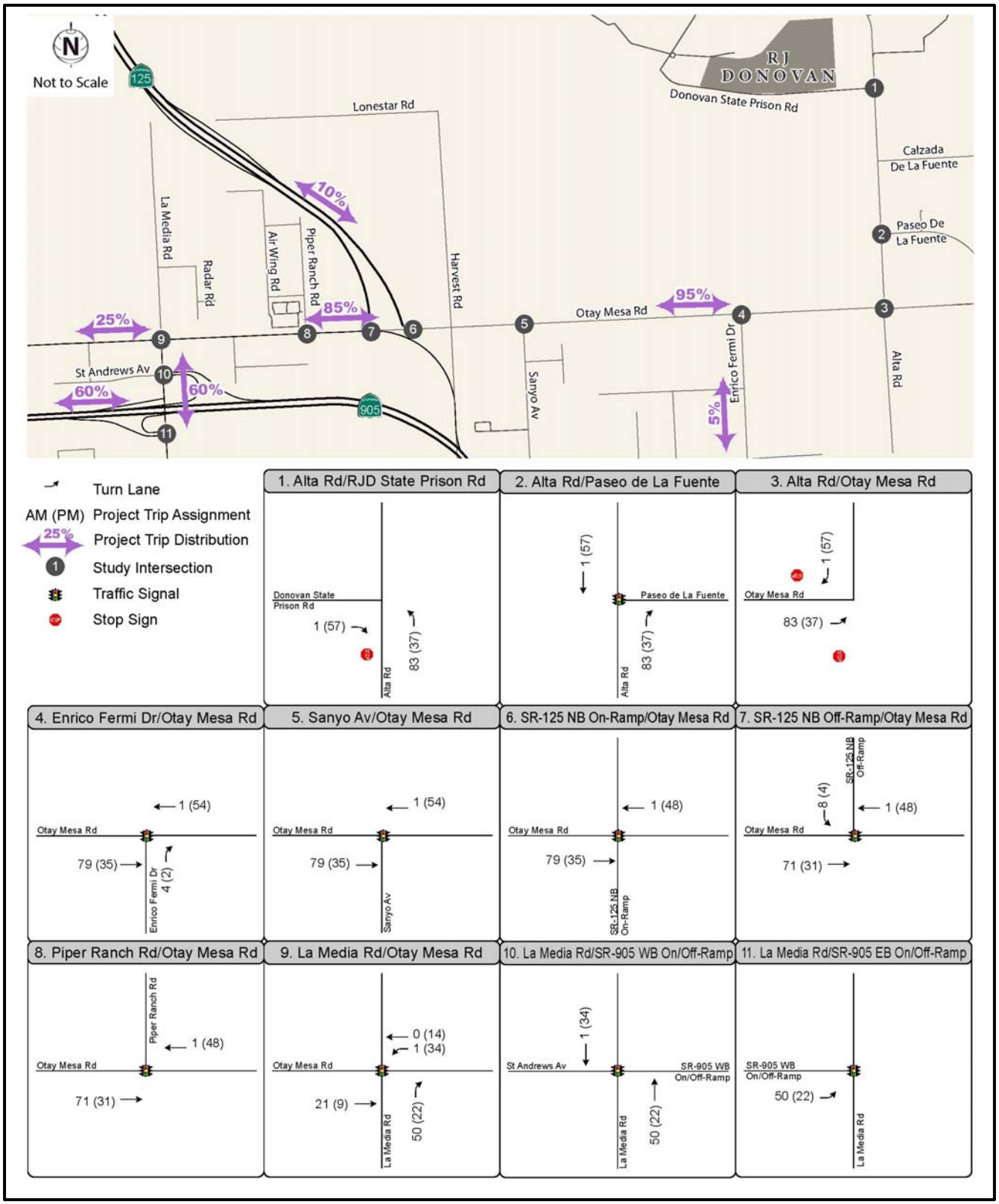
Exhibits 3.11-3 and 3.11-4 show the project trip distribution and project trip assignment under existing conditions for a single facility and a complex, respectively.

As noted previously, the first phase of the new SR 11 freeway, connecting SR 905 and Enrico Fermi Drive, has been fully funded by the State of California and is anticipated to be completed by 2015 This new freeway link will provide a shorter travel distance from the freeway to the prison with the construction of a new interchange at Enrico Fermi Drive. It is anticipated that, with the implementation of this link, prison-generated traffic to/from the west on SR 905 will use the SR 11/Enrico Fermi Drive interchange instead of the SR 905/La Media Road interchange. Exhibits 3.11-5 and 3.11-6 display the project trip distribution and assignment under future (2020) conditions, assuming the SR 11 extension, for a single facility and a complex, respectively.

EXISTING PLUS LEVEL II INFILL CORRECTIONAL FACILITY CONDITIONS

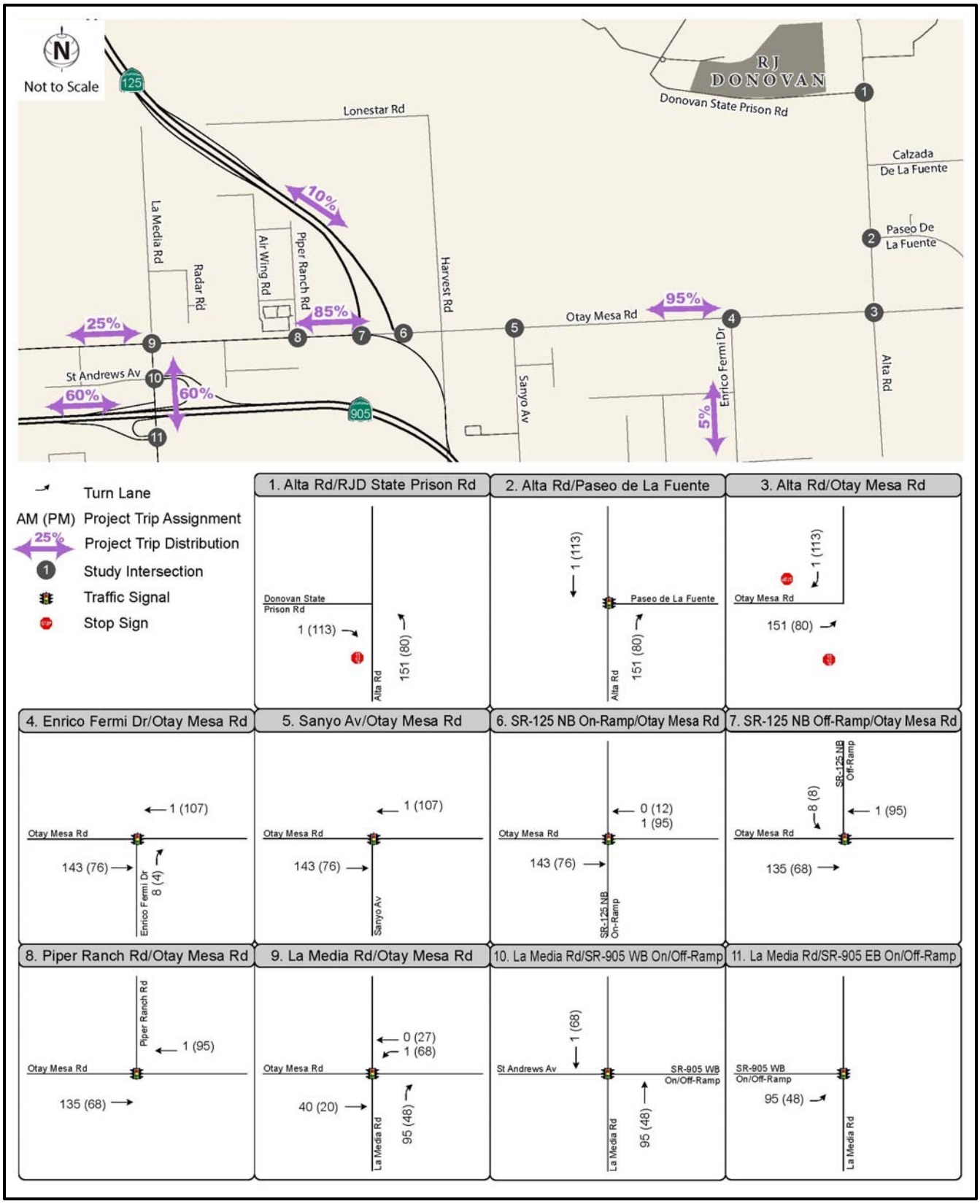
To evaluate the potential traffic impacts of construction and operation of a single, level II infill correctional facility or a level II infill correctional facility complex at RJD on the local roadway system, the traffic study developed estimates of traffic conditions with the new facility. Development-generated traffic volumes for both a single facility and a complex (displayed in Exhibits 3.11-3 and 3.11-4, respectively) were added to the existing traffic volumes (displayed in Exhibit 3.11-2) to derive the traffic volumes for a single facility and a complex under existing plus level II infill correctional facility conditions. Exhibits 3.11-7 and 3.11-8 show the daily and peak-hour traffic volumes under existing plus level II infill facility conditions for a single facility and a complex, respectively.

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.



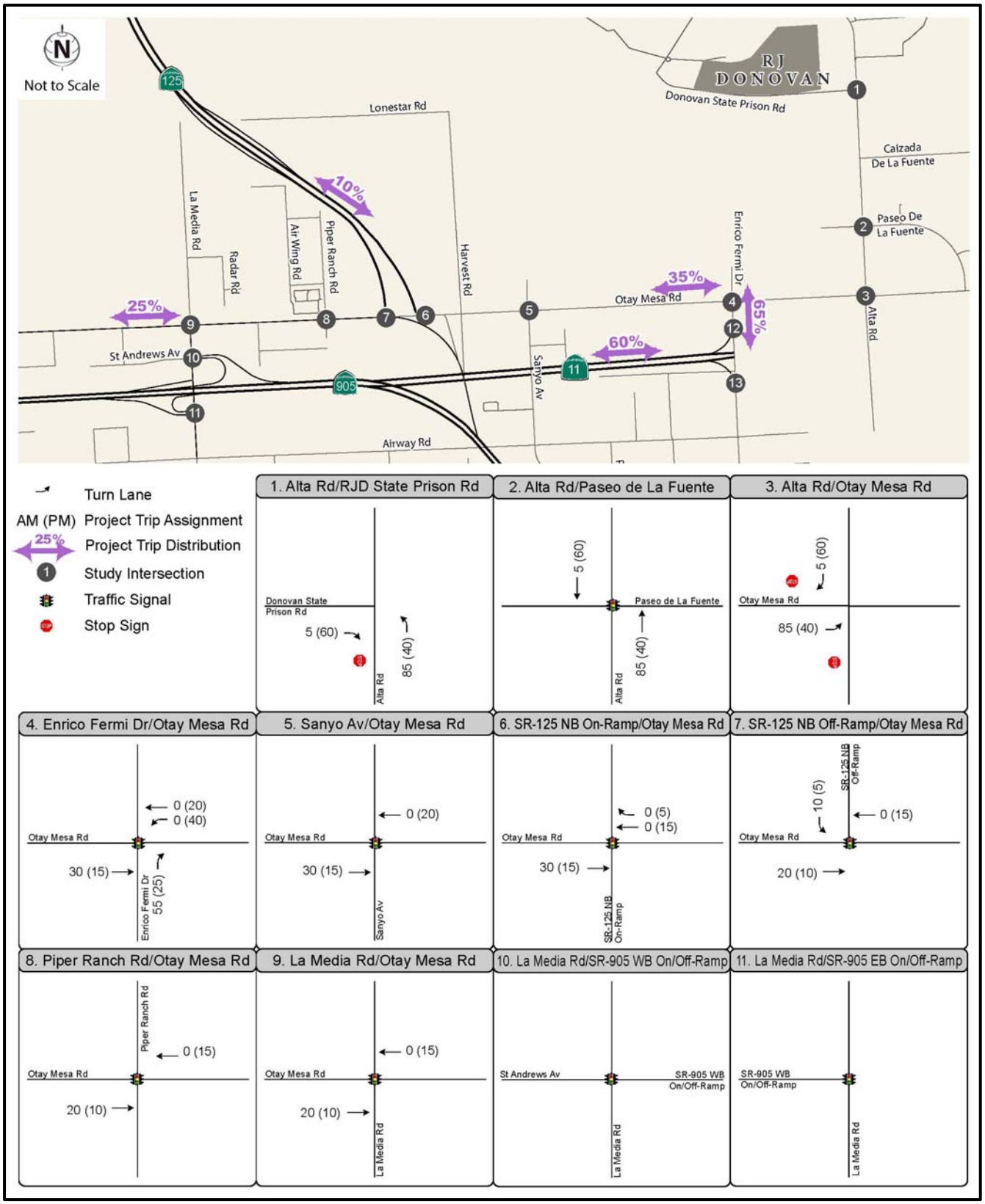
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-3 Trip Distribution and Assignment – Existing Conditions – Single Facility



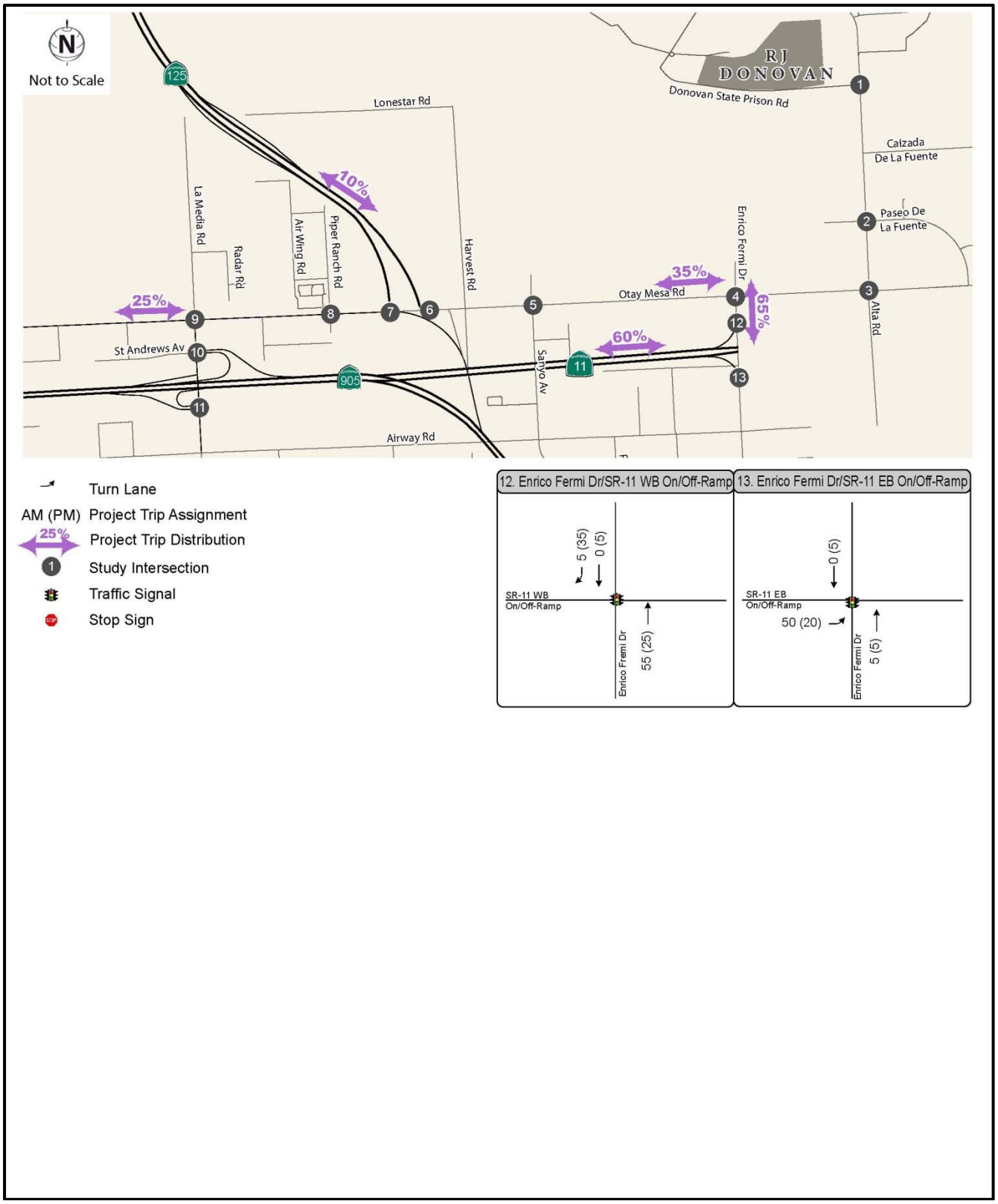
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-4 Trip Distribution and Assignment – Existing Conditions – Complex



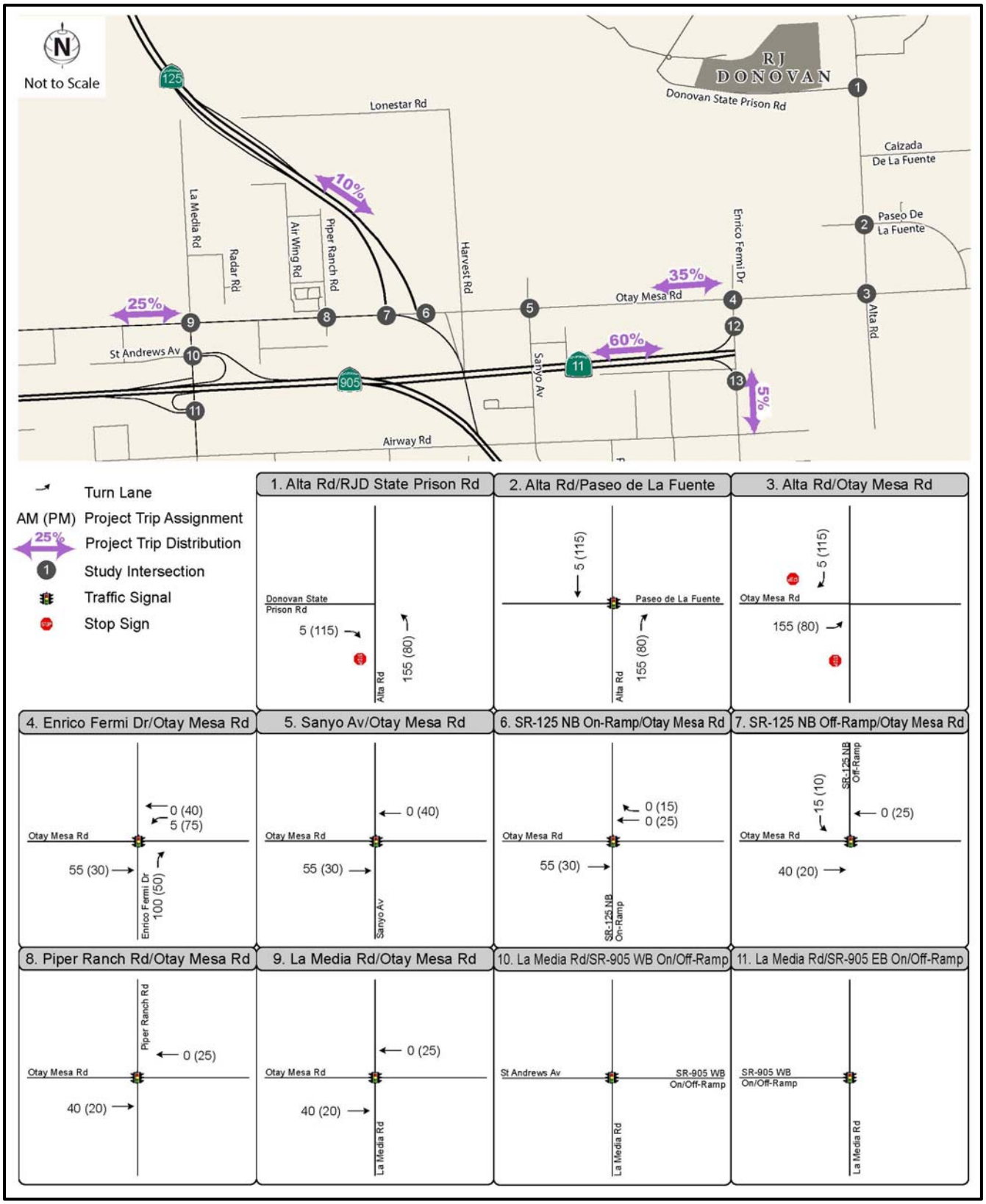
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-5 Trip Distribution and Assignment – Cumulative (2020) –Single Facility (1 of 2)



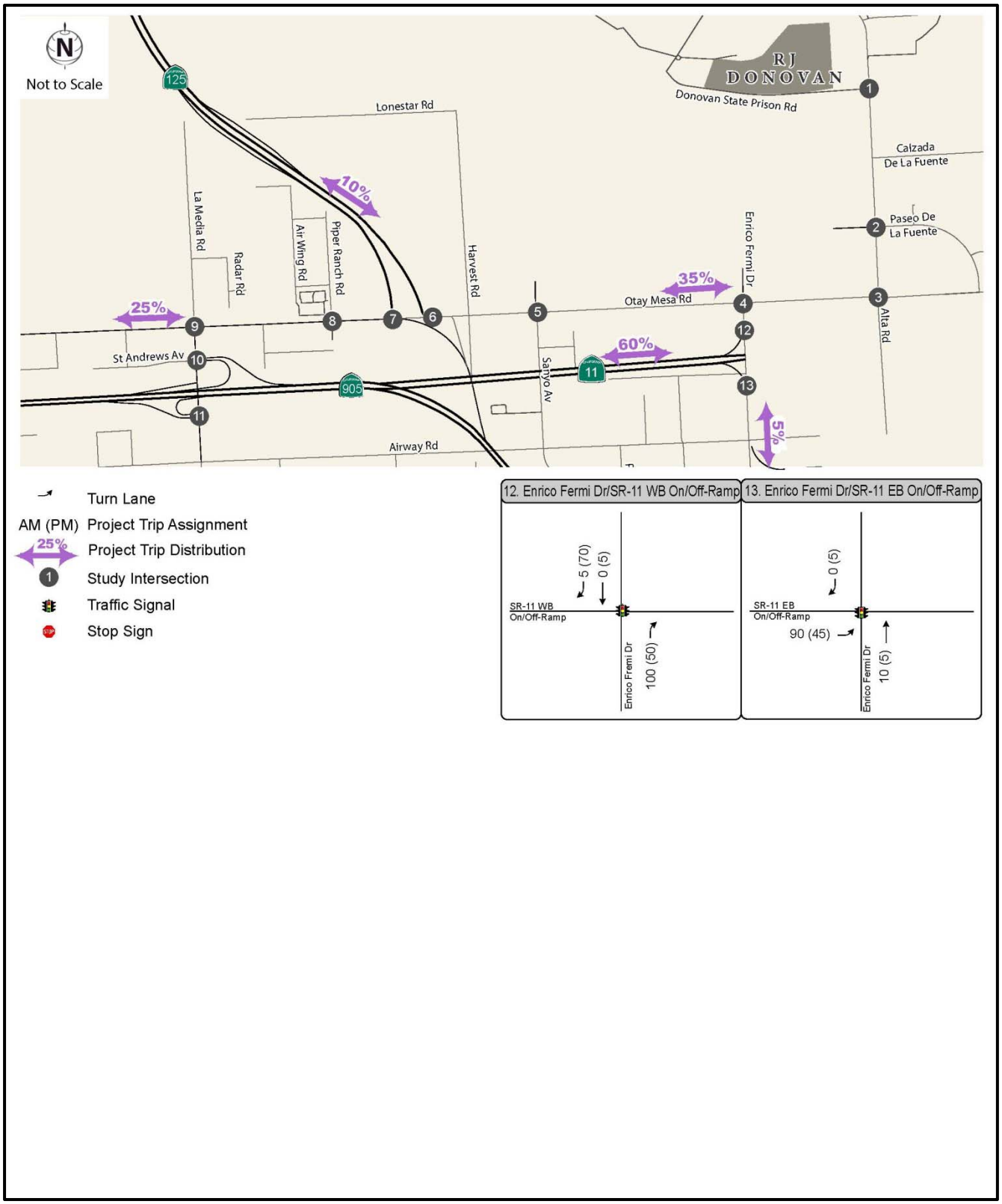
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-5 Trip Distribution and Assignment – Cumulative (2020) – Single Facility (2 of 2)



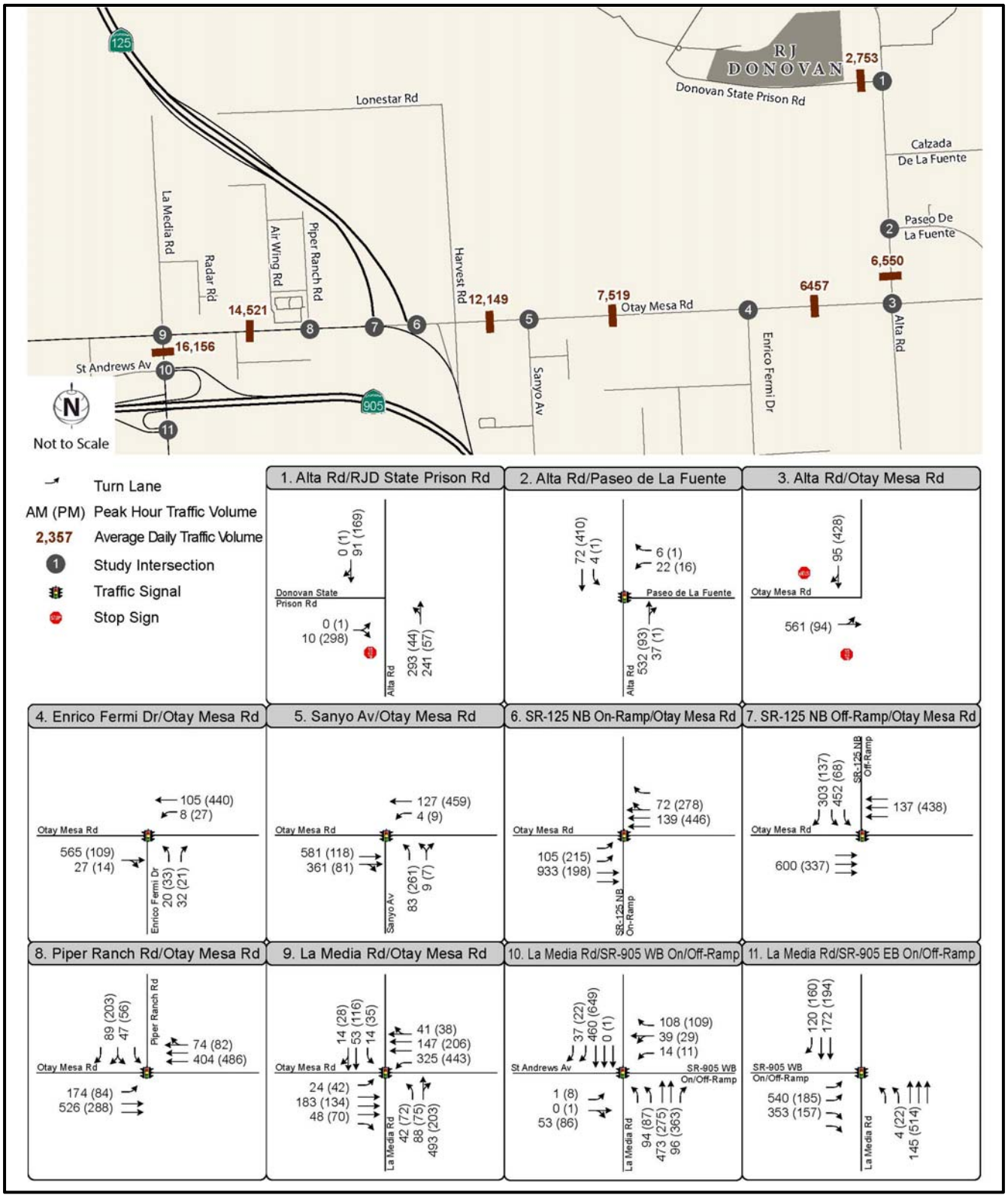
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-6 Trip Distribution and Assignment – Cumulative (2020) – Complex (1 of 2)



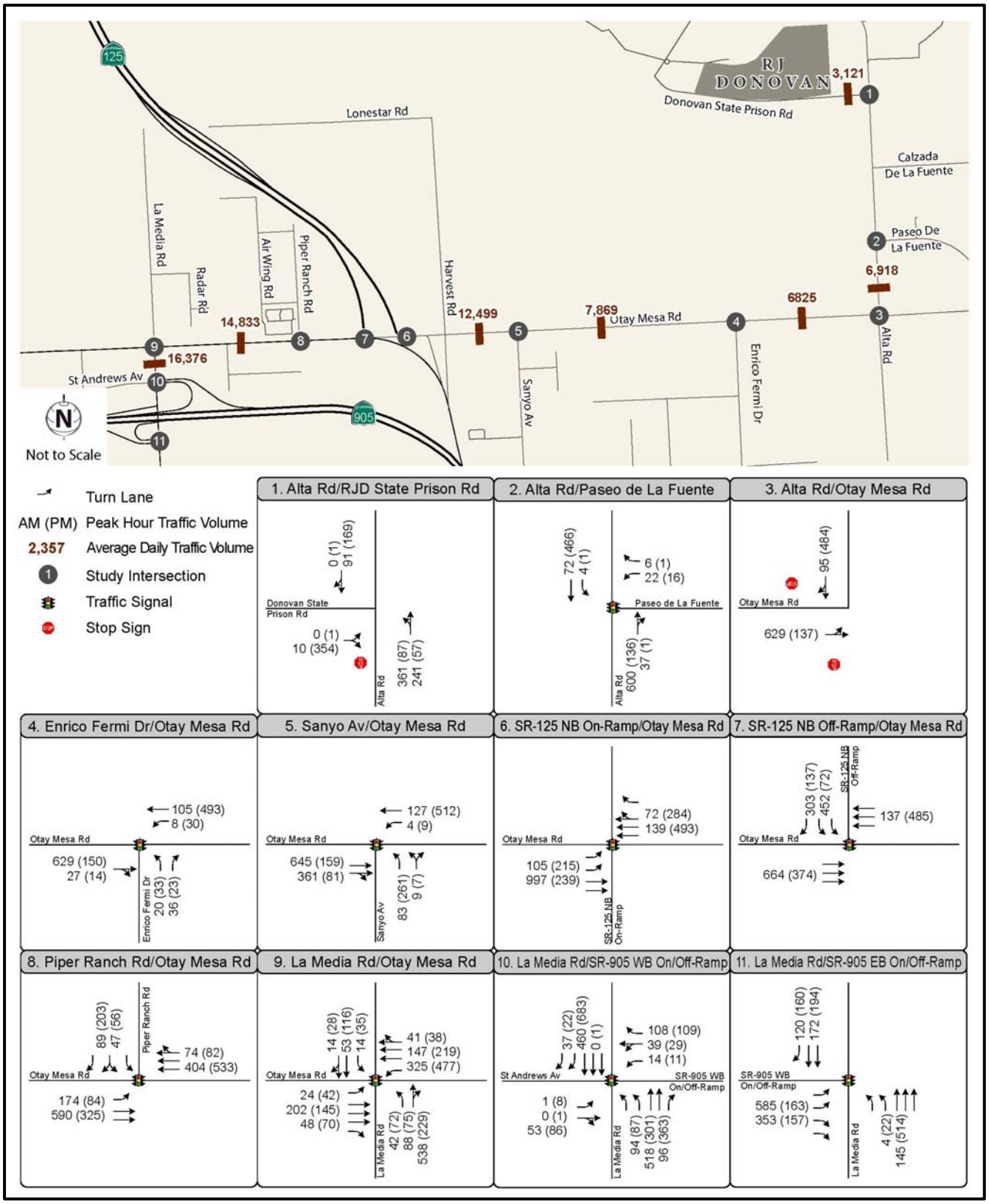
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-6 Trip Distribution and Assignment – Cumulative (2020) – Complex (2 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-7 Existing Conditions plus Single Facility Traffic Volumes



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-8 Existing Conditions plus Complex Traffic Volumes

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.11-1a: Impacts on Intersection Operations [Single Facility]

Table 3.11-9 summarizes the projected peak-hour LOS at each study intersection for both a single and level II infill correctional facility complex at the RJD Infill Site. With the addition of a single infill facility, traffic operations would degrade from an acceptable LOS to an unacceptable LOS or further increase delay at an intersection already operating at an unacceptable LOS at the following locations and times:

- Otay Mesa Road and Alta Road – a.m. peak hour, and
- Otay Mesa Road and La Media Road – a.m. and p.m. peak hours.

Table 3.11-9 Existing plus Level II Infill Correctional Facility Conditions – Intersection Peak-Hour Levels of Service

Intersection	Traffic Control	Peak Hour[1]	Existing Conditions		Existing Plus Single Facility			Existing Plus Complex		
			Delay[2]	LOS[3]	Delay[2]	LOS[3]	Change in Delay[4]	Delay[2]	LOS[3]	Change in Delay[4]
1. Donovan State Prison Road/Alta Road	SSSC	a.m.	8.9	A	8.9	A	0.0	8.9	A	0.0
		p.m.	12.4	B	13.8	B	1.4	15.7	C	3.3
2. Paseo De La Fuente/Alta Road	Signal	a.m.	9.9	A	10.2	B	0.3	10.2	B	0.3
		p.m.	7.0	A	7.0	A	0.0	7.0	A	0.0
3. Otay Mesa Road/ Alta Road	Signal	a.m.	23.8	C	**38.5**	**E**	**14.7**	**38.5**	**E**	**14.7**
		p.m.	9.9	A	11.7	B	1.8	14.8	B	4.9
4. Otay Mesa Road/Enrico Fermi Drive	Signal	a.m.	8.7	A	10.3	B	1.6	10.3	B	1.6
		p.m.	11.2	B	14.2	B	3.0	7.1	A	-4.1
5. Otay Mesa Road/Sanyo Avenue	Signal	a.m.	14.2	B	15.4	B	1.2	15.4	B	1.2
		p.m.	13.0	B	13.2	B	0.2	13.5	B	0.5
6. Otay Mesa Road/ SR 125 NB On-Ramp	Signal	a.m.	1.7	A	1.7	A	0.0	1.7	A	0.0
		p.m.	5.6	A	5.6	A	0.0	5.6	A	0.0
7. Otay Mesa Road/ SR 125 SB Off-Ramp	Signal	a.m.	8.5	A	8.8	A	0.3	8.8	A	0.3
		p.m.	6.9	A	6.9	A	0.0	6.9	A	0.0
8. Otay Mesa Road/ Piper Ranch Road	Signal	a.m.	9.5	A	9.5	A	0.0	9.5	A	0.0
		p.m.	10.2	B	10.2	B	0.0	10.2	A	0.0
9. Otay Mesa Road/ La Media Road	Signal	a.m.	51.0	D	**56.1**	**E**	5.1	**57.1**	**E**	**6.1**
		p.m.	44.5	D	53.9	D	9.4	**67.3**	**E**	**22.8**
10. SR 905 WB Ramps/ La Media Road	Signal	a.m.	11.1	B	11.1	B	0.0	11.1	B	0.0
		p.m.	11.8	B	11.8	B	0.0	11.8	B	0.0
11. SR 905 EB Ramps/ La Media Road	Signal	a.m.	8.8	A	8.9	A	0.1	8.9	A	0.1
		p.m.	7.3	A	7.5	A	0.2	7.6	A	0.3

Notes: Unacceptable operations highlighted in **bold** text. Significant project impacts highlighted with gray shading.
[1] a.m. = morning peak hour, p.m. = afternoon peak hour.
[2] Whole-intersection weighted-average control delay expressed in seconds per vehicle using methods described in the 2000 *Highway Capacity Manual*. For side-street stop-controlled intersections, total control delay for the worst movement is presented.
[3] LOS = level of service.
[4] Change in intersection delay between with-project and base scenarios
Source: Data compiled by Fehr & Peers in 2013.

With respect to the intersection of Otay Mesa Road and La Media Road, it is anticipated that, with completion of Phase 1 of the new SR 11 freeway in 2015, which will connect SR 905 and Enrico Fermi Drive, most (if not all) development-related traffic coming to/from the west on SR 905 would utilize the new SR 11/Enrico Fermi Drive interchange instead of the SR 905/La Media Road interchange. This shift in traffic patterns would allow traffic associated with the infill project to bypass the Otay Mesa Road/La Media Road intersection via SR 11, thus reducing the overall level of development-related traffic traveling through this intersection from 85 percent to 25 percent. This reduction in traffic associated with development of the infill site would restore intersection operations back to LOS D during both peak hours. Upon implementation of the interchange, this impact would be considered less than significant.

However, if Phase 1 of the SR 11 is not completed prior to the opening of the level II correctional facility at RJD, the Otay Mesa Road/La Media Road intersection would degrade to an unacceptable level (LOS E). For the purposes of presenting a conservative analysis, it is assumed that Phase 1 would not be completed prior to operation of the contemplated level II correctional facility at the RJD Infill Site.

Implementation of a level II correctional facility (single facility) at the RJD Infill Site would result in the degradation of intersection operations at the Otay Mesa Road/Alta Road and Otay Mesa Road/La Media Road intersection locations. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.11-1a

CDCR will coordinate with the County of San Diego and will fully fund the signalization and improvement of the intersection of Otay Mesa Road and Alta Road. CDCR shall consult with the County of San Diego on the necessary street widening and geometry of the modified intensity. This mitigation measure will be implemented prior to occupancy or, if feasible, earlier if specified by the construction transportation management plan (see Mitigation Measure 3.11-4).

Mitigation Measure 3.11-1b

CDCR will fully fund the restriping of the westbound approach at the intersection of Otay Mesa Road and La Media Road to include a second left-turn lane. This mitigation measure will be implemented prior to occupancy orearlier if specified by the construction transportation management plan (see Mitigation Measure 3.11-4).

Significance after Mitigation

With implementation of Mitigation Measure 3.11-1a, signalization of the intersection of Otay Mesa Road and Alta Road would improve traffic flow through that intersection. With the proposed mitigation measures the operations at the impacted intersections would improve to the following:

- Otay Mesa Road/Alta Road – intersection operations would improve to LOS B during both the a.m. and p.m. peak hours.
- Otay Mesa Road/La Media Road - intersection operations would improve to LOS D during both the a.m. and p.m. peak hours.

It should be noted that, based on existing traffic volumes, a signal would not be warranted at the Otay Mesa Road/Alta Road intersection under operation of a single, level II correctional facility. However, based on the projected growth within the East Otay Mesa area, the signal would be warranted by the time a single, level II infill facility would be operational at the RJD Infill Site. This improvement would improve operations during the a.m. and p.m. peak hours to LOS A and LOS B, respectively, and impacts would be **less than significant** at this intersection.

As noted above, if Phase 1 of the SR 11 is complete prior to operation of a single, level II correctional facility at the infill site, impacts to the intersection of Otay Mesa Road and La Media Road would be less than significant without mitigation. Since completion of construction of Phase 1 cannot be assured, the implementation of Mitigation Measure 3.11-1b would reduce impacts to the Otay Mesa Road/La Media Road intersection, with or without the extension of SR 11, to a **less-than-significant** level because it would improve operations at the intersection associated with the westbound approach.

Impact 3.11-2a: Impacts on Roadway Segment Operations [Single Facility]

ADT on each study roadway segment was projected under existing conditions in conjunction with traffic volumes associated with the contemplated development to determine the potential project-specific impacts of implementing the single, level II correctional facilities at the RJD Infill Site. Because no traffic from a level II correctional facility at RJD is anticipated to utilize Enrico Fermi Drive prior to the construction of the SR 11 interchange (scheduled to open in 2015), this roadway was not analyzed under existing plus level II infill correctional facility conditions. Table 3.11-10 summarizes the projected daily LOS on each study segment. As noted in Table 3.11-10, all study area roadway segments are projected to operate at an acceptable LOS with development of a single, level II infill correctional facility at RJD.

*Implementation of a single, level II correctional facility at the RJD Infill Site would not cause operations at any study area roadway segment to degrade to an unacceptable level. This would be a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

Table 3.11-10 Existing Conditions – Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Roadway Type	Existing Conditions		Existing Plus Single Facility		Existing Plus Complex	
			ADT[1]	LOS	ADT[1]	LOS	ADT[1]	LOS
1. Alta Road between Donovan State Prison Road and Paseo De La Fuente	County of San Diego	2.1E	6,154	C	6,550	C	6,918	C
2. Otay Mesa Road between Alta Road and Enrico Fermi Drive	County of San Diego	2.1E	6,061	C	6,457	C	6,825	C
3. Otay Mesa Road between Enrico Fermi Drive and Sanyo Avenue	County of San Diego	2.1E	7,143	D	7,519	D	7,869	D
4. Otay Mesa Road between Sanyo Avenue and SR 125 NB Ramp	County of San Diego	4.1A	11,773	A	12,149	A	12,499	A
5. Otay Mesa Road between SR 125 NB Ramp and La Media Road	County of San Diego	6.2	14,184	A	14,521	A	14,833	A
6. La Media Road between Otay Mesa Road and SR 905 WB Ramps	City of San Diego	4.1A	15,918	B	16,156	B	16,376	B

Notes: ADT = average daily traffic.
[1] Note that ADT volume reported is the maximum volume on the given roadway segment within the project study area.
Source: Data compiled by Fehr & Peers in 2013.

Impact 3.11-3a: Impacts on Parking [Single Facility]

A parking accumulation analysis was performed to determine the maximum parking demand for the RJD Infill Site. The parking demand calculations considered the anticipated parking demand of each

shift for the site, accounting for overlap in the shift schedules. The parking demand was calculated based on the following assumptions:

- This correctional facility is unlike other types of land use for which published parking demand rates are available.
- Because of overlapping shifts, the analysis must account for the presence of employees from multiple shifts at the same time.
- Employees do not arrive for their shift exactly when it begins. It is assumed that a person arrive several minutes before their shift begins.
- Employees also do not depart immediately when their shift ends. For purposes of this analysis, it is assumed that employees depart within 1 hour after their shift ends.

As shown in Table 3.11-11, the maximum parking demand on a typical weekday for a single facility would be 175 spaces. As noted in Chapter 3, "Project Description," of Volume 1, a single facility would include no fewer than 207 parking spaces, which is more than the peak demand on a typical weekday. Furthermore and as noted above, the contemplated single facility would allow visitors only on holidays and weekends, which coincides with days on which the support staff would not be located onsite, and onsite staffing would be limited to correctional staff. As noted in Chapter 3, "Project Description," of Volume 1 and in Chapter 2, "Project Description," of this volume, it is assumed that up to 15 percent of inmates would receive visitors (120 visitors total) on a given weekend day or holiday. This visitation, coupled with the decrease in staff parking needs onsite during weekends and holidays, would not result in inadequate parking onsite.

Implementation of a single, level II correctional facility at the RJD Infill Site would not result in inadequate parking supply to support anticipated demand. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Table 3.11-11 Estimated Weekday Parking Demand – Single Infill Facility

Hour Beginning	Hour Ending	Watch 1	Watch 2	Watch 3	Support Staff	Total
12:00 a.m.	1:00 a.m.	18				18
1:00 a.m.	2:00 a.m.	18				18
2:00 a.m.	3:00 a.m.	18				18
3:00 a.m.	4:00 a.m.	18				18
4:00 a.m.	5:00 a.m.	18				18
5:00 a.m.	6:00 a.m.	18	57			75
6:00 a.m.	7:00 a.m.	18	57			75
7:00 a.m.	8:00 a.m.		57		81	138
8:00 a.m.	9:00 a.m.		57		81	138
9:00 a.m.	10:00 a.m.		57		81	138
10:00 a.m.	11:00 a.m.		57		81	138
11:00 a.m.	12:00 p.m.		57		81	138
12:00 p.m.	1:00 p.m.		57		81	138
1:00 p.m.	2:00 p.m.		57	37	81	**175**

Table 3.11-11 Estimated Weekday Parking Demand – Single Infill Facility						
Hour Beginning	Hour Ending	Watch 1	Watch 2	Watch 3	Support Staff	Total
2:00 p.m.	3:00 p.m.		57	37	81	**175**
3:00 p.m.	4:00 p.m.			37	81	118
4:00 p.m.	5:00 p.m.			37	81	118
5:00 p.m.	6:00 p.m.			37	81	118
6:00 p.m.	7:00 p.m.			37		37
7:00 p.m.	8:00 p.m.			37		37
8:00 p.m.	9:00 p.m.			37		37
9:00 p.m.	10:00 p.m.	18		37		55
10:00 p.m.	11:00 p.m.	18		37		55
11:00 p.m.	12:00 a.m.	18				18

Notes: Watch 1 = 10:00 p.m. to 6:00 a.m., Watch 2 = 6:00 a.m. to 2:00 p.m., Watch 3 = 2:00 p.m. to 10:00 p.m., Watch 2 (Support Staff) = 8:00 a.m. to 5:00 p.m.
Source: Fehr & Peers, 2013

Impact 3.11-4a: Site Access Impacts [Single Facility]

The primary RJD access roadway, Donovan State Prison Road, extends along the property's southern boundary on the west side of Alta Road and terminates at the entrance of the existing RJD facility. RJD has used this access throughout the operating history of the facility. Development of the RJD Infill Site as either a single facility or a complex would continue to utilize Donovan State Prison Road as its only access point. It should be noted that, with development of the infill site, the existing guard station would be relocated to an area along Donovan State Prison Road that would allow for controlled access to the parking lot associated with either the single facility or a complex.

Implementation of a single, level II correctional facility at the RJD Infill Site would add vehicle traffic to the Donovan State Prison Road/Alta Road intersection. However, this additional traffic would not cause intersection operations to degrade to substandard levels during either peak hour, as displayed in Table 3.11-9. Further, queuing space for approximately 85 vehicles is available to accommodate vehicles as they access the relocated guard station from Alta Road, which would be considered adequate. The relocated guard station would also include a secondary lane at the point of ingress to allow for continued flow of traffic during periods of extended inspection of a particular vehicle.

*Implementation of a single, level II correctional facility at the RJD Infill Site would generate additional vehicular traffic at the Donovan State Prison Road/Alta Road intersection; however, this additional traffic would not cause an operational deficiency according to County standards, and adequate queuing space is available to accommodate vehicles as they access the relocated guard station. This would be a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.11-5a: Construction-Related Traffic Impacts [Single Facility]

Construction of a level II correctional facility at the RJD Infill Site could temporarily affect traffic and parking conditions near RJD, within the CDCR property, and on the RJD Infill Site. During construction, construction-generated traffic at the level II infill correctional facilities would be attributable to trucks and construction worker trips to and from the infill site. Construction would include four general phases in the following order: demolition/site preparation, grading, utilities, and building construction. Each phase

would take place concurrently with the previous and following phase for some period of time. Construction-traffic trip generation was estimated based on the following assumptions:

- The number of daily employees during each phase was calculated based on data provided by CDCR regarding construction activities from the California Health Care Facility site in Stockton, California.
- The numbers of truck trips during demolition/site preparation and grading were calculated based on cubic yards of material to be moved to/from the site.
- The numbers of truck trips during utilities and building construction were assumed to be 20 one-way trips per day.

Table 3.11-12 shows the estimated trip generation during each phase of construction for a single, level II infill facility, including concurrent phases (phases that partially overlap), based on the number of expected construction employees and the number of truck trips.

Implementation of a single, level II correctional facility at the RJD Infill Site would generate an estimated 744 daily trips during the peak period of construction traffic. The peak period is anticipated to be during the 6 months when utilities and building construction are occurring concurrently. These trips, when added to the local roadway network, could result in some of the same traffic impacts described for operation of the RJD Infill Site. The single, level II correctional facility is expected to generate 396 daily trips, which is more than the trip generation of the demolition/site preparation, grading, or utilities phase of construction. During those single phases (approximately 3 months in duration), construction impacts would be the same as or less than those for operation of a single, level II correctional facility. For the remainder of the construction period (i.e., during the building construction phase), the daily trip generation would vary from 441 daily trips to 744 daily trips.

Although the majority of construction trips would occur outside the peak hours of traffic, the number of construction-related trips could be similar to or slightly greater than the peak-hour traffic volumes for operation of the single facility. While the construction traffic impacts may be temporary in nature, they would occur over an extended period and would likely result in unacceptable LOS for the a.m. peak hour at the Otay Mesa Road/Alta Road intersection and for the p.m. peak hour at the Otay Mesa Road/La Media Road intersection (similar to LOS described in Impact 3.11-1). Further, the number of trips generated on a daily basis by construction activity would be greater than those generated by operation of a single, level II correctional facility for approximately 26 months, primarily during building construction.

Table 3.11-12 Estimated Construction Trip Generation – Single Infill Facility

Construction Phase	Employee Trips per Day[1]	Truck Trips per Day[2]	Daily Trips		Notes
			Single Phase	Concurrent Phase	
Demolition/Site Preparation	50	8	58	436	Demolition = 2 months; 1 month concurrent with grading
Grading	364	42	406	441	Grading = 3 months; 1 month concurrent with demolition; 1 month concurrent with utilities
Utilities	42	20	62	744	Utilities = 8 months; 1 month concurrent with grading; 6 months concurrent with building construction
Building Construction	662	20	682		Building Construction = 23 months; 6 months concurrent with utilities

Notes:
[1] Based on data provided by CDCR regarding the construction activities at the CHCF Stockton site.
[2] Based on cubic yards of material to be moved to/from the site during demolition/site preparation and grading. Based on 20 one-way trips per day during utilities and building construction.
Source: Fehr & Peers 2013

Construction of a single, level II correctional facility at the RJD Infill Site could result in significant short-term construction traffic impacts for the a.m. peak hour at the Otay Mesa Road/Alta Road intersection and for the p.m. peak hour at the Otay Mesa Road/La Media Road intersection. Therefore, this impact would be significant.

Mitigation Measures

Mitigation Measure 3.11-5

CDCR will prepare a construction traffic management plan (TMP) in consultation with the applicable transportation entities, including Caltrans (for state and federal roadway facilities) and San Diego County. This mitigation measure will be implemented prior to construction. The applicant shall implement the construction TMP during project construction.

The TMP will address the following:

- scheduling for oversized material deliveries to the work site and haul routes, including flagging, scheduling off-peak deliveries, etc.;
- the cumulative effect of construction traffic with other concurrent, major construction projects nearby;
- daily construction time windows during which construction is restricted; and
- other actions to be identified and developed as may be needed by the construction manager/ resident engineer to ensure that temporary impacts on transportation facilities are minimized.

To minimize potential impacts, the TMP will restrict, to the extent feasible, peak-hour trips entering and exiting RJD to 50 passenger-car equivalents (PCEs). The TMP will include an updated evaluation of current operational characteristics of the roadways to determine if construction traffic would cause unacceptable operations. If so, the TMP will specify temporary mitigation as needed, including (but not limited to) temporary operational improvements or limiting the hours or amount of construction trips on affected roadway segments. The TMP will also evaluate pavement conditions along the haul routes designated in the TMP, and specify mitigations to avoid or minimize the use of haul routes where the pavement condition is physically deficient, according to each jurisdictions' standards. Determination of whether the pavement condition is "acceptable" or "deficient" will be defined by the presiding jurisdiction's pavement management criteria.

Significance after Mitigation

Although the construction TMP would reduce the significance of this impact and would substantially improve and manage construction-related traffic conditions on area roadways, until the specific parameters of the construction activities and the details of the TMP are developed, it is possible that feasible mitigation measures would not be available for all construction-related impacts. Further, it is considered unlikely that the peak-hour construction traffic associated with development of the infill site could be reduced to below the performance standard of 50 PCEs identified above. Therefore, because of these unknown factors, this impact is concluded to remain **significant and unavoidable.**

CUMULATIVE (2020) CONDITIONS

The County of San Diego has determined that the planned cumulative development within the East Otay Mesa area would exceed the rate of the real estate market to potentially absorb developed industrial land. The County's decision was based on a review of the December 15, 2006 *Addendum to*

Real Estate Market Analysis, which was prepared by Economics Research Associates (ERA) for the City of San Diego during the preparation of the Otay Mesa Community Plan. The percentage of development that could be expected by 2020 was estimated by taking the total land use density forecast for the unincorporated county portion of the East Otay Mesa area between 2006 and 2020, based on the high scenario growth rate (or 135 acres of development), and dividing by the total acreage proposed for development in the county (or 1,178.2 acres of potentially developed land). Excerpts from the ERA market forecast are provided in Appendix 2D of this volume.

In the unincorporated County of San Diego, 19 cumulative projects, including many large-scale subdivisions and the infill site, are located in the Otay Mesa Specific Plan Area. The methodology used to apply the ERA market analysis was as follows:

- Traffic generated by projects processed as major use permits, interim use permits, and site plans would be applied at 100 percent of their planned development capacity by 2020. Nine of the 19 approved/pending projects met those criteria and marketing assumptions in the ERA analysis and were applied to this group of projects.
- Traffic generated by projects processed as subdivisions (tentative maps, tentative parcel maps) would be applied at a reduced percentage of the planned development capacity by 2020. The reduced percentage was based on market absorption data in the ERA market study. This group included the remaining 10 approved/pending projects. The County estimated that these projects, based on the market absorption factors described above, could reasonably develop a calculated percentage of the total acreage available for future development. This percentage was determined to be approximately 13 percent of the total development capacity by 2020 without the inclusion of the Hawano and Rabago projects, and approximately 11.46 percent of the total development capacity by 2020 with the inclusion of the Hawano and Rabago projects. Since the *Addendum to Real Estate Market Analysis* was completed prior to applications being filed for the Hawano and Rabago projects; they were included at 11.46 percent while all others were included at 13 percent.

This methodology presents a more reasonable approach to cumulative traffic analysis by recognizing the real-estate/market-absorption factors that influence the rate at which industrial land is subdivided and made fully operational for development and, therefore, the cumulative traffic impacts realized. This methodology also takes into consideration the fact that developers must process a second permit, called a Site Plan, before development can occur within subdivisions located in the East Otay Mesa Specific Plan Area. The County will monitor market trends and the level of development in the East Otay Mesa area to ensure that the assumptions utilized above remain valid and reasonable. In addition, the cumulative project list will be updated, as appropriate, when site plans are submitted to the County. Traffic generated by projects with site plans would then be applied at I00 percent.

Table 3.11-13 summarizes the list of approved/pending projects and identifies those that are assumed by the County of San Diego to be developed at forecasted growth rates based on economic and market analysis for the Otay Mesa area (see Appendix 2D). Exhibit 3.11-9 illustrates the locations of the approved/pending projects in the Otay Mesa area of the county. As shown in Table 3.11-13, the approved/pending projects within the County of San Diego are estimated to generate a total of approximately 175,556 ADT, of which approximately 56,579 ADT are anticipated to be added to the roadway network by 2020.

Approved/Pending Project Access

Three of the approved/pending projects listed in Table 3.11-13 do not have project frontage along existing roadways: (1) International Industrial Park, TM 5549; (2) Otay Business Park, TM 5505; and (3) Otay Crossings Commerce Park, TM 5405. Thus, to include the traffic generated by these projects in the Cumulative (2020) analysis, assumptions were made regarding how the traffic associated with each of these projects would access the roadway network. Further details regarding these assumptions are provided in Appendix 2D.6 in this volume of the DEIR.

Table 3.11-13 Summary of Approved/Pending Projects in the County of San Diego

Map ID #	Project Name	County Project #	Project Location	# Acres	Land Use	Trip Generation		
						Total ADT	% Cumulative Traffic Applied to 2020	
							%	ADT
Projects Processing Site Plans								
1	California Crossings	P06-102 TPM 21046	NW Corner of Otay Mesa Rd and Harvest Rd	29.6	325,502 ksf Community Shopping Ctr	22,785	100	22,785
2	CCA San Diego Correctional Facility	SPA 06-005 O06-074	n/o Calzada De La Fuente, e/o Alta Rd	37.0	2,868 Bed Correctional Detention Facility	2,674	100	2,674
3	COPART County Sales Yard Time Extension (a)	P 88-020W1	SW Corner of Otay Mesa Rd and Alta Rd	38.2	Auto Auction	846	100	846
4	FEDEX Site Plan	S08-018	NE Corner of Airway Rd and Paseo De Las Americas	20.0	FEDEX Distribution Center	1,598	100	1,598
5	Salvage Yards/National Enterprises Recycling	P 98-001	East and West Side of Alta Rd, n/o Otay Mesa Rd	161.0	Auto Recycling and Salvage Yards	2,408	100	2,408
6	Sunroad Interim Uses-Sunroad Centre I Harvest Ranch Nursery	P 09-009 P09-005	n/o Otay Mesa Rd btwn Harvest Rd and Vann Centre Blvd	138.0	Nursery	14	100	14
7	Travel Plaza	P 90-024W1 Tp.m. 20414	e/o Enrico Fermi Drive, btwn Otay Mesa Rd and Airway Rd	83.0	Truck Stop	5,116	100	5,116
8	Vulcan	S 07-038	NE quadrant of Lone Star Rd (Paseo De La Fuente) and Otay Mesa Rd	12.7	Asphalt and Concrete Plant	1,078	100	1,078
9	Otay Hills	P 04-004	e/o Alta Rd btwn Otay Mesa Rd and Calzada De Le Fuente	112.1	Hard Rock Quarry on 433.9 total acres w/112.1 acres Developed	2,674	100	2,674
Subtotal:				**631.6**		**39,193**	**100**	**39,193**
Projects Processing Tentative Maps								
10	International Industrial Park	TM 5549	n/o Lone Star btwn Vann Centre Blvd and e/o Enrico Fermi Dr	161.1	113.6 net acres Business/Tech. Park	10,201	13	1,327
11	OMC Properties	Tp.m. 21140	NE Corner of Otay Mesa Rd and Alta Rd	49.8	30.1 acres Tech. Business Park and 8.4 acres Commercial Retail	6,972	13	906
12	Otay Business Park	TM 5505	s/o Airway Rd, East of Alta Rd	161.1	2092.9 ksf of Ind./Business Park	33,486	13	4,353
13	Otay Crossings Commerce Park	TM 5405 SPA 04-006	SE Quadrant of Otay Mesa Rd and Alta Rd	311.5	Mixed Industrial and Temporary Truck Parking	21,279	13	2,766

Table 3.11-13 Summary of Approved/Pending Projects in the County of San Diego

Map ID #	Project Name	County Project #	Project Location	# Acres	Land Use	Trip Generation		
						Total ADT	% Cumulative Traffic Applied to 2020	
							%	ADT
14	Sunroad/Otay Tech Center	SPA 07-003 TM 5538	n/o Otay Mesa Rd btwn Harvest Rd and Vann Centre Blvd	253.1	130 acres Tech. Business Park and 27 acres Commercial Retail	30,566	13	3,974
15	Piper Otay Park	TM 5527	NE Corner of Otay Mesa Rd and Piper Ranch Rd	25.0	Light Industrial	1,612	13	210
16	S. County Commerce Center	TM 5394R	SW Corner of Otay Mesa Rd and Enrico Fermi Dr	81.2	Industrial	7,486	13	973
17	Saeed Revised Map	TM 5304R	n/o Airway Rd btwn Paseo De Las Americas and Michael Faraday Dr.	20.6	Industrial	2,602	13	338
18	Hawano	TM 5566	e/o Airway Pl, w/o Alta Rd, s/o Airway Rd, and n/o Via De La Amistad	59.3	852.426 ksf of Ind./Business Park	13,639	11.46	1,563
19	Rabago	TM 5568	NW Corner of Otay Mesa Rd and Enrico Fermi Dr	55.0	55.0 net acres Ind./Business Park on 71 gross acres	8,520	11.46	976
			Subtotal:	**1,178.2**		**136,363**	**11.46**	**17,386**
			Total:	**1,809.8**		**175,556**	**-**	**56,579**

Notes: (a) Existing Interim Use processing a time extension

2020 Roadway Network

In addition to the roads that must be constructed to provide access to the three projects described above, the development of several of the approved/pending projects listed in Table 3.11-13 would also result in construction or modification of existing intersections or roadway improvements to provide access to the infill site. It is reasonable to assume the completion of these intersections modifications and roadway improvements because the cumulative projects associated with the improvements could not be occupied without completion of the assumed improvements. Because at least a portion of all the cumulative projects were assumed to be constructed by the year 2020, the following new roadway facilities and intersection modifications within the County of San Diego were assumed to be constructed under the Cumulative (2020) conditions.

- SR 11 between SR 905 and Enrico Fermi Road was assumed to be completed and operational.
- Old Otay Mesa Road between Alta Road and Lone Star Road (Paseo De La Fuente) (which is currently a dirt road) would be built to the standards of a Light Collector (providing access for the Vulcan Materials, OMC Properties, and Otay Crossing Commerce Park projects).
- Airway Road between Airway Place (which currently does not exist) and Alta Road would be built to the standards of a Light Collector (providing access for the Otay Business Park and Hawano projects).

Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-9 Cumulative Project Locations

- Airway Road between Alta Road and Siempre Viva Road (which currently does not exist) would be built to the standards of a Light Collector (providing internal circulation for the Otay Business Park project).
- Siempre Viva Road between the California Highway Patrol entrance east of Enrico Fermi Drive and Airway Place (which currently only provides two westbound travel lanes) would be improved to the standards of a Light Collector Road (providing access for the Otay Business Park and Hawano projects).
- Siempre Viva Road between Airway Place and Alta Road (which currently does not exist) would be built to the standards of a Light Collector Road (providing access for the Otay Business Park and Hawano projects).

The roadway conditions listed here are based on the assumption that pending projects would construct the facilities required to provide access to their developments. It should be noted that none of the proposed improvements listed above are required for the RJD Infill Site.

Cumulative (2020) Traffic Projections

Cumulative (2020) No Project traffic volumes are presented in Exhibit 3.11-10 Development-generated traffic volumes for a single and level II infill correctional facility complex (displayed in Exhibits 3.11-5 and 3.11-6, respectively) were added to the Cumulative (2020) No Project traffic volumes (displayed in Exhibit 3.11-10) to derive the traffic volumes for a single facility and a complex under Cumulative (2020) plus Level II Infill Correctional Facility conditions. Exhibits 3.11-11 and 3.11-12 display the daily and peak-hour traffic volumes under Cumulative (2020) plus Single and Complex conditions, respectively.

Impact 3.11-6a: Cumulative (2020) Impacts on Intersection Operations [Single Facility]

Table 3.11-14 presents an analysis of the projected traffic operations under Cumulative (2020) No Project and Cumulative (2020) plus Level II Infill Correctional Facility conditions to determine the potential cumulative impacts of the infill facility. The following intersections are projected to operate at an unacceptable LOS E or F under Cumulative (2020) No Project conditions:

- Otay Mesa Road/Alta Road – is projected to operate at LOS F during both the a.m. and p.m. peak hours.
- Otay Mesa Road/Enrico Fermi Drive – is projected to operate at LOS F during the a.m. peak hour.

With the addition of a single facility, traffic operations would degrade from an acceptable LOS to an unacceptable LOS or delay would increase further at an intersection already operating at an unacceptable LOS at the following locations:

- Otay Mesa Road/Alta Road – is projected to operate at LOS F under Cumulative (2020) no project conditions during both the a.m. and p.m. peak hours. Traffic associated with the single, level II correctional facility at the RJD Infill Site, would further exacerbate the unacceptable operations at the intersection during both peak hours.
- Otay Mesa Road/Enrico Fermi Drive – is projected to operate at LOS F under Cumulative (2020) no project conditions during the a.m. peak hour. Traffic associated with the single, level II correctional facility at the RJD Infill Site, would further exacerbate the unacceptable operations at the intersection during the a.m. peak hour.

Implementation of a single, level II infill correctional facility at the RJD Infill Site would result in the degradation of intersection operations at the Otay Mesa Road/Alta Road and Otay Mesa Road/Enrico Fermi Drive intersection locations. This would be a potentially significant impact.

Mitigation Measures

Mitigation Measure 3.11-6a

CDCR will contribute appropriate fees to San Diego County per the County's TIF program for the following improvements to the intersection of Otay Mesa Road and Alta Road:

- Signalization of the intersection
- Addition of an exclusive eastbound left-turn lane
- Addition of an exclusive southbound right-turn lane

The improvement of this intersection is currently planned for and included in the County's TIF program.

Mitigation Measure 3.11-6b

CDCR will contribute appropriate fees to San Diego County per the County's TIF program for the following improvements to the intersection of Otay Mesa Road and Enrico Fermi Road:

- Addition of a second westbound left-turn lane
- Addition of an exclusive southbound left-turn lane
- Addition of a through lane in each direction along Otay Mesa Road

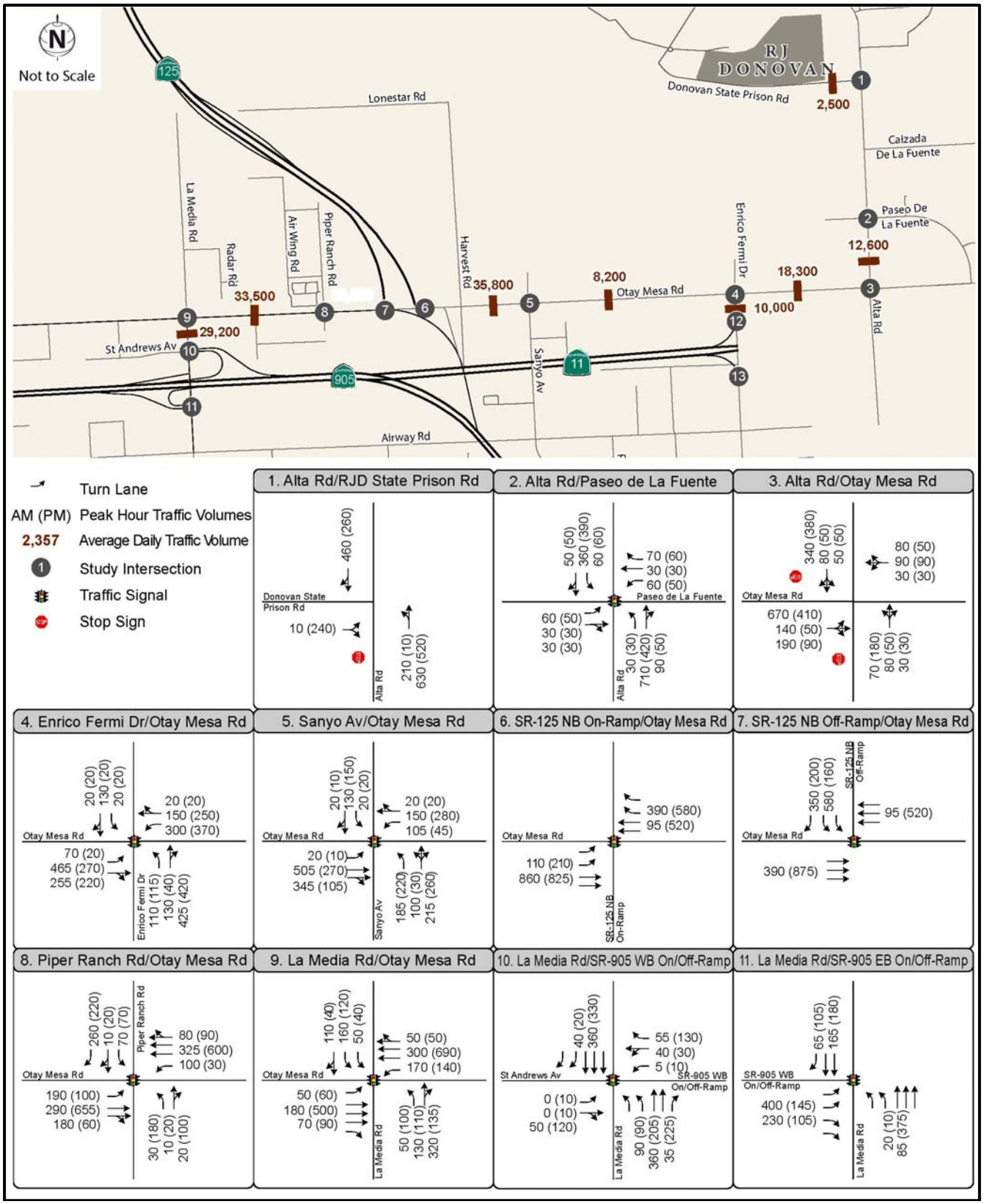
The improvement of this intersection is currently planned for and included in the County's TIF program.

Significance after Mitigation

Implementation of Mitigation Measures 3.11-6a and 3.11-6b would reduce potential impacts of the single, level II correctional facility at the RJD Infill Site to a less-than-significant level at both of the potentially affected intersections under Cumulative (2020) conditions. With the proposed mitigation measures the operations at the impacted intersections would improve to the following:

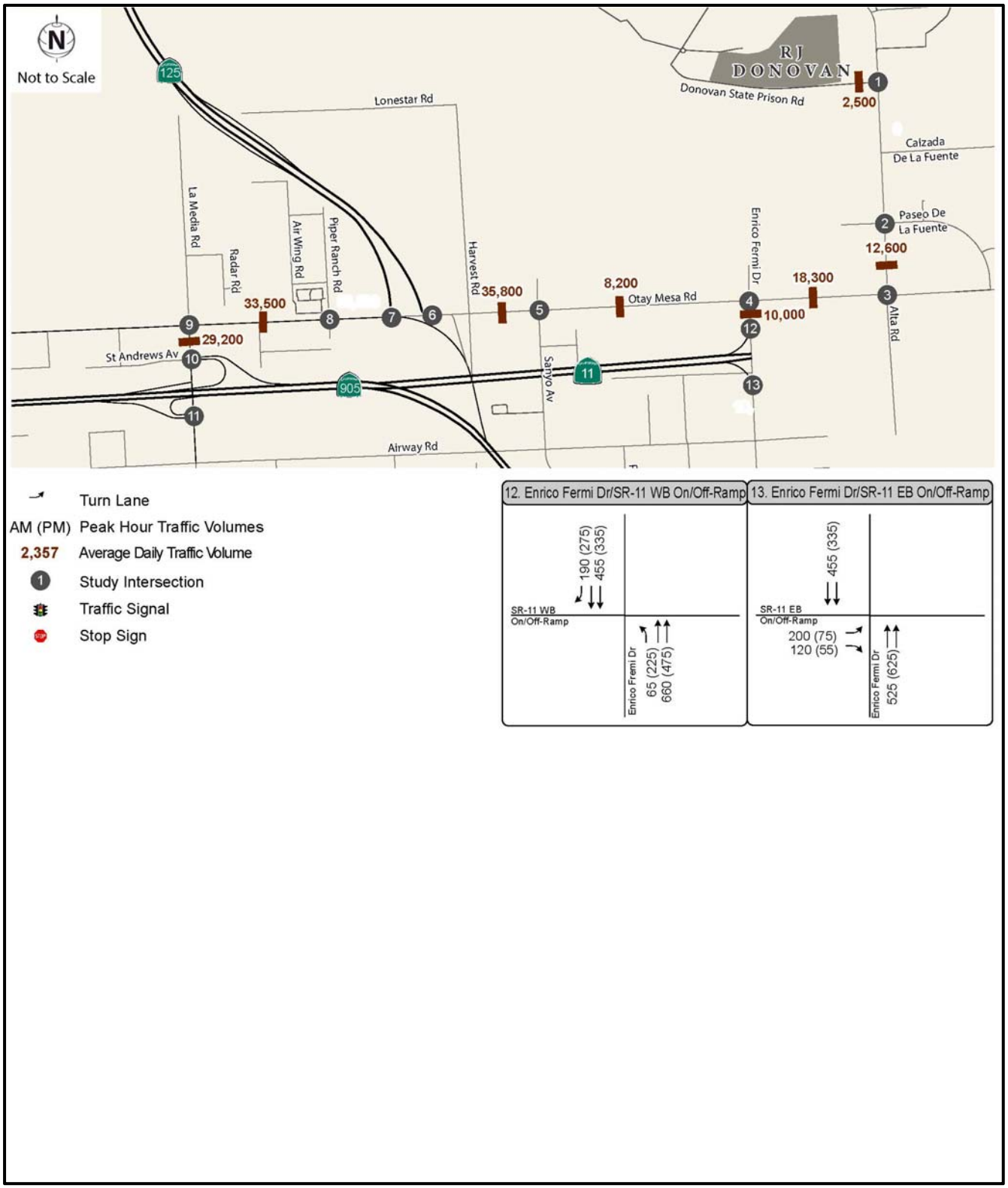
- Otay Mesa Road/Alta Road - would improve intersection operations to LOS D during both the a.m. and p.m. peak hours.
- Otay Mesa Road/Enrico Fermi Drive - would improve intersection operations to LOS D during the a.m. peak hour and to LOS C during the p.m. peak hour.

As the improvements are already included as part of the County's TIF program, a fair-share contribution to the County's TIF program would serve as adequate mitigation for the project's contribution to cumulative impacts. Therefore, with implementation of the above-listed mitigation, cumulative impacts would be **less than significant**.



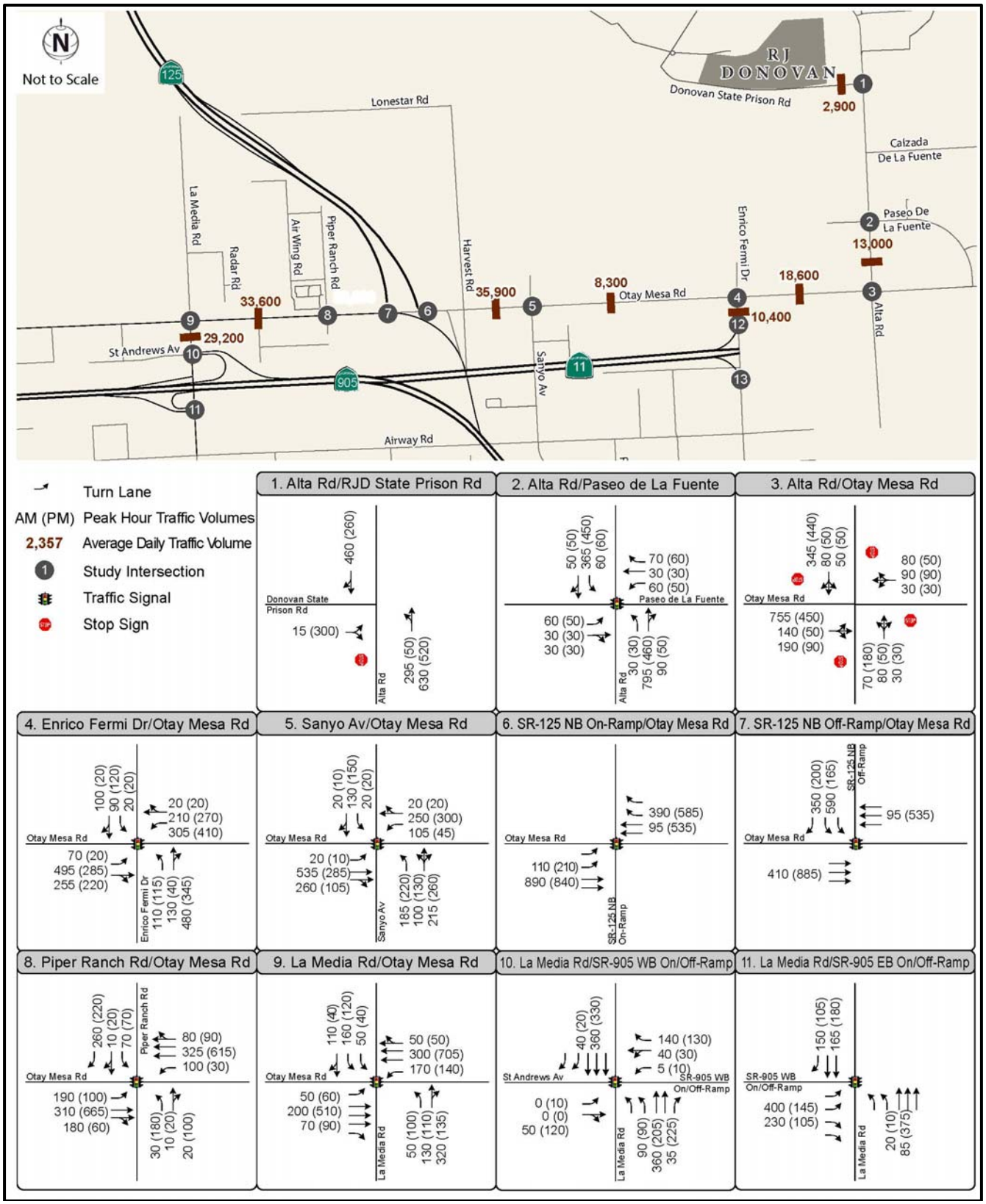
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-10 Cumulative (2020) No Project Volumes (1 of 2)



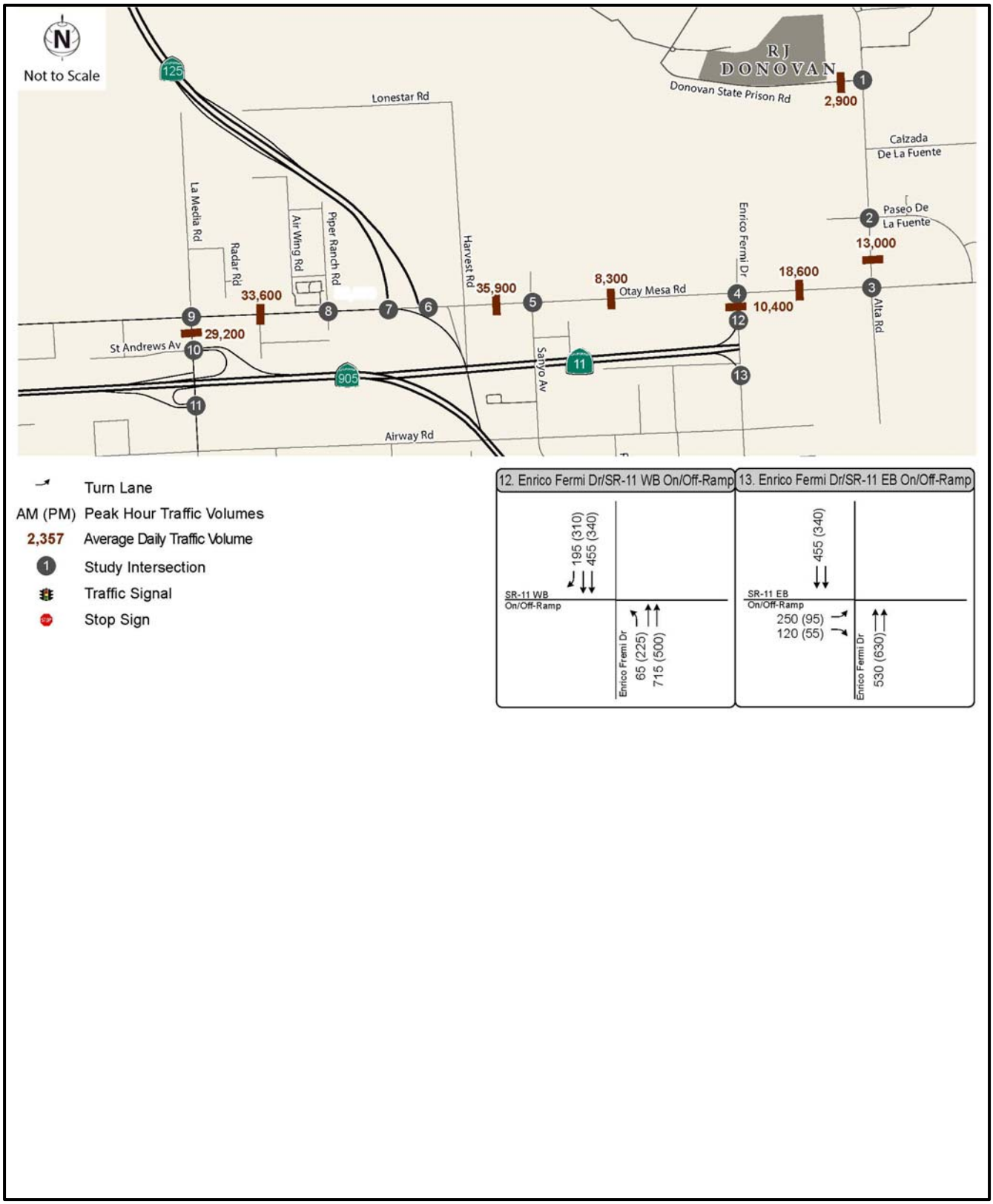
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-10 Cumulative (2020) No Project Volumes (2 of 2)



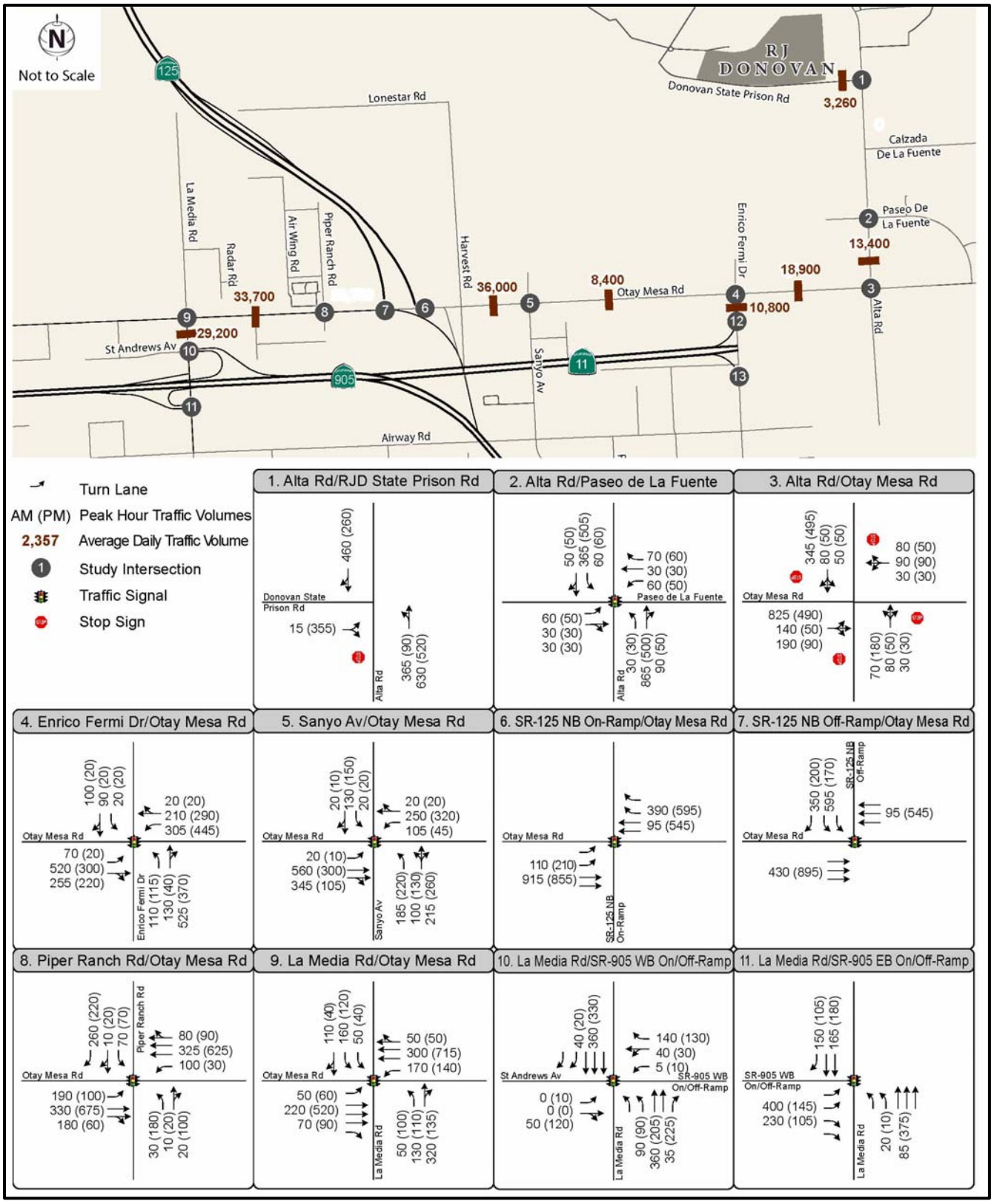
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-11 Cumulative (2020) plus Single Facility Traffic Volumes (1 of 2)



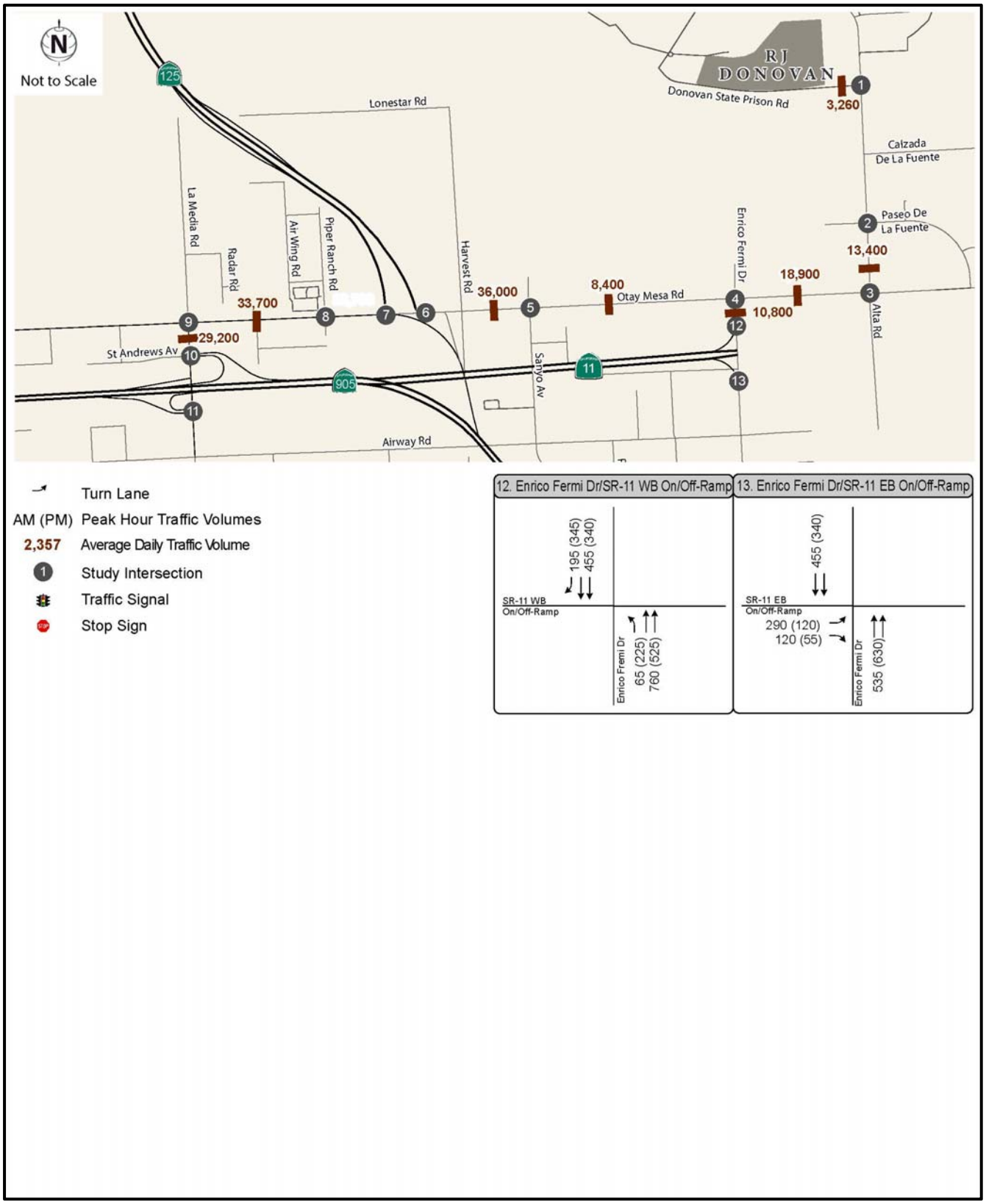
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-11 Cumulative (2020) plus Single Facility Traffic Volumes (2 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-12 Cumulative (2020) plus Complex Traffic Volumes (1 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-12 Cumulative (2020) plus Complex Traffic Volumes (2 of 2)

Table 3.11-14 Cumulative (2020) Conditions — Intersection Peak-Hour Levels of Service

Intersection	Traffic Control[1]	Peak Hour	Cumulative (2020) Conditions		Cumulative (2020) plus Single Facility			Cumulative (2020) plus Complex		
			Delay[2]	LOS[3]	Delay[2]	LOS[3]	Change in Delay[4]	Delay[2]	LOS[3]	Change in Delay[4]
1. Donovan State Prison Road/Alta Road	SSSC	a.m.	11.4	B	11.5	B	0.1	11.5	B	0.1
		p.m.	12.2	B	13.3	B	1.1	14.6	B	2.4
2. Paseo De La Fuente/Alta Road	Signal	a.m.	23.7	C	29.3	C	5.6	39.0	D	15.3
		p.m.	20.5	C	21.2	C	0.7	21.1	D	0.6
3. Otay Mesa Road/ Alta Road	Signal	a.m.	**321.8**	**F**	**382.3**	**F**	**60.5**	**432.4**	**F**	**110.6**
		p.m.	**88.3**	**F**	**117.6**	**F**	**29.3**	**148.8**	**F**	**60.5**
4. Otay Mesa Road/ Enrico Fermi Drive	Signal	a.m.	**158.8**	**F**	**185.5**	**F**	**26.7**	**208.4**	**F**	**49.6**
		p.m.	45.4	D	51.1	D	5.7	**58.8**	**E**	**13.4**
5. Otay Mesa Road/ Sanyo Avenue	Signal	a.m.	36.9	C	37.5	D	0.6	38.1	D	1.2
		p.m.	34.3	C	34.3	C	0.0	34.3	D	0.0
6. Otay Mesa Road/ SR 125 NB On-Ramp	Signal	a.m.	2.3	A	2.3	A	0.0	2.3	A	0.0
		p.m.	3.8	A	3.8	A	0.0	3.8	A	0.0
7. Otay Mesa Road/ SR 125 SB Off-Ramp	Signal	a.m.	8.3	A	8.4	A	0.1	8.4	A	0.1
		p.m.	7.5	A	7.5	A	0.0	7.6	A	0.1
8. Otay Mesa Road/ Piper Ranch Road	Signal	a.m.	25.5	C	25.9	C	0.4	26.5	C	1.0
		p.m.	21.9	C	22.0	C	0.1	22.0	C	0.1
9. Otay Mesa Road/ La Media Road	Signal	a.m.	33.8	C	34.0	C	0.2	34.3	C	0.5
		p.m.	30.2	C	30.3	C	0.1	30.4	C	0.2
10. SR 905 WB Ramps/ La Media Road	Signal	a.m.	10.7	A	10.7	B	0.0	10.7	B	0.0
		p.m.	11.9	B	11.9	B	0.0	11.9	B	0.0
11. SR 905 EB Ramps/ La Media Road	Signal	a.m.	8.7	A	8.7	A	0.0	8.7	A	0.0
		p.m.	6.7	A	6.7	A	0.0	6.7	A	0.0
12. SR 905 WB Ramps/ Enrico Fermi Road	Signal	a.m.	2.3	A	2.3	A	0.0	2.3	A	0.0
		p.m.	4.5	A	4.5	A	0.0	4.5	A	0.0
13. SR 905 EB Ramps/ Enrico Fermi Road	Signal	a.m.	7.0	A	8.1	A	1.1	8.6	A	1.6
		p.m.	5.1	A	5.3	A	0.2	6.1	A	1.0

Notes: Unacceptable operations are highlighted in **bold** text. Significant project impacts are highlighted with gray shading.
[1] SSSC = Side-Street Stop Control
[2] Whole-intersection weighted-average control delay is expressed in seconds per vehicle using methods described in the 2000 *Highway Capacity Manual*. For side-street stop-controlled intersections, total control delay for the worst movement is presented.
[3] LOS = level of service.
[4] Change in intersection delay between with-project and base scenarios
Source: Data compiled by Fehr & Peers in 2013.

Impact 3.11-7a: Cumulative (2020) Impacts on Roadway Segments [Single Facility]

Table 3.11-15 summarizes the projected daily LOS along the analyzed roadway segments under Cumulative (2020) No Project and Cumulative (2020) plus Level II Infill Correctional Facility conditions. Under Cumulative (2020) No Project conditions, the following roadway segments would operate unacceptably at LOS E or F:

- Alta Road between Paseo De La Fuente and Otay Mesa Road (LOS E),
- Otay Mesa Road between Alta Road and Enrico Fermi Drive (LOS F), and
- Otay Mesa Road between Sanyo Avenue and SR 125 NB (LOS E).

Table 3.11-15 Cumulative (2020) Conditions — Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Roadway Type	Cumulative (2020) Conditions		Cumulative (2020) plus Single Facility		Cumulative (2020) plus Complex	
			ADT[1]	LOS	ADT[1]	LOS	ADT[1]	LOS
1. Alta Road between Paseo De La Fuente and Otay Mesa Road	County of San Diego	2.1E	**12,600**	**E**	**13,000**	**E**	**13,400**	**E**
2. Otay Mesa Road between Alta Road and Enrico Fermi Drive	County of San Diego	2.1E	**18,300**	**F**	**18,600**	**F**	**19,000**	**F**
3. Otay Mesa Road between Enrico Fermi Drive and Sanyo Avenue	County of San Diego	2.1E	8,200	D	8,300	D	8,400	D
4. Otay Mesa Road between Sanyo Avenue and SR 125 NB	County of San Diego	4.1A	**35,800**	**E**	**35,900**	**E**	**36,000**	**E**
5. Otay Mesa Road between SR 125 NB Ramp and La Media Rd	County of San Diego	6.2	33,500	B	33,600	B	33,700	B
6. La Media Road between Otay Mesa Road and SR 905 WB	City of San Diego	4.1A	29,200	C	29,200	C	29,200	C
7. Enrico Fermi Drive north of SR 11	County of San Diego	2.1E	10,000	D	10,400	D	10,800	D

Notes: ADT = average daily traffic; Caltrans = California Department of Transportation; LOS = level of service; SR = State Route
[1] Note that ADT volume reported is the maximum volume on the given roadway segment within the project study area.
Unacceptable operations are indicated in **bold**. Significant impacts are highlighted with gray shading.
Source: Data compiled by Fehr & Peers in 2013.

All other study area roadway segments would operate acceptably with implementation of the infill facility.

Based on the County of San Diego significance thresholds outlined in Table 3.11-6, development of a single, level II infill correctional facility would create a significant impact on the following roadway segments:

- Alta Road between Paseo De La Fuente and Otay Mesa Road, and
- Otay Mesa Road between Alta Road and Enrico Fermi Drive.

Implementation of the single, level II correctional facility at the RJD Infill Site would further exacerbate unacceptable operating conditions on Alta Road between Paseo De La Fuente and Otay Mesa Road and on Otay Mesa Road between Alta Road and Enrico Fermi Drive. This would be a significant cumulative impact and the project's contribution would be considerable.

Mitigation Measures

Mitigation Measure 3.11-7a

CDCR will contribute appropriate fees to the County's TIF program for the widening of Alta Road between Paseo De La Fuente and Otay Mesa Road to a community collector with a continuous left-turn lane. The improvement of this segment is currently planned for and included in the County's TIF program.

Mitigation Measure 3.11-7b

CDCR will contribute appropriate fees to the County's TIF program for the widening of Otay Mesa Road between Alta Road and Enrico Fermi Drive to a four-lane major road with a raised median. The improvement of this segment is currently planned for and included in the County's TIF program.

Significance after Mitigation

Implementation of Mitigation Measures 3.11-7a and 3.11-7b would reduce potential impacts of the single, level II infill correctional facility to a less-than-significant level at both of the affected roadway segments. Further, as the improvements are already included as part of the County's TIF program, a fair-share contribution to the County's TIF program would serve as adequate mitigation for the infill facility under Cumulative (2020) conditions. Therefore, with implementation of the above-listed mitigation, cumulative impacts would be **less than significant**.

Impact 3.11-8a: Cumulative (2020) Site Access Impacts [Single Facility]

Development and operation of a single, level II correctional facility at the RJD Infill Site would add vehicle traffic to the Donovan State Prison Road/Alta Road intersection. However, as noted in Table 3.11-12, this additional traffic would not cause the intersection to degrade to substandard levels under Cumulative (2020) conditions. Further, queuing space for approximately 85 vehicles is available to accommodate vehicles as they access the relocated guard station from Alta Road, which would be considered adequate. The relocated guard station would also include a secondary lane at the point of ingress to allow for continued flow of traffic during periods of extended inspection of a particular vehicle.

Development and operation of a single, level II correctional facility would generate additional vehicular traffic at the Donovan State Prison Road/Alta Road intersection; however, this additional traffic would not cause an operational deficiency according to County standards, and adequate queuing space is available to accommodate vehicles as they access the guard station. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

BUILDOUT CONDITIONS

Buildout conditions are assumed to represent buildout conditions of the County General Plan and 2030 conditions of the San Diego Region. Traffic operations for the infill facility under this scenario are presented below and include only an evaluation of roadway segment conditions per County guidelines.

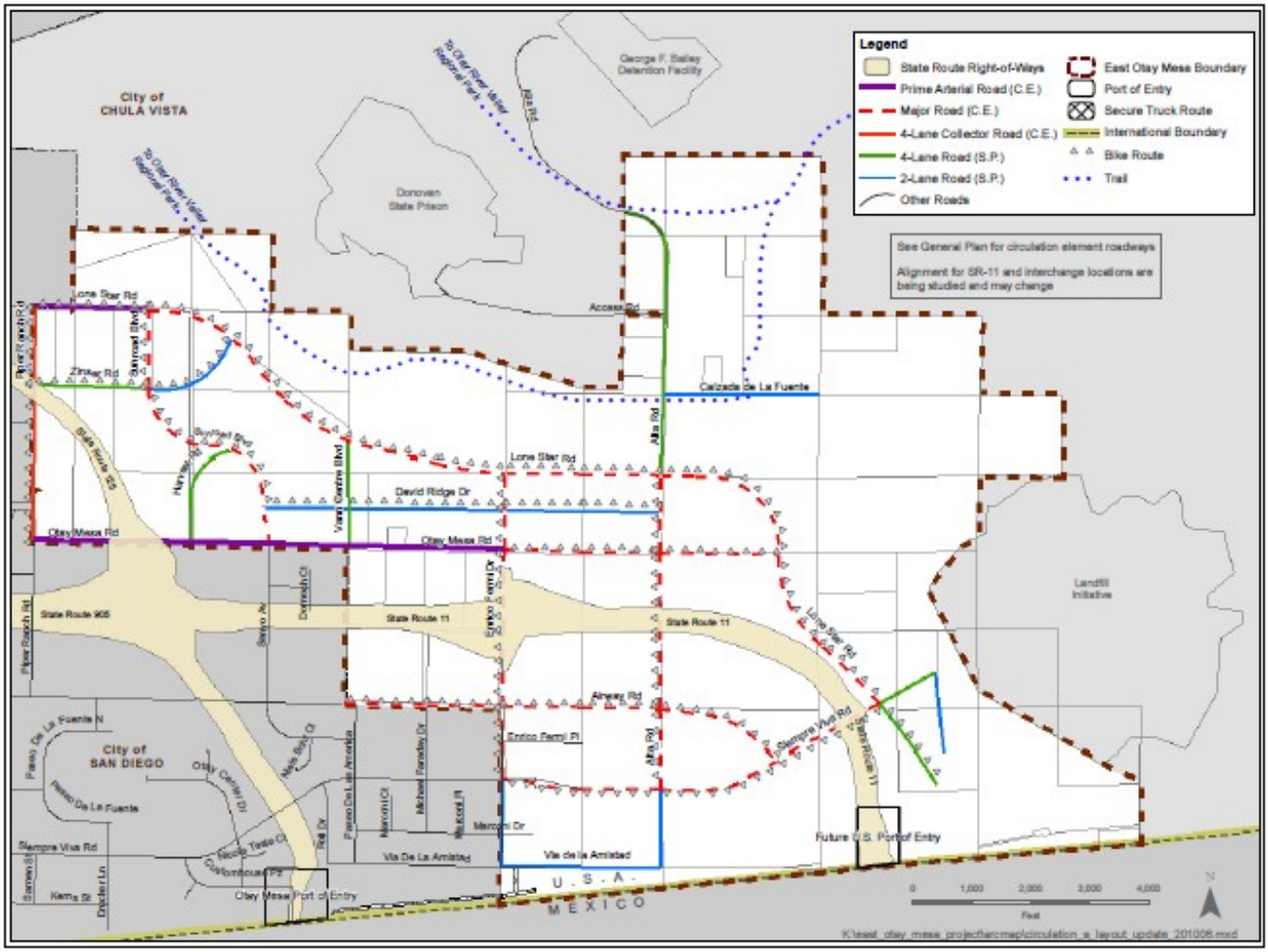
East Otay Mesa Specific Plan Amendment

As discussed previously, the East Otay Mesa Specific Plan Amendment (SPA 10-001) (County of San Diego (2010) that was approved by the County Board of Supervisors on September 15, 2010 is the most current approved amendment for the East Otay Mesa area. The East Otay Mesa Specific Plan Amendment did not assume any expansion of the existing RJD facility.

Buildout Roadway Network

Exhibit 3.11-13 illustrates the circulation plan for 2030 conditions in the East Otay Mesa area in the County of San Diego as identified in the East Otay Mesa Specific Plan Amendment. As shown in the exhibit, the following improvements are planned for study area roadways:

- *Otay Mesa Road* is planned to be widened to a six-lane prime arterial (6.2) between the County boundary and Enrico Fermi Drive,
- *Otay Mesa Road* is planned to be widened to a four-lane major roadway (4.1A) between Enrico Fermi Drive and Alta Road,
- *Alta Road* is planned to be widened to a four-lane major roadway (4.1A) between Lone Star Road and Siempre Viva Drive, and
- *Enrico Fermi Drive* is planned to be widened to a four-lane major roadway (4.1A) between Otay Mesa Road and Airway Road.



Source: East Otay Mesa Specific Plan Amendment (2013)

Exhibit 3.11-13 Buildout (2030) Roadway Network

Buildout Traffic Projections

Using the land use information identified in the East Otay Mesa Specific Plan Amendment, Linscott, Law, & Greenspan Engineers (LL&G) worked with SANDAG and the County of San Diego to forecast the buildout (2030) traffic volumes for the roadways in the East Otay Mesa area. LL&G summarized the results of the analysis in the August 8, 2013 *East Otay Mesa Specific Plan Amendment Traffic Impact Analysis*. Table 3.11-16 summarizes the projected daily LOS along the analyzed roadway segments under Buildout No Project and Buildout plus Single and Complex conditions.

Table 3.11-16 Buildout (2030) Conditions — Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Roadway Type	Buildout Conditions		Buildout plus Single Facility		Buildout plus Complex	
			ADT[1]	LOS	ADT[1]	LOS	ADT[1]	LOS
1. Alta Road between Paseo De La Fuente and Otay Mesa Road	4.1A	15,400	B	15,800	B	16,160	B	4.1A
2. Otay Mesa Road between Alta Road and Enrico Fermi Drive	4.1A	17,600	B	18,000	B	18,360	B	4.1A
3. Otay Mesa Road between Enrico Fermi Drive and Sanyo Avenue	6.2	24,300	B	24,440	B	24,570	B	6.2

Table 3.11-16 Buildout (2030) Conditions — Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Roadway Type	Buildout Conditions		Buildout plus Single Facility		Buildout plus Complex	
			ADT[1]	LOS	ADT[1]	LOS	ADT[1]	LOS
4. Otay Mesa Road between Sanyo Avenue and SR 125	6.2	44,900	D	45,040	D	45,170	D	6.2
5. Otay Mesa Road between SR 125 and La Media Road	6.2	41,900	C	42,000	C	42,090	C	6.2
6. La Media Road between Otay Mesa Road and SR 905	6.2	17,200.0	A	17,200.0	A	17,200.0	A	6.2
7. Enrico Fermi Road between Otay Mesa Road and SR 905	4.1A[2]	37,100	D	37,360	D	37,600	D	4.1A[2]

Notes: ADT = average daily traffic; Caltrans = California Department of Transportation; LOS = level of service; SR = State Route
[1] Note that ADT volume reported is the maximum volume on the given roadway segment within the project study area.
[2] Additional lanes may be provided to accommodate turning movements and freeway access; hence, the roadway capacity (LOS E) was assumed to be 47,000 vehicles (halfway between 4.1A and 6.2)
Unacceptable operations are indicated in **bold**. Significant impacts are highlighted with gray shading.
Source: Data compiled by Fehr & Peers in 2013.

Development-generated traffic volumes for the single, level II infill correctional facility and the level II infill correctional facility complex (displayed in Exhibits 3.11-5 and 3.11-6, respectively) were added to the Buildout No Project traffic volumes (displayed in Exhibit 3.11-14) to derive the traffic volumes for a single facility and a complex under Buildout Plus Level II Infill Correctional Facility conditions. Exhibits 3.11-15 and 3.11-16 display the daily traffic volumes under Buildout plus Single Facility and Complex conditions, respectively.

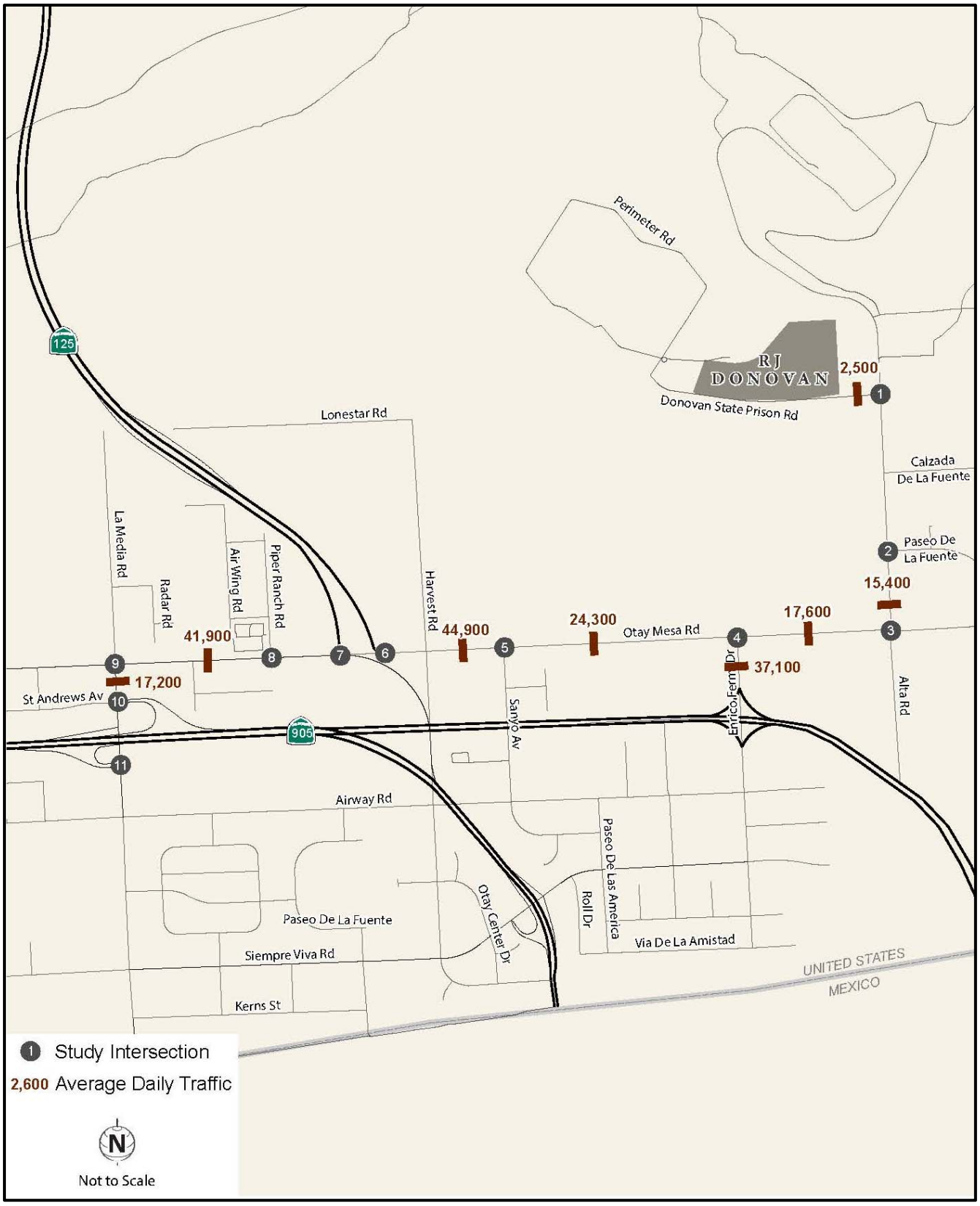
Impact 3.11-9a: Buildout Impacts on Roadway Segments [Single Facility]

As noted in Table 3.11-16 above, all study area roadway segments are projected to operate at an acceptable LOS under Buildout (2030) conditions with the implementation of a single, level II infill correctional facility at RJD.

*Operation of a single, level II infill correctional facility at the RJD Infill Site would not cause operations at any study area roadway segment to degrade to an unacceptable level under Buildout (2030) conditions. This would be a **less-than-significant** impact.*

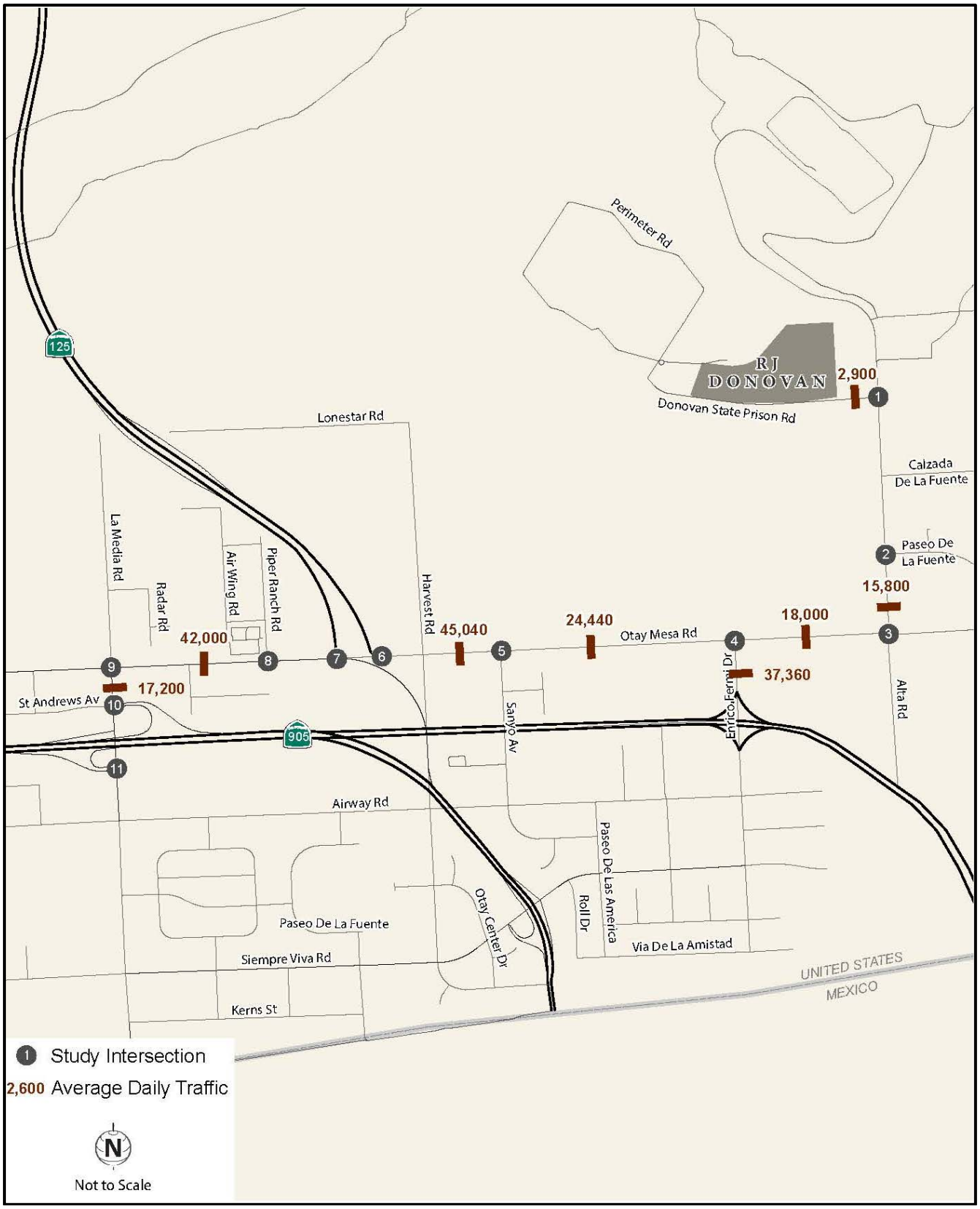
Mitigation Measures

No mitigation measures are required.



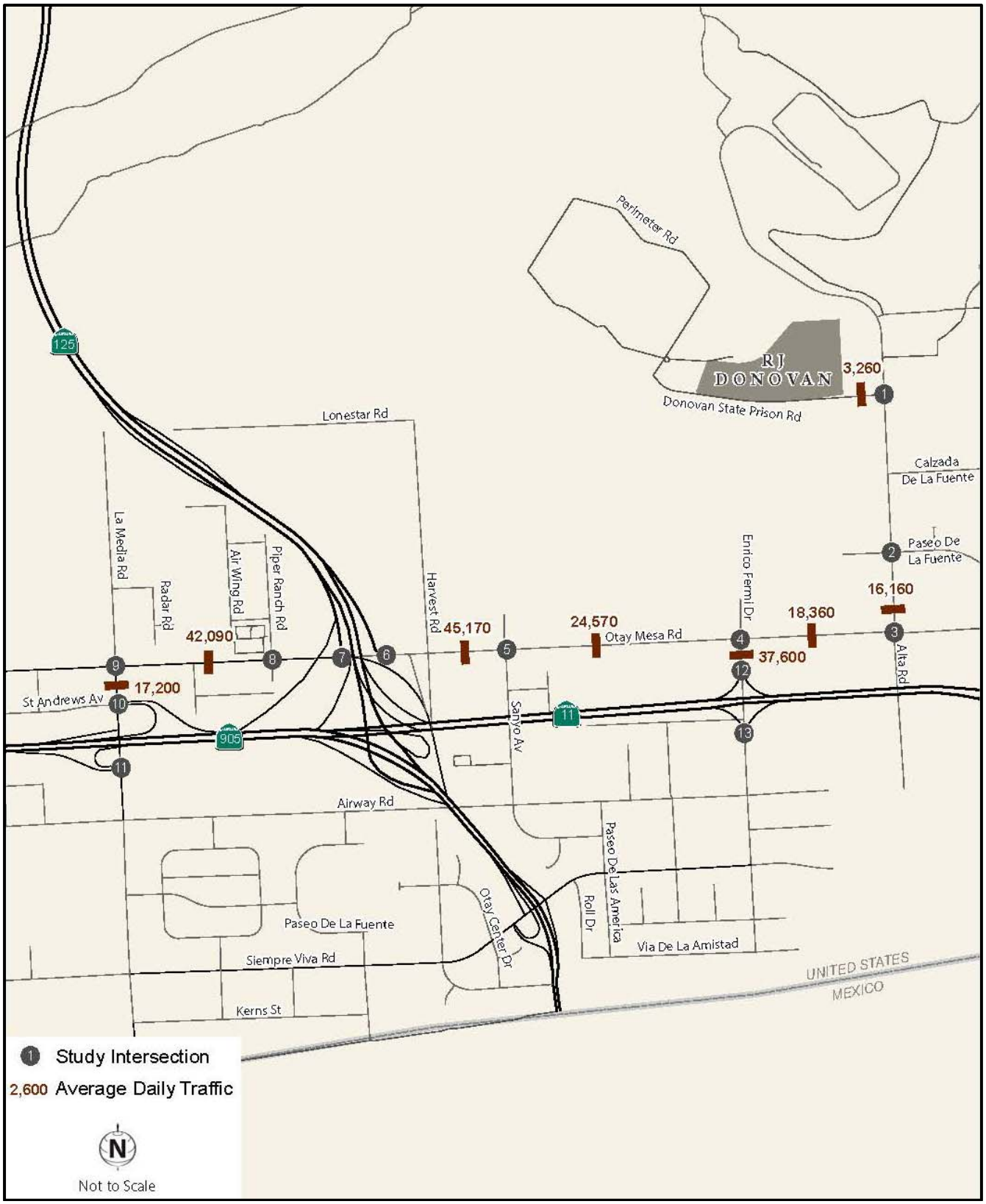
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-14 Buildout (2030) No Project Daily Traffic Volumes



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-15 Buildout (2030) plus Single Facility Daily Traffic Volumes



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-16 Buildout (2030) plus Complex Daily Traffic Volumes

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.11-1b: Impacts on Intersection Operations [Complex]

Table 3.11-9 (above) summarizes the projected peak-hour LOS at each study intersection for the level II infill correctional facility complex at the RJD Infill Site. With the addition of a level II infill correctional facility complex, traffic operations at the same intersections identified for a single facility (the Otay Mesa Road/Alta Road and Otay Mesa Road/La Media Road intersections) [see Impact 3.11-1a above] would be degraded from an acceptable LOS to an unacceptable LOS, or delays would increase further at intersections already operating at an unacceptable LOS.

Implementation of the level II infill correctional facility complex at the RJD Infill Site would result in the degradation of intersection operations at the Otay Mesa Road/Alta Road and Otay Mesa Road/La Media Road intersection locations. This would be a significant impact.

Mitigation Measures

Implement Mitigation Measures 3.11-1a and 3.11-1b (above).

Significance after Mitigation

Similar to the proposed single facility (see Impact 3.11-1a above), implementation of Mitigation Measures 3.11-1a and 3.11-1b would reduce complex impacts on intersection operations to a less-than-significant level. With implementation of these measures, operations at the impacted intersections would improve to the following:

- Otay Mesa Road/Alta Road – intersection operations would improve to LOS B during both the a.m. and p.m. peak hours.
- Otay Mesa Road/La Media Road - intersection operations would improve to LOS D during both the a.m. and p.m. peak hours.

Therefore, with implementation of the aforementioned mitigation, impacts would be reduced to **less than significant** with its implementation.

Impact 3.11-2b: Impacts on Roadway Segment Operations [Complex]

ADT on each study roadway segment was projected under existing conditions in conjunction with traffic volumes associated with the contemplated development to determine the potential project-specific impacts of implementing the level II infill correctional facility complex at the RJD Infill Site. Because no traffic from a complex at RJD is anticipated to utilize Enrico Fermi Drive prior to the construction of the SR 11 interchange (scheduled to open in 2015), this roadway was not analyzed under existing plus level II infill correctional facility conditions. As noted in Table 3.11-10 and similar to the potential roadway segment impacts of a single facility (see Impact 3.11-2a above), all study area roadway segments are projected to operate at an acceptable LOS with development of a level II infill correctional facility complex at RJD.

*Implementation of a level II infill correctional facility complex at the RJD Infill Site would not cause operations at any study area roadway segment to degrade to an unacceptable level. This would be a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.11-3b: Impacts on Parking [Complex]

A parking accumulation analysis was performed to determine the maximum parking demand for the RJD Infill Site. The parking demand calculations considered the anticipated parking demand of each shift for the complex, accounting for overlap in the shift schedules. Assumptions of the parking demand calculations are provided under Impact 3.11-3a above.

As shown in Table 3.11-17, the maximum parking demand on a typical weekday for a level II infill correctional facility complex would be 342 spaces. As noted in Chapter 3, "Project Description," of Volume 1, a complex would include no fewer than 417 parking spaces, which is more than the peak demand on a typical weekday. Furthermore and as noted above, the complex would allow visitors only on holidays and weekends, which coincides with days on which the support staff would not be located onsite, and onsite staffing would be limited to correctional staff. As noted in Chapter 3, "Project Description," of Volume 1 and in Chapter 2, "Project Description," of this volume, it is assumed that up to 15 percent of inmates would receive visitors (238 visitors total) on a given weekend day or holiday. This visitation, coupled with the decrease in staff parking needs onsite during weekends and holidays, would not result in inadequate parking onsite.

Table 3.11-17 Estimated Weekday Parking Demand – Complex

Hour Beginning	Hour Ending	Watch 1	Watch 2	Watch 3	Support Staff	Total
12:00 a.m.	1:00 a.m.	35				35
1:00 a.m.	2:00 a.m.	35				35
2:00 a.m.	3:00 a.m.	35				35
3:00 a.m.	4:00 a.m.	35				35
4:00 a.m.	5:00 a.m.	35				35
5:00 a.m.	6:00 a.m.	35	113			148
6:00 a.m.	7:00 a.m.	35	113			148
7:00 a.m.	8:00 a.m.		113		149	262
8:00 a.m.	9:00 a.m.		113		149	262
9:00 a.m.	10:00 a.m.		113		149	262
10:00 a.m.	11:00 a.m.		113		149	262
11:00 a.m.	12:00 p.m.		113		149	262
12:00 p.m.	1:00 p.m.		113		149	262
1:00 p.m.	2:00 p.m.		113	80	149	**342**
2:00 p.m.	3:00 p.m.		113	80	149	**342**
3:00 p.m.	4:00 p.m.			80	149	229
4:00 p.m.	5:00 p.m.			80	149	229
5:00 p.m.	6:00 p.m.			80	149	229
6:00 p.m.	7:00 p.m.			80		80
7:00 p.m.	8:00 p.m.			80		80
8:00 p.m.	9:00 p.m.			80		80
9:00 p.m.	10:00 p.m.	35		80		115
10:00 p.m.	11:00 p.m.	35		80		115
11:00 p.m.	12:00 a.m.	35				35

Notes: Watch 1 = 10:00 p.m. to 6:00 a.m., Watch 2 = 6:00 a.m. to 2:00 p.m., Watch 3 = 2:00 p.m. to 10:00 p.m., Watch 2 (Support Staff) = 8:00 a.m. to 5:00 p.m.
Source: Fehr & Peers, 2013

Implementation of a level II infill correctional facility complex at the RJD Infill Site would not result in inadequate parking supply to support anticipated demand. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.11-4b: Site Access Impacts [Complex]

Site access would be similar under each design option and is described under Impact 3.11-4a above. Implementation of a level II infill correctional facility complex at the RJD Infill Site would add vehicle traffic to the Donovan State Prison Road/Alta Road intersection. However, this additional traffic would not cause intersection operations to degrade to substandard levels during either peak hour, as displayed in Table 3.11-9. Further, queuing space for approximately 85 vehicles is available to accommodate vehicles as they access the relocated guard station from Alta Road, which would be considered adequate. The relocated guard station would also include a secondary lane at the point of ingress to allow for continued flow of traffic during periods of extended inspection of a particular vehicle.

Implementation of a level II infill correctional facility complex at the RJD Infill Site would generate additional vehicular traffic at the Donovan State Prison Road/Alta Road intersection; however, this additional traffic would not cause an operational deficiency according to County standards, and adequate queuing space is available to accommodate vehicles as they access the relocated guard station. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.11-5b: Construction-Related Traffic Impacts [Complex]

Similar to the proposed single facility (see Impact 3.11-5a), construction of a level II correctional facility complex at the RJD Infill Site could temporarily affect traffic and parking conditions near RJD, within the CDCR property, and on the RJD Infill Site. A description of construction and a list of construction-traffic trip generation assumptions is provided under Impact 3.11-5a above.

Table 3.11-18 shows the estimated trip generation during each phase of construction for a level II infill correctional facility complex, including concurrent phases (phases that partially overlap), based on the number of expected construction employees and the number of truck trips.

Table 3.11-18 Estimated Construction Trip Generation – Complex

Construction Phase	Employee Trips per Day[1]	Truck Trips per Day[2]	Daily Trips		Notes
			Single Phase	Concurrent Phase	
Demolition/Site Preparation	112	12	124	1,034	Demolition = 2 months; 1 month concurrent with grading
Grading	818	92	910	1,028	Grading = 3 months; 1 month concurrent with demolition; 1 month concurrent with utilities
Utilities	98	20	118	1,628	Utilities = 8 months; 1 month concurrent with grading; 6 months concurrent with building construction
Building Construction	1,490	20	1,510		Building Construction = 23 months; 6 months concurrent with utilities

Notes:
[1] Based on data provided by CDCR regarding the construction activities at the CHCF Stockton site.
[2] Based on cubic yards of material to be moved to/from the site during demolition/site preparation and grading. Based on 20 one-way trips per day during utilities and building construction.
Source: Fehr & Peers 2013

Implementation of a level II infill correctional facility complex at the RJD Infill Site would generate an estimated 1,630 daily trips during the peak period of construction traffic. The peak period is anticipated to be during the 6 months when utilities and building construction are occurring concurrently. These trips, when added to the local roadway network, could result in some of the same traffic impacts described for operation of the RJD Infill Site. During those single phases (approximately 3 months in duration), construction impacts would be the same as or less than those for operation of a level II infill correctional facility complex. For the remainder of the construction period, the daily trip generation would vary from 910 daily trips to 1,628 daily trips.

Table 3.11-11 summarizes the estimated daily construction traffic that would access the site. Estimates of both the construction-related truck trips and worker estimates for all phases of construction are provided in Appendix 2D of this volume of the DEIR.

Although the majority of construction trips would occur outside the peak hours of traffic, it is possible that the number of construction-related trips could be similar to or slightly greater than the peak-hour traffic volumes that would occur during operation of a complex. While the construction traffic impacts may be temporary in nature, they would likely result in unacceptable LOS for the a.m. peak hour at the Otay Mesa Road/Alta Road intersection and for the p.m. peak hour at the Otay Mesa Road/La Media Road intersection (similar to Impact 3.11-1). Further, the number of trips generated on a daily basis by construction activity would be greater than under operation of a level II infill correctional facility complex for approximately 28 months.

Construction of a level II infill correctional facility complex at the RJD Infill Site could result in significant short-term construction traffic impacts for the a.m. peak hour at the Otay Mesa Road/Alta Road intersection and for the p.m. peak hour at the Otay Mesa Road/La Media Road intersection. Therefore, this impact would be significant.

Mitigation Measures

Implement Mitigation Measure 3.11-5.

Significance after Mitigation

Although the construction TMP would reduce the significance of this impact and would substantially improve and manage construction-related traffic conditions on area roadways, until the specific parameters of the construction activities and the details of the TMP are developed, it is possible that feasible mitigation measures would not be available for all construction-related impacts. Therefore, because of these unknown factors, this impact is concluded to remain **significant and unavoidable.**

Impact 3.11-6b: Cumulative (2020) Impacts on Intersection Operations [Complex]

Table 3.11-14 and intersections projected to operate at an unacceptable LOS E or F under Cumulative (2020) No Project conditions are provided in Impact 3.11-6a above. With the addition of a level II infill correctional facility complex and similar to the single facility option, traffic operations under Cumulative (2020) conditions would degrade from an acceptable LOS to an unacceptable LOS or delay would increase further at an intersection already operating at an unacceptable LOS at the following locations:

- Otay Mesa Road/Alta Road – is projected to operate at LOS F under Cumulative (2020) no project conditions during both the a.m. and p.m. peak hours. Traffic associated with the single, level II correctional facility at the RJD Infill Site, would further exacerbate the unacceptable operations at the intersection during both peak hours
- Otay Mesa Road/Enrico Fermi Drive – is projected to operate at LOS F under Cumulative (2020) no project conditions during the a.m. peak hour. Traffic associated with the single, level II correctional

facility at the RJD Infill Site, would further exacerbate the unacceptable operations at the intersection during the a.m. peak hour

Implementation of the level II infill correctional facility complex at the RJD Infill Site would result in the degradation of intersection operations at the Otay Mesa Road/Alta Road and Otay Mesa Road/Enrico Fermi Drive intersection locations. This would be a potentially significant impact.

Mitigation Measures

Implement Mitigation Measures 3.11-6a and 3.11-6b (above).

Significance after Mitigation

Implementation of Mitigation Measures 3.11-6a and 3.11-6b would reduce potential impacts of the level II infill correctional facility complex at the RJD Infill Site to a less-than-significant level at both of the potentially affected intersections. With the proposed mitigation measures the operations at the impacted intersections would improve to the following:

- Otay Mesa Road/Alta Road - would improve intersection operations to LOS D during both the a.m. and p.m. peak hours.
- Otay Mesa Road/Enrico Fermi Drive - would improve intersection operations to LOS D during the a.m. peak hour and to LOS C during the p.m. peak hour.

Further, as the improvements are already included as part of the County's TIF program, the appropriate contribution to the County's TIF program would serve as adequate mitigation for the project's contribution to cumulative impacts. Therefore, with implementation of the above-listed mitigation, cumulative impacts would be **less than significant**.

Impact 3.11-7b: Cumulative (2020) Impacts on Roadway Segments [Complex]

Based on the County of San Diego significance thresholds outlined in Table 3.11-6, implementation of a level II infill correctional facility complex at RJD would create a significant cumulative impact on the same roadway segments identified above for a single facility:

- Alta Road between Paseo De La Fuente and Otay Mesa Road and
- Otay Mesa Road between Alta Road and Enrico Fermi Drive.

Implementation of the level II infill correctional facility complex at the RJD Infill Site would further exacerbate unacceptable operating conditions on Alta Road between Paseo De La Fuente and Otay Mesa Road and on Otay Mesa Road between Alta Road and Enrico Fermi Drive. This would be a significant cumulative impact and the project's contribution would be considerable.

Mitigation Measures

Implement Mitigation Measures 3.11-7a and 3.11-7b (above).

Significance after Mitigation

Implementation of Mitigation Measures 3.11-7a and 3.11-7b would reduce potential impacts of the level II infill correctional facility complex to a less-than-significant level at both of the affected roadway segments. Further, as the improvements are already included as part of the County's TIF program, a fair-share contribution to the County's TIF program would serve as adequate mitigation for the infill facility under Cumulative (2020) conditions. Therefore, with implementation of the above-listed mitigation, cumulative impacts would be **less than significant**.

Impact 3.11-8b: Cumulative (2020) Site Access Impacts [Complex]

Development and operation of a level II infill correctional facility complex would add vehicle traffic to the Donovan State Prison Road/Alta Road intersection. However, as noted in Table 3.11-12, this additional traffic would not cause the intersection to degrade to substandard levels under Cumulative (2020) conditions. Further, queuing space for approximately 85 vehicles is available to accommodate vehicles as they access the relocated guard station from Alta Road, which would be considered adequate. The relocated guard station would also include a secondary lane at the point of ingress to allow for continued flow of traffic during periods of extended inspection of a particular vehicle.

Development and operation of a level II infill correctional facility complex at the RJD Infill Site would generate additional vehicular traffic at the Donovan State Prison Road/Alta Road intersection; however, this additional traffic would not cause an operational deficiency according to County standards, and adequate queuing space is available to accommodate vehicles as they access the guard station. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

BUILDOUT CONDITIONS

Buildout conditions are assumed to represent buildout conditions of the County General Plan and 2030 conditions of the San Diego Region. Traffic operations for the infill facility under this scenario are presented below and include only an evaluation of roadway segment conditions per County guidelines.

East Otay Mesa Specific Plan Amendment

As discussed previously, the East Otay Mesa Specific Plan Amendment (SPA 10-001) (County of San Diego (2010) that was approved by the County Board of Supervisors on September 15, 2010 is the most current approved amendment for the East Otay Mesa area. The East Otay Mesa Specific Plan Amendment did not assume any expansion of the existing RJD facility.

Buildout Roadway Network

Exhibit 3.11-13 illustrates the circulation plan for 2030 conditions in the East Otay Mesa area in the County of San Diego as identified in the East Otay Mesa Specific Plan Amendment. As shown in the exhibit, the following improvements are planned for study area roadways:

- *Otay Mesa Road* is planned to be widened to a six-lane prime arterial (6.2) between the County boundary and Enrico Fermi Drive,
- *Otay Mesa Road* is planned to be widened to a four-lane major roadway (4.1A) between Enrico Fermi Drive and Alta Road,
- *Alta Road* is planned to be widened to a four-lane major roadway (4.1A) between Lone Star Road and Siempre Viva Drive, and
- *Enrico Fermi Drive* is planned to be widened to a four-lane major roadway (4.1A) between Otay Mesa Road and Airway Road.

Buildout Traffic Projections

Using the land use information identified in the East Otay Mesa Specific Plan Amendment, Linscott, Law, & Greenspan Engineers (LL&G) worked with SANDAG and the County of San Diego to forecast the buildout (2030) traffic volumes for the roadways in the East Otay Mesa area. LL&G summarized the results of the analysis in the August 8, 2013 *East Otay Mesa Specific Plan Amendment Traffic Impact Analysis*. Table 3.11-16 summarizes the projected daily LOS along the analyzed roadway segments under Buildout No Project and Buildout plus Single and Complex conditions.

Development-generated traffic volumes for the single, level II infill correctional facility and the level II infill correctional facility complex (displayed in Exhibits 3.11-5 and 3.11-6, respectively) were added to the Buildout No Project traffic volumes (displayed in Exhibit 3.11-14) to derive the traffic volumes for a single facility and a complex under Buildout Plus Level II Infill Correctional Facility conditions. Exhibits 3.11-15 and 3.11-16 display the daily traffic volumes under Buildout plus Single Facility and Complex conditions, respectively.

Impact 3.11-9b: Buildout Impacts on Roadway Segments [Complex]

As noted, in Table 3.11-15 above, all study area roadway segments are projected to operate at an acceptable LOS under Buildout conditions with the implementation of a level II infill correctional facility complex at RJD.

*Operation of a level II infill correctional facility complex at the RJD Infill Site would not cause operations at any study area roadway segment to degrade to an unacceptable level under Buildout 2030 Conditions. This would be a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

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3.12 UTILITIES

This section evaluates the adequacy of existing and planned future utilities to serve either a single, level II infill correctional facility or a level II infill correctional facility complex at the Richard J. Donovan Correctional Facility (RJD) infill site. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. This section evaluates the potential effects of construction and operation of a level II infill correctional facility on the following services and utilities:

- water supply, distribution, and treatment;
- wastewater treatment and disposal;
- solid waste disposal; and
- energy (electricity and natural gas).

The analysis provided in this section is based on a review of utilities agreements, consultation with project engineers, consultation with the Otay Water District (OWD), and the *Richard J. Donovan State Correctional Facility at Rock Mountain (RJD State Prison) – San Diego (*Nolte Associates, Inc. 2008).

Storm drainage and surface and groundwater quality are addressed in Section 3.7, “Hydrology and Water Quality,” of this volume of the draft environmental impact report (DEIR). The development of a level II correctional facility at the RJD Infill Site would include storm drains to direct runoff from the infill site to detention basins, which temporarily detain stormwater runoff to allow sediment particles and certain pollutants to settle before entering the watershed. In addition, low-impact development (LID) methods to maintain pre-project runoff levels, including design considerations when planning roads, parking lots, buildings, or landscaping would be incorporated to the maximum extent practicable. As required by Mitigation Measure 3.7-2, the final specifications of the project’s drainage system would be designed to appropriately accommodate the stormwater runoff generated from the new level II correctional facility to maintain pre-project conditions. Therefore, the impacts associated with the capacity of the existing stormwater drainage system are not analyzed further in this section. However, it should be noted that the impacts of construction of the storm drainage system have been evaluated throughout the technical resources sections in Chapter 3 of this DEIR.

3.12.1 ENVIRONMENTAL SETTING

WATER DEMAND

Based on records from CDCR, RJD water use has dropped dramatically in recent years due to both installation of water conservation devices and a reduction in inmate population. As shown in Table 3.12-1, RJD consumed between 897 and 942 AFY between 2003 and 2007, an average of 923 AFY. Conservation device installation began in 2008, and average water use over the subsequent 3 years of record (2009-2012) was 635 AFY, a 31 percent reduction.

Table 3.12-1 Existing RJD Water Demand 2003-2012	
	Acre-feet/year (AFY)
2003	940
2004	897
2005	901
2006	942
2007	933
2008	811
2009	683
2010	596
2011	626
2012	635
Source: Vanir Construction 2012a. Compiled by Ascent in 2013.	

WATER SUPPLY

The information provided in this water supply section is based on consultation with OWD, review of a prior *Subarea Master Plan of Potable and Recycled Water for the R.J. Donovan Correctional Facility Expansion* (Dexter Wilson Engineering, Inc., 2008) pertaining to a larger project that was not constructed, and the California Department of Corrections and Rehabilitation's (CDCR's) projected water demand estimates for the level II infill correctional facilities (see Appendix 2E). These documents and others prepared by water agencies are referenced as appropriate throughout this section.

The RJD Infill Site is located in unincorporated San Diego County, in the southern area of the San Diego metropolitan region, and near the eastern edge of the Otay Mesa community planning area. OWD is the water supplier to the RJD Infill Site. OWD receives its water supply from local sources within its district and the San Diego County Water Authority (SDCWA), who receives its supply from a mix of local sources and imports water from the Metropolitan Water District of Southern California (MWD).

With its Mediterranean climate, the San Diego region has year-round mild temperatures and receives approximately 10 inches of rainfall annually in coastal regions and up to 40 inches of rainfall in the local mountains (SDCWA 2011). Most of the potable water that serves the region is imported from sources outside of the region, although some groundwater and surface water resources are available. Further, additional projects and conservation measures are planned to decrease the percentage of water supply relied upon from outside sources.

In recent years, the southwestern United States experienced an extended drought period, which combined with population growth, resulted in marked decreases in water reserves and questions of reliability of water supply sources. In June 2008, Governor Arnold Schwarzenegger issued Executive Order S-06-08 declaring a statewide drought, and directing state agencies and departments to take immediate action to address drought conditions and water delivery reductions. This Executive Order was rescinded on March 30, 2011, by Governor Jerry Brown, with strong encouragement to all Californians to continue to minimize water usage and engage in water conservation efforts.

Additional factors potentially affecting future water supply reliability include global climate change and changes to the operation of the State Water Project necessitated by threats to endangered species and other environmental concerns.

Otay Water District (OWD) – Local Water Delivery

OWD joined the SDCWA as a member agency in 1956. The OWD service area is generally located within the south-central portion of San Diego County and includes approximately 137 square miles. It is responsible for water planning, receiving, and delivery within its boundaries, including provision of water resources and maintenance of infrastructure, and implementing water conservation programs. The topography of the service area is diverse, consisting of a variety of valleys, hills, mountains, lakes, and rivers, and includes both Urban and rural development. OWD serves portions of the communities in the southern El Cajon, La Mesa, Rancho San Diego, Jamul, Spring Valley, Bonita, eastern Chula Vista, Eastlake, and Otay Mesa areas. The area within OWD's boundaries is roughly bounded on the north by the Padre Dam Municipal Water District, on the northwest by the Helix Water District, and on the west by the South Bay Irrigation District (Sweetwater Authority) and the City of San Diego. The southern boundary of the OWD service area is the international border with Mexico. This service area lies generally in coastal climate weather conditions, receiving an average rainfall of 12.17 inches per year.

OWD prepared an Urban Water Management Plan (UWMP) in 2010 that demonstrates the demand forecast and full implementation plan for water supply including alternatives and emergencies within OWD's jurisdiction for the years 2015 through 2035 as required by State law. Information provided herein about local water demand and service to the RJD Infill Site is from the OWD 2010 UWMP.

OWD (Local) Water Demand

OWD's service area population has grown from approximately 48,300 in 1980 to a 2010 population of 198,616, and it is expected to continue this strong growth trend. Data on the future rate of growth within OWD were obtained from the San Diego Association of Governments (SANDAG) 2050 Regional Growth Projection adopted by SANDAG's Board of Directors on February 26, 2010 (SANDAG 2010). SANDAG serves as the regional, intergovernmental planning agency and provides estimates of population and housing up to the year 2050. The estimated OWD service population is shown in Table 3.12-2.

Table 3.12-2 Existing and Projected Otay Water District Service Area Population

	2010	2015	2020	2025	2030	2035
OWD Service Area Population	198,616	219,223	242,241	258,037	269,522	284,997
Compound Annual Growth Rate	--	2.1%	2.1%	1.3%	0.9%	1.1%

Source: OWD 2011

The SANDAG forecasts in Table 3.12-5, above, included growth at the RJD. Inmate population was forecasted to grow from nearly 4,700 inmates in 2008 to 7,094 in 2020, and 7,123 in 2035 (SANDAG 2010).

OWD provides water service to residential, commercial, industrial, and agricultural customers, as well as to RJD and other institutions, and for environmental and fire protection uses. The numbers of customers for year 2015 and projections through year 2035 are shown in Table 3.12-3. Table 3.12-4 demonstrates the actual average water uses of these customers based on customer type in 2010. OWD had imposed mandatory conservation measures in 2009 due to a water supply shortage, which were in effect in 2010. This resulted in the 2010 water use decreasing by 25 percent from 2005 levels.

Table 3.12-3 Otay Water District Projected Customer Growth 2015 through 2035 (Number of Customers)					
Water Use Sectors	2015	2020	2025	2030	2035
Single-family residential	42,905	47,410	50,502	52,749	55,778
Multi-family residential	774	855	911	951	1,006
Commercial / Industrial	1,115	1,232	1,312	1,370	1,449
Institutional	230	254	270	282	299
Irrigation	1,655	1,828	1,948	2,034	2,151
Other	822	908	967	1,010	1,068
Unaccounted for	0	0	0	0	0
Total	47,500	52,487	55,910	58,398	61,751
Source: OWD 2011					

Table 3.12-4 2010 Otay Water District Water Deliveries by Sector					
Water Use Sector (Potable)	Number of Accounts	Percent of Customers	2010 Consumption (af)	Percent of Consumption	Average afy used by Customer
Single-family residential	40,994	83%	17,165	51%	0.42
Multi-family residential(1)	3,420	7%	3,605	11%	1.05
Commercial / Industrial	1,196	2%	2,243	7%	1.88
Institutional	237	Less than 1%	1,867	6%	7.88
Dedicated Irrigation(2)	1,200	2%	3,732	11%	3.11
Other(3)	114	0%	584	2%	5.12
Fire Lines	667	1%	23	0%	0.03
Potable Water Delivery Subtotal	48,845	99%	29,270	88%	0.60
Recycled Water Dedicated Irrigation(4)	684	1%	4,074	12%	5.96
Water Delivery Total	**49,529**	**100%**	**33,344**	**100%**	**---**
Source: OWD 2011					

OWD's long-term historic growth rate has averaged around 4 percent. In recent years, growth has occurred at a reduced rate due to a slowdown in economic conditions. The SANDAG forecast shows a growth rate of 1 to 2 percent through 2020. The growth rate is expected to slow as the inventory of developable land is diminished.

Using demand generation factors based on actual use data per customer type, and the anticipated projection of number of customers in a given year within OWD's service area, OWD is able to project the total water demand use for years 2010 through 2030. This use by customer type is shown in Table 3.12-5. Whenever possible, OWD also estimates the water lost to any known unmetered events (for example, construction activities). Furthermore, because the recorded use has not equaled actual supply, OWD service experiences system losses. System losses include water used for storage, flushing, firefighting, and minor leaks in the distribution system, and are reasonably accounted for in the demand projections.

Table 3.12-5 Otay Water District Projected Potable Water Deliveries (af)					
Water Use Sectors	2015	2020	2025	2030	2035
Single-family residential	23,633	28,312	33,600	37,211	40,635
Multi-family residential	3,444	4,126	4,897	5,423	5,922
Commercial / Industrial	1,844	2,209	2,622	2,904	3,171
Institutional	2,518	3,017	3,580	3,965	4,330
Irrigation	10,134	12,141	14,408	15,957	17,425
Other	2,700	3,235	3,839	4,252	4,643
Unaccounted for	608	729	865	958	1,046
Total	**44,883**	**53,768**	**63,811**	**70,669**	**77,171**
Source: OWD 2011					

OWD (Local) Water Supply

OWD receives potable water from Pipeline Number 4 of the Second San Diego County Aqueduct, which is owned and operated by the SDCWA. Pipeline Number 4 delivers potable water treated at the MWD Skinner Water Treatment Plant (WTP) located in Riverside County. Pipeline No. 4 is OWD's primary point of system. SDCWA has multiple flow control facilities (FCF) or connections to Pipeline Number 4 that feed into OWD's water system. During normal operations, most of OWD's potable demand is met with water from Pipeline Number 4.

SDCWA does not have contractual agreements with its member agencies to guarantee flow rates or hydraulic gradients at their various FCF connections. Generally, if the SDCWA cannot obtain sufficient treated and/or raw water, or has delivery limitations for the water requests of its 24 member agencies, SDCWA will attempt to allocate the water delivery shortfall to its member agencies on a proportional basis. OWD water supplies associated with SDCWA are described as follows:

- **Otay 14 Flow Control Facility Modification Agreement:** OWD entered into the Otay 14 Flow Control Facility Modification Agreement on January 24, 2007 with SDCWA to increase the physical capacity of the Otay 14 Flow Control Facility. This agreement provides for a water supply delivery of 12 mgd on–peak, and 16 mgd off-peak.
- **Helix Water District –** OWD has entered into arrangements with SDCWA and neighboring water agencies to provide up to 8.9 mgd potable water to their northern service area during periods when supply from Pipeline No. 4 is unavailable.
- **City of San Diego** – OWD may obtain up to 10 mgd of supply from the City of San Diego's Otay WTP. Under the terms of the agreement between OWD and the City, the City's obligation to supply treated water to OWD is contingent upon its surplus treatment capacity, beyond what the City needs for its own area system.

In addition to water supplies by SCWA, recycled water supplies are produced locally at two locations: the OWD Ralph W. Chapman Water Recycling Facility and a recycled water supply produced at the City of San Diego's South Bay Water Reclamation Plant. The Chapman recycling facility provides tertiary treatment that meets the State of California's Title 22 requirements for reuse. Treated effluent from the plant is pumped to lined and covered reservoirs in OWD's property located north of Proctor Valley Road adjacent to the Rolling Hills Ranch Development project. Water supplied by the South Bay reclamation plant allows OWD to meet recycled water demand without supplementing with potable water. Under the existing agreement between OWD and the City of San Diego, at least 6 mgd of recycled water is provided to OWD. By 2020, OWD anticipates purchasing up to 5,312 af of recycled water for the City of San Diego and producing approximately 1,200 af from the Ralph W. Chapman Water Recycling Facility.

OWD is investigating the potential for developing local groundwater to reduce its dependence on imported water. As illustrated in Table 3.12-6, for water supply planning purposes, OWD anticipates adding groundwater pumped from the Rancho del Rey well into its water supply portfolio. Although the quantity is limited to 500 afy, these supplies could be used in future years to bolster OWD's reliability within its local supply portfolio. It should be noted that these groundwater supplies are not considered "verifiable" local supplies by the SDCWA because all the necessary documentation is still outstanding. As such, these groundwater supplies are not carried through water supply totals discussed below.

Table 3.12-6 Groundwater – Volume Projected to be Pumped (af)

San Diego Formation	2010	2020	2025	2030	2035
Rancho Del Rey	500	500	500	500	500
Percent of total water supply	1.2%	1.2%	1.1%	1.1%	1.0%

Source: OWD 2011

In times when its normal treated supply from Pipeline No. 4 is limited or curtailed, OWD has arranged to receive water from SDCWA and the City of San Diego. These minor interconnections are intended primarily for short-term repairs or emergencies. During an extended outage or water shortage, these neighboring agencies may not have sufficient supply at these minor interconnections to share significant amounts with OWD. Table 3.12-7 provides transfer and exchange opportunities available to OWD.

Table 3.12-7 Transfer and Exchange Opportunities

Transfer Agency	Transfer or Exchange	Short term or long term	Proposed volume (af)
Helix Water District	Emergency Transfer	Short Term	13,500
City of San Diego	Emergency Transfer	Short Term	11,200
Total			**24,700**

Source: OWD 2011

OWD has also constructed storage reservoirs to provide water during an interruption in SDCWA's supply to OWD. These reservoirs provide approximately 190 million gallons of storage, equal to approximately five days of average demand.

Table 3.12-8 summarizes OWD's total current and planned water supplies through 2035. The values provided for 2010 are recorded deliveries; quantities for years 2015 to 2035 are based on growth projections as forecasted by SANDAG (see Table 3.12-3 through 3.12-5, above, for projected population growth and projected water deliveries).

Table 3.12-8 Otay Water District Water Supplies – Current and Projected (af)

Water supply	2010	2015	2020	2025	2030	2035
SDCWA	29,270	44,883	53,768	63,811	70,669	77,171
Recycled Water	4,074	4,400	5,000	5,800	6,800	8,000
Total Supplies	**33,344**	**40,483**	**48,768**	**58,011**	**63,869**	**69,171**

Source: OWD 2011

OWD Water Conservation Measures

Water conservation is a critical part of OWD's 2010 UWMP and its long-term strategy for meeting the water needs of OWD. The goals of OWD's water conservation program are to:

- reduce the demand for more expensive, imported water;
- demonstrate continued commitment to the best management practices (BMPs); and
- ensure a reliable water supply.

OWD is a signatory to the Memorandum of Understanding Regarding Urban Water Conservation in California, which created the California Urban Water Conservation Council (CUWCC) in 1991. As a signatory, OWD is required to submit biannual reports that detail the implementation of current water conservation practices. OWD voluntarily agreed to implement the fourteen water conservation BMPs beginning in 1992. OWD submits its annual report to the CUWCC every two years.

Pursuant to Water Code Section 10608.28, OWD will continue to implement its current programs to reduce water demand throughout its service area and ultimately meet or surpass its water use reduction targets. Through implementation of these programs, rate increases to customers, and an increase in recycled water supplies, OWD has reduced its potable annual water demand between 2008 and 2010 by approximately 3,600 af.

OWD (Local) Supply and Demand Summary

OWD has implemented water conservation measures and currently maintains a per capita demand of 140 gpd. The projected supply and demand comparison under normal conditions is shown in Table 3.12-9.

Table 3.12-9 Otay Water District Projected Normal Year Supply and Demand

Water Supply Sources	2015	2020	2025	2030	2035
SDCWA[1]	40,483	41,321	44,015	45,974	48,614
Recycled Water	4,400	5,000	5,800	6,800	8,000
Groundwater	0	0	0	0	0
Supply totals	44,883	46,321	49,815	52,774	56,614
District Demands[2]	44,883	53,768	63,811	70,669	77,171
Additional Conservation Target[3]	0	-7,447	-13,996	-17,895	-20,557
Demand totals with conservation	44,883	46,321	49,815	52,774	56,614
Difference	0	0	0	0	0
Difference as % of Supply	0%	0%	0%	0%	0%
Difference as % of Demand	0%	0%	0%	0%	0%

[1] OWD supplies assume that the demands meet their 2010 and 2015 SBX 7-7 gpcd water use targets.
[2] OWD demand projections based on SANDAG population projections and near-term annexations.
[3] Additional conservation target is conservation required for OWD to meet their 2010 and 2015 SBX 7-7 gpcd target demands

The OWD 2010 UWMP describes various water demand management measures, including BMPs, water conservation programs, and water efficient practices. According to the OWD 2010 UWMP, SDCWA and MWD have determined that they will be able to meet OWD's potable water demands, during normal, single dry and multiple dry year conditions through 2035. Given this expectation, and existing agreements and assumptions, OWD has a reliable water source to supply all users and planned land uses identified within its 2010 UWMP, including RJD and the proposed level II correctional facility.

San Diego County Water Authority (SDCWA) – Regional Water Delivery to OWD

SDCWA acts as a wholesale purchaser of potable water resources to serve most of the San Diego region. SDCWA, in turn, distributes the water to all of its 24 member agencies, including OWD, which ultimately deliver water to most of the county's residents. Information provided here about SDCWA services and supply/demand projections is obtained from the Updated 2010 UMWP (SDCWA 2011).

SDCWA's boundaries extend from the border with Mexico in the south, to Orange and Riverside counties in the north, and from the Pacific Ocean to the foothills that terminate the coastal plain in the east. With a total of 951,000 acres (1,486 square miles), SDCWA's service area encompasses the western third of San Diego County, including the RJD Infill Site. SDCWA is the county's predominant water supplier, supplying from 75 to 95 percent of the region's needs depending upon weather conditions and yield from surface, recycled, and groundwater projects (SDCWA 2011).

SDCWA (Regional) Water Demand

Table 3.12-10 shows the historic water demand within the SDCWA's service area. Over the last several decades a prosperous economy had stimulated local development and population growth, which in turn produced a relatively steady increase in water demand. After peak in water demand in 2007, with a record level of 741,893 acre-feet (af), demand dropped to 566,443 af by fiscal year 2010. The 175,450 af reduction in demand represents the largest volumetric decline over a three-year period in the SDCWA's history. This drop is attributable to a combination of factors, including mandatory water use restrictions, a growing conservation ethic, greater consumer price response to the retail cost of water, the national recession and a high rate of home foreclosures. This period also included slightly cooler temperatures and more normal rainfall amounts.

Table 3.12-10 Historic Water Demand within SDCWA Service Area (1995-2010)

Fiscal Year	Water Use (af)
1995	526,053
1996	615,900
1997	621,739
1998	562,225
1999	619,409
2000	694,995
2001	646,387
2002	686,530
2003	649,622
2004	715,763
2005	642,152
2006	687,253
2007	741,893
2008	691,931
2009	643,900
2010	566,443

Source: SDCWA 2011

SDCWA utilizes local general plan land use and econometric forecasts, regional implementation plans for conservation members, and member agency-level data to project the amount of water that will be demanded for service in the area. Table 3.12-11 shows water demand for SDCWA for years 2015 through 2035 under normal precipitation conditions with conservation savings. Baseline total regional M&I demand projections reflect historic passive conservation, Marine Corps Base Camp Pendleton area demands, and an increment of demand associated with the decay of historic active conservation program savings. In addition, to fully quantify potential demands served by SDCWA, a small increment of water use associated with known future potential annexations and accelerated forecasted growth was incorporated into the demand forecast.

Dry year conditions (low rainfall) produce greater water demand. Based on historical records during dry years, SDCWA has projected water demand. Under single dry year conditions adjusted for water conservation, the forecast demand would increase to 687,520 af in year 2015 and 839,016 af in year 2035 (approximately 6 percent more than normal years). Multiple dry years have a compounding effect on the amount of water demanded by end users. Under multiple dry year conditions, the forecast demand could increase approximately 1.5 percent above single dry year conditions (7.5 percent above a normal year demand). The increase in this demand and available supply under single-dry or multiple-dry years is accommodated by an increase in imported supply to offset both a decrease in predicted local supply plus increase in local demand.

Table 3.12-11 SDCWA Normal Year Water Demand Projections

	2015	2020	2025	2030	2035
Baseline M&I Demand (af)	590,731	661,415	728,574	788,174	839,417
Baseline Agricultural Demand – Program (af)	30,358	27,164	26,531	25,927	25,324
Baseline Agricultural Demand – Full Service (af)	25,000	22,370	21,849	21,352	20,854
Near-Term Annexations (af)	5,709	6,670	6,670	6,670	6,670
Accelerated Forecasted Growth (af)	2,224	4,421	6,605	8,776	10,948
Total Baseline Demand Forecast (af)	654,022	722,040	790,229	850,899	903,213
SBX7-7 Conservation (af)	- 6,737	-46,951	-72,234	-97,280	-117,528
Total Baseline Demand Forecast with Conservation (af)	**647,285**	**675,089**	**717,995**	**753,619**	**785,685**

Source: SDCWA 2011

SDCWA (Regional) Water Supply

Historically, SDCWA has relied on imported water supplies purchased from the Metropolitan Water District of Southern California (MWD) to meet the needs of its member agencies. MWD's supplies come from two primary sources: (1) the Colorado River and (2) the State Water Project (SWP). However, after experiencing severe shortages from MWD during the 1987–1992 drought, SDCWA began aggressively pursuing actions to diversify the region's water supply sources. As documented in Tables 3.12-12 and 3.12-13, below, SDCWA supplies include the following sources.

MWD - Colorado River Aqueduct: MWD was formed to import water from the Colorado River. During the 1930s, MWD built the Colorado River Aqueduct to convey this water. MWD's member agencies received the first deliveries in 1941. The aqueduct is more than 240 miles long, beginning at Lake Havasu on the Arizona/California border and ending at Lake Mathews in Riverside County. The aqueduct has capacity to deliver up to 1.25 million afy.

Before 1964, MWD had a firm annual allocation of 1.212 million af of Colorado River water through contracts with the U.S. Department of the Interior, which was enough to keep MWD's aqueduct full. However, as a result of the U.S. Supreme Court decision in *Arizona vs. California* (2000), MWD's firm supply fell to 550,000 af, its basic annual apportionment. Due to growth in demand from the other states and drought conditions, since 2003, MWD's deliveries have been limited to its basic annual apportionment plus water resulting from unused apportionment water (by other California holders of certain priority rights) and transfer programs resulting from conservation with other senior water right holders. Water availability from the Colorado River is governed by a system of priorities and water rights that has been established over many years. The Colorado River Lower Basin states (California, Arizona, and Nevada) have an annual apportionment of 7.5 million af of water divided as follows: (1)

California, 4.4 million af; (2) Arizona, 2.8 million af; and (3) Nevada, 300,000 af. The 1931 Seven Party Agreement established California's priorities for water among California's contractors to use Colorado River water made available to California. The first four priorities total the 4.4 million afy available to California. MWD has priorities 4, 5(a), and 5(b) water listed in the Seven Party Agreement, but only priorities 1–4 of the Seven Party Agreement are within California's basic annual apportionment. MWD's fourth priority of 550,000 af is junior to that of the first three priorities, 3.85 million af to California agricultural agencies. Water used to satisfy MWD's priorities 5(a) and 5 (b) must come from unused allocations within California, Arizona, or Nevada, or from surpluses declared by the Secretary of the Interior.

A number of species that are on either "endangered" or "threatened" lists under the federal and/ or California Endangered Species Acts are present in the area of the Lower Colorado River. To address this issue, a broad-based state/federal/tribal/private regional partnership, which includes water, hydroelectric power, and wildlife management agencies in Arizona, California, and Nevada, developed a multi-species conservation plan for the main stem of the Lower Colorado River (the Lower Colorado River Multi-Species Conservation Program). Developed between 1996 and launched in early-2005, this 50-year plan allows MWD to obtain federal and state permits for any incidental take of protected species resulting from current and future water and power operations and diversions on the Colorado River. The conservation plan also covers operations of federal dams and power plants on the Colorado River.

MWD has a firm Colorado River supply of 550,000 af from its fourth priority within California's basic apportionment of 4.4 million af. Because MWD continues to face dry hydrologic challenges coupled with increasing demands, MWD relied on its fifth priority for up to 662,000 afy (through unused water from holders of priorities 1 through 3, water saved by Palo Verde, or when the U.S. Secretary of Interior declares surplus or unused water by Arizona and/or Nevada), and additional supplies when the Department of Interior declared surplus flows are available. A 2003 Quantification Settlement Agreement and related agreements among the Imperial Irrigation District, the Coachella Valley Water District (CVWD), State of California, Department of Interior, MWD, and SDCWA, formalized a plan for how California will implement water transfers, water conservation, and supply programs that allow California to live within the state's 4.4 million af basic annual apportionment of Colorado River water. Since then, MWD has relied on cooperative transfer programs and storage programs to increase its Colorado River water deliveries beyond its basic fourth priority water.

MWD's 2010 Regional Urban Water Management Plan indicates that MWD's current program Colorado River Aqueduct supply target for an average (based on 1922–2004 hydrologies) and single (repeat of 1977 hydrology) or multiple dry year (based on 1990–1992 hydrology) is 1.25 million af, the maximum Colorado River Aqueduct delivery capacity. The figure includes water management programs and IID/SDCWA transfers and conserved canal lining water conveyed by the aqueduct.

MWD – State Water Project: The SWP is owned by the State of California and is operated by the Department of Water Resources (DWR). MWD has a take-or-pay supply contract with the State of California and is entitled to take about 48 percent of available SWP water through its Long-Term State Water Project Water Supply Contract. The SWP stretches more than 600 miles, from Lake Oroville in the north to Lake Perris in the south. Water is stored at Lake Oroville and released when needed into the Feather River, which flows into the Sacramento River and to the Sacramento–San Joaquin River Delta (Delta). The Delta is the largest estuary on the United States' west coast and is also home to agricultural industry, recreation and fishing, and provides the means by which to deliver water from Northern California to the south. In the north Delta, water is pumped into the North Bay Aqueduct for delivery to Napa and Solano counties. In the south Delta, water is diverted into the SWP's Banks Pumping Plant, where it is lifted into the 444-mile-long California Aqueduct. Some of this water flows into the South Bay Aqueduct to serve areas in Alameda and Santa Clara counties. The remainder flows southward to cities and farms in central and southern California. In the winter, when demands are

lower, water is stored at the San Luis Reservoir located south of the Delta. State Water Project facilities provide drinking water to 23 million Californians and 755,000 acres of irrigated farmland.

When approved by the voters in the 1960s, the SWP was planned to deliver 4.2 million af to 32 contracting agencies. Subsequent contract amendments reduced total contracted deliveries to 4.13 million af and the number of contracting agencies to 29. MWD's contracted entitlement is 1,911,500 af. MWD's original long-term water supply contract for 2,011,500 af was amended as part of the 2003 Quantification Settlement Agreement. Effective in 2005, the amendment resulted in an exchange agreement among CVWD, Desert Water Agency (DWA), and MWD. The exchange agreement provides for the transfer of 88,100 af of MWD amounts to CVWD and 11,900 af of MWD's amounts to DWA.

MWD's SWP deliveries projection listed in its Regional Urban Water Management Plan (November 2010) (RUWMP) are based on DWR's 2009 State Water Project Delivery Reliability Report (which is substantially the same as the final report) but is also rooted in unpredictable flow requirements due to new state and federal environmental laws, more stringent water quality standards to protect the Delta, changes in public attitudes, and increasing costs. For dry, below-normal conditions, MWD also developed its Central Valley storage and transfer programs to increase its supply capabilities. In developing its supply capabilities, MWD assumed a new Delta conveyance as fully operational by 2022 and would return supply reliability similar to 2005 conditions, prior to supply regulatory restrictions imposed. MWD also assumes near-term improvements that could potentially provide a 10 percent increase in water supplies obtained from the SWP allocation for the year. Additional supplies from this interim fix are assumed to materialize by 2013. In terms of water supply impacts, MWD identified regulatory restrictions of over one million af between both the SWP and the federal CVP in 2010.

Imperial Irrigation District Transfer Agreement: A Water Resources Plan developed in 1993 and updated in 1997 emphasized the development of local supplies and core water transfers. Consistent with the direction provided in the 1997 plan, SDCWA entered into a Water Conservation and Transfer Agreement with the Imperial Irrigation District (IID), an agricultural district in neighboring Imperial County, in 1998. Through the transfer agreement, the SDCWA received 70,000 af in 2010, with the volume increasing annually until it reaches 200,000 acre-feet per year (afy) (in 2021). The Imperial Irrigation District Water Conservation and Transfer Agreement supply source is considered a verifiable SDCWA supply (i.e., a project with adequate documentation regarding implementation and supply utilization).

Canal Lining Projects: In 2003, a Quantification Settlement Agreement for the Colorado River was completed. This historic agreement provides California the means to implement water transfers and supply programs that will allow California to live within the state's 4.4 million acre-foot basic annual apportionment of Colorado River water. As part of the Quantification Settlement Agreement, SDCWA contracted for 77,700 afy of conserved water from projects to line the All-American and Coachella Canals. The projects reduced the loss of water that occurred through seepage, and the conserved water is delivered to SDCWA. Depending on environmental requirements from the Coachella Canal lining project, an additional 4,850 afy is available to SDCWA. For planning purposes, SDCWA assumes that 2,500 af of the additional 4,850 af will be available each year for delivery, for a total of 80,200 afy of supply from this source. These Colorado River canal-lining supplies are considered verifiable SDCWA supplies.

Desalination: To further diversify regional supplies, SDCWA's 2005 Plan identified seawater desalination as a potential supply for meeting future demands. In keeping with the objective of the 2005 Plan, SDCWA pursued the purchase of a water supply from the Carlsbad Desalination Project, a fully-permitted private desalination project at the Encina Power Station site located in the City of Carlsbad. In 2010, SDCWA's Board of Directors approved a Term Sheet between the SDCWA and the private investor-owned company, Poseidon Resources (Poseidon), and prepared a draft Water Purchase Agreement based on its provisions. The Carlsbad Desalination Project will provide a reliable local supply of 56,000 afy and is considered a verifiable SDCWA supply. The desalination project is under

construction, with a planned 2016 operational date. In addition to the Carlsbad Desalination Project, the SDCWA is also pursuing the development of two other regional seawater desalination projects – planning efforts for a new regional desalination project located on Camp Pendleton, and the feasibility evaluation of a bi-national seawater desalination project in Rosarito, Mexico.

SDCWA-Member Agency Water Supplies: Local resources developed and managed by the SDCWA's member agencies are also critical to securing a diverse and reliable supply for the region. Local projects include surface water, groundwater, recycled water, and desalinated seawater, which reduce demands for imported water and often provide agencies with a drought-proof supply. Since 1980, a range of 5 to 36 percent of the water used within the SDCWA's service area has come from local sources, primarily from surface water reservoirs with yields that vary directly with annual rainfall. A small but growing share of local supply comes from recycled water and groundwater recovery projects, with additional local supply planned from seawater desalination. Yield from these projects are considered drought-proof since they are primarily independent of precipitation. In fiscal year 2010, total local water sources provided 11 percent of the water used in the SDCWA's service area.

Surface water supplies represent the largest single local resource in the SDCWA's service area. The regional surface water yield is supported by 25 surface reservoirs with a combined capacity of 593,490 af. However, annual surface water yields can vary substantially due to fluctuating hydrologic cycles. Since 1980, annual surface water yields have ranged from a low of 18,000 af to a high of 146,000 af. Planned SDCWA Emergency Storage Projects are expected to increase local yield due to the more efficient use of local reservoirs; however, the volume has not been determined. SDCWA member agencies determined average surface water yield to range from 48,206 afy in 2015 to 47,289 afy in 2035.

SDCWA does not currently hold groundwater basin rights, nor does it own or operate groundwater facilities within San Diego County. Groundwater production in the SDCWA's service area is limited by a number of factors including: the limited geographic extent of the more productive sand and gravel (alluvial) aquifers; the relatively shallow nature of most of the alluvial aquifers; lack of rainfall and groundwater recharge; and degraded water quality resulting from human activities, such as septic tank use. Although opportunities are limited, groundwater is currently being used to meet a portion of the municipal water demands throughout the SDCWA's service area from Marine Corps Base Camp Pendleton in the north to National City in the south.

Within the past five years, water supply agencies within the SDCWA's service area have produced an annual average of approximately 18,300 af of potable water supplies from groundwater. This total represents production from both brackish groundwater desalination facilities and municipal wells producing groundwater not requiring desalination. In addition to providing a local supply to water agencies, groundwater is also a source of supply for numerous private well owners who draw on groundwater to help meet their domestic and agriculture water needs. These domestic supplies help to offset demand for imported water provided by the SDCWA and its member agencies. Although the amount of groundwater pumped by private wells is significant, it cannot be accurately quantified nor estimated within the SDCWA's entire service area.

Water may be recycled for non-potable or indirect potable purposes. Non-potable recycling is the treatment and disinfection of municipal wastewater to provide a water supply suitable for non-drinking uses. Agencies in San Diego County use recycled water to fill lakes, ponds, and ornamental fountains; to irrigate parks, campgrounds, golf courses, freeway medians, community greenbelts, school athletic fields, food crops, and nursery stock; and to control dust at construction sites. Recycled water can also be used in certain industrial processes, in cooling towers and for flushing toilets and urinals in non-residential buildings. Recycled water is also being considered for street sweeping purposes.

Indirect potable reuse includes the use of multi-barrier treatment, which may include treatment technologies such as reverse osmosis and advanced oxidation, and a natural barrier, such as a

groundwater basin or surface water reservoir, to render wastewater suitable for potable purposes. Several SDCWA member agencies are completing studies pertaining to potable reuse in San Diego County through groundwater recharge or reservoir augmentation.

SDCWA Water Conservation Measures

SDCWA works with member agencies, such as OWD, to implement a variety of water conservation programs and best management practices (BMPs) to help reduce the demand on imported supply. These BMPs include residential water surveys; residential plumbing retrofit; large landscape programs and incentives; high-efficiency washing machine rebate programs; commercial, industrial, and institutional water conservation programs; and residential ultra-low flush toilet replacement programs. In addition, SDCWA monitors member agency programs such as distribution system water audits, metering with commodity rates, public information programs, school education programs, wholesale agency assistance programs, conservation pricing, water conservation coordinator and water waste prohibition. From 1991 through 2010, over 656,000 af of water was conserved through the region's conservation programs, including 65,000 af in 2010.

SDCWA Water Supply and Demand Summary

Tables 3.12-12 and 3.12-13 summarize the confirmed sources of water for the SDCWA service area through year 2035 under normal and single dry year conditions and demonstrates that the SDCWA will be able to meet projected demands throughout this time period. In the absence of a catastrophic shortfall in delivery, SDCWA believes that through its projections, entitlements and continued on-schedule systems planning, it will receive the amounts listed in this Table (SDCWA 2011).

Table 3.12-12 Summary of SDCWA Confirmed Water Supplies (Normal Year Conditions)

Water Source	2015	2020	2025	2030	2035
MWD Supplies[1]	358,189	230,601	259,694	293,239	323,838
IID Water Transfer	100,000	190,000	200,000	200,000	200,000
Canal Lining Projects	80,200	80,200	80,200	80,200	80,200
Proposed Regional Desalination	0	56,000	56,000	56,000	56,000
Local (Member Agency) Supplies Subtotal	108,896	118,288	122,101	124,180	125,647
Surface Water	*48,206*	*47,940*	*47,878*	*47,542*	*47,289*
Water Recycling	*38,660*	*43,728*	*46,603*	*48,278*	*49,998*
Groundwater	*11,710*	*11,100*	*12,100*	*12,840*	*12,840*
Groundwater Recovery	*10,320*	*15,520*	*15,520*	*15,520*	*15,520*
Total Projected Supplies	**647,285**	**675,089**	**717,995**	**753,619**	**785,685**
Total Projected Demand with Conservation Measures	**647,285**	**675,089**	**717,995**	**753,619**	**785,685**

Source: SDCWA 2011
[1] MWD water supplies include water imported from the State Water Project and the Colorado River.

Table 3.12-13 Summary of SDCWA Confirmed Water Supplies (Single Dry Year Conditions)					
Water Source	2015	2020	2025	2030	2035
MWD Supplies[1]	430,431	305,101	338,501	376,023	409,389
IID Water Transfer	100,000	190,000	200,000	200,000	200,000
Canal Lining Projects	80,200	80,200	80,200	80,200	80,200
Proposed Regional Desalination	0	56,000	56,000	56,000	56,000
Local (Member Agency) Supplies Subtotal	**108,896**	**118,288**	**122,101**	**124,180**	**125,647**
Surface Water	*17,932*	*17,932*	*17,932*	*17,932*	*17,932*
Water Recycling	*38,660*	*43,728*	*46,603*	*48,278*	*49,998*
Groundwater	*9,977*	*9,977*	*9,977*	*9,977*	*9,977*
Groundwater Recovery	*10,320*	*15,520*	*15,520*	*15,520*	*15,520*
Total Projected Supplies	**687,520**	**718,458**	**764,733**	**803,930**	**839,016**
Total Projected Demand with Conservation Measures	**687,520**	**718,458**	**764,733**	**803,930**	**839,016**

Source: SDCWA 2011
[1] MWD water supplies include water imported from the State Water Project and the Colorado River.

GLOBAL CLIMATE CHANGE AND WATER SUPPLY

In recent years, the scientific consensus has begun to accept that Earth's climate is changing, and has broadened to consider increasing concentrations of greenhouse gases, attributable to anthropogenic activities, as a primary cause of global climate change. The United Nations Intergovernmental Panel on Climate Change predicts that changes in Earth's climate will continue through the 21st century and that the rate of change may increase significantly in the future because of human activity (IPCC 2007). An extensive background on global climate change, including modeling and trends, is found in Chapter 5 of Volume 1 of this DEIR.

WATER SUPPLY PROJECTIONS

Several studies have shown that existing water supply systems are sensitive to climate change (Wood et al.1997). Many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows as a result of rainfall and snowpack (Kiparsky and Gleick 2005; Cayan et al. 2006). Little work has been performed on the effects of climate change on specific hydrologic basins, though groundwater recharge reduction, higher evaporation, and shorter rainfall seasons could be expected (Kiparsky and Gleick 2003). Conversely, rapid or additional winter runoff would be occurring at a time when some basins, particularly in Northern California, are being recharged at their maximum capacity. However, the specific extent to which various meteorological conditions will change and the impact of that change on hydrologic systems are both unknown.

The DWR *California Water Plan* (2005 update) addresses a wide range of climate impacts and risks, including risks to water resources (Kiparsky and Gleick 2005; Roos 2005). The 2005 update focused on climate change impacts on SWP operations and on the Delta. The results suggest several impacts of climate change on overall SWP operations and deliveries. In three of the four climate scenarios simulated, reservoirs north of the Delta experienced shortages during droughts. Van Rheenen et al. (2004) studied the potential effects of climate change on the hydrology and water resources of the Sacramento– San Joaquin River basin using five parallel climate model scenarios. The study concluded that most mitigation alternatives examined satisfied 87 percent to 96 percent of environmental targets in the Sacramento system, and less than 80 percent in the San Joaquin system. Therefore, modifications and improvements to system infrastructure could be necessary to accommodate the volumetric and temporal shifts in flows predicted to occur with future climates in the

Sacramento–San Joaquin River basin. Lund et al. (2003) examined the effects of a range of estimates of climate warming on the long-term performance and management of California's water system. The study estimated changes in California's water availability, including effects of forecasted changes in year 2100 urban and agricultural water demands, using a modified version of the CALVIN model. Some of the main conclusions are summarized as follows:

- A broad range of climate-warming scenarios shows significant increase in wet season flows and significant decreases in spring snowmelt. The magnitude of effects of climate change on water supplies is comparable to increases in water demand from population growth in the 21st century.
- In Southern California, population growth is expected to be more problematic than climate change.
- Population growth, conveyance limits on imports, and the high economic value of water in Southern California could lead to high levels of wastewater reuse and substantial use of desalinated seawater along the coast.
- California's water system could economically adapt to all the climate-warming scenarios examined in the study.
- California can adapt to population growth and global climate change by using new technologies for efficiency of water supply, treatment, and water use; implementing water transfers and conjunctive use; coordinating operation of reservoirs; and improving flow forecasting. The cooperation of the federal, state, regional, and local governments can also be helpful. Even if these strategies are implemented, however, the costs of water management are expected to be high and there is likely to be less "slack" in the system than under current operations and expectations.

SUMMARY OF GLOBAL CLIMATE CHANGE ON WATER SUPPLY

Overall, climate change is expected to have a greater effect in Southern California including the San Diego region, than the rest of California. For example, for year 2020 conditions, where optimization is allowed (i.e., using the CALVIN model), scarcity is essentially zero in the Sacramento Valley for both urban and agricultural users, and generally zero for urban users in the San Joaquin and Tulare basins. Rather, most water scarcity will be felt by agricultural users in Southern California, although urban users in Southern California, especially those in the Coachella Valley, will also experience some scarcity. By the year 2050, urban water scarcity will remain almost entirely absent north of the Tehachapi Mountains, although agricultural water scarcity in the Sacramento Valley could increase to about 2 percent (Medellin et al. 2006). Based on the conclusions of current literature regarding California's ability to adapt to global climate change, it is reasonably expected that, over time, the state's water system will be modified to be able to handle the projected climate changes, even under dry and/or warm climate scenarios (DWR 2005). Although coping with climate change effects on California's water supply could come at a considerable cost, based on a thorough investigation of the issue, it is reasonably expected that statewide implementation of some, if not several, of the wide variety of adaptation measures available to the state will likely enable California's water system to reliably meet future water demands. For example, traditional reservoir operations may be used, in conjunction with other adaptive actions, to offset the impacts of global warming on water supply (Medellin et al. 2006; see also Tanaka et al. 2006 and Lund et al. 2003). Other adaptive measures include better water use efficiency practices by urban and agricultural users, conjunctive use of surface water and groundwater, desalination, and water markets and portfolios (Medellin et al. 2006; see also Lund et al. 2003 and Tanaka et al. 2006). As described by Medellin et al. 2006, with adaptation to the climate, water deliveries to urban centers are expected to decrease by only 1 percent, with Southern California shouldering the brunt of this decrease.

WATER DISTRIBUTION

Water supply to RJD is exclusively provided by OWD. The RJD property is within OWD's Otay Mesa system. The Otay Mesa system is supplied entirely from OWD flow control facility (FCF) 13 on pipeline

4 of SDCWA second San Diego aqueduct. The water supply for the Otay Mesa system is conveyed from FCF 13 to the 571-1 reservoir via a 30-inch transmission line. Water is then pumped to the 870 zone system.

There is a low head pump station that is supplied by either the 571-1 reservoir or FCF 13. This pump station operates in series with the 870-1 pump station to provide suction pressure to the 870-1 pump station. Capacities of the pump stations are described in the Subarea Master Plan (Dexter Wilson Engineering 2008). The two reservoirs in the Otay Mesa system are the 571-1 reservoir and 870-1 reservoir, which have capacities of 36.7 million gallons and 11.0 million gallons, respectively.

The offsite potable water infrastructure is currently able to accommodate water delivery to RJD and the infill site. Two existing OWD water lines serve RJD. A 30-inch water main lies under Alta Road and delivers potable water from the north of the project site. A 24-inch water delivery line connects to this water main approximately 0.25 mile north of Donovan State Prison Road and runs directly west under the RJD Infill Site to an existing meter. A second 30-inch water main lies under Johnson Canyon and runs along the CDCR southern property boundary, then turns northward to deliver water to RJD through the same meter and connects with the 24-inch line to form a closed system loop. From the meter, water is delivered throughout the existing RJD via a 16-inch private water line into the site, and branching 12-inch water lines to final use locations.

Water infrastructure is required to be of a capacity enough to provide high fire flow for 3 hours minimum. This equates to a minimum of 3,500 gallons per minute that would need to be delivered to the site (Dexter Wilson Engineering 2008). This delivery rate is currently achievable under the existing infrastructure.

The potable water distribution system has been designed to maintain static pressures between 65 pounds per square inch (psi) and 200 psi. The potable water distribution system has been designed to yield a maximum static pressure of 200 psi, a minimum of 40 psi residual pressure at any location under peak hour demand flows, and a minimum residual pressure of 20 psi during maximum day demand plus fire flow conditions. Potable water mains are sized to maintain a maximum velocity of 10 feet per second under a maximum day plus fire flow scenario and a maximum velocity of 6 feet per second under peak hour flow conditions.

The OWD 24- inch transmission main located under the RJD Infill Site is steel pipe and is not cathodically protected, which is a concern due to corrosive soil conditions. However, OWD has an ongoing pipeline replacement program for sections of corroded pipeline (CDCR 1995). Maintenance of the OWD water transmission lines is the responsibility of OWD. OWD has indicated that the existing potable water transmission lines are adequate to serve RJD and the contemplated level II infill correctional facility.

RECYCLED WATER

Recycled water facilities for OWD Zone 860 currently do not serve the existing RJD Infill Site. However, a 30-inch recycled water main line is constructed beneath Alta Road to the east of the infill site. Although recycled water facilities, such as the line east of RJD, have been constructed by developers in Otay Mesa, none are currently receiving recycled water. There is currently no connection from the 30-inch main to RJD. OWD plans to expand its recycled water system into the Otay Mesa area by constructing a 24-inch pipeline along Alta Road and a 4-mg 850-1 Reservoir, connecting the Central Area system with the Otay Mesa system for the delivery of recycled water. These facilities are included in the 2009 District's Capital Improvement Program (OWD 2010).

WATER TREATMENT FACILITIES

As described above, OWD receives potable water from Pipeline Number 4 of the Second San Diego County Aqueduct, which are owned and operated by SDCWA. Pipeline Number 4 delivers potable

water treated at the MWD Skinner Water Treatment Plant located in Riverside County. OWD has also established emergency interconnections with neighboring agencies to provide potable water during an emergency from the City of San Diego Otay WTP (10 mgd) and SDCWA through the Levy WTP (currently 8 mgd and proposed 16 mgd). As such, there is no onsite water treatment facilities existing or planned at RJD.

WASTEWATER

The City of San Diego's Public Utilities Department (San Diego PUD) sewage system provides wastewater collection and treatment services for RJD. All wastewater from RJD site is conveyed to the Point Loma Wastewater Treatment Plant (WWTP). An onsite 15-inch sewer main at RJD collects wastewater flows, passes them through a bar screen and sewer grinder, and then conveys them to a series of trunk sewers beginning at the western edge of the existing RJD facilities. Wastewater flows are then conveyed downstream via gravity flow along Johnson Canyon Road, ultimately to the WWTP. Two main sewer trunk lines serve the Otay Mesa region before reaching the main delivery lines at the Grove Avenue pump station, approximately 10 miles west of RJD.

Landowners in Otay Mesa and the City of Chula Vista are currently required to fund, based on dwelling unit-equivalencies, upgrades to the wastewater system. The upgrades will include new transmission pipelines, recycled water pipelines, and associated pump stations. As a landowner in this area, CDCR will contribute to these upgrades, as discussed further in the impact discussion below.

The Point Loma WWTP has a treatment capacity of 240 mgd and treats approximately 175 mgd of wastewater, generated in a 450 square-mile area by more than 2.2 million residents. The WWTP is currently waived from secondary treatment requirements of the Clean Water Act; instead, it implements advanced primary treatment of wastewater, a deep ocean outfall (4.5 miles long and 320 feet below the ocean surface), and comprehensive environmental monitoring (City of San Diego 2013). The State of California, OWD, and San Diego PUD (formerly known as the San Diego Metropolitan Wastewater Department) entered into a wastewater service agreement for the provision of sewer service to RJD on August 19, 1985. This agreement allows CDCR to discharge sewage to the San Diego PUD sewer collection, treatment, and disposal system. The agreement allows CDCR to discharge 0.826 mgd average daily flow with a maximum instantaneous peak flow rate of 1.5 mgd (City of San Diego 1985).

Between July 2007 and June 2008, the average 12-month wastewater flow generated by RJD was 0.801 mgd, and wastewater generation exceeded the 0.826 mgd average daily flow sewer capacity allowance in two of the 12 months. However, since that time, implementation of water conservation measures; installation of water saving devices; and a reduction in the inmate population at RJD have substantially reduced the amount of wastewater generated at RJD. Table 3.12-14 provides the average, maximum, and minimum recorded wastewater flows from RJD between January 2010 and February 2012. The projected level II facility flow plus the existing RJD flows are anticipated to remain below the discharge limits allowed in the City of San Diego agreement.

Table 3.12-14 RJD Wastewater Flows January 2010 - February 2012

	Wastewater Flow (mgd)	Per Inmate (gpid)
RJD Average	**0.54 mgd**	**138 gpid**
RJD Minimum	**0.48 mgd**	**123 gpid**
RJD Maximum	**0.58 mgd**	**148 gpid**

Note: mgd = million gallons per day; gpid = gallons per inmate per day
Source: Vanir Construction Management 2013a; Data compiled by Ascent in 2013

SOLID WASTE

The primary landfill site serving RJD is the Otay Landfill in Chula Vista, approximately five miles west of RJD. San Diego County owns and operates the Otay Landfill, which is one of five primary solid waste disposal facilities in the County. Otay Landfill is 464 acres in size, with a permitted disposal area of 230 acres. The landfill is classified as a Class III municipal solid waste landfill facility and is permitted to accept general residential, commercial, and industrial refuse for disposal, including municipal solid waste, construction and demolition debris, green materials, agricultural debris, and other nonhazardous designated debris (CalRecycle 2013).

The Otay Landfill is permitted to accept a maximum of 5,830 tons per day (tpd) of solid waste. The landfill has a permitted capacity of approximately 62 million cubic yards and a remaining capacity of 33 million cubic yards. The closure date of the Otay Landfill is anticipated to be approximately 2021 (CalRecycle 2013).

CDCR utilizes a solid waste generation factor of 3.6 pounds per inmate per day (CDCR 1995). RJD also operates a recycling and salvage program, which salvages primarily metal, cardboard, and white paper, which reduces the waste delivered to local landfills by as much as 40 percent (CDCR 1995). Currently, with a population of approximately 4,700 inmates, there is an estimated 17,000 pounds (8.5 tons, or 11.4 cubic yards) of waste generated daily or the equivalent of 3,000 tons annually. Since the Otay Landfill receives an average of 3,774 cubic yards daily, RJD contributes approximately 0.3 percent of the daily landfill intake.

Regulated medical waste is currently collected from soiled staging areas near the clinic facilities and is transported to a dock. This waste is placed in a sterilizer for processing, and is then sent to a general waste compactor. Specialty waste is contracted through private companies for removal, processing and final disposal.

ELECTRICAL SERVICE

Electricity service is provided to RJD by San Diego Gas & Electric (SDG&E). SDG&E is a regulated public utility that provides energy service to 3.4 million people in San Diego and southern Orange Counties over 4,100 square miles (SDG&E 2013).

SDG&E owns and operates the electric transmission and distribution facilities within the project area. These are bulk power lines that connect the various electric distribution substations to the bulk power supply. They are not suitable for direct power connections to customer service, unless the customer is a large electric load user. If a bulk power connection is made, it is usually done at the 69 kilovolt (kV) transmission level with a specially designed metering and transforming station to be owned by the customer. Nearby electrical facilities include the following:

- TL23040 – a 230kV transmission line, located just east of the infill site. The right-of-way (ROW) for this transmission line passes immediately west of the George F. Bailey and East Mesa Detention Facilities.
- TL649 – a 69kV transmission line, located to the immediate north and west of the infill site. The ROW travels north along Harvest Road from the SDG&E Border substation and then east, after it passes Lonestar Road toward the southwest corner of RJD.
- TL6910 – a 69kV transmission line, which lies within the same ROW as TL23040 as it travels south from the Miguel substation. TL6910 branches off that ROW north of RJD and on to ROW on the east side of Alta Road and then turns west on Otay Mesa Road and on to the Border substation.

The line servicing the immediate infill site is the overhead distribution circuit #534 (3 – phase, 3-#2 [ACSR] conductor). This circuit is located on the south side of Donovan State Prison Road. It branches

from 12kV circuit #536 and runs north-south along the east side of Alta Road on wood poles common to TL6910 and circuit #536. A telephone line, owned by AT&T, also shares this same pole line and is under built to the electric service lines. Circuit #534 proceeds west along Donovan State Prison Road to serve the prison facility. It then continues west to Harvest Road and then south to Border substation. Other circuits in the near vicinity are located along Otay Mesa Road and along the Otay River Valley and are also of overhead construction.

The local electricity distribution substations are Otay Lakes (just northeast of the project site on the east side of the ROWs for TL23040 and TL6910) and Border substation (located on the south side of Otay Mesa Road, near Harvest Road). These substations are located 0.5 mile to the north and 2 miles to the southwest, respectively, of the project site. Each of these substations transforms the 69kV electricity down to 12kV for local electricity distribution.

Most of the existing buildings at RJD are fed via underground distribution lines. RJD typically demands about 4 megawatts (MW) under peak energy needs. RJD has a natural gas-fired turbine 3-MW cogeneration system located in the Central Plant of RJD, which is designed to serve as a primary electricity provider for the prison. However, the system may not have the capacity to serve all of RJD's needs for an extended period of time. Additionally, five, 1,500-kilowatt (kW) backup generators are available to deliver electricity to RJD in the event of a power outage. From August 2010 through August 2012, electricity demand at the existing RJD facilities averaged approximately 68,000 kilowatt-hours (kWh) per month (Vanir 2012b).

NATURAL GAS

SDG&E is the local distributor of natural gas. SDG&E purchases gas supplies from other utilities and transports it through a network of interstate gas transmission lines to the Southern California area via pipelines to approximately 1.4 million business and residential accounts in a 4,100 square-mile service area (SDG&E 2013). The primary pipeline serving the gas transmission needs for RJD is pipeline 2000, a 36-inch-diameter high pressure (600 psi or greater) line for bulk product transport that is within rights of way along the eastern side of Harvest Road. Lesser diameter and lower pressure lines branch off from the primary line's termination point at a gas regulator station adjacent to the SDG&E Border substation (Nolte Associates 2008: 4-18).

Local natural gas service to the RJD Infill Site is provided by a 10-inch-diameter, 400 psi high pressure main located along Otay Mesa Road, approximately three miles to the southwest. Service to RJD is provided by an eight-inch-diameter, 400 psi gas pipeline located in Harvest Road. The eight-inch line also provides service to other local area SDG&E customers. All construction and maintenance activities for natural gas facilities are the responsibility of SDG&E (Nolte Associates 2008: 4-18).

From March 2010 through February 2012, natural gas demand for existing RJD facilities averaged approximately 274,000 Therms per month (Vanir 2012c).

COGENERATION

A natural gas-fired turbine cogeneration system is located in the central energy plant at RJD, which provides approximately 80 percent of the existing RJD electrical load. However, this cogeneration system has never been the sole source of electricity for RJD. The cogeneration system provides electricity and thermal energy for space heating, water heating and process heat throughout RJD. This central energy plant was designed to take full advantage of the waste heat from the cogeneration system to supplement the boilers (Nolte Associates 2008). The RJD cogeneration system was rebuilt in 2010 (after it was out of service for a number of years). Although the RJD cogeneration facility will continue to operate, it has reached maximum output; therefore, no energy would be supplied to new level II correctional facilities at RJD from this cogeneration system (Cavender, pers. comm., 2013).

3.12.2 REGULATORY CONSIDERATIONS

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws related to utilities are applicable to the construction and operation of level II correctional facilities at RJD.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

A list of the applicable state plans, policies, regulations, and laws relating to public utilities is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

WATER SUPPLY

- California Water Code - The California Water Code outlines the general state authority and responsibilities over water in California.
- Urban Water Management Planning Act - The Urban Water Management Planning Act requires water suppliers to document water supplies available during normal, single dry, and multiple dry water years during a 20-year projection period, and to document the existing and projected future water demand during a 20-year projection period.
- Senate Bills 610 and 221 - SB 610 amended the Water Code requirements within the CEQA process and broadened the types of information required in a UWMP. SB 610 requires the preparation of “water supply assessments” for large developments (i.e., more than 500 dwelling units or nonresidential equivalent) proposed under the jurisdiction of a County or City lead agency. CEQA Guidelines section 15155 now includes the requirements of SB 610. Because CDCR is a state agency, it is not required to comply with the requirements of these provisions.
- California Water Code Part 2.10 - Water Code Part 2.10 clarifies the roles and responsibilities, under CEQA, of the lead agency and the water supplier (i.e., the public water system) with respect to describing current and future supplies compared to current and future demand. It also defines the projects for which a WSA must be prepared as well as the responsibilities of the lead agency related to the WSA.

WATER AND WASTEWATER DISTRIBUTION

There are no state regulations relevant to the project that pertains to water and wastewater distribution infrastructure.

ELECTRICITY AND NATURAL GAS

- California Building Code (CBC) Title 24, Part 6 - California Building Code (CBC), Title 24, Part 6, establishes building energy efficiency standards for new construction (including requirements for new buildings, additions, alterations, nonresidential buildings, and repairs).

SOLID WASTE

- California Waste Management Act of 1989 - The California Waste Management Act requires each county to submit a management plan to the California Integrated Waste Management Board that includes an adopted Source Reduction and Recycling Element from each of its cities as well as for the unincorporated area.

CDCR DESIGN CRITERIA GUIDELINES

The CDCR *Design Criteria Guidelines* (DCG) establishes general sustainable design principles for the design of correctional facilities. The DCG provides guidelines that comply with various regulatory requirements, including those described as follows.

- **Executive Order S-20-04** requires that the state takes aggressive action to reduce electricity usage in state facilities by retrofitting, building and operating the most energy and resource efficient buildings by taking cost-effective measures. These measures are intended to reduce grid-based energy purchases for state-owned buildings by 20 percent of 2009 levels by 2015.
- The **Green Building Action Plan** detailed direction that accompanies Executive Order 2-20-04.
- **Assembly Bill (AB) 32** requires a reduction in greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resources Board has established a reporting program (Climate Action Registry) that includes publicly owned utilities and all electricity consumed in the state or imported into the state.

The DCGs requires that new or renovated buildings with floor area of 10,000 square feet or greater, which are subject to Title 24, meet Leadership in Energy and Environmental Design (LEED) Silver or higher certification. All projects must also implement cost-effective measures to conserve water, such as water-saving fixtures and conservation practices. In addition, the guidelines contain various building reuse and recycling requirements to reduce waste production at CDCR facilities.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

COUNTY OF SAN DIEGO GENERAL PLAN

As described in Section 3.8, “Land Use and Planning,” of this volume, the County of San Diego (County) designates the property as 22-public/semi-public lands (County of San Diego 2011) within the County General Plan/Otay Subregional Plan map, and the RJD property is surrounded on all sides by land under the jurisdiction of the County. Therefore, RJD is closely connected in several respects to the surrounding area under the jurisdiction of the County and this volume of the DEIR considers whether a conflict with County policy exists.

County policy encourages public facilities planning and availability as part of land use planning and development. The Land Use Element of the County General Plan includes the following policies:

- **Policy 1.1.** The County will include public facilities planning and availability as part of decision making on land use and development.
- **Policy 2.1.** Assure that growth is limited to areas where adequate public facilities exist or can be efficiently provided.
- **Policy 4.1.** The County will coordinate facility planning with cities and special districts in the region.

County policy encourages and supports studies to determine ultimate water need, the most logical service provider, cooperation between agencies, and the use of reclaimed water. The Public Facilities Element (Part XII), Section 13 (Water Provision Systems) of the County General Plan includes the following policies:

- **Policy 1.2:** Discretionary land development projects dependent on imported water will only be approved if the service provider reasonably expects that water facilities will be available concurrent with need, and that all appropriate requirements will be met through conditions placed on project approval.
- **Policy 1.3:** All land development projects requiring the use of imported water shall obtain a commitment of service by the appropriate district prior to land preparation and construction.

Other policies within this section that discuss water supply do not directly apply to the project, such as County coordination with water districts and increasing storage and delivery capacity for supply, consistent with planned population growth and land use patterns. The Conservation Element (Part X), Chapter 3 (Water) of the County General Plan includes the following policy:

- **Policy 3:** The County shall support programs which assure an adequate supply and quality of water to meet the present and future population needs and to ensure this water is provided in concert with environmental and growth management policies.

COUNTY OF SAN DIEGO - OTAY SUBREGIONAL PLAN

- **Policy B.1.** The County will encourage and support public service and facility planning and programming for the Otay Mesa and will work with all affected property owners and developers to assure equitable financing of such services and facilities.
- **Policy B.2.** The County will encourage and support studies and planning that create the most comprehensive and reasonable sewage disposal system for the entire region, including South Bay cities and the Tijuana area, and the County will encourage and support studies that lead to the efficient use of wastewater by onsite treatment and recycling.

CITY OF SAN DIEGO - PUBLIC FACILITIES AND SERVICES ELEMENT

- **PF-A.1.** Reduce existing deficiencies by investing in needed public facilities and infrastructure to serve existing and future development.
- **PF-A.2.** Address current and future public facility needs by pursuing, adopting, implementing, and maintaining a diverse funding and management strategy.
- **PF-C.1.** Require development proposals to fully address impacts to public facilities and services.

3.12.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the RJD Infill Site would result in a significant impact relating to public utilities if it would do any of the following:

- result in a lack sufficient water supplies available to serve the project from existing resources and entitlements, and/or a need for new or expanded entitlements;
- require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- exceed wastewater treatment requirements of the applicable regional water quality control board (RWQCB);

- result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- generate waste materials that would exceed the permitted capacity of local landfills;
- violate federal, state, and/or local statutes and regulations related to solid waste; or
- create demand for electricity or natural gas service that would require or result in the construction of new electricity or natural gas facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

ISSUES NOT DISCUSSED FURTHER

Section 3.7, "Hydrology and Water Quality," of this volume reviews project impacts to stormwater drainage facilities. Therefore, this issue is not discussed further.

Groundwater supply: OWD does not rely on local groundwater resources (although it is exploring limited use) for supply to customers in its jurisdiction, including the RJD Infill Site, and the level II infill correctional facility includes no proposals to use groundwater. The project would acquire 100 percent of its water from OWD, which currently and in the foreseeable future will rely on imported water, not groundwater, as previously discussed. Therefore, there would be no impact to groundwater resources with development and operation of level II correctional facilities at RJD, and this issue is not discussed further.

Onsite wastewater treatment: The existing RJD facilities as well as the contemplated level II correctional facilities at the infill site do not include onsite wastewater treatment facilities; therefore, the project would not affect the wastewater treatment requirements of the San Diego RWQCB and this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.12-1a: Impacts on Water Supply [Single Facility]

In order to evaluate the impact to water supply from the construction and operation of new level II correctional facilities at RJD, a *Subarea Master Plan of Potable and Recycled Water for the R.J. Donovan Correctional Facility Expansion* (Dexter Wilson Engineering 2008, also attached as Appendix 2E) pertaining to a larger project that was not constructed, was reviewed. This plan documents:

- Quantified actual water savings due to ongoing conservation measures;
- Water demand estimates for the proposed facility;
- Conversations with OWD about water supply options; and
- Potable water system design criteria, required infrastructure upgrade requirements, and cost of improvements.

Project Water Demand

A single, level II infill facility would house a total of 792 inmates at full buildout. CDCR assumes an average daily water demand factor of 150 gallons per inmate per day (gpid) based on the facility design, which would include water conservation devices. (Note that although this factor is based on the number of inmates, it encompasses potable-water demand for the entire facility, such as landscaping and staff demands). Given this demand factor, water demands for a single, level II correctional facility are estimated to be 118,800 gpd (133 afy) at full buildout.

Table 3.12-15, below, provides the estimated potable water demand for a single, level II infill correctional facility at RJD, considering recorded demand from RJD.

Table 3.12-15 Estimated Potable Water Demand of a Single Level II Infill Correctional Facility at RJD

Facility	Average Daily Demand (gallons)
Existing (2012) RJD Demand	635 AFY
Proposed Single, Level II Infill Correctional Facility Demand	133 AFY
Total Water Demand	**768 AFY**

Source: Analysis by Ascent in 2013.

As shown, existing plus project water use at RJD would be 768 AFY. This total is substantially below the 923 AFY average water use at RJD that occurred prior to 2008, when conservation devices were installed and after which CDCR reduced total inmate population.

As described in Section 3.4, “Employment, Population, and Housing,” of this volume, most of the anticipated employees would come from the existing labor force in the region. Because these employees are presently using the regional water supply, there would be no net increase to their domestic-use water suppliers. A small number of households (no more than 10 percent) are anticipated to migrate into the County and would settle across multiple water districts; however, they may predominantly be expected to come from elsewhere in the state–particularly Southern California–and therefore would have no net increase in the domestic use from the perspective of the original source of water. Therefore, the proposed project would not cause offsite impacts to water supply by inducing additional water demand elsewhere in the region.

Long-Term Water Sufficiency Analysis

OWD has planned its water supply for long-term growth and reliability, within their 2010 UWMP. The UWMP is based on SANDAG growth projections; as previously described, OWD has a reliable water supply for normal, single dry, and multiple dry water years through its planning horizon (through 2035).

Development of additional inmate capacity at RJD is assumed in the OWD 2010 UWMP. SANDAG projects that inmate capacity would grow from nearly 4,700 in 2008 to 7,094 in 2020 and 7,135 in 2035 (SANDAG data for TAZ 4478, SANDAG 2010). Through realignment, CDCR has reduced inmate population at RJD to a current level of 3,504 (as of the December 2012 release of the NOP). The existing plus single level II facility would increase population at the site to 4,296 inmates, over 400 less than assumed in SANDAG’s 2008 baseline, nearly 2,800 inmates fewer than assumed in 2020 (39 percent less), and 2,839 fewer (40 percent less) than in 2035. It is important to also add that the contemplated level II correctional facility would be constructed to LEED standards, which include aggressive water conservation features.

CDCR has no other plans to add inmates to RJD other than this project. Because inmate capacity would be substantially less than planned for by OWD through 2035, and because OWD has sufficient water to provide for the needs of its service area through its 2035 planning horizon (normal, single dry, and multiple dry years), the single level II facility would result in a less-than-significant impact to water supply.

The water demand related to a single, level II correctional facility (plus existing demand) at the RJD Infill Site is far below the water demand planned for the RJD property in OWD's (the supplier's) most recent UWMP. Therefore, it is expected that the project would not adversely affect the ability of OWD to supply water to the project or other customers. This would result in a ***less-than-significant*** *impact to water supply.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-2a: Impacts to Water Transmission Facilities – Potable Water Infrastructure [Single Facility]

The Subarea Master Plan (Dexter Wilson Engineering 2008), which studied existing water lines delivering potable water to RJD, determined that the existing lines that serve RJD would need to be relocated as part of the project, in part due to corrosive soils. However, OWD has implemented major potable water infrastructure improvements in the vicinity of RJD to address corrosive soils or has identified planned upgrades in the OWD *Water Resources Master Plan* (OWD 2010). The 30-inch water mains under Alta Road and Johnson Canyon, as well as the 24-inch water main extending west through the infill site, would continue to serve RJD and the contemplated single, level II correctional facility.

As explained in Impact 3.12-1, above, water usage at RJD has declined from historic use due to lower inmate population and implementation of water conservation measures. Based on the reduction in RJD water demand from historical peaks; the inclusion of water conservation features at the contemplated level II correctional facility; evidence that past peak water demand was sufficiently served by the OWD water transmission facilities; and that OWD has upgraded water lines and has plans to continue upgrades, the OWD infrastructure delivering water to RJD has sufficient capacity to continue to serve RJD and the contemplated single, level II correctional facility, and would not need to be replaced for, the construction and operation of level II correctional facilities at RJD.

Onsite water transmission lines to the single, level II correctional facility at RJD would involve connecting to the existing OWD 24-inch line running west from the OWD 30-inch main under Alta Road. This connection would also continue to support RJD fire protection service. A new onsite private water line and private water supply lines would be installed to connect the new level II facilities to the OWD pipelines. All new onsite pipes would be protected from corrosion by cathodic protection, or coating with high-quality dielectric coating materials such as extruded polyethylene, tape coating systems, hot-applied coal tar enamel, or fusion bonded epoxy. A new water meter would be installed with capacity to meet the peak hour domestic demands of the new facility, or 0.96 mgd (664 gpm). To meet this requirement, a new domestic service and master meter with backflow preventer is recommended. .

Because major potable water infrastructure improvements in the vicinity of RJD to address corrosive soils are either already in place or have been identified by the OWD Water Resources Master Plan (OWD 2010), because the existing pipelines have sufficient capacity to serve the level II correctional facility, and because adequate onsite water supply infrastructure would be constructed, this is a ***less-than-significant*** *impact. Furthermore, the potential environmental impacts of construction and operation of the single, level II correctional facility at the RJD Infill Site, including utility connections, have been considered and evaluated throughout the environmental resource sections in Chapter 3 of this volume of the DEIR. Where necessary, mitigation recommended would substantially reduce construction-related impacts associated with onsite water facility improvements.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-3a: Impacts to Wastewater Treatment Capacity [Single Facility]

Construction of a single, level II infill correctional facility at RJD would increase the flow of wastewater from RJD as a result of increased onsite population. As described above, the San Diego PUD sewage system provides wastewater collection and treatment services for RJD and all wastewater from the RJD Infill Site would be conveyed to the Point Loma WWTP. The existing RJD sewage flows and the projected sewage flows from a single, level II correctional facility are summarized in Table 3.12-16, below. Based on a conservative flow rate projection of 130 gpid, the single, level II infill correctional facility would generate approximately 102,960 gallons per day, or 0.103 mgd, of wastewater, as shown in Table 3.12-16. These flows combined with existing RJD wastewater flows would result in 0.683 mgd of wastewater being conveyed to the Point Loma WWTP, which is less than CDCR's agreement with San Diego PUD (i.e., 0.826 mgd). Furthermore, the City of San Diego operates the Point Loma WWTP under a modified permit (also called a "waiver") from Secondary Treatment requirements of the Clean Water Act, which was most recently renewed in June 2010. The Point Loma WWTP has a treatment capacity of 240 mgd and treats approximately 175 mgd, indicating available treatment capacity.

Table 3.12-16 Estimated Wastewater Flow Rate – Single Facility

Facility	Flow (mgd)
Maximum Existing RJD Flow	0.580[1]
Projected Single, Level II Infill Facility Flow	0.103
Total	**0.683**
Existing Agreement with San Diego PUD	0.826
Remaining Capacity	**0.143**

Notes: [1] Flow rate reflects the highest monthly flow from January 2010 through March 2012, which reflects the implementation of water conservation features at RJD and reduced wastewater flows from previous years.

Onsite wastewater infrastructure improvements (i.e., pipelines, pumps, sewage grinder) would be constructed within disturbed areas and developed areas, such as roads and parking lots, within the identified boundary of disturbance. The potential environmental impacts of construction and operation of the new level II facility, including utility connections, have been considered and evaluated throughout the environmental resource sections in Chapter 3 of this volume of the DEIR. Where necessary, mitigation recommended would substantially reduce construction-related impacts associated with onsite water and wastewater facility improvements.

As with the other landowners in Otay Mesa and the City of Chula Vista, CDCR will contribute funds toward needed upgrades to the wastewater system. The upgrades will include new transmission pipelines, recycled water pipelines, and associated pump stations. CDCR will coordinate with the San Diego PUD to determine the appropriate contribution, based on dwelling unit-equivalencies, and will make the contribution prior to operation of the new level II facility.

As shown in Table 3.12-16, wastewater flows associated with a single, level II correctional facility at the RJD Infill Site would not result in an exceedance of the existing wastewater treatment agreement with San Diego PUD. Because wastewater flows would remain within the agreed-upon treatment flow levels, no new or expanded wastewater treatment facilities would be required as a result of construction of a single, level II correctional facility at the RJD Infill Site. This impact is ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-4a: Impacts to Electricity and Natural Gas Facilities [Single Facility]

As discussed in Section 5.2 of this volume, in compliance with Governor Schwarzenegger's Executive Order S-20-04, which requires all state projects over 10,000 square feet to meet LEED Silver standards, CDCR has committed meeting or exceeding LEED Silver standards for the contemplated level II infill facilities. Nonetheless, construction and operation of a single, level II infill correctional facility at RJD would result in an increase in demand for electricity. Although the demand has not been fully defined, project engineers have estimated a single facility would require a new line that would deliver an average of 3,099 kilo volt-amps (kVA) (Vanir 2013c). The specific amount of electricity needed to operate the facility would be determined when/if the project design is finalized.

The infill facility would require construction of additional onsite electrical equipment, which would likely consist of a new 12 kV service line, substation switchgear, transformers, and backup power generation. Another option that is being considered is the construction of a substation, within the potential disturbance area, to convert 69kV transmission level power to 12kV service level power. This would allow CDCR to purchase power at the lower transmission level rate. The level II correctional facility include emergency generators and necessary equipment to provide electrical power to the main facility and accessory and support structures (e.g., visiting area, library, central health services) in the event of an electrical power interruption. The generators would automatically and immediately start up and send power to pre-determined areas of the facility for up to 72 hours.

CDCR would continue to coordinate with SDG&E, the local electricity service provider, regarding facility and project demands to serve the level II infill correctional facility at RJD. SDG&E has the capacity to serve the project's electricity demand with existing regional infrastructure and system-wide utility capacity. Additional demand onsite is not anticipated to require offsite improvements, including higher load-bearing transmission line and potential improvements to substations. The existing power service lines described above accommodate the service area surrounding the project and could accommodate the level II correctional facility. SDG&E is responsible for all improvements and maintenance of its facilities and utilities infrastructure. An impact would be considered significant if the project would require improvements that would cause a significant impact on the environment. Because no offsite improvements are anticipated to be required (onsite improvements are evaluated along with project construction throughout this DEIR), the increased demand for electricity caused by the operations of the proposed facility would be a less-than-significant impact.

Construction and operation of a level II infill correctional facility at RJD would also result in an increase in natural gas demand at RJD. Although the amount of demand has not been fully defined, project engineers estimate that a new gas line would be designed to deliver a peak of 9.65 cubic feet per hour (cfh) or 9,650 mbh (thousand Btu per hour) (Vanir 2013d). The specific amount of natural gas needed to operate the level II infill correctional facility would be determined when the project design is completed. Project implementation is not expected to require offsite natural gas infrastructure improvements. Onsite improvements would include minor trenching work in previously disturbed areas and cutting, capping, and then connecting a new 8-inch gas line to the existing gas main serving the RJD. The point of connection would be the southwest area of the RJD property, and the new line would run in non-environmentally sensitive areas (existing roads, parking lots) adjacent to the infill site's sanitary sewer connection.

A natural gas impact would be considered significant if offsite improvements were required to meet the added demand and those construction activities would result in significant impacts on the environment. SDG&E has the capacity to serve the proposed project's natural gas demand with existing regional infrastructure and system-wide utility capacity. Because no offsite improvements would be needed to satisfy the additional demand for natural gas, then no significant impacts on the environment would occur. Therefore, increased demand for natural gas resulting from project operations is considered a less-than-significant impact. It should be noted that a discussion of energy conservation related to

development at the infill site is included within Chapter 4, “Cumulative Impacts of the Proposed Project” of Volume 1 of this DEIR.

Because minor electrical and natural gas infrastructure improvements would be constructed onsite in highly developed areas, and no offsite improvements would be necessary to accommodate the electricity and natural gas demands of a single, level II correctional facility at the RJD Infill Site, impacts on electricity and natural gas service would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-5a: Impacts to Solid Waste Facilities [Single Facility]

Based on CDCR estimates, the average solid waste generation rate is 3.6 pounds per inmate per day. Taking into account that in December 2012 RJD housed 3,559 inmates, existing solid waste generation is approximately 12,810 pounds per day. Construction and operation of a single, level II infill correctional facility at RJD would be anticipated to generate an additional 2,850 pounds of solid waste per day (3.6 pounds per day multiplied by 792 inmates) or 1.4 tons per day.

The Otay Landfill’s permitted throughput is 5,830 tons per day (CalRecycle 2013).Operation of a level II infill correctional facility at RJD would result in a total combined contribution of up to 0.13 percent (15,660 pounds) of the maximum volume accepted each day an increase of 1.4 tons (0.0002 percent). This would constitute a very small percentage of the daily tonnage of solid waste accepted at the Otay Landfill, which is estimated to be in operation until 2028. Additionally, it should be noted that CDCR would comply with all applicable federal, state, and local statutes and regulations related to solid waste. The level II infill correctional facility would have its own recycling program that would result in the weekly diversion of recyclable waste from the waste stream, reducing the amount of project waste that would need to be sent to a local landfill. Recycled waste includes cardboard, recycled paper, and co-mingled recyclables such as plastic, tin, aluminum, and glass. Recyclable waste would be collected from multiple locations throughout the level II infill correctional facility and staged onsite for pickup by a contractor.

Although a single, level II correctional facility would increase solid waste generation at the RJD Infill Site during construction and operation, the Otay Landfill is projected to have sufficient capacity to accept the increased solid waste, and the project would not consume a substantial amount of the available capacity of the landfill or result in the need to expand or construct new landfill facilities. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.12-1b: Impacts on Water Supply [Complex]

Refer to Impact 3.12-1a above for document reviewed for this water supply evaluation.

Project Water Demand

A level II infill correctional facility complex would house a total of 1,584 inmates at full buildout. Assuming similar demand factors as identified above for a single facility, the estimated average daily water demand of a complex would be 237,600 gpd (266 afy).

Table 3.12-17 Estimated Potable Water Demand of a Level II Infill Correctional Facility Complex at RJD	
Facility	Average Daily Demand (gallons)
Existing RJD Demand	635 AFY
Level II Infill Correctional Facility Complex	266 AFY
Total	**901 AFY**
Notes : [1] based on peak monthly demand from January 2010 through March 2012 Source: Analysis by Ascent in 2013.	

As shown in Table 3.12-17, existing plus project water use for a level II infill correctional facility complex at RJD would be 901 AFY. This total is below the 923 AFY average water use at RJD that occurred prior to 2008, when conservation devices were installed and after which CDCR reduced total inmate population.

As described in Section 3.4, “Employment, Population, and Housing,” of this volume, most of the anticipated employees would come from the existing labor force in the region. Because these employees are presently using the regional water supply, there would be no net increase to their domestic-use water suppliers. A small number of households (no more than 10 percent) are anticipated to migrate into the County and would settle across multiple water districts; however, they may predominantly be expected to come from elsewhere in the state–particularly Southern California–and therefore would have no net increase in the domestic use from the perspective of the original source of water. Similar to a single facility option, a complex would not cause offsite impacts to water supply by inducing additional water demand elsewhere in the region.

Long-Term Water Sufficiency Analysis

As described for the single facility option under Impact 3.12-1a above, OWD has planned its water supply for long-term growth and reliability, within their 2010 UWMP and the UWMP is based on SANDAG growth projections; further, OWD has a reliable water supply for normal, single dry, and multiple dry water years through its planning horizon (through 2035).

Also as described under the single facility analysis under Impact 3.12-1a above, SANDAG projects that inmate capacity would grow from nearly 4,700 in 2008 to 7,094 in 2020 and 7,135 in 2035. (SANDAG data for TAZ 4478, SANDAG 2010). The existing plus level II infill correctional facility complex would increase population at the site to 5,088 inmates, nearly 400 more than included in SANDAG’s 2008 baseline but over 2,000 inmates fewer than assumed in 2020 (28 percent less) and 2,047 fewer (29 percent less) than in 2035. Finally, the level II correctional facility would be constructed to LEED standards, which include aggressive water conservation features.

CDCR has no other plans to add inmates to RJD other than this project. Because inmate capacity would be substantially less than planned for by OWD through 2035, and because OWD has sufficient water to provide for the needs of its service area through its 2035 planning horizon (normal, single dry, and multiple dry years), the level II infill correctional facility complex would result in a less-than-significant impact to water supply.

The water demand related to a level II infill correctional facility complex (plus existing demand) at the RJD Infill Site is far below the water demand planned for the RJD property in OWD’s (the suppliers) most recent UWMP. Therefore, it is expected that the project would not adversely affect the ability of OWD to supply water to the project or other customers. This would result in a ***less-than-significant*** *impact to water supply.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-2b: Impacts to Water Transmission Facilities – Potable Water Infrastructure [Complex]

As described under Impact 3.12-2a above, OWD has implemented major potable water infrastructure improvements in the vicinity of RJD to address corrosive soils or has identified planned upgrades in the OWD *Water Resources Master Plan* (OWD 2010). The 30-inch water mains under Alta Road and Johnson Canyon would continue to serve RJD and the complex option. Based on the reduction in RJD water demand from historical peaks; the inclusion of water conservation features under the complex option; evidence that past peak water demand was sufficiently served by the OWD water transmission facilities; and OWD upgrades to water lines as well as plans to continue upgrades, the OWD infrastructure delivering water to RJD has sufficient capacity to continue to serve RJD as well as a complex, and would not need to be replaced for, the construction and operation of a complex. However, the existing OWD 24-inch line running west from the OWD 30-inch main under Alta Road is located under the footprint of the complex option and therefore would need to be relocated. Construction of a level II infill correctional facility complex would therefore include capping and abandoning the existing 24-inch water line in place and constructing a new 24-inch line under Donovan State Prison Road. This new line would connect to the 30-inch main under the intersection of Donovan State Prison Road and Alta Road.

Onsite water transmission lines to the level II infill correctional facility complex at RJD would connect to the new 24-inch line under Donovan State Prison Road and would be protected from corrosion as described above. In addition, a new water meter would be installed with capacity to meet the peak hour domestic demands of the new facility.

Because major potable water infrastructure improvements in the vicinity of RJD to address corrosive soils are either already in place or have been identified by the OWD Water Resources Master Plan (OWD 2010), because the existing pipelines have sufficient capacity to serve the level II correctional facility, and because adequate onsite water supply infrastructure would be constructed, this is a ***less-than-significant*** *impact. Furthermore, the potential environmental impacts of construction and operation of the level II infill correctional facility complex at the RJD Infill Site, including utility connections, have been considered and evaluated throughout the environmental resource sections in Chapter 3 of this volume of the DEIR. Where necessary, mitigation recommended would substantially reduce construction-related impacts associated with onsite water facility improvements.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-3b: Impacts to Wastewater Treatment Capacity [Complex]

Implementation of a level II infill correctional facility complex would increase the flow of wastewater from RJD as a result of increased population at the site. The existing RJD sewage flows and the projected sewage flows from a level II infill correctional facility complex are summarized in Table 3.12-18, below. Using CDCR's flow rate projection of 130 gpid, a level II infill correctional facility complex would generate approximately 205,920 gallons per day, or 0.206 mgd, as shown in Table 3.12-18. These flows combined with existing RJD wastewater flows would result in 0.786 mgd of wastewater being conveyed to the Point Loma WWTP, which is less than CDCR's agreement with San Diego PUD (i.e., 0.826 mgd).

Table 3.12-18 Estimated Wastewater Flow Rate – Complex	
Facility	Flow (mgd)
Maximum RJD Existing Flow	0.580[1]
Projected Level II Infill Correctional Facility Complex Flow	0.206
Total	**0.786**
Existing Agreement with San Diego PUD	0.826
Remaining Capacity	**0.040**
Notes: [1] Flow rate reflects the highest monthly flow from January 2010 through March 2012, which reflects the implementation of water conservation features at RJD and reduced wastewater flows from previous years.	

Onsite wastewater infrastructure improvements (i.e., pipelines, pumps, sewage grinder) would be constructed within disturbed areas and developed areas, such as roads and parking lots, within the identified boundary of disturbance. The potential environmental impacts of construction and operation of the new level II facility, including utility connections, have been considered and evaluated throughout the environmental resource sections in Chapter 3 of this volume of the DEIR. Where necessary, mitigation recommended would substantially reduce construction-related impacts associated with onsite water and wastewater facility improvements.

As with the other landowners in Otay Mesa and the City of Chula Vista, CDCR will contribute funds toward needed upgrades to the wastewater system. The upgrades will include new transmission pipelines, recycled water pipelines, and associated pump stations. CDCR will coordinate with the San Diego PUD to determine the appropriate contribution, based on dwelling unit-equivalencies, and will make the contribution prior to operation of the new level II facility.

As shown in Table 3.12-18, wastewater flows associated with a level II infill correctional facility complex at the RJD Infill Site would not result in an exceedance of the existing wastewater treatment agreement with San Diego PUD. Because wastewater flows would remain within the agreed-upon treatment flow levels, no new or expanded wastewater treatment facilities would be required as a result of construction of a level II infill correctional facility complex at the RJD Infill Site. This impact is ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-4b: Impacts to Electricity and Natural Gas Facilities [Complex]

Implementation of a level II infill correctional facility complex at RJD would result in an increase in demand for electricity and natural gas, similar to the single facility described above (see Impact 3.12-4a). Although the demand has not been fully defined, project engineers have estimated electrical demand for a complex to require a new line that would deliver an average of 6,176 kVA (Vanir 2013c). In addition, although the amount of natural gas demand has not been fully defined, project engineers estimate that a new gas line would be sized to deliver a peak of 16.99 cfh or 16,985 mbh (Vanir 2013d). The specific amounts of electricity and natural gas needed to operate the level II infill correctional facility complex would be determined when/if the project design is completed.

CDCR would continue to coordinate with SDG&E, the local gas and electricity service provider, regarding facility and project demands to serve facility complex. SDG&E has the capacity to serve the electrical and gas demand from a level II infill correctional facility complex at RJD with existing regional infrastructure and system-wide utility capacity. Additional demand is not anticipated to require offsite improvements, such as higher load-bearing transmission lines, and potential improvements to substations. Furthermore, the potential environmental impacts of construction and operation of facility

complex at RJD, including utility connections, has been considered and evaluated throughout the environmental resource sections in Chapter 3 of this volume of the DEIR. Where necessary, mitigation recommended would substantially reduce construction-related impacts associated with onsite electrical and natural gas improvements. It should be noted that a discussion of energy conservation related to development at the infill site is included within Chapter 4, “Cumulative Impacts of the Proposed Project” of Volume 1 of this DEIR.

Because minor electrical and natural gas infrastructure improvements would be constructed onsite in highly developed areas, and no offsite improvements would be necessary to accommodate the electricity and natural gas demands of a level II infill correctional facility complex at the RJD Infill Site, impacts of electricity and natural gas service would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-5b: Impacts to Solid Waste Facilities [Complex]

As described under the single facility option above (see Impact 3.12-5a), the current average solid waste generation rate is 3.6 pounds per inmate per day. Therefore, construction and operation of a level II infill correctional facility complex would be anticipated to generate an additional 5,700 pounds of solid waste per day (3.6 pounds per day multiplied by 1,584 inmates) or 2.85 tons.

The Otay Landfill’s permitted throughput is 5,830 tons per day (CalRecycle 2013). Thus, implementation of the level II infill correctional facility complex at RJD would result in a total combined contribution of up to 0.16 percent (18,510 pounds) or an increase of 0.0005 percent of the maximum volume accepted each day. This would constitute a very small percent of the daily tonnage of solid waste accepted at the Otay Landfill, which is estimated to be in operation until 2028. Additionally, it should be noted that CDCR would comply with all applicable federal, state, and local statutes and regulations related to solid waste and the level II infill correctional facility complex would have its own recycling program that would result in the weekly diversion of recyclable waste from the waste stream, reducing the amount of project waste that would need to be sent to a local landfill.

Although a level II infill correctional facility complex would increase solid waste generation at the RJD Infill Site during construction and operation, the Otay Landfill is projected to have capacity to accept the increased solid waste, and the project would not consume a significant amount of the available capacity of the landfill or result in the need to expand or construction new landfill facilities. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

3.13 VISUAL RESOURCES

This section describes the existing visual characteristics and quality of the Richard J. Donovan Correctional Facility (RJD) Infill Site, the remainder of property owned by the California Department of Corrections and Rehabilitation (CDCR) at RJD, and the surrounding area, and evaluates the effects on the visual environment resulting from the development of a level II infill correctional facility at the infill site, including light- and glare-related impacts. The impact analysis has been organized into two parts. The first part addresses the proposed single, level II infill correctional facility that is being considered for construction at the RJD Infill Site. The second part addresses an alternative plan for the RJD Infill Site that would involve construction of a level II infill correctional facility complex. The latter is considered an alternative to the proposed project for the RJD Infill Site. This visual resources analysis is based on field surveys of the site and surrounding areas and interpretation and analysis of existing views of the infill site and surrounding area.

Visual resources are the natural and human-built features of the landscape that can be seen and that contribute to an attractive landscape appearance and the public's enjoyment of the environment. Visual quality is dependent upon the degree to which landscape features combine to provide striking and distinctive visual patterns; whether or not intrusive elements are dominant in the views; and the visual or compositional harmony of the views. A scenic vista is generally considered a view of an area that has "remarkable" or unique scenery or a resource that is unique to the area.

The viewer's distance from landscape elements plays an important role in the determination of an area's visual quality. Visibility and visual dominance of landscape elements depend on their placement within a viewshed. A viewshed is defined as all of the surface area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., a roadway or trail) (FHWA 1988).

Viewer sensitivity is also considered in assessing the impacts of visual change and is a function of several factors. The sensitivity of the viewer or viewer concern is based on the visibility of resources in the landscape, proximity of the viewers to the visual resource, elevation of the viewers relative to the visual resource, frequency and duration of views, numbers of viewers, and types and expectations of individuals and viewer groups.

An assessment of the effects of a project on visual resources is a subjective process, and reasonable people may disagree as to whether visual change would be considered an adverse effect on the environment. The following analysis takes into consideration the aspects of existing visual character and visual quality, and sensitivity of viewers to visual change.

3.13.1 ENVIRONMENTAL SETTING

RJD is located in the southern part of San Diego County, in the unincorporated community of Otay, on the eastern portion of the Otay Mesa. The general vicinity surrounding RJD is characterized by low, gently rolling hills and canyons, which transition in elevation from the Otay River Valley (approximately 200 feet) east to the San Ysidro Mountains (over 3,400 feet). RJD is located on a mesa that is in between O'Neal Canyon to the northeast and Johnson Canyon to the southwest, with the Otay River Valley to the north. The immediately surrounding area is predominantly undeveloped, with a mix of disturbed and native landscapes. The typical land uses in the surrounding vicinity of RJD consist mainly of institutional facilities, open space, and industrial uses.

VISUAL CHARACTER OF THE SURROUNDING AREA

The George F. Bailey and East Mesa Detention facilities are located to the northeast of RJD, across O'Neal Canyon, as shown in Exhibit 2-3 from Chapter 2, "Project Description" of this volume of the draft environmental impact report (DEIR). In general, views of this facility are similar to views of RJD: they

consist of institutional buildings surrounded by perimeter fencing. Large expanses of open space surround the facility.

Apart from these institutional facilities, areas to the north and east are generally undeveloped and are occasionally used for recreation via the Otay Mountain Truck Trail. Otay Valley Regional Park surrounds RJD in a semicircle to the north, west, and south, though there are no active or passive uses in the immediate vicinity. These areas are characterized by rolling hills of Coastal sage scrub and chaparral habitat.

The Otay County Open Space Preserve is located adjacent to the northeast portion of RJD, as shown in Exhibit 2-3 from Chapter 2, “Project Description” of this volume of the DEIR; however, this area is not open to recreational uses. Otay Ranch Open Space Preserve is an area of over 11,000 acres of dedicated conservation land. It is located adjacent to the western portion of RJD and is not open for recreational uses.

A variety of industrial uses are located to the southwest, south, and southeast of RJD. The hills in this area are gentler than those in the surrounding open space and recreation areas. The industrial uses are interspersed among nonnative grasses.

The Otay Mesa Energy Center, located south of RJD, is a major natural gas-fired energy production facility that will generate power for regional use. Direct unobstructed views of the Otay Mesa Energy Center are available from Alta Road. The facility is set back approximately 600 feet from Alta Road, isolated among nonnative grasses. The buildings are industrial in nature with two venting stacks rising above the main building mass.

An auto auction yard and the Otay Mesa Road Transfer Facility are visible along Otay Mesa Road near Alta Road. Both of these facilities are paved lots with numerous cars, trucks, and motor homes. The view of the auction yard is partially screened from Otay Mesa Road by vegetation, while the transfer facility is partially screened by a solid fence.

Distant views of the city of Tijuana in Mexico can be seen to the southwest of RJD across the international border. The Brown Field Municipal Airport and other industrial uses are west of the RJD site and are visible from Otay Mesa Road.

VISUAL CHARACTER OF THE INFILL SITE AND IMMEDIATE AREA

The RJD Infill Site is located on a parcel of land at the entrance to RJD north of Donovan State Prison Road, adjacent to the existing institutional facilities. The site is situated on a plateau that slopes from the southeast to the northwest. The site is mostly flat and undeveloped, with two rows of mature trees near the road. The site is also regularly mowed. Rolling topography obstructs most direct views of the infill site from the surrounding roadway network.

RJD’s existing security fencing, high-mast lighting standards and prison buildings are directly visible from the infill site. All existing structures have an institutional and simple appearance of concrete and gray color tones on low-lying (mostly two-story) structures, typical of prisons.

VISIBILITY FROM OFFSITE AREAS

The Otay Mountain Truck Trail, a county-owned multi-use regional trail, runs from Otay Lakes and Otay Valley to the north, to the east of the George F. Bailey and East Mesa Detention facilities before turning westward to Alta Road. Direct views to the RJD Infill Site from a distance of 500 to 1,500 feet are available along a small segment of the trail, as rolling hills block most views and only a portion of the trail travels near the infill site.

The Otay Ranch and other master planned communities (with residential and some commercial uses) are over two miles north of the infill site. Because these communities are located at a higher elevation

that RJD and the infill site, views from the southern edge of these communities have a distant, background views of RJD and the infill site over the Otay River Valley and surrounding open space.

A field reconnaissance was conducted in December 2012 to survey potential representative public accessible viewing points that would represent common views of the RJD Infill Site. Photographs were taken from various viewpoints outside of RJD to determine the visibility of the infill site from various public roads, public open space/recreational areas, and residential areas. Representative viewpoints were selected based on visibility of the site (unobstructed or partially obstructed views) and on the sensitivity of the potential viewers. Exhibit 3.13-1 shows the location of photographs and orientation of the selected viewpoints.

VIEWPOINT 1: VIEW WEST FROM ALTA ROAD AT OTAY MOUNTAIN TRUCK ROAD

Viewpoint 1, shown in Exhibit 3.13-2, is from Alta Road facing west, just south of Otay Mountain Truck Trail. Due to the undulating topography and the layout and elevation of the road, views of the infill site are partially obstructed by a hill and are in the background of the viewshed. Receptors accessing this viewing point include drivers on Alta Mesa Road, although views would be limited because of the speeds at which vehicles pass the site. This viewpoint is also representative of views of the infill site from the Otay Mountain Truck Trail, although the trail itself could not be accessed.

VIEWPOINT 2: VIEW NORTHWEST FROM THE CORNER OF OTAY MESA ROAD AND ALTA ROAD

Viewpoint 2, shown in Exhibit 3.13-3, is from the intersection of Otay Mesa Road and Alta Road approximately 0.75 mile southeast of the infill site. Views of the infill site are blocked by topography. The Otay Mesa Energy Center is located to the right on this exhibit. As discussed above, the facility is set back approximately 600 feet from Alta Road among nonnative grasses. Receptors accessing this view point include drivers on Alta Mesa Road and Otay Mesa Road, although views would be limited because of the speeds at which vehicles pass the site.

VIEWPOINT 3: VIEW FROM OTAY MESA ROAD AT ENRICO FERMI ROAD TO THE NORTH

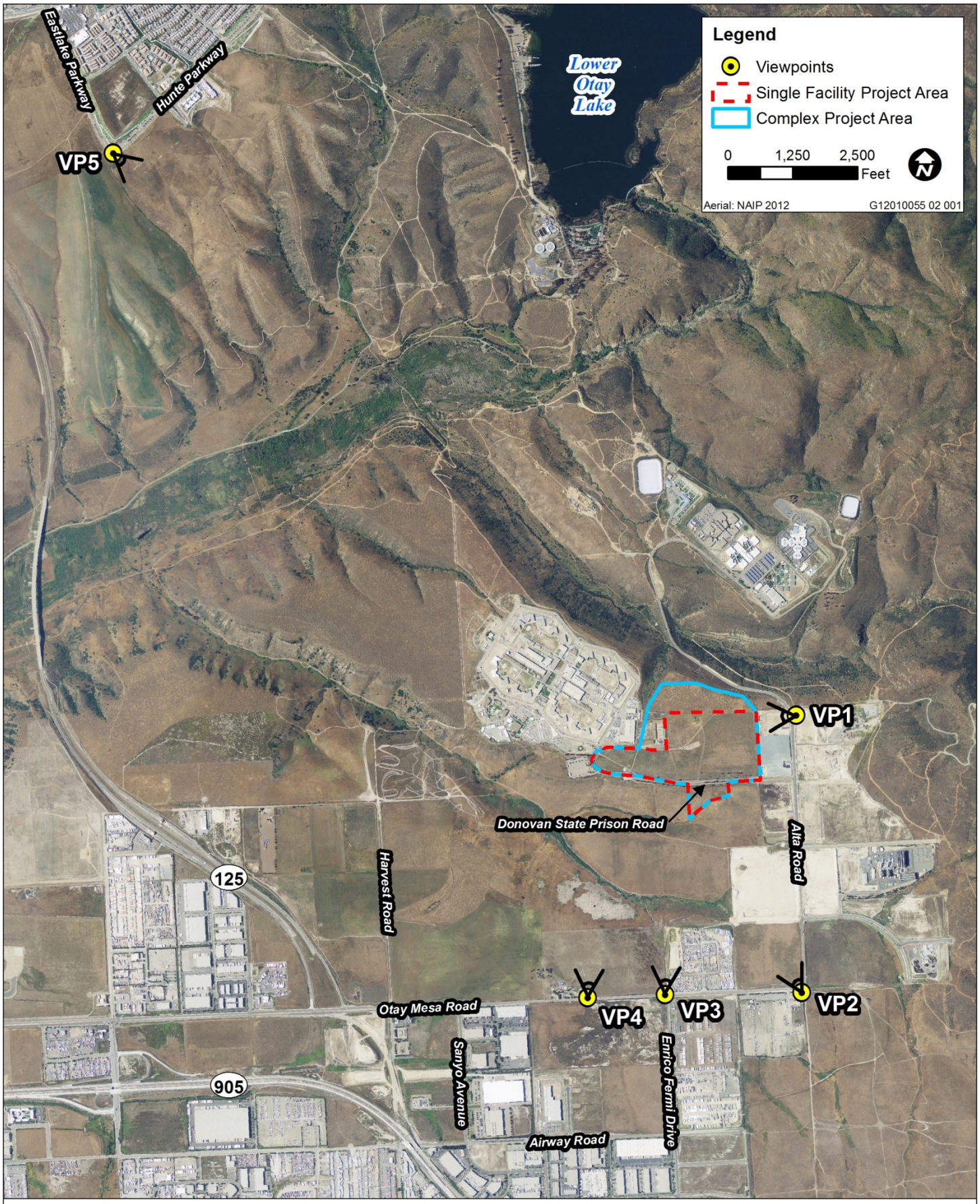
Viewpoint 3, shown in Exhibit 3.13-4, is from Otay Mesa Road at Enrico Fermi Road. The Otay Mesa Road Transfer Facility is located just east of this intersection. The existing RJD facilities are approximately one mile north of this location and the RJD Infill Site would be approximately 0.75 mile north from this location. Due to the undulating topography, there is a combination of both direct and partial views of the existing RJD facilities and infill site; however, views of RJD appear in the distant background from this location. Receptors accessing this view point include drivers on Otay Mesa Road and Enrico Fermi Road, although views would be limited because of the speeds at which vehicles pass the site.

VIEWPOINT 4: VIEW NORTH FROM OTAY MESA ROAD WEST OF ENRICO FERMI ROAD

Viewpoint 4, shown in Exhibit 3.13-5, is from Otay Mesa Road, at the three residences located west of Enrico Fermi Road. The existing RJD facilities are visible in the distant background approximately one mile north of this location. Lighting standards are visible, but the views of the buildings are partially obstructed by vegetation. Receptors at this viewpoint include the residents at this location and drivers on Otay Mesa Road a, although views would be limited because of the speeds at which vehicles pass the site.

VIEWPOINT 5: VIEW SOUTHEAST FROM OTAY RANCH

Viewpoint 5, shown in Exhibit 3.13-6, is from the corner of Eastlake Parkway and Hunte Parkway, located in the Otay Ranch planned community. The RJD facilities are over two miles from this location and are barely discernible in the distant background due to undulating topography and vegetation.



Source: Ascent Environmental 2013

Exhibit 3.13-1 RJD Infill Site Location Map for Selected Viewpoints

Source: Ascent Environmental 2013

Exhibit 3.13-2

Viewpoint 1

Source: Ascent Environmental 2013

Exhibit 3.13-3

Viewpoint 2

Source: Ascent Environmental 2013

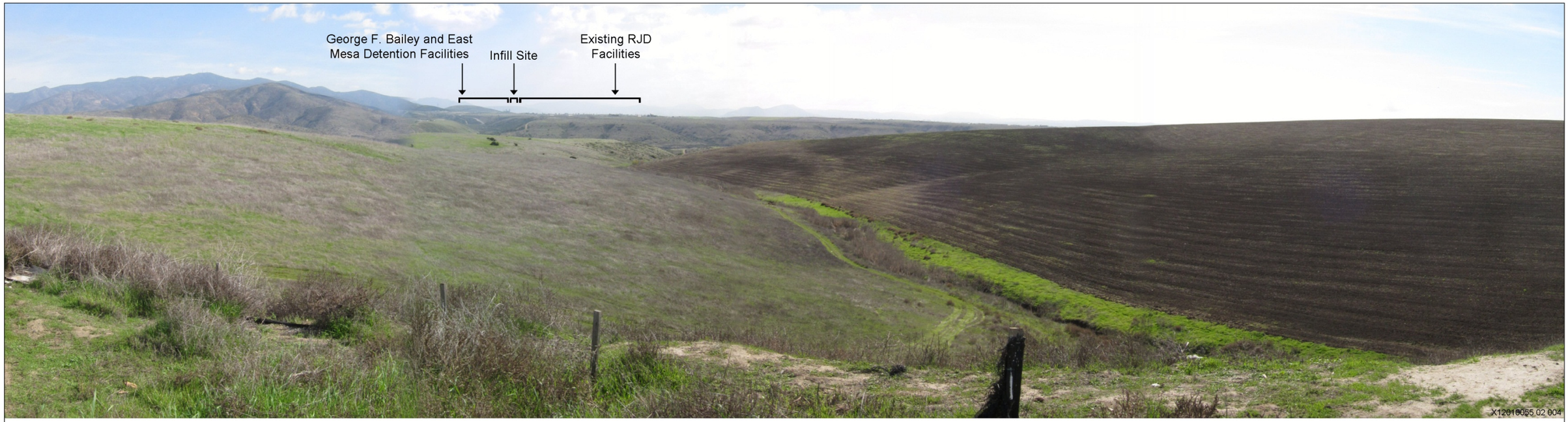
Exhibit 3.13-4

Viewpoint 3

Source: Ascent Environmental 2013

Exhibit 3.13-5

Viewpoint 4



Source: Ascent Environmental 2013

Exhibit 3.13-6

Viewpoint 5

LIGHT AND GLARE CONDITIONS

The terms “glare” and “skyglow” are used in this analysis to describe the visual effects of lighting. For the purposes of this impact analysis, glare is considered to be direct exposure to bright lights and skyglow is a glow that extends upward beyond the light source into the night sky and can dominate or partially dominate nighttime views above the horizon.

The existing RJD and the County’s George F. Bailey and East Mesa Detention facilities are the predominant light sources in the area. Lighting at these facilities includes lighting on the guard towers and high-mast (60 to 100 feet tall) lighting on cell blocks and yards, as well as less intensive (parking-lot type) perimeter fence lighting, lighting for access roads and ancillary uses, and lighting poles for site security. As a result, indirect lighting and sky glow are visually evident from locations adjacent to and within five miles of these existing facilities.

3.13.2 REGULATORY CONSIDERATIONS

A list of the federal and state plans, policies, regulations, and laws relating to visual resources that are applicable to the RJD Infill Site is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- National Scenic Byways Program - Under the National Scenic Byways Program, the U.S. Secretary of Transportation recognizes certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities. This program provides resources to help manage the intrinsic qualities in the broader byway corridor to be treasured and shared.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- California Scenic Highway Program - California’s Scenic Highway Program was created to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

SAN DIEGO COUNTY GENERAL PLAN

The San Diego County General Plan (County of San Diego 2011) includes goals and policies intended to preserve dark skies that contribute to rural character.

- **Policy COS-13.1:** Restrict Light and Glare. 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-13.3:** Collaboration to Retain Night Skies. Coordinate with adjacent federal and State agencies, local jurisdictions, and tribal governments to retain the quality of night skies by minimizing light pollution.

The San Diego County General Plan Scenic Highway Element, Part VI, includes objectives to establish a scenic highway program; protect and enhance scenic resources within scenic highway corridors; and increase public involvement (County of San Diego 1975). The Scenic Highway Element includes criteria to be used when reviewing and recommending changes to the County Scenic Highway System. It identifies first, second, or third priority scenic routes. State Route 125 (SR-125) from the international border north to Telegraph Canyon Road is considered a third priority scenic route. However, SR-125 is approximately 1.5 miles west of the RJD Infill Site and views of the infill site are hidden by rolling hills and by the existing RJD buildings.

SAN DIEGO COUNTY ZONING ORDINANCE

The provisions within the San Diego County Zoning Ordinance Section 5200, Scenic Area Regulations (County of San Diego 1995), are to regulate development in areas of high scenic value both to assure exclusion of incompatible uses and structures and to preserve and enhance the scenic resources present in adjacent areas. Scenic area regulations are to be applied to areas of unique scenic value including but not limited to scenic highway corridors designated by the General Plan, critical viewshed and prime viewshed areas designated by a local coastal program, and areas adjacent to significant recreational, historic, or scenic resources, including federal and state parks. The infill site is not considered an area of unique scenic value.

SAN DIEGO COUNTY CODE

Division 9 of the San Diego County Code (Sections 59.101–59.115) (County of San Diego 1998), the Light Pollution Code, provides guidelines for lighting types, dark sky zones, shielding techniques, and hours of lighting use. Stringent light pollution standards are set for the circular area 15 miles in radius centered on the Palomar Observatory and the circular area 15 miles in radius centered on the center of the Mount Laguna Observatory. The infill site is not located within a defined County of San Diego light control ordinance area and is more than 15 miles from both the Palomar Observatory and the Mount Laguna Observatory.

3.13.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact relating to visual resources if it would do any of the following:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Scenic highways: Nearby roads that provide access the RJD Infill Site (SR-905, SR-125, and Alta Road) are not designated as scenic roads or state scenic highways by Caltrans. There are no County-ranked priority routes in the immediate RJD vicinity; therefore, the development of a level II infill correctional facility at the infill site would not affect views from scenic highways. This issue is not evaluated further as part of this volume of the DEIR.

PROJECT IMPACTS AND MITIGATION MEASURES

As noted in Chapters 1and 2 of this volume of the DEIR, construction and operation of a single, level II infill correctional facility is part of the proposed project. The following impact discussion also evaluates a complex as an alternative to development of the single facility. For the purposes of this analysis, the evaluation of construction and operation of the proposed single facility at the RJD Infill Site is presented first, followed by the evaluation of the impacts associated with development of a complex.

PROPOSED SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.13-1a: Potential Degradation of Scenic Vistas [Single Facility]

A scenic vista is generally considered a view which has remarkable or unique scenery or resources that are indigenous to an area. The infill site is a mowed and regularly maintained grassland area typical of the surrounding grassland areas; therefore, the site does not contain remarkable or unique scenery or resources and is not considered a scenic vista. While the canyon topography and distant mountains are unique visual features in the area, the vista that includes the infill site contains existing RJD facilities and other nearby correctional institutions and industrial uses, including the George F. Bailey and East Mesa Detention facilities and the Otay Mesa Energy Center (Exhibit 3.13-4). Much of the surrounding views are of highly disturbed landscapes and industrial-type development. There are no critical viewsheds or prime viewshed areas as designated by the San Diego County General Plan, nor areas adjacent to significant recreational, historic, or scenic resources, including federal and state parks. Further, the infill facility would be of the same design and character of other surrounding institutional uses.

The RJD Infill Site is located in a viewshed that includes other institutional uses, industrial uses, and disturbed open space; therefore, construction of a single, level II correctional facility that is of the same character as surrounding institutional uses would not result in a substantial adverse effect to a scenic vista. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.13-2a: Visual Character Impacts [Single Facility]

The development of a level II infill correctional facility at the RJD Infill Site would result in the construction of institutional-type facilities on undeveloped land adjacent to existing RJD institutional facilities. The single facility, which would be generally pentagonal in shape, would cover approximately 35 acres and would include three separate housing units that would be of similar design and character as the existing RJD facilities.

The nearest sensitive land use, private residences, are approximately one mile south. Views from these residences would not substantially change because the site appears in the distant background. Views of the site would appear to continue the developed footprint of the RJD facility, but would be indistinguishable from surrounding development. Therefore, the change in the viewshed would not be

substantial and would not alter the visual experience of these viewers (Exhibit 3.13-5). The site is not visible from any well-traveled roadways, and those roads that do provide views of the site also have views of the other detention facilities and industrial uses in the area (Exhibits 3.13-3 and 3.13-4). The County's George F. Bailey and East Mesa Detention facilities and residences have direct views of the infill site, but these views also include the existing facilities at RJD, the Otay Mesa Energy Center, and other industrial uses; therefore, the contemplated infill facility would not substantially alter these views. More distant views to the infill site are afforded to Otay Ranch planned communities (Exhibit 3.13-6) and other uses in southern Chula Vista, and to some portions of the Otay Valley Regional Park trails and Otay Mountain Truck Trail (Exhibit 3.13-2). However, these vantage points are more than one mile from the infill site and are partially blocked by intervening topography.

Development of a single, level II correctional facility at the RJD Infill Site would be consistent with the scale and character of the existing surrounding institutional and industrial facilities. Further, views from the nearest residences would not substantially change because the infill site would appear in the distant background and facilities would be indistinguishable from the existing developed footprint of RJD. Therefore, the infill facility would not substantially degrade the existing visual character of the site or its surroundings and this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.13-3a: Light and Glare Impacts [Single Facility]

The contemplated level II infill facilities would be constructed with similar materials used for the RJD facility. Because it is essential that CDCR maintain adequate site security and line-of-sight, non-reflective materials are used in building design. Therefore, the contemplated infill facilities would not result in any daytime glare-related impacts.

CDCR uses exterior lighting at all its new facilities that is designed to cast light only where needed, and to cut off glare to offsite areas. Similar to lighting at the existing RJD facility, perimeter fence luminaries, 30 feet above ground level, would be located six feet inside the exterior fence and spaced 80 feet apart along the level II facility perimeter. This perimeter fence lighting would be angled in towards the facility and perimeter security zones. High-mast lighting would be installed in the interior yard of the level II facility. The high mast lighting would be a maximum of 100-feet high. Other onsite lighting would be installed for the illumination of guard towers, parking lots, circulation roads, internal site features, and for all-purpose lighting in courtyards. This lighting would be in the form of high pressure sodium lights on 35-foot poles, similar to typical retail parking lot lighting.

Regarding glare, the RJD Infill Site would be located approximately one mile from the three nearest residences (sensitive to glare) located to the south of RJD off of Otay Mesa Road. Otay Ranch is located over two miles to the northwest. Therefore, the development of a level II infill correctional facility at the infill site would not result in a substantial increase in glare that would directly affect residential areas.

The infill site is not located within a defined County of San Diego light control ordinance area and is more than 15 miles from the Laguna Mountain Observatory, which requires a dark sky for its effectiveness.

As mentioned above in the setting discussion, the existing RJD and the County's George F. Bailey and East Mesa Detention facilities are the predominant light sources in the area and include guard-tower and high-mast lighting, cell-block and yard lighting, perimeter fence lighting, and roadway lighting, which are generally the same types of lighting that would be included at the RJD Infill Site. Existing levels of indirect lighting and sky glow are visible from distances up to five miles.

Development of a single, level II infill correctional facility at the infill site would be only a minor addition to the existing lighting sources present at the RJD property, especially when considered within the context of surrounding development and in particular other institutional facilities. Views of the infill site from offsite areas would appear to extend the existing developed lighted area; however, would not result in substantial alterations of nighttime views because substantial lighting sources already exist in the surrounding area. The RJD Infill Site would not substantially increase the casting of sky glow or the distance at which the facilities could be seen during the nighttime.

The single, level II correctional facility at the RJD Infill Site would include lighting and would extend the lighted footprint of the RJD property. However, the infill facility would not result in substantial alteration of nighttime views because substantial lighting sources already exist in the surrounding area. No substantial increase in the casting of sky glow would occur. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.13-1b: Potential Degradation of Scenic Vistas [Complex]

As described above under the single facility option (see Impact 3.13-1a), the vista that includes the RJD Infill Site contains existing RJD facilities, other institutions, and industrial uses. There are no critical viewsheds or prime viewshed areas. While the level II infill correctional facility complex would occupy a larger area of land than the single facility, the buildings would be of the same design and character (i.e., height, architecture) as the single facility and views of the infill site would not substantially differ from the single facility. For these reasons, construction of a complex at RJD would not degrade a scenic vista.

The RJD Infill Site is located in a viewshed that includes other institutional uses, industrial uses, and disturbed open space; therefore, construction of a level II infill correctional facility complex that is of the same character as surrounding institutional uses would not result in a substantial adverse effect to a scenic vista. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.13-2b: Visual Character Impacts [Complex]

A level II infill correctional facility complex at the RJD Infill Site would cover approximately 55 acres and would include six separate dormitory housing units (three on either side of the considered facility). Similar to the single facility option (see Impact 3.13-2a), development of a complex on the RJD Infill Site would be consistent with the scale and overall character of the existing facilities on the RJD property. Further, the nearest sensitive land uses (private residences) are located approximately one mile south. Views from these residences would not substantially change because the RJD Infill Site appears in the distant background. Views of a complex would appear to continue the developed footprint of the RJD facility, but would be indistinguishable from surrounding development. Therefore, the change in the viewshed would not be substantial and would not alter the visual experience of these viewers (Exhibit 3.13-5).

Development of a level II infill correctional facility complex at the RJD Infill Site would be consistent with the scale and character of the existing surrounding institutional and industrial facilities. Further, views from the nearest residences would not substantially change because the RJD Infill Site would appear in

the distant background and facilities would be indistinguishable from the existing developed footprint of RJD. Therefore, facility complex would not substantially degrade the existing visual character of the site or its surroundings and this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.13-3b: Light and Glare Impacts [Complex]

As discussed above (see Impact 3.13-2a), the nearest sensitive receptors are located approximately one mile from the RJD Infill Site and the development of a level II infill correctional facility would not result in a substantial increase in glare that would directly affect residential areas. As discussed in Impact 3.13-3a above, RJD is not located within a defined County of San Diego light control ordinance area and is more than 15 miles from the Laguna Mountain Observatory. The existing RJD facilities and the County's George F. Bailey and East Mesa Detention facilities are the predominant light sources in the area. While a level II infill correctional facility complex would increase the lit area of the infill site compared to the single facility (single facility is analyzed under Impact 3.13-3a above) and would include additional lighting fixtures, the area lit and number of lighting sources would still be substantially less than the existing lighting sources surrounding the RJD Infill Site including the RJD facility, the County's George F. Bailey and East Mesa Detention Center, and other surrounding industrial development. Therefore, construction of a complex at the infill site would not result in substantial alterations of nighttime views.

The level II infill correctional facility complex at the RJD Infill Site would include lighting and would extend the lighted footprint of the RJD property. However, the level II infill correctional facility complex would not result in substantial alterations of nighttime views because substantial lighting sources already exist in the surrounding area. No substantial increase in the casting of sky glow would occur. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

4 CUMULATIVE IMPACTS

4.1 INTRODUCTION TO THE CUMULATIVE ANALYSIS

Section 15130 of the State of California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) discuss cumulative impacts of a project and determine whether the project's incremental effect is "cumulatively considerable." The definition of cumulatively considerable is provided in Section 15065(a)(3):

> "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

According to Section 15130(b) of the State CEQA Guidelines,

> [t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

For purposes of this EIR, the project would have a significant cumulative effect if it meets either one of the following criteria:

- the cumulative effects of related projects (past, current, and probable future projects) without the project are not significant but the project's incremental impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- the cumulative effects of related projects (past, current, and probable future projects) without the project are already significant and the project represents a considerable contribution to the already significant effect. The standards used herein to determine "considerability" are that the impact either must be substantial or must exceed an established threshold of significance.

Mitigation measures are to be developed, where feasible, that reduce the project's contribution to cumulative effects to less than considerable.

Volume 1 of this draft EIR (DEIR) evaluates cumulative impacts statewide that pertain to greenhouse gas emissions of the development of the Level II Infill Correctional Facilities Project, as described in Chapter 3, "Project Description" in Volume 1 of this EIR. This volume focuses on the cumulative impacts of development at the Richard J. Donovan Correctional Facility (RJD) Infill Site in combination with other projects throughout the San Diego region that could result in more extensive local/regional environmental effects. Chapter 3, "Environmental Setting, Thresholds of Significance, Environmental Impacts of the Project, and Mitigation Measures," of this volume identified potentially significant environmental impacts associated with development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site. These issues, and others that could contribute considerably to cumulatively significant effects, are discussed below in the context of cumulative development.

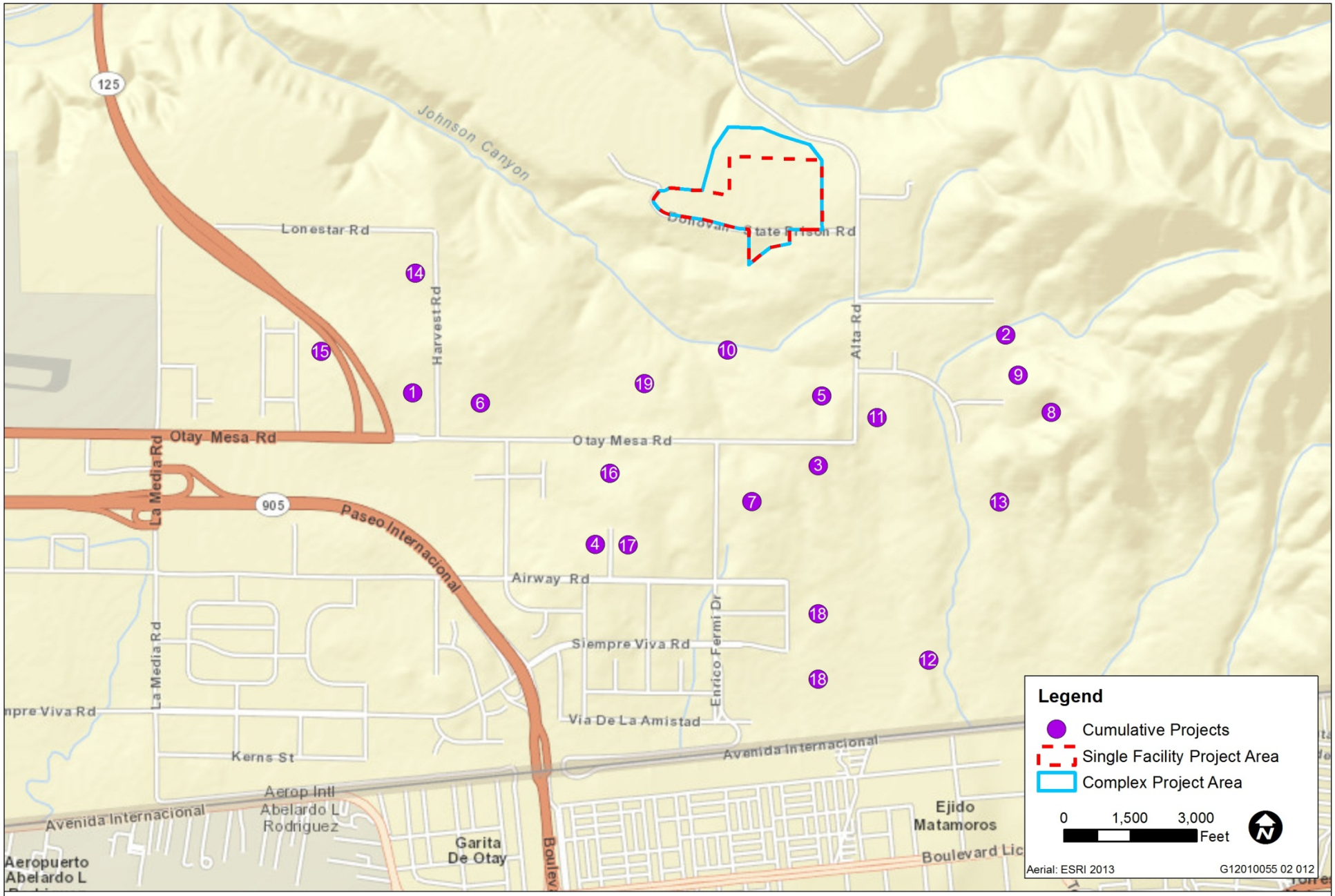
4.2 RELATED PROJECTS

The analysis of cumulative environmental impacts associated with development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site addresses the potential incremental impacts of the project in combination with those of other past, present, and probable future projects and land use changes. The projects listed in Table 4-1 (correlated with their locations in Exhibit 4-1) are not intended to be an all-inclusive list of projects in the region, but rather an identification of projects constructed, approved, or under review within the County of San Diego that are in the vicinity of the RJD Infill Site and have some relation to the environmental impacts of construction and operation of a level II infill correctional facility at RJD. The list of projects used in this cumulative analysis is based on information for approved and pending projects obtained from the County of San Diego and is consistent with the cumulative projects evaluated in the analysis of cumulative transportation impacts in Section 3.11, "Transportation," of this volume.

Table 4-1 List of Projects in the Vicinity of the RJD Infill Site

Exhibit 4-1 Map Key	Project Name	Developed or Proposed Land Use	Size (Acreage and/or Dwelling Units)	Jurisdiction
	RJD Medical Facility Improvements	Modernization/improvement * of existing RJD Facility medical space	42,000 gsf	CDCR
1	California Crossings	Retail commercial center	29.64 acres	County of San Diego
2	Corrections Corporation of America San Diego Correctional Facility	2,868-bed minimum/medium security correctional facility	37.0 acres	County of San Diego
3	COPART County Sales Yard Time Extension	Auto auction	38.2 acres	County of San Diego
4	FEDEX Site Plan	Distribution center	20.0 acres	County of San Diego
5	Salvage Yard/National Enterprises Recycling	Industrial	161.0 acres	County of San Diego
6	Sunroad Centre Harvest Ranch	Nursery	138.0 acres	County of San Diego
7	Travel Plaza and Otay Mesa Truck Stop	Industrial	80 acres	County of San Diego
8	Vulcan	Industrial	12.73 acres	County of San Diego
9	Otay Hills Mining	Quarry	112.1 acres	County of San Diego
10	International Industrial Park	Commercial/Industrial	170.59 acres	County of San Diego
11	OMC Properties	Commercial/Business Park	49.8 acres	County of San Diego
12	Otay Business Park	Industrial	161.6 acres	County of San Diego
13	Otay Crossing Commerce Park	Industrial	311.4 acres	County of San Diego
14	Sunroad/Otay Tech Center	Industrial	318 acres	County of San Diego
15	Piper Otay Park	Industrial	24.84 acres	County of San Diego
16	South County Commerce Center	Industrial	80 acres	County of San Diego
17	Saeed Revised Map	Industrial	81.2 acres	County of San Diego
18	Hawano	Industrial/Business Park	59.3 acres	County of San Diego
19	Rabago	Industrial/Business Park	55.0 acres	County of San Diego

Note: CDCR = California Department of Corrections and Rehabilitation; gsf = gross square feet; RJD = Richard J. Donovan Correctional Facility.
* No capacity or staffing increases; facility improvements only.
Source: County of San Diego 2012



Source: Adapted by Ascent Environmental 2013

Exhibit 4-1

Approximate Locations of Cumulative Projects

4.3 GEOGRAPHIC SCOPE OF THE CUMULATIVE ANALYSIS

The geographic area that could be affected by development of a level II infill correctional facility at the RJD Infill Site varies depending on the type of environmental resource being considered. The general geographic area associated with various environmental effects of construction and operation of a level II infill correctional facility at the RJD Infill Site establishes the boundaries of the area used for compiling the list of projects considered in this cumulative impact analysis. Table 4-2 presents the general geographic areas associated with the resources addressed in this DEIR and evaluated in those sections of this cumulative analysis.

Table 4-2 Geographic Scope of Cumulative Impacts

Resource Issue	Geographic Area
Air Quality and Climate Change	Regional (San Diego Air Basin–pollutant emissions that have regional effects) Local (immediate project vicinity—pollutant emissions that are highly localized) Global (greenhouse gas emissions)
Biological Resources	Regional (South County Subarea of the San Diego County Multi-Species Conservation Plan)
Cultural Resources	Local (limited to CDCR property)
Employment, Population, and Housing	Regional (San Diego County) and local (Cities of San Diego, Chula Vista)
Geology, Soils, Seismicity, Mineral Resources, and Paleontological Resources	Local (limited to CDCR property)
Hazards and Hazardous Materials	Local (immediate project vicinity or limited to CDCR property)
Hydrology and Water Quality	Local (immediate project vicinity—local watershed)
Land Use, Agriculture, and Forestry Resources	Regional (County of San Diego) and local (Otay Subregion, East Otay Mesa, City of Chula Vista, the Brown Field Airport)
Noise	Local (immediate project vicinity—effects are highly localized)
Public Services	Local (local service area)
Transportation	Regional and local (discussed in Section 3.11, “Transportation”)
Utilities	Regional (regional utility area)
Visual Resources (light and glare; aesthetics)	Local (immediate project vicinity)

Note: CDCR = California Department of Corrections and Rehabilitation.
Source: Data compiled by Ascent in 2013

4.4 ANALYSIS OF CUMULATIVE IMPACTS

4.4.1 AIR QUALITY

SHORT-TERM CONSTRUCTION-RELATED IMPACTS

The County of San Diego has established daily significance thresholds for criteria pollutants and ozone precursors for land use development projects. The San Diego Air Pollution Control District (SDAPCD) acknowledges that the entire San Diego Air Basin (SDAB) is a nonattainment area for state and federal

ambient air quality standards for ozone due to the combined levels of emissions generated by sources throughout the SDAB (including, but not limited to, the projects listed in Table 4-1). The County of San Diego (County) considers an individual project's emissions of criteria pollutants and precursors that exceed the daily screening level thresholds to be a substantial contribution to this basin-wide (i.e., cumulative) impact. Construction-generated emissions of fugitive dust from related projects could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations. In addition, because San Diego County is currently designated as a nonattainment area for ozone, PM_{10} and $PM_{2.5}$, construction-generated emissions could contribute on a cumulative basis to pollutant concentrations that exceed the ambient air quality standards because of growth in the area. This is considered to be a significant cumulative impact.

Construction-related emissions of PM_{10} from implementation of either the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site were determined to be significant, as identified in Impact 3.1-1 in Chapter 3 of this volume. Implementation of mitigation measures identified for Impact 3.1-1, which include minimizing land disturbance, watering graded areas, street sweeping, limited vehicle speeds, and revegetation, would reduce the proposed single facility or complex construction-related impacts from emissions of PM_{10} to a less-than-significant level. Assuming that all related projects also implement all feasible PM_{10} control measures (consistent with SDAPCD and County guidelines and regulations), construction emissions from related projects may be reduced to less-than-significant levels, although it is likely that larger projects would result in significant and unavoidable air quality impacts on their own. However, because development of the infill site would not exceed the established thresholds, which are considered to represent the allowable incremental contribution of a development while still progressing toward overall attainment within the air basin, the development of a level II infill correctional facility at RJD would not have a considerable contribution to a significant cumulative construction-related air quality impact.

The SDAB is in nonattainment status for ozone, PM_{10}, and $PM_{2.5}$. This is a result of past cumulative development in the air basin, as well as transport of pollutants from other basins. New development, including the potential development of the infill site (either the proposed single facility or complex) would be required to comply with SDAPCD and County measures that would reduce construction emissions of these pollutants. With implementation of appropriate measures, development of the infill site with either the proposed single facility or complex would be considered less than cumulatively considerable. Therefore, cumulative short-term construction related emissions, with mitigation, would represent a ***less-than-significant*** *cumulative air quality impact.*

LONG-TERM OPERATION-RELATED IMPACTS

Because San Diego County is currently designated as a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, stationary-source and mobile-source emissions could contribute on a cumulative basis to pollutant concentrations that exceed the ambient air quality standards because of growth in the area. This is considered to be a significant cumulative impact.

Long-term operation of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would result in regional emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ from area, stationary, and mobile sources. However, long-term operation-related emissions generated by the contemplated development would not exceed the County's significance thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$ and would not generate substantial operational emissions of TACs (as described in Impacts 3.1-2 and 3.1-3 in Chapter 3 of this volume). Emissions from stationary sources would be regulated through SDAPCD's permitting process and implementation of best available control technologies (BACT) (all feasible measures to attain long-term air quality standards). The County's thresholds are set at a level that avoids a potential conflict with air quality attainment plans, which are required to reach attainment of federal and state air quality standards. Consequently, the long-term operation of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would not contribute to an increase in regional emissions (the projected

emissions inventory for the SDAB) of criteria pollutants that would conflict with the emissions budget used for regional air quality planning (i.e., SDAPCD's air quality attainment plans).

Operation of a level II infill correctional facility at the RJD Infill Site would generate emissions that are below County thresholds, which were established to reach attainment with air quality standards. Further, the proposed single, level II infill correctional facility or the level II infill correctional facility complex would comply with land use designations used in the development of the air quality attainment plan, and the facility would be required to implement all feasible measures in the plan aimed at attaining long-term air quality standards. The project's long-term operation-related emissions would not make a considerable contribution of emissions that would exceed applicable air quality standards. Therefore, operation-related emissions generated by the project would result in a ***less-than-significant*** *cumulative air quality impact.*

4.4.2 BIOLOGICAL RESOURCES

The cumulative context for biological resources is the South County Subarea of the San Diego County Multi-Species Conservation Plan (MSCP) because this area supports a similar suite of special-status species as those that have potential to occur on the RJD Infill Site; contains known and major populations of many of these species, including endemic species; contains important occupied and potential habitat for these species; and supports habitat types consistent with those found on and surrounding the RJD Infill Site. In addition, the South County Subarea is subject to similar development pressures, and other developments in this area would be expected to affect the same special-status species and habitats as development of the proposed single, level II correctional facility or a level II infill correctional facility complex at the RJD Infill Site.

Many past and ongoing projects have resulted in loss of special-status species populations that could occur on the RJD Infill Site, as well as known suitable and potential habitat for these species. For some of these species, such as California gnatcatcher, losses have been substantial. Because of the large amount of suitable and potentially suitable habitat that has been lost in the area, a significant cumulative impact on special-status species exists.

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have determined that activities conducted in compliance with the MSCP and associated subarea plans would not be likely to jeopardize any of the covered species; further, in compliance with the federal and California Endangered Species Acts, covered activities are required to fully mitigate their impacts. The proposed RJD Infill Site is located within a take-authorized area of the MSCP; therefore, development of a level II infill correctional facility at the RJD Infill Site would be in full compliance with the MSCP and South County Subarea Plan. Implementation of the MSCP and South County Subarea Plan has resulted in creation of hardline preserves that will conserve core populations of covered special-status species and high-value habitat for these species in perpetuity. Furthermore, the RJD Infill Site consists of low-quality, disturbed habitat that has very low potential to support special-status species. Therefore, it is unlikely that large or important populations of any special-status species exist on the infill site.

Nonetheless, as discussed in Section 3.2, "Biological Resources," in Chapter 3 of this volume, the construction of level II infill correctional facilities at the RJD Infill Site could result in potentially significant impacts to special-status plants, raptors (including northern harriers and burrowing owls), and grasshopper sparrow. It could also cause potentially significant, indirect construction-related impacts to adjacent habitat areas. However, with implementation of Mitigation Measures 3.2-1 through 3.2-3, these impacts would be reduced to a less-than-significant level. Therefore, the level II infill correctional facility's incremental contribution to the cumulative impact on special-status species would not be considerable.

Operation of a lethal electrified fence at the RJD Infill Site could result in the death (by electrocution) of sensitive and common wildlife species, some of which are protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Other planned, proposed, and approved projects in the region could also result in significant impacts to wildlife species. As described in Section 3.2, "Biological Resources," in Chapter 3 of this volume, it is not expected that the construction and operation of a level II infill correctional facility at the RJD Infill Site would eliminate any resident or migratory animal or bird species or reduce species diversity in the vicinity of the infill site or region; however, it is possible that the local population of one or more native birds protected by the MBTA and the California Fish and Game Code, could be substantially affected. As part of the infill development, the California Department of Corrections and Rehabilitation (CDCR) would implement Mitigation Measure 3.2-5, which requires CDCR's coordination with USFWS and CDFW and implementation of measures to minimize, deter, and fully compensate for the infill development's impact on native wildlife populations. After implementation of the specified measures identified in Mitigation Measure 3.2-5, the project would not substantively contribute to reduction of any affected species. Therefore, the infill facility's contribution to adversely affect native wildlife populations would not be cumulatively considerable.

Cumulative development could result in significant biological resource impacts. However, with implementation of the MSCP and South County Subarea Plan, as well as the mitigation measures proposed for development at the RJD Infill Site, the contribution to these impacts attributable to the construction and operation of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would be reduced to a less-than-significant level. Therefore, although the overall cumulative condition is adverse, the project's contribution to cumulative biological resource impacts would not be considerable, and the project would have a ***less-than-significant*** *cumulative biological resource impact.*

4.4.3 CULTURAL RESOURCES

No historically significant buildings or structures are related to the RJD Infill Site. In addition, the RJD Infill Site has been surveyed previously; the infill site has been subjected to intensive archaeological investigations, including excavation of numerous controlled backhoe trenches, as well as manual excavation; the archaeological resources located within the infill site have been adequately investigated; and these resources have been found not to meet the CEQA criteria for a significant resource. Furthermore, historic and archaeological resource impacts are site specific rather than regional in nature. The project and any related development would be subject to mitigation to avoid the loss of identified or previously undiscovered historic resources, archaeological resources, and human remains. Therefore, cumulative cultural resource impacts would be **less than significant** and are not addressed further.

4.4.4 EMPLOYMENT, POPULATION, AND HOUSING

As described in Section 3.4, "Employment, Population, and Housing," in Chapter 3 of this volume, San Diego County (including the cities of San Diego and Chula Vista) is projected to experience cumulative population growth from approximately 3.1 million in 2010 to approximately 3.5 million in 2025 (Table 3.4-1 in Chapter 3 of this volume). This population growth is regulated and monitored by the County as well as by cities within the county. It is anticipated and reasonable to assume that local jurisdictions would only approve growth and development that is consistent with and planned for in their growth projections and planning documents, as required by relevant planning and zoning laws. Also, ample housing exists throughout the region (Table 3.4-2 in Chapter 3 of this volume), especially given the recent national slowdown in the housing market (including a substantial number of foreclosures in the region). Therefore, cumulative population, employment, and housing impacts would be less than significant.

Development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would result in approximately 193 or 377 new employees, respectively, most of whom are expected to be current residents of the region. It is anticipated that San Diego County would receive the largest percentage (92 percent) of new RJD employees. However, project-generated population growth would be small enough to be indistinguishable from other projected local growth in the area. Project-generated growth, by itself, would not stimulate construction of any new housing, local government facilities, or utilities infrastructure in any one jurisdiction because new employees would likely be widely distributed throughout the region. For these reasons, the employment, population, and housing impacts related to development of a level II infill correctional facility at the RJD Infill Site would not result in a considerable contribution to cumulative population, employment, and housing impacts.

Local jurisdictions are anticipated to only approve growth and development that is consistent with and planned for in their growth projections. Therefore, cumulative population, employment, and housing impacts would be less than significant. Development of either the proposed level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would result in population growth that would be indistinguishable from other projected local growth, and employee residences would likely be widely distributed throughout the region. Therefore, the employment, population, and housing impacts related to development of a level II infill correctional facility at the RJD Infill Site would not result in a considerable contribution such that new significant cumulative population, employment, and housing impacts would occur. This is a ***less-than-significant*** *cumulative impact.*

4.4.5 GEOLOGY, SOILS, SEISMICITY, MINERALS, AND PALEONTOLOGICAL RESOURCES

Geotechnical and paleontological impacts are site specific rather than regional in nature, and any development occurring within the RJD area would be subject to, at a minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent within the region, such as California Building Code standards. Additionally, implementation of measures such as those described in Mitigation Measure 3.5-4 in Chapter 3 of this volume would reduce impacts on previously undiscovered paleontological resources. Therefore, cumulative geology, soils, seismicity, mineral, and paleontological impacts would be **less than significant** and are not addressed further.

4.4.6 GREENHOUSE GAS EMISSIONS

An individual project cannot generate enough greenhouse gas (GHG) emissions to substantially influence global climate change. A project participates in this potential cumulative impact to the extent that its incremental contribution, combined with the cumulative contributions of all other sources of GHGs, when taken together, causes global climate change impacts. Because climate change is an inherently cumulative effect, the analysis of GHG emissions and climate change is provided in Chapter 5 of Volume 1 of this DEIR, as that cumulative analysis looks at the contribution of GHGs due to the overall construction and operation of level II infill correctional facilities, regardless of which final sites are chosen for the facilities.

4.4.7 HAZARDS AND HAZARDOUS MATERIALS

Hazardous materials impacts are site specific rather than regional in nature. In addition, the storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, state, and local agencies. Therefore, cumulative hazardous materials impacts are less than significant and are not addressed further.

There is a high potential for wildland fire in the vicinity of the RJD Infill Site. The fire hazard associated with a new level II infill correctional facility at RJD would be mitigated through the presence of onsite personnel and facilities equipped to fight fires, mutual-aid agreements, and building and maintenance practices that would make the new level II facility defensible in case of a wildland fire. To the degree that other projects are constructed in adjacent areas of high fire hazard risk, there may be an increased propensity for wildland fires that could spread to the RJD Infill Site. However, most of the cumulative projects are not in an area of high fire hazard, and those that are would be required to construct or contribute to sufficient fire protection services and to implement fire-safe building practices.

Although there is a high potential for wildland fire in the RJD vicinity, the project and related projects would be required to ensure sufficient fire protection services and implement fire-safe building practices. Therefore, construction and operation of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would not have a considerable contribution such that a new significant cumulative impact would occur. This is a ***less-than-significant*** *cumulative hazards impact.*

4.4.8 HYDROLOGY AND WATER QUALITY

WATER QUALITY

Overall water quality in the region has degraded over time as natural habitat has been converted to urban uses and these uses have resulted in runoff of various pollutants into local and regional waterways. A variety of programs have been implemented with the goal of halting degradation of water quality and reversing this trend. Several state and federal agencies are involved in these programs, many of which are required by or originate in the federal Clean Water Act. Nonetheless, a cumulative adverse water quality condition exists.

Construction of level II infill correctional facilities at the RJD Infill Site, as well as construction of related projects, would result in surface disturbance through ground scraping, grading, trenching, and compaction associated with typical development activities. Existing vegetation would be removed, thereby increasing the potential for erosion. Operational activities and proposed land uses (e.g., roadways, parking areas) would generate atmospheric pollution, tire-wear residues, petroleum products, and oil and grease, all of which would be carried in stormwater runoff. These constituents could enter the storm drainage system and adversely affect water quality. However, a Stormwater Pollution Prevention Plan (SWPPP) that would include site-specific BMPs and any other necessary site-specific Waste Discharge Requirements (WDRs) or waivers under the Porter-Cologne Act would be prepared for each project to sufficiently reduce the potential surface water quality impacts during construction. In accordance with federal and state stormwater regulations, new construction and substantial redevelopment projects must maintain pre-project hydrology and incorporate proper pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through proper post-construction BMPs when source control or exposure protection are insufficient for reducing pollutant loads. Specifically, CDCR would be required to incorporate detention basins, post-construction BMPs, and low impact development stormwater management principles for operation of level II infill correctional facilities at the RJD Infill Site, which would provide some treatment of pollutants and would maintain the infill site's pre-project levels of stormwater runoff.

Water quality regulations require implementation of construction and post-construction site-specific BMPs and water quality protection measures. Therefore, the construction and operation of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site and the construction and operation of related projects would reduce site-specific water quality impacts, such that cumulatively adverse hydrology and water quality impacts would not occur and the project would not have a considerable contribution such that a new significant cumulative impact would occur. This is a ***less-than-significant*** *cumulative impact.*

STORMWATER DRAINAGE

Development of level II infill correctional facilities at the RJD Infill Site and the development of related projects would result in the addition of impervious surfaces, which could increase stormwater runoff. However, in accordance with federal and state stormwater regulations, new construction and substantial redevelopment projects must maintain pre-project hydrology and incorporate proper pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through proper post-construction BMPs when source control or exposure protection are insufficient for reducing pollutant loads. Therefore, before any construction-related ground disturbance, final drainage plans would be required to demonstrate that all runoff would be appropriately conveyed and would not leave the project sites at rates exceeding pre-project runoff conditions. Therefore, this would be a less-than-significant cumulative impact.

Specifically at the RJD Infill Site (under the proposed single facility or complex), as required by Mitigation Measure 3.7-2 in Chapter 3 of this volume, the level II infill correctional facility's drainage plan and detention basins must control peak flow discharge rates to pre-project levels and improve water quality. All San Diego Regional Water Quality Control Board requirements would be followed in the development of the final drainage plan, and the new and reconfigured storm drainage facilities would be constructed to accommodate increased surface flows associated with the infill site's increase in impervious surfaces. New detention basins or ponds would temporarily detain stormwater runoff to allow sediment and other pollutants to settle and prevent them from flowing directly into receiving water bodies. These facilities would adhere to the requirements of the existing National Pollutant Discharge Elimination System permit, including the associated monitoring and reporting program.

In accordance with federal and state stormwater regulations, new construction and substantial redevelopment projects must maintain pre-project hydrology and incorporate proper pollutant source controls. Therefore, the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would provide adequate stormwater drainage facilities on the CDCR property to accommodate stormwater runoff demands, and other cumulative developments would be required to provide adequate stormwater facilities. Therefore, the development of a level II infill correctional facility at the RJD Infill Site would not result in a considerable contribution to cumulative stormwater drainage impacts such that a new cumulative impact would occur. This is a ***less-than-significant*** *cumulative impact.*

4.4.9 LAND USE, AGRICULTURE, AND FORESTRY RESOURCES

No existing or reasonably foreseeable land use impacts have been identified as a result of development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site because it would not physically divide a community or conflict with any policies adopted for the purposes of avoiding environmental impacts. While development of the proposed infill site in combination with the related projects would result in land use changes, such changes are generally consistent with the goals and policies found in the County of San Diego General Plan, County of San Diego Otay Subregional Plan, County of San Diego East Otay Mesa Specific Plan, City of San Diego Otay Mesa Community Plan, City of Chula Vista General Plan, or Brown Field Airport Land Use Compatibility Plan. Therefore, cumulative land use impacts would be less than significant.

The cumulative loss of farmland in the region is considered a significant cumulative condition. However, the land surrounding the RJD Infill Site is primarily designated as grazing land and urban and built-up land. As discussed in Section 3.4, "Land Use, Agriculture, and Forestry Resources," in Chapter 3 of this volume, development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would not result in conversion of forest land to non-forest use; would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; would not conflict with existing zoning for agricultural use of a Williamson Act contract; and

would not involve any changes in the existing environment that could result in conversion of farmland to nonagricultural use. Therefore, development of a level II infill correctional facility at the RJD Infill Site would not contribute to the cumulative loss of farmland in the region.

Cumulative projects would comply with local policies and plans for development but could result in the cumulative loss of farmland. Development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would not result in any land use impacts (physically divide a community or violate a policy intended to avoid a significant environmental impact) or impacts to Important Farmland, and would be consistent with relevant policies of state and local jurisdictions. Therefore, the project would not have a considerable contribution to cumulative land use, agricultural, and forestry resources impacts and would result in ***less-than-significant*** *cumulative land use impacts.*

4.4.10 NOISE

The geographic context for the analysis of cumulative noise impacts depends on the impact being analyzed. As described in Section 3.9 in Chapter 3 of this volume, noise is a localized occurrence and attenuates with distance. For construction and stationary source impacts, only the immediate area around a site would be included in the cumulative context. For example, construction and stationary source impacts related to noise dissipate/attenuate quickly as the distance between the site and the receptor increases. As a result, only those construction projects located within a distance of no more than 1,000 feet would be considered within the cumulative context of construction and stationary source noise.

For operational/roadway related impacts, the context is the increase in roadway volumes as a result of existing and future development within Otay Mesa. It should be noted that future roadway volumes contain regional growth calculations as they would affect traffic volumes within Otay Mesa Area, and are thus considered cumulative. Traffic-related noise increases discussed under in Section 3.9 include an evaluation of cumulative impacts, as both increases in noise associated with development of the infill site and regional traffic levels are analyzed.

Construction of a level II infill correctional facility (proposed single or complex) at the RJD Infill Site would result in less-than-significant site-specific noise impacts and would not otherwise expose offsite receptors to significant construction noise. City noise regulations limit construction activities to daytime hours and noise levels are not directly additive and attenuate rapidly with distance. No projects shown in Exhibit 4-1 are located close enough (i.e., 1,000 feet) to the infill site that they could combine with construction noise from development at the infill site. Therefore, there is not a cumulative noise impact. Therefore, construction of a level II infill correctional facility would not cause a cumulatively considerable incremental contribution to cumulative noise impacts.

Construction at the infill site would produce temporary vibration. However, the construction vibration impact of the contemplated development would be less than significant due to the distance between source and receptors. Potential cumulative construction vibration impacts are considered extremely localized (less than 500 feet), and no cumulative projects or receptors are located within 500 feet of the RJD Infill Site. As such, construction vibration at the infill site (proposed single facility or complex) would not be considered cumulatively considerable.

As described in Section 3.9, “Noise,” operational noise levels associated with operation of a level II infill correctional facility at the RJD Infill Site would not result in noise levels that exceed state exterior or interior noise compatibility standards. Further, as noted in Tables 3.9-20 and 3.9-21, potential operational noise levels associated with an infill facility at RJD as perceived at offsite receptors would be substantially less (>10 dBA) than Title 24 standards. As such, development of the infill facility (proposed single or complex) would not be considered cumulatively considerable such that noise levels

may exceed state noise compatibility standards. Therefore, the development plan would not result in a considerable contribution to operational noise impacts.

Future traffic noise levels were modeled using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model and are presented in Tables 3.9-15, 3.9-16, 3.9-18, and 3.9-19 of Section 3.9, "Noise," in Chapter 3 of this volume. Substantial permanent increases (i.e., greater than 3 A-weighted decibels [dBA]) in roadway noise levels would occur at up to five study roadway segments, primarily as a result of increased traffic from other local development; these increases would nonetheless represent a significant cumulative impact. Although development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would generate 1 dBA or less of this increase in roadway noise levels, this contribution would be considered cumulatively considerable.

Traffic noise levels would not exceed applicable exterior standards (65 decibels [dB] day-night noise level [L_{dn}]) or result in a substantial increase in ambient noise levels at the CDCR property, as shown in the aforementioned tables. Assuming a 25-dB reduction as a result of exterior-to-interior transmission loss from building façades, interior traffic noise levels would not exceed applicable interior standards (State of California Title 24 Noise Standards for Detention Facilities, 70 dB equivalent noise level [L_{eq}] daytime and 45 dB L_{eq} nighttime). Therefore, cumulative vehicular noise sources are not expected to result in noise in excess of applicable standards or in a substantial increase in ambient noise levels at the RJD Infill Site.

Development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would not result in a considerable contribution to cumulative construction, vibration, or onsite operational noise impacts. The contemplated development would not result in noise levels that would cumulatively combine with other cumulative projects such that they would exceed state construction or operational noise compatibility standards. However, the contemplated development, in combination with cumulative development, would result in a substantial increase in traffic noise along area roadways. Therefore, the project (proposed single facility or complex) would result in a considerable contribution to significant cumulative noise impacts. Because it is considered infeasible to sufficiently reduce noise at every existing and proposed sensitive receptor that would be affected, this cumulative traffic noise impact is considered ***significant and unavoidable****.*

4.4.11 PUBLIC SERVICES

Cumulative development in the region, including development of a level II infill correctional facility at the RJD Infill Site, would result in the concentration of persons and structures within local police and fire jurisdictions. It is anticipated that local jurisdictions would require that all new cumulative development provide or fund the necessary police, fire, and emergency response services to serve those developments consistent with relevant local policies addressing these issues. Therefore, cumulative public services impacts would be less than significant. As described in Section 3.10, "Public Services," in Chapter 3 of this volume, the new level II infill correctional facility would use existing RJD fire response personnel, and law enforcement would be provided by the correctional personnel staffing the new and existing facilities at all times. Although assistance from other local fire, law enforcement, and emergency response agencies could be required if an incident at the infill site were to exceed the capabilities of onsite personnel and facilities, this backup assistance is currently provided for RJD by these agencies, and a new level II infill correctional facility would not be expected to substantially increase the demand for these agencies to provide this backup assistance. Therefore, the project would not result in a cumulatively considerable contribution such that a significant cumulative public services impact would occur.

Development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would not result in a substantial population increase throughout the region

and would utilize existing RJD fire response and law enforcement personnel. In addition, cumulative development would provide or fund the necessary police, fire, and emergency response services to serve those developments consistent with relevant local policies addressing these issues. Therefore, cumulative impacts to police, fire, and emergency services demands would be ***less than significant****, and the project would not result in a cumulatively considerable contribution such that a significant cumulative public services impact would occur.*

4.4.12 TRANSPORTATION

Cumulative traffic impacts are evaluated and presented in Section 3.11, "Transportation," in Chapter 3 of this volume.

4.4.13 UTILITIES

WATER SUPPLY

As discussed in Section 3.12, "Utilities," in Chapter 3 of this volume, the Otay Water District (OWD) is the water supplier to RJD and the infill site. OWD receives its water supply from local sources within its district and the San Diego County Water Authority (SDCWA), who receives its supply from a mix of local sources and imports from the Metropolitan Water District of Southern California (MWD). OWD prepared an Urban Water Management Plan (UWMP) in 2010 that demonstrates the demand forecast and full implementation plan for water supply, including alternatives and emergencies, within OWD's jurisdiction for the years 2015 through 2035 as required by State law.

The 2010 UWMP projections of OWD's future water demands and supplies are based on estimates of future growth in OWD's service area obtained from the San Diego Association of Governments (SANDAG) 2050 Regional Growth Projection adopted by SANDAG's Board of Directors on February 26, 2010. SANDAG's projections include forecasts of population, housing and employment in each census tract in 5-year increments between 2010 and 2035. As shown in Table 3 of the UWMP, OWD's long-term historic growth rate averaged around 4 percent. However, in recent years, growth in their jurisdiction has occurred at a reduced rate due to a slowdown in economic conditions. The SANDAG forecast shows a growth rate of 1 to 2 percent through 2020. The growth rate is expected to slow as the inventory of developable land is diminished.

The 2010 UWMP also accounts for the fact that the largest percentage of commercial and industrial growth in the San Diego Region has been forecasted by SANDAG's projections to occur within OWD's service area (2010 UWMP Section 3.6.1.3). SANDAG's Series 12 Growth Projections for the year 2050 indicate that 42 percent of new industrial land and 20 percent of new residential land would occur within OWD's service area. As illustrated in Figure 4 of the UWMP, industrial lands projected by the Series 12 Growth Projections for 2050 are clustered near the U.S. – Mexico border in the vicinity of RJD. Consistent with the SANDAG projections, the cumulative projects listed in Table 4-1, above, are commercial and industrial projects.

Accounting for projected growth by SANDAG which includes industrial and commercial land uses in the vicinity of RJD, OWD has demonstrated reliable water supply for normal, single dry, and multiple dry years through its planning horizon (2010 UWMP, Tables 33 through 37). Furthermore, OWD has demonstrated validated water supplies from the San Diego County Water Authority (SDCWA) and its other suppliers. The regional supplier, SDCWA, has similarly planned for water delivery to all of its member agencies, including OWD, using land use and growth assumptions, and it has demonstrated validated water supplies and infrastructure sufficient to accommodate the planned growth. Therefore, the cumulative demand for water supply in the vicinity of the RJD Infill Site is considered to be less than significant.

Chapter 1, “Introduction,” of this volume of the EIR explains that the inmate population at the existing RJD facility has decreased by 925 inmates (20.6 percent) between 2004 and 2012. The RJD population peaked in 2008 with 4,773 inmates; the 2012 population of 3,559 represents a decrease of 1,214 inmates from that peak (see Table 1-1 of this volume). Furthermore, CDCR’s long-term plan of operations, as detailed in the Future of California Corrections (“Blueprint”), calls for further decreases in the population at RJD, with a long-term operational goal (staffed capacity) of 3,138 inmates (CDCR 2012a). There are no plans to again increase inmate levels at the existing RJD facilities above that goal. Based on the 2012 RJD population of 3,559, the addition of the proposed single, level II infill facility would add 792 inmates to CDCR’s RJD property, which would bring the number of inmates up to 4,351, 422 less than the peak population in 2008. Based on CDCR’s goal of 3,138 inmates, the total population with the proposed single facility would be 3,930. For the alternative level II complex, which would add 1,584 inmates, based on the 2012 population, the total population would be 5,143, above the peak 2008 population. However, based on CDCR’s goal of 3,138 inmates, the addition of 1,584 inmates would bring the total to 4,722, below the 2008 peak population.

Table 3.12-1 in Section 3.12, “Utilities,” of this volume demonstrates that demand for water at the existing RJD facility has also decreased between 2003 and 2012. The decrease relates to both the decrease in inmate population, as described above, but also because water conservation devices were installed, beginning in 2008. As shown in Table 3.12-1, RJD consumed between 897 and 942 acre feet per year (AFY) between 2003 and 2007, an average of 923 AFY. However, after installation of water conservation devices, average water use over the subsequent 3 years (2009-2012) was 635 AFY, a 31 percent reduction.

Also discussed in Section 3.12, “Utilities,” in Chapter 3 of this volume, the average inmate domestic water demand unit is assumed to be 150 gallons per inmate per day (gpid), based on the facility design, which would include water conservation devices. This rate of consumption is based on design parameters; actual per-inmate water use at the existing RJD facility has been approximately 10-15 percent lower, on average, than this total, and the project would use similar water conservation devices. The highest amount of potable water that the proposed single, level II infill correctional facility at the RJD Infill Site would consume (assuming 150 gpid) would be an average of approximately 133 AFY. A complex would consume an average of approximately 266 AFY. The addition of the proposed single facility or a complex to the existing average RJD use of 635 AFY would result in use of 768 AFY or 901 AFY, respectively, both of which would be below the historic average RJD water use of 923 AFY prior to 2008.

Inmate population reductions and water conservation devices installed at RJD since 2008 have substantially lowered water use to the point that existing RJD water use plus either the proposed single facility or complex would consume less water than has historically been consumed at RJD prior to 2008, before water conservation measures were implemented. OWD has planned for water delivery to RJD as well as all anticipated growth within its jurisdiction under its 2010 UWMP, and has demonstrated validated water supplies from SDCWA and its other suppliers. SDCWA has similarly planned for water delivery to all of its member agencies, including OWD, using land use and growth assumptions, and it has demonstrated validated water supplies and infrastructure sufficient to accommodate the planned growth, including the demand for RJD and the proposed single, level II infill correctional facility or a level II infill correctional facility complex. Thus, the project would not contribute to a cumulatively significant water supply impact.

The construction and operation of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site is not expected to increase the amount of water demand onsite beyond what is planned for RJD in OWD’s most recent UWMP. Therefore, it is expected that the project would not affect the ability of OWD to deliver water to the project or other customers. The infill facility would not result in a considerable contribution such that a new significant cumulative water supply impact would occur. This would be a ***less-than-significant*** *cumulative water supply impact.*

WASTEWATER TREATMENT

Collected wastewater flows from RJD are, and would continue to be, transported to the Point Loma Wastewater Treatment Plant (WWTP) for treatment and disposal. The agreement between the City of San Diego Public Utility District's metropolitan wastewater sewerage system and CDCR allows for RJD to contribute 0.826 million gallons per day (mgd) of average daily flow, with a maximum instantaneous flow of 1.5 mgd. As discussed in Section 3.12, "Utilities," in Chapter 3 of this volume, RJD installed water conservation devices in 2008, and wastewater flows are currently below the sewer capacity rights, with a maximum existing flow of approximately 0.580 mgd (highest monthly flow from January 2010 through March 2012). Development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site would result in additional wastewater flows (0.013 or 0.206 mgd, respectively) that would remain within the agreed-upon treatment flow levels (totaling 0.786 mgd for a complex). Therefore, new level II infill correctional facilities at the RJD Infill Site would not require the expansion or development of new wastewater treatment facilities. Furthermore, the cumulative development would provide or fund the necessary wastewater treatment disposal and treatment facilities to serve those developments consistent with relevant local policies.

Because adequate treatment capacity is available to treat wastewater flows from cumulative development, no significant cumulative wastewater treatment impact would occur. Further, development of a level II infill correctional facility at the RJD Infill Site (proposed single facility or complex) would not result in an exceedance of the existing wastewater treatment agreement with the Point Loma WWTP. The level II infill correctional facilities at the RJD Infill Site would not, either individually or in combination with other development, require the expansion of existing wastewater treatment facilities. Therefore, the project would not result in a considerable contribution such that a new significant cumulative wastewater treatment impact would occur. This would be a ***less-than-significant*** *cumulative wastewater treatment impact.*

SOLID WASTE, ELECTRICITY, AND NATURAL GAS

The level II infill correctional facilities proposed at the RJD Infill Site, in combination with cumulative development in the region, would increase demand for solid waste disposal capacity; however, substantial capacity is available at the Otay Landfill to meet this demand. Therefore, cumulative solid waste impacts would be less than significant. Development of level II infill correctional facilities at the RJD Infill Site would result in a contribution of up to 0.16 percent (18,510 pounds) of the maximum volume accepted each day at the Otay Landfill. This constitutes a very small percent of the daily tonnage of solid waste accepted at the Otay Landfill, which is estimated to be in operation until 2028. In addition, the level II infill correctional facility would have its own recycling program that would result in the weekly diversion of recyclable waste from the waste stream, reducing the amount of waste that would need to be sent to a local landfill. Therefore, the project (proposed single facility or complex) would not have a considerable contribution such that a new significant cumulative solid waste impact would occur.

Development of a level II infill correctional facility at the RJD Infill Site, in combination with cumulative development in the region, would result in an increase in electrical and natural gas demands. San Diego Gas and Electric Company (SDG&E) has the capacity to serve the level II correctional facility's electrical and gas demand with existing regional infrastructure and system-wide utility capacity. This would be a less-than-significant cumulative impact. Additional demand due to the proposed single, level II infill correctional facility or the level II infill correctional facility complex is not anticipated to require offsite improvements, such as higher load-bearing transmission lines or improvements to substations. CDCR would continue to coordinate with SDG&E regarding service for the level II infill facility at RJD. Therefore, the project (proposed single facility or complex) would not have a considerable contribution such that a new significant cumulative electricity or natural gas impact would occur.

The Otay Landfill and SDG&E have adequate capacity to meet the demand associated with the level II infill correctional facility (proposed single or complex). Therefore, the development of a level II infill correctional facility at the RJD Infill Site would not result in a considerable contribution such that a new significant cumulative solid waste, electricity, or natural gas impact would occur. This is a ***less-than-significant*** *cumulative utilities impact.*

4.4.14 VISUAL RESOURCES

Over time, development of past projects in the RJD vicinity has transformed the area, first from natural habitat to farmland, and more recently to a combination of industrial and correctional uses (RJD, George F. Bailey and East Mesa Detention Facilities, and the Otay Mesa Energy Center). These uses are the sources of most light and glare in the area.

In general, the visual resources impacts of the cumulative projects listed in Table 4-1 are site specific; they would not result in changes to other project areas within the local viewshed. With the exception of projects 5, 10, 11, and 19, cumulative projects in the vicinity are either sufficiently distant from the infill site or of small enough scale that they would not combine with the RJD Infill Site's visual impacts. Additionally, the four projects in the vicinity of RJD are either commercial or industrial in nature, and would have a similar visual quality as the correctional facility. Lighting associated with these four projects in combination with lighting for the level II infill correctional facility would be considered a minor addition to the existing lighting in the RJD vicinity, which already includes three correctional facilities. While lighting would increase at the RJD Infill Site, as described in Section 3.13, "Visual Resources," in Chapter 3 of this volume, this lighting would be a relatively minor addition to the existing lighting sources present at RJD and the adjacent correctional and industrial facilities. In addition, CDCR uses state-of-the-art lighting in all its new facilities, which is designed to cast light only where needed and to cut off glare to offsite areas. Therefore, the project would not result in a considerable contribution to a significant cumulative visual resources impact.

Development of the proposed single, level II infill correctional facility or a level II infill correctional facility complex at the RJD Infill Site in combination with cumulative development would not result in substantial changes to the local viewshed or to nighttime views in the surrounding area because it would be compatible with the surrounding visual environmental and because new lighting sources associated with the infill site and cumulative development would not substantially increase the casting of skyglow. Therefore, the project (proposed single facility or complex) would not result in a considerable contribution to a significant cumulative visual resources impact and would result in ***less-than-significant*** *cumulative visual impacts. .*

5 OTHER CEQA SECTIONS

5.1 SIGNIFICANT UNAVOIDABLE IMPACTS

5.1.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT GUIDELINES

Section 21100(b)(2)(A) of the State of California Environmental Quality Act (CEQA) Guidelines provides that an environmental impact report (EIR) shall include a detailed statement setting forth "in a separate section: any significant effect on the environment that cannot be avoided if the project is implemented." Accordingly, this section provides a summary of significant environmental impacts of development of the Richard J. Donovan Correctional Facility (RJD) Infill Site with a single, level II infill correctional facility or a level II infill correctional facility complex that cannot be mitigated to a less-than-significant level.

5.1.2 SIGNIFICANT UNAVOIDABLE IMPACTS OF THE PROJECT

Chapter 3, "Environmental Setting, Thresholds of Significance, Environmental Impacts, and Mitigation Measures," provides a description of the potential environmental impacts of the project and recommends various mitigation measures to reduce impacts, to the extent feasible. Chapter 4, "Cumulative Impacts," evaluates whether the incremental effects of this project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. After implementation of the recommended mitigation measures, most of the impacts associated with development of level II infill correctional facilities at the RJD Infill Site would be reduced to a less-than-significant level. The following impacts are considered significant and unavoidable; that is, no feasible mitigation is available to reduce the project's impacts to a less-than-significant level at the RJD Infill Site. Volume 1, Chapter 5, "Alternatives," considers alternatives to development of the RJD Infill Site that may be capable of reducing or avoiding some of these impacts.

TRANSPORTATION

Impact 3.11-5a: Construction-Related Traffic Impacts [Single Facility]

With development of the proposed single, level II infill correctional facility at the RJD Infill Site, construction traffic could result in significant short-term traffic impact on several local intersections. Although CDCR would prepare and implement a construction traffic management plan (TMP) to improve and manage construction-related traffic conditions on area roadways, until the specific parameters of the construction activities and the details of the TMP are developed, it is possible that feasible mitigation measures would not be available for all construction-related impacts. However, the details of these improvements cannot feasibly be developed at this time. Further, it is considered unlikely that the construction traffic associated with development of the infill site could be reduced to below the performance standard of 50 passenger-car equivalents. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable**.

Impact 3.11-5b: Construction-Related Traffic Impacts [Complex]

With development of the alternative level II infill correctional facility complex at the RJD Infill Site, construction traffic could result in significant short-term traffic impact on several local intersections. Although CDCR would prepare and implement a construction traffic management plan (TMP) to improve and manage construction-related traffic conditions on area roadways, until the specific parameters of the construction activities and the details of the TMP are developed, it is possible that

feasible mitigation measures would not be available for all construction-related impacts. However, the details of these improvements cannot feasibly be developed at this time. Further, it is considered unlikely that the construction traffic associated with development of the infill site could be reduced to below the performance standard of 50 passenger-car equivalents. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable**.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines require a discussion of the significant irreversible environmental changes which would be involved in the project should it be implemented.

Irreversible and irretrievable commitment of resources is the permanent loss of resources for future or alternative purposes. Irreversible and irretrievable resources are those that cannot be recovered or recycled or those that are consumed or reduced to unrecoverable forms. The infill project would result in the irreversible and irretrievable commitment of energy and material resources during project construction, operation, and maintenance, including the following:

- construction materials, including such resources as rocks, wood, concrete, glass, roof shingles, and steel;
- land area committed to new project facilities;
- water supply for project operation; and
- energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

In compliance with Governor Schwarzenegger's Executive Order S-20-04, which requires all state projects over 10,000 square feet to meet Leadership in Energy and Environmental Design (LEED) Silver standards, as stated in Chapter 3, "Project Description," in Volume 1, CDCR has committed meeting or exceeding LEED Silver standards for the proposed level II infill facilities. The design process operates under the expectation of best long-term cost and environmental value, having a direct connection to the concept of sustainability as well as achieving a possible result of LEED Gold or Platinum status. As part of this process, efforts would be made to utilize recycled and renewable materials, and the building would be designed using energy efficient technologies. Some nonrenewable resources would still be required. These nonrenewable resources are expected to account for a minimal portion of the region's resources and would not affect the availability of these resources for other needs within the region. Long-term operational energy and natural resource consumption is expected to be less than significant. Construction activities would not result in inefficient use of energy or natural resources. Construction contractors selected would use best available engineering techniques, construction and design practices, and equipment-operating procedures. Because the proposed project would be LEED-certified and use energy-efficient materials where appropriate, potential irreversible changes related to long-term consumption of energy and natural resources would be less than significant.

5.3 GROWTH INDUCEMENT

5.3.1 STATE CEQA GUIDELINES

State CEQA Guidelines Section 2100(b)(5) specifies that growth-inducing impacts of a project must be addressed in an EIR. State CEQA Guidelines Section 15126(d) states that a proposed project is growth-inducing if it could "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Included in the definition are

projects that would remove obstacles to population growth. Examples of growth-inducing actions include developing water, wastewater, fire, or other types of services in previously unserved areas, extending transportation routes into previously undeveloped areas, and establishing major new employment opportunities. The following is a summary of the direct and indirect growth-inducing impacts that could result with implementation of the project.

5.3.2 GROWTH-INDUCING IMPACTS OF THE PROJECT

Project construction would foster substantial short-term and long-economic growth associated with construction and operation employment opportunities. Construction would begin in spring 2014. A single, level II correctional facility is estimated to take approximately 26 months to complete, and a complex is estimated to take approximately 28 months to complete. During construction, the estimated peak level of construction workers at any given time would be 355 during construction of a single facility and 795 during construction of a complex. Upon initiation of operational activities, the proposed facility would employ between 193 people for a single facility and 377 people a complex, including correctional officers, medical/mental health personnel, vocational and educational staff, facility maintenance personnel, and administrative support staff. Operation of the level II infill correction facility would foster long-term growth in three ways:

- direct growth related to employment at the level II infill correctional facility,
- growth related to induced employment resulting from jobs created to provide goods and services to the employees, and
- growth resulting from facility expenditures.

CDCR estimates that each new position creates approximately 0.5 indirect or secondary jobs through payrolls and the purchase of local goods and services. Based on the wide geographic distribution of residences of existing employees of RJD, and given that most induced jobs would require skill levels that could be provided by existing residents of the region (i.e., County of San Diego, City of Chula Vista, and other nearby cities), induced employment is not anticipated to have a substantial effect on population growth. Implementation of the proposed project would not substantially increase population growth in the surrounding region because it would not require the construction of new housing (see Section 3.4, “Employment, Population, and Housing,” of this volume for further discussion). The proposed project would not remove barriers to population growth because no new or expanded (beyond what is currently planned by local jurisdictions) public infrastructure facilities would be installed. The project is unlikely to tax existing local or regional community service facilities based on the anticipated wide geographic distribution of proposed project employees (see Section 3.10, “Public Services,” for additional discussion).

Although the proposed project would foster some economic and population growth associated with new employment opportunities at the level II infill correctional facility, this growth would not substantially affect the ability of public services providers to serve their existing customers, nor would it require the construction of new facilities to serve the project. This growth would be widely dispersed throughout San Diego County and other surrounding communities and would not result in an increased demand for housing in these areas. As noted in Section 3.4, “Employment, Population, and Housing,” of this volume, the population and employment growth expected with implementation of the proposed project would not exceed the projections of local general plans in the communities surrounding the infill site. Additionally, the proposed project would not extend infrastructure and public services to serve areas outside of the existing CDCR property, which includes the infill site and RJD.

In conclusion, the proposed level II infill correctional facility has the potential to stimulate the economy both directly (by providing jobs) and indirectly (by creating a demand for local goods and services) in the region. Because of the general availability in the labor market and current unemployment rates, there would be an opportunity to fill some positions with local hires, while other positions would be filled

by new employees that would relocate to the region. This in-migration would not substantially affect housing growth because new housing generated by the project would account for only a small percentage of existing housing, and the current high number of foreclosures in the region due to current economic conditions may result in decreased demand. Further, the project would not meaningfully affect employment or other growth in the region, given the size of the regional economy. Therefore, the project would not contribute to substantial population growth and would result in a less-than-significant impact.

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CHAPTER 5, OTHER CEQA CONSIDERATIONS

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