Draft Environmental Impact Report

Level II Infill Correctional Facilities Project

Volume 3

Site-Specific Evaluation of Level II Infill Correctional Facilities at Mule Creek State Prison

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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
ACEHD	Amador County Environmental Health Department
ACTC	Amador County Transportation Commission
ADT	average daily traffic
afy	acre-feet per year
ANSI	American National Standards Institute
APCO	Air Pollution Control Officer
AQMP	air quality management plan
ARB	California Air Resources Board
ARSA	Amador Regional Sanitation Authority
ATC	Authority to Construct
AWA	Amador Water Agency
AWS	Amador Water System
BAAQMD	Bay Area Air Quality Management District
B.P.	before present
BPCT	best practical treatment and control
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal OSHA's	State of California Division of Occupational Safety and Health's
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CASQA	California Stormwater Quality Association's
CBC	California Building Code
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
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Fish and Game Code, California Endangered Species Act
cf/hr	cubic feet per hour
cfs	cubic feet per second
CHCF	California Health Care Facility

CHL	California Historical Landmark
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSMP	Corridor System Management Plan
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	decibel
dBA	A-weighted sound levels
DCG	CDCR Design Criteria Guidelines
DTSC's	California Department of Toxic Substances Control's
DWR	California Department of Water Resources
EDD	California Employment Development Department
EDR	Environmental Data Resources
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Federal Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	greenhouse gas
gpid	gallons per inmate per day
gsf	gross square feet
HAPs	hazardous air pollutants
HCM	Highway Capacity Manual
HRA	health risk assessment
Hz	hertz
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Mokelumne, Amador, and Calaveras Integrated Regional Water Management Plan

kW	kilowatts
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
LOS	Level of Service
L_x	Statistical Descriptor
MCLs	Maximum Contaminant Levels
MCSP	California Medical Facility and California State Prison, Solano
MCSP	Mule Creek State Prison
mgd	million gallons per day
MOU	Memorandum of Understanding
mph	miles per hour
MUTCD	Manual on Uniform Traffic Control Devices
NAAQS	National Ambient Air Quality Standards
NESHAP	national emissions standards for HAPs
NESHAPS	National Emission Standard for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
NRHP	National Register of Historic Places
NSR	New Source Review
PCYF	Preston Correctional Youth Facility/Preston Youth Correctional Facility
PDS	County of San Diego Planning and Development Services
PG&E	Pacific Gas and Electric Company
PHF	Peak Hour Factor
$PM_{2.5}$	fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less
PM_{10}	respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act

PPV	peak particle velocity
PTO	Permit to Operate
RAQS	regional air quality strategy
RCRA	Resource Conservation and Recovery Act
RMS	root-mean-square
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SEL	Sound Exposure Level
SLMs	sound level meters
SMAQMD	Sacramento Air Quality Management District
SO_2	sulfur dioxide
SR	State Route
SR 104	State Route104
SR 99	State Route 99
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminant
T-BACT	best available control technology for TACs
TCO	total coliform organics
TDF	Travel Demand Forecasting
TMP	Traffic Management Plan
TNM	Highway Traffic Noise Model
USACE	U.S. Army Corps of Engineers’
UWMP	Amador Water Agency Urban Water Management Plan
VdB	vibration decibels
VOCs	volatile organic compounds
WARF	Western Amador Recycling Facility
WDRs	waste discharge requirements
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant
WY	water year

1 INTRODUCTION

This volume (Volume 3) of the draft environmental impact report (DEIR) evaluates the potential physical environmental impacts associated with development of a level II infill correctional facility at Mule Creek State Prison (MCSP) in Ione. As noted in Volume 1 of this EIR, the MCSP Infill Site has been designated by the California Department of Corrections (CDCR) as the proposed site for a 1,594-bed, level II infill correctional facility complex. This volume evaluates the proposed complex, as well as an alternative single, level II infill correctional facility at an equal level of detail. Either the proposed complex or the alternative single facility 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; site-specific project information for the MCSP Infill Site is provided in Chapter 3 of this volume.

1.1 PROJECT BACKGROUND

MCSP opened in 1987 on approximately 866 acres of land. MCSP currently provides facilities for Levels I, III, and IV of inmate classifications and provides vocational, academic, and industrial programs to inmates located onsite. A description of inmate classifications is provided in Section 2.1, "Project Background," of Chapter 2, "Introduction," in Volume 1 of this DEIR. With respect to onsite 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 MCSP from 2004 to 2012. During that period, MCSP's inmate population decreased by 876 inmates (23.4 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 MCSP, with a long-term operational goal (staffed capacity) of 2,400 inmates (CDCR 2012a). There are no plans to increase inmate levels at the existing MCSP facilities above that goal.

Table 1-1 MCSP Prison Population (2004-2012)

Year	Prison Population[1]	Percentage Change Compared to Previous Year
2004	3,741	--
2005	3,755	0.4%
2006	3,965	5.6%
2007	3,599	(9.2%)
2008	3,859	7.2%
2009	3,797	(1.6%)
2010	3,540	(6.8%)
2011	3,432	(3.0%)
2012	2,865	(16.5%)
Percent decrease in MCSP population since 2004		(23.4%)

[1] Prison population statistics for each year are derived from the December monthly report of population prepared for that calendar year.
Source: CDCR 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013.

In evaluating currently unused land outside of the existing secure perimeter at MCSP, it was determined that the existing state-owned CDCR property could feasibly accommodate either a single, 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 for correctional purposes outside of the existing boundaries of the state-owned parcel that contains the MCSP prison. The level II infill facilities, whether using a single 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 MCSP. Either proposed level II facility would be configured as a stand-alone prison; the existing perimeter of the MCSP 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 either the proposed level II infill correctional facility complex or a single, level II infill correctional facility at MCSP. If CDCR selects the MCSP 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 MCSP 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 (formerly California Department of Fish and Game) (California Endangered Species Act review/permitting).
- Central Valley Regional Water Quality Control Board (Clean Water Act Section 401 water quality certification, wastewater treatment plant operation, and National Pollutant Discharge Elimination System permit).

- California Department of Toxic Substances Control (Environmental site assessment).
- California Department of Transportation (Caltrans), District 10 (Encroachment permits and potential transportation improvements within Caltrans right-of-way).
- California Office of Historic Preservation (Review of potential impacts to historic resources pursuant to Public Resources Code Section 5024)

1.3.4 LOCAL RESPONSIBLE AGENCIES

- Amador County Air Pollution Control District (Authority to construct and operate).
- City of Ione (Coordination for potential offsite improvements such as roadway and/or infrastructure improvements, wastewater conveyance infrastructure; mutual aid agreements with City fire department and police department).

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 MCSP Infill Site; review of published studies related to the MCSP Infill Site; review of proposed project 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 and the review period concluded on February 4, 2013. The NOP notified the public that a DEIR was to be prepared for the project and described briefly the basic elements of the project and the projected 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 in Ione (near MCSP). 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 the DEIR.

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 MCSP:

- the perceived need (or lack thereof) for level II beds;
- impacts related to groundwater quality;
- water/wastewater infrastructure and capacity to support the development;
- consideration of a regional wastewater treatment facility;
- traffic impacts, including access from State Route (SR) 104 and potential need for Caltrans encroachment permits or review by the California Transportation Commission;
- consideration of the potential effects of possible relinquishment by Caltrans of SR 16 in Sacramento County; or
- lighting and visual impacts from the contemplated facility.

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 MCSP. As described above, these efforts included the circulation of the NOP on December 19, 2012, including posting a notice within the *Ledger Dispatch* newspaper. On January 17, 2013, two public scoping meetings were held at 3:00 p.m. and 5:00 p.m. at the City of Ione Council Chambers, 600 South Church Street, Ione, CA 95640.

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 MCSP, two meetings will be held on July 29, 2013, at 3:00 p.m. and 5:00 p.m. at the City of Ione Council Chambers, located at 600 South Church Street, Ione, CA 95640.

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 MCSP, has been published in the *Ledger Dispatch* newspaper.

1.5.2 WRITTEN COMMENTS

Comments on the DEIR, including this volume (Volume 3), 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:

See earlier edits and e-mails about proper name of CDCR Facilities…

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 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

Ione Branch Library
25 East Main Street
Ione, CA 95640
(209) 274-2560

1.6 ORGANIZATION OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

As noted in Volume 1, the 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 R. J. Donovan Correctional Facility (Volume 2); MCSP (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 MCSP, 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 MCSP Infill Site.

Chapter 2, "Project Description": Chapter 2 describes the project location, background, project objectives, proposed project characteristics and construction for the MCSP 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 proposed 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 3 appendices are identified as Appendix 3A, 3B, 3C, and so on, and are provided in electronic format on a CD.

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 (Public Resources Code §21068defines 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 CDCR, Facility Planning, Construction, and Management, Environmental Planning Section, 9838 Old Placerville Road, Suite B, Sacramento, CA 95827.

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 Mule Creek State Prison (MCSP).

2.2 PROJECT LOCATION

The existing MCSP, located at 4001 State Route (SR) 104 in Ione, California, is situated on 866 acres and is owned by the State of California. MCSP is located in the City of Ione in Amador County, approximately 33 miles southeast of downtown Sacramento. Primary local access to MCSP is from SR 104. Regional access to MCSP is also provided by SR 104, which connects with SR 99 in the City of Galt, and SR 124, which connects S.R. 16 to Ione. Exhibit 3-1 in Volume 1 of this DEIR shows the location of MCSP in relation to the other proposed and alternative infill sites being evaluated in this DEIR. In this volume, Exhibit 2-1 shows MCSP's regional location.

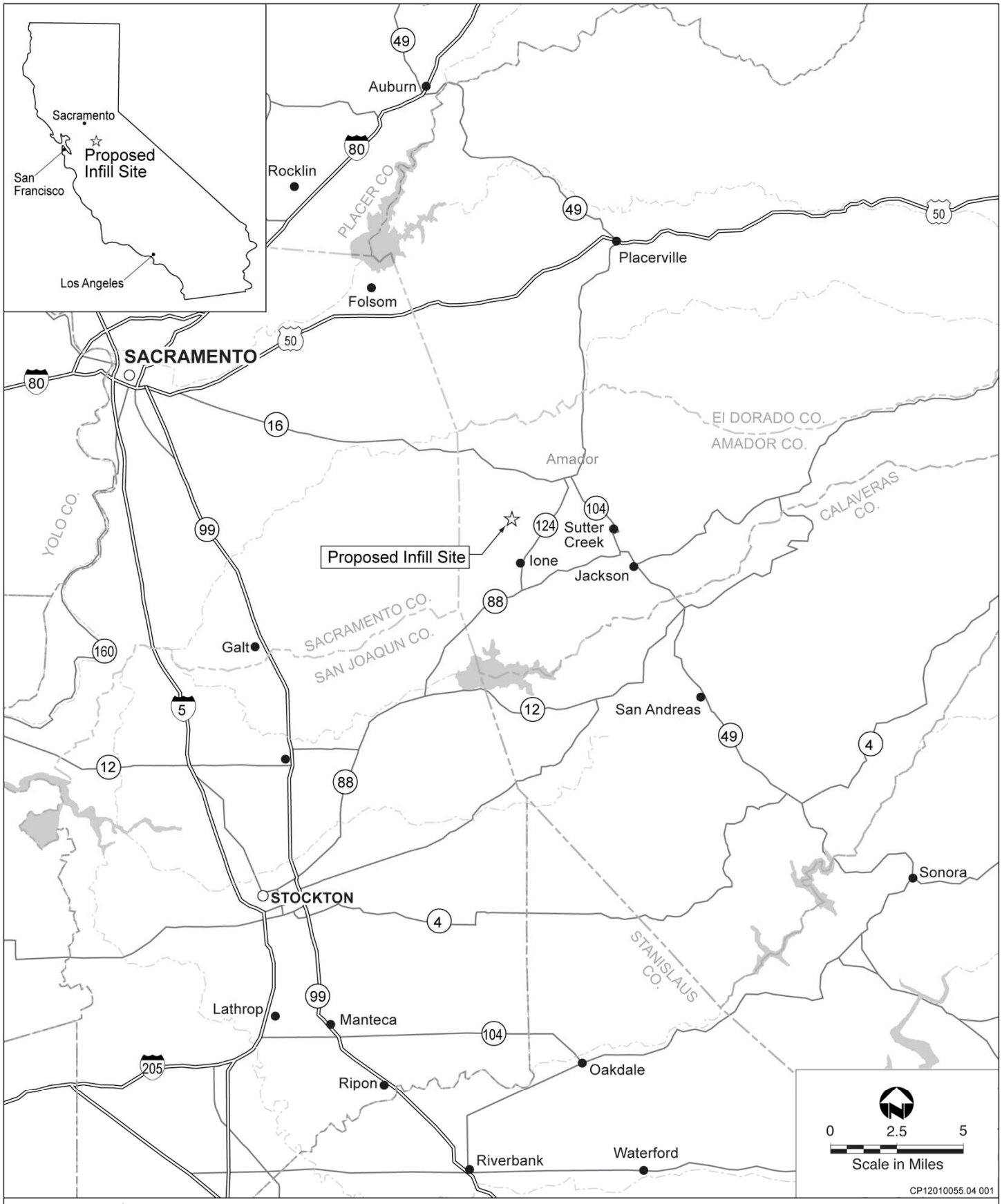
As shown in Exhibit 2-2, MCSP is bounded by Collins Road to the west, Ione Michigan Bar Road/SR 104 (see comment) to the south, and open space with some sparsely distributed residential uses to the north and east. Access to MCSP is from a single existing prison entrance road and gate from SR 104. There is an existing right-of-way/access gate directly across from Castle Oaks Drive that is currently locked and receives limited use. Surrounding land uses include Preston Reservoir to the east; the California Department of Forestry and Fire Protection's (CAL FIRE's) Academy and former Preston Youth Correctional Facility, which was closed in 2011; these facilities are located to the southeast of the prison facilities. Castle Oaks Golf Club and its associated residential development is situated directly across SR 104 from MCSP. Rural residential uses are located to the north and east MCSP. MCSP is located within but at the northernmost edge of the boundaries of the City of Ione, with unincorporated Amador County immediately north and west of MCSP.

The closest airports are Eagles Nest Airport, approximately 5.5 miles to the northwest, and Horse Shoe A Ranch Airport, approximately 6 miles to the northeast; both of these are private airstrips.

2.2.1 DESCRIPTION OF THE PROPOSED INFILL SITE

As noted in Chapter 1, "Introduction," CDCR has designated MCSP for a proposed 1,584-bed level II infill correctional facility complex, pursuant to Senate Bill 1022. For the purposes of this EIR, MCSP is also considered as a potential alternative site for a smaller, 792-bed (single), level II infill correctional facility. The infill site at MCSP refers to the potential location of either the proposed complex or an alternative single facility, although the acreage associated with the proposed complex would be larger than that of the single facility.

The MCSP Infill Site is located on state-owned property east of the existing prison but within the state-owned property of this prison; see Exhibit 2-2. The boundaries of the infill site, including potential construction disturbance area and an unpaved, temporary, construction access road from SR 104 would be approximately 100 acres for the proposed level II infill facility complex. As described in further detail below, the unpaved, temporary, construction access road would be abandoned and returned to preconstruction conditions upon completion of construction at the infill site. The area needed for single, level II infill correctional facility during construction would be approximately 60 acres.



Source: Adapted by Ascent Environmental 2013

Exhibit 2-1

MCSP Regional Location

Source: Adapted by Ascent Environmental 2013

Exhibit 2-2

Boundary of Potential Disturbance and Existing Land Uses

With respect to the proposed complex, approximately 60 acres would be associated with the completed development including housing units, program and administrative buildings, the secure perimeter and its associated towers, parking, and supporting infrastructure. By contrast, the alternative single facility would occupy approximately 35 acres for the entire level II prison once construction is completed. Both facilities would require the dedication of approximately 5 additional acres for a paved access road that would connect to the main MCSP facility (note: once the proposed infill facility is completed it would continue to use the existing MCSP entrance road from SR 104). The remainder of the disturbance area acreage, which would be approximately 30 acres under the proposed complex and 20 acres under the alternative single facility, would be returned to pre-construction conditions and/or revegetated once the facility is completed.

The majority of the MCSP Infill Site is disturbed, undeveloped land that is currently used as spray fields for disinfected secondary effluent wastewater generated and treated at MCSP. The wastewater from MCSP is initially processed at an onsite wastewater treatment plant (WWTP) and then pumped up to Mule Creek Reservoir before either being applied to the spray fields onsite or being sent (on a seasonal basis) to the Preston Reservoir. From Preston Reservoir, the effluent is transferred to the City of Ione's tertiary wastewater treatment plant for use as irrigation water for the Castle Oaks Golf Course. The balance of MCSP treated effluent is disposed by surface irrigation on its spray fields, or in winter months, stored in the onsite effluent reservoir.

2.3 DESCRIPTION OF THE PROPOSED PROJECT

As noted in Volume 1 of this EIR, the MCSP Infill Site has been designated by CDCR as the proposed site for a 1,594-bed, level II infill correctional facility complex. Within the context of this EIR, the MCSP Infill Site is also being considered for a potential alternative facility that would consist of a 792-bed (single), level II infill correctional facility. The proposed complex at MCSP would cover approximately 60 acres upon completion of construction (Exhibit 2-3) and would include six separate dormitory housing units (three on either side of the proposed facility) with 264 level II beds per structure for a total of 1,584 level II beds.

A single facility, which would be generally pentagonal in shape, would cover approximately 35 acres upon completion of construction (Exhibit 2-4) and would include three separate housing units with an operational capacity of 792 beds. Although a level II infill correctional facility at the infill site would be operated by, and under the authority of, MCSP, the facility would be independent/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.

Section 3.3, "Description of Proposed Project," of Chapter 3 in Volume 1, provides detailed descriptions of the proposed level II infill correctional facility complex and the alternative single, level II infill correctional facility, including the dorm 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 level II infill sites.

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

2.3.1 FACILITY RELOCATIONS

Development of the MCSP Infill Site with a level II correctional facility (proposed complex or single facility) would result in the loss of existing effluent spray field operations at the infill site. As part of the proposed project and described in further detail below, CDCR would secure new replacement effluent spray fields through a potential agreement with the City of Ione. CDCR would work with the City (see Sections 3.7,

"Hydrology and Water Quality" and 3.12, "Utilities" in this volume of the EIR) to extend/expand the City's recycled water conveyance system to the additional fields that would service as replacements for the lost acreage. This would occur during construction and operation of the proposed level II infill correctional facility complex or the alternative single, level II infill correctional facility at MCSP.

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 infill correctional facility is based on a combined estimate of the staff totals for the second and third watches (Table 3-1 in Chapter 3 of Volume 1) plus an approximation of the number of visitors the facility would receive based on the facility's population. CDCR evaluated existing facilities across the state and determined that approximately 15 percent of the inmate population received a visitor on a given weekend/holiday visitation day. Therefore, a single facility would include a total of 207 spaces and a complex would include a total of 417 spaces.

The proposed parking, circulation system, and service roads are identified in Exhibit 2-3 for a single infill facility and in Exhibit 2-4 for a complex. For either a single facility or complex, the parking area would generally be located north of the contemplated facility, along the primary road within CDCR property. Additional parking would be provided southeast of the existing MCSP facilities, as shown in Exhibits 2-3 and 2-4. This area is currently an unpaved lot that is maintained free of vegetation. As part of development of the infill site, the existing unpaved access road that extends to the infill site from MCSP would be widened and paved to accommodate two-way traffic. In addition, the existing bridge that crosses Mule Creek would be replaced to accommodate two-way traffic to and from the contemplated development.

2.3.3 UTILITIES AND SERVICE SYSTEMS

POTABLE WATER

CDCR assumes an average daily water demand factor of 150 gallons per inmate per day (gpid) based on existing MCSP 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 the proposed complex would have an estimated demand of 237,600 gpd and a single, level II correctional facility are estimated to be 118,800 gallons per day (gpd) at buildout.

Amador Water Agency (AWA) provides treated water to MCSP. Water supplied to and used in Ione, including at MCSP, originates from runoff collected in the Mokelumne River watershed. This raw water is stored in the Tanner Reservoir and then gravity-fed to the AWA treatment plant (WTP) in Ione prior to use at MCSP.

The potable water delivery system to MCSP would remain unchanged with development of level II infill correctional facilities. The internal potable water pipeline system would be extended to serve a single, level II infill correctional facility or a level II infill correctional facility complex. In addition, CDCR would construct a water storage tank (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.

Source: Adapted by Ascent Environmental 2013

Exhibit 2-3

Conceptual MCSP Level II Infill Correctional Facility Complex Site Plan

Source: Adapted by Ascent Environmental 2013

Exhibit 2-4

Conceptual MCSP Single, Level II Infill Correctional Facility Site Plan

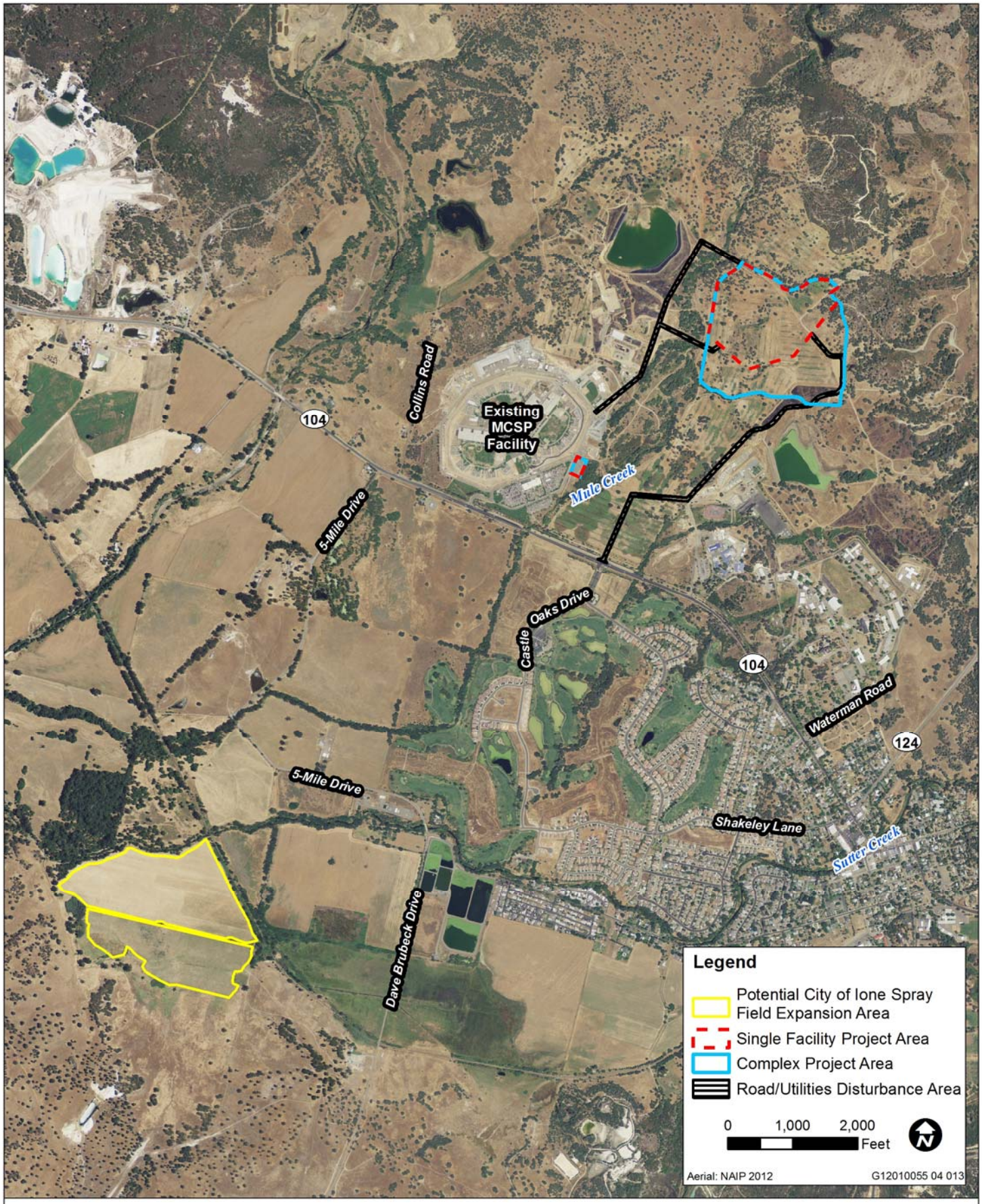
WASTEWATER

CDCR assumes an average daily wastewater flow rate of 140 gpid based on the existing MCSP wastewater flows and the level II correctional facility design, which would include water conservation devices. The gpid wastewater flow rate at MCSP differs from the rates used for the other facilities evaluated in Volume 2, 4, and 5 because of the historic differences in flows between MCSP and the other CDCR facilities. This is due in part to the presence of regional laundry service at MCSP, but also climate and topographic considerations. Based on this flow rate, the proposed complex would generate approximately 221,760 gpd (0.222 mgd) of wastewater and the single, level II correctional facility would generate approximately 110,880 gpd (0.111 mgd).

Wastewater generated at MCSP is treated onsite at a WWTP that was commissioned in 1988 All effluent from the existing WWTP is stored onsite in the Mule Creek Reservoir prior to being applied to existing open space fields and pastureland or conveyed to nearby Preston reservoir which is owned by CDCR and operated, through a tri-party agreement, with the Amador Regional Sanitation Authority (ARSA) and the City of Ione. The WWTP currently has a permitted capacity for an average flow of 0.74 million gallons per day (mgd) and maximum wet weather flow of 2.2 MGD. Current average flows generated by MCSP are 0.436 mgd, based on a 12-month average of 2012 flows (CDCR 2013).

Implementation of the proposed project at MCSP would increase the generation of wastewater, increasing the demand for wastewater treatment at the existing WWTP. All flows would be accommodated by the existing WWTP, which is being upgraded with respect to treatment as part of a separate action in response to Regional Water Quality Control Board directives (refer to Section 3.7, “Hydrology and Water Quality” of this volume of the DEIR). The planned upgrades at the WWTP include additional clarifiers, upgrades to the belt filter press, the addition of diffused aeration capacity, and improved instrumentation and controls. As part of the contemplated development of the infill site, a separate connection from the single, level II infill correctional facility or the level II infill correctional facility complex would be extended westward from the infill site, past Mule Creek, and then placed along an internal access road to the WWTP. As noted above, CDCR is currently evaluating several options for disposal of the effluent from its WWTP, as development of the infill site would reduce the spray field acreage at MCSP. In the event that an agreement with the City of Ione is reached regarding disposal of effluent through the City’s recently approved effluent disposal system, the City, with assistance from CDCR, would extend the existing City effluent irrigation infrastructure to additional acreage located west along Five Mile Drive.

As noted above, development of the infill site, with either the proposed complex or a single facility, would involve the temporary loss/disturbance of up to 103 acres of currently operational spray fields (Spray Fields 4 and 5). As a result, as part of the proposed project, CDCR would coordinate with the City of Ione for the construction of additional recycled water conveyance infrastructure, commensurate with the City’s existing conveyance system. Wastewater effluent that would have otherwise been distributed to Spray Fields 4 and 5 would be released to the City’s WWTP via an existing 10-inch pipe prior to being distributed by the City onto approximately 100 acres of agricultural land (alfalfa) associated with Greenrock Ranch, shown in Exhibit 2-5. As part of the proposed project, the City would extend its existing conveyance infrastructure, which consists of buried PVC C900 pipes, to the proposed spray fields. At the proposed spray fields, above grade fixed set irrigation systems, wheel line systems or flood irrigation systems would be used for distribution of the reclaimed water.



Source: adapted by Ascent Environmental in 2013

Exhibit 2-5

Proposed Spray Fields

ELECTRICITY

Pacific Gas and Electric Company (PG&E) provides electricity service to MCSP. The existing electrical infrastructure system at MCSP, including the main switchgear, is located near the center of MCSP. The additional load for the potential infill facility is being coordinated with an upgrade to the MCSP electrical system, which is already programmed for MCSP, separate from the Level II Infill Correctional Facilities Project. Upon completion of this separate electrical system upgrade, the level II infill correctional facilities would connect to the new electrical system and add generators to the pad constructed as part of the electrical upgrade, as needed.

As described in Chapter 3 of Volume 1, the development of either the proposed level II infill correctional facility complex or a single, level II infill correctional facility would include appropriate onsite electricity equipment, such as switchgear, transformers, and backup power generators. No offsite infrastructure improvements would be required.

NATURAL GAS

PG&E is the natural gas service provider to MCSP. It should be noted that PG&E is currently planning a gas regulator station at the intersection of Castle Oaks Drive and SR 104 to provide service to MCSP. Connection to the infill site would be provided at the existing MCSP facility and would parallel the existing access road to the infill site. No offsite infrastructure improvements would be required.

STORMWATER DRAINAGE

Implementation of either the proposed complex or a single facility at MCSP would involve onsite drainage improvements (e.g., drains, gutters), including potential construction of detention basins, which would be designed to handle a 100-year flood event, to manage stormwater flows to and from the infill site. These facilities would be located in the southern portion of the infill site but the exact location has yet to be determined.

2.3.4 STAFFING

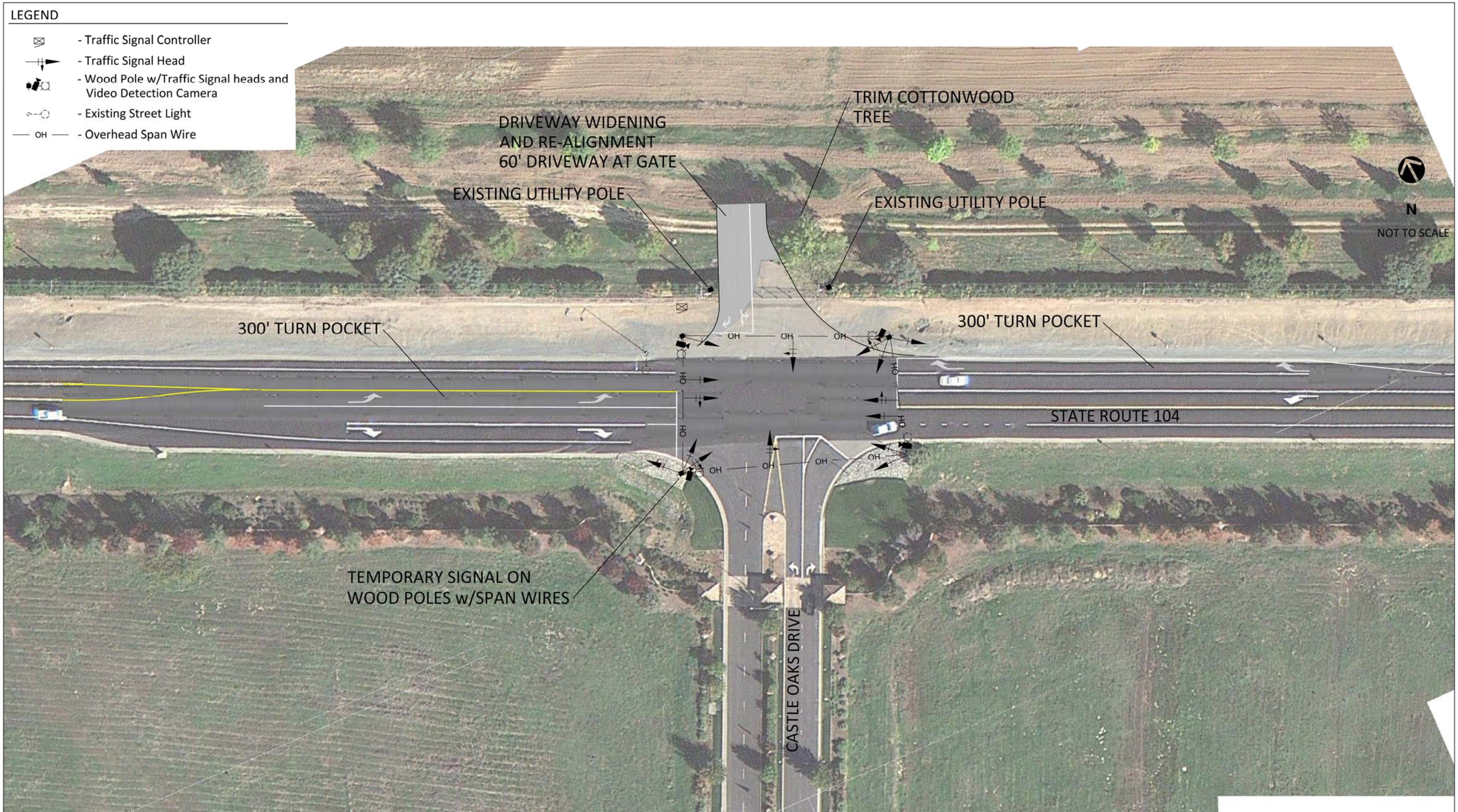
Development of a single, level II infill facility or a level II infill correctional facility complex at MCSP would result in an increase in onsite staffing, as described in Chapter 3 of Volume 1. The level of staffing increase would be dependent on whether a single facility or complex would be constructed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

All construction staging for either a single facility or complex at MCSP would be provided on State-owned property, as identified in Exhibit 2-2. All construction-related traffic would access the infill site via a temporary construction access road that would pass east of the infill site and along the western boundary of the CAL FIRE facility, connecting to SR 104 where it intersects Castle Oaks Drive. Temporary restriping of the intersection of SR 104 and Castle Oaks Drive would occur, as shown in Exhibit 2-6. If necessary, periodic use of an existing access road from Waterman Road may occur but

would be restricted to light-duty autos and trucks, associated with construction worker commute. In addition, the former athletic fields at PYCF may be used for the placement and operation of construction trailers. No modifications to any structures located at PYCF would occur and all trailers would be removed upon completion of construction. Access to the PYCF athletic fields would be provided, if necessary, via a secure gate located on the north end of PYCF. Parking for construction vehicles, including construction worker commute vehicles would be provided onsite, either within the disturbance area shown in Exhibit 2-2 or at the former athletic fields at PYCF.



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Source: Adapted by Ascent Environmental 2013

Exhibit 2-6

State Route 104/Castle Oaks Drive Conceptual Construction Entrance

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

Chapter 3 of this volume (Volume 3) of the Draft Environmental Impact Report (DEIR) evaluates the potential environmental impacts associated with development of a level II infill correctional facility at the Mule Creek State Prison (MCSP) Infill Site, located in the City of Ione. As noted in Volume 1 of this EIR, the MCSP Infill Site is CDCR's proposed site for a 1,584-bed (complex) level II infill correctional facility and is being considered as an alternative site for a 792-bed (single) level II infill correctional facility. 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.
- 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 MCSP 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 option.

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 1.7 of this volume 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 vicinity of the Mule Creek State Prison (MCSP) Infill Site, and a summary of applicable regulations. The impact analysis has been organized into two parts. The first part addresses the proposed level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP 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 recommendations of the Amador County Air Pollution Control District (ACAPCD). Guidance from neighboring air districts is also relied upon in the absence of direction from ACAPCD. 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 on the MCSP property in the City of Ione in Amador County, California. The site is within the Mountain Counties Air Basin (MCAB), which is under the local jurisdiction of the ACAPCD. Ambient concentrations of air pollutant emissions are determined by the amount of emissions released by the sources of air pollutants 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 MCAB includes the central and northern Sierra Nevada. Elevations range from several hundred feet above mean sea level in the foothills to more than 10,000 feet above mean sea level along the Sierra Nevada crest. In addition to Amador County, the MCAB comprises Calaveras, Mariposa, Nevada, Plumas, Sierra, and Tuolumne Counties, the central portion of Placer County, and the western portion of El Dorado County.

REGIONAL CLIMATE

The general climate of the MCAB varies considerably with elevation and proximity to mountains. The mountains and hills are primarily responsible for wide variations in rainfall, temperatures, and localized winds that occur throughout the region. The temperature variations have a significant influence on wind flow, dispersion along mountain ridges, vertical mixing, and photochemistry within the MCAB. Climates vary from alpine in the eastern areas to more arid at the western edge of the MCAB. Amador County generally experiences warm, dry summers and mild winters. During the summer, in the western portion of the MCAB, temperatures that often exceed 100°F, coupled with clear skies, create favorable conditions for ozone formation through photochemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_X).

LOCAL MICROCLIMATE

The local meteorology of the MCSP Infill Site and surrounding area is represented by measurements recorded at the Ione station. The mean annual precipitation is approximately 22 inches. January

average temperatures range from 37°F to 51°F. July average temperatures range from 67°F to 91°F (WRCC 2012). The predominant wind direction and speed is from the south-southeast at 8 miles per hour (mph) (WRCC 2013a, 2013b).

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 effects 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 local area.

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 ROG and 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 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).

Emissions of ozone precursors ROG and NO_X have decreased over the past several years because of more stringent motor vehicle standards and cleaner burning fuels. The California Air Resources Board's (ARB's) *2009 California Almanac of Emissions and Air Quality* (known as the Almanac) provides information on statewide air quality trends, specifically trends for the five most urbanized air basins in the state. Neither ACAPCD nor MCAB is included; however, the Almanac does provide information for the Sacramento Valley Air Basin (SVAB) and San Joaquin Valley Air Basin (SJVAB), which are relevant to Amador County because much of the air pollution in Amador County is the result of transport from these upwind areas (ARB 2001). The Almanac indicates that, since 1990, the peak 8-hour indicator in the SVAB has decreased slightly, and the overall decline for the 20-year period is almost 12 percent. In the SJVAB, peak ozone levels declined by an average of 10 percent while the number of State and national 8-hour exceedance days declined by 17 percent and 21 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.

According to the Almanac, direct emissions of both PM_{10} and $PM_{2.5}$ in the SVAB have increased between 1975 and 2000 and are projected to increase through at least 2020. These emissions are dominated by areawide sources, primarily because of development (ARB 2009). Although PM_{10} emissions have decreased overall in the SJVAB, values overall are highly variable. This variability appears to be a result of meteorology, while the overall downward trend is consistent with a change in emissions (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 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 SVAB, 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 throughout California. The closest station to the MCSP Infill Site is the Jackson–Clinton Road station, approximately 11 miles southeast of the infill site. This station monitors ozone levels only. Data for PM_{10} and $PM_{2.5}$ are reported from the San Andreas–Gold Strike Road station, approximately 19 miles southeast of the infill site. Table 3.1-1 summarizes the air quality data from these stations for the most recent 3 years, 2009–2011.

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

	2009	2010	2011
Ozone[a]			
Maximum concentration (1-hour/8-hour, ppm)[b]	0.096/0.077	0.093/0.087	0.094/0.077
Number of days State standard exceeded (1-hour/8-hour)	1/1	0/11	0/4
Number of days national standard exceeded (1-hour/8-hour)	0/1	0/3	0/2
Respirable Particulate Matter (PM_{10})[c]			
Maximum concentration (µg/m^3) (national/California[b])	26.0/24.9	26.3/25.8	32.2/34.1
Number of days state standard exceeded (measured/estimated[d])	0/0.0	0/*	0/*
Number of days national standard exceeded (measured/estimated[b])	0/0.0	0/0.0	0/*
Fine Particulate Matter ($PM_{2.5}$)[c]			
Maximum concentration (µg/m^3)[b]	11.5	11.4	33.9
Number of days national standard exceeded (measured/estimated[d])	0/0.0	0/*	0/0.0
National/California annual average (µg/m^3)[b]	6.0/6.1	*/*	9.1/*

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

[a] Measurements were recorded at the Jackson–Clinton Road 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] Measurements were recorded at the San Andreas–Gold Strike Road monitoring station.

[d] 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 MCAB are shown in Table 3.1-2 for each criteria air pollutant.

EXISTING EMISSIONS

With respect to the MCAB, mobile sources are the largest contributor to the estimated annual average air pollutant levels of ROG and NO_X. Mobile sources account for approximately 56 percent and 81 percent, respectively, of the total emissions. Areawide sources account for approximately 52 percent, 92 percent, and 87 percent of the MCAB's CO, 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 Almanac (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.

Diesel PM poses the greatest health risk among these 10 TACs. According to ARB's Community Health Air Pollution Information System, no major existing stationary sources of TACs are located within 2 miles of the MCSP Infill Site (ARB 2013c). Vehicles on State Route (SR) 104, SR 124, SR 16, SR 88, Ione Michigan Bar Road, Preston Avenue, Main Street, South Church Street, and South Ione Street are sources of diesel PM and other TACs associated with vehicle exhaust.

Table 3.1-2 Ambient Air Quality Standards and Designations for Mountain Counties Air Basin

Pollutant	Averaging Time	California [a]		National Standards [b]		
		Standards[c]	Attainment Status[i]	Primary[c,d]	Secondary[c,e]	Attainment Status[j]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	N	–	Same as Primary Standard	N
	8-hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	U	150 µg/m^3	Same as Primary Standard	U
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)	24-hour	–	U	35 µg/m^3	Same as Primary Standard	U/A
	Annual Arithmetic Mean	12 µg/m^3		12 µg/m^3		
Carbon Monoxide (CO)	8-hour	9 ppm (10 mg/m^3)	U	9 ppm (10 mg/m^3)	–	U
	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)	A	0.053 ppm (100 µg/m^3)	Same as Primary Standard	U/A
	1-hour	0.18 ppm (339 µg/m^3)		0.100 ppm [f]	–	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	A	0.030 ppm (for certain areas) [g]	–	U
	24-hour	0.04 ppm (105 µg/m^3)		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)		0.075 ppm (196 µg/m^3) [g]	–	

Table 3.1-2 Ambient Air Quality Standards and Designations for Mountain Counties Air Basin

Pollutant	Averaging Time	California [a]		National Standards [b]		
		Standards[c]	Attainment Status[i]	Primary[c,d]	Secondary[c,e]	Attainment Status[j]
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 Average	–	–	0.15 µg/m^3		A
Visibility-Reducing Particle 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)	U/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% 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% 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%ile 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 three-year average of the annual 99th%ile 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 a least one violation of a state standard for that pollutant in the area.

[j] 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

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.

The MCSP Wastewater Treatment Plant (WWTP) was constructed as part of MCSP and is located onsite. The WWTP design consists of an oxidation ditch, two clarifiers, chlorination facilities, a belt filter press operation for dewatering sludge, and a 4,000-gallon hypochlorination storage tank. Solids produced by the WWTP are dewatered with a belt filter press and then stored in a covered, concrete-lined drying area. When the material is sufficiently dried, it is collected by Liberty Compost and hauled to Kern County, where it is converted into Class A compost. Winterport Farm, a cattle ranch that raises beef cattle, is located within 2 miles of the infill site. Neither of these existing facilities produce major sources of objectionable odors.

3.1.2 REGULATORY CONSIDERATIONS

Air quality within the vicinity of the MCSP Infill Site area is regulated by EPA, ARB, and ACAPCD. 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 – The 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

Amador County Air Pollution Control District

APAPCD seeks to attain and maintain acceptable air quality conditions in Amador County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of ACAPCD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. ACAPCD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the CAA, CAAA, and the CCAA.

Rules and Regulations

As mentioned above, ACAPCD adopts rules and regulations. All projects are subject to ACAPCD's rules and regulations in effect at the time of construction. Specific rules applicable to the development of the infill site may include, but are not limited to, the following:

- ***Rule 202 – Visible Emissions.*** A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one (1) hour which is: (a) as dark or darker in shade as that designated as No. 1 on the Ringlemann 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 subsection (a) of this section.
- ***Rule 205 – Nuisance.*** A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which can 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 to have a natural tendency to cause injury or damage to business or property.
- ***Rule 207 – Particulate Matter.*** A person shall not release or discharge into the atmosphere from any source or single processing unit, exclusive of sources emitting combustion contaminants only, particulate matter emissions in excess of 0.1 grains per cubic foot of dry exhaust gas at standard conditions.
- ***Rule 210 – Specific Contaminants***.

  Sulfur Compounds
  A person shall not release or discharge in to the atmosphere from any source of emission whatsoever, sulfur compounds, calculated as sulfur dioxide (SO_2), in excess of 2000 parts per million by volume (0.2 percent) of exhaust gas.

  - **Combustion Contaminants**
    A person shall not release or discharge into the atmosphere from the following sources or units thereof, combustion contaminants calculated at 12% carbon dioxide (CO_2) in excess of:
    - Wood Fired Boilers and Incinerators: 0.2 grains per cubic foot of dry exhaust gas at standard conditions.
    - All Other Sources: 0.1 grains per cubic foot of dry exhaust gas at standard conditions.
  - Particulate matter emitted from a source or combination of sources in which exhaust gases are used to dry, calcine, pyrolyze, sinter or otherwise thermally condition, exclusive of combusting any process material, shall be excluded from calculation as combustion contaminants.
- ***Rule 218 – Fugitive Dust Emissions.*** This rule requires dust abatement measures for an assortment of activities, including construction/grading of land; processing, handling, storing and/or transporting solid bulk materials; and operation of machines or equipment. Dust abatement

measures include wetting or paving and maintaining roadways; wetting stockpiles; using ventilation hoods, fans, or filters on equipment; planting vegetation or installing other barriers; controlling vehicle speeds, etc.

TOXIC AIR CONTAMINANTS

At the local level, air pollution control or management districts may adopt and enforce ARB control measures. Under ACAPCD Rules 401 and 501 ("Permit Required," summarized below), 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. ACAPCD limits emissions and public exposure to TACs through a number of programs. ACAPCD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people, or facilities that generally house people (e.g., schools, hospitals, residences), that may experience adverse effects from unhealthful concentrations of air pollutants.

- ***Rule 401 – Permit Required.*** Any person building, altering, or replacing any source of air contaminants shall first obtain an Authority to Construct from the Air Pollution Control Officer. An Authority to Construct shall remain in effect until the Permit to Operate for that source for which the application was filed is either granted or denied or until termination pursuant to other provisions of this Regulation.
- ***Rule 501 – Permit Required.*** Before any source may be operated, a Permit to Operate shall be obtained from the Air Pollution Control Officer. No Permit to Operate shall be granted either by an Air Pollution Control Officer or the Hearing Board for any source constructed without authorization as required in Regulation IV (Authority to Construct) until the information required is provided to the Air Pollution Control Officer and such source is altered, if necessary, and made to conform to the standards set forth in Regulation IV and elsewhere in the Rules and Regulations.

Sources that require a permit are analyzed by ACAPCD (e.g., HRA) on the basis of their potential to emit toxics. If it is determined that a project would emit toxics in excess of ACAPCD's threshold of significance for TACs, 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, ACAPCD 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 ACAPCD'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

Although offensive odors rarely cause physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and ACAPCD. ACAPCD's Rule 205 (Nuisance) regulates odorous emissions.

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, they are

typically reviewed for each project on an individual basis, focusing on the existing and potential surrounding uses and the location of sensitive receptors.

3.1.1 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 MCSP Infill Site would result in a significant impact relating to air quality resources if it would do any of the following:

- conflict with or obstruct implementation of the applicable air quality plan;
- violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable NAAQS or CAAQS (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- expose sensitive receptors to substantial pollutant concentrations; or
- create objectionable odors affecting a substantial number of people.

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.

As stated in Appendix G, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the above determinations. ACAPCD has not established thresholds of significance for CEQA evaluations of air quality impacts. Therefore, CEQA thresholds established by the Sacramento Metropolitan Air Quality Management District (SMAQMD) are used to evaluate emissions anticipated from development of the level II infill correctional facility. Using SMAQMD thresholds is considered appropriate, in part, because air quality conditions in the western portion of Amador County are considered similar to those in Sacramento County as a result of of pollution transport from Sacramento County to Amador County, as discussed above. Although the provision for using other thresholds is attributed to the State CEQA Guideline section for adopting thresholds of significance (Section 15064.7), nothing in CEQA precludes the use of another agency’s thresholds when used on a project-by-project basis (i.e., thresholds not adopted for general use by the lead agency but used for a specific project). Thus, as used in this DEIR in accordance with guidance provided by SMAQMD (SMAQMD 2011), development of a level II infill correctional facility would result in significant air quality impacts if it would:

- cause construction-generated criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended threshold of 85 lbs/day for NO_X, or substantially contribute to emissions concentrations (e.g., PM_{10}) that exceed the NAAQS or CAAQS;
- cause long-term regional criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended threshold of 65 lbs/day for ROG and NO_X, or substantially contribute to emissions concentrations (e.g., PM_{10}) that exceed the NAAQS or CAAQS;
- cause local mobile-source emissions to exceed or substantially contribute to CO concentrations that violate the 1-hour ambient air quality standard of 20 ppm or the 8-hour standard of 9 ppm;
- expose sensitive receptors to TAC emissions that exceed 10 in 1 million for the maximally exposed individual to contract cancer and/or a hazard index of 1 for the maximally exposed individual; and/or
- expose sensitive receptors to excessive nuisance odors, as defined under ACAPCD Rule 205.

According to SMAQMD, short-term ROG emissions generated by construction should be modeled; however, SMAQMD has not established a threshold to determine the significance of such emissions.

SMAQMD bases this approach on the fact that ROG emissions attributable to construction equipment exhaust are low and those from the application of architectural coatings are regulated by Rule 442 (SMAQMD 2011). ACAPCD has not adopted a rule regulating the volatile organic compound (VOC) content of architectural coatings. According to ARB, air districts without an architectural coating rule are covered by EPA's National Architectural Coatings Rule.

SMAQMD recommends that PM_{10} emissions be addressed as a localized pollutant. Thus, SMAQMD considers PM_{10} emissions to be significant at the project level if they would exceed SMAQMD's concentration-based threshold of significance at an offsite receptor location. Because $PM_{2.5}$ is a subset of PM_{10}, SMAQMD assumes that construction projects that do not exceed SMAQMD's PM_{10} threshold of significance would also be considered less-than-significant for $PM_{2.5}$ impacts.

In addition, SMAQMD has developed screening criteria to assist in the evaluation of construction-generated PM_{10} emissions (SMAQMD 2011:3-12, 3-13). According to those criteria, PM_{10} emissions are considered less than significant from a project if less than 15 acres would be actively disturbed on any given day during construction and the project would implement SMAQMD's basic construction emission control practices.

Sensitive receptors near the MCSP Infill Site include the existing employees and inmates at MCSP and occupants of the California Department of Forestry and Fire Protection (CAL FIRE) Academy. The nearest sensitive receptors outside MCSP are residential uses approximately 0.7 mile southeast of the infill site. The infill site would be accessed from SR 104, and residences are located along the roadway, approximately 0.9 mile south of the infill site.

PROJECT IMPACTS AND MITIGATION MEASURES

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

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

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

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 development-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 proposed level II correctional facility complex, including minor trenching and other construction activities associated with the proposed spray fields, were modeled using the CalEEMod (Version 2011.1.1) computer program as recommended by SMAQMD. 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 development-specific information. In accordance with SMAQMD-recommended methodologies, short-term ROG emissions generated by construction are modeled and presented for informational purposes only. PM_{10} and $PM_{2.5}$ emissions were assessed with respect to SMAQMD's screening levels to determine compliance with the AAQS.

Construction of the level II correctional facility is expected to commence in spring 2014. A single facility is estimated to take approximately 26 months to complete and a double facility 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/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)
- 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 six months, concurrent with building 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 double facility. Anticipated monthly variation in construction workers present onsite during construction of a single facility and a double facility is reported in Tables 2-3 and 2-4 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; with secondary sources including on-road trucks for import and export of materials and worker 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 dust (e.g., PM_{10} and $PM_{2.5}$) are associated primarily with ground disturbance activities during site preparation, demolition, and grading, and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT on- and offsite. These activities generate fugitive dust, which includes PM_{10} and $PM_{2.5}$. 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 3.1-3 summarizes the modeled construction-related emissions of criteria air pollutants and ozone precursors for the proposed level II infill correctional facility complex at MCSP. The significance of construction-related air quality impacts was determined by comparing these modeling results with applicable significance thresholds. Refer to Appendix 3A for detailed modeling input parameters and results.

Table 3.1-3 Summary of Modeled Daily Emissions of Criteria Air Pollutants and Precursors from Construction of the Level II Infill Facility Complex (Unmitigated)

Year	Emissions (lbs/day)			
	ROG[1]	NO_X[1]	PM_{10}	$PM_{2.5}$
Daily Unmitigated Emissions—2014	45.1	**225.7**	198.9	16.5
Daily Unmitigated Emissions—2015	37.9	**115.1**	38.0	6.7
Daily Unmitigated Emissions—2016	137.5	**101.4**	36.1	6.8
Threshold of Significance (lbs/day)	–	*85*	*AAQS*	*AAQS*

Notes: AAQS = Ambient Air Quality Standard; 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; lbs/day = pounds per day
1 ROG and NO_X are precursors to ozone.
Bold indicates a value greater than the significance threshold.
Refer to Appendix 3A for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

As shown in Table 3.1-3, unmitigated emissions of NO_X would exceed the SMAQMD threshold of significance in 2014. As discussed above, SMAQMD has not established a threshold of significance for construction-generated ROG emissions because those attributable to construction equipment exhaust are low and those from the application of architectural coatings are regulated by air district rules. ACAPCD has not adopted a rule regulating the VOC content of architectural coatings. However, coatings produced, sold or applied in ACAPCD's jurisdiction are covered by EPA's National Architectural Coatings Rule. Thresholds for ROG have not been established by ACAPCD. To provide additional context for the magnitude of ROG emissions from project construction, the thresholds presented in ACAPCD Rule 500.II, Section X, for a "major source," which is defined as "a stationary source with the potential to emit a regulated air pollutant in quantities equal to or exceeding the thresholds," are utilized. The threshold for VOCs as presented in the Rule is 50 tons per year (274 lbs/day) for a serious nonattainment area. The MCAB is designated a moderate nonattainment area; however, the threshold for a serious nonattainment is used to provide a conservative analysis. As shown in Table 3.1-3, ROG emissions during 2014, 2015, and 2016 would not exceed the ACAPCD Rule 500.II threshold of 274 lbs/day. Therefore, ROG emissions from construction would be anticipated to be within acceptable levels.

Construction activities would also generate substantial amounts of PM_{10} and $PM_{2.5}$ emissions. Fugitive dust control measures consistent with ACAPCD Rule 218 are not currently part of the contemplated development at the MCSP Infill Site. Therefore, development-generated construction emissions of PM_{10} and $PM_{2.5}$, and NO_X as discussed above, could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering MCAB's nonattainment status for ozone.

Emissions of NO_X in 2014 (i.e., 225.7 lbs/day) would exceed the daily significance threshold of 85 lbs/day during construction of a level II infill correctional facility complex. In addition basic construction fugitive dust control practices consistent with ACAPCD Rule 218 are not currently part of the proposed development at the MCSP Infill Site. Thus, NO_X, PM_{10} and $PM_{2.5}$ emissions from construction of the proposed level II infill correctional facility complex at the MCSP Infill Site could violate 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 significant.

Mitigation Measures

Mitigation Measure 3.1-1a

The following control measures will be implemented by CDCR to reduce NO_X emissions during construction:

- Heavy-duty onsite construction equipment (greater than 50 horsepower [hp]) will meet EPA Tier III emissions standards at a minimum and Tier IV standards if available. A copy of each unit's certified tier specification, BACT documentation, and ARB or Air District operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

- Idling time will be minimized either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Clear signage that posts this requirement will be provided for workers at the entrances to the site.

- All construction equipment will be maintained in proper working condition according to manufacturer's specifications. The equipment will be checked by a certified mechanic and determined to be running in proper condition before it is operated.

Mitigation Measure 3.1-1b

The following control measures will be implemented by CDCR to reduce PM_{10} and $PM_{2.5}$ emissions during construction.

- All exposed surfaces will be watered two times daily or a stabilizing agent will be applied to prevent generation of dust plumes. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Haul trucks transporting soil, sand, or other loose material on the site will be covered or at least two feet of free board space will be maintained. Any haul trucks that will be traveling along freeways or major roadways will be covered.
- Wet power vacuum street sweepers will be used to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Vehicle speeds on unpaved roads will be limited to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved will be completed as soon as possible. In addition, building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- Disturbed areas will be covered with a vegetative ground cover as soon as possible.
- All excavating and grading operations will be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period.

Significance after Mitigation

Implementation of Mitigation Measure 3.1-1a would reduce maximum daily NO_X emissions to 157.5 lbs/day, 91.3 lbs/day, and 83.4 lbs/day for the worst-case scenario during construction years 2014, 2015, and 2016, respectively. Measure effectiveness with use of Tier III certified equipment was quantified in CalEEMod; detailed input and output data are provided in Appendix 3A. CDCR will use Tier IV certified equipment to the extent feasible; however, availability of such equipment is limited and it is not possible to ascertain the proportion of equipment that meets these requirements that could be employed onsite during construction. Worst-case maximum daily emissions of NO_X in 2014 would still exceed SMAQMD's daily threshold. Implementation of Mitigation Measure 3.1-1b would lead to a reduction in PM_{10} and $PM_{2.5}$ emissions during site preparation and grading activities. Based on mitigation effectiveness estimated by CalEEMod, fugitive dust PM_{10} and $PM_{2.5}$ emissions would be reduced by 55% through watering of exposed surfaces, thereby substantially reducing the potential for emissions to substantially contribute to PM_{10} and $PM_{2.5}$ concentrations exceeding the NAAQS or CAAQS. As discussed above, thresholds for PM_{10} and $PM_{2.5}$ have not been established by ACAPCD. To provide additional context for the magnitude of these emissions from project construction, the thresholds presented in ACAPCD Rule 500.II, Section X, for a "major source," are utilized. The threshold for PM_{10} as presented in the Rule is 70 tons per year (384 lbs/day) for a nonattainment area. Although the project area is currently designated as unclassified for PM_{10}, the threshold is used to provide a conservative scenario. Construction emissions of PM_{10} would not exceed the Rule 500.II threshold and would be further reduced through incorporation of Mitigation Measure 3.1-1b. However, due to NO_X emissions in excess of the SMAQMD threshold, construction-related impacts would be **significant and unavoidable**.

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

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 development 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 contemplated land uses types and sizes as described in Chapter 3, "Project Description," in Volume 1 of the DEIR, trip generation data presented in the traffic analysis prepared for this project (Section 3.11 and Appendix 3D 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. CalEEMod input parameters were adjusted with development-specific information, where available.

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 3A in this volume for detailed modeling input parameters and results.

Table 3.1-4 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 3.1-4, area- and mobile-source emissions resulting from operation of the level II infill correctional facility complex would be well below SMAQMD's significance threshold of 65 lbs/day for ROG or NO_X and would not be expected to contribute to concentrations that exceed the NAAQS or CAAQS. 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 3.1-4 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	PM_{10}	$PM_{2.5}$
Area Sources	17.6	13.2	1.0	1.0
Mobile Sources	7.8	9.3	8.9	0.5
Total Unmitigated Emissions	25.3	22.5	9.9	1.5
Threshold of Significance (lbs/day)	*65*	*65*	*AAQS*	*AAQS*

Notes: AAQS = Ambient Air Quality Standard (California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations); 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
Numbers may not sum exactly to totals due to rounding.
Refer to Appendix 3A 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 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 ACAPCD Rules 401 and 501, "Permit 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).

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 Rules 401 and 501.

According to ACAPCD Regulations IV and V, the construction and operation of any source must comply with Rule 419, "Nonattainment Pollutant Air Quality Analysis," and Rule 427, "Regulating Construction or Reconstruction of Major Sources Of Hazardous Air Pollutants," 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 ACAPCD applicable rules.

According to ACAPCD, new permitted sources emitting more than 1,000 lbs/day of any criteria pollutant 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 level II infill correctional facility complex at the MCSP Infill Site would result in area- and mobile-source emissions that would not exceed SMAQMD's applicable operational significance thresholds. Although development-generated stationary-source emissions would be additive, such would be controlled and limited through ACAPCD'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 [Complex]

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. The SVAB is designated as an attainment area for the CAAQS and NAAQS for CO. As of 2003, CO levels recorded in the SVAB have been more than 50% below the federal 8-hour standard (ARB 2004). The SVAB has not had any exceedances of CO standards in over 20 years.

Several air districts in California recently adopted screening criteria for analyzing local CO impacts, including SMAQMD. 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 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 3A in this volume and discussed in Section 3.11, "Transportation"), none of the maximum peak-hour traffic volumes resulting from development of the level II infill correctional facility complex at the MCSP Infill Site would exceed SMAQMD's screening criteria of 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 MCSP 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 [Complex]

The exposure of sensitive receptors to emissions of TACs from onsite development-generated construction-related and operation-related sources for each facility type is discussed separately below.

Onsite Construction-Related Equipment Emissions

Construction of the level II infill correctional facility complex at the MCSP Infill Site would result in short-term, development-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment used for site preparation (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 ACAPCD nor SMAQMD 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.

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 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 28 months for the level II infill correctional facility complex. 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 are residential uses approximately 0.7 mile southeast of the infill site. The infill site would be accessed by SR 104 and residences are located along the roadway,

approximately 1 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. As a result, this impact would be less than significant.

Onsite Operation-Related Stationary-Source Emissions

Development of the level II infill correctional facility complex at the MCSP 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 in the event of an emergency. These types of stationary sources, in addition to any other stationary sources that may emit TACs, would be subject to ACAPCD's rules and regulations, including Regulation IV(Authority to Construct Regulations), and Regulation V (Permit to Operate Regulations), and Regulation IX (Nonvehicular Airborne Toxic Control Measures), as well as MACT and T-BACT requirements. Thus, as discussed above, ACAPCD 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 ACAPCD'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, ACAPCD would deny the required PTO.

More specifically, the siting of new stationary sources of TACs would be subject to ACAPCD rules and each new stationary source is evaluated to determine whether it has the potential to emit TACs. ACAPCD 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. ACAPCD 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 ACAPCD'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 authority to construct and permit to operate from ACAPCD would not exceed the applicable TAC thresholds of significance.

With regards to potential sensitive receptors (e.g., inmates onsite), ARB's Community Health Air Pollution Information System identifies no major stationary sources of TACs within 2 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 potential) to substantial pollutant concentrations from stationary sources. This impact would be a less than significant.

With regards 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 MCSP Infill Site (i.e., sufficient distance from emission sources that excessive concentrations of diesel PM would not occur at the receptor). For any contemplated stationary sources of TACs, CDCR would comply with applicable

ACAPCD rules and regulations for permitted stationary sources, and development of the level II infill correctional facility complex would not locate any potential sensitive receptors within ARB-recommended separation distances from emission sources. As a result, development of the level II infill correctional facility complex at the MCSP Infill Site would not result in the exposure of sensitive receptors (existing or potential) 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 [Complex]

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 very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

Land uses within 2 miles of the infill site include cattle grazing land; however, these uses do not represent major, concentrated sources of odors (for instance, in comparison to livestock operations at a dairy). A grass-fed cattle farm is located almost 2 miles from the infill site, and this distance is consistent with SMAQMD's recommended odor screening distance for feed lot and dairy operations.

The MCSP WWTP was constructed as part of MCSP and is located onsite. The WWTP design consists of an oxidation ditch, two clarifiers, chlorination facilities, a belt filter press operation for dewatering sludge, and a 4,000-gallon hypochlorination storage tank. Solids produced by the WWTP are dewatered with a belt filter press and then stored in a covered, concrete-lined drying area. The WWTP is located more than 500 feet from the level II infill correctional facility complex at the infill site. Development of the complex would not lead to an expansion of the onsite WWTP. WWTP operations would remain the same with or without the infill facility.

The level II infill correctional facility complex would not introduce new types of sensitive receptors at the site. Odors from the onsite WWTP and agricultural uses (primarily cattle grazing) in the vicinity of the infill site experienced by the new inmates would be similar to those experienced by inmates currently. Objectionable odors, if any, would be intermittent and temporary. Thus, development of the complex would not expose a substantial number of inmates to objectionable odors beyond existing conditions.

Development of the level II infill correctional facility complex would not introduce new, permanent odor-generating facilities. Any onsite odor sources (e.g., fryers, charbroilers, solid waste disposal areas) would be controlled under ACAPCD nuisance regulations and California Department of Public Health emission reduction mandates that limit exhaust emissions from cooking sources. Thus, development of the complex would not expose nearby existing receptors to objectionable odors.

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, and therefore would also be less than significant.

Development of the level II infill correctional facility complex at the MCSP Infill Site would not involve the construction or operation of any major odor sources. Odors experienced by future inmates at the facility would be similar to those that are experienced by inmates currently. Thus, development of the level II infill correctional facility complex at the MCSP Infill Site 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 SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

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

Table 3.1-5 summarizes the modeled construction-related emissions of criteria air pollutants and ozone precursors for a 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 3Afor detailed modeling input parameters and results.

As shown in Table 3.1-5, unmitigated emissions of NO_X would exceed the SMAQMD threshold of significance in 2014, 2015, and 2016. As discussed above, SMAQMD has not established a threshold of significance for construction-generated ROG emissions because those attributable to construction equipment exhaust are low and those from the application of architectural coatings are regulated by air district rules. ACAPCD has not adopted a rule regulating the VOC content of architectural coatings. However, coatings produced, sold or applied in ACAPCD's jurisdiction are covered by EPA's National Architectural Coatings Rule. Therefore, ROG emissions from construction would be anticipated to be within acceptable levels.

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

Year	Emissions (lbs/day)			
	ROG[1]	NO_X[1]	PM_{10}	$PM_{2.5}$
Daily Unmitigated Emissions—2014	28.3	**165.7**	102.6	14.0
Daily Unmitigated Emissions—2015	21.1	79.8	18.5	4.4
Daily Unmitigated Emissions—2016	66.9	70.0	17.8	4.7
Threshold of Significance (lbs/day)	–	*85*	*AAQS*	*AAQS*

Notes: AAQS = Ambient Air Quality Standard; 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; lbs/day = pounds per day
1 ROG and NO_X are precursors to ozone.
Bold indicates a value greater than the significance threshold.
Refer to Appendix 3A for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

Construction activities would also generate substantial amounts of PM_{10} and $PM_{2.5}$ emissions. Fugitive dust control measures consistent with ACAPCD Rule 218 are not currently part of the contemplated development at the MCSP Infill Site. Therefore, development-generated construction emissions of PM_{10} and $PM_{2.5}$, and NO_X as discussed above, could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering MCAB's nonattainment status for ozone.

Emissions of NO_X in 2014, 2015, and 2016 (i.e., 225.7 lbs/day, 115.1 lbs/day, and 101.4 lbs/day, respectively) during construction of a single, level II infill correctional facility would exceed the daily significance threshold of 85 lbs/day. In addition basic construction fugitive dust control practices consistent with ACAPCD Rule 218 are not currently part of the contemplated development at the MCSP Infill Site. Thus, NO_X, PM_{10} and $PM_{2.5}$ emissions from construction of the single, level II infill correctional facility at the MCSP Infill Site could violate 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 significant.

Mitigation Measures

Implement Mitigation Measures 3.1-1a and 3.1-1b.

Significance after Mitigation

Implementation of Mitigation Measure 3.1-1a would reduce maximum daily NO_X emissions to 105.8 lbs/day for the worst-case scenario during 2014. Measure effectiveness with use of Tier III certified equipment was quantified in CalEEMod; detailed input and output data are provided in Appendix 3A. CDCR will use Tier IV certified equipment to the extent feasible; however, availability of such equipment is limited and it is not possible to ascertain the proportion of equipment that meets these requirements that could be employed onsite during construction. Worst-case maximum daily emissions of NO_X in 2014 would still exceed SMAQMD's daily threshold. Implementation of Mitigation Measure 3.1-1b would lead to a reduction in PM_{10} and $PM_{2.5}$ emissions during site preparation and grading activities. Based on mitigation effectiveness estimated by CalEEMod, fugitive dust PM_{10} and $PM_{2.5}$ emissions would be reduced by 55% through watering of exposed surfaces, thereby substantially reducing the potential for emissions to substantially contribute to PM_{10} and $PM_{2.5}$ concentrations exceeding the NAAQS or CAAQS. However, due to NO_X emissions in excess of the SMAQMD threshold, construction-related impacts would be **significant and unavoidable**.

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

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 3A in this volume for detailed modeling input parameters and results.

Operational emissions for a single, level II infill correctional facility were modeled using the same methodology as identified above under Impact 3.1-2a for the proposed complex. 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 SMAQMD's significance threshold of 65 lbs/day for ROG or NO_X and would not be expected to contribute to concentrations that exceed the NAAQS or CAAQS. 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 – pounds per day (lbs/day)			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area Sources	7.8	5.9	0.5	0.5
Mobile Sources	4.0	4.8	4.6	0.3
Total Unmitigated Emissions	11.8	10.7	5.1	0.7
Threshold of Significance (lbs/day)	*65*	*65*	*AAQS*	*AAQS*

Notes: AAQS = Ambient Air Quality Standard; 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
Numbers may not sum exactly to totals due to rounding.
Refer to Appendix 3A 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 ACAPCD Rules 401 and 501, "Permit Required," under which any construction, alteration, replacement, or operation of a source that will emit or may emit emissions must obtain an Authority to Construct (ATC) and/or a Permit to Operate (PTO).

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 Rules 401 and 501.

According to ACAPCD Regulations IV and V, the construction and operation of any source must comply with Rule 419, "Nonattainment Pollutant Air Quality Analysis," and Rule 427, "Regulating Construction or Reconstruction of Major Sources Of Hazardous Air Pollutants," 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 ACAPCD applicable rules.

According to ACAPCD, new permitted sources emitting more than 1,000 lbs/day of any criteria pollutant 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 a single, level II infill correctional facility at the MCSP Infill Site would result in area- and mobile-source emissions that would not exceed SMAQMD's applicable operational significance thresholds. Although development-generated stationary-source emissions would be additive, such would be controlled and limited through ACAPCD'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 [Single Facility]

As was discussed above under Impact 3.1-3a for the proposed complex, the addition of 31,600 vehicles per hour to a particular intersection is often used as a screening threshold for potentially significant CO concentrations. According to the traffic analysis (attached as Appendix 3D 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 MCSP Infill Site would exceed SMAQMD's screening criteria of 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 MCSP 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 [Single Facility]

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 ACAPCD nor SMAQMD 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 a 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 are residential uses approximately 0.7 mile southeast of the infill site. The infill site would be accessed on SR 104 and residences are located along the roadway, approximately 1 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 in case of an emergency. These types of stationary sources, in addition to any other stationary sources that may emit TACs, would be subject to ACAPCD's rules and regulations, including Regulation IV (Authority to Construct Regulations), and Regulation V (Permit to Operate Regulations),

and Regulation IX (Nonvehicular Airborne Toxic Control Measures), as well as maximum achievable control technology (MACT) and T-BACT requirements. Thus, as discussed above, ACAPCD 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 ACAPCD'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, ACAPCD would deny the required PTO.

More specifically, the siting of new stationary sources of TACs would be subject to District rules and each new stationary source is evaluated to determine whether it has the potential to emit TACs. ACAPCD assesses the impact from TACs based on its own guidance, as well guidance documents from OEHHA, ARB, and the California Air Pollution Control Officers Association. ACAPCD 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 one (unless approved by OEHHA).

These permitting requirements reflect ACAPCD'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 authority to construct and permit to operate from ACAPCD would not exceed the applicable TAC thresholds of significance.

With regards to potential sensitive receptors (*e.g.*, inmates onsite), ARB's Community Health Air Pollution Information System identifies no major stationary sources of TACs exist within 2 miles of the infill site. Thus, development of the single, level II infill correctional facility would not result in the placement of sensitive receptors 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 potential) 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 MCSP Infill Site (i.e., sufficient distance from emission sources that excessive concentrations of diesel PM would not occur at the receptor). For any contemplated stationary sources of TACs, CDCR would comply with applicable ACAPCD rules and regulations for permitted stationary sources, and implementation of the contemplated development would not locate any potential sensitive receptors within ARB-recommended separation distances from emission sources. As a result, development of the single, level II infill correctional facility at the MCSP Infill Site would not result in the exposure of sensitive receptors (existing or potential) 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 [Single Facility]

Land uses within 2 miles of the infill site include cattle grazing land; however, these uses do not represent major, concentrated sources of odors (for instance, in comparison to livestock operations at a dairy). A grass-fed cattle farm is located almost 2 miles from the infill site, and this distance is consistent with SMAQMD's recommended odor screening distance for feed lot and dairy operations.

The MCSP WWTP was constructed as part of MCSP and is located onsite. The WWTP design consists of an oxidation ditch, two clarifiers, chlorination facilities, a belt filter press operation for dewatering sludge, and a 4,000-gallon hypochlorination storage tank. Solids produced by the WWTP are dewatered with a belt filter press and then stored in a covered, concrete-lined drying area. The WWTP is located more than 1,000 feet from the infill site. Development of the single, level II infill correctional facility would not lead to an expansion of the onsite WWTP. WWTP operations would remain the same with or without the infill facility.

The single, level II infill correctional facility would not introduce new types of sensitive receptors at the site. Odors from the onsite WWTP and agricultural uses (primarily cattle grazing) in the vicinity of the infill site experienced by the new inmates would be similar to those experienced by inmates currently. Objectionable odors, if any, would be intermittent and temporary. Thus, development of the single, level II infill correctional facility would not expose a substantial number of inmates to objectionable odors beyond existing conditions.

Development of the single, level II infill correctional facility would not introduce new, permanent odor-generating facilities. Any onsite odor sources (e.g., fryers, charbroilers, solid waste disposal areas) would be controlled under ACAPCD 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 and would also be less than significant.

Development of the single, level II infill correctional facility would not involve the construction or operation of any major odor sources. Odors experienced by future inmates at the facility would be similar to those that are experienced by inmates currently. Thus, development of the single, level II infill correctional facility at the MCSP Infill Site 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 contemplated level II infill correctional facility at the Mule Creek State Prison (MCSP) Infill Site and describes relevant regulations pertaining to biological resources. The impact analysis has been organized into two parts. The first part addresses the proposed level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site. The analysis includes a description of the existing environmental conditions, the methods used for assessment, the impacts associated with development of a level II infill correctional facility at the MCSP Infill Site, and the mitigation measures necessary to address significant or potentially significant impacts.

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 project area, including the following documents:

- California Natural Diversity Database (CNDDB) Search (CNDDB 2013);
- California Native Plant Society (CNPS) Inventory (CNPS 2013); and
- *Newman Ridge Project Draft Environmental Impact Report* (Amador County 2012: Section 4.3).

3.2.1 ENVIRONMENTAL SETTING

The MCSP Infill Site is located within the existing state-owned prison property in the City of Ione in western Amador County. The proposed infill site is located northeast of the existing MCSP prison complex in an area consisting primarily of spray fields used for the disposal of the prison's secondary wastewater effluent. Construction of the proposed level II infill facility would also necessitate replacement of existing spray fields that would be lost to build the proposed facilities. The proposed spray field relocation site is located approximately 2 miles southwest of the proposed infill site and is characterized by cropland used for dryland hay production. The infill site is within the northern Sierra Nevada foothill subregion of the California floristic province and is characterized by gently rolling foothill topography with elevations ranging from approximately 310 to 390 feet above mean sea level. The spray field relocation site generally flat with an elevation range of approximately 250 to 260 feet above mean sea level.

The existing spray fields are disked two to three times each season to promote the growth of ruderal vegetation that is irrigated by the effluent. These disked spray fields with annual grasses and weeds make up the majority of the infill site; however, there are stands and strips of foothill woodland containing a large number of mature trees within the area to be affected by construction. The spray fields also contain remnant seasonal wetlands and small stream courses within two watersheds that traverse the proposed site of the infill facility.

Mule Creek, a seasonal stream supporting riparian woodland vegetation, flows southwesterly to the west of the infill site. Development of the proposed level II correctional facility would require adding a second bridge adjacent to the existing one-lane bridge over Mule Creek and running a utility connection under Mule Creek. The portion of Mule Creek where the bridge would be added is characterized by riprap banks with large willow and cottonwood trees beyond the riprapped area. The area where the utility line would be bored under Mule Creek is characterized by an existing dirt road with riparian woodland beyond the dirt road. A reinforced diversion channel runs along the outside edge of the southern project boundary and a seasonal tributary to Mule Creek runs east to west just outside the northern boundary of the infill site. Sutter Creek, a perennial stream, and its associated riparian forest vegetation run parallel to but outside the northern boundary of the proposed spray field relocation site.

Exhibit 3.2-1 shows the vegetation and habitat types on the infill site, including wetland features and wetland delineation sample points. The proposed infill site is surrounded by open space composed of foothill woodland, chaparral, and annual grassland to the north and east; the city of Ione, the California Department of Forestry and Fire Protection (CAL FIRE) Academy, Preston Reservoir, and Preston Youth Correctional Facility (PYCF) to the south; and the existing MCSP facilities, quarries, and open space to the west. Surrounding land uses include cattle grazing, agriculture, residential, and mining.

Exhibit 3.2-2 shows the vegetation and habitat types on the proposed spray field relocation site. The relocation site is surrounded by open space used primarily for cattle grazing and agriculture and characterized by field crops, annual grassland, oak woodland, seasonal wetland, and riparian habitats.

COMMON VEGETATION AND WILDLIFE

As noted above, the majority of the area to be developed for the proposed infill facility site consists of effluent spray fields that support generally weedy annual species because of the periodic disking of the terrain to promote continued vegetation growth throughout the period when the spray fields are in use (spring through fall in a typical year). However, there are remaining stands of foothill pine-oak woodland vegetation within and between the spray fields, particularly in low areas where slopes converge. There is a moderately well-developed riparian corridor associated with Mule Creek, a seasonal stream, just northwest of the infill site.

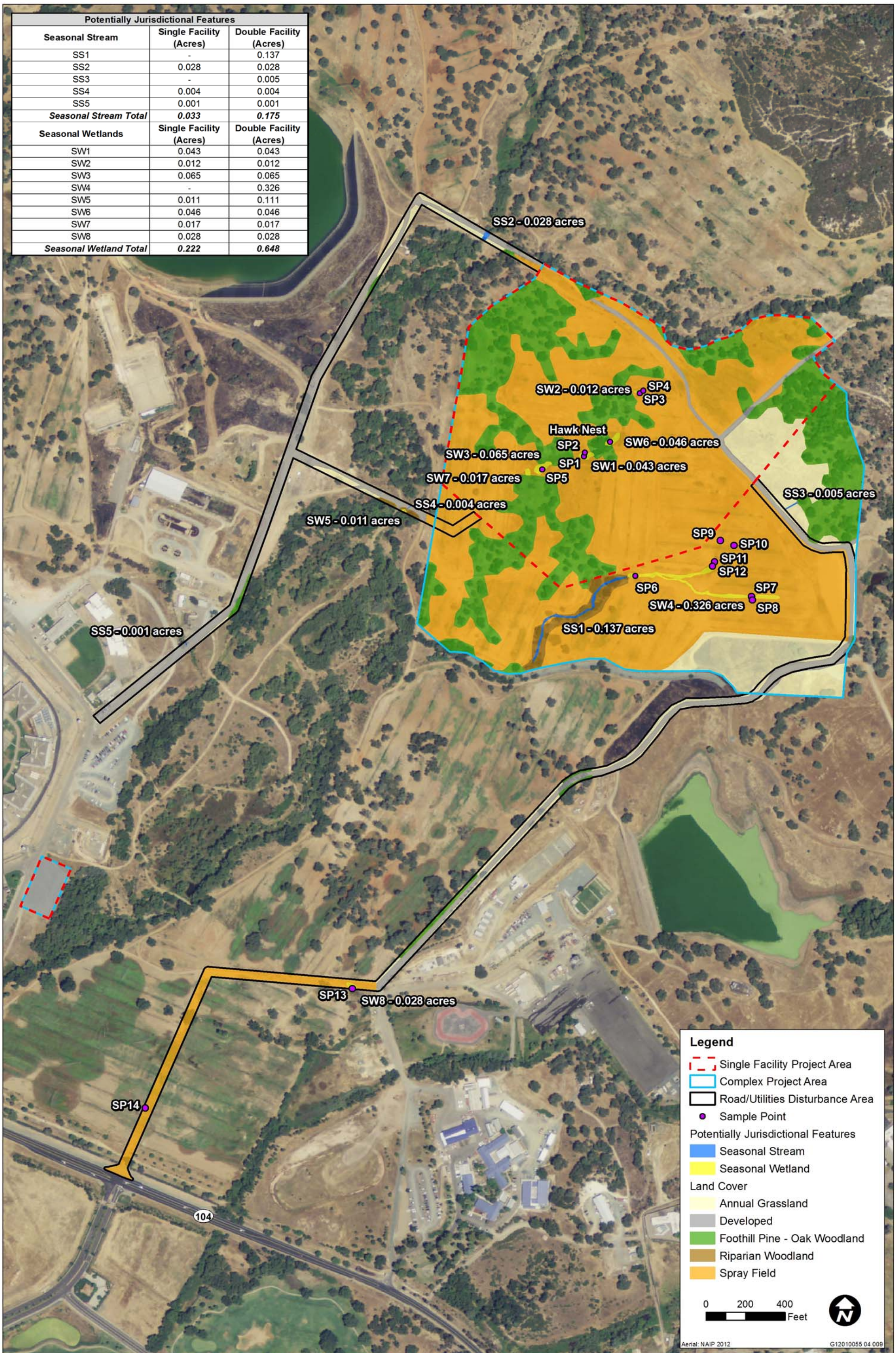
There are also two small areas of undisked annual grassland present at the edge of the area to be graded for the proposed infill facility and just southeast of the site. One of these areas is along the southeast project boundary near Preston Reservoir; it is regularly burned or mowed to control vegetation so cover here is low and dominated by weedy species. The other grassland area is in the northeastern portion of the proposed infill site at the base of a steeper slope and is not regularly managed so it contains denser cover, taller vegetation, and standing dead vegetation and thatch outside the growing season. Annual grassland is characterized by a mixture of annual grasses and forbs and dominated by nonnative grasses including wild oat (*Avena* spp.), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*).

The foothill pine-oak woodland community is dominated by foothill pine (*Pinus sabiniana*) and live oak (*Quercus wislizeni*) and also contains blue oak (*Quercus douglasii*). Understory shrubs include poison oak (*Toxicodendron diversilobum*) and buckbrush (*Ceanothus cuneatus*). However, shrub cover is sparse and the understory is primarily herbaceous and dominated by nonnative species including wild oat, soft chess (*Bromus hordeaceus*), bristly ox-tongue (*Picris echioides*), and blessed milk thistle (*Silybum marianum*).

The riparian woodland on the site occurs as a narrow strip associated with an unnamed seasonal stream within the proposed infill site and also the larger riparian corridor along Mule Creek to the west of the proposed infill site and east of the access road to the infill site. The riparian woodland is characterized by large Fremont cottonwood (*Populus fremontii*) and willow (*Salix* spp.) trees in the overstory and Himalayan blackberry (*Rubus armeniacus*), Coyote brush (*Baccharis pilularis*), and poison oak in the shrub layer.

The spray field relocation site is characterized by grasses cultivated for hay production, predominantly Italian ryegrass (*Festuca perennis*) and wild oat. Blackberry scrub, annual grassland, riparian forest, and oak woodland occur adjacent to the spray field relocation site.

Potentially Jurisdictional Features		
Seasonal Stream	**Single Facility (Acres)**	**Double Facility (Acres)**
SS1	-	0.137
SS2	0.028	0.028
SS3	-	0.005
SS4	0.004	0.004
SS5	0.001	0.001
Seasonal Stream Total	***0.033***	***0.175***
Seasonal Wetlands	**Single Facility (Acres)**	**Double Facility (Acres)**
SW1	0.043	0.043
SW2	0.012	0.012
SW3	0.065	0.065
SW4	-	0.326
SW5	0.011	0.111
SW6	0.046	0.046
SW7	0.017	0.017
SW8	0.028	0.028
Seasonal Wetland Total	***0.222***	***0.648***



Source: Ascent Environmental 2013

Exhibit 3.2-1

Habitat Types at MCSP Infill Site

Source: adapted by Ascent Environmental in 2013

Exhibit 3.2-2

Proposed Spray Fields

Although foothill pine-oak woodland and riparian habitats generally provide high-value habitat for a wide variety of wildlife species, the habitat values on the project site are somewhat lower due to their small patch size and existing continual ground disturbance in the surrounding spray fields. Nonetheless, the site does provide habitat for a number of wildlife species. Larger trees in the riparian corridor and surrounding woodlands, as well as those scattered throughout the spray fields, provide nesting opportunities for raptors and other bird species. A red-tailed hawk (*Buteo jamaicensis*) nest was observed in a foothill pine onsite. Some of the other common wildlife species observed or expected on the infill site include wild turkey (*Meleagris gallopavo*), American kestrel (*Falco sparverius*), western kingbird (*Tyrannus verticalis*), oak titmouse (*Baeolophus inornatus*), savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), rattlesnake (*Crotalus oreganus*), western fence lizard (*Sceloporus occidentalis*), deer mouse (*Peromyscus maniculatus*), black-tailed jackrabbit (*Lepus californicus*), and mule deer (*Odocoileus hemionus*).

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 the CDFW 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 Section 15380. CDFW recommends, and local governments may require, 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 State CEQA Guidelines 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 project site or immediate vicinity was developed primarily through review of the CNDDB (CNDDB 2013) and the CNPS Inventory (CNPS 2013) records of previously documented occurrences of special-status species in the Amador City, Carbondale, Clements, Goose Creek, Ione, Irish Hill, Jackson, Valley Springs, and Wallace U.S. Geological Survey 7.5-minute quadrangles.

Special-Status Plants

Thirteen special-status plant species have been documented in the CNDDB and CNPS Inventory nine-quadrangle search area. Although seasonal wetlands were found on the project site, vegetation in these wetlands is dominated by wetland generalists and none of them support plant species characteristic of vernal pools, or vernal pool indicator species. Vernal pool associated special-status plants would not be expected to occur in these wetlands. Therefore, the five species listed below were immediately eliminated from further evaluation in this document because they are restricted to vernal pools:

- dwarf downingia (*Downingia pusilla*)
- Bogg's Lake hedge hyssop (*Gratiola heterosepala*)
- Greene's legenere (*Legenere limosa*)
- pincushion navarretia (*Navarretia myersii*)
- Sacramento Orcutt grass (*Orcuttia viscida*)

The potential for the remaining eight species was evaluated further based on habitat requirements, geographic distribution, and elevation range, as described in Table 3.2-1. The potential for any special-status plant to occur on the infill site is fairly low because the site is composed of primarily spray fields that are regularly disked to promote the growth of annual vegetation. However, as stated above, there are strips of riparian and foothill woodland vegetation between the spray fields and along the seasonal streams that provide limited potential habitat for some species. In addition, there is a small area of annual grassland in the northeast portion of the level II infill correctional facility complex between its boundary and the boundary of the single facility option that does not get disked.

Table 3.2-1 Special-Status Plant Species Known to Occur in the Project Area

Species	Status[1]			Habitat and Blooming Period	Potential to Occur on the Project Site
	ESA	CESA	CRPR		
Ione manzanita *Arctostaphylos myrtifolia*	T	_	1B.2	Acidic, sandy or clay soils in chaparral or foothill woodland; 200 to 1,900 feet elevation. Generally occurs in pure stands, but also found in a transitional zone with other chaparral types. Blooms November-March.	Unlikely to occur; foothill woodland vegetation is present; however, chaparral associates are lacking and disking beneath the trees is routine. No manzanita shrubs were observed on the infill site during reconnaissance surveys. There are several CNDDB records of this species within 5 miles of the infill site, including a record mapped as a 1-mile radius circle that includes the infill site. The exact location of this occurrence is unknown.

Table 3.2-1 Special-Status Plant Species Known to Occur in the Project Area

Species	Status[1]			Habitat and Blooming Period	Potential to Occur on the Project Site
	ESA	CESA	CRPR		
Hoover's calycadenia *Calycadenia hooveri*	–	–	1B.2	Rocky, barren exposures in grassland or foothill woodland communities; 200 to 1,000 feet elevation. Blooms July-September.	Low potential to occur; limited foothill woodland and grassland; however there are no rock outcrops and barren, exposed soil consists of spray fields that are disked regularly.
Ione buckwheat *Eriogonum apricum* var. *apricum*	E	E	1B.1	Gravelly openings in chaparral vegetation on Ione Formation soils; 200 to 500 feet elevation. Blooms July-October.	Unlikely to occur; no chaparral vegetation is present and open areas consist of spray fields that are disked regularly. Known from approximately 10 occurrences south of Ione.
Irish Hill buckwheat *Eriogonum apricum* var. *prostratum*	E	E	1B.1	Gravelly openings in chaparral vegetation on Ione Formation soils; 250 to 400 feet elevation. Blooms June-July.	Unlikely to occur; no chaparral vegetation is present and open areas are disked regularly. Known from only two occurrences near Irish Hill and Carbondale Mesa on the Ione Formation.
Tuolumne button-celery *Eryngium pinnatisectum*	–	–	1B.2	Vernal pools or other seasonally wet sites in cismontane woodland and lower montane coniferous forest; 200 to 3,000 foot elevation. Blooms May–August.	Low potential to occur; although no vernal pools are present, this species is sometimes found in other seasonally moist habitats that do not contain typical vernal pool associates. The seasonal wetlands and intermittent drainage provide marginally suitable habitat. There are two CNDDB records within five miles; one approximately 4 miles northwest and one approximately four miles southwest and this species was found just east of the Newman Ridge project site approximately two miles to the west in 2010.
Parry's horkelia *Horkelia parryi*	–	–	1B.2	Openings on clay soils of the Ione Formation and other clay soils in chaparral or foothill woodland communities; 0 to 1,000 feet elevation. Blooms April-September.	Low potential to occur; foothill woodland is present and the infill site is on the Ione Formation; however, open areas consist of spray fields that are disked regularly and soils are gravelly and sandy clay loams and not pure clay. There are several CNDDB records of this species within five miles of the site, all to the south of Ione. The nearest record is approximately 2.5 miles away.
Sanford's arrowhead *Sagittaria sanfordii*	–	–	1B.2	Shallow freshwater marshes and swamps in still or slow-moving perennial waters; below 2,200 foot elevation; blooms May–October.	Unlikely to occur, the onsite stream segments are seasonal and fairly fast flowing, therefore, they do not provide suitable habitat conditions for this species.

Table 3.2-1 Special-Status Plant Species Known to Occur in the Project Area

Species	Status[1]			Habitat and Blooming Period	Potential to Occur on the Project Site
	ESA	CESA	CRPR		
Prairie wedge grass *Sphenopholis obtusata*	–	–	2.2	Meadows or streambanks; 1,000 to 6,500 feet elevation. Blooms April-July.	Unlikely to occur; the project site is below the known elevation range of this species.

Notes: ESA = Federal Endangered Species Act; CESA = California Endangered Species Act, CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database;
[1] Legal Status Definitions

Federal Endangered Species Act:
E Endangered (legally protected)
T Threatened (legally protected)
California Endangered Species Act:
E 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)
3 Plants for which more information is needed – a review list
CRPR Extensions:
.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)

Sources: CNDDB 2013; CNPS 2013; Amador County 2012; data compiled by Ascent in 2013

Special-Status Wildlife

Sixteen special-status wildlife species have been documented in the CNDDB nine-quad search area. The following two species were immediately eliminated from further evaluation in this document because they are restricted to vernal pools, which are not present on or within 250 feet of the MCSP Infill Site, and the infill site is outside their known area of distribution as reported in the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005):

- vernal pool fairy shrimp (*Branchinecta lynchi*),
- vernal pool tadpole shrimp (*Lepidurus packardi*)

Two additional special-status wildlife species were added to the list of species evaluated based on habitat requirements, geographic distribution, and regional populations. The potential for 15 special status wildlife species is evaluated in Table 3.2-2.

Table 3.2-2 Special-Status Wildlife with Potential to Occur in the Project Area

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/PD	–	Elderberry shrubs below 3,000 feet in elevation, typically in riparian habitats.	Could occur. Five elderberry shrubs are present within 100 feet of the proposed spray field relocation site on the south bank of Sutter Creek. There are no elderberry shrubs on the infill site.

Table 3.2-2 Special-Status Wildlife with Potential to Occur in the Project Area				
Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Amphibians and Reptiles				
California tiger salamander *Ambystoma californiense*	T	T	Fishless, seasonal and semi-permanent ponds, vernal pools, and seasonal wetlands with a minimum 10-week inundation period for breeding and surrounding uplands, primarily grasslands, with active ground squirrel or gopher burrows. Adults spend most of their lives below ground, except during breeding.	Unlikely to occur. There is no suitable breeding habitat on the infill site. There are a number of ponds within 1.3 miles of the site that provide potentially suitable breeding habitat; however, regular disking on the infill site discourages establishment of burrowing mammals and makes uplands on the site unsuitable for this species. One juvenile tiger salamander was observed on the Newman Ridge project site in 2011. CTS larvae were detected in five ponds within 1.3 miles of the Newman Ridge site during focused surveys conducted in spring 2009 and both juveniles and adults were captured in subsequent upland drift-fence/pitfall trap surveys. The five confirmed breeding ponds are approximately 3.25 to 3.5 miles southwest of the infill site and approximately 1 mile from the proposed spray field relocation site.
Western pond turtle *Actinemys marmorata*	–	SC	Forage in ponds, marshes, slow-moving streams, sloughs, and irrigation/drainage ditches with permanent water source, aquatic vegetation, and open basking sites; nest in nearby uplands (typically within 325 feet of aquatic habitat) with low, sparse vegetation.	Unlikely to occur. No suitable marsh or permanent aquatic habitat is present and seasonal disking makes the site unsuitable for nesting.
California red-legged frog *Rana aurora draytonii*	T	SC	Ponds with dense shrubby or emergent riparian vegetation, minimum 11weeks of permanent water for larval development, and upland refugia for aestivation.	Unlikely to occur. Suitable aquatic breeding habitat is not present (not inundated long enough to complete metamorphosis) and there are no known reproducing populations in Amador County. Nearest CNDDB occurrence is a 2003 record from Young's Creek 2.5 miles southeast of Pardee Dam in Calaveras County.

Table 3.2-2 Special-Status Wildlife with Potential to Occur in the Project Area

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Western spadefoot *Spea hammondii*	–	SC	Vernal pools and other seasonal ponds with a minimum 3-week inundation period in valley and foothill grasslands.	Unlikely to occur. While the seasonal wetlands on the infill site may provide marginally suitable breeding habitat, western spadefoot are generally associated with vernal pool complexes and long-term population survival in small, isolated wetlands such as those on the infill site is unlikely. Regular disking of surrounding uplands makes them unsuitable for this species, which is terrestrial except during breeding and in larval stages. Furthermore, this species was not detected in Amador County during a census conducted in 1996 (USFWS 2005) and there are no CNDDB records of this species in Amador County. Nearest known records are from Sacramento County approximately 6 miles from the infill site.
Birds				
Tricolored blackbird *Agelaius tricolor* (nesting colony)	–	SC	Forages in agricultural lands and grasslands; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or thistles. Requires open water and protected nesting substrate, such as flooded, spiny, or thorny vegetation (Schuford and Gardali 2008: 439).	Unlikely to nest onsite. While blackberry clumps are present, they are relatively small, are not adjacent to permanent water, and seasonal disking to the edges of these clumps would likely discourage nesting. The nearest CNDDB record is from 6.5 miles north of the project site.
Grasshopper sparrow *Ammodramus savannarum* (nesting)	–	SC	Nests and forages in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs.	No suitable nesting habitat is present on the infill site. Nearest CNDDB record is from approximately nine miles northwest of the project site.
Golden eagle *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 spray fields onsite, but sufficient prey base may not be available due to disking. Nearest CNDDB record is a nesting record from approximately 10 miles south of the infill site. This species has been observed foraging on the Newman Ridge project site two miles west of the prison.

Table 3.2-2 Special-Status Wildlife with Potential to Occur in the Project Area

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Burrowing owl *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.	Unlikely to nest onsite; the infill site is east of the species breeding range limit, but within its winter range. No ground squirrels or burrows were observed onsite and the seasonal disking deters ground squirrels from establishing. The nearest CNDDB record is a nonbreeding record from approximately seven miles southwest at Howard Ranch.
Swainson's hawk *Buteo swainsoni* (nesting)	–	T	Forages in grasslands and agricultural lands (alfalfa, row, or grain crops); nests in large trees in riparian areas, grasslands with scattered trees, or in tree lines or small groves near grasslands or croplands.	Could occur; suitable nesting and foraging habitat present. The infill site is located at the eastern edge of the species' range, but an active nest was documented two miles to the west in 2011, as well as three additional nests within five miles southwest of the infill site.
Northern harrier *Circus cyaneus* (breeding)	_	SC	Nests and forages in grasslands, agricultural fields, and marshes.	Unlikely to nest onsite due to seasonal disking of fields.
Bald eagle *Haliaeetus leucocephalus* (nesting and wintering)	D	E	Forage primarily in large inland fish-bearing waters with adjacent large trees or snags; occasionally in uplands with abundant rabbits, other small mammals, or carrion. Typically nests and winters within one mile of ocean, lake, or river.	Unlikely to occur. Though large trees are present, species is likely to nest and winter closer to large water bodies in the vicinity, such as Lake Amador and Pardee and Comanche Reservoirs, which provide preferred foraging opportunities. Nearest CNDDB record is from New Hogan Reservoir in Calaveras County.
Yellow-breasted chat *Icteria virens* (nesting)	_	SC	Nests in low, dense riparian vegetation such as willow or blackberry thickets.	Could occur; potentially suitable nesting habitat is present along Mule Creek, Sutter Creek, and the unnamed seasonal stream. The nearest CNDDB record is from the Mokelumne River approximately one mile upstream of Comanche Reservoir.
Loggerhead shrike *Lanius ludovicianus* (breeding)	_	SC	Forages and nests in grasslands, shrublands, and open woodlands.	Could nest on infill site. Potentially suitable breeding and foraging habitat in scattered shrubs, trees, and grasslands.
Bank swallow *Riparia riparia* (nesting)	–	T	Nests in colonies in unvegetated vertical banks with fine-textured, sandy soils, typically next to streams, rivers, or lakes, occasionally in gravel quarries or other eroding bluffs. Forages in a variety of habitats near nests.	Unlikely to occur. The streams onsite do not have cut vertical banks with fine-textured soils and do not provide suitable nesting habitat for this species. Nearest CNDDB record is from the banks of the Cosumnes River near Live Oak.

Table 3.2-2 Special-Status Wildlife with Potential to Occur in the Project Area

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
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; the existing bridge over Mule Creek does not provide suitable roost habitat and oak hollows that could provide potential colonial roost sites are lacking.

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)

Sources: CNDDB 2013; Amador County 2012; Shuford and Gardali 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 (CDFW 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.

Ione chaparral is a special-status plant community dominated by Ione manzanita and often containing other special-status plants associated with the clay or sandy soils of the Ione Formation. The Ione Formation occurs as a series of isolated exposures along a 200-mile stretch of the northern Sierra Nevada Foothills between Butte County and Fresno County. The proposed MCSP infill site is located on the Ione geologic formation and known stands of Ione chaparral are present within a 2 mile radius of the proposed site as well as the Apricum Hill Ecological Preserve, which is located approximately three miles south of Ione. However, no Ione chaparral was observed on the areas to be directly affected by construction within the proposed infill site. None of the plant communities present on the infill site are included on CDFW's list of special-status plant communities. However; seasonal streams and associated riparian vegetation provide potential habitat for wildlife species and may be subject to regulation under Section 1602 of the California Fish and Game Code. The seasonal streams and seasonal wetlands would all be considered waters of the United States or waters of the state, as discussed below.

Although the oak woodland communities on the proposed infill site are not included on CDFW's list of special-status plant communities, the importance of protecting oak woodlands is recognized through the passage of the Oak Woodlands Conservation Act and CEQA Section 21083.4, as described in "Regulatory Considerations" below.

Wetlands and Other Waters of the United States

While a significant portion of the area where the proposed infill facility would be constructed has been modified through its annual use for effluent disposal (for several decades following activation of Mule Creek State Prison) there are three seasonal streams (Mule Creek, which is not within the development site, and two unnamed tributaries), and eight seasonal wetlands on the infill site (Exhibit 3.2-1). Based on a wetland verification by the U.S. Army Corps of Engineers' (USACE) conducted during April 2013, all of these features may be subject to regulation under Section 404 of the CWA. Each of the aquatic features delineated on the project site is described further below:

SW1 is a 0.043-acre wet depression located in an area of convergent slopes (i.e., a draw) and dominated by pennyroyal (*Mentha pulegium*) and dotted smartweed (*Persicaria punctata*). This wetland receives water from rainwater and effluent runoff from the adjacent spray fields. This feature is dominated by hydrophytic vegetation and exhibits indicators of hydric soils. Indicators of wetland hydrology were not visible at the time of the delineation, but the delineation was conducted during the dry season and during a drought year and wetland hydrology indicators are likely to be observed during the wet season and during normal precipitation years. This wetland feature does not appear to be connected or adjacent to other waters of the U.S.

SW2 is a 0.012-acre wet depression located in a draw and dominated Himalayan blackberry, poison oak, Baltic rush (*Juncus balticus*), and Muhlenberg's centaury (*Zeltnera muehlenbergii*). This wetland receives water from rainwater and effluent runoff from the adjacent spray fields. Though this feature contains dominant wetland plants in the herbaceous understory, the shrub layer is dominated by upland plants. This feature contains redox depressions, a hydric soil indicator. Indicators of wetland hydrology were not visible at the time of the delineation, but the delineation was conducted during the dry season and during a drought year and wetland hydrology indicators are likely to be observed during the wet season and during normal precipitation years. This wetland feature does not appear to be connected or adjacent to other waters of the U.S.

SW3 is a 0.065-acre wet depression located at the downslope end of the draw containing SW1, SW2, and SW6. The draw terminates at an earthen berm that causes increased ponding in this small depression. Dominant vegetation consists of barnyard grass (*Echinochloa crus-galli*), northern water plantain (*Alisma triviale*), rabbitsfoot grass (*Polypogon monspeliensis*), and cocklebur (*Xanthium strumarium*). Although this feature meets the three criteria (soils, hydrology, and vegetation) to qualify as a wetland according to the USACE definition, it is not connected or adjacent to other waters of the United States.

SW4 is a 0.33-acre seasonal swale network in gently sloping topography. The swale consists of two forks that converge then connect to a seasonal stream (SS1). Vegetation in this wetland is dominated by Baltic rush and Italian ryegrass (*Festuca perennis*). This feature is located at the head of an unnamed seasonal stream and the source of water is rainwater and effluent runoff from the surrounding spray fields. This appears to be the lowest point within the spray field and, thus, all of the runoff from the field collects here then flows into the seasonal drainage channel. Soil, vegetation, and hydrology are significantly disturbed in this feature due to seasonal plowing; however, dark color signatures on aerial imagery indicate regularly saturated soil conditions. This feature is directly connected to the unnamed tributary to Mule Creek and is, therefore, subject to regulation under the CWA.

SW5 is a 0.11-acre pool area within Mule Creek. This feature is directly connected to Mule Creek and is, therefore, subject to regulation under the CWA.

SW6 is a 0.046-acre wet depression located in the same draw containing SW1, SW2, and SW3. Vegetation, soils, and hydrology are very similar to those described for SW2. This wetland feature does not appear to be connected or adjacent to other waters of the U.S.

SW7 is a 0.017-acre excavated depression within a spray field. Dominant vegetation consists of barnyard grass, northern water plantain, rabbitsfoot grass, and cocklebur. This wetland feature does not appear to be connected to or adjacent other waters of the U.S.

SW8 is a 0.028-acre low-lying area in gently sloping topography, similar to SW4. Soil, vegetation, and hydrology are significantly disturbed at this location due to seasonal plowing. This feature is directly connected to an unnamed tributary to Sutter Creek and is, therefore, subject to regulation under the CWA.

SS1 is 0.19-acre seasonal stream that begins at SW8 and drains via culvert into the armored diversion channel south of the infill site. The water source for this drainage is rainwater and effluent runoff from the surrounding spray fields. Surface water is absent from this drainage channel during most of the year, but groundwater availability is sufficient to support riparian trees. The lower 750 feet of this seasonal stream supports a narrow strip of riparian woodland vegetation characterized by large Fremont cottonwood and willow trees in the overstory and Himalayan blackberry, Coyote brush, and poison oak in the shrub layer. The upper 300 feet of this feature is more ephemeral in nature and supports seasonal wetland vegetation when not plowed. Because this feature is connected to Mule Creek, via the diversion channel, and Mule Creek is ultimately connected to the Mokelumne River, it would be considered a jurisdictional water of the United States subject to regulation under the CWA.

SS2 is a 0.028-acre segment of Mule Creek where an existing 18-foot-wide bridge crosses the stream. The channel and banks beneath the bridge are armored with riprap for approximately 40 feet. Beyond the riprapped section, the banks support mature riparian woodland vegetation as described above. Mule Creek is a seasonal tributary to Dry Creek, which joins the Mokelumne River downstream of Comanche Reservoir and ultimately drains to the San Joaquin River in the Sacramento-San Joaquin River Delta. Therefore, Mule Creek meets the definition of other waters of the United States and is subject to regulation under the CWA.

SS3 is a 60-foot long, 0.005-acre seasonal stream channel formed at the base of a slope. This channel conveys flows sporadically during rain events and is characterized by upland grasses. The channel crosses under a dirt access road via culvert and drains into the spray fields, and ultimately into the unnamed tributary to Mule Creek (SS1). Therefore, this feature would be considered a jurisdictional water of the United States subject to regulation under the CWA.

SS4 is a 0.004-acre segment of Mule Creek where a utility line connection would be installed under the stream channel using jack-and-bore technology. An existing dirt access road crosses through the stream channel at this location. Beyond the dirt road crossing, the banks support mature riparian woodland vegetation as described previously. Mule Creek is a seasonal tributary to Dry Creek, which joins the Mokelumne River downstream of Comanche Reservoir and ultimately drains to the San Joaquin River in the Sacramento-San Joaquin River Delta. Therefore, Mule Creek meets the definition of other waters of the United States and is subject to regulation under the CWA.

SS5 is a 0.001-acre seasonal stream that crosses under an existing paved access road via culvert. This drainage collects runoff from existing prison facilities and drains directly to Mule Creek. Because this feature is connected to Mule Creek and Mule Creek is ultimately connected to the Mokelumne River, it would be considered a jurisdictional water of the United States subject to regulation under the CWA.

All of these aquatic resources would be considered waters of the state subject to regulation by the Central Valley Regional Water Quality Control Board (RWQCB) under the Porter-Cologne Act and/or Section 401 of the CWA.

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) - 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 (Sections 3503 and 3503.5) - 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.
- California State Senate Bill 1134, Oak Woodlands Conservation Act (CEQA Statutes Section 21083.4) - This statute requires that a county must determine whether or not a project will result in a significant impact on oak woodlands and, if it is determined that a project may result in a significant impact on oak woodlands, then the County shall require one or more of the following mitigation measures:
  - conserve oak woodlands through the use of conservation easements;
  - plant an appropriate number of trees, including maintenance of plantings and replacement of failed plantings;
  - contribute funds to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements;
  - other mitigation measures developed by the county.

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 (including the Amador County General Plan) is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

OAK WOODLANDS CONSERVATION ACT

Amador County has not yet adopted any specific ordinances regarding oak woodlands per California State Senate Bill 1334, the Oak Woodlands Conservation Act (described above). However, consistent with CEQA statutes, CDCR is providing an analysis of impacts on oak woodlands because removal of oak woodlands can result in a significant impact on biological resources, including impacts to nesting raptors.

STATEWIDE ELECTRIFIED FENCE PROJECT HABITAT CONSERVATION PLAN

Development of a level II infill correctional facility 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 1999a). 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 (CDC 1999b). 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 development of a level II infill correctional facility 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 development of a level II infill correctional facility.

3.2.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the proposed Level II Infill Correctional Facilities Project 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; or
- 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

Wildlife nurseries and migratory routes: No native wildlife nursery sites or established migratory routes are present through the proposed MCSP Infill Site that are vital for the movement of any resident or migratory fish or wildlife species or population. Project implementation would not interfere substantially with the movement of native resident or migratory wildlife species because the site does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated. Regionally common wildlife species such as coyote, fox, raccoon, skunk, and possum, would be expected to continue to use the Mule Creek riparian corridor, which would remain intact, and abundant open space surrounding the prison property after project implementation. Therefore, developing a level II correctional facility at the infill site would not have an impact on wildlife movement or nursery sites. This issue is not discussed further.

Habitat conservation plan: The proposed MCSP Infill Site is not within the planning area of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan and there are no such plans under development for the area. Therefore, developing a level II correctional facility at the infill site would not conflict with any adopted conservation plans. This issue is not discussed further.

Survival of species: The area within the proposed MCSP Infill Site provides limited value to wildlife species. Developing a level II correctional facility at the infill site would not eliminate any habitat important to the long-term survival of any species or community, nor would it 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 1 and 2 of this volume of the DEIR, construction and operation of a level II infill correctional facility complex at MCSP is part of the proposed project. The following impact discussion also evaluates a single facility as an alternative to development of the complex. For the purposes of this analysis, the evaluation of construction and operation of the proposed complex at the MCSP Infill Site is presented first, followed by the evaluation of the impacts associated with development of a single facility.

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

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

Construction of a level II infill correctional facility complex, which is an alternative to the proposed MCSP infill project, would result in direct removal of approximately 22 acres of foothill pine-oak woodland habitat, 1 acre of riparian woodland, 10 acres of annual grassland, 0.65 acre of seasonal wetland, and 0.18 acre of seasonal stream that has low potential to support special-status plant species. Because the majority of the infill site is disked seasonally, even beneath the existing oak and foothill pine trees, the potential for special-status plants to be found on the site is low. However, there are stands of woodland vegetation and a small patch of grassland that do not get disked. In particular, low-lying areas between converging slopes support woodland vegetation with an herbaceous

understory and some shrubs and also contain seasonally wet depressions that provide marginally suitable habitat for Tuolumne button celery.

The proposed infill site is located on the Ione Formation, which is known to support rare endemic plant species such as Ione manzanita and Parry's Horkelia. However, the proposed infill site is highly disturbed due to its use for effluent disposal. The fields must be periodically disked to maintain growing stands of ruderal/annual species. While the surface soils observed on the infill site are not specifically representative of Ione Formation soils, surface soil inclusions derived from the Ione Formation may be present. Ione manzanita generally occurs in pure stands, and there are no stands of chaparral vegetation on the infill site. Furthermore, no manzanita shrubs of any kind have been observed on the infill site during reconnaissance surveys conducted by an Ascent botanist during August and September 2012 and March and April 2013, and Ione manzanita was therefore determined to be absent. The potential for presence of Tuolumne button celery, Hoover's Calycadenia, and Parry's Horkelia cannot be completely ruled out because at least some potentially suitable habitat is present, and focused surveys have not been conducted during the appropriate time of year to find these species. Development of a level II infill correctional facility complex could result in direct mortality of these special-status plants if they are present.

Removal of foothill pine-oak woodland, annual grassland, and seasonal wetland habitat associated with development of a level II infill correctional facility complex at the MCSP Infill Site could result in loss of special-status plants (Tuolumne button celery, Hoover's Calycadenia, and Parry's Horkelia) if they are present. Loss of special-status plants would be a potentially significant impact.

Mitigation Measures

Mitigation Measure 3.2-1

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

Prior to project initiation and during the blooming period for the special-status plant species with potential to occur on the MCSP Infill Site (see table below), a qualified botanist will conduct protocol-level surveys for special-status plants in areas where potentially suitable habitat would be removed or disturbed by project activities.

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tuolumne button-celery *Eryngium pinnatisectum*												
Hoover's calycadenia *Calycadenia hooveri*												
Parry's horkelia *Horkelia parryi*												

CDCR will complete the protocol-level surveys for Tuolumne button celery, Hoover's Calycadenia, and Parry's Horkelia, in July 2013.

If no special-status plants are found, the botanist will document the findings in a letter report to USFWS, CDFW, and CDCR and no further mitigation will be required.

If special-status plant species are found on the infill site and are located outside of the permanent facilities footprint and can be avoided, CDCR will establish and maintain a 40-foot protective buffer around special-status plant populations to be retained.

If special-status plant species are found that cannot be avoided during construction, CDCR will consult with CDFW and/or USFWS, as appropriate depending on species status, to determine the appropriate mitigation measures for direct and indirect impacts that could occur as a result of developing a level II correctional facility and will implement the agreed-upon mitigation measures. Mitigation measures may include preserving and enhancing existing populations, creation of offsite populations on project 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 and/or individuals. A mitigation and monitoring plan will be developed describing how unavoidable losses of special-status plants will be compensated.

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 plant density (number of plants per unit area) 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 five 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 project 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 (Tuolumne button celery, Hoover's Calycadenia, and Parry's Horkelia) 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 through creation of offsite populations, conservation easements, or other appropriate measures.

Impact 3.2-2a: Impacts on Valley Elderberry Longhorn Beetle [Complex]

Although valley elderberry longhorn beetle has been proposed for delisting by USFWS (2013), until a final rule is issued and goes into effect, it remains listed as threatened and is protected by the ESA. Five elderberry shrubs with stems greater than 1.0 inch in diameter at ground level, which provide

potential habitat for valley elderberry longhorn beetle (USFWS 1999), are present within 100 feet of the proposed spray field relocation site. These shrubs are located outside the northern boundary of the proposed spray field on the south bank of Sutter Creek and are between 20 and 50 feet from the proposed spray field boundary. Because the site is already used for crop production and the disturbance footprint for spray field operation would remain the same as it is now for hay production, there would be no direct impacts to elderberry shrubs or valley elderberry longhorn beetle. However, indirect impacts could result if the health of elderberry shrubs containing valley elderberry longhorn beetle larvae is affected. Use of the site as an effluent spray field would not result in a change in topography or ground disturbances within the drip lines of elderberry shrubs, but indirect effects could result if herbicides or insecticides are used adjacent to elderberry shrubs or if the hydrology of the surrounding area is altered such that the soil around the shrubs becomes too dry or too wet.

Operation of effluent spray fields as part of a level II correctional facility complex at the MCSP Infill Site could result in indirect impacts on valley elderberry longhorn beetle that could ultimately result in death. Loss of valley elderberry longhorn beetle would be a potentially significant impact.

Mitigation Measures

Mitigation Measure 3.2-2

CDCR will implement the following measures to avoid, minimize, and mitigate impacts on valley elderberry longhorn beetle:

- Prior to project initiation, a qualified biologist will conduct surveys for valley elderberry longhorn beetle according to the protocol outlined in USFWS' Conservation Guidelines for the Valley Elderberry Longhorn Beetle (1999). The biologist will identify and map all elderberry shrubs with stems measuring one inch or greater in diameter at ground level on and within 100 feet of the infill and effluent spray field site.

- Impacts to valley elderberry longhorn beetle will be avoided and minimized by following the Conservation Guidelines for cases where elderberry shrubs can be retained and protected on the infill site.

- Project activities may occur up to 20 feet from the dripline of other elderberry shrubs if precautions are implemented to minimize the potential for indirect impacts. Specifically, these minimization measures include:

  - A minimum setback of at least 20 feet from the dripline of each elderberry plant with stems greater than one-inch diameter at ground level will be maintained to avoid direct impacts. The buffer area will be fenced with high visibility construction fencing prior to during establishment of the spray field boundary. Ground disturbing activities on the infill site will not alter the hydrology of the site or otherwise affect the likelihood of vigor or survival of elderberry shrubs.

  - Project activities, such as truck traffic or other use of machinery, will not create excessive dust on the infill site, such that the growth or vigor of elderberry shrubs is adversely affected.

  - No insecticides, herbicides, fertilizers, or other chemicals will be used within 100 feet of elderberry shrubs. Herbaceous vegetation may be mowed or removed using hand tools within 100 feet, but not within 20 feet of the elderberry shrubs.

Significance after Mitigation

Implementation of Mitigation Measure 3.2-1, which involves establishing a 20-foot no disturbance buffer to avoid indirect impacts to elderberry shrubs, would reduce significant impacts on valley elderberry longhorn beetle to a **less-than-significant** level.

Impact 3.2-3a: Impacts on Raptors [Complex]

Approximately 110 trees would be removed under the level II infill correctional facility complex option. Nearly all of these trees provide potential nesting sites for Swainson's hawk and common raptors, such as red-tailed hawk, red-shouldered hawk, western screech owl, and great horned owl, which are protected under Section 3503.5 of the California Fish and Game Code. A raptor nest is present in a large foothill pine onsite and a juvenile red-tailed hawk was observed perched in this nest tree during the wetland assessment in August 2012. If trees are to be removed during the raptor breeding season (February–August), mortality of eggs and chicks could result if an active nest were present. In addition, construction of a level II correctional facility complex at the MCSP Infill Site could disturb active nests near the construction site or in trees not yet removed from the infill site, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Use of the proposed spray field relocation site would not affect nesting raptors because no native vegetation would be removed and the site would continue to be used as cultivated cropland. The crop type would change from dryland hay to an irrigated alfalfa crop. This change would potentially benefit Swainson's hawks, which prefer to forage in alfalfa over grass crops because it is easier for them to find and capture prey in the shorter growing alfalfa.

Construction of the infill complex would also result in loss of spray fields and annual grassland that provide potential foraging habitat for raptors; however, the seasonal disking in the spray field likely prevents rodent populations from establishing and reduces the abundance of prey in the fields. Four active Swainson's hawk nest sites have been documented within 5 miles of the infill site. However, loss of foraging habitat at the infill site is not likely to affect nesting success, survival rates, or availability of prey for the local population because the site is at the eastern edge of the species' range and abundant high-quality foraging habitat is available in the open space and agricultural areas to the west.

Construction of a level II correctional facility complex at the MCSP Infill Site could result in direct destruction of an active Swainson's hawk or raptor nest or 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 would be considered a potentially significant impact. Loss of 67 acres of foraging habitat is not likely to affect nesting success, survival rates, or availability of prey for the local population because the site is at the eastern edge of the species' range and abundant high-quality foraging habitat is available in the open space and agricultural areas to the west. Therefore, the loss of foraging habitat would be a less-than-significant impact.

Mitigation Measures

Mitigation Measure 3.2-3

CDCR will implement the following measures to reduce impacts on Swainson's hawk and other tree-nesting raptors (such as red-tailed hawk, red-shouldered hawk, western screech owl, 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

Swainson's hawk and other nesting raptors to identify active nests on and within 0.5 mile 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. To the extent feasible, guidelines provided in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) will be followed.

- If active nests are found, impacts on nesting Swainson's hawks and other raptors will be avoided by establishing appropriate buffers around the nests. No project activity will commence within the buffer area until a qualified biologist confirms that any young have fledged and the nest is no longer active. For Swainson's hawk nests, CDFW guidelines recommend maintenance of 0.25-acre buffers around Swainson's hawk nests in developed areas, but 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.

Significance after Mitigation

Implementing Mitigation Measure 3.2-3 would reduce significant impacts on Swainson's hawk and other raptors to a **less-than-significant** level because it would ensure that these species are not disturbed during nesting so that project construction would not result in nest abandonment and loss of eggs or young.

Impact 3.2-4a: Impacts on Nesting Birds [Complex]

Vegetation removal and ground disturbances associated with construction and operation of a new level II correctional complex could result in direct destruction of active nests of migratory birds, including yellow-breasted chat, a riparian woodland species that is a California species of special concern, and loggerhead shrike, a shrub and small-tree nesting species that is also a California species of special concern. Project construction could also result in disturbance of breeding birds causing nest abandonment by the adults and mortality of chicks and eggs. Construction of a level II infill correctional facility complex would result in loss of approximately 22 acres of foothill pine oak woodland habitat that is suitable nesting habitat for loggerhead shrike. Approximately 1 acre of riparian habitat with blackberry thickets may be suitable nesting habitat for yellow-breasted chat would be directly removed. While loss of some nests of common migratory bird species (e.g., mourning dove, American robin, and scrub jay) 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 destruction of any bird nest is a violation of Section 3503 of the California Fish and Game Code.

Use of the proposed spray field relocation site would not affect nesting birds because no native vegetation would be removed and the site would continue to be used as cultivated cropland.

Construction of a level II infill correctional facility complex at the MCSP Infill Site may remove active nests or disturb nesting yellow-breasted chat or loggerhead shrike, resulting in nest abandonment by adult birds and abandonment of chicks and eggs, causing mortality. Loss of yellow-breasted chat or loggerhead shrike nests would be a potentially significant impact.

Mitigation Measures

Mitigation Measure 3.2-4

CDCR will implement the following measures to avoid or minimize loss of special-status nesting birds (yellow-breasted chat and loggerhead shrike):

- To minimize the potential for loss of active yellow-breasted chat and loggerhead shrike nests, project activities will commence during the nonbreeding season (September 1-February 31), including removal of grassland, shrub, and woodland vegetation. If all suitable nesting habitat is removed during the nonbreeding season, no further mitigation will be required. 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 yellow-breasted chat and loggerhead shrike on and within 50 feet of the project site. The surveys will be conducted no more than seven days before construction commences.

- If active yellow-breasted chat or loggerhead shrike 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

Implementing Mitigation Measure 3.2-4 would reduce significant impacts on yellow-breasted chat and loggerhead shrike to a **less-than-significant** level because it would ensure that these species are not disturbed during nesting; therefore, construction of a level II correctional facility would not result in nest abandonment and loss of eggs or young.

Impact 3.2-5a: Impacts on Riparian [Complex]

Approximately 0.18 acres of seasonal stream and 1 acre of associated riparian habitat would be removed with construction of a level II infill correctional complex at the MCSP Infill Site. While the riparian woodland community on the infill site is not listed as a special-status plant community, riparian habitat, in general, provides important habitat functions for wildlife and wildlife species abundance and diversity tend to be high in riparian communities. The Mule Creek riparian corridor to the west of the infill site is expected to support a large number of nesting birds and provides escape cover, shade, water, and movement opportunities for many wildlife species. Bridge replacement over Mule Creek would not involve any loss of stream channel because the bridge would span the channel and no piers or abutments would be constructed in the channel. The existing bridge would be removed and a new bridge would be constructed in its place within an existing opening in the riparian vegetation. Therefore, replacing the bridge over Mule Creek would not result in loss of riparian vegetation, but 0.2 acre of riparian habitat would be removed from the unnamed tributary to Mule Creek (SS1) to construct the housing facility. The unnamed seasonal stream does not support fish and supports only a narrow riparian corridor, but still provides habitat to a number of common wildlife species, such as nesting songbirds. Loss or alteration of streams and associated riparian habitat is subject to regulation under Section 1602 of the California Fish and Game Code.

Implementation of the level II infill correctional facility complex on the MCSP Infill Site would result in the loss and degradation of seasonal stream and riparian habitat regulated under Section 1602 of the California Fish and Game Code. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-5

CDCR will implement the following measures to minimize impacts to riparian habitat:

- CDCR will compensate for the permanent loss of riparian habitat through contributions to a CDFW-approved mitigation bank or through development of a Habitat Mitigation and Monitoring Plan (HMMP). Mitigation measures are likely to include a combination of riparian habitat restoration and preservation and enhancement of existing riparian habitat along Mule Creek on MCSP property outside of the infill development area. The compensation habitat will

be similar in composition and structure to the habitat to be removed and will be at ratios adequate to offset the loss of riparian habitat functions and services at the MCSP Infill site such that there would be no net loss of riparian habitat. The HMMP will include:

- Identification of compensatory mitigation sites and criteria for selecting these mitigation sites;
- Complete assessment of the existing biological resources in the preservation and restoration areas;
- In kind reference habitats for comparison with compensatory riparian habitats (using performance and success criteria) to document success;
- Monitoring protocol, including schedule and annual report requirements (compensatory habitat will be monitored for a minimum of five years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.);
- Ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted riparian trees and shrubs by the end of the five-year maintenance and monitoring period or dead and dying trees will be replaced and monitoring continued until 80 percent survivorship is achieved;
- Corrective measures if performance standards are not met;
- Responsible parties for monitoring and preparing reports; and
- Responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.
- Prior to beginning construction that could affect the bed or bank of seasonal streams and riparian habitat, CDCR will provide written notification to CDFW describing the activity and including all required information as described under Section 1602 of the California Fish and Game Code, and pay the applicable notification fees. CDCR will submit the HMMP to CDFW for review.
- CDCR will obtain a streambed alteration agreement from CDFW and conduct project construction activities in accordance with the agreement, including implementing reasonable measures to protect wildlife resources.

Significance after Mitigation

Implementing Mitigation Measure 3.2-5 would reduce significant impacts from alteration of seasonal streams and loss of riparian habitat to a **less-than-significant** level because it would require CDCR to compensate for any loss of riparian habitat, consult with and obtain agreements from CDFW, and implement all reasonable measures necessary to protect fish and wildlife resources.

Impact 3.2-6a: Impacts on Wetlands and Other Waters [Complex]

Implementing the level II infill correctional facility complex at the MCSP Infill Site would result in fill of approximately 0.83 acre of wetlands and other waters (0.65 acre of seasonal wetland and 0.18 acre of seasonal stream). The loss of wetlands and other waters would be greater under this option because

an additional 0.43 acre of seasonal wetland would be filled and 0.14 acre of seasonal stream would be filled that would not be filled under the single facility design.

Implementation of the level II infill correctional facility complex on the MCSP Infill Site would result in the loss of approximately 0.83 acre of wetlands and other waters. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-6

CDCR will implement the following measures to minimize impacts to wetlands and other waters:

- CDCR will commit to replace or restore on a "no net loss" basis the acreage and function of all wetlands and other waters that would be removed, lost, or degraded as a result of project implementation. Wetland habitat will be restored or replaced at an acreage and location and by methods agreeable to USACE and the Central Valley RWQCB, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes. It is CDCR's intention to compensate for the loss of seasonal wetlands that would occur under the single facility design through the purchase of credits from the Cosumnes Floodplain Mitigation Bank, which has seasonal wetland credits available and is expecting approval to sell credits to projects in the Ione area by June 2013.

- CDCR will submit a wetland delineation report to USACE and request a preliminary jurisdictional determination. Based on the jurisdictional determination, CDCR will determine the exact acreage of waters of the U.S. and waters of the state that would be filled as a result of project implementation.

- CDCR will obtain a USACE Section 404 permit and RWQCB Section 401 certification before any groundbreaking activity within 50 feet of or discharge of fill or dredge material into any water of the United States. CDCR will implement all permit conditions. The applicable Section 404 permit process for the proposed complex would be a Letter of Permission. The discharge will not cause the loss of greater than 1.0-acre of non-tidal waters of the United States, including the loss of no more than 500 linear feet of stream bed.

- CDCR will have a qualified biologist prepare a wetland mitigation plan detailing how the loss of aquatic functions will be replaced. The mitigation plan will describe compensation ratios for acres filled, and, if mitigation credits are not available, mitigation sites, a monitoring protocol, annual performance standards and final success criteria for created or restored habitats, and corrective measures to be applied if performance standards are not met.

- At a minimum, wetlands and other waters lost through development of a level II correctional facility at the MCSP infill site will be replaced at a 1:1 ratio. Permittee-responsible mitigation habitat, if mitigation credits are not available, will be monitored for a minimum of 5 years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.

Significance after Mitigation

Implementing Mitigation Measure 3.2-6 would reduce significant impacts on waters of the United States and waters of the state to a **less-than-significant** level because it would ensure no net loss of functions and acreage of wetlands, other waters of the United States, and waters of the state.

Impact 3.2-7a: Conflict with the Oak Woodlands Conservation Act [Complex]

Under the level II infill correctional facility complex option, up to 22 acres of foothill pine-oak woodland, estimated to contain approximately 110 trees, would be removed. CEQA requires counties to evaluate impacts on oak woodland to determine if it would result in a significant impact on the environment. Amador County has not adopted a tree preservation ordinance or an oak woodland policy; therefore, there would be no conflict with a local policy or ordinance. The quality of most of the foothill pine-oak woodland habitat that would be removed from the infill site under this option is the same as under the single, level II infill facility because it is within spray fields that are continually disked. The proposed complex would result in removal of additional acreage of oak woodland outside of the spray fields (compared to single facility option) in less disturbed habitat, but still adjacent to spray fields. Although this option would result in 7 more acres of foothill pine-oak woodland loss than under the single facility option (see Impact 3.2-6b below), it is still a small amount compared to the abundant foothill pine-oak woodland habitat of higher quality present in the surrounding area. The foothill pine-oak woodland that would be removed from the site is not unique and does not contain particularly large or unique specimens, and does not represent a level of structural diversity or species associations that are rare or unusual to the area. Plant species diversity in the onsite foothill pine-oak woodland habitat is low due to the seasonal removal of understory vegetation and tree regeneration and establishment of shrubs is prevented by the seasonal plowing and therefore food and cover is very limited for most wildlife species. For these reasons, woodland habitat quality is generally better in surrounding woodland habitats that are not located within spray fields and are not as highly disturbed. Therefore, loss of 22 acres of disturbed foothill pine-oak woodland from the infill site would not be expected to substantially degrade habitat for woodland-dependent species in the area. Although the removal of up to 110 trees, the majority of which are oak, would not substantially reduce local population numbers nor adversely affect the long-term viability of any woodland species in the region, the loss of 110 trees would be considered substantial.

Loss of 22 acres of disturbed foothill pine-oak woodland habitat for development of a level II infill correctional facility complex at the MCSP Infill Site would not conflict with the Oak Woodlands Conservation Act and would not result in a substantial loss of habitat for woodland species locally or regionally. However, because development of the site would result in the removal of a substantial number of trees, impacts would be ***significant****.*

Mitigation Measures

Mitigation Measure 3.2-7:

A formal tree survey will be conducted of the infill site in order to determine the number and classification of all trees that may be removed. CDCR will implement the following measures to reduce impacts on native oak trees:

- Replace all native oak trees removed by project construction activity at a 1:1 ratio within CDCR property at MCSP.
- Use trees from healthy commercial nursery stock and/or acorns from the tree removed when establishing new trees.
- Ensure that trees are established and maintained for at least 5 years.
- Trees will be planted between October 1 and December 31, and no later than 12 months after the date of tree removal.

Alternatively, CDCR may consult with Amador County and the City of Ione regarding offsite replacement options where one or both of these entities will accept responsibility for the planting and maintenance of the replacement trees. If it is determined, in consultation with the County and

the City, that this is a viable option, mitigation requirements would be consistent with those listed above and additional measures may be required.

Significance after Mitigation

With the implementation of the mitigation measure described above, impacts on native oaks would be avoided and reduced because trees lost through construction activities would be replaced onsite, where possible, or at a nearby feasible location. As a result, this impact would be reduced to a **less-than-significant** level.

Impact 3.2-8a: Mortality of Wildlife Species from the Lethal Electrified Fence [Complex]

Development of the infill site with a level II infill correctional facility complex at the MCSP Infill Site would include installation and operation of a 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 the existing MCSP, 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 121 individuals of native birds and mammals are killed per year at MCSP. Most of these are species protected under the MBTA and California Fish and Game Code. Approximately 2 percent of the species killed at these locations are considered "sensitive" species, but none are protected by ESA or CESA. Sensitive species include those that meet the definition of special-status described above (i.e., wildlife species identified by CDFW 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 MCSP over 10 years, between June 2002 and June 2012, included two barn owls, two burrowing owls, one Cooper's hawk, 11 great horned owls, and two red-tailed hawks. No species listed as threatened or endangered or candidates for listing under ESA or CESA were killed at MCSP.

The existing LEF is 6,300 feet in length at MCSP. The LEF that would extend around the level II infill correctional facility complex would be 4,569 feet, which is 73 percent of the existing fence length at MCSP. Although expected wildlife mortality should not be strictly calculated 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 the LEF for a complex would be approximately 88 individuals per year on average. Based on mortality data from the operational LEF at MCSP, sensitive species that could be killed by the LEF at the infill site include great horned owl, barn owl, burrowing owl, Cooper's hawk, or red-tailed hawk. Common native species likely to be killed by the LEF at the infill site include house finch, lesser goldfinch, yellow-rumped warbler, Brewer's blackbird, black phoebe, cliff swallow, American goldfinch, and Bullock's oriole.

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

Mitigation Measure 3.2-8:

CDCR will consult with USFWS and CDFW regarding the development of the infill site with level II infill correctional facilities 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 contemplated level II infill

correctional facility at the MCSP Infill Site would not be covered by the HCP. A monitoring program consistent with the monitoring program established in the Statewide Electrified Fence HCP 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 of Prison Perimeters* (CDCR1996b).

- 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 electrified fence at the infill site 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 project. Birds likely to be adversely affected will be predicted based on the results of mortality monitoring at comparable CDCR facilities and based on birds expected to occur in the project vicinity based on surrounding habitat. 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 project 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 implementation of the tiered mitigation measure described in Mitigation Measure 3.2-8, impacts on wildlife would be reduced by minimizing the number of animals killed by the LEF 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 SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

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

The types of potential impacts on special-status plant species (Tuolumne button celery, Hoover's Calycadenia, and Parry's Horkelia) would be the same if the infill site were to be development with a single, level II infill correctional facility, except that a total of approximately 15 acres of foothill pine-oak woodland, 3 acres of annual grassland, 0.22 acre of seasonal wetland habitat, and 0.03 acre of seasonal stream that could potentially support special-status plants would be removed.

Removal of foothill pine-oak woodland, annual grassland, and seasonal wetland habitat associated with development of a single, level II correctional facility at the MCSP Infill Site could result in loss of special-status plants (Tuolumne button celery, Hoover's Calycadenia, and Parry's Horkelia) if they are present. Loss of special-status plants would be a potentially 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 (Tuolumne button celery, Hoover's Calycadenia, and Parry's Horkelia) 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 through creation of offsite populations, conservation easements, or other appropriate measures.

Impact 3.2-2b: Impacts on Valley Elderberry Longhorn Beetle

Construction of a single, level II infill correctional facility at MCSP would result in the same impact potential indirect impacts on valley elderberry longhorn beetle described above for the level II infill correctional facility complex option (see Impact 3.2-2a above).

Operation of effluent spray fields as part of a level II correctional facility at the MCSP Infill Site could result in indirect impacts on valley elderberry longhorn beetle that could ultimately result in death. Loss of valley elderberry longhorn beetle would be a potentially significant impact.

Mitigation Measures

Implement Mitigation Measure 3.2-2.

Significance after Mitigation

Implementation of Mitigation Measure 3.2-1, which involves establishing a 20-foot no disturbance buffer to avoid indirect impacts to elderberry shrubs, would reduce significant impacts on valley elderberry longhorn beetle to a **less-than-significant** level.

Impact 3.2-3b: Impacts on Raptors [Single Facility]

Under the single, level II infill correctional facility option, approximately 65 mature trees that provide potential nest sites for Swainson's hawk and common raptors would be removed and approximately 33 acres of spray fields and 3 acres of annual grassland habitat would be removed. In all other respects, this impact would be the same as described above for the level II infill correctional facility complex option. The loss of 36 acres of foraging habitat is not likely to affect nesting success, survival rates, or availability of prey for the local population because the site is at the eastern edge of the species' range and abundant high-quality foraging habitat is available in the open space and agricultural areas to the west.

Construction of a single, level II infill correctional facility at the MCSP Infill Site could result in direct destruction of occupied Swainson's hawk or raptor nests or 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 would be considered a potentially significant impact.

Mitigation Measures

Implement Mitigation Measure 3.2-3.

Significance after Mitigation

Implementing Mitigation Measure 3.2-3 would reduce significant impacts on Swainson's hawk and other raptors to a **less-than-significant** level because it would ensure that these species are not disturbed during nesting so that project construction would not result in nest abandonment and loss of eggs or young.

Impact 3.2-4b: Impacts on Nesting Birds [Single Facility]

Construction of a single, level II infill correctional facility at MCSP would result in the same impact as described above for the level II infill correctional facility complex option (see Impact 3.2-4a above), except that fewer trees that could potentially support loggerhead shrike, a species of special concern, and common bird nests would be removed (approximately 65 trees and 15 acres of foothill pine oak woodland habitat are estimated under proposed Complex option). No riparian woodland vegetation would be removed, but approximately 1 acre of suitable nesting habitat for yellow-breasted chat is

immediately adjacent to the site. Loss of common bird nests would not be a significant impact under CEQA, but would be a violation of the MBTA and Fish and Game Code.

Construction of a single, level II infill correctional facility at the MCSP Infill Site may remove active nests or disturb nesting yellow-breasted chat or loggerhead shrike located on or near the infill site, resulting in nest abandonment by adult birds and abandonment of chicks and eggs, causing mortality. Loss of special-status (yellow-breasted chat or loggerhead shrike) nests would be a potentially significant impact.

Mitigation Measures

Implement Mitigation Measure 3.2-4.

Significance after Mitigation

Implementing Mitigation Measure 3.2-4 would reduce significant impacts on nesting special-status birds (yellow-breasted chat and loggerhead shrike) to a **less-than-significant** level because it would ensure that these species are not disturbed during nesting so that level II infill correctional facility construction would not result in nest abandonment and loss of eggs or young.

Impact 3.2-5b: Impacts on Riparian Habitat [Single Facility]

Single Facility Design

No stream habitat or associated riparian woodland vegetation would be removed as a result of implementing the single, level II infill correctional facility. A new bridge would be added next to the existing bridge over Mule Creek to provide two way access for vehicles. However, the bridge would span the bed and bank of the Mule Creek and no riparian habitat would be removed.

*Implementation of the single, level II correctional facility on the MCSP Infill Site would result in **no impact** on seasonal stream and riparian habitat.*

Mitigation Measures

No mitigation measures are required.

Impact 3.2-6b: Impacts on Wetlands and Other Waters [Single Facility]

Single Facility Design

Implementing the single, level II infill facility would result in fill of approximately 0.25 acre of potential waters of the United States consisting primarily of depressional seasonal wetlands located at the convergence of two slopes. Implementing the single facility design would not affect any stream channels.

Implementation of the single, level II correctional facility on the MCSP Infill Site would result in the loss of approximately 0.22 acre of wetlands and other waters. This would be a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.2-6 (above).

Significance after Mitigation

Similar to the single facility option (see Impact 3.2-6a above), implementing Mitigation Measure 3.2-6 would reduce significant impacts on waters of the United States and waters of the state as a result of development of a single, level II infill correctional facility to a **less-than-significant** level because it would ensure no net loss of functions and acreage of wetlands, other waters of the United States, and waters of the state.

Impact 3.2-7b: Conflict with the Oak Woodlands Conservation Act [Single Facility]

Development of a single, level II infill correctional facility at the MCSP Infill Site would result in the removal of approximately 15 acres of foothill pine-oak woodland estimated to contain approximately 65 trees and approximately 60 percent of the trees on site are oaks. CEQA requires counties to evaluate impacts on oak woodland to determine if it would result in a significant impact on the environment. Amador County has not adopted a tree preservation ordinance or an oak woodland policy; therefore, there would be no conflict with a local policy or ordinance. Because the foothill pine-oak woodland that would be removed is small (15 acres) compared to the amount of this habitat type present in the surrounding area, and substantially disturbed due to frequent (two to three times each season) disking and lacks understory vegetation, and because there is abundant higher quality oak woodland habitat outside the potential disturbance area boundaries of the MCSP Infill Site and throughout Amador County, development of a single, level II infill correctional facility would not be expected to substantially degrade habitat for woodland-dependent species in the area and would not reduce local population numbers or adversely affect the long-term viability of any woodland species in the region. The foothill pine-oak woodland that would be removed from the site is not unique and does not contain particularly large or unique specimens, and does not represent a level of structural diversity or species associations that are rare or unusual to the area. Plant species diversity in the onsite foothill pine-oak woodland habitat is low due to the seasonal removal of understory vegetation and tree regeneration and establishment of shrubs is prevented by the frequent plowing and therefore food and cover is very limited for most wildlife species. For these reasons, woodland habitat quality is generally better in surrounding woodland habitats that are not located within spray fields and are not as highly disturbed. However, although the removal of up to 65 trees, the majority of which are oak, would not substantially reduce local population numbers nor adversely affect the long-term viability of any woodland species in the region, the loss of 65 trees would be considered substantial.

Loss of disturbed foothill pine-oak woodland habitat for development of a single, level II infill correctional facility at the MCSP Infill Site would not conflict with the Oak Woodlands Conservation Act and would not result in a substantial loss of habitat for woodland species locally or regionally. However, because development of the site would result in the removal of a substantial number of trees, impacts would be ***significant****.*

Mitigation Measures

Implement Mitigation Measure 3.2-7.

Significance after Mitigation

With the implementation of the mitigation measure described above, impacts on native oaks would be avoided and reduced because trees lost through construction activities would be replaced onsite, where possible, or at a nearby feasible location. As a result, this impact would be reduced to a **less-than-significant** level.

Impact 3.2-8b: 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 MCSP Infill Site would include installation and operation of a 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 the existing MCSP, 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 121 individuals of native birds and mammals are killed per year at MCSP. Most of these are species protected under the MBTA and California Fish and Game Code. Approximately 2 percent of the species killed at these locations are considered “sensitive” species, but none are protected by ESA or CESA. Sensitive species include those that meet the definition of special-status described above (i.e., wildlife species identified by CDFW 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 MCSP over 10 years, between June 2002 and June 2012, included two barn owls, two burrowing owls, one Cooper’s hawk, 11 great horned owls, and two red-tailed hawks. No species listed as threatened or endangered or candidates for listing under ESA or CESA were killed at MCSP.

The existing LEF is 6,300 feet in length at MCSP. The LEF that would extend around the single, level II infill correctional facility would be 3,566 feet in length, or 57 percent of total length of the existing fence. Although expected wildlife mortality should not be strictly calculated 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 the LEF for a single facility would be approximately 69 individuals per year on average. Less than one individual is expected to be a sensitive species.

Based on mortality data from the operational LEF at MCSP, sensitive species that could be killed by the LEF at the infill site include great horned owl, barn owl, burrowing owl, Cooper’s hawk, or red-tailed hawk. Common native species likely to be killed by the LEF at the infill site include house finch, lesser goldfinch, yellow-rumped warbler, Brewer’s blackbird, black phoebe, cliff swallow, American goldfinch, and Bullock’s oriole.

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

Mitigation Measures

Implement Mitigation Measure 3.2-8.

Significance after Mitigation

With the implementation of tiered mitigation measures as described in the mitigation for Impact 3.2-8, impacts on wildlife would be reduced by minimizing the number of animals killed by the LEF 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 infill correctional facility at the Mule Creek State Prison (MCSP) 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 the MCSP Infill Site, and recommended mitigation measures to address significant or potentially significant impacts. The impact analysis has been organized into two parts. The first part addresses the proposed level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site. This section is based on a review of the *Archaeological Inventory Report for the California Department of Corrections Level II Infill Project, Amador, Sacramento, San Bernardino, and Solano Counties, California* and the *Historical Resource Analysis for the California Department of Corrections and Rehabilitation proposed infill facility near Mule Creek State Prison, Ione, California* and the *Historical Resource Analysis for the California Department of Corrections and Rehabilitation Proposed Infill Facility Near Mule Creek State Prison, Ione, California,* both of which were prepared by ICF International in 2013.

Impacts related to unique paleontological or geologic features at the MCSP Infill Site are addressed in Section 3.5, “Geology, Soils, Seismicity, Minerals, and Paleontological Resources,” of this volume of the draft environmental impact report (DEIR).

3.3.1 ENVIRONMENTAL SETTING

REGIONAL PREHISTORY

Although the Sacramento Valley may have been inhabited by humans as early as 10,000 years ago, the evidence for early human use likely is buried by deep alluvial sediments that accumulated rapidly during the late Holocene epoch. Although rare, archaeological remains of this early period have been identified in and around the Central Valley. There is evidence for some use of the Mokelumne River area, under what is now Camanche Reservoir, during the late Pleistocene epoch. Archaeologists working at Camanche Reservoir found a number of lithic cores and a flake that are associated with Pleistocene gravels. These archaeological remains have been grouped into what is called the Farmington Complex, which is characterized by core tools and large, reworked percussion flakes. The economy of this early period generally is thought to be based on exploitation of large game. Later periods are better understood because of more abundant representation in the archaeological record.

The taxonomic framework of the Sacramento Valley has been described in terms of archaeological patterns. A pattern is a general mode of life characterized archaeologically by technology, particular artifacts, economic systems, trade, burial practices, and other aspects of culture. Fredrickson (1973) identified three general patterns of resource use for the period between 4500 years before present (B.P.) and 200 B.P.: the Windmiller, Berkeley, and Augustine Patterns.

WINDMILLER PATTERN (4500 B.P.–3000 B.P.)

The Windmiller Pattern shows evidence of a mixed economy of game procurement and use of wild plant foods. The archaeological record contains numerous projectile points with a wide range of faunal remains. Hunting was not limited to terrestrial animals, as is evidenced by fishing hooks and spears that have been found in association with the remains of sturgeon, salmon, and other fish. Plants also were used, as indicated by ground stone artifacts and clay balls that were used for boiling acorn mush. Settlement strategies during the Windmiller period reflect seasonal adaptations: habitation sites in the valley were occupied during the winter months, but populations moved into the foothills during the summer.

BERKELEY PATTERN (3500 B.P.–2500 B.P.)

The Windmiller Pattern ultimately changed to a more specialized adaptation labeled the Berkeley Pattern. A reduction in the number of manos and metates and an increase in mortars and pestles indicate a greater dependence on acorns. Although gathered resources gained importance during this period, the continued presence of projectile points and atlatls (spear-throwers) in the archaeological record indicates that hunting was still an important activity.

AUGUSTINE PATTERN (1500 B.P.–200 B.P.)

The Berkeley Pattern was superseded by the Augustine Pattern. The Augustine Pattern reflects a change in subsistence and land use patterns to those of the ethnographically known people (Nisenan) of the historic era. This pattern exhibits a great elaboration of ceremonial and social organization, including the development of social stratification. Exchange became well developed, and an even more intensive emphasis was placed on the use of the acorn, as evidenced by the presence in the archaeological record of shaped mortars and pestles and numerous hopper mortars. Other notable elements of the artifact assemblage associated with the Augustine Pattern are flanged tubular smoking pipes, harpoons, clam shell disc beads, and an especially elaborate baked clay industry, which included figurines and pottery vessels (Cosumnes Brownware). The presence of small projectile point types, referred to as the Gunther Barbed series, suggests the use of the bow and arrow. Other traits associated with the Augustine Pattern include the introduction of preinterment burning of offerings in a grave pit during mortuary ritual, increased village sedentism, population growth, and an incipient monetary economy in which beads were used as a standard of exchange.

ETHNOGRAPHY

The MCSP Infill site is in the territory of the Eastern and Plains Miwok. The Eastern Miwok are composed of the Bay, Plains, and Sierra Miwok. The Bay Miwok occupied the eastern portions of what is now Contra Costa County, from Mount Diablo northeast into the Sacramento–San Joaquin River Delta. The Plains Miwok inhabited the lower reaches of the Mokelumne and Cosumnes Rivers and the banks of the Sacramento River from Rio Vista to Freeport. The Sierra Miwok inhabited the foothills and higher mountains of the Sierra Nevada.

The basic subsistence strategy of the Eastern Miwok was mobile hunting and gathering. This was motivated by seasonal variations in resource availability, which forced the Miwok to exploit resources outside the immediate vicinity of their permanent settlements. Lacking any substantive cultivation technology or animal domestication, Miwok sustenance relied heavily on the gathering of wild plant foods and hunting varieties of mammals. Of the vegetal resources gathered, the numerous varieties of acorns were highly valued and harvested widely. Nuts such as buckeye, sugar pine, and Sierra pine were collected and stored to augment any unexpected poor acorn harvest. Seeds, roots, and various green plants served to round out the bulk of the vegetal resources exploited by the Miwok.

The Miwok hunted, trapped, and fished for numerous varieties and combinations of resources throughout the mountain regions, foothills, and plains. Because the Miwok tended to live in geographically distinct regions, each group placed higher premiums on more locally obtainable resources. With the arrival of trappers, gold miners, and settlers to California, the Miwok suffered exposure to new varieties of introduced diseases they had previously not experienced. Although this early contact with settlers had a destructive impact on the Miwok population, relationships with settlers varied. Although some hostilities occurred between the Sierra Miwok and miners, some of the Plains Miwok became involved in agricultural operations then coming into existence on the large land grants. After California was annexed by the United States, some of the Miwok were displaced to Central Valley locations, yet many remained on the rancherias established in the Sierra Nevada foothills. During the final decades of the nineteenth century and early years of the twentieth century, the Miwok living on the foothill rancherias adapted to a new lifestyle. Subsistence through hunting and gathering was now augmented by seasonal wage labor on ranches and farms. As the reliance upon a cash income increased, traditional subsistence practices suffered. In spite of hardships, persons of Miwok descent still survive and maintain strong communities and action-oriented organizations.

REGIONAL HISTORY

SACRAMENTO VALLEY

Exploration and Early Settlement

Perhaps the first European to see the Central Valley was Pedro Fages, who led an expedition from Monterey in 1772. Significant Spanish exploration of the interior of central California did not begin until 1806, in an effort to locate new mission. A party led by Gabriel Moraga traveled north from Mission San Juan Bautista through the San Joaquin Valley, along the Kings and Kern Rivers, to the Sierra Nevada foothills. Moraga led another expedition from San Jose in 1808 that eventually reached the American River just below Auburn. One of the first Euroamericans to travel through the Sacramento Valley, Jedediah Strong Smith is believed to have reached the American River in 1827. The river was not named until 1837, when Spanish governor Juan Bautista Alvarado called it the Rio de los Americanos. During the 1820s, 1830s, and 1840s, trappers from the Hudson's Bay Company trapped along the courses of the Central Valley's rivers.

John Sutter, a native of Switzerland escaping debtor's prison, arrived in California in 1839. He received his Mexican citizenship and the title to a land grant at the confluence of the Sacramento and American Rivers in 1841. He called the land grant New Helvetia and by 1844 had completed the construction of a fort on the site. Sutter's Fort became a trading post and center for Euroamerican activities in the vicinity.

Sutter was not the first person to obtain a land grant in the area. In 1833, J. B. R. Cooper was granted a parcel on the American River east of what would become Sacramento. Cooper did not develop the property and renounced the grant in 1835. John Sinclair, a Scotsman, settled on the property immediately east of New Helvetia in 1841. That land, Rancho del Paso, was granted to Eliab Grimes in 1844. Rancho de los Americanos was granted to William A. Leidesdorff in 1844 and covered 35,500 acres on the south side of the American River, east of New Helvetia. Leidesdorff died 4 years later, and Captain Joseph L. Folsom purchased the rancho.

The Rancho de San Juan was located north of the American River, across from Rancho de los Americanos. It originally was granted to Joel P. Dedmond, an American carpenter in 1844. Dedmond failed to improve the property and transferred the grant to John Sinclair in August 1845. In 1849, Sinclair deeded the property to Hiram Grimes (nephew of Eliab), and the rancho remained unused, repeatedly being sold for overdue taxes. In 1873, the real estate firm of Cox and Clarke took over the property and later subdivided it.

Discovery of Gold

In 1847, John Sutter opened a sawmill in the foothills. The mill was to be operated by John Marshall. During the construction of the mill's tailrace in 1848, Marshall discovered gold. Despite efforts to keep the find quiet, word spread and the Gold Rush was on. The resulting influx of miners caused the nonnative population of California to grow exponentially. In 1848, 14,000 nonnatives inhabited California; by the end of 1849, the nonnative population was close to 100,000. By late 1852, that number had more than doubled to 220,000. The town of Coloma was established on the site of Marshall's discovery.

Transportation

Jedediah Strong Smith made his first overland journey to California in 1826. In 1827, he opened the Sacramento Trail. The first trail into the Folsom area was the Coloma Road, laid out by John Sutter in 1847 and 1848 from Sutter's Fort to Coloma. In time, the Coloma Road branched to Mormon Island and Negro Hill. In 1849, the Coloma Road became the route of California's first stage line, established by James E. Birch. During its short existence in the area (April to July 1860), the Pony Express paralleled the Coloma Road. After 1860, mail was delivered as far as Folsom by railroad.

Ferries were established for river crossings and to improve access to the northern mines. Sinclair's Ferry (also known as the Upper Ferry) on the American River at Brighton and the Lower Ferry 2 miles downstream were established in 1849. Ferries along the American River at Condemned Bar, Beal's Bar, Rattlesnake Bar, Whiskey Bar, Oregon Bar, and Salmon Falls were established that same year. Turner's Ferry (at the Lower Ferry location), the Norris Ferry (at what is now 29th Street in Sacramento), and Muldrow's Ferry (0.5 mile downstream from Sinclair's Ferry) were added in 1850.

The Sacramento and American Rivers provided convenient arteries to move goods and people around central California. Transportation on the Sacramento River as far as the mouth of the American River was reliable until siltation related to mining debris caused problems in the Delta region. However, transportation along the American River was seasonal. In winter, steamers could reach as far as 12 miles upstream from the mouth of the river, depending on rainfall totals. During the dry summers, ships could navigate only to Brighton. Increases in debris from hydraulic mining made navigation progressively less feasible, and in 1860 the American River was no longer considered a navigable waterway. Sacramento became the supply center for mining and settlers in the foothills because it was the farthest point upstream that was accessible to ocean-going vessels.

Ione

Ione is located in the Ione Valley in Amador County, which is believed to be named by Thomas Brown around 1849. During the days of the Gold Rush, the miners knew the town by the names of "Bedbug" and "Freezeout." Unlike other communities in Amador County, which were founded on gold mining, Ione was a supply center, stage and rail stop, and agricultural hub. The Town of Ione continued to grow even after the Gold Rush ebbed. At the centennial of 1876, Ione had a population of about 600 which included about 100 Chinese who lived in Ione's Chinatown. The town included one public school, four churches, four general stores, one meat market, one laundry, one brewery, a restaurant, millinery shop, an art gallery, six saloons, a drug store and barber shop, and many other business establishments. The centennial also celebrated the completion of the railroad to the town of Ione. In 1894 the Preston School of Industry (also known as Preston Castle) was constructed to reform juvenile delinquents. Preston remained open until 2010. The City of Ione was incorporated as a General Law City in 1953 and is now the largest city in Amador County. MCSP was constructed in 1987 and currently houses over 3,000 inmates.

Other Mining Towns

A number of other mining towns were located in north and west of Ione, including Muletown, Q Ranch, Irish Hill, and Quincy. Established by miners in the 1850s, nothing remains of these towns today. Muletown was located about 2 miles north of Ione, just north of Mule Creek, and was a prolific mining

camp. At its height Muletown had several hundred inhabitants, mostly of Irish origin. Q. Ranch is noted as a structure on an 1866 map. Irish Hill was located on the north side of Dry Creek.

Even in 1881, the location of the town of Quincy was not known, but was thought to be between Muletown and the Boston store. However, neither Quincy nor Boston store could be located on an 1866 map, though “Boston Ranch” was noted near the county line, northwest of the Mokelumne River.

SITE INVESTIGATION

NCIC RECORDS SEARCH

On January 24, 2013, staff members of the NCIC in Sacramento, California, part of CHRIS, conducted a cultural resources records search for the MCSP Infill Site. Records of previously conducted cultural resource investigations and previously recorded cultural resources were consulted for the MCSP Infill Site and a 0.25-mile radius around the infill site. The records search also included a review of the NRHP (1988 and computer listings 1966 through 2008), CRHR (2008 and up), California Inventory of Historic Resources (1976), *California Historical Landmarks* (1996), *California Points of Historical Interest* listing (1992), Caltrans Bridge Inventory (2009), and the Directory of Properties in the Historic Properties data file for Amador County (2012). Historic maps, including the 1962 USGS 7.5’ Ione and Irish Hill Quadrangles, were also examined as part of the records search (ICF 2013a).

According to the records search, the MCSP Infill Site was previously studied as part of a cultural resources study conducted in 1984 (Decater 1984). Five other studies were conducted within a 0.25-mile radius of the infill site. Eight cultural resources were recorded within 0.25 mile of the infill site. Of the eight previously recorded resources, one is prehistoric, five are historic in nature, and two are multi-component sites. One of the historic-era sites, P-03-0918, encompasses a large area that includes the infill site and is described as an interconnected mining operation complete with dams, ditches, retaining walls, ponds, and tailings. According to the site record, P-03-0918 is associated with the historic Muletown Mining District. None of the recorded features associated with the site are located within the infill site. No other resources are located within the infill site boundaries. No prehistoric archaeological resources have been recorded in the infill site (ICF 2013a).

With respect to the proposed offsite spray field location, the City of Ione had conducted a records search for the area. No archaeological or historic resources were recorded in the area of the proposed spray fields or extended recycled water conveyance system (Ione 2012).

NATIVE AMERICAN CONSULTATION AND OTHER INTERESTED PARTIES

On January 16, 2013, a description of the contemplated development at MCSP and maps were sent to the Native American Heritage Commission (NAHC). The purpose was to request a search of the NAHC’s sacred lands file and request a list of Native American contacts for the area including and surrounding the infill site. The NAHC responded by fax with sacred lands search results and contacts for Amador County on February 20, 2013. The sacred lands file searches did not have record of Native American resources in the vicinity of the infill site. The NAHC also provided a list of 14 individuals to contact for additional information regarding cultural resources. As of February 25, 2013, no concerns or information regarding potential cultural resources have been received (ICF 2013a).

PEDESTRIAN SURVEYS

During pedestrian surveys of the infill site, no cultural resources were encountered. On February 4, 2013, qualified archaeologists conducted a pedestrian archaeological survey of the MCSP Infill Site. Survey transects no wider than 15 meters were walked to ensure maximum coverage in a timely manner. Visibility was excellent throughout the infill site due to recent disking. Rock outcrops were

closely inspected for mortars, and all cut and eroded banks were closely inspected for cultural materials. A particular effort was made to relocate the features listed for P-03-918, but none were found to be located within the infill site boundaries.

RESOURCES ON OR ADJACENT TO THE INFILL SITE

Historic Architectural Resources

No historic or potentially historic structures are located within the boundaries of the infill site, including the disturbance area. The original building at the Preston Youth Correctional Facility (PYCF) is approximately 0.7 mile from the southwest corner of the MCSP Infill Site. This three-story building, known as the Preston Castle, originally housed the Preston School of Industry (the precursor to the PYCF) and is a prominent visual and historical landmark.

The Romanesque Revival style building was completed in 1892 and is sited on a knoll about ½ mile north of the city of Ione. Because the population and needs of the Preston School of Industry outgrew Preston Castle, additional buildings were constructed to support the operation of this facility beginning in the 1910s. A National Register nomination mentions that Preston Castle was abandoned in 1960 as staff was moved to newer office buildings. Buildings that are associated with the general administration, care, housing and education of the wards were constructed to the southeast, east and north of the Preston Castle. These buildings are accessed from Waterman Road. Most staff residences were built along Palm Drive (west and south of Preston Castle) and along Circle Drive and Veteran's Drive, near the base of the knoll. These buildings comprise a potential historic district, which has not been fully documented at this time (ICF 2013b).

It was determined eligible for the National Register as the most significant representation of the Romanesque Revival architecture in the Mother Lode Region. In addition, it is considered significant for its association with a progressive social and educational movement that sought to place youth offenders and wards of the state in a school as opposed to a prison setting. This was the first attempt by the State of California to introduce prison reform for juvenile offenders (ICF 2013b).

The building was established as California Historical Landmark (CHL) #867 in 1974 and listed on the NRHP in 1975. Properties listed on the NRHP and state landmarks with a number higher than #770 are automatically listed in the California Register (California Public Resources Code Section 5024.1[d][2]). Therefore, according to Section 15064.5(a)(1) of the State of California Environmental Quality Act (CEQA) Guidelines, the Preston Castle is a historical resource for the purposes of CEQA (ICF 2013b).

3.3.2 REGULATORY CONSIDERATIONS

A list of the applicable cultural resource-related federal and state plans, policies, regulations, and laws is provided below. Complete summaries of the federal and state 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 5020.1-Historic Districts - Under PRC section 5020.1, a historic district means a definable, unified geographic entity that possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. Historic districts require nomination to be listed in the CRHR.
- 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. However, CDCR considers the plans, policies, and ordinances of surrounding local jurisdictions to reduce any environmental consequences to the extent most feasible. There are no local regulatory requirements for cultural resources that would apply to the development of the infill site at MCSP.

3.3.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, a level II infill correctional facility at the MCSP 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 resource or its immediate surroundings.

PROJECT IMPACTS AND MITIGATION MEASURES

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

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

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

Record search information identified one historic-era archaeological site, an interconnected mining operation complete with dams, ditches, retaining walls, ponds, and tailings. As discussed above, a particular effort was made to relocate the features listed for P-03-918, but none were found to be located within the infill site boundaries. Although the site was reported to encompass a large area that includes the infill site, the archaeological field survey was unable to locate any of the features within the MCSP Infill Site boundaries.

However, the potential exists to encounter previously undiscovered or unrecorded archaeological sites and materials during project-related preconstruction or construction-related ground disturbing activities. If such resources were to represent “historical resources” or “unique archaeological resources” as defined by CEQA, any substantial change to or destruction of these resources would be a potentially significant impact.

No known archaeological resources would be altered by the infill project. Development of a level II infill correctional facility complex at the MCSP Infill Site could result in a substantial adverse change in the significance of a previously undiscovered archaeological resource as defined in Section 15064.5 and would therefore result in a potentially significant impact.

Mitigation Measures

Mitigation Measure 3.3-1

In the event that any prehistoric or historic-era subsurface archaeological features or deposits, including locally darkened soil (madden), that could conceal cultural deposits, are discovered during construction-related earth-moving activities, all ground-disturbing activity within 100 feet of the resources will be halted and a qualified professional archaeologist will be retained to assess the significance of the find. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist will develop appropriate mitigation to protect the integrity of the resource and ensure that no additional resources are affected. Mitigation could include but would not necessarily be limited to preservation in place, archival research, subsurface testing, or contiguous block unit excavation and data recovery.

Significance after Mitigation

Implementation of a plan to address discovery of unanticipated buried cultural resources and to preserve and/or record those resources consistent with appropriate laws and requirements, as described in Mitigation Measure 3.3-1 would reduce impacts to a **less-than-significant** level.

Impact 3.3-2a: Construction Impacts on Historical Resources [Complex]

During construction of the infill site, construction-management trailers and personal vehicles may be located on an athletic field located at the former PYCF. Several historic buildings are located adjacent to this field. The placement and use of the construction-management trailers would not result in modifications to these buildings, and the use of the athletic field would be temporary. All trailers and vehicles would be removed after construction is completed. At this time, the field would be returned to pre-construction conditions. Further, there are no public views of the athletic field in the context of the potentially historic buildings. Although the buildings would not be affected by placement and use of the construction-management trailers or personal vehicles, there remains the potential for unintentional damage.

Due to the potential for unintentional damage to potentially historic structures located at the former PYCF, construction of a level II infill correctional facility complex at the MCSP Infill Site could result in a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5 and would, therefore, result in a potentially significant impact.

Mitigation Measures

Mitigation Measure 3.3-2

CDCR will maintain a buffer of 100 feet between the edge of construction management activities, including trailers and personal vehicles, and the potentially historic buildings located at the former PYCF. CDCR will confirm through development of a consultation agreement with SHPO pursuant to Section 5024.5 of the Resources Code prior to any modification of the former PYCF athletic field and/or any historic structure within the boundaries of the former PYCF.

Significance after Mitigation

Establishment of a 100-foot buffer, as described in Mitigation Measure 3.3-2 would ensure the protection of the potentially historic buildings from unintentional damage. This would reduce impacts to a **less-than-significant** level.

Impact 3.3-3a: Operational Impacts on Historical Resources [Complex]

As noted above, no historic structures are located within the boundaries of the infill site or at the proposed spray fields location; however several historic structures are located within one mile of the infill site. Preston Castle is listed on the NRHP and is CHL #867. Therefore, Preston Castle is a historical resource for the purposes of CEQA. The building is located approximately 0.7 mile from the southwest corner of the MCSP Infill Site and would not be altered by development of the project. Preston Castle's primary historical elevation faces south towards the city of Ione, with secondary elevations on the east and west. The less significant elevation is the north side, which faces towards the MCSP Infill Site. Between Preston Castle and the MCSP Infill Site, the landscape is comprised of hills and valleys, with many mature trees and grassy areas. An abandoned dairy or calving barn is located on a knoll roughly halfway between Preston Castle and the MCSP Infill Site is surrounded by mature trees. Numerous PYCF buildings gravel-lined roads and the tall fence that surrounds much of the PYCF property are located in the valley between Preston Castle and the barn. To the north of the barn is the existing sewage treatment reservoir, which is located in a low-lying area; beyond that feature is the MCSP Infill Site. Therefore, due to the geography and intervening topography and vegetation of the area, the MCSP Infill Site is not visible from the important elevations of Preston Castle and its historic setting would not be compromised (ICF 2013b).

With respect to the potential historic district located adjacent to Preston Castle, the nearest buildings that could be considered contributing resources to a potential historic district are located over 0.5 mile from the infill site, and because of this large distance, there would be no potential impact to these structures or their historic setting (ICF 2013b). Further, intervening terrain and vegetation between the infill site and these structures would largely prevent views of the proposed level II infill correctional facility complex. Additional structures, including those associated with housing employees who worked at Preston Castle, are located to the south and southwest of Preston Castle and at a lower elevation, thereby preventing any views of the infill site. As a result, development of the infill site with the proposed level II infill correctional facility complex would not affect the historical setting of the potential district (ICF 2013b).

Development of a level II infill correctional facility complex at the MCSP Infill Site would not result in a substantial adverse change in the significance of Preston Castle, a historical resource as defined in CEQA Guidelines Section 15064.5, or the potential historic district surrounding Preston Castle because the structures themselves would not be altered. In addition, views of the MCSP Infill Site from nearby

historic resources, including Preston Castle, would not be visible such that the integrity of these resources would be adversely affected. Therefore, this would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.3-4a: Impacts on Human Remains [Complex]

Based on documentary research, no evidence suggests that any prehistoric or historic-era marked or un-marked human interments are present within or in the immediate vicinity of the MCSP Infill Site or at the proposed spray field location. However, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the infill site, and could be uncovered by project-related construction activities. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and grave-associated items from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in Sections 7050.5 and 7052 of the California Health and Safety Code and Section 5097 of the California Public Resources Code.

Development of the proposed level II infill correctional facility complex at the MCSP Infill Site could result in disturbance of previously undiscovered human remains, including those interred outside of formal cemeteries which would result in a potentially significant impact.

Mitigation Measures

Mitigation Measure 3.3-4

If human remains are discovered during any demolition/construction activities, all ground-disturbing activity within 50 feet of the remains will be halted immediately, and the Amador County coroner will be notified immediately, according to Section 5097.98 of the California Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the County coroner to be Native American, the NAHC will be notified within 24 hours, and the guidelines of the NAHC will be adhered to in the treatment and disposition of the remains. CDCR will also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD), if any, identified by the NAHC. Following the coroner's findings, the archaeologist, and the NAHC-designated MLD will determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.94.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code Section 5097.

Significance after Mitigation

Implementation of the Mitigation Measure 3.3-4 would result in coordination between the MLD and CDCR with the assistance of an archaeologist. The steps outlined in the mitigation measure would minimize or eliminate adverse impacts on undiscovered human remains resulting from project-related construction activities. As a result, the project's impacts to previously undiscovered human remains would be reduced to a **less-than-significant** level.

ALTERNATIVE SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

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

Even though the acreage of a single, level II infill correctional facility at MCSP would be less than that of a complex, the potential for impacts on archaeological resources would be considered the same because the same soils would be disturbed with development of a single facility, which could result in the disturbance of previously undiscovered archaeological resources.

No known archaeological resources would be altered by construction of a single facility. Development of a single, level II infill correctional facility at the MCSP Infill Site could result in a substantial adverse change in the significance of a previously undiscovered archaeological resource as defined in Section 15064.5 and would, therefore, result in a potentially significant impact.

Mitigation Measures

Implement Mitigation Measure 3.3-1.

Significance after Mitigation

Implementation of a plan to address discovery of unanticipated buried cultural resources and to preserve and/or record those resources consistent with appropriate laws and requirements, as described in Mitigation Measure 3.3-1 will reduce the potential impacts of development at the MCSP Infill Site to a **less-than-significant** level.

Impact 3.3-2b: Construction Impacts on Historical Resources [Single Facility]

Even though the acreage of a single, level II infill correctional facility at MCSP would be less than that of a complex, the potential for construction impacts on historical resources would be considered the same because the same number of construction management trailers and vehicles would be located on the athletic field at PYCF.

Construction of a single, level II infill correctional facility at the MCSP Infill Site could result in a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5 and would, therefore, result in a potentially significant impact.

Mitigation Measures

Implement Mitigation Measure 3.3-2.

Significance after Mitigation

Implementation of the Mitigation Measure 3.3-2 would ensure the protection of the historic buildings from unintentional damage. This would reduce the potential impacts of the proposed project at MCSP to a **less-than-significant** level.

Impact 3.3-3b: Operational Impacts on Historical Resources [Single Facility]

While the acreage of a single facility at MCSP would be less than that of a complex, the potential for impacts on historical resources would be considered the same because development would occur within the same general footprint and would not change the elevation of site features such that they would become visible from nearby historic structures (i.e., Preston Castle).

Development of a single, level II infill correctional facility at the MCSP Infill Site would not result in a substantial adverse change in the significance of Preston Castle, a historical resource as defined in Section 15064.5, because the Castle would not be altered and views of the MCSP Infill Site from

*nearby historic resources would not be visible such that the integrity of these resources would be adversely affected. Therefore, this would be a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.3-4b: Impacts on Human Remains [Single Facility]

While the acreage of a single, level II infill correctional facility at MCSP would be less than that of a complex, the potential to encounter human remains during development of a single facility would be the same as a complex because the same soils would be disturbed, which could result in the disturbance of previously undiscovered human remains.

Development of a single, level II infill correctional facility at the MCSP Infill Site could result in disturbance of previously undiscovered human remains, including those interred outside of formal cemeteries which would result in a potentially significant impact.

Mitigation Measures

Implement Mitigation Measure 3.3-4.

Significance after Mitigation

Implementation of the Mitigation Measure 3.3-4 would result in coordination between the MLD and CDCR with the assistance of an archaeologist. The steps outlined in the mitigation measure would minimize or eliminate adverse impacts on undiscovered human remains resulting from construction activities. As a result, the potential impacts associated with development of a single, level II infill correctional facility to previously undiscovered human remains associated with development of a complex at MCSP would be reduced to a **less-than-significant** level.

3.4 EMPLOYMENT, POPULATION, AND HOUSING

This section evaluates the potential employment, population, and housing impacts attributable to development of a single level II correctional facility or a level II infill correctional facility complex at the Mule Creek State Prison (MCSP), 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 level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site.

3.4.1 ENVIRONMENTAL SETTING

The MCSP Infill Site is located in the city of Ione in Amador County, California (see Exhibit 2-1 in Chapter 2 of this volume). The study area for this analysis is based on the existing distribution of employees of the California Department of Corrections and Rehabilitation (CDCR) and their families. Based on current zip code data that identifies the residential communities where MCSP employees reside, approximately 84 percent (978) of 1,160 employees reside in Sacramento, Amador, and San Joaquin Counties. The cities with the highest percentages of MCSP employees and their families residing are the cities of Ione (17 percent) in Amador County and Elk Grove (11 percent) in Sacramento County.

Because the type of staff required for a level II infill facility is similar to the current employment mix at MCSP, it is reasonable to assume that the staff for a level II infill facility (single or complex) would also predominantly reside in the counties of Sacramento (including Elk Grove), Amador (including Ione), and San Joaquin. Therefore, these areas constitute the study area for the employment, population, and housing analysis provided below. Other locations are not considered in this analysis because the number of MCSP employees who currently reside, and would be expected to reside, in other communities is low (16 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 Sacramento, Amador, and San Joaquin counties (with a focus on the cities of Ione and Elk Grove) 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.[1] County and state employment statistics reflect conditions in December 2012 as published by EDD in 2013.

SACRAMENTO COUNTY

In December 2012, the employed civilian labor force in Sacramento County (including the city of Elk Grove) was 607,200 people and the unemployment rate was 9.9 percent, slightly higher than the state average of 9.7 percent (EDD 2013). According to the U.S. Census Bureau (2011a), civilian employment in Sacramento County was distributed among the following sectors:

- management, business, science, and arts occupations – 37.4 percent;
- sales and office occupations – 27.4 percent;

[1] Census data for the city of Ione are from the American Community Survey 5-year Estimates, from data collected between January 2007 and December 2011.

- service occupations – 19.2 percent;
- production, transportation, and material moving occupations – 8.3 percent; and
- natural resources, construction, and maintenance occupations – 7.6 percent.

City of Elk Grove

In 2011, the unemployment rate in the city of Elk Grove was estimated to be 10.6 percent (U.S. Census Bureau 2011a). According to the U.S. Census Bureau (2011a), civilian employment in Elk Grove was distributed among the following sectors:

- management, business, science, and arts occupations – 43.4 percent;
- sales and office occupations – 26.1 percent;
- service occupations – 18.4 percent;
- production, transportation, and material moving occupations – 6.7 percent; and
- natural resources, construction, and maintenance occupations – 5.4 percent.

AMADOR COUNTY

In December 2012, the employed civilian labor force in Amador County (including the city of Ione) was 14,620 people and the unemployment rate was 11.1 percent, slightly higher than the state average of 9.7 percent (EDD 2013). According to the U.S. Census Bureau (2011a), civilian employment in Amador County was distributed among the following sectors:

- management, business, science, and arts occupations – 29 percent;
- sales and office occupations – 25.6 percent;
- service occupations – 24.7 percent;
- production, transportation, and material moving occupations – 10.5 percent; and
- natural resources, construction, and maintenance occupations – 10.2 percent.

City of Ione

In 2011, the unemployment rate for the city of Ione was estimated to be 7.9 percent (U.S. Census Bureau 2011b). According to the U.S. Census Bureau (2011b), civilian employment in Ione was distributed among the following sectors:

- management, business, science, and arts occupations – 34.8 percent;
- service occupations – 22 percent;
- sales and office occupations – 12.6 percent;
- production, transportation, and material moving occupations – 15.3 percent; and
- natural resources, construction, and maintenance occupations – 15.3 percent.

SAN JOAQUIN COUNTY

In December 2012, the employed civilian labor force in San Joaquin County was 258,400 people and the unemployment rate was 14.5 percent, substantially higher than the state average of 9.7 percent (EDD 2013). According to the U.S. Census Bureau (2011a), civilian employment in San Joaquin County was distributed among the following sectors:

- management, business, science, and arts occupations – 28.1 percent;
- sales and office occupations – 24.9 percent;
- service occupations – 18.7 percent;

- production, transportation, and material moving occupations – 15.9 percent; and
- natural resources, construction, and maintenance occupations – 12.4 percent.

POPULATION

Most of the current employees at MCSP reside in Sacramento, Amador, and San Joaquin Counties, where the combined population exceeds 2 million people. Table 3.4-1 presents the geographic distribution of MCSP employees and the regional population estimates for the major counties and cities that support these employees.

SACRAMENTO COUNTY

The population of Sacramento County (including the city of Elk Grove) was 1,418,788 people in 2010, which was a 13.8 percent increase from 2000 (U.S. Census Bureau 2013a). As indicated in Table 3.4-1, approximately 37 percent of current MCSP employees reside in Sacramento County.

By 2025, the California Department of Finance (2012) projects the population of Sacramento County to be 1,643,263 people, an increase of approximately 25.5 percent from 2000.

Table 3.4-1 Geographic Distribution of Current MCSP Employees

County/City	2000 Population	2010 Population	Projected 2025 Population	Number (Percent) of MCSP Employees [1]
Sacramento County	1,223,499	1,418,788	1,643,263	430 (37%)
Amador County	35,100	38,091	41,270	386 (33%)
San Joaquin County	563,598	685,306	862,496	162 (14%)
Other counties	N/A	N/A	N/A	182 (16%) [2]
County Total				**1,160 (100%)**
City of Ione	7,129	7,918	18,182 [3]	200 (17%)
City of Elk Grove	59,984 [4]	153,015	168,465	129 (11%)
Other cities	N/A	N/A	N/A	831 (72%) [5]
City Total				**1,160 (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 16% of MCSP employees reside in 20 other counties, each of which represents less than 7% of total employee population.
[3] Projection is for the year 2030.
[4] Elk Grove was incorporated as a city in July 2000. U.S. Census Bureau information for 2000 does not reflect this change.
[5] Less than 72% of MCSP employees reside in 87 other jurisdictions, each of which represents less than 10% of total employee population.
Sources: U.S. Census Bureau 2013a, 2013b, 2013c, 2013d, 2013e; California Department of Finance 2012; City of Ione 2009; Sacramento County 2008; zip code data provided by CDCR in 2013

City of Elk Grove

The population of Elk Grove increased from 59,984 people in 2000 to 153,015 people in 2010, which was an increase of 60.8 percent (U.S. Census Bureau 2013b).[2] As indicated in Table 3.4-1, approximately 11 percent of current MCSP employees reside in Elk Grove.

By 2025, the total population in Elk Grove is projected to be 168,465 people, an increase of approximately 64.4 percent from 2000 (Sacramento County 2008:5-4).

[2] Elk Grove was incorporated as a city in July 2000. U.S. Census Bureau information for 2000 does not reflect this change.

AMADOR COUNTY

The population of Amador County (including the city of Ione) was 38,091 people in 2010, which was a 7.8 percent increase from 2000 (U.S. Census Bureau 2013c). As indicated in Table 3.4-1, approximately 33 percent of current MCSP employees reside in Amador County.

By 2025, the California Department of Finance (2012) projects the population of Amador County to be 41,270 people, an increase of approximately 15 percent from 2000.

City of Ione

Ione's population increased from 7,129 people in 2000 to 7,918 people in 2010, which was an increase of 9.9 percent (U.S. Census Bureau 2013d). As indicated in Table 3.4-1, approximately 17 percent of current MCSP employees reside in Ione.

By 2030, the total population in Ione is projected to be 18,182 people, an increase of 60.7 percent from 2000 (City of Ione 2009:4.3-11).

SAN JOAQUIN COUNTY

The population of San Joaquin County was 685,306 people in 2010, which was a 17.7 percent increase from 2000 (U.S. Census Bureau 2013e). As indicated in Table 3.4-1, approximately 14 percent of current MCSP employees reside in San Joaquin County.

By 2025, the California Department of Finance (2012) projects the population of San Joaquin County to be 862,496 people, an increase of approximately 35 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 Sacramento, Amador, and San Joaquin Counties and the Cities of Ione and Elk Grove in 2011 are provided in Table 3.4-2. As shown, there is a general availability of housing within these areas; Elk Grove has the lowest vacancy rate (5.9 percent) and Amador County has the highest (21 percent).

Table 3.4-2 Vacant Units per Jurisdiction

County/City	Total Housing Units	Occupied Housing Units	Vacant Housing Units	Vacancy Rate
Sacramento County	556,067	511,894	44,173	7.9%
Amador County	18,055	14,260	3,795	21%
San Joaquin County	234,003	213,967	20,036	8.6%
County Total	**808,125**		**68,004**	
City of Ione	1,630	1,365	265	16.3%
City of Elk Grove	49,285	46,395	2,890	5.9%
City Total	**50,915**		**3,155**	

Notes: N/A = not applicable
Sources: U.S. Census Bureau 2011c, 2011d

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 MCSP 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, this 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 4).

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 of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the MCSP 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: Because the level II infill facility, whether single or complex in design, would be located on undeveloped land and land used for non-residential uses (i.e., spray fields for tertiary-treated wastewater generated at MCSP) on State-owned property, it would not displace existing housing or people. Therefore, these issues are not discussed further.

Impacts of increased inmate population: Although a level II infill correctional facility at MCSP would include the construction of either 792 or 1,584 new level II beds (depending on whether a single facility or a complex is selected) at the MCSP 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 and of 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 4). For these reasons, this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

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

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

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

Development of a complex at MCSP would provide both short-term and permanent employment opportunities. The number of short-term jobs required during project construction of a complex would peak at 795. The proposed project would be constructed over a 28-month period. Of these 795 required jobs, 745 would last for a minimum of 17 months. As described above, Sacramento, Amador, and San Joaquin Counties contained more than 55,000 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 MCSP 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 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. It should also be noted that there were approximately 400 staff positions (custody and support) that were previously associated with the Preston Youth Correctional Facility (PYCF), which was closed in 2010, and previous employees of PYCF may fill some of the positions associated with a level II infill correctional facility complex at MCSP. 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 MCSP 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 MCSP employee distribution patterns. That is to say, the overwhelming majority (84 percent) of employees would be anticipated to reside in Sacramento, Amador, and San Joaquin Counties, and the remainder (16 percent) would be anticipated to reside in other outlying counties. As indicated in Table 3.4-1, Sacramento County would be expected to receive the largest portion of a project-related population increase (approximately 406 [37 percent] of the 1,097 people). The remaining employees and their families would be distributed throughout other adjacent and outlying counties (including Amador and San Joaquin Counties). 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 Sacramento County of 406 people would represent 0.0247 percent of the County's projected 2025 population of 1,643,263 people (California Department of Finance 2012). At a more local level, project-related population growth in the city of Ione of 186 (17 percent of 1,097) people would represent 1.02 percent of the City's projected 2030 population of 18,182 people (City of Ione 2009).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 level II infill correctional facility complex at the MCSP 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 (Sacramento, Amador, and San Joaquin counties, including the cities of Ione and Elk Grove). Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

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

As discussed in Impact 3.4-1a, operation of a complex (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 MCSP. 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 could increase the number of job opportunities at MCSP by 377 positions, the project would result in a demand for 377 housing units as follows: approximately 139 (37 percent) housing units in Sacramento County, approximately 124 (33 percent) housing units in Amador County, approximately 53 (14 percent) housing units in San Joaquin County, and approximately 60 (16 percent) housing units in other counties. At a more local level, approximately 64 (17 percent) housing units would be needed in Ione. 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 3.4-1a).

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 the MCSP Infill Site 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 SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

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

Development of a single, level II infill correctional facility at MCSP would also provide both short-term and permanent employment opportunities, although less than the proposed complex. 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 jobs, 335 would last for a minimum of 15 months. More than 55,000 construction workers were living in Sacramento, Amador, and San Joaquin Counties 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 construction needs. Therefore, implementation of a single, level II infill facility at MCSP would not

generate employment opportunities that would require in-migration of construction personnel from outside the region.

Operation of a single, level II infill correctional facility at MCSP would require 193 new correctional officers, medical/mental health personnel, vocational and educational staff, facility maintenance personnel, and administrative support staff (see Table 3-1 of Chapter 3 of Volume 1). More than half of these positions would be correctional staff, and the remaining positions would be in support services. Sacramento, Amador, and San Joaquin Counties have a combined labor force of more than 880,000 people and high unemployment rates (9.9 percent, 11.1 percent, and 14.5 percent for Sacramento, Amador, and San Joaquin Counties, respectively) (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 of the region because of the general availability in the labor market. It should also be noted that there were approximately 400 staff positions (custody and support) that were previously associated with the Preston Youth Correctional Facility (PYCF), which was closed in 2010, and previous employees of PYCF may fill some of the positions associated with a single, level II infill correctional facility at MCSP.

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 facility at MCSP 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 MCSP employee distribution patterns. That is to say, the overwhelming majority (84 percent) of employees would be anticipated to reside in Sacramento, Amador, and San Joaquin Counties, and the remainder (16 percent) would be anticipated to reside in other outlying counties. As indicated in Table 3.4-1, Sacramento County would be expected to receive the largest portion of any project-related population increase (approximately 208 [37 percent] of the 562 people). The remaining employees and their families would be distributed throughout other adjacent and outlying counties (including Amador and San Joaquin Counties). 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 Sacramento County of 208 people would represent 0.013 percent of the County's projected 2025 population of 1,643,263 people (California Department of Finance 2012). At a more local level, project-related population growth in the city of Ione of 96 (17 percent of 562) people would represent 0.53 percent of the City's projected 2030 population of 18,182 people (City of Ione 2009). 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 correctional facility at the MCSP 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 (Sacramento, Amador, and San Joaquin Counties, including the cities of Ione and Elk Grove). Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

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

As discussed in Impact 3.4-1b, 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 facility at MCSP could increase population by approximately 562 people, which would in turn increase housing demand in the communities near MCSP. 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 MCSP by 193 positions, the project could result in a demand for 193 housing units as follows: approximately 71 (37 percent) housing units in Sacramento County, approximately 64 (33 percent) housing units in Amador County, approximately 27 (14 percent) housing units in San Joaquin County, and approximately 31 (16 percent) housing units in other counties. At a more local level, approximately 33 (17 percent) housing units would be needed in Ione. 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 3.4-1b).

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 correctional facility at the MCSP Infill Site 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.

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

This section addresses existing geology, soils, seismicity, minerals, and paleontological resources at the Mule Creek State Prison (MCSP) Infill Site and analyzes the potential for the development of level II infill correctional facilities (single facility and complex designs) to affect those resources. The impact analysis has been organized into two parts. The first part addresses the proposed level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site. Although the acreage of disturbance for a complex at MCSP would be greater than that for a single facility, the physical characteristics underlying the MCSP Infill Site are the same throughout these development areas. No geotechnical report has been prepared for the MCSP Infill Site.

3.5.1 ENVIRONMENTAL SETTING

REGIONAL TOPOGRAPHY AND GEOLOGY

The MCSP Infill Site is located between the Sierra Nevada and the Great Valley geomorphic province. The Great Valley of California, also called the Central Valley, is a nearly flat alluvial plain extending from the Tehachapi Mountains in the south to the Klamath Mountains in the north and from the Sierra Nevada in the east to the Coast Ranges in the west. Elevations of the alluvial plain are generally just a few hundred feet above mean sea level (MSL), with extremes ranging from a few feet below MSL to about 1,000 feet above MSL (Hackel 1966).

The Sierra Nevada is a strongly asymmetric mountain range with a long, gentle western slope and a high, steep eastern escarpment. It averages 50–80 miles wide, and it runs in a northwesterly direction through eastern California for more than 400 miles—from the Mojave Desert in the south to the Cascade Range and the Modoc Plateau in the north (Bateman and Wahrhaftig 1966).

The Sierra Nevada is a large block of the earth's crust that has broken free on the east along the Sierra Nevada fault system and has been tilted westward. It is overlapped on the west by sedimentary rocks of the Great Valley geomorphic province and on the north by volcanic sheets extending south from the Cascade Range. A blanket of volcanic material caps large areas in the northern part of the range (Bateman and Wahrhaftig 1966).

The Ione region is underlain by metamorphic rocks of the Mesozoic-age Copper Hill Volcanics Formation, the Jurassic-age Gopher Ridge Volcanics, and the Tertiary-age Ione Formation. These metamorphic rocks were intruded by the magmas of the Sierra Nevada granitic batholith during the Upper Jurassic epoch (Wagner et al. 1981). These rocks form elongated zones along the western margin of the Sierra Nevada.

The Ione Formation is a sedimentary rock deposited in streams and nearshore marine zones during a tropical climatic period (Creely and Force 2007). These stream systems were draining an Eocene-period Sierra Nevada mountain range. The Ione is known for two characteristics. First, it is considered the "downstream" equivalent of the extensive, gold-bearing, Tertiary-age stream gravels (also called auriferous gravels) that are found in the mid-elevation Sierra Nevada and were extensively mined in the 1800s. Second, the tropical climate during the Ione period resulted in the sediments undergoing extensive chemical weathering during and after deposition. This extensive weathering produced kaolinitic clay, quartz sands, and concentrated heavy minerals, all of which have economic value.

The Ione region lies at the transition of the Sierra Nevada into the Central Valley; consequently, there are also a range of Quaternary (Pleistocene- and Holocene-age) alluvial (river) deposits representing various depositional periods. As with many streams draining the Sierra Nevada, some of these contained alluvial gold, which has been mined. Dry Creek west of the MCSP Infill Site contains extensive dredge tailing from such alluvial mining. The portion of MCSP west of the infill site is on dredge tailings from such alluvial mining along Mule Creek (Wagner et al. 1981).

INFILL SITE TOPOGRAPHY AND GEOLOGY

TOPOGRAPHY

The topography of the infill site generally slopes to the west toward Mule Creek, which drains to Dry Creek. The site slopes gently southward but is shallowly incised by several small drainages. To the east, the topography rises into a broad, stream-incised surface. Farther east, it rises into the higher areas of the Sierra Nevada.

GEOLOGY

The infill site is underlain by a single geologic formation, the Jurassic-age Gopher Ridge Metavolcanics (Wagner et al. 1981). The Gopher Ridge Volcanics consist of volcanic rocks deposited in an ocean environment. They include explosive ash deposits and pillow lavas (lava extruded into a water environment, producing distinctive mushroom-shaped surfaces called pillows). These rocks have also been metamorphosed and are relatively hard (Clark 1964). No fossils have been found in the formation (Clark 1964).

SOILS

Surface Soils

The soils at the MCSP Infill Site have been mapped by the Natural Resources Conservation Service (formerly called the U.S. Soil Conservation Service) and presented in the Web Soil Survey (NRCS 2013). According to the soil survey (Table 3.5-1, Exhibit 3.5-1), one individual soil map unit is present at the infill site. This unit is the Red-Bluff-Mokelumne complex, 5 to 16 percent slopes.

Table 3.5-1 Soil Characteristics of the MCSP Infill Site

Soil Map Unit	Shrink-Swell Potential	Erosion Hazard	Runoff Rate
Red Bluff-Mokelumne complex, 5 to 16% slopes			
Red Bluff	Moderate	Moderate	Moderately low
Mokelumne	Moderate	Moderate	High

Source: NRCS 2013.

Based on the soil survey data (Table 3.5-1), the soils are expected to be up to 40 inches and 46 inches deep (Red Bluff and Mokelumne, respectively) and are underlain by weathered bedrock. At depth, both soils have a moderate shrink-swell potential. Their erosion hazard is moderate. The runoff rates are moderately low and high (Red Bluff and Mokelumne, respectively). The Red Bluff soil texture is gravelly loam and clay loams. The Mokelumne soil texture is similar but includes gravelly sandy loams.

Soil Corrosion Potential

Based on the soil survey data (NRCS 2013). both soils have high risk of corrosion for both uncoated steel and concrete.

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 near 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 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).

Table 3.5-2 provides a summary of seismic sources (faults) found within the search radius, their approximate distance from the site, and the maximum earthquake magnitudes (moment magnitude).

Table 3.5-2 Near-Site Seismic Sources

Fault Name	Approximate Distance, Miles	Maximum Earthquake Magnitude
Foothills fault system 1	25	6.5
Foothills fault system 2	35	6.5
Foothills fault system 3	44	6.5
Great Valley 3	54	6.9
Great Valley 4	55	6.6
Great Valley 5	57	6.5
Hunting Creek–Berryessa	58	7.1
Concord/Green Valley (GVN)	59	6.0
Concord/Green Valley (CON+GVS+GVN)	59	6.7
Concord/Green Valley (GVS+GVN)	59	6.5
Concord/Green Valley (Floating)	59	6.2
Western Nevada Zone 1	59	7.3
Concord/Green Valley (GVS)	60	6.2
Concord/Green Valley (CON+GVS)	60	6.6

Source: Jennings and Bryant 2010

A total of 15 faults were identified as potential seismic sources within about a 63-mile radius of the infill site. Those expected to have the greatest impact because of their proximity to the infill site are faults associated with the Foothills fault system. The Foothills fault system is located along the western flank of the Sierra Nevada. Many areas of late Cenozoic faulting and some areas of Quaternary faulting have been identified along this system. The most recent event on the Foothills fault system was the 1975 Oroville earthquake (magnitude 5.6).

The closest Foothills system fault is the western branch of the Bear Mountain fault zone, trending nearly north–south approximately 3–4 miles east of the MCSP Infill Site (Wagner et al. 1981). The majority of the Bear Mountain fault zone is considered pre-Quaternary because of the lack of evidence supporting Quaternary displacement. The closest potentially active portion of the Bear Mountain fault zone is approximately 10 miles to the northeast; at this distance, the fault would be unlikely to affect the infill site with respect to surface fault rupture. Accordingly, the infill site is not likely to be adversely affected by surface fault rupture.

Ground-Shaking Hazard

The infill site is located within Uniform Building Code (UBC) Seismic Hazard Zone 3 (International Code Council 1997). The Zone 3 designation indicates that earthquakes in the region have the potential to make standing difficult and to cause stucco and some masonry walls to fall. Structures must be designed to meet the regulations and standards associated with Zone 3 hazards.

The infill site is located in a region of California characterized by low historical seismic activity. As mentioned above, the UBC recognizes no active seismic sources in the vicinity of the infill site (International Conference of Building Officials 1997). As described above, the risk of surface rupture in 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”).

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 will reflect both the effects of strong ground accelerations and the consequences of ground failure.

Estimates of Earthquake Shaking

The infill site is located in a region of California characterized by a low ground-shaking hazard. 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 in the infill site ranges from 0.1 to 0.2g, where 1g equals the force of gravity. This indicates that the ground-shaking hazard in the infill site is low. Farther to the east and west, 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). The

most severe ground motion would be expected to occur if significant activity were to take place along the Foothills fault system.

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 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 the 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, the relatively high depth to groundwater, as discussed in Section 3.7, “Hydrology and Water Quality,” of this volume (Volume 4)) of the draft environmental impact report (DEIR), and anticipated ground-shaking hazard for the infill site, the potential for liquefaction, dynamic compaction, or seismically induced settlement or bearing loss is considered low.

LANDSLIDES AND SEISMICALLY INDUCED SLOPE FAILURES

Within the limits of ground disturbance of the infill site, there is limited risk of naturally occurring large landslides because of moderate slopes and shallow bedrock.

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 infill site is not on a large body of water and could not be affected by a tsunami or seiche. There are no steep, upslope contributing areas that have the potential to generate mudflows that would impact the infill site. Radon and naturally occurring asbestos are discussed in Section 3.1, “Air Quality,” and Section 3.6, “Hazards and Hazardous Materials,” of this volume.

MINERAL RESOURCES

Amador County produces a broad range of mineral resources, including clay, sand, gravel, aggregate, quartz sand, copper, silver, gold, soapstone, marble, slate, limestone, zinc, chromite, talc, lignite, and diamonds (County of Amador 2011). In the vicinity of the infill site, mineral production is related to the Ione Formation (Creely and Force 2000, 2007), as well as former dredging of older, hydraulically mined

sediments in Dry Creek and Mule Creek (Wagner et al. 1981). It should be noted that the infill site is not located within the Ione Formation, although it is located approximately 500 feet of the infill site boundary (Creely and Force 2007). The Ione Formation produces a wide variety of minerals. The following minerals are present (list from Creely and Force 2000, 2007): quartz sands (which also contain valuable heavy minerals); clays that can be used for firebrick and ceramic products; lignites used in wax manufacture and power generation; clayey sand used in cement manufacturing; and lateritic clays used as aluminous additives to cement. Because the Ione Formation is the downstream equivalent of the Eocene-age gold-bearing gravels of the Sierra Nevada, it also produces small amounts of gold as a byproduct of other operations (Creely and Force 2007). Heavy mineral potential is also high in the Ione Formation (Creely and Force 2000, 2007), and titanium is produced as a byproduct of silica sand mining (Creely and Force 2000).

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 in Volume 1, Appendix 1B.

As shown in the Amador County General Plan (County of Amador 2011), based on California Geological Survey mapping, the southern portion of the infill site is classified as MRZ-2b, areas where the presence of mineral deposits is inferred from geologic information. That classification is based on the nearby presence of the Ione Formation, which includes a range of economically important mineral resources. However, the infill site is underlain by the Gopher Ridge Volcanics, which do not contain known mineral resources (Clark 1964).

PALEONTOLOGICAL RESOURCES

The infill site is situated on Gopher Ridge Volcanics, which are not known to be fossiliferous (Clark 1964).

3.5.2 REGULATORY CONSIDERATIONS

A list of the applicable federal, state and local plans, policies, regulations, and laws relating 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

- 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 Standards Code - The CBSC 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) - Section 15064.5(a)(3) provides protection for paleontological resources by requiring that they be identified and mitigated as historical resources.
- California Environmental Quality Act (*13 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.

CITY OF IONE GENERAL PLAN

Polices in the Noise and Safety Element of the City's general plan (City of Ione 2009) related to soils and geology that can be considered with respect to the development of level II infill correctional facilities at the MCSP Infill Site are as follows.

- **Policy NS-4.2:** Ensure that new structures are protected from damage caused by geologic and/or soil conditions to the greatest extent feasible.

Action NS-4.2: Continue to require that all new construction projects complete a geotechnical report or conduct other appropriate analysis to determine the soil characteristics and associated development constraints and impost appropriate measures for geologically sensitive areas.

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 MCSP 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 earthquake fault rupture, strong seismic ground-shaking, seismic-related ground failure, including liquefaction and 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 infill site development, 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

Fault rupture: The MCSP Infill Site is not located in an Alquist-Priolo Earthquake Fault Study Zone and the closest active fault zone is 25 miles away. Consequently, fault rupture at the infill site from an earthquake is not anticipated and this issue is not evaluated further.

Geologic and seismic hazards: Several geologic and seismic hazards (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 infill site is not on a large body of water and could not be affected by a tsunami or seiche. There are no steep, upslope contributing areas that have the potential to generate mudflows that would impact the infill site. Consequently, these hazards are not likely to affect the development of level II infill correctional facilities at the MCSP Infill Site and, therefore, are not discussed in this EIR.

Septic systems: No septic systems or alternative wastewater disposal systems are included as part of the development of level II infill correctional facilities at MCSP. Wastewater would be treated onsite at the existing MCSP wastewater treatment plant, which provides disinfected secondary effluent. This disinfected effluent would then be dispersed via spray fields similar to existing operations at MCSP. For a discussion of water quality impacts in the vicinity of the infill site, see Section 3.7, “Hydrology and Water Quality,” in this volume. This issue is not evaluated further.

Mineral resources: The MCSP Infill Site is not located where significant deposits of mineral resources are known to occur, although the Ione formation is located within 500 feet of the boundaries of the infill

site (Creely and Force 2007). The development of level II infill correctional facilities at MCSP would not 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. Therefore, this issue is not discussed further.

Paleontological resources: The development of level II infill correctional facilities at MCSP would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Therefore, this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

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

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

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

Although the 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 fault activity. Consistent with State requirements, would design the level II infill correctional facilities to meet CBC standards to minimize the potential of ground shaking hazards on associated infill site features and structures must be designed to meet the regulations and standards associated with CBC seismic design categories.

Liquefaction and related hazards such as lateral spreading and differential settlement have the potential to compromise the structural integrity of the contemplated facilities and cause injury to construction workers and residents. However, based on the geologic age of the earth materials, average relative density of the subsurface material, groundwater conditions, and anticipated ground-shaking hazard for the infill site, the potential for liquefaction, dynamic compaction, or seismically induced settlement or bearing loss is considered low. Furthermore, consistent with State requirements, CDCR would be required to implement CBC standards into the design of the level II infill correctional facility complex to minimize the potential liquefaction hazards on associated site features.

Within the limits of ground disturbance of the infill site and the immediate vicinity, there is no risk of naturally occurring large landslides because of the stable, cemented nature of the underlying geology. Additionally, the City of Ione General Plan shows that the area shows the area as low to moderate slopes (City of Ione 2009). Though the area containing and surrounding the infill site appears to be in a low-risk area with respect to onsite and offsite landslides, site-specific information is not available (e.g., the presence or absence of local, unmapped slope instability or localized slope and soil conditions conducive to such instability).

Consistent with State requirements, CDCR is required to construct all new facilities in accordance with CBC standards. These standards are, therefore, part of the development of a level II infill correctional facility complex at MCSP, including potential design and construction of the level II infill correctional facility at MCSP, and require that appropriate soils and geotechnical reports be prepared and site-specific engineering design measures be implemented to appropriately minimize adverse impacts related to risks related to seismic hazards at the infill site.

The proposed level II correctional facility complex at the MCSP 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 [Complex]

Development of the proposed level II correctional facility complex at the MCSP 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 volume of the DEIR, a Stormwater Pollution Prevention Plan (SWPPP) would be developed for the project by a qualified SWPPP developer. 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 the proposed level II correctional facility complex at the MCSP Infill Site would result in ***less-than-significant*** *impacts related to erosion.*

Mitigation Measures

No mitigation measures are required.

Impact 3.5-3a: Expansive Soil and Corrosion Impacts [Complex]

The soil survey indicates that there is moderate shrink-swell potential at depth (Table 3.5-1) and onsite soils have high risk of corrosion for both uncoated steel and concrete. Techniques to address this issue include excavation of potentially problematic soils during construction and replacement with engineered backfill, ground treatment processes, and direction of surface water and drainage away from foundation soils. Consistent with State requirements, CDCR is required to construct all new facilities in accordance with CBC standards, including specifications for construction within expansive soils. Conformance to these standards would minimize adverse impacts related to expansive and corrosive soils.

The proposed level II correctional facility complex at the MCSP 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.

ALTERNATIVE SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

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

Although the acreage of a single, level II infill correctional facility at MCSP would be less than that for a complex, the potential impacts from ground shaking that would occur with development of a single facility would be the same as those for the proposed complex 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 on infill site features and structures must be designed to meet the regulations and standards associated with CBC seismic design categories.

A single, level II infill correctional facility at the MCSP Infill Site would be designed to comply with the most recent requirements of the CBC, which has provisions for seismic safety. As a result, this would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

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

Although the acreage of a single, level II infill correctional facility at MCSP would be less than that for the proposed complex, the potential impacts from erosion that would occur with development of a complex would be the same as those for the proposed complex because the same types of construction activities would occur. CDCR would construct a single facility at MCSP 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 single, level II infill correctional facility at the MCSP Infill Site would result in ***less-than-significant*** *impacts related to erosion.*

Mitigation Measures

No mitigation measures are required.

Impact 3.5-3b: Expansive Soil and Corrosion Impacts [Single Facility]

As noted above, the soil survey indicates that there is moderate shrink-swell potential at depth (Table 3.5-1) and onsite soils have high risk of corrosion for both uncoated steel and concrete. Techniques to address this issue include excavation of potentially problematic soils during construction and replacement with engineered backfill, ground treatment processes, and direction of surface water and drainage away from foundation soils. Consistent with State requirements, CDCR is required to construct all new facilities in accordance with CBC standards, including specifications for construction

within expansive soils. Conformance to these standards would minimize adverse impacts related to expansive and corrosive soils.

A single, level II correctional facility at the MCSP 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.

3.6 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential for the development of level II infill correctional facilities at the Mule Creek State Prison (MCSP) Infill Site to expose construction workers and future occupants to existing hazards and hazardous materials, and surrounding residences and other land uses to development-related hazards and hazardous materials. The impact analysis has been organized into two parts. The first part addresses the proposed level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site. The analysis contained herein was derived, in part, from a government database search conducted by Environmental Data Resources (EDR) in 2012 (provided in Appendix 3B, Volume 3). This records review included searches of the U.S. Environmental Protection Agency's (EPA's) and California Department of Toxic Substances Control's (DTSC's) databases for known hazardous materials in the vicinity of the infill site.

Impacts related to emergency response at the MCSP Infill Site are addressed in Section 3.10, "Public Services," of this `draft environmental impact report (DEIR) (Volume 3). For more information on geological hazards associated with development of the MCSP Infill Site, refer to Section 3.5, "Geology, Soils, Seismicity, Minerals, and Paleontological Resources," of this volume. For information related to flooding and groundwater quality at the infill site, refer to Section 3.7, "Hydrology and Water Quality," of this volume.

3.6.1 ENVIRONMENTAL SETTING

Historical and contemporary aerial photographs (dated 1940, 1944, 1954, 1966, 1984, 1987, 1998, and 2005) and topographic maps (dated 1902, 1944, and 1962) were reviewed to characterize former and existing uses of the infill site and adjacent properties. The Preston School of Industry is identified south of the infill site on the topographic maps beginning in 1944. Development of the area south of the infill site is evident beginning in 1954. The MCSP Infill Site appears disturbed and partially graded beginning in the 1980s. The existing MCSP opened in 1987.

The MCSP Infill Site is currently used as a spray field for treated wastewater. The area appears as grassland with scattered trees. The area is regularly disked to promote the growth of annual vegetation.

Preston Reservoir and the California Department of Forestry and Fire Protection (CAL FIRE) Academy are located south of the MCSP Infill Site, the existing MCSP facilities are located to the northwest, residences are located to the southwest across State Route 104, and open space is located to the northeast. The topographic maps identify the area northwest of Mule Creek as mine tailings.

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. Natural asbestos occurs most commonly in association with ultramafic rocks. Therefore, the presence of ultramafic rocks within a region indicates the possibility of naturally-occurring asbestos materials. Both chrysotile and amphibole asbestos are found in the serpentine rocks commonly located in the Sierra Nevada foothills and in Amador County; however, there are no ultamafic rock formations in the City of Ione, and it is unlikely that asbestos occurs naturally on the MCSP Infill Site (City of Ione 2009b: 4.9-11–4.9-12).

EXISTING SPRAY FIELDS

As noted above, the infill site is located on existing spray fields used by MCSP for disposition of disinfected, secondary-treated wastewater effluent. The sprayed wastewater effluent from the MCSP wastewater treatment plant (WWTP) is distributed using an aboveground irrigation system that uses oscillating sprinkler heads distributed evenly across the existing spray fields. Wastewater effluent distributed in this manner either evaporates into the air, is taken up by plants, or soaks into the soil.

SITES OF POTENTIAL ENVIRONMENTAL CONCERN

Sites of potential concern are identified where there is the possible presence of any hazardous material under conditions that indicate the possibility of an existing release, a past release, or a threat of a release of the hazardous material or waste into structures on the property or into the ground, groundwater, or surface water of the property. This analysis considered potential effects based on proximity of the MCSP Infill Site to known hazardous material sites identified through environmental database record searches conducted by EDR in 2012. There are no records of hazardous materials use or disposal on the MCSP Infill Site.

CAL FIRE Academy

The CAL FIRE Academy (also known as the Ione Fire Academy) is located at 4501 Preston Avenue/State Route 104 and was established in 1967. The facility is attended by more than 2,000 students annually and offers an academic curriculum ranging from basic fire control to arson investigation (CAL FIRE 2012). A leaking underground storage tank at this site released gasoline to the groundwater in 1997. The case was remediated and was closed in 2003 (SWRCB 2013). Potential safety issues associated with the continued operation of the academy include the use of helicopters, flammable liquids, flammable structures, off-road vehicles, a live-fire weapons range, and other training activities (City of Ione 2009a: 6-12).

Preston School Private Dump

The Preston School Private Dump is located more than 0.25 mile southwest of the MCSP Infill Site. This unpermitted, closed landfill is inspected annually by the Local Enforcement Agency (Amador County). No issues have been reported regarding this site. In November 2012, workers removed treated wood waste and scrap metal surface debris from the site. A berm diverts surface water from the site (CalRecycle 2012). Groundwater generally flows to the west in the vicinity of the MCSP Infill Site and at MCSP.

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. Amador County Unified School District maintains two schools in Ione: Ione Elementary (415 S. Ione Street) and Ione Junior High School (450 S. Mill Street), both of which are more than 1.5 miles south of the MCSP Infill Site. No schools are proposed near the MCSP Infill Site.

PROXIMITY TO AIRPORTS

The MCSP Infill Site is not near any airports. The nearest airport is Westover Field- Amador County Airport, located more than 8 miles east of the infill site. The 'Ranch Airstrip' (lat/long: 38.33741388 / -120.97327389) is the nearest private airstrip, located more than 3 miles southwest of the infill site.

FIRE HAZARD

The MCSP Infill Site is located in a rural setting susceptible to wildland fire due to hot, dry summers, and dense clusters of trees and dry grasses. Wildland fires are primarily associated with the wildland-urban interface (i.e., areas where development is placed next to wildlands) (City of Ione 2009a: 6-12). The MCSP Infill Site is located at the northern boundary of the developed area of Ione in an oak woodland environment. There are open, grass-covered hills to the northeast that pose a potential for wildland fire. Fire protection is provided by the MCSP Fire Department, with local support from the City of Ione Fire Department, the Amador Fire Protection District, and CAL FIRE (City of Ione 2009a: 6-12).

For more information on firefighting facilities and emergency service to the MCSP Infill Site, please refer to Section 3.10, "Public Services."

3.6.2 REGULATORY CONSIDERATIONS

A list of the applicable federal and state plans, policies, regulations, and laws related to hazards and hazardous materials 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 - 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 - 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 - 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 - The transportation of hazardous materials is regulated by HMTA, which provides 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 - 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 - 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 - 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 - 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 - 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 Code of Regulations (CCR), Title 8 and Title 22 - Title 8 contains the CAL OSHA health and safety regulations and includes special procedures for supplementary enforcement of state plan requirement concerning Proposition 65 and the hazardous substances list. Division 4.5, Environmental Health Standards for the Management of Hazardous Waste, of Title 22 Social Security contains the California Department of Toxic Substances hazardous waste regulations.
- 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 - 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 - 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 4201-4204 and Government Code Sections 51175–51189) - Requires 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, the California Department of Correction 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.

AMADOR COUNTY MULTI-HAZARD MITIGATION PLAN

The Amador County Multi-Hazard Mitigation Plan is a multi-jurisdictional plan that includes the county and the communities of Amador City, Ione, Jackson, Plymouth, and Sutter Creek. The purpose of hazard mitigation and this plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Amador County. The plan acknowledges that Amador County is vulnerable to several types of natural hazard, including wildfires, floods, and drought. Each hazard is identified, profiled, and analyzed in the plan. The plan and planning process lay out the strategy that will enable Amador County to become less vulnerable to future disaster losses. This plan has been formally adopted by each participating entity and is required to be updated a minimum of every 5 years.

CITY OF IONE GENERAL PLAN

The City of Ione General Plan Noise and Safety Element goals and policies relevant to hazards and hazardous materials include policies to reduce levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards in the area; reduce serious harm to residents, employees, or the environment as the result of an accidental release of toxic or hazardous substances; work with public agencies and private companies to identify and work towards elimination of potential hazardous releases and comply with state and federal laws; and to consider the potential impact of hazardous facilities on the public and/or adjacent or nearby properties.

3.6.3 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 MCSP 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 two 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

Site Contamination: The MCSP Infill Site is not located on a site known to have upset or accident conditions related to the release of a hazardous material.

Airport Hazards: The MCSP Infill Site is also not located within 2 miles of a public airport or in the vicinity of a private airstrip.

Hazards to Schools: The MCSP Infill Site is not located within 0.25 mile of an existing or proposed school.

Therefore, these potential impacts are not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

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

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

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

Construction and operation of the proposed level II correctional facility complex at the MCSP 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 spills and releases, and disposal of any spills or releases, must be established for the development of level II infill facilities at 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.

The development of level II infill facilities at the infill site would conform to the provisions of spill prevention plans prepared under a Construction General Permit (2009-0009 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 the proposed level II correctional facility complex at the MCSP 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.

Spray application of treated, recycled water would continue on property adjacent to the MCSP Infill Site after site development. These fields would be located at least 100 feet from the infill site, and more than 500 feet from any areas where inmates or staff could come in contact with any aerial drift, consistent with Title 22 standards (DPH 2009). All wastewater would be disinfected to levels compliant with the regulations related to recycled water contained in the California Code of Regulations and the waste discharge requirements adopted by the Central Valley Regional Water Quality Control Board. No health hazard would be associated with the aerial dispersal (via sprinklers) of recycled water in the vicinity of individuals working or residing on the MCSP Infill Site. Further, no residences are located within 100 feet of the proposed spray fields located southwest of the infill site, refer to Exhibit 2-5, and no domestic water supply wells are located within 150 feet of the proposed spray fields, consistent with Title 22 standards. As a result, no health hazards would be associated with their operation.

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 project-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 proposed 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 infill 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 the proposed level II correctional facility complex at the MCSP 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: Wildland Fire Impacts [Complex]

The MCSP Infill Site is located in an area that is at high risk for wildland fires. However, existing CDCR fire prevention operations at MCSP, as described in Section 3.10, “Public Services,” have capacity to extend service to the contemplated infill facility. Additionally, as noted in Section 3.10, the CAL FIRE Academy, located adjacent to MCSP, is responsible for responding to wildland fires in the area around Ione and provides mutual aid assistance. CAL FIRE responds to all service calls in the county, in addition to the response by the local fire provider. CAL FIRE maintains staffed stations during the wet months of the year to ensure that all service calls throughout Amador County receive a response (City of Ione 2009a).

In addition, the buildings that would be constructed as part of the proposed level II infill correctional facility complex would be designed to meet all fire code requirements that would address ignition resistive construction, interior fire sprinklers, and 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 minimize the risk of damage in the event of a wildland fire.

Although the proposed level II correctional facility complex at the MCSP Infill Site would be located in an area of high fire hazards, 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. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Alternative Single, Level II Infill Correctional Facility

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

As discussed above, construction of level II infill correctional facilities would likely involve the transportation, use, and disposal of hazardous materials. Although the acreage of disturbance for a single, level II infill correctional facility at MCSP would be less than that for a complex, the potential risks related to hazards and hazardous materials from the potential infill development, 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 proposed complex because the same types of activities would occur onsite. As with a complex, 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 level II correctional facilities at the MCSP 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 single facility at MCSP would be less than that for the proposed complex, 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. Operation of the adjacent spray fields would continue in compliance with existing regulations related to proximity and quality of recycled water. In addition, firearms and ammunitions would be used and stored according to state regulations. Therefore, the level II infill correctional facilities would not result in a risk related to the storage of weapons on the site.

Because a single, level II infill correctional facility at the MCSP 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: Wildland Fire Impacts [Single Facility]

As discussed for the proposed level II infill correctional facility complex, the MCSP Infill Site is located in an area that is at high risk for wildland fires. However, existing CDCR fire prevention operations at MCSP have capacity to extend service to the contemplated infill facility. In addition, the buildings that would be constructed as part of the single, level II infill correctional facility would be designed to meet all fire code requirements that would address ignition resistive construction, interior fire sprinklers, and sufficient water supply (volume) and pressure. The facility would also include features, such as a vegetation-free clearing associated with the fenced building perimeter, which would minimize the risk of damage in the event of a wildland fire.

Although a single, level II infill correctional facility at the MCSP Infill Site would be located in an area of high fire hazards, 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. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

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3.7 HYDROLOGY AND WATER QUALITY

This section discusses the existing hydrological setting for the Mule Creek State Prison (MCSP) Infill Site, including runoff, storm drainage, and flood control. This section describes regulations and policies affecting local hydrology and water quality, identifies impacts that may result from development of the infill site, and recommends mitigation measures to reduce potential impacts, where appropriate. The impact analysis has been organized into two parts. The first part addresses the proposed level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site.

Impacts associated with water supply, including groundwater supplies, are discussed in Section 3.12, "Utilities," of this volume. Impacts related to inundation by seiche, tsunami, or mudflow are discussed in Section 3.5, "Geology, Soils, Seismicity, Minerals, and Paleontological Resources," of this volume.

3.7.1 ENVIRONMENTAL SETTING

REGIONAL SETTING

The MCSP Infill Site is located in the foothills of the western slope of the Sierra Nevada, within the north portion of the City of Ione in Amador County. Elevations at the site range from approximately 300 to 390 feet. The infill site is bounded to the southwest by the existing MCSP, to the northwest by MCSP's existing effluent storage reservoir, to the southeast by Preston Reservoir, and to the northeast by largely undeveloped woodland. Mule Creek flows along the northern boundary of the site, and an unnamed intermittent tributary to Mule Creek is located in the southern portion of the infill site.

The infill site is located in a Mediterranean climate characterized by dry, hot summers and cool, wet winters. The 1980–2012 water-year average annual precipitation in the area is 22.60 inches (PRISM 2013). More than 93 percent of this precipitation falls from October to April.

AREA HYDROLOGY

SURFACE WATER

The infill site is located within the Mule Creek watershed, which has a total watershed area[1] of approximately 10 square miles, measured where it empties into Dry Creek, about 3 miles downstream. Dry Creek eventually flows into the Mokelumne River in the Central Valley near Thornton, which then eventually flows into the San Joaquin River and the Sacramento–San Joaquin River Delta. The infill site is within the U.S. Geological Survey's HUC-12 Mule Creek-Dry Creek hydrologic basin boundary (Natural Resources Conservation Service 2012). An unnamed tributary to the south with a drainage area of 1.7 square miles flows into Mule Creek about 1.6 miles downstream of the infill site. This tributary flows south of Preston Reservoir and through the Castle Oaks Golf Club, collecting drainage water from a housing subdivision to the south. The Mule Creek drainage area upstream of the tributary to the south is 8.4 square miles and largely undeveloped except for MCSP. Watershed delineation shows that the drainage divide between the Mule Creek and Dry Creek watersheds goes through the MCSP property. Local drainage in the vicinity of the prison is altered by constructed stormwater features, described in "Onsite Drainage."

[1] Watershed delineated from U.S. Geological Survey 1/3 Arc Second National Elevation Dataset (NED) files. The horizontal resolution of the data is approximately 31 feet, and the vertical accuracy is ± 23 feet.

DAMS

Two dammed reservoirs, Preston and Mule Creek, are located in the vicinity of the infill site (Table 3.7-1). The details of these dams are listed on the California Department of Water Recourses – Division of Safety of Dams database of jurisdictional dams (California Department of Water Resources – Division of Safety of Dams 2012). Preston Reservoir was built in 1949 and is owned by CDCR and operated under a tri-party agreement with the Amador Regional Sanitation Authority and the City of Ione. The effluent storage reservoir is located in the watershed of the unnamed tributary south of Mule Creek and has a storage capacity of 268 acre-feet. The southern boundary of the infill site is less than 500 feet from Preston Reservoir.

The second reservoir is the MCSP reservoir, owned CDCR. The effluent storage reservoir was built with an earthen dam in 1988 and has a storage capacity of 535 acre-feet (af), with a usable capacity of 525 af. The reservoir is located about 800 feet northwest of the infill site and within the same sub-basin. The current waste discharge requirements (WDRs) for the MCSP wastewater treatment plant, described in further detail below, require that the freeboard in the effluent storage reservoir shall never be less than 2 feet from the top of the embankment (CDCR 2007). Because the top of an overflow structure is more than 3 feet below the embankment, the WDR freeboard requirement will always be met (CDCR 2007). The WDRs also state that the reservoir storage shall have enough capacity to contain all reclaimed wastewater flow, design seasonal precipitation, seasonal ancillary flow, and wet season infiltration (CDCR 2007).

Under existing conditions (average of 2007-2012 data), an average of 11 million gallons (MG) (33.5 af) per month is applied to irrigation spray fields at MCSP. Higher application rates of approximately 22 MG per month (67 af) are applied May through September, while minimal application rates of 3 MG per month (9 af) are applied October through April, and only during dry conditions. Spray field discharge is reduced during the wet season because evapotranspiration is reduced during winter months (cool temperatures result in a lack of plant growth and reduced uptake of water). Therefore, the storage reservoirs have capacity to store treated secondary effluent for months at a time during wet months.

The storage reservoirs also need to contain the 1-in-100 year rain event and runoff from the event. The 100-yr rainfall event data from the City of Ione Report of Waste Discharge (2012) is 41.38 inches per year. This rainfall over the storage reservoir drainage area (29 ac) yields 100 af of storage needed. Precipitation falling on the spray field (296 ac) yields an additional 1,020 af of storage needed. Currently, the stormwater runoff from irrigation fields is not recirculated back to the storage reservoir.

FLOODPLAINS

Flood zones at the site are mapped by the Federal Emergency Management Agency (FEMA). An approximately 150- to 250-foot-wide buffer along Mule Creek is mapped in flood zone A, which includes areas with a 1% annual chance of flooding (FEMA 2012). No depths or base flood elevations are shown within these zones. The western boundary of the infill site is within 500 horizontal feet of the Mule Creek flood zone and about 10 feet higher in elevation. The CSP Mule Creek and Preston Reservoirs are also mapped as FEMA flood zone A.

The prison facilities are mapped as being outside the preliminary 200-year floodplain mapping performed in conjunction with the U.S. Army Corps of Engineers' Sacramento and San Joaquin River Basins Comprehensive Study (California Department of Water Resources 2013).

ONSITE DRAINAGE

The footprint of the existing prison is approximately 135 acres. Of this area, about 28 acres are pervious land (e.g., playing fields and other grassy areas) and 106 acres are completely impervious (e.g., building rooftops, concrete) or mostly impervious (compacted earth) area. The infill site is currently undeveloped and includes part of Spray Fields 4 and 5 where MCSP's wastewater effluent is sprayed onto the fields via irrigation.

Table 3.7-1 Dams within Jurisdiction of the State of California near the Project Site

Name	Owner	Stream	Year Built	Capacity (Ac-Ft)	Res. Area (Acres)	Drainage Area (mi2)	Crest Elev. (ft)	Freeboard (ft)[1]	Height (ft)	Length (ft)	Width (ft)	Type
CSP Mule Creek	CDCR	Offstream	1988	535	24	0.05	368	3.8	51	2300	16	Earthen
Preston Forebay	Amador Regional Sanitation Authority	Tributary to Mule Creek	1949	268	17	0.12	360	5	40	647	20	Earthen

[1] Freeboard refers to the distance between the water line and the upper edge of a dam.
Source: California Department of Water Resources – Division of Safety of Dams 2013.

The drainage divide between the Mule Creek and Dry Creek watersheds goes through the existing MCSP. The CDCR report *Population Management Site and Infrastructure Survey, Mule Creek State Prison, Ione, CA* (CDCR 2007) states that stormwater drainage at the existing prison is limited to surface runoff across the site from the west to the east and south of the minimum-security facility. The report states that stormwater runoff drains directly into Mule Creek and is often silty, and that no stormwater detention basin currently exists to reduce the amount of silt delivered into Mule Creek.

The stormwater drainage of the existing MCSP facility, as interpreted from aerial photography and elevations for this report, generally follows the natural drainage divide, with most of the runoff from the prison draining to Mule Creek. A major drainage ditch paralleling State Route (SR)104 conveys water from the southwest portion of the prison and delivers it into Mule Creek where it crosses under CA-104. Two other drainage ditches also route runoff from the prison into Mule Creek. One is located 1,100 feet upstream of SR 104 and drains the central portion of the prison, and the second is 2,500 feet upstream of SR 104 and drains the northeast portion. One appreciable drainage path is visible in the northwest portion of the prison. This 2,500 foot-long drainage circles around the northern perimeter of MCSP and delivers water to a low-lying area west of Collins Road, where the water infiltrates into the ground or crosses Collins Road and makes its way into Dry Creek.

Based on the natural topography of the site, the land where the contemplated infill facility would be constructed currently drains into Mule Creek (based on the potential footprint of the level II infill correctional facility complex). Two intermittent drainages flow through the infill site. The drainage to the north has a drainage area of 144 acres and the drainage to the south has a drainage area of 91 acres. Runoff in the central portion of the infill site that does not enter one of the two intermittent drainages enters Mule Creek via overland flow or is channelized into micro-drainage and swale features.

The infill site is located in soils mapped as Red Bluff-Mokelumne (RbD) complex, 5-16 percent slopes (National Cooperative Soil Survey 2013). Red bluff soils comprise 60 percent of the soil unit and Mokelumne soils comprise 25 percent of the unit, with the remaining 15 percent comprising minor soil components. The Red bluff component is a gravelly loam to gravelly clay loam classified as Hydrologic group B, which is defined for soils with moderately low runoff potential when thoroughly wet and water transmission through the soil is unimpeded. The Mokelumne component contains gravelly sandy loam with clay, sandy clay, and weathered bedrock. Mokelumne soils are classified as Hydrologic group D, exhibiting high runoff potential when thoroughly wet and water movement through the soil is restricted or very restricted.

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 published a Statewide 2008-2010 303(d) list of impaired water bodies (State Water Resources Control Board 2010) that was subsequently amended with additional listings, then approved, by the U.S. Environmental Protection Agency (EPA) (EPA 2011). Impaired water bodies are water quality-limited segments requiring a TMDL(5A), being addressed by TMDL(5B), and/or being addressed by an action other than TMDL(5C). Neither Mule Creek nor its receiving water body, Dry Creek, is listed as impaired on the final EPA list of impaired water bodies.

The Central Valley Regional Water Quality Control Board (RWQCB) considers beneficial uses as being 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 (and not be limited to) "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 (RWQCB 2011). The Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins define the beneficial uses (Table 3.7-2) that the Central Valley RWQCB has specifically designated for water bodies in the Central Valley, along with objectives to be met to protect those uses.

Water quality degradation in Mule Creek previously occurred as a result of disposal of the prison's wastewater effluent via spray irrigation onto prison land and by evaporation and percolation from the CSP Mule Creek effluent storage reservoir; this issue is discussed in "Groundwater Quality."

Table 3.7-2 Beneficial Uses of Surface Water in the Camanche Reservoir to Delta Reach of the Mokelumne River Watershed

	Hydro Unit 531.2
Municipal & Domestic	✓
Agricultural Irrigation	✓
Agricultural Stock Watering	✓
Industrial Process	
Industrial Service Supply	
Industry Hydropower	
REC-1 Contact	✓
REC-1 Canoeing & Rafting	
REC-2 Other Noncontact	✓
Freshwater Warm Habitat	✓
Freshwater Cold Habitat	✓
Migration Warm	✓
Migration Cold	
Spawning Warm	✓
Spawning Cold	✓
Wildlife Habitat	✓
Navigation	

Source: Central Valley RWQCB 2011
REC-1 = Indicates recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water skiing, skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs
REC-2 = Indicates recreational activities involving proximity to water, but generally with no body contact with water or any likelihood of ingestion of water. These include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, and aesthetic enjoyment associated with the above activities.

GROUNDWATER

Regional Groundwater

The area including and surrounding the infill site is located in the California Department of Water Resources' (DWR's) San Joaquin Valley Groundwater Basin–Cosumnes Subbasin (number 5-22.16) (DWR 2006). The 439-square-mile subbasin is bordered on the south and southwest by the Eastern San Joaquin Subbasin, to the north and northwest by the South American Subbasin. Three main rivers drain the subbasin: the Cosumnes River to the north, Dry Creek in the middle, and the Mokelumne River to the south (DWR 2006). Stream channel deposits, which include active channel deposits and overbank deposits and terraces, consist primarily of unconsolidated silt, fine to medium-grained sand, and gravel. Sand and gravel zones in the younger alluvium are highly permeable and yield significant quantities of water to wells (DWR 2006). Groundwater levels throughout much of the Cosumnes subbasin declined from the mid-1960s to 1980 by about 20–30 feet, then recovered from 1993 to 2000 by about 15–20, with water levels at about the same elevation as they were in the mid-1980s. Along the eastern subbasin, however, groundwater levels remained fairly constant from 1993 to 2000 and did not experience the same level of recovery as elsewhere (DWR 2006).

Local Groundwater

The 20- to 40-foot-deep alluvial aquifer along Mule Creek is part of the Riverbank and Modesto formations of late Pleistocene age (City of Ione 2009a). The sandy and clayey silt aquifer generally coarsens with depth to silty sands, gravelly sands, and sandy gravels (City of Ione 2009a). The bedrock geology of the infill site is mapped as Gopher Ridge Metavolcanics, which are metamorphosed volcanic rocks yielding small amounts of water from fractures and weathered zones (City of Ione 2009a). They are a component of the crystalline bedrock underlying the area. Little is known about the movement of groundwater within the unit, but it is believed to be similar to the Salt Springs Slates formation, which is reported to have commonly low groundwater yields best suited for small domestic wells (City of Ione 2009a). Groundwater elevation contours created from measurements taken in December 2012 show that the groundwater table is around 325–350 feet elevation with a gradient down toward the southwest (Atlas Environmental Engineering 2013). Groundwater elevations at the site have remained consistent since the first measurements in 2007 and extending through the most recent measurements made in 2012 (Atlas Environmental Engineering 2013).

Quarterly groundwater monitoring data are available since 2001 for three wells in the nearby Castle Oaks Golf Course (Table 3.7-3). Note that the groundwater monitoring tables also contain water quality standards published by the California Department of Public Health (2012), derived from the California Code of Regulations Title 17 and Title 22. The regulations specify enforceable standards known as Maximum Contaminant Levels (MCLs) for potable water constituents that present a risk to human health. The regulations also establish secondary MCLs, which are guidelines for contaminants that do not present a risk to human health but have potential aesthetic concerns (e.g., taste, odor, color).

Table 3.7-3 Castle Oaks Golf Course Groundwater Monitoring Well Water Quality Measurements – Average Concentrations in mg/L

Parameter	Period	Castle Oaks Monitoring Well 1 (CO MW-1)	Castle Oaks Monitoring Well 2 (CO MW-2)	Castle Oaks Monitoring Well 3 (CO MW-3)	Drinking Water-Related Regulations Compiled from Title 17 and Title 22 of the California Code of Regulations - Maximum Contaminant Levels		
					Recommended	Upper	Short Term
TDS	2003–2006	361	1,058	302	500	1,000	1,500
Chloride	2006–2009	58	154	32	250	500	600
Sodium	2006–2009	31	79	32	N/A	N/A	N/A
Nitrate-N	2005–2008	4.8	2	0.15	45 max	N/A	N/A
Total Manganese	2004–2009	0.06	0.02	0.14	0.05 max	N/A	N/A
Total Iron	2004–2009	1.9	0.66	11	0.3 max	N/A	N/A

Sources: City of Ione 2009b; California Department of Public Health 2012.
Notes: mg/L = milligrams per liter; N/A = No standard has been established; TDS = total dissolved solids.

Water levels in the wells all respond similarly to seasonal rainfall patterns, with levels lowest in late fall and highest in spring after the wettest months (City of Ione 2009a). The groundwater levels in the wells have not changed appreciably for data measured from 2001 – 2009, with elevations consistently ranging from 255 to 272 feet. The groundwater gradient in the Castle Oaks Golf Course wells is generally northeast to southwest (City of Ione 2009b).

MCSP's wastewater effluent is disposed of via spray irrigation onto prison land and by evaporation and percolation from the MCSP effluent storage reservoir. The wastewater treatment plant (WWTP) includes seven spray fields; most of these are located on both sides of Mule Creek, except Spray Fields 1 and 2, which drain northwest into the Dry Creek drainage (Carollo Engineers 2008). The WWTP current provides secondary wastewater treatment through a combination of an oxidation ditch, two clarifiers, chlorination facilities (including a hypochlorite storage tank), and a filter belt press operation for dewatering sludge. Treated secondary effluent is stored in the 535 af storage reservoir, with a usable storage capacity of 525 af. Treated secondary effluent is disposed of via spray irrigation on the land and by evaporation/percolation from the effluent storage reservoir. Most of the treated secondary effluent is recycled via spray irrigation on approximately 266 acres (total gross parcel size is 296 acres) of adjacent land with natural vegetation. The remainder of the treated effluent is conveyed temporarily to Preston Reservoir, where it ultimately flows by gravity via a 10-inch pipe to the City of Ione Wastewater Treatment Plant. (CDCR is under contract to provide an annual minimum flow of 80 af and up to a maximum of 130 af to Preston Reservoir for ARSA.) The current WDRs allow an average dry weather discharge flow rate of up to 740,000 gallons per day (gpd) and a peak wet weather discharge flow rate not to exceed 2.2 million gpd.

In 2006, the Central Valley RWQCB issued a Consideration of a Cease and Desist Order (CDO) to CDCR, MCSP, for allegedly violating many provisions of its WDRs in regard to operation of its wastewater treatment plant (WWTP) and spray fields (Central Valley RWQCB 2006). Several alleged violations were noted, and CDCR has responded to resolve a number of the issues and is currently preparing plans for a WWTP water quality treatment upgrade, separate from the proposed project. Compliance issues included spray heads within the required 100-foot setback from creeks and drainages, spray fields saturated from over-irrigation and overgrown with vegetation, lack of tailwater controls, and lack of access to spray fields for maintenance (Central Valley RWQCB 2006). The Central Valley RWQCB's order states that the prison did not have sufficient treatment, storage, and disposal capacity for its wastewater because of the increased inmate population, and directs the prison to reduce wastewater inflows to the effluent reservoir through various conservation methods and to implement improvements to the spray fields to prevent future spills to Mule Creek (Central Valley RWQCB 2006). The prison must control seepage from the effluent storage reservoir, and a long-term wastewater facility upgrade must be completed. Additionally, the Central Valley RWQCB ordered groundwater monitoring of the site.

In response to the Central Valley RWQCB's order, CDCR installed 10 monitoring wells at MCSP as part of awastewater plant monitoring program (Carollo Engineers 2008). MCSP treated effluent potential constituents of concern for recycled water use for irrigation include the following:

- Nitrogen,
- Total Dissolved Solids,
- Fecal Coliform, and
- Volatile Organic Compounds (VOCs), including Total Trihalomethanes (THMs).

During 2012, influent and effluent discharge monitoring occurred for VOCs. Several VOCs were detected, but at relatively low levels and below their respective water quality criteria. VOCs were detected both in the influent and effluent, indicating that the origins of the VOCs are both from the prison facilities and the wastewater treatment process. VOCs that were consistently detected include:

- Trihalomethanes (influent and effluent):
  - Chloroform,
  - Bromodichloromethane (BDCM),
- Acetone (influent and reduced concentration in effluent), and
- Toluene (influent).

VOCs will readily volatilize post-treatment in the storage basins, or when applied in the irrigation water. Further, CDCR is planning to upgrade the MCSP WWTP to correct certain deficiencies and in response to the CDO from the RWQCB (the CDO is still in effect). CDCR is currently designing upgrades, including a secondary clarifier, a mixed liquor splitter box, a chlorine contact basin, a disinfected secondary effluent pump station, motor speed controls for return activated sludge pumps, chemical feed equipment, and other upgrades by November 2014 that will bring performance of the WWTP into compliance with its NPDES permit and discharge of the CDO.

CDCR plans to upgrade the WWTP, including secondary clarifier, a mixed liquor splitter box, a chlorine contact basin, a disinfected secondary effluent pump station, motor speed controls for return activated sludge pumps, and other improvements to bring the WWTP into compliance with NPDES permit requirements and to discharge the CDO. Fecal coliform concentrations will be reduced with the proposed upgrade of existing treatment facilities, including both the clarifier and chlorine contact basin. There is potential for the treatment process to produce more THMs with the use of chlorine in the chlorine contact basin, although the plant would need to comply with WDRs pertaining to these pollutants, thusly reducing the potential for adverse water quality effects.

Acetone and toluene influent concentrations will be reduced through pollution prevention practices at the prison, including source control.

During spray field application, nitrogen and TDS loadings are monitored on a daily basis to provide groundwater protection. The historical maximum nitrogen loading rate from 2007-2012 was 47 lb/ac-yr, with an average of 10 lb/ac-day. Nitrogen loading rates are significantly less than the recommended nitrogen application rate of 100 lb/ac-year for pasture grasses (weeds). Therefore, nitrogen is applied at safe levels whenever a crop is growing on the spray fields. The historical maximum TDS loading rate was 50 lb/ac-yr, with an average of 5 lb/ac-day. TDS loadings are within assimilative capacity for pasture grasses (weeds), which are typically 700-1,000 lb/ac-yr. Therefore, TDS are applied at safe levels whenever a crop is growing on the spray fields.

3.7.2 REGULATORY CONSIDERATIONS

A list of the applicable federal, state and local plans, policies, regulations, and laws related to hydrology and water quality 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

- 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.

- Central Valley Flood Protection Board - The Central Valley Flood Protection Board is required to enforce standards for the construction, maintenance, and protection of adopted flood control plans that will protect public lands from floods. The jurisdiction of the board includes the Central Valley, including all tributaries and distributaries of the Sacramento and San Joaquin Rivers and designated floodways.
- General Order for Dewatering and Other Low Threat Discharges to Surface Waters - The Central Valley RWQCB has adopted a General Dewatering Permit that applies to various categories of dewatering activities. Permit conditions for discharge of these types of wastewaters to surface water are specified in the Waste Discharge Requirements for Dewatering and Other Low Threat Discharges to Surface Waters General Order.
- 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 - 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.
- Stormwater Discharge Requirements - The CWA mandates permits for municipal stormwater discharges. These permits require implementation of controls in order to reduce the discharge of pollutants in stormwater flows to the maximum extent possible.
- Senate Bill (SB) 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.

CITY OF IONE GENERAL PLAN

The City of Ione General Plan (City of Ione 2009a) includes the following policies and actions related to hydrology and water quality:

- **Policy CO-2.1:** Consult with relevant State and local agencies, property owners, and local interest groups to restore, enhance, and preserve creeks in and around the City of Ione. Public and private projects shall be required to avoid impacts to wetlands if feasible. If avoidance is not feasible, projects shall achieve no net loss of wetlands, consistent with State and federal regulations.
- **Policy CO-4.2:** Encourage the use of treated wastewater to irrigate parks, golf courses, and landscaping. In new development areas, the use of treated wastewater for irrigation may be applied as a condition of approval subject to State permitting.

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 MCSP 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 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 supply: Development of the infill site would result in additional impervious surfaces that could alter groundwater recharge. Although construction of level II correctional facilities would result in additional impervious surfaces, it is not anticipated to significantly affect groundwater supply because sufficient stormwater drainage and detention basins would be constructed as part of the contemplated development. Further, water supplies in the area and at MCSP are provided via Amador Water Agency and not from groundwater wells, and the infill site is not considered to provide substantial groundwater recharge capability due to the types of soils (clay) located at the infill site. Therefore, although groundwater recharge would occur over a smaller surface area compared to the baseline condition, onsite infrastructure would be designed to allow infiltration to occur, and the regional loss in groundwater recharge potential as a result of implementation of the contemplated development is anticipated to be minimal. Therefore, no significant impacts on groundwater supply are anticipated, and this issue is not discussed further in this EIR.

Housing or structures in a 100-year flood hazard area: Development of level II infill correctional facilities at MCSP 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 1 and 2 of this volume of the DEIR, the proposed project includes construction and operation of a level II infill correctional facility complex at MCSP . The following impact discussion also evaluates a single facility as an alternative to development of the complex. For the purposes of this analysis, the evaluation of construction and operation of the proposed complex at the MCSP Infill Site is presented first, followed by the evaluation of the impacts associated with development of a single facility, which is an alternative to the project.

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

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

Construction of the proposed level II correctional facility and parking lots, as well as the demolition and relocation of some existing facilities, would include extensive ground-disturbing activities over approximately 100 acres and would include earth removal, grading, trenching, and restoration. Construction is anticipated to begin in May 2014 and would be scheduled for completion by June 2016. Depending on scheduling, construction could potentially 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. It should be noted that, upon completion of construction, approximately 20 acres would be returned to pre-construction conditions.

Activities related to the construction of a level II infill correctional facility complex at MCSP would create the potential for soil erosion and possibly increase sedimentation of stormwater facilities, both onsite and downstream of the infill site. Construction activities would 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 and exceed water quality standards. Onsite 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.

The potential for erosion hazards within the infill site is moderate given the steepness of the existing ground terrain. Rainfall and associated stormwater runoff could result in periods of sheet erosion within areas of exposed or stockpiled soils. If uncontrolled, these soil materials could cause sedimentation and blockage of drainage channels. Further, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase the potential for runoff and erosion. Stormwater runoff could also wash construction materials into receiving water bodies and negatively impact water quality. Non-stormwater discharges could result from activities such as construction dewatering procedures, or discharge or accidental spills of hazardous substances such as fuels, oils, concrete, paints, solvents, cleaners, or other construction materials.

However, as part of the design and implementation of a level II infill correctional facility at MCSP, CDCR or its contractor would retain a qualified Storm Water Pollution Prevention Plan (SWPPP) developer to prepare a SWPPP that would have to comply with established regulatory standards and would include site-specific best management practices (BMPs) and any other necessary site-specific 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 MCSP. 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 MCSP. 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 will 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 in the project area 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 will 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 will be properly disposed of in designated concrete waste facilities.
- *Material delivery and storage practices:* All materials, especially toxic or hazardous materials, will be covered to prevent exposure to stormwater and runoff. Toxic or hazardous materials will also be stored and transferred on impervious surfaces that will prevent immediate exposure to soils. Vehicles and equipment used for material transport and storage, as well as any other vehicles, will be parked in clearly designated areas.

- *Street sweeping and maintenance:* Regular cleaning will occur at the entrances and exits to and from the project site to avoid contamination of offsite areas.
- *Solid waste management:* An appropriate amount of conveniently located trash and waste containers will be placed around the project site for proper disposal of solid wastes. All receptacles will have lids or covers that will not blow off in windy conditions.
- *Spill prevention and control:* Any spills or releases of materials will be cleaned up immediately and comprehensively. Appropriate and easily accessible cleanup equipment, including spill kits containing absorbents, will be located in several areas around the site. Used cleanup materials will 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 project site will be cleaned. Additionally, refueling of vehicles and equipment will occur offsite whenever possible. An onsite, designated fueling area with appropriate containment and cleanup materials will 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 will 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 will 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, this would be a less-than-significant impact.

Construction activities during development of the proposed level II infill correctional facility complex at the MCSP 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. CDCR would be required as a matter of State requirements to implement adequate measure to control onsite stormwater (i.e., SWPPP and BMPs) and protect water quality; this would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.7-2a: Stormwater System Impacts [Complex]

The infill site is currently undeveloped. Development of the proposed level II infill correctional facility complex at MCSP would result in an increase in impervious surfaces. The completed facility footprint would be approximately 60 acres, approximately half of which would be impervious surfaces. Of this acreage, less than 1 acre is currently considered impervious surface.

Based on the natural topography of the infill site, the land where the contemplated single facility would be constructed currently drains into Mule Creek. Two intermittent drainages flow through the infill site. The drainage to the north has a drainage area of 144 acres and the drainage to the south has a drainage area of 91 acres. Runoff in the central portion of the infill site that does not enter one of the two intermittent drainages enters Mule Creek via overland flow or is channelized into micro-drainage and swale features.

The increase in impervious land that would occur with development of the infill site with the proposed level II correctional facility complex could increase runoff into the intermittent drainages and Mule Creek. The existing intermittent channels and swales would be susceptible to erosion from increased flow and shear stress. Furthermore, land that drains directly into Mule Creek via overland flow would also be susceptible to increased erosion and gullying, as well as localized erosion along Mule Creek from the sudden and concentrated increase in runoff. To reduce the impact of increased runoff, CDCR would adhere to applicable requirements related to retention of stormwater flows onsite. The level II infill correctional facilities would also include a desilting basin, which would allow sediment particles and certain pollutants to settle before entering the watershed. Storm drains would be constructed to direct runoff from the infill site to the desilting basin.

Other low-impact development (LID) methods would be implemented 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 Central Valley RWQCB requirements, the project must also consider and incorporate LID techniques to minimize runoff from the 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 the proposed level II correctional facility complex at the MCSP Infill Site has the potential to cause an increase in surface runoff that would exceed the capacity of the stormwater drainage system, resulting in onsite and offsite flooding and erosion and would be considered a significant impact.

Mitigation Measure 3.7-2

Before any construction-related ground disturbance, final drainage plans will be completed to demonstrate that all runoff would be appropriately conveyed through the infill site and not leave the site at rates exceeding pre-project runoff conditions. The drainage design for the contemplated development would limit the 10-year and 100-year peak runoff from the infill site to no more than pre-project conditions. The plan will include, but not be limited to, the following items:

- An accurate calculation of pre-project and post-project runoff scenarios, obtained using appropriate engineering methods, that accurately evaluates potential changes to runoff, including increased surface runoff;

- A description of the proposed maintenance program for the onsite drainage system; project-specific standards for installing drainage systems; and
- The final drainage plan will meet the necessary requirements, which requires 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 do not occur.

New storm drainage facilities will need to be constructed and existing facilities reconfigured in order to accommodate increased surface flows associated with the project's increase in impervious surfaces. Final project design will incorporate design features that will minimize flood risk by controlling the anticipated increase in flow and stormwater runoff and reduce offsite runoff to rates not exceeding pre-project conditions.

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. The facilities would adhere to the requirements of the existing NPDES permit, including the associated monitoring and reporting program. However, expanded or entirely new detention basins may need to be constructed. The final drainage plan will also specify any treatments necessary to protect earthen channels from erosion, and modifications that may be needed to existing underground pipe and culvert capacities.

Other low-impact development (LID) methods will be used to maintain pre-project runoff levels, including planning and design considerations for buildings, landscaping, parking lots, and roads that maximize runoff infiltration into the ground and reduce the peaks of stormwater hydrographs. All Central Valley RWQCB requirements will be followed in the development of the final drainage plan.

Significance after Mitigation

Implementation of the Mitigation Measure 3.7-2 would reduce the potential impact associated with increased surface runoff that could exceed the capacity of the stormwater drainage system, thereby resulting in potential onsite and offsite flooding and water quality pollutants to a **less-than-significant** level by providing adequate onsite storm drainage facilities to accommodate the potential stormwater demands and runoff from the infill site to rates not exceeding pre-development conditions.

Impact 3.7-3a: Long-Term Water Quality Degradation from Urban Contaminants [Complex]

Development of the infill site with the proposed level II infill correctional facility complex would increase the footprint of development at the infill site, adding to the level of impervious surfaces currently onsite, including roadways and parking areas, which could potentially increase the level of urban contaminants discharged into the stormwater drainage system and adjacent Mule Creek. As noted in Impact 3.7-2, the footprint of the proposed facility would be approximately 60 acres upon completion. The land where the proposed level II infill correctional facility complex would be constructed is currently undeveloped and includes Spray Fields 4 and 5 upon which MCSP's disinfected wastewater effluent is sprayed as irrigation.

The contemplated development has the potential to increase the pollutant load of stormwater discharges. Anticipated pollutants associated with the proposed level II infill correctional facility complex include trash, debris, heavy metals, and hydrocarbons from parking areas. In addition, potential pollutants associated with the development include sediment from pervious areas that will not be landscaped, pesticides from potential pest control activities, nutrients, fertilizers, oxygen-demanding substances from landscaped areas, and organic compounds from uncovered parking areas and roadway/driveway systems.

In accordance with federal and state stormwater management regulations, new construction and significant redevelopment must maintain pre-project hydrology and incorporate proper pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through proper BMPs, as noted in Impact 3.7-1a, when source control or exposure protection are insufficient for reducing runoff pollutant loads. In accordance with Central Valley RWQCB compliance guidelines, development at the infill site would be required to incorporate BMPs and LID stormwater management principles. These would include detention systems and other suitable stormwater pollutant control BMPs to reduce the discharge of pollutants into stormwater to the maximum extent practicable.

While the potential for development of the proposed level II correctional facility complex at the MCSP 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, which would 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.

Impact 3.7-4a: Long-Term Water Quality Degradation from Use of Spray Fields [Complex]

As described in Section 4.12, “Utilities” of this volume of the DEIR, the potential average dry weather flow (ADWF) of wastewater at MCSP with operation of the proposed complex (711,062 gpd) would be within the existing flow rates permitted in the WDRs (740,000 gpd). The projected future ADWF would be consistent with historic flows that occurred between 2007 (ADWF of 867,000 gpd) and 2008 (ADWF of 580,000 gpd). The maximum acreage of spray fields used was 220 acres in 2007 (with frequent application) and 181 acres in 2008 (with less frequent application). Therefore, it is reasonable to assume that 266 net acres of landscape irrigation would be sufficient for assimilating proposed flows for the complex.

However, the location of the proposed project could result in the permanent loss of spray irrigation Field 4 (53.5 ac net) and Field 5 (49.5 net), for a total potential loss of 103 acres. As currently planned, however, only approximately 10 acres of Field 4 would be permanently removed from operation. Historically, Fields 4 and 5 have received approximately 40% of the applied treated effluent. As noted in Chapter 2, “Project Description” of this volume of the DEIR, CDCR would, as part of the proposed project send additional flows of MCSP-treated secondary effluent to the City of Ione via the existing 10-inch line that extends from MCSP to the City of Ione WWTP. Additionally, the existing area that the City intends to use as spray fields would need to be expanded by approximately 75-100 acres, as noted in Chapter 2, “Project Description” of this volume of the DEIR. Flows from MCSP to the City of Ione WWTP would be controlled so as not to exceed the existing capacity of the 10-inch line. In the event that flows through the 10-inch line would approach capacity, CDCR would utilize existing storage capacity at the MCSP and Preston Reservoirs until such time as additional capacity within the 10-inch line is available.

With implementation of the proposed project, CDCR would continue to store treated effluent onsite and send additional treated effluent to the City of Ione WWTP for use on its recycled water irrigation reuse facilities. Ultimately, CDCR may opt to send part or all of its treated secondary effluent to the City of Ione WWTP, however, this analysis only addresses the removal of Spray Fields 4 and 5 from operation because that is what would be caused by construction of the project. If the remaining MCSP spray fields discontinue operations (not currently planned), additional environmental analysis and CEQA compliance may be required to address the need for additional irrigable land requirements.

Once CDCR releases treated effluent into the existing 10-inch line, the City of Ione would be responsible for the disposal and management of effluent disposal facilities for the MCSP treated secondary effluent. As part of the proposed project, CDCR would coordinate with the City of Ione to extend the City's spray field infrastructure to additional spray fields. The infrastructure would include fixed irrigations systems (i.e., pipes and sprinklers), wheel line systems (i.e., pipe that is rolled across the field), and/or flood irrigation systems (i.e. field is flooded via gravity). Temporary storage of flows at the existing City of Ione WWTP may be necessary, but would not likely be significant due to the flow equalization provided by MCSP and Preston Reservoirs. As part of the proposed project, CDCR would provide its proportional share to fund any temporary storage improvements, to lease 100 acres of additional fields, and construct irrigation supply and tailwater return facilities for recycled water irrigation. CDCR would also provide cost share for irrigation site isolation to prevent tailwater from leaving the proposed spray fields. The additional irrigated land area is located west of the proposed improvements to the City of Ione WWTP irrigation areas. The land at this location is flat and is currently in agricultural production.

The planned upgrades to the MCSP WWTP identified above would be implemented prior to use of the proposed spray fields and operation of the level II infill correctional facilities at the MCSP Infill Site. As a result, effluent water quality is expected to remain the same or improve with the aforementioned treatment facilities upgrade (separate project). The use of irrigated land at the City of Ione WWTP would also likely provide a water quality benefit compared to existing spray field applications at MCSP because the land application fields are relatively flat in slope (compared to lands at MCSP) such that the City would be able to better control tailwater return. Additionally, alfalfa crops proposed for the City of Ione WWTP irrigation reuse have significantly higher water and nutrient requirements; therefore, irrigation reuse at this site would either likely require less land to accommodate the additional MCSP flows, or would allow greater uptake of nitrogen and TDS when applied to the same amount of land.

Operation of the proposed level II infill correctional facility complex would remove existing spray fields and reduce existing effluent disposal capacity at MCSP. Removal of effluent disposal areas at MCSP would reduce the concentration of constituents of concern applied to MCSP lands. This would be a water quality benefit at MCSP. Further, CDCR would coordinate with the City of Ione to extend the City's effluent disposal system, and would construct the effluent disposal system such that all effluent would be retained onsite and would not be discharged to offsite water bodies. Finally, the new spray field areas could result in the greater uptake of constituents in the effluent such as nitrogen and TDS. Overall, impacts related to long-term water quality as a result of operation of the proposed complex would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.7-5a: Dam Failure Impacts [Complex]

The infill site does not lie within a 100-year flood hazard area and would, therefore, not place housing or structures within a 100-year flood hazard area. However, the infill site is downgradient of the CSP Mule Creek Reservoir, owned by CDCR. The effluent storage reservoir with earthen dam was built in 1988 and has a storage capacity of 535 acre-feet. The reservoir is located about 800 feet northwest of the infill site. The current WDRs require that the freeboard in the effluent storage reservoir never be less than 2 feet from the top of the embankment (CDCR 2007). Because the top of the overflow structure is more than 3 feet below the embankment, the WDR freeboard requirement will always be met (CDCR 2007). The WDRs also state that the reservoir storage shall have enough capacity to contain all reclaimed wastewater flow, design seasonal precipitation, seasonal ancillary flow, and wet season infiltration (CDCR 2007).

The probable peak horizontal ground acceleration values from an earthquake affecting the infill site range from 0.1 to 0.2 g, where 1 g equals the force of gravity, thus indicating that the ground-shaking hazard in the infill site is low (see Section 3.5, "Geology, Soils, Seismicity, Minerals, and Paleontological Resources," of this volume of the DEIR). Therefore, the potential for an earthquake to cause the dam to fail is low.

A flood failure analysis has not been conducted for the site. If the eastern dam did incur a catastrophic failure and the reservoir drained quickly, the topography shows the water would flow toward Mule Creek. Much of the western boundary of the infill site is 10–15 feet higher than Mule Creek, and this area would likely not be in the flow path of the reservoir's water that would ultimately flow into Mule Creek.

*As the likelihood of the dam failing near the proposed level II correctional facility complex at the MCSP Infill Site is low, the potential for flooding at the infill site is also considered low. This impact is considered to be **less than significant**.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

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

Although the acreage of construction disturbance for a single, level II infill correctional facility at MCSP would be less than that for a complex, the potential impacts from expansive soils that would occur with development of a single facility would be the same as those for the proposed complex because the same types of ground disturbance and construction activities would occur. Activities related to the construction of contemplated single facility would create the potential for soil erosion, possible increase in sedimentation of stormwater facilities, and potential or accidental release of pollutants, which could affect surface water quality both onsite and downstream of the project area. However, as part of the design and implementation of a level II infill correctional facility at MCSP, CDCR or its contractor would retain a Qualified SWPPP Developer to prepare and implement a SWPPP that would include site-specific BMPs and any other necessary site-specific WDRs or waivers under the Porter-Cologne Act. It should be noted that the orientation of a single facility at the infill site would result in the same amount of potential direct impact to existing drainages as described for a complex.

*Construction activities for development of a single, level II infill correctional facility at the MCSP 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 [Single Facility]

Although the acreage of construction disturbance for a single, level II infill correctional facility at MCSP would be less than that for a complex, the potential impacts that would occur with development of a single facility would be the same as those for the proposed complex because the same types of facilities would be developed resulting in stormwater discharges. Development of a single, level II infill

correctional facility at MCSP would result in an increase in impervious surfaces; the completed facility footprint would be approximately 35 acres, approximately half of which would be 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. Because final drainage design specifications have not been completed, including stormwater flow paths and magnitudes based on a finalized project site plan, project implementation has the potential to cause an increase in surface runoff that would exceed the capacity of the stormwater drainage system, resulting in on- and offsite flooding and erosion. As noted in Impact 3.7-1, the orientation of a single facility at the infill site would result in the same amount of potential direct impact to existing drainages as described for a complex.

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 MCSP Infill Site has the potential to cause an increase in surface runoff that would exceed the capacity of the stormwater drainage system, resulting in onsite and offsite flooding and erosion and would be considered a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.7-2.

Significance after Mitigation

Implementation of Mitigation Measure 3.7-2 would reduce the potential impact associated with increased surface runoff from a single facility that could exceed the capacity of the stormwater drainage system, thereby resulting in onsite and offsite flooding and water quality pollutants to a **less-than-significant** level by providing adequate onsite storm drainage facilities to accommodate the potential stormwater demands and runoff from the infill site to rates not exceeding pre-development conditions.

Impact 3.7-3b: Long-Term Water Quality Degradation from Urban Contaminants [Single Facility]

Although the acreage of construction disturbance for a single, level II infill correctional facility at MCSP would be less than that for a complex, the potential impacts related to long-term water quality degradation from urban contaminants that would occur with development of a single facility would be the same as those for the proposed complex because similar facilities would be developed. Approximately 35 acres of the infill site would be 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 and incorporate proper pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through proper BMPs, as noted in Impact 3.7-1b, when source control or exposure protection are insufficient for reducing runoff pollutant loads. In accordance with Central Valley RWQCB compliance guidelines, CDCR would be required to incorporate BMPs and LID stormwater management principles. These would include detention systems and other suitable stormwater pollutant control BMPs to reduce the discharge of pollutants into stormwater to the maximum extent practicable.

While the potential for development of a single, level II infill correctional facility at the MCSP 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, which would 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.

Impact 3.7-4b: Long-Term Water Quality Degradation from Use of Spray Fields [Single Facility]

Although the acreage of construction disturbance for a single, level II infill correctional facility at MCSP would be less than that for a complex, the potential impacts related to long-term water quality degradation from the use of spray fields that would occur with development of a single facility would be the same as those for the proposed complex because the use of a portion of Spray Field 4 and all of Spray Field 5 for effluent disposal would also be discontinued with implementation of a single facility at MCSP.

Similar to the proposed complex, CDCR would coordinate with the City of Ione to extend the City's spray field infrastructure to additional spray fields. The infrastructure would include fixed irrigations systems (i.e., pipes and sprinklers), wheel line systems (i.e., pipe that is rolled across the field), and/or flood irrigation systems (i.e. field is flooded via gravity). Flows from MCSP to the City of Ione WWTP would be controlled so as not to exceed the existing capacity of the 10-inch line. In the event that flows through the 10-inch line would approach capacity, CDCR would utilize existing capacity at the MCSP Reservoir until such time as additional capacity within the 10-inch line is available. CDCR would also provide its proportional share to fund any temporary storage improvements, to lease additional fields, and construct irrigation supply and tailwater return facilities for recycled water irrigation reuse.

The planned upgrades to the MCSP WWTP identified above would be implemented prior to use of the proposed spray fields and operation of the level II infill correctional facilities at the MCSP Infill Site. As a result, effluent water quality is expected to remain the same or improve with the aforementioned treatment facilities upgrade (separate project). The use of irrigated land at the City of Ione WWTP would also likely provide a water quality benefit compared to existing spray field applications at MCSP because the land application fields are relatively flat in slope (compared to lands at MCSP) such that the City would be able to better control tailwater return. Additionally, alfalfa crops proposed for the City of Ione WWTP irrigation reuse have significantly higher water and nutrient requirements; therefore, irrigation reuse at this site would either likely require less land to accommodate the additional MCSP flows, or would allow greater uptake of nitrogen and TDS when applied to the same amount of land.

Operation of a single level II infill correctional facility would remove existing spray fields and reduce existing effluent disposal capacity at MCSP. Removal of effluent disposal areas at MCSP would reduce the concentration of constituents of concern applied to MCSP lands. This would be a water quality benefit at MCSP. Further, CDCR would coordinate with the City of Ione to extend the City's effluent disposal system, and would construct the effluent disposal system such that all effluent would be retained onsite and would not be discharged to offsite water bodies. Finally, the new spray field areas could result in the greater uptake of constituents in the effluent such as nitrogen and TDS. Overall, impacts related to long-term water quality as a result of operation of a single facility would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.7-5b: Dam Failure Impacts [Single Facility]

Complex Design

Although the acreage of construction disturbance for a single, level II infill correctional facility at MCSP would be less than that for a complex, the potential impacts associated with flooding as a result of damn failure would be the same as those for the proposed complex because it is located on the same

site near CSP Mule Creek Reservoir. As stated above for a single facility, the potential for failure of the dam at the CSP Mule Creek reservoir is considered low, and neither the infill site nor the reservoir is located in an area prone to substantial ground-shaking.

As the likelihood of the dam failing near a single, level II infill correctional facility at the MCSP Infill Site is low, the potential for flooding at the infill site is also considered low. This impact is considered to be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

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3.8 LAND USE, AGRICULTURE, AND FORESTRY RESOURCES

This section describes the existing onsite and surrounding land uses and evaluates the potential effects of development of the proposed 1,584-bed level II facility or a single 792-bed alternative facility at Mule Creek State Prison (MCSP) on existing land uses, agriculture, and forestry resources. The analysis provided in this section is based on a review of local land use policies, including the City of Ione General Plan and Zoning Code, 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 infill site is located in the northern portion of the City on state-owned property that also includes the existing MCSP. The state-owned property encompasses 866 acres. Within the existing state-owned property, the infill site is located in the central portion of the property (See Exhibit 2-2, Project Description of this volume). The majority of the MCSP Infill Site is undeveloped and is currently used as spray fields for disinfected secondary-treated wastewater generated by MCSP, the California Department of Forestry and Fire Protection (CAL FIRE) Academy, and the former Preston Youth Correctional Facility (PYCF), which is closed but maintained by CDCR. Mule Creek flows to the west of the site, and Mule Creek Reservoir is located beyond the creek to the northwest.

SURROUNDING LAND USES

The infill site is located in Ione, in southwestern Amador County. Ione is approximately 30 miles southeast of Sacramento and 30 miles northeast of Stockton. State Route (SR) 104 and SR 124 pass through the city and intersect north of the downtown core. The city is 2,904 acres in size, with the commercial uses concentrated in a commercial core south of Sutter Creek, and near the intersection of the SR 104 and SR 124. Sutter Creek flows in an east–to-west direction through the southern portion of the city. The city contains a range of land uses, including residential (approximately 13 percent), commercial, heavy industrial, and open space and recreation. Existing land use classifications include a relatively large portion devoted to Public Service–Open Space and Public Service–Agricultural Transition-Mineral; these two land uses include the MCSP, CAL FIRE, and the former PYCF. Ione is surrounded by rural and agricultural lands in unincorporated Amador County with some surface mining operations in the area.

Existing land uses in the area surrounding the MCSP property are described in Table 3.8-1.

Table 3.8-1 Existing Land Uses Surrounding the MCSP Property

North	Agriculture - grazing land
Northwest	Agriculture - grazing land
West	Agriculture -grazing land, scattered rural residences
Southwest	Agriculture - cultivated and grazing land, SR 104, scattered rural residences
South	SR 104, vacant land, Castle Oaks Golf Course
Southeast	SR 104, Castle Oaks residential area, California Department of Forestry and Fire Protection training facility, former Preston Youth Correctional Facility (closed)
East	California Department of Forestry and Fire Protection training facility, agriculture - grazing, scattered rural residences, Waterman Road

AGRICULTURAL DESIGNATIONS

Agricultural land uses in and around Ione consist primarily of non-irrigated and irrigated pasture lands, cultivation of small grain (e.g., wheat, barley), and field crops such as sugar beets, alfalfa, safflower, beans, and corn. In general, soils in the city and the surrounding area do not possess characteristics favorable to agricultural production. Limiting factors include steep slopes, shallow soils, high erosion potential, poor drainage, high proportion of stone and rock in the soil profile, low water capacity, low fertility, and poor soils structure (City of Ione 2009: 4.2-1).

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 2011):

- 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. As presented in Table 3.8-2, the majority of the MCSP Infill Site is classified as Grazing Land and Farmland of Local Importance with other areas classified by the FMMP as Urban and Built Up Land, all of which are not considered Important Farmlands for the purposes of CEQA. Only a small part of the infill site, less than one acre, is Prime Farmland and considered Important Farmland under CEQA. Further, there is no agricultural activity on the site (CDC 2011).

Table 3.8-2 MCSP Infill Site Farmland Classifications

FMMP Classification	Single Facility	Complex
	Acres of disturbance	Acres of disturbance
Prime Farmland	0.74	0.74
Farmland of Local Importance	39.60	60.55
Grazing Land	11.83	27.47
Urban and Built-Up Land	2.80	2.80

Source: CDC 2011

There are no lands under Williamson Act Contract within the city limits, including the infill site (City of Ione 2009: 4.2-7).

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 resource—including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation—and other public benefits (California Public Resources Code [PRC] 12220[g]).

The infill site is currently maintained as spray fields for MCSP and does not support established natural habitat. Several mature native trees are located onsite; however, the wooded areas of the site (including canopy) do not exceed 10 percent native tree cover and would not qualify 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 relating to land use, agriculture, and forestry resources are applicable to the MCSP Infill Site.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

A list of the state plans, policies, regulations, and laws addressing land use, agriculture, and forestry resources applicable to the MCSP 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 draft environmental impact report) - 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 MCSP Infill Site and land in the area are situated within the incorporated City of Ione. Adjacent land to the north and west are in the unincorporated area of Amador County. The City and County cooperate in planning unincorporated areas that are within the City's sphere of influence. Therefore, the City's land use designation policies for the project area are described below, as well as land use designations and policies for adjacent lands, including applicable unincorporated areas.

CITY OF IONE GENERAL PLAN

The General Plan for the City of Ione addresses all land both within the city limits and an area beyond the City that bears relation to the City's planning efforts. Roughly speaking, the General Plan Planning Area is defined as the City plus the area south of the City just beyond SR 88, west to the Amador County/San Joaquin County/Sacramento County boundaries, and approximately 2 miles north and east of the City. The portion of the planning area outside the current city limits represents lands whose uses and character affect the city of Ione. Currently, Amador County has jurisdiction and land use authority over land outside of the city limits that is within the General Plan Planning Area. Through policy direction and implementation of this General Plan, it is the City's intent to cooperatively set goals for land use and circulation planning for areas outside of the City's jurisdiction that affect the city of Ione.

Land Use Element

The proposed infill site and surrounding state-owned property is designated Public Service on the City of Ione General Plan Land Use Diagram. The Public Service category covers a variety of public, quasi-public, and public utility sites used to provide public services including major permanent, facilities. Policies applicable to this land use category include the following:

- **Policy LU-2.6:** Development located adjacent to lands designated for Public Services shall include appropriate setbacks, fencing, and landscaping to avoid land use conflicts.
- **Policy LU-2.7:** Ensure that public facilities located adjacent to areas designated for development include proper setbacks and landscape screening to avoid incompatibilities and provide shielding between uses.

Policy Areas

The City's General Plan Land Use Element Goal LU-1 states: "Establish growth patterns that enhance the quality of life in Ione and contribute to a balanced community." As a means of establishing growth patterns that meet the City's vision, the City's General Plan identifies 10 individual Policy Areas within the General Plan Planning Area with unique characteristics or features that warrant more detailed planning efforts and specific policies. The Policy Areas have been established based on several criteria, including existing, proposed, or approved project boundaries; location within the General Plan Planning Area; ownership; type of existing or proposed land uses; distinctive issues; and geographic or environmental features. Each Policy Area warrants the incorporation of special provisions or consideration as the City develops.

Some of the Policy Areas have land use designations of Special Planning Area while other Policy Areas have land use designations of Rural Residential, Low Density Residential, Light Industrial, Heavy Industrial, Open Space, and other land use designations. The Policy Area designations serve as policy overlays that work in conjunction with the land use designations. Four Policy Areas are in the vicinity of the existing MCSP Facility and the MCSP Infill Site: Castle Oaks Gateway south of the project area and SR 104, Q Ranch west of project area, Ringer Ranch and Silva, south of the project area and SR 104. The MCSP Infill Site does not fall within any of these Policy Areas.

Conservation Element

The following conservation goal is relevant to land use concerns associated with the infill project:

Goal CO-10: Conserve agricultural resources within and around the City and promote development which does not interfere with ongoing agricultural operations.

CITY OF IONE MUNICIPAL CODE

Zoning Ordinance

The state-owned property where the existing MCSP facility and the infill site are located, along with the adjacent state-owned property to the south occupied by CAL FIRE, are zoned Public Facilities. According to Section 17.25.020 of the City of Ione Zoning Ordinance, this district is intended to provide a zoning district in the City for the establishment of public safety facilities (e.g., police stations, fire stations, hospitals), public schools (schools, colleges, and universities), and other public service facilities (e.g., sewer treatment plants, water treatment plants, utility substations). The intent of this district is to identify appropriate locations for these uses without impacting, disrupting, or otherwise removing other lands for residential or other uses. This district specifically implements the Public Service land use category of the General Plan (Ordinance 430, Section 2, 2009).

Properties to the south of SR 104 are Planned Development. According to City of Ione Zoning Ordinance Section 17.26.030, the purpose of the P-D district is to provide procedures for the consideration and regulation of areas suitable for proposed comprehensive development with detailed development plans and of those areas that require special planning to provide for appropriate planned development.

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 MCSP Infill Site would result in a significant impact relating to land use, agriculture, or forestry 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: The development of a level II infill correctional facility would not result in any physical barriers that would divide an established community. The contemplated development would be constructed on existing state-owned prison grounds adjacent to existing facilities operated by CDCR. The infill site is designated Public Service on the City of Ione General Plan Land Use Diagram, and is zoned Public Facilities. The construction and operation of a level II infill correctional facility at the MCSP Infill Site would be consistent with the general plan land use designation and zoning district. Therefore, there is no potential for the contemplated development to physically divide an established community. No impact would occur, and this issue is not discussed 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 in this section.

Conflicts with planning efforts: The infill site would be 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 MCSP property, as outlined in the City of Ione General Plan and zoning ordinance. The project would not conflict with any general plan policies. The infill site is located at the center of existing state-owned property and would be setback from existing non-prison uses. Further, the infill site would be fenced and, as shown in Section 3.13, “Visual Resources,” is substantially screened from offsite views by existing vegetation and topography, consistent with City of Ione General Plan Land Use Policies LU-2.6 and LU-2.7. As noted, the MCSP site uses (prison) are acknowledged in the general plan as a use that would last in perpetuity. Further, 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.

Conversion of Important Farmland or land under Williamson Act contract: The infill site is not zoned for agricultural use and there are no lands under Williamson Act Contract within the city limits of Ione, including the infill site (City of Ione 2009: 4.2-7). Further, there is currently no cultivated agricultural acreage that is part of the infill site. As noted in Table 3.8-2, approximately 0.74 acre of Prime Farmland would be disturbed during construction at the infill site. However, no agricultural activities are taking place on this area (or any other areas of the site), this land is located south of the contemplated level II infill facility, and the disturbance would be related to construction access and would return to pre-project conditions once the facility is constructed. No permanent conversion of designated Prime Farmland would occur. Therefore, conflicts with existing designations and zoning for agricultural use or a Williamson Act contract would not occur, and this issue is not discussed further.

Conversion of forestland: The 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 MCSP Infill Site would not result in conversion of forestland to non-forest use. No impact would occur, and this issue is not evaluated further.

PROJECT IMPACTS AND MITIGATION MEASURES

No impacts related to land use and agricultural and forestry resources would occur with development of a single, level II infill correctional facility or a level II infill correctional facility complex at the MCSP Infill Site.

3.9 NOISE

This section describes ambient noise conditions in the vicinity of the Mule Creek State Prison (MCSP) Infill Site and summarizes applicable regulations. This section also analyzes noise impacts associated with the implementation of the contemplated development at the infill site, 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 level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP 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 3D of this volume of the draft environmental impact report (DEIR). Noise modeling inputs and results are provided in Appendix 3C of this volume.

3.9.1 ENVIRONMENTAL SETTING

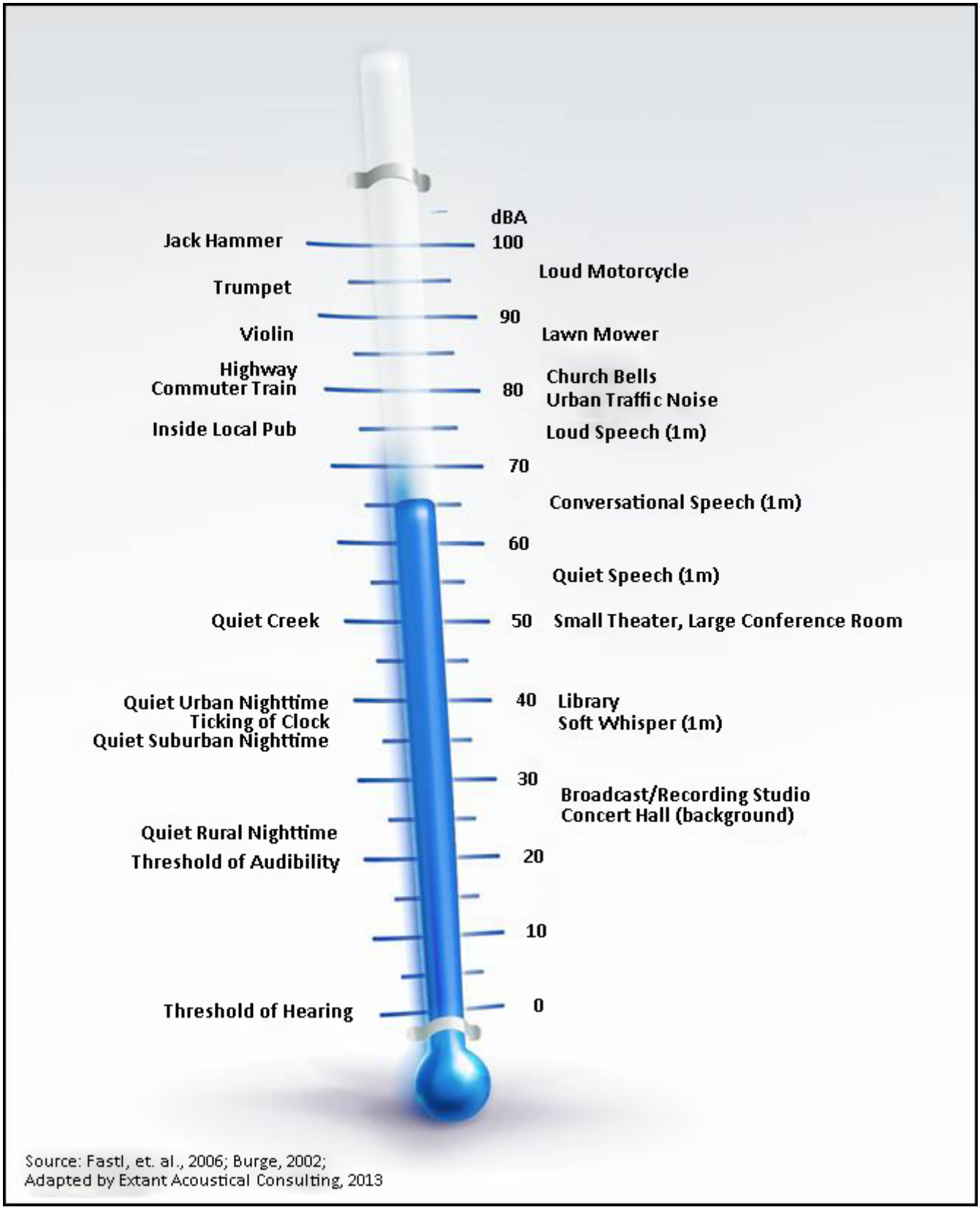
NOISE FUNDAMENTALS

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 descriptions of 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: 7-1 – 7-8, California Department of Transportation [Caltrans] 2004: 5-7). 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 in the vicinity of the MCSP Infill Site is influenced primarily by transportation noise emanating from vehicular traffic on State Route (SR) 104, which travels east–west approximately 3,000 feet south-by-southwest of the infill site's southern boundary. Aircraft overflights contribute to the existing noise environment and have been observed to be associated with operations at Westover Field, approximately 7 nautical miles east of the MCSP Infill Site. Existing MCSP daily operational activities, such as daily vehicle trips along facility access roads, mechanical systems, and loudspeaker announcements, contribute to the noise environment within the immediate vicinity of the infill site. Operations of both the California Department of Corrections and Rehabilitation (CDCR) firing range west of the infill site and the California Department of Forestry and Fire Protection (CAL FIRE) Academy firing range to the south have the potential to influence the existing noise environment in the vicinity of the MCSP 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. 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 noise-sensitive land uses to the MCSP Infill Site being considered are residential and institutional (inmate housing) uses. The nearest onsite uses are inmate house uses at the existing MCSP facilities, approximately 2,200 feet west of the MCSP Infill Site. The nearest offsite noise-sensitive receptors are student housing facilities for the CAL FIRE Academy, approximately 2,200 feet from the infill site. The nearest offsite residential dwelling to the MCSP Infill Site is approximately 3,900 feet to the south, across SR 104 within the Castle Oaks development.

AMBIENT NOISE SURVEY

An ambient noise survey was conducted by Ascent on January 17, 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.

Average daytime hourly noise levels measured during the survey ranged from approximately 38 to 65 dBA L_{eq}, with maximum noise levels that ranged from 52 to 88 dBA L_{max}. The primary noise sources influencing noise measurement locations were vehicular traffic SR 104 adjacent to the Cal Fire Facility. Noise generated by operational activities associated with the MCSP facility came from the public address (PA) system and traffic on the access road. Meteorological conditions during the measurement period were nominal, with clear skies, temperatures ranging from 60 degrees Fahrenheit (°F) to 64°F, and a slight breeze from the east-southeast at 2 miles per hour (mph).

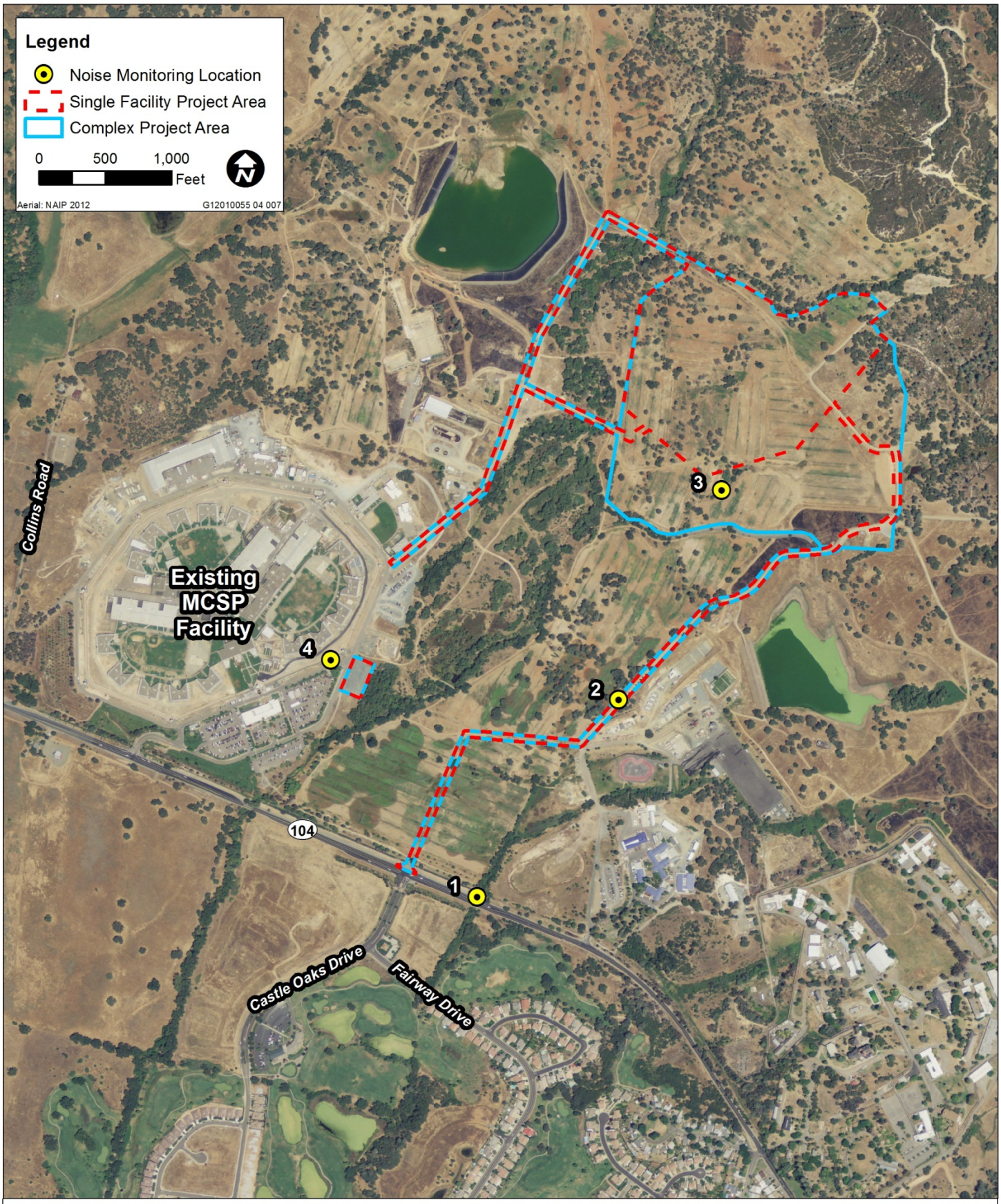
Table 3.9-1 Summary of Results of the Short-Term Daytime Community Noise Survey, January 17, 2013

Time	Noise Sources	A-Weighted Sound Level (dBA)	
		L_{eq}	L_{max}
1 – Center of Infill Site			
10:15–10:30 a.m.	Tractor in background, birds, tractor beeping, PA system	38	52
2 – Adjacent to Cal Fire helipad			
10:45–11:00 a.m.	Access road traffic, firing range	55.9	71.2
3 – Adjacent to SR 104 and Cal Fire Facility			
11:30–11:45 a.m.	Trucks idling, traffic	59.9	87.9
4 – Eastern boundary of existing MSCP facility, north of SR 104 approximately 1,000 feet			
11:03–11:18 a.m.	Vehicle traffic	65.1	85.1

Notes: dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
Source: Ascent Environmental 2013.

EXISTING TRAFFIC NOISE

Existing traffic noise levels were calculated for roadway segments in the project vicinity based on the Federal Highway Administration's (FHWA's) 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 and 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, receiver distance, 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.



Source: Ascent Environmental 2013

Exhibit 3.9-2

Noise Monitoring Locations

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 were based on existing average daily traffic (ADT) volumes. As shown in Table 3.9-2, the location of the 60-dBA CNEL traffic noise contour along the local roadway network ranges from 48 feet to 256 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 3C in this volume of the draft environmental impact report (DEIR) for complete modeling inputs and results.

Table 3.9-2 Summary of Modeled Existing Traffic Noise Levels

Roadway	Segment		CNEL (dBA) 100 feet	Distance (feet) from Roadway Centerline to CNEL Contour		
				70 dBA	65 dBA	60 dBA
Main Street	Preston Avenue	S. Church Street	57.4	14	30	64
Michigan Bar Road	North of	SR 104	59.0	19	40	86
Preston Road	North of	SR 124	56.4	12	25	55
Preston Road	South of	SR 124	57.4	14	30	64
S. Church Street	South of	Main Street	55.5	10	22	48
S. Ione Street	South of	Main Street	55.6	11	23	49
SR 104	West of	Michigan Bar Road	59.1	18	40	86
SR 104	East of	MCSP Driveway	61.6	27	59	126
SR 124	North of	SR 104	61.9	28	61	131
SR 88	West of	SR 124	66.3	55	119	256
SR 88	East of	SR 124	65.8	52	111	240

Notes: dBA = A-weighted decibels; L_{dn} = day-night average noise level; SR = State Route.
Source: Data modeled by Extant Acoustical Consulting 2013. Traffic data provided by Fehr & Peers 2013.

EXISTING AIRCRAFT NOISE

Westover Field is approximately 7 nautical miles east of the infill site in Jackson, California. The infill site is not located within the airport's 60 dBA CNEL noise contour according to the most recent noise contours identified in the Amador County General Plan and the Westover Field Airport Land Use Plan. No air traffic noise was experienced during the noise monitoring survey, but aircraft overflights are known to occur in the vicinity of the infill site.

FIRING RANGE NOISE

CDCR currently operates and maintains a firing range northeast of the existing MCSP facility, west of the MCSP InfillSite. The firing range is used for practice, training, and qualification of correctional officers and law enforcement agency personnel in communities surrounding the facility. Similar CDCR facilities are available for operation from 7:00 a.m. to 7:00 p.m. and are not expected to operate during nighttime hours.

The CAL FIRE Academy also operates and maintains a firing range on the northwest corner of its facility, approximately 600 feet south of the MCSP Infill Site. The CAL FIRE Academy firing range is used for training and qualification of select CAL FIRE personnel; the range also receives limited use by law enforcement agencies in the surrounding community. The CAL FIRE range is typically operated 4

day per week during daytime hours (7:00 a.m. to 7:00 p.m.). On occasion, the range is operated during evening hours (in dusk conditions) for low-light qualifications and training.

Noise levels from firing range activities were modeled within the SoundPLAN three-dimensional noise simulation model based on reference noise level data obtained from previous CDCR projects, information provided by CAL FIRE (Morris, pers. comm. 2013), and noise level reference data from the Small Arms Range Noise Assessment Model v2.6 (SARNAM2). SARNAM2 was developed by the United States Army Corps of Engineers for assessment of noise impacts created by firing ranges (USACE 2003). The noise levels presented assume that both the CDCR and CAL FIRE Academy firing ranges are operating at full capacity, representing potential "worst case" operational noise levels. Predicted exposure of onsite noise-sensitive receptors in the vicinity of the MCSP Infill Site to existing firing range noise levels was modeled based on the assumptions outlined herein and are presented in Table 3.9-3.

Table 3.9-3 Modeled Existing Firing Range Noise Levels

Description	Firing Range Hourly Noise Levels, dBA					
	MCSP		CAL FIRE		Combined	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
Onsite Receptors						
MCSP - Pod 1	46	52	33	37	46	52
MCSP - Pod 2	35	45	43	46	44	46
MCSP - Pod 3	26	34	41	44	42	44
MCSP Level 1	41	47	42	45	44	47
Offsite Receptors						
CAL FIRE Academy	36	47	50	56	50	56
R-01_10835 Waterman Road	29	40	39	45	39	45
R-02_10675 Waterman Road	30	39	41	44	41	44
R-03_Oak View Drive	32	42	44	47	44	47
R-04_Fairway Drive	32	43	44	46	44	46
R-05_Oak View Drive	32	42	44	48	44	48
R-06_Castle Oaks Drive	30	39	40	42	40	42

Notes: dBA = A-weighted decibels; 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 façades.
Source: Extant Acoustical Consulting 2013

MCSP Firing Range Operations

During the ambient noise measurements at site 2 (Exhibit 3.9-1), the MCSP and/or CAL FIRE firing ranges were actively utilized; however, specific firing range noise levels were not able to be documented. 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. 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 course)

(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.

CAL FIRE ACADEMY FIRING RANGE OPERATIONS

As previously stated, specific firing range noise levels were not able to be documented during the ambient noise survey; however, operational information for the CAL FIRE Academy was obtained directly from the Academy. The CAL FIRE Academy range is typically operated 4 day per week during daytime hours (7:00 a.m. to 7:00 p.m.), with limited operation during evening hours for dusk/low-light qualification and training. The CAL FIRE Academy range consists of two 50-yard pistol/shotgun ranges and one 100-yard rifle range.

CAL FIRE personnel most frequently use 9mm and .40 caliber pistols, 12-gauge shotguns, and Mini-14 style rifles. Typical qualification sessions include a maximum 16 CAL FIRE officers/cadets per course on each of three ranges (48 participants total). Each course consisting of up to 54 rounds of 9mm pistol or 50 rounds of 0.223 rifle ammunition (Mini-14/AR-15) fired per officer/cadet. This results in an approximate maximum of 2,528 rounds fired per course (54 rounds per officer per pistol course or 50 rounds per officer per rifle course) (Morris, pers. comm. 2013). 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.

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 contemplated development 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.

AMADOR COUNTY GENERAL PLAN NOISE ELEMENT

The following relevant policies are considered in this DEIR. Acceptable noise level criteria by land use classification in Amador County are based on State guidelines, as shown in Table 3.9-4.

Table 3.9-4 Land Use Compatibility for Community Noise Environments (Figure 2 of the Amador County General Plan Noise Element)

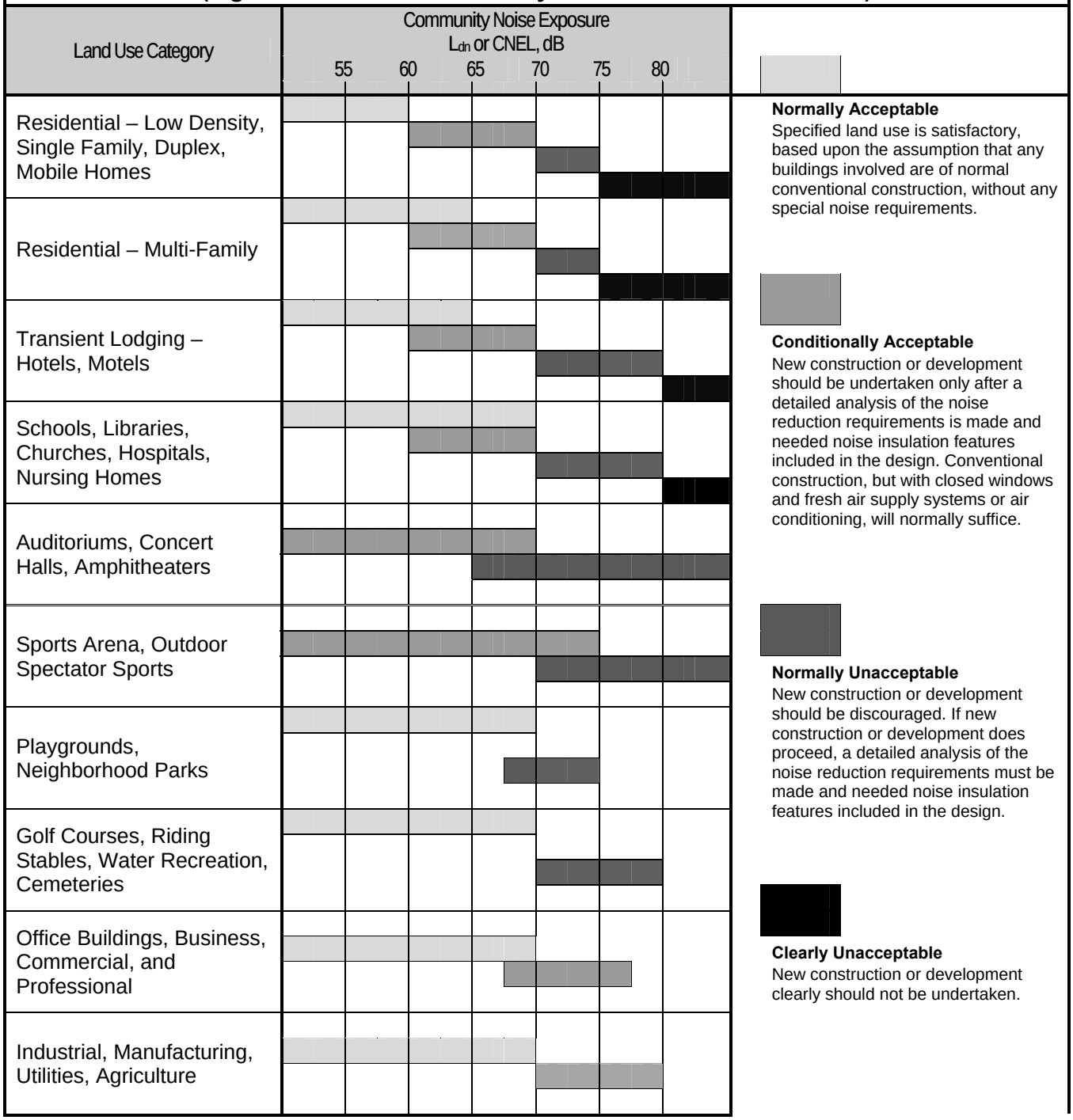


Table 3.9-4 Land Use Compatibility for Community Noise Environments (Figure 2 of the Amador County General Plan Noise Element)

Considerations in Determination of Noise-Compatible Land Use

Normalized Noise Exposure Information Desired

Where sufficient data exist, evaluate land use suitability with respect to a "normalized" value of CNEL or L_{dn}. Normalized values are obtained by adding or subtracting the constants described in Table 1 [of the Amador County General Plan Noise Element] to the measured or calculated value of CNEL or L_{dn}.

Noise Source Characteristics

The land use-noise compatibility recommendation should be viewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic but occurs less frequently. Therefore, different sources yielding the same composite exposure do not necessarily create the same noise environment. The State Resources Act uses 65 dB CNEL as the criterion which airports must eventually meet to protect existing residential communities from unacceptable exposure to aircraft noise. In order to facilitate the purposes of the Act, one of which is to encourage land uses compatible with the 65 dB CNEL criterion wherever possible, and in order to facilitate the ability of airports to comply with the Act, residential uses located in Community Noise Exposure Areas greater than 65 dB should be discouraged and considered to be located within normally unacceptable areas.

Suitable Interior Environments

One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL of L_{dn}. This requirement, coupled with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum acceptable distance to a noise source.

Acceptable Outdoor Environments

Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically the maximum considered "normally acceptable" for that land use category, may be appropriate.

Source: Amador County 1988.

The following Amador County General Plan policies from the most recently adopted General Plan Noise Element (September 6, 1988) are applicable to the proposed project, along with a brief consistency analysis (Amador County 1988: Noise Element, pp. 14–32).

- **Highways and Freeways and Primary Arterials and Major Local Streets**

  New development of residential or other noise sensitive uses shall not be permitted in traffic noise impacted areas … unless effective noise mitigation measures are incorporated into the project design to reduce exterior noise levels to L_{dn} 55 dB or less and interior noise levels to L_{dn} 45 dB or less.

- **Industrial Plants and Other Ground Stationary Noise Sources**

  It is the policy of the County to protect existing and potential industrial plant sites or other ground stationary noise sources from the encroachment of incompatible noise sensitive land uses which could hinder their continued operation, expansion or new construction.

  It is the policy of the County to not locate new industrial plants or other ground stationary sources near noise sensitive land uses unless appropriate mitigation is included.

- **Noise Standards and Criteria to be Followed When Reviewing General Plan Amendments, Rezones, Divisions of Land; Use Permits and Environmental Documents**

  It is the policy of the County that the following noise sensitive land uses shall not be exposed to an exterior noise level at their property lines which exceeds an L_{dn} 65 dB(A) and will have an interior noise level not to exceed an L_{dn} 45 dB(A):

  - Residential Classifications in the Land Use Element
  - Residential Projects Including Rezones, Use Permits and Residential Divisions of Land
  - Schools, Churches, Hospitals, Care Facilities, Libraries, Auditoriums

Exception

On existing parcels zoned for single family dwellings there shall be no requirement for noise mitigation or denials of building permits due to noise. The County shall attempt to warn permit applicants of the

existence of the noise source and existing or projected noise levels which could adversely affect the dwelling.

Implementation

The following additional standards shall be applied to any noise generating projects at their property lines unless otherwise mitigated or found acceptable pursuant to Section 15093 of the State of California Environmental Quality Act (CEQA) Guidelines:

a. All noise level measurements shall be taken on noise monitoring equipment found to be acceptable by the County and by a person(s) qualified to take noise level readings.

b. Noise level readings are to be read on the A scale at the slow response unless more accurate methods such as octave band analysis are required.

c. The noise level contributed by a proposed noise generating project to adjoining properties identified by the County as being noise sensitive shall not raise the existing ambient noise level at the property line beyond the following levels unless a statement of overriding considerations has been adopted pursuant to Section 15093 of the State CEQA Guidelines or other acceptable mitigation measures have been incorporated into the project.

Existing Ambient Noise Level	Allowed Increase
L_{dn} 55 dB(A)	L_{dn} 3dB(A)
L_{dn} 60 dB(A)	L_{dn} 2dB(A)
L_{dn} 65 dB(A)	L_{dn} 1dB(A)

a. The Amador County Planning Department shall determine the ambient background level. If necessary, a noise consultant may be contracted for by the County at the expense of whomever initiated the project under review.

b. The 24 hour L_{dn} noise level standards measured at the property line of a noise generator shall also not be exceeded on a per hour basis beyond the following levels:

- Cumulative period of 30 minutes per hour – 0
- Cumulative period of 15 minutes per hour - +5
- Cumulative period of 5 minutes per hour - +10
- Cumulative period of 1 minute per hour - +15
- Level not be exceeded for any time per hour except for impulse or intermittent noise in f) below - +20

c. Intermittent of impulse noise level maximum to be measured at a noise generator's property line [included in this document as Table 3.9-5]:

Table 3.9-5 Intermittent Impulse Noise Level Maximum

Impulse Duration	25 Micro-Seconds			
	Or Less	One Second	One Second	One Second
Number of Impulses per Day	1	1	10	100
Maximum Noise Level	167 dB(A)	145 dB(A)	135 dB(A)	125 dB(A) – 85 dB

Notes: dB(A) = A-weighted decibels
Source: Amador County 1988.

CITY OF IONE GENERAL PLAN NOISE AND SAFETY ELEMENT

Policies of the City of Ione General Plan Noise & Safety Element relating to noise, that are applicable to the development of the infill correctional facility at the MCSP Infill Site under consideration are provided below:

- **Policy NS-1.1:** Establish the Noise Level Performance Standards in Table 6-1 [Table 3.9-6 in this document] and Table 6.2 [Table 3.9-7 in this document] to govern maximum allowable sound levels in all new development.

Table 3.9-6 City of Ione Exterior Noise Level Performance Standards for Non-Transportation Noise for New Projects

Land Use Type	Maximum Noise Exposure Level (dBA)	
	7 a.m. to 10 a.m.	10 p.m. to 7 a.m.
Single-Family Homes	55	45
Multi-Family Residential	60	45

Notes: The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels.
Source: City of Ione 2009 (General Plan Noise & Safety Element, Table 6-1).

Table 3.9-7 City of Ione Exterior Noise Level Performance Standards for All Noise Sources, Including Transportation Noise, for New Projects

Noise-Sensitive Land Use	Maximum Noise Exposure Level (dBA)	
	Outdoor Activity Areas[1]	Interior Spaces
Residential	60[2]	45
Churches	60[2]	45
Playgrounds, Neighborhood Parks	70	--
Schools, Libraries, Museums	--	45
Nursing Homes/Hospitals	60	45

Notes:
[1] Outdoor activity areas are property locations where an individual spends the most outdoor time or where people are likely to congregate.
Where the outdoor activity area is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.
Where it is not possible to reduce noise in outdoor activity areas to 60 dBA or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dBA may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels.
Source: City of Ione 2009 (General Plan Noise & Safety Element, Table 6-2).

- **Policy NS-1.2:** Ensure the outdoor and indoor areas of new projects will be located, constructed and/or shielded from noise sources in compliance with the City's noise standards.
- **Policy NS-1.3:** Ensure that proposed development likely to exceed the City's standards do not create noise disturbance in existing noise-sensitive areas.
- **Policy NS-1.4:** Mitigate noise created by proposed non-transportation noise sources to comply with the City's noise standards to the maximum extent feasible.
  - **Action NS-1.4.1:** Limit construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends, when construction is conducted in proximity to residential land uses.

- **Action NS-1.4.2:** Restrict the hours of operation of loading docks, trash compactors and other noise-producing uses in commercial areas with the potential to significantly impact noise-sensitive land uses.
- **Policy NS-1.5:** Mitigate noise created by the construction of new transportation noise sources to the maximum extent feasible to comply with the City's standards.
  - **Action NS-1.5.1:** Require the use of temporary construction noise control measures including the use of temporary noise barriers, temporary relocation of noise-sensitive land uses, or other appropriate measures as mitigation for noise generated during construction of public and/or private projects.
- **Policy NS-1.7:** Emphasize noise mitigation methods other than soundwall installation.

VIBRATION REGULATIONS

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. The Amador County and City of Ione General Plans also lack vibration standards. Publications of the Federal Transit Administration (FTA) and California Department of Transportation (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 MCSP 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 Amador County General Plan as presented in Section 3.9.2, "Regulatory Considerations," in Table 3.9-4);
- 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;
- 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;
- 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
- expose persons to or generate excessive groundborne vibration or groundborne noise levels in excess of 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 (i.e., residential) land uses.

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 the City of Ione. Noise impacts are considered significant if existing or future noise-sensitive land uses would be exposed to noise levels in excess of the *City of Ione General Plan* standards as described above (see Section 3.9.2, “Regulatory Considerations”), or if implementation of the contemplated development would result in an increase in ambient noise levels at noise sensitive land uses in excess of those listed in Table 3.9-5.

Data included in Chapter 2, “Project Description,” and obtained during onsite noise surveys were used to determine potential locations of sensitive receptors and potential noise- and vibration-generating land uses associated with the development of an infill correctional facility at the 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 MCSP 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 contemplated development 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 of the specific construction equipment that would be used and the resulting noise levels where sensitive receptors are located were calculated.

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

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.9-1: Short-Term Construction-Generated Noise Levels [Complex]

Construction noise levels in the vicinity of the infill site 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 at the infill site and in the surrounding area for the duration of the construction process. It is assumed that the construction equipment fleet mixes and utilization would occur in four separate phases of construction (described in further detail in Chapter 3, “Project Description,” in Volume 1 of this DEIR): demolition and site preparation (Phase 1), grading (Phase 2), utilities (Phase 3), and construction (Phase 4). Construction of a level II infill correctional facility at MCSP 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 3.9-8 lists the noise levels typically generated by various types of construction equipment.

Table 3.9-8 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

Table 3.9-8 Noise Emission Levels from Construction Equipment	
Equipment Type	Typical Noise Level (dBA) at 50 feet
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.

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 at the existing MCSP Correctional Facility are primarily institutional (inmate housing) receptors. Distances from the approximate acoustical center of construction activities for the infill site to onsite noise-sensitive institutional receptors at the existing MCSP facility, range from 2,500 feet to approximately 5,000 feet.

The nearest offsite noise-sensitive receptor in the project vicinity are the rural single-family residential uses along the west side of Waterman Road (R-01 and R-02), located approximately 3,000–3,500 feet east of the acoustical center of the infill site. Additional offsite noise-sensitive residential uses in the vicinity of the infill site are south of the site, within the Castle Oaks housing development (R-03 through R-06); located approximately 4,500 feet or more south of the acoustical center of construction activities at the infill site. Table 3.9-9 shows the predicted hourly average noise levels from construction activities associated with the development of the proposed level II infill correctional facility complex at existing onsite and offsite noise-sensitive receptors, accounting for the usage factor of individual pieces of equipment, topographical shielding, and absorption effects.

As indicated in Table 3.9-8, operational noise levels for typical construction activities would range from 74 to 85dBA at a distance of 50 feet. Table 3.9-9 shows the predicted hourly average noise levels that would be attributable to construction activities of the complex at existing onsite and offsite noise-sensitive receptors when accounting for the usage factor of individual pieces of equipment, topographical shielding and absorption effects.

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).

As shown in Table 3.9-9, construction operations and related activities during Phases 1, 2, and 4 are predicted to generate maximum exterior hourly noise levels of 47 dBA L_{eq} at the nearest onsite noise-

sensitive institutional receiver, MCSP - Pod 1. 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.

Construction operations and related activities during Phase 2 and 4 are predicted to generate maximum exterior hourly noise levels of 40 dBA L_{eq} at the nearest offsite noise-sensitive residential receiver, R-01. Construction activities associated with the project are planned to be performed Monday through Friday between the hours of 7 a.m. and 7 p.m.; as such, construction operations associated with the development of the proposed level II infill correctional facility complex at the MCSP Infill Site would be exempt from the City of Ione Noise and Safety Element noise level criteria. Additionally, construction noise levels generated from development of a level II infill correctional facility complex at the infill site are not anticipated to exceed the City of Ione Noise and Safety Element exterior noise level criteria during daytime hours (7 a.m. to 10 p.m.) at offsite noise-sensitive residential land uses. It should also be noted that offsite construction activities associated with extending City infrastructure to the proposed spray fields would be considered minimal and conducted in accordance with City of Ione General Plan Actions NS-1.4.1 and NS-1.5.1. No residential structures or other sensitive receptors would be located within 500 feet of offsite construction activities, and, as a result, offsite construction noise is not anticipated to exceed local exterior noise level criteria.

Table 3.9-9 Predicted Level II Infill Correctional Facility Complex Construction Noise Levels by Phase

Location	Hourly Average Noise Level, L_{eq} (dBA)			
	Phase 1	Phase 2	Phase 3	Phase 4
Onsite Receptors				
MCSP - Pod 1	47	47	46	47
MCSP - Pod 2	42	43	40	43
MCSP - Pod 3	36	37	34	38
MCSP Level 1	45	46	43	46
Offsite Receptors				
CAL FIRE Academy	42	43	40	43
R-01_10835 Waterman Road	39	40	36	40
R-02_10675 Waterman Road	39	40	37	40
R-03_Oak View Drive	37	38	35	38
R-04_Fairway Drive	36	37	35	37
R-05_Oak View Drive	37	38	35	38
R-06_Castle Oaks Drive	34	34	32	35

Notes: dBA = A-weighted decibels; 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.

While construction of a level II infill correctional facility complex at the MCSP Infill Site would result in short-term construction activities, these construction activities would not expose onsite or offsite noise-sensitive receptors to any 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 [Complex]

Construction activities for the proposed level II infill correctional facility complex on the MCSP 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 3.9-10.

Table 3.9-10 Representative Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 feet (in/sec)[1]	Approximate Lv (VdB) at 25 feet[2]
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 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 1,600 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 a level II infill correctional facility complex at the MCSP 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 [Complex]

Long-term operation of the proposed level II infill correctional facility complex at the MCSP Infill Site 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. Traffic noise was modeled based on the FHWA TNM vehicle noise-level emissions and sound propagation algorithms. Traffic noise levels were evaluated under the following conditions: existing, existing plus complex, existing plus approved projects (EPAP), EPAP plus complex, cumulative (2020), and cumulative (2020) plus complex. ADT volumes and distributions of those volumes were obtained from the transportation impact analysis prepared for contemplated development (Fehr & Peers 2013; refer to Section 3.11 and Appendix 3D of this volume). Vehicle speeds and truck volumes on local area roadways were determined from field observations conducted on January 17, 2013.

Tables 3.9-11 through 3.9-13 summarize modeled CNEL traffic noise levels at a reference distance of 100 feet from the roadway centerline for affected roadway segments in the vicinity of the contemplated development under modeled conditions, with and without operation of a level II infill correctional facility complex at the MCSP Infill Site. 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, relative distances between sources and receiver locations, shielding provided by existing and

proposed structures, and meteorological conditions. Refer to Appendix 3C in this volume for complete modeling inputs and results.

Table 3.9-11 Predicted Traffic Noise Levels – Existing Conditions and Existing Conditions plus Complex

Roadway	Segment Location		CNEL at 100 Feet, dBA			
			Existing Conditions*	Existing plus Complex	Net Change	Significant Impact?
Main Street	From Preston Avenue	To S. Church Street	57.6	57.7	<1	No
Michigan Bar Road	North of	SR 104	59.2	59.5	<1	No
Preston Road	North of	SR 124	56.6	56.8	<1	No
Preston Road	South of	SR 124	57.6	57.7	<1	No
S Church Street	South of	Main Street	55.7	55.8	<1	No
S Ione Street	South of	Main Street	55.8	55.9	<1	No
SR 104	West of	Michigan Bar Road	59.3	59.6	<1	No
SR 104	East of	MCSP Driveway	61.9	62.3	<1	No
SR 124	North of	SR 104	62.1	62.2	<1	No
SR 88	West of	SR 124	66.5	66.5	<1	No
SR 88	East of	SR 124	66.0	66.1	<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 3.9-12 Predicted Traffic Noise Levels – EPAP Conditions and EPAP Conditions plus Complex

Roadway	Segment Location		CNEL at 100 Feet, dBA			
			EPAP*	EPAP plus Complex	Net Change	Significant Impact?
Main Street	From Preston Avenue	To S. Church Street	58.6	58.7	<1	No
Michigan Bar Road	North of	SR 104	60.0	60.1	<1	No
Preston Road	North of	SR 124	57.4	57.6	<1	No
Preston Road	South of	SR 124	58.5	58.6	<1	No
S Church Street	South of	Main Street	56.6	56.7	<1	No
S Ione Street	South of	Main Street	56.8	56.8	<1	No
SR 104	West of	Michigan Bar Road	60.1	60.3	<1	No
SR 104	East of	MCSP Driveway	62.9	63.3	<1	No
SR 124	North of	SR 104	63.0	63.1	<1	No
SR 88	West of	SR 124	66.8	66.8	<1	No
SR 88	East of	SR 124	66.9	67.0	<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 3.9-13 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 Complex	Net Change	Significant Impact?
Main Street	From Preston Ave	To S. Church Street	59.9	60.1	<1	No
Michigan Bar Road	North of	SR 104	57.4	57.6	<1	No
Preston Road	North of	SR 124	58.9	58.9	<1	No
Preston Road	South of	SR 124	56.7	56.7	<1	No
S Church Street	South of	Main Street	57.6	57.6	<1	No
S Ione Street	South of	Main Street	60.1	60.3	<1	No
SR 104	West of	Michigan Bar Road	62.9	63.3	<1	No
SR 104	East of	MCSP Driveway	63.7	63.7	<1	No
SR 124	North of	SR 104	66.8	66.8	<1	No
SR 88	West of	SR 124	68.4	68.5	<1	No
SR 88	East of	SR 124	59.9	60.1	<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 at MCSP would result in changes in traffic noise levels of less 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 a complex at the MCSP 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 MCSP Infill Site would not result in a significant increase in traffic noise levels (exceeding 3–5 dBA), as shown in Tables 3.9-11 through 3.9-13, nor would development of a complex at the MCSP Infill Site cause traffic noise levels to exceed the City of Ione exterior noise level criteria of 60 dBA L_{dn} for the roadway segments shown in Tables 3.9-11 through 3.9-13.

While implementation of a level II infill correctional facility complex at the MCSP 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 or substantial (3-5 dBA or greater) increase in traffic noise along roadways in the vicinity of the MCSP Infill Site, and would not cause an exceedance of the City of Ione General Plan Noise Element 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 [Complex]

Development of the proposed level II infill correctional facility complex at the MCSP 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. It should be noted that because of the infrequent and intermittent nature of these noise sources, evaluation of the potential for these sources to generate noise simultaneously is not considered appropriate.

Support infrastructure for the infill correctional facility that is typically handled at a central plant, such HVAC, mechanical systems, emergency generators and utility distribution areas, would be facilitated through the existing infrastructure support of MCSP. 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

Development of a single, level II infill correctional facility at MCSP 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.

Inmates and personnel associated with the infill facility are the intended audience for information broadcast 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, while not reaching levels that would be considered excessively loud for the intended audience. Because inmates and personnel within the infill correctional facility are considered the intended audience and users of the PA system, onsite receptors within the contemplated infill facility are not considered to be “noise sensitive” with respect to this noise source, just as inmates at the existing MCSP detention facility are not considered “sensitive” with respect to existing PA system noise levels.

Offsite noise-sensitive residential land uses nearest the MCSP Infill Site are located 3,000 feet southeast of the acoustical center of the PA system (R-01 and R-02), with additional residential receivers approximately 4,000 feet to the south (R-03 through R-06). Modeled PA system noise levels at these noise-sensitive receptors are presented in Table 3.9-14.

Table 3.9-14 Modeled Public Address System Noise Levels – Complex Housing Unit

Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
Offsite Receptors		
CAL FIRE Academy	35	38
R-01_10835 Waterman Road	32	35
R-02_10675 Waterman Road	32	35
R-03_Oak View Drive	30	33
R-04_Fairway Drive	29	32
R-05_Oak View Drive	30	33
R-06_Castle Oaks Drive	27	30

Notes: dBA = A-weighted decibels; 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 façades.
Source: Extant Acoustical Consulting 2013.

As presented below in Table 3.9-14, exterior noise levels associated with the operation of a PA system at the level II infill correctional facility complex are anticipated to be 30–38 dBA L_{eq} and 40–49 dBA L_{max} at nearby offsite residential receivers (R-01 through R-06). PA system noise levels associated with the development of a complex at the MCSP Infill Site are not anticipated to exceed the City of Ione exterior noise level criteria during daytime (7 a.m. to 10 p.m.) or nighttime hours (10 p.m. to 7 a.m.) at offsite noise-sensitive residential land uses.

Parking Lot Activities

Implementation of a level II infill correctional facility complex would require additional parking to support staff and visitors of the infill facility. Parking would be located directly adjacent to the south side of the complex, with an access road leading south towards SR 104. 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 a 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 staff 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, with additional spaces included for weekend visitation, assumed for 15 percent of the inmate population. Therefore, a complex is planned to include approximately 417 parking stalls. These assumptions were used as input to the SoundPLAN noise simulation model created for the project. The resultant parking noise levels at noise-sensitive receptors in the vicinity are shown in Table 3.9-15.

Table 3.9-15 Modeled Parking Lot Noise Levels – Complex Housing Unit

Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
Onsite Receptors		
Infill Family Visiting – East Housing Unit	34	52
Infill Housing Unit – East Housing Unit	37	54
Infill Family Visiting – West Housing Unit	33	52
Infill Housing Unit – West Housing Unit	33	54
MCSP - Pod 1	--[1]	27
MCSP - Pod 2	18	30
MCSP - Pod 3	--[1]	25
MCSP Level 1	20	33
Offsite Receptors		
CAL FIRE Academy	--[1]	--[1]
R-01_10835 Waterman Road	--[1]	--[1]
R-02_10675 Waterman Road	--[1]	--[1]
R-03_Oak View Drive	--[1]	--[1]
R-04_Fairway Drive	--[1]	--[1]
R-05_Oak View Drive	--[1]	--[1]
R-06_Castle Oaks Drive	--[1]	--[1]

Notes: dBA = A-weighted decibels; 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 would be provided by building facades.
Source: Extant Acoustical Consulting, 2013.

Exterior noise levels generated from parking operations at the level II infill correctional facility complex would result in average hourly noise levels ranging from less than 15 to 37 dBA L_{eq} and maximum noise levels of 25 to 54 dBA L_{max} at onsite institutional land uses exposed to infill parking noise. Based on the ambient noise levels recorded during the noise level survey, exterior parking lot noise levels would likely be at or below ambient noise levels experienced at the noise-sensitive receptor locations. 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 onsite noise-sensitive institutional receptors.

Exterior noise levels generated from parking operations at the level II infill correctional facility complex are anticipated to be 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 City of Ione exterior noise level criteria of 55 dBA during daytime hours (7 a.m. to 10 p.m.) or 45 dBA during nighttime hours (10 p.m. to 7 a.m.).

Other Stationary Noise Sources
Additional intermittent noise sources attributable to operation of the contemplated level II infill correctional facility complex include the opening and closing of entries, adult voices, varied 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.

Operation of the level II infill correctional facility complex at the MCSP 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 the complex would not result in a noticeable (3 dBA or greater) increase in noise levels in the vicinity of the MCSP Infill Site, and would not cause an exceedance of the City of Ione stationary source noise level criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-5a: Potential for Incompatibility of Proposed Onsite Land Uses with the Ambient Noise Environment [Complex]

Development of the proposed level II infill correctional facility complex at the MCSP Infill Site would include development of new noise-sensitive institutional receptors (infill housing units). The State has established noise compatibility standards for prisons and institutional land uses 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).

Based on the noise monitoring conducted at and around the infill site, average daytime ambient noise levels currently range from approximately 46 to 52 dBA L_{eq} (Table 3.9-1). Therefore, development of the single, level II infill correctional facility at the MCSP Infill Site is not anticipated to result in the exposure of new noise-sensitive receptors to existing ambient noise levels that would exceed the Title 24 daytime or nighttime noise level criteria of 70 dBA and 45 dBA L_{eq}, respectively.

Westover Field is located approximately 7 nautical miles east of the infill site. The infill site is not within the airport’s 60 dBA CNEL noise contour, according to the most recent noise contours in the Amador County General Plan (originally published in 1987, revised in 1990). Existing aircraft flyovers occur at

the infill site; however, the 60 dBA CNEL noise contour is approximately 6.2 nautical miles east of the MCSP Infill Site. As a result, aircraft noise may be audible depending on varying environmental effects, but aircraft overflights are not expected to result in noise levels at the proposed level II infill correctional facility complex that exceed Title 24 interior noise level regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours at onsite noise-sensitive institutional receptors.

The proposed level II infill correctional facility complex is located more than 3,000 feet from the nearest roadway, SR 104. Traffic noise from SR 104 is the primary traffic noise source affecting the MCSP Infill Site. Based on the predicted traffic noise levels for SR 104, the distance from the roadway to receptors, and shielding provided by topography and intervening structures, traffic noise levels are expected to be attenuated to no louder than the level of other background noise sources in the project study area. Based on the traffic noise modeling and assuming an exterior-to-interior noise level reduction of 25 dB, development of the single, level II infill correctional facility at the MCSP Infill Site would not cause the exposure of new noise-sensitive receptors at the infill site to noise levels that exceed the Title 24 regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours at onsite noise-sensitive institutional receptors.

Development of the proposed level II infill correctional facility complex at the infill site would not affect the location, configuration, or operation of the existing firing ranges. It is expected that operation of the existing firing ranges would continue during and following development of the infill site. As such, exposure of existing onsite noise-sensitive receptors to firing range noise would remain consistent with existing conditions. Exposure of inmates within the level II infill facility complex was modeled based on the assumptions previously outlined and for the combined noise level exposure from both the CAL FIRE and MCSP firing ranges.

Modeled firing range noise levels from concurrent operation of both the CAL FIRE and MCSP ranges at the infill site would be 39–47 dBA L_{eq} and 48–52 dBA L_{max} at the exterior building façades of the inmate housing units. Assuming an average exterior-to-interior noise reduction of 25 dBA, interior noise levels at onsite 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.

Implementation of a single, level II infill correctional facility at the MCSP Infill Site c would not expose onsite noise-sensitive land uses to noise levels exceeding applicable criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.9-1b: Short-Term Construction-Generated Noise Levels [Single Facility]

Implementation of a single, level II infill correctional facility at the MCSP Infill Site would include the generation of construction noise. Construction equipment and the associated generated noise would be similar to that described for the proposed complex. Table 3.9-16 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 in the vicinity of the infill site.

As shown in Table 3.9-16, construction operations and related activities during Phases 1, 2, and 4 are predicted to generate maximum exterior hourly noise levels of 43 dBA L_{eq} at the nearest onsite noise-sensitive institutional receiver, MCSP - Pod 1. 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.

Table 3.9-16 Predicted Single Facility Construction Noise Levels by Phase

Location	Noise Level (L_{eq}, dBA)			
	Phase 1	Phase 2	Phase 3	Phase 4
Onsite Receptors				
MCSP - Pod 1	36	38	34	37
MCSP - Pod 2	39	41	37	40
MCSP - Pod 3	35	36	33	35
MCSP Level 1	41	43	39	42
Offsite Receptors				
CAL FIRE Academy	40	42	38	42
R-01_10835 Waterman Road	38	39	36	38
R-02_10675 Waterman Road	38	39	36	38
R-03_Oak View Drive	36	36	33	35
R-04_Fairway Drive	34	35	32	34
R-05_Oak View Drive	35	36	33	35
R-06_Castle Oaks Drive	31	32	29	32

Notes: dBA = A-weighted decibels.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation would be provided by building façades.
Source: Extant Acoustical Consulting LLC, 2013

Construction operations and related activities during Phase 2 and 4 are predicted to generate maximum exterior hourly noise levels of 39 dBA L_{eq} at the nearest offsite noise-sensitive residential receiver, R-01. Construction activities associated with the project are planned to be performed Monday through Friday between the hours of 7 a.m. and 7 p.m.; as such, construction operations associated with the development of the single, level II infill correctional facility at the MCSP Infill Site would be exempt from the City of Ione Noise and Safety Element noise level criteria. Additionally, construction noise levels generated from development of a single, level II infill correctional facility at the infill site are not anticipated to exceed the City of Ione Noise and Safety Element exterior noise level criteria during daytime hours (7 a.m. to 10 p.m.) at offsite noise-sensitive residential land uses.

While construction of a single, level II infill correctional facility at the MCSP Infill Site would result in short-term construction activities, these construction activities would not expose onsite or offsite noise-sensitive receptors to any 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 [Single Facility]

Construction activities associated with a single, level II infill correctional facility at the MCSP Infill Site would be similar to those associated with construction of a complex. As with the proposed complex, the distance from the nearest sensitive receptor to the single facility would be 1,600 feet. Therefore, the

same vibration analysis presented above for the proposed level II infill correctional facility complex would apply to a single facility.

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 1,600 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 a single, level II infill correctional facility at the MCSP 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 [Single Facility]

Long-term operation of a single, level II infill correctional facility at the MCSP Infill Site 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. Traffic noise was modeled based on the FHWA TNM vehicle noise-level emissions and sound propagation algorithms. Traffic noise levels were evaluated under the following conditions: existing, existing plus single facility and complex, existing plus approved projects (EPAP), EPAP plus single facility and complex, cumulative (2020), and cumulative (2020) plus single facility and complex. ADT volumes and distributions of those volumes were obtained from the transportation impact analysis prepared for contemplated development (Fehr & Peers 2013; refer to Section 3.11 and Appendix 3D of this volume). Vehicle speeds and truck volumes on local area roadways were determined from field observations conducted on January 17, 2013.

Tables 3.9-17 through 3.9-19 summarize modeled CNEL noise levels at a reference distance of 100 feet from the roadway centerline for affected roadway segments in the project vicinity under modeled conditions, with and without implementation of a single, level II infill correctional facility at the MCSP Infill Site. 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, relative distances between sources and receiver locations, shielding provided by existing and proposed structures, and meteorological conditions. Refer to Appendix 3C in this volume for complete modeling inputs and results.

As shown in Tables 3.9-17 through 3.9-19, the largest increase in roadway noise associated with the development of the infill facility at the MCSP Infill Site would be less than 1 dBA on any affected road segment, which would be barely perceptible. Development of a single facility at the MCSP Infill Site would not result in a significant increase in traffic noise levels (an increase of greater than 3–5 dBA). Furthermore, development would not cause traffic noise levels to exceed the City of Ione exterior noise level criteria of 60 dBA L_{dn} for the roadway segments shown in Tables 3.9-17 through 3.9-19.

Table 3.9-17 Predicted Traffic Noise Levels – Existing Conditions and Existing Conditions plus Single Facility

Roadway	Segment Location		CNEL at 100 Feet, dBA			
			Existing Conditions*	Existing plus Single Facility	Net Change	Significant Impact?
Main Street	From Preston Avenue	To S. Church Street	57.6	57.7	<1	No
Michigan Bar Road	North of	SR 104	59.2	59.4	<1	No
Preston Road	North of	SR 124	56.6	56.7	<1	No
Preston Road	South of	SR 124	57.6	57.7	<1	No
S. Church Street	South of	Main Street	55.7	55.7	<1	No
S. Ione Street	South of	Main Street	55.8	55.9	<1	No
SR 104	West of	Michigan Bar Road	59.3	59.5	<1	No
SR 104	East of	MCSP Driveway	61.9	62.1	<1	No
SR 124	North of	SR 104	62.1	62.1	<1	No
SR 88	West of	SR 124	66.5	66.5	<1	No
SR 88	East of	SR 124	66.0	66.0	<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 3.9-18 Predicted Traffic Noise Levels – Existing Conditions plus Approved Projects (EPAP) and EPAP plus Single Facility

Roadway	Segment Location		CNEL at 100 Feet, dBA			
			EPAP Conditions*	EPAP plus Single Facility	Net Change	Significant Impact?
Main Street	From Preston Avenue	To S. Church Street	58.6	58.6	<1	No
Michigan Bar Road	North of	SR 104	60.0	60.0	<1	No
Preston Road	North of	SR 124	57.4	57.5	<1	No
Preston Road	South of	SR 124	58.5	58.6	<1	No
S Church Street	South of	Main Street	56.6	56.6	<1	No
S Ione Street	South of	Main Street	56.8	56.8	<1	No
SR 104	West of	Michigan Bar Road	60.1	60.2	<1	No
SR 104	East of	MCSP Driveway	62.9	63.1	<1	No
SR 124	North of	SR 104	63.0	63.1	<1	No
SR 88	West of	SR 124	66.8	66.8	<1	No
SR 88	East of	SR 124	66.9	67.0	<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 3.9-19 Predicted Traffic Noise Levels –Cumulative (2020) Conditions and Cumulative (2020) Conditions plus Single Facility

Roadway	Segment Location		CNEL at 100 Feet, dBA			
			2020 Conditions	2020 plus Single Facility	Net Change	Significant Impact?
Main Street	From Preston Avenue	To S. Church Street	59.1	59.1	<1	No
Michigan Bar Road	North of	SR 104	60.0	60.0	<1	No
Preston Road	North of	SR 124	57.4	57.5	<1	No
Preston Road	South of	SR 124	58.9	58.9	<1	No
S Church Street	South of	Main Street	56.7	56.7	<1	No
S Ione Street	South of	Main Street	57.6	57.6	<1	No
SR 104	West of	Michigan Bar Road	60.1	60.2	<1	No
SR 104	East of	MCSP Driveway	62.9	63.1	<1	No
SR 124	North of	SR 104	63.7	63.7	<1	No
SR 88	West of	SR 124	66.8	66.8	<1	No
SR 88	East of	SR 124	68.4	68.4	<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

While implementation of a single, level II infill correctional facility at the MCSP Infill Site could result in an increase of average daily vehicle trips in the project's vicinity, the increased traffic volumes would not result in a significant (3–5 dBA or greater) increase in traffic noise along roadways in the vicinity of the MCSP Infill Site and would not cause an exceedance of the City of Ione noise level criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-4b: Long-Term Increase in Onsite Noise Levels from Operation of Stationary Noise Sources [Single Facility]

Public Address System

Development of a single, level II infill correctional facility at MCSP 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.

Inmates and personnel associated with the infill facility are the intended audience for information broadcast 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, while not reaching levels that would be considered excessively loud for the intended audience. Because inmates and personnel within the infill correctional facility are considered the intended audience and users of the PA system, onsite receptors within the contemplated infill facility are not considered to be "noise sensitive" with respect to this noise source, just as inmates at the existing MCSP detention facility are not considered "sensitive" with respect to existing PA system noise levels.

Offsite noise-sensitive residential land uses nearest the MCSP Infill Site are located 3,000 feet southeast of the acoustical center of the PA system (R-01 and R-02), with additional residential receivers approximately 4,000 feet to the south (R-03 through R-06). Modeled PA system noise levels at these noise-sensitive receptors are presented in Table 3.9-20.

Table 3.9-20 Modeled Public Address System Noise Levels – Single Facility

Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
Offsite Receptors		
CAL FIRE Academy	30	33
R-01_10835 Waterman Road	26	29
R-02_10675 Waterman Road	27	30
R-03_Oak View Drive	26	29
R-04_Fairway Drive	25	28
R-05_Oak View Drive	26	29
R-06_Castle Oaks Drive	22	25

Notes: dBA = A-weighted decibels; 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.

As presented in Table 3.9-20, exterior noise levels associated with operation of a PA system at the single, level II infill correctional facility are anticipated to be 25–33 dBA L_{eq} and 40–47 dBA L_{max} at the nearest offsite residential land use. PA system noise levels associated with the development of a single infill correctional facility at the MCSP Infill Site are not anticipated to exceed the City of Ione exterior noise level criteria during daytime (7:00 a.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.) hours at onsite noise-sensitive residential land uses.

Parking Lot Activities

Development of a single, level II infill correctional facility at the MCSP Infill Site would require additional parking for staff and visitors of the infill facility. Parking would be located directly south of the single infill facility, with an access road connecting to SR 104. 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, level II infill 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 simulation model created for the project. The resultant parking lot noise levels at noise-sensitive uses in the vicinity are shown in Table 3.9-21.

Table 3.9-21 Modeled Parking Lot Noise Levels – Single Facility

Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
Onsite Receptors		
Infill Family Visiting	32	51
Infill Housing Unit	27	42
MCSP - Pod 1	--[1]	26
MCSP - Pod 2	17	29
MCSP - Pod 3	--[1]	24
MCSP Level 1	19	32
Offsite Receptors		
CAL FIRE Academy	15	18
R-01_10835 Waterman Road	--[1]	--[1]
R-02_10675 Waterman Road	--[1]	--[1]
R-03_Oak View Drive	--[1]	--[1]
R-04_Fairway Drive	--[1]	--[1]
R-05_Oak View Drive	--[1]	--[1]
R-06_Castle Oaks Drive	--[1]	--[1]

Notes: dBA = A-weighted decibels; 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 would be provided by building façades.
Source: Extant Acoustical Consulting 2013.

Exterior noise levels generated from parking operations at the single, level II infill correctional facility would result in average hourly noise levels ranging from less than15 to 32 dBA L_{eq} and noise levels of 24–51 dBA L_{max} at onsite institutional land uses exposed to infill parking noise. Based on the ambient noise levels recorded during the noise level survey, exterior parking lot noise levels would likely be at or below ambient noise levels experienced at many of the noise-sensitive receptor locations. 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 onsite noise-sensitive institutional receptors.

Exterior noise levels generated from parking operations at the single, level II infill correctional facility are anticipated to be less than those reported above at all offsite residential land uses and would be dominated by the existing ambient noise. Noise levels are not be anticipated to approach or exceed the City of Ione exterior noise level criteria of 55 dBA during daytime hours (7 a.m. to 10 p.m.) or 45 dBA during nighttime hours (10 p.m. to 7 a.m.).

Other Stationary Noise Sources
Additional intermittent noise sources attributable to operation of the contemplated development include the opening and closing of entries, adult voices, varied 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.

Operation of a single, level II infill correctional facility at the MCSP 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 the infill facilities would not result in a noticeable (3 dBA or greater) increase in noise levels in the vicinity of the MCSP Infill Site, and would not cause of an

exceedance of the City of Ione stationary source noise level criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-5b: Potential for Incompatibility of Proposed Onsite Land Uses with the Ambient Noise Environment [Single Facility]

Development of a single, level II infill correctional facility complex would involve nearly the same location as development of the proposed complex. Perceived noise levels from traffic, aircraft, and other sources would be similar to those for a level II infill correctional facility complex. The same analysis presented above for the proposed complex would apply to a single facility. As such, 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 onsite and offsite noise-sensitive institutional receptors in the vicinity of the single, level II infill correctional facility.

Implementation of a single, level II infill correctional facility at the MCSP 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 Measures

No mitigation measures are required.

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3.10 PUBLIC SERVICES

This section describes the existing public services provided to the Mule Creek State Prison (MCSP) Infill Site, including police services, fire protection services, emergency medical response services, schools, and parks. Impacts are evaluated in relation to the potential for increased demand associated with development of a level II infill correctional facility at the MCSP Infill Site and any 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 level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site. Public utilities at MCSP (i.e., water supply, wastewater treatment and disposal, solid waste disposal, and electricity and natural gas systems) are discussed in Section 3.12, "Utilities," of this volume of the draft environmental impact report (DEIR).

3.10.1 ENVIRONMENTAL SETTING

POLICE SERVICES

The California Department of Corrections and Rehabilitation (CDCR) staffs the existing MCSP with 689 correctional officers equipped to manage site security (CDCR 2010). Throughout the remainder of the City of Ione, the Ione City Police Department provides law enforcement services, including traffic enforcement, patrol, and investigation (City of Ione 2009a). The Ione City Police Department staff includes a Chief of Police, three patrol officers, a K-9 officer, and 11 volunteer patrol officers (Ione Police Department n.d.). The Ione City Police Department has an average of 1.4 paid sworn officers per 1,000 residents, which is similar to the average ratio for California cities of 1.5 officers per 1,000 residents (City of Ione 2009b).

The Ione Police Department relies on the Amador County Sheriff's Office for specialized team services (City of Ione 2009a). The sheriff's office provides patrol and investigation services, as well as a dive team, a search and rescue team, a special weapons and tactics team, a marine enforcement unit, off-highway vehicle enforcement, and general traffic enforcement services. Most traffic enforcement is provided by the California Highway Patrol's Valley Division (City of Ione 2009b).

FIRE PROTECTION

The MCSP Fire Department is responsible for protecting property belonging to the CDCR, including the former Preston Youth Correctional Facility. The MCSP Fire Department also provides response within the city's primary response area when specifically requested by the City (City of Ione 2009b). The City of Ione Fire Department provides fire prevention, fire protection, fire suppression, basic life support, low-angle rescue, and water rescue services to all areas within the city limits, including both of the prisons and the state fire academy (which are located within the city limits) (City of Ione 2009b).

In addition to serving the city, Ione's firefighters operate in a service area of approximately 38 square miles outside city boundaries. The Ione Fire Department operates from two fire stations, one located on W. Jackson Street (Station 1) in downtown, and another located on Preston Avenue (Station 2) north of Sutter Creek and just south of Waterman Road. Operations and management of the fire department are based out of Station 2, approximately 1 mile south of the MCSP Infill Site (City of Ione 2009a). Throughout the service area, Ione Fire Department's 90th percentile response time is 9.6 minutes. The median response time in the service area is 5.8 minutes (City of Ione 2009b).

The California Department of Forestry and Fire Protection (CAL FIRE), located adjacent to MCSP, is responsible for responding to wildland fires in the area around the City of Ione, and provides mutual aid assistance to the Ione Fire Department (City of Ione 2009a). CAL FIRE responds to all service calls in the county, in addition to the response by the local fire provider. CAL FIRE also provides fire dispatch for each of the fire providers in the county. CAL FIRE maintains staffed stations during the wet months of the year to ensure that all service calls throughout Amador County receive a response (City of Ione 2009c).

EMERGENCY SERVICES

The MCSP Fire Department is the primary provider of emergency services to the existing MCSP. Emergency medical aid service in the City of Ione is provided by the Ione Fire Department as a first responder. For calls involving emergency medical services, the Ione Fire Department provides basic life support response until American Legion Ambulance Service, a contracted nonprofit organization, arrives to perform advanced life support and ambulance transport (City of Ione 2009a). In addition, CAL FIRE provides emergency response to structure fires, vehicle accidents, medical emergencies, swift water rescues, search and rescues, hazardous material spills, train wrecks, and natural disasters (City of Ione 2009c).

Neither the City of Ione nor Amador County currently has an adopted emergency response plan or emergency evacuation plan (City of Ione 2009c); however, MCSP has its own emergency response/evacuation plan.

SCHOOLS

The City of Ione is served by the Amador County Unified School District. The district operates two public schools, Ione Elementary and Ione Junior High, within the city limits. Students are bussed to Argonaut High School in Sutter Creek to attend high school (City of Ione 2009a). Enrollment at each school serving the City of Ione has declined somewhat over the past few years. As of 2008–2009, Ione Elementary School was at 86% of its 600-student capacity with 516 students; enrollment has dropped to 461 students in the 2011–2012 school year, 77% of capacity. Ione Middle School was at 68% of its 599-student capacity with 405 students in 2008–2009, declining to 372 in the 2011–2012 school year, or 62% of capacity. Argonaut High School was at 81% of its 794-student capacity in the 2008–2009 school year with 640 students, declining to 589 students (74% of capacity) in the 2011–2012 school year (City of Ione 2009b, Amador County Unified School District n.d.).

PARKS

The City of Ione's recreational facilities consist of four small parks and one large community park. The small parks include Oakridge Park, Train Park at City Hall, Perry Earl Park, and Pioneer Park (also known as Grover Park). These smaller parks mainly serve neighborhoods, with benches and historical exhibits. Howard Park includes a play structure, group picnic areas, four baseball diamonds, four soccer fields, a basketball court, a community building, restrooms, and parking. The nearest park to the MCSP Infill Site is the 2-acre Pioneer Park, located approximately 1.25 miles south 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 the development of a level II infill site at MCSP.

STATE PLANS, POLICIES, REGULATIONS AND LAWS

A list of the applicable state and local plans, policies, regulations, and laws related to public services is provided below. Complete summaries of the federal and state 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 Buildings Standards Code - 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.

Amador County Park and Recreation Master Plan

The Amador County Recreation Agency is a joint powers authority consisting of Amador County; the Amador County Unified School District; the cities of Amador, Ione, Jackson, Plymouth, and Sutter Creek; and the Community Services Districts for Volcano and Camanche. The agency provides park and recreation services in the county. The Master Plan helps identify parks and recreation opportunities and create an overall vision for meeting recreation needs (Amador County Recreation Agency 2006).

City of Ione General Plan

The general plan includes goals to maintain sufficient levels of police and fire protection to protect public safety and property. The general plan requires all new development within the city over which the City has discretionary authority to provide adequate emergency access features.

The City of Ione General Plan (2009a) also establishes policies designed to meet the goal of ensuring the highest possible level of education to students in Ione, including reestablishing a high school in the community.

3.10.3 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 MCSP Infill Site would result in a significant impact relating to public services 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,” in this volume of the DEIR, new staff at the MCSP Infill Site would be distributed among several cities and communities. 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 1 and 2 of this volume of the DEIR, construction and operation of a level II infill correctional facility complex at MCSP is part of the proposed project. The following impact discussion also evaluates a single facility as an alternative to development of the complex. For the purposes of this analysis, the evaluation of construction and operation of the proposed complex at the MCSP Infill Site is presented first, followed by the evaluation of the impacts associated with development of a single facility.

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.10-1a: Impacts on Police Services [Complex]

Development of a level II infill correctional facility complex at the MCSP Infill Site would increase in the number of employees on the CDCR property by approximately 377 staff, 207 of whom would be correctional officers. These new correctional officers, along with the existing police and correctional officers at the existing MCSP facilities, would provide police protection at the complex. To provide additional police presence when support is needed, CDCR would continue mutual aid agreements with the Ione Police Department.

As described in Section 3.4, “Employment, Population, and Housing,” in this volume of the DEIR, the additional employee population would be expected to come largely from the existing workforce. In the event that some of these new employees are new residents to the area, they would likely be dispersed throughout the surrounding communities and would not cause a substantial increase in demand for police protection services. Further, there is no known connection between the presence of prison facilities and increased crime rates in the surrounding communities. Therefore, demand on police services in the neighboring communities is not expected to increase substantially as a result of the development of a complex.

Development of a level II infill correctional facility complex at the MCSP 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 result in a relatively small increase in the volume of calls to the Ione 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 [Complex]

Development of a level II infill correctional facility complex at the MCSP Infill Site would result in an increase in the number of employees at the prison site by approximately 377 staff. As described in Section 3.4, “Employment, Population, and Housing” of this volume, the additional employee population would not generate a substantial number of new residents or concentrate new residents within any one city (relative to the city’s population and planned growth). Therefore, the contemplated development 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.

Although the MCSP Fire Department can manage most fire protection services onsite, the infill site is also served by the Ione Fire Department through mutual aid agreement and additional aid is available from the adjacent CAL FIRE facilities. Further, the contemplated complex at the infill site would be designed to meet state building standard and the level II infill correctional facility complex would include defensible space and structures designed based on consultation with the State Fire Marshall. Structures would contain water sprinkler systems sufficient to handle most fire emergencies, as well as adequate and accessible fire suppression systems. Therefore, it is not anticipated that a complex would significantly affect the ability of these departments to continue to provide adequate levels of fire protection services to the infill site and surrounding areas.

Implementation of the level II infill correctional facility complex at the MCSP 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 [Complex]

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 MCSP 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 MCSP includes contingency plans to respond to the following types of emergency situations: war, flood, civil disturbance, pollution, earthquake, fire, and industrial accident transportation. 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 MCSP. Employees are trained to follow specific instructions and precautionary measures for emergencies, and in the use of emergency equipment and medical aids. Development of a level II infill correctional facility complex at the MCSP Infill Site would not interfere with plan compliance. Following the existing Emergency Preparedness Plan for MCSP would address any potential impairment to the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan.

Primary emergency medical services for any development at the complex would be provided by the onsite MCSP Fire Department. The City of Ione Fire Department would also provide emergency medical services to the complex through the existing mutual aid agreement. The contemplated development would operate under the existing emergency response plan without impairing plan implementation.

Development of the level II infill correctional facility complex at the MCSP 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 [Complex]

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 volume, most of the new employees for a level II infill correctional facility complex at the MCSP Infill Site would likely reside in Sacramento, Amador, and San Joaquin Counties. 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. In the instance of the proposed complex, sufficient capacity is available at schools that would likely serve children of new employees; enrollment has declined in local (Amador County) schools over the past few years, and there appears to be ample available student capacity. 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 local superintendent of schools for allocation among affected local education agencies. CDCR would pay the remaining $400 per bed to the City of Ione and Amador County 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 MCSP Infill Site. 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 where necessary to fund new facilities. Local schools in the project area have seen declining enrollment and available capacity the past several years. 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 California Government Code Section 15819.403, CDCR would also contribute $633,600 to the superintendent of Amador County schools for distribution to school districts affected by implementation of the level II infill correctional facility complex at the MCSP Infill Site. School impacts would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.10-1b: Impacts on Police Services [Single Facility]

Development of a single, level II correctional facility at the MCSP Infill Site would increase the number of employees at MCSP 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 MCSP facilities, would provide police protection at the new level II infill facility. To provide additional police presence when support is needed, CDCR would continue mutual aid agreements with the Ione Police Department.

As discussed under Impact 3.10-1a above, the additional employee population would be expected to come largely from the existing workforce and there is no known connection between the presence of prison facilities and increased crime rates in the surrounding communities. Therefore, demand on police services in the neighboring communities is not expected to increase substantially as a result of the single facility.

Development of the single, level II correctional facility at the MCSP 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 result in a relatively small increase in the volume of calls to the Ione 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 [Single Facility]

The development of a single, level II correctional facility at the MCSP Infill Site would result in an increase in the number of employees at the prison site of up to 193 staff. As described in Section 3.4, “Employment, Population, and Housing,” of this volume of the DEIR, the additional employee population would not generate a substantial number of new residents or concentrate new residents within any one community. Therefore, employees associated with a single, level II correctional facility at

the infill site would not create substantial demand for new fire protection service facilities, and adverse physical impacts associated with development of the infill site would not occur.

Although the MCSP Fire Department can manage most fire protection services onsite, the infill site is also served by the Ione Fire Department through an existing mutual aid agreement, and additional aid is available from the adjacent CAL FIRE facilities/resources. Further, to limit the potential for fire and wildfires from adjacent lands, CDCR would design the infill site to meet state building standards; it would contain water sprinkler systems sufficient to handle most fire emergencies, in addition to providing an adequate number of fire suppression systems. CDCR will consult with the State Fire Marshall to ensure structures are designed to be resistant to wildfire, including proper landscaping practices, construction standards and techniques, adequate emergency water supply needs, and access. Therefore, it is not anticipated that the development of a single facility at MCSP would significantly affect the ability of fire departments to continue to provide adequate levels of fire protection services to the MCSP Infill Site or surrounding areas.

Implementation of a single, level II correctional facility at the MCSP 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 [Single Facility]

As discussed above for the proposed complex (see Impact 3.10-3a above), the MCSP Fire Department would provide primary emergency response to the infill site with development of a single facility at the MCSP Infill Site. The City of Ione Fire Department would also provide emergency medical services to the site through the existing mutual aid agreement. The contemplated development would operate under the existing emergency response plan without impairing plan implementation.

Development of the single, level II correctional facility at the MCSP 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 [Single Facility]

Similar to the complex option (see Impact 3.10-4a above), most of the new employees for a single facility at the MCSP Infill Site would likely reside in Sacramento, Amador, and San Joaquin Counties. 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. In the instance of a single facility, sufficient capacity is available at schools that would likely serve children of new employees; enrollment has declined in local (Amador County) schools over the past few years, and there appears to be ample available student capacity. 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 local superintendent of schools for allocation among affected local education agencies. CDCR would pay the remaining $400 per bed to the City of Ione and Amador County 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 MCSP Infill Site. 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 where necessary to fund new facilities. 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 California Government Code Section 15819.403, CDCR would also contribute $317,200 to the superintendent of Amador County schools for distribution to affected school districts affected by implementation of the single, level II correctional facility at the MCSP Infill Site. School impacts would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

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3.11 TRANSPORTATION

This section provides an evaluation of the Mule Creek State Prison (MCSP) level II infill correctional facility's traffic impacts based on an analysis conducted by Fehr & Peers. This analysis is based on traffic volume data collected in January and February 2013; site visits conducted in January and February 2013; and incorporation, where appropriate, of data from local and regional transportation studies. The impact analysis has been organized into two parts. The first part addresses the proposed level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site. Impacts related to potential hazards due to aircraft operations are addressed in Section 3.6, "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 study area. State Route (SR) 104, SR 124, SR 16, and SR 88 provide primary regional access to the study area. SR 104 would provide access to the MCSP Infill Site. Brief descriptions, including physical characteristics of principal roads and highways serving the study area, are detailed below.

SR 104 is generally an east-west state highway that connects SR 99 in Galt to SR 49 in Sutter Creek. SR 104 is identified as a two-lane major collector in the *2004 Amador County Regional Transportation Plan Update*, and a major arterial in the *City of Ione General Plan*. SR 104 overlaps with SR 124 in the City of Ione from Shakeley Lane to S. Church Street. Through downtown Ione, SR 104 is also called Preston Avenue, Main Street, and S. Ione Street.

SR 124 is generally a north-south state highway that connects SR 16 and SR 88 in Amador County. SR 124 is identifies as a two-lane minor arterial in the *2004 Amador County Regional Transportation Plan Update* (Amador County Transportation Commission (ACTC), 2006), and a major arterial in the *City of Ione General Plan* (City of Ione, 2009). SR 124 shares a route with SR 104 in the City of Ione from Shakeley Lane to S. Church Street. Through downtown Ione, SR 124 is also called Preston Avenue, Main Street, and S. Church Street.

SR 16 is generally an east-west, two-lane state highway that connects U.S. Highway 50 (US 50) in Sacramento with SR 49 in Amador County. Throughout the study area, SR 16 is also referred to as Jackson Road. The California Department of Transportation (Caltrans) is currently considering relinquishing ownership and operation of SR 16 to the local jurisdictions through which the roadway extends.

Ione Michigan Bar Road is generally a north-south, two-lane major collector that connects SR 16 in Sacramento County to SR 104 in Amador County.

SR 88 is an east-west, two-lane state highway that intersects with SR 99 in Stockton at its west end and the California-Nevada border at its east end. SR 104 and SR 124 intersect SR 88 south of Ione.

Preston Avenue is the local street name for the section of SR 104 through the City of Ione. Preston Avenue is a two-lane arterial roadway. Preston Avenue terminates at Main Street in downtown Ione.

Main Street is an east-west, two-lane arterial roadway within the City of Ione. Main Street shares a route with SR 104 from Preston Avenue to Ione Street, and SR 124 from Preston Avenue to Church Street.

S. Church Street is a north-south, two-lane arterial roadway within the City of Ione. Church Street shares a route with SR 124 south of Main Street.

S. Ione Street is a north-south, two-lane arterial roadway within the City of Ione. Ione Street shares a route with SR 104 from Main Street to Marlette Street.

EXISTING TRANSIT FACILITIES

Transit service within Amador County is provided by Amador Transit and includes fixed-route service Monday through Friday between Sacramento, Plymouth, Mace Meadow, Jackson, and Ione. Seven routes are provided throughout the Amador Transit service area. Route 7 provides service within the City of Ione from 7:45 a.m. to approximately 4:40 p.m. Service is provided twice per day to downtown Sacramento with connections to Sacramento International Airport via Yolo Bus.

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Bicycle facilities throughout the City of Ione are limited. Bicycle lanes exist on portions of Shakeley Lane and Fairway Drive, east of SR 104.

Sidewalks are present throughout most of the newer residential neighborhoods east of SR 104 and throughout the downtown area of Ione along Preston Avenue and Main Street. No sidewalks are located along SR 104 as it borders MCSP.

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 MCSP may be sufficient to cause traffic conditions to degrade. The trip generation associated with a new single, level II infill correctional facility or a level II infill correctional facility complex at the MCSP 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 MCSP 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 (between 2 and 6) 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, to provide additional onsite support for food and medical purposes. The first- and third-watch support staff would arrive and depart outside the peak hours of the roadways (i.e., 8:00 a.m. and 5:00 p.m.) 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 accounted for in the daily trip generation estimates.

Complex Design

The proposed 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.).

Single Facility Design

The single, level II infill 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.).

The staffing spreadsheets provided by the California Department of Corrections and Rehabilitation (CDCR) are provided in Appendix 3D in this volume (Volume 3) of the DEIR.

Estimates of potential trips generated by these employees were developed using the following key assumptions:

- all employees would arrive within one hour of the beginning of their shift and leave within one hour of the end of their shift only (i.e., all employees arrive/leave within one 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 infill facility 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 for the level II infill 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 study periods.

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 (one inbound and one outbound), a total of 10 additional daily

trips would be generated by operation of either a single, level II infill correctional facility complexat the MCSP Infill Site. It was assumed that the deliveries would be spaced out throughout the day. Therefore, to present a conservative analysis, 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 MCSP.

TRANSPORTATION STUDY LOCATIONS

Exhibit 3.11-1 shows the study intersections and roadway segments. Intersection and roadway operations were evaluated to determine if there would be any potential impacts on the surrounding roadway network with the development of a level II infill correctional facility at the MCSP Infill Site. The following intersections (i.e., study intersections) were selected for analysis based on past studies in the area and consultation with staff from the City of Ione (City), Amador County (County), ACTC, and Caltrans:

Intersections

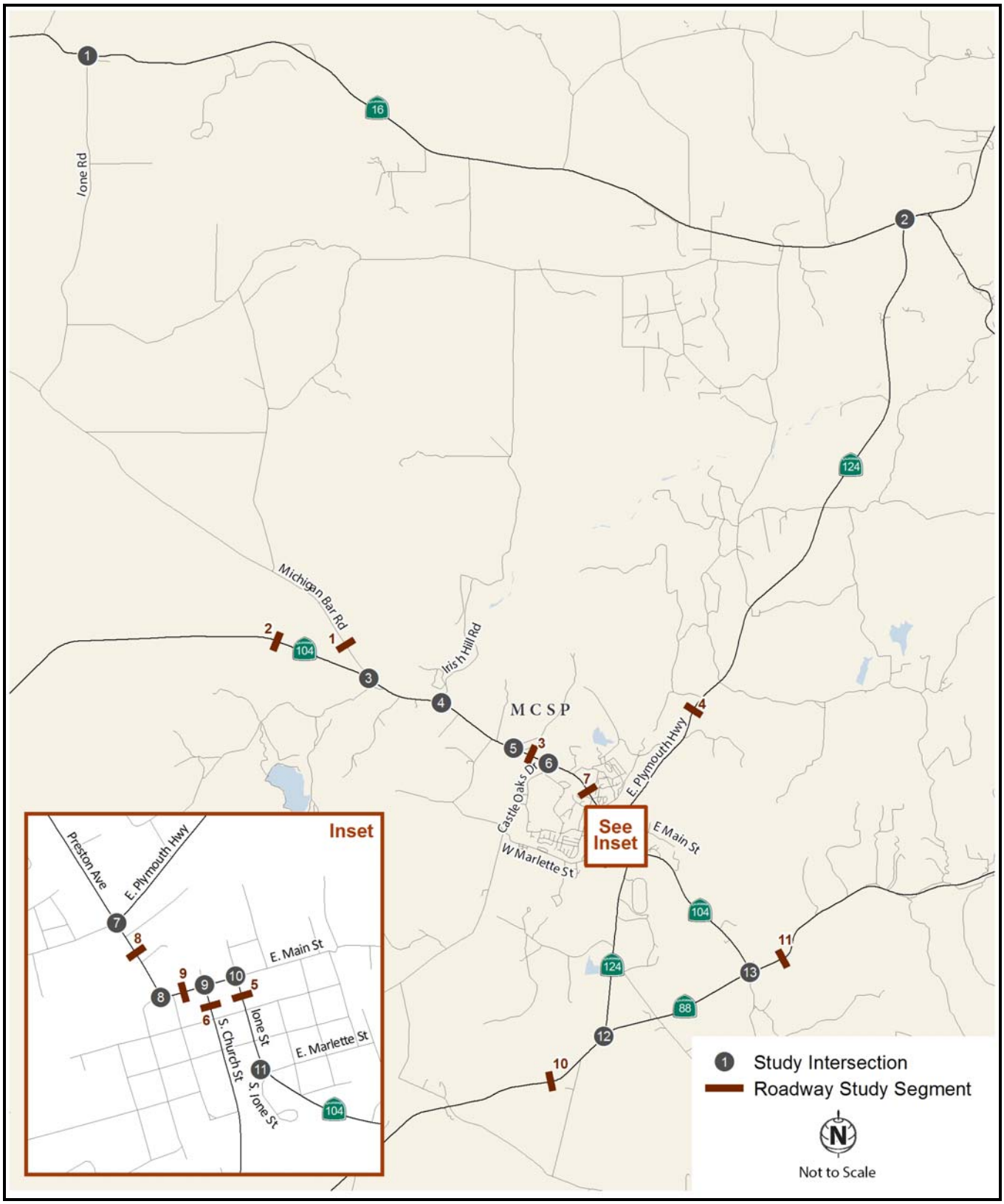
1. SR 16 (Jackson Road)/Ione Road
2. SR 16/SR 124
3. SR 104/Ione Michigan Bar Rd
4. SR 104/Irish Hill Road
5. SR 104/MCSP Driveway
6. SR 104/Castle Oaks Drive
7. Preston Ave (SR 104)/E. Plymouth Highway (SR 124)
8. Main St/Preston Avenue
9. E. Main St/S. Church Street
10. E. Main St/S. Ione Street
11. SR 104/S. Ione Street/E. Marlette Street
12. SR 124/SR 88
13. SR 104/SR 88/Jackson Valley Road

Roadway Segments

1. Michigan Bar Road – North of SR 104
2. SR 104 – West of Michigan Bar Road
3. SR 104 – East of MCSP Driveway
4. SR 124 – North of SR 104
5. S. Ione Street – South of Main Street
6. S. Church Street – South of Main Street
7. Preston Road – North of E. Plymouth Highway/Shakeley Lane
8. Preston Road – South of E. Plymouth Highway/Shakeley Lane
9. Main Street – Between Preston Avenue and S. Church Street
10. SR 88 – West of SR 124
11. SR 88 – East of SR 104

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 least congested operating conditions (minimal vehicular congestion) and LOS F representing the most congested 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 the signalized intersections and another method for the unsignalized intersections, as described below.



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-1 Existing Roadway Network and Traffic Study Locations

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 the 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 experienced on all approaches. At side-street stop-controlled intersections, LOS is calculated for the stopped movements and the left-turn movement 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: *Highway Capacity Manual*, TRB 2000

Roadway Segments

The LOS for the 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 *2004 Amador County Regional Transportation Plan (RTP) Update* (Amador County, 2006). Table 3.11-2 presents threshold volumes for various roadway types.

Table 3.11-2 Daily Roadway Segment Level of Service Volume Thresholds

Roadway Type	Total Daily Vehicles in Both Directions (vehicles per day)				
	LOS A	LOS B	LOS C	LOS D	LOS E
Arterial, Class I	2,600	5,900	10,300	16,900	20,200
Arterial, Class II	2,200	5,200	9,300	15,300	18,900
Arterial, Class III	1,600	4,500	8,600	14,200	18,600
Arterial, Class IV	1,200	3,300	6,400	11,000	15,500
Arterial, Class V	1,000	3,000	5,900	10,200	14,300
Arterial (with climbing lane)	NA	12,200	16,500	22,200	25,100
Arterial (2 lanes each direction)	NA	24,900	30,800	32,700	34,900
Collector, Class I-III	1,300	3,900	7,500	12,600	16,900
Collector, Class IV	1,000	3,000	5,500	8,750	11,200
Collector, Class V	600	2,000	3,500	4,900	5,500

Notes: LOS = level of service, NA = Not Available
Sources: *2004* Amador County *Regional Transportation Plan/Circulations Element Update*, Appendix G, Amador County, 2004

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 (intersection LOS).

LEVEL OF SERVICE STANDARDS

CITY OF IONE

The *City of Ione General Plan* (2009) provides the following LOS policies:

- **Policy CIR-1.3:** Seek to maintain operations on all roadways and intersections at Level of Service (LOS) E or better at all times, with the exceptions listed in Policy CIR-1.4. LOS E should be maintained even during peak travel times, unless maintaining this LOS would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals or unless maintaining this LOS would not, in the City's judgment, adequately serve the City's circulation needs, per Policy CIR-1.4.
- **Policy CIR-1.4:** Exceptions to Policy CIR-1.3 may be allowed by the City Council where requiring a higher LOS or allowing a lower LOS would result in clear public benefits. Specific exceptions granted by the City Council shall be added to the list of exceptions below, depicted in Figure 4-4 [not included in this DEIR], and updated as needed :
  - Main Street, Church Street, Preston Avenue, and Ione Street– LOS F;
  - All Parkways – LOS D

AMADOR COUNTY

The *Circulation Element of the Amador County General Plan* and the *2004 Amador County Regional Transportation Plan (RTP) Update* (concurrent documents published in 2006) provide the following LOS policy:

1A Goals, 1A(2): It is Amador County's goal to maintain a LOS of "C" or better for average daily conditions on all State highways and local streets and roads outside of incorporated cities and other developed communities. It is the County's goal to maintain LOS "D" or better for average daily conditions within incorporated cities and other developed communities. As documented in previous chapters of the RTP/Circulation Element Update, LOS C and D may not be achievable on certain sections of the State highway and local road system because of prohibitive costs and/or environmental impacts and the lower LOS level shall not require denial of any development project provided the County or city finds that a project's benefits are sufficient to override the project contributing to a LOS level other than C or D.

CALTRANS

Caltrans' policy is to maintain LOS C on Interregional Road System (IRRS) routes in rural areas and LOS D on non-IRRS routes and IRRS routes in urban areas. The study roadway segments are classified as follows:

- Non-IRRS Routes (LOS D Minimum)
  - SR 104
  - SR 124
- IRRS Rural Routes (LOS C Minimum)
  - SR 88

Caltrans provides a Transportation Concept Report for each of its State routes. These reports include a 20-Year Concept LOS, which is the minimum acceptable LOS over the next 20 years. The Caltrans routes within the study area are assigned the following 20-Year Concept LOS:

- SR 16 (Sacramento County) – LOS E
- SR 16 (Amador County) – LOS C
- SR104 – LOS D
- SR 124 – LOS D

SUMMARY OF LEVEL OF SERVICE STANDARDS FOR STUDY AREA

For purposes of this study and based on the discussion above, the following standards were used:

- LOS E is the minimum acceptable LOS for intersections and roadway segments within the City of Ione, except where noted below.
- LOS F is the minimum acceptable LOS for the following facilities (roadway segments and intersections with these roadways segments) within the City of Ione:[1]
  - Main Street
  - Church Street
  - Preston Avenue
  - Ione Street
- LOS C is the minimum acceptable LOS for County roadway segments and intersections.
- LOS D is the minimum acceptable LOS for SR 104 and SR 124.
- LOS E is the minimum acceptable LOS for SR 16 in Sacramento County.
- LOS C is the minimum acceptable LOS for SR 16 in Amador County.
- LOS C is the minimum acceptable LOS for SR 88.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

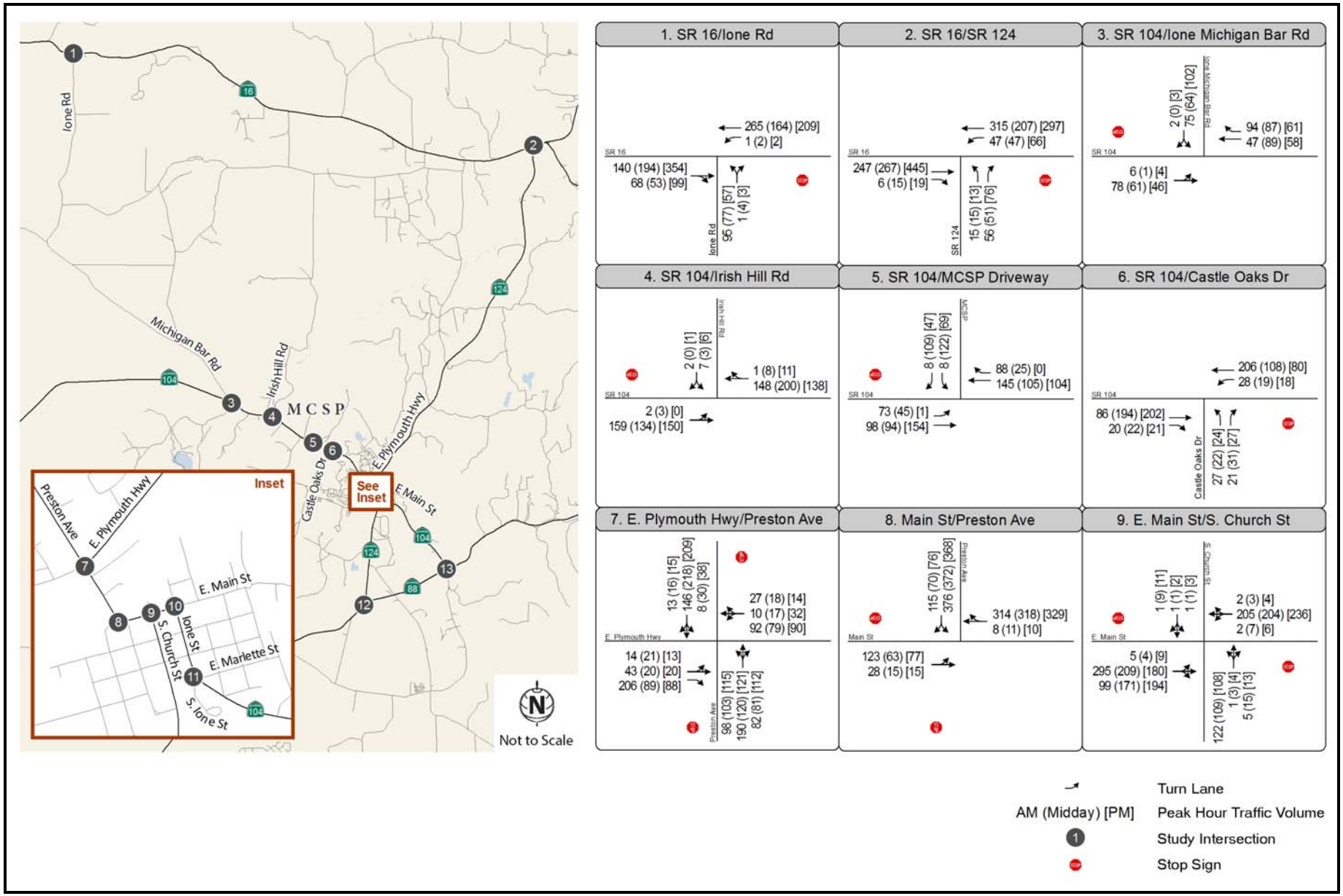
EXISTING TRAFFIC VOLUMES

Intersection turning-movement counts were collected during weekday a.m. (5:00 a.m. to 9:00 a.m.), midday (1:00 p.m. to 4:00 p.m.), and p.m. (4:00 p.m. to 6:00 p.m.) peak periods in January and February 2013 for the study intersections. Since count data were collected on different days for each intersection, traffic volumes were balanced between intersections, where appropriate.

Exhibit 3.11-2 displays the existing peak hour intersection turning movement volumes and lane configurations at the study intersections. The raw traffic counts are presented in Appendix 3D of this volume.

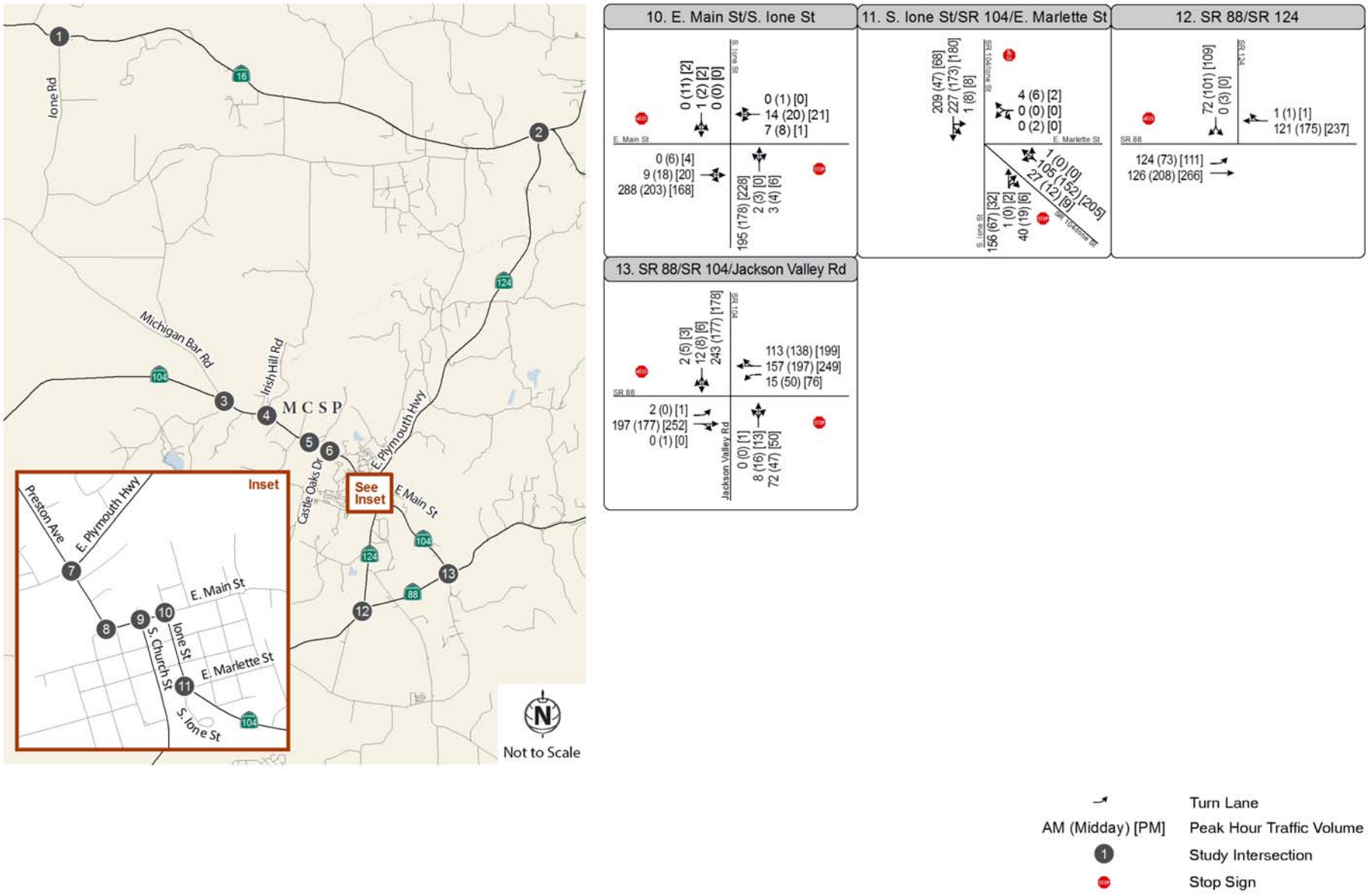
Daily roadway segment volumes were obtained from the Caltrans Traffic Data Branch's 2011 Annual Average Daily Traffic (AADT) volume database. For locations where data on AADT volumes are not available, daily traffic volumes were calculated based on the peak hour traffic volumes at the nearest intersection and information obtained from the 2011 Peak Hour Volumes Data Report (Caltrans, 2011).

[1] Per Caltrans, LOS F is not considered to be an acceptable LOS for those segments and intersections as they relate to joint Caltrans/City facilities, regardless of the City's designation (Honma 2013).



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-2 Existing Traffic Volumes (1 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-2 Existing Traffic Volumes (2 of 2)

EXISTING INTERSECTION LEVELS OF SERVICE

The a.m., midday, and p.m. peak hour intersection delay and LOS were determined using Synchro 7 analysis software, which utilizes *HCM 2000* methodology. The analysis was based on existing traffic controls and lane configurations at the study intersections and on field observations. Intersection peak hour factors (PHF) were determined based on the count data collected at each study intersection. The percentages of heavy vehicles were determined based on *Annual Average Daily Truck Traffic on the California State Highway System* (Caltrans 2011) for each state highway, and were assumed to be at least two percent of vehicular traffic on all non-State roadways (e.g., Ione Michigan Bar Road). Table 3.11-3 summarizes the existing LOS results at the study intersections. The technical calculations are provided in Appendix 3D in this volume.

Table 3.11-3 Intersection Level of Service Results – Existing Conditions

Intersection	Traffic Control[1]	Minimum Acceptable LOS	AM Peak[2]		Midday Peak[2]		PM Peak[2]	
			Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1. SR 16 (Jackson Road)/Ione Road	SSSC	E	2.2 (13.2)	A (B)	2.0 (12.1)	A (B)	1.2 (14.2)	A (B)
2. SR 16/SR 24	SSSC	C	1.7 (11.3)	A (B)	1.9 (11.7)	A (B)	1.9 (13.0)	A (B)
3. SR 104/Ione Michigan Bar Road	SSSC	C	2.8 (10.4)	A (B)	2.2 (10.3)	A (B)	3.9 (9.9)	A (A)
4. SR 104/Irish Hill Road	SSSC	C	0.3 (10.2)	A (B)	0.2 (11.5)	A (B)	0.2 (10.4)	A (B)
5. SR 104/MCSP Driveway	SSSC	E	1.7 (10.3)	A (B)	5.6 (11.5)	A (B)	3.0 (10.1)	A (B)
6. SR 104/Castle Oaks Drive	SSSC	E	1.8 (11.0)	A (B)	1.8 (11.5)	A (B)	1.8 (11.2)	A (B)
7. Preston Avenue (SR 104)/E. Plymouth Highway (SR 124)	SSSC	F	18.8 (99.3)	C (F)	7.2 (25.1)	A (D)	9.1 (35.3)	A (E)
8. Main Street/Preston Avenue	SSSC	F	78.3 (149.3)	F (F)	15.8 (28.0)	C (D)	16.1 (28.9)	C (D)
9. E. Main Street/S. Church Street	SSSC	F	4.9 (27.1)	A (D)	3.6 (19.2)	A (C)	3.3 (17.7)	A (C)
10. E. Main Street/S. Ione Street	SSSC	F	5.7 (14.3)	A (B)	5.7 (12.8)	A (B)	6.1 (11.4)	A (B)
11. SR 104/S. Ione Street/E. Marlette Street	SSSC	F	10.1 (37.9)	B (E)	2.8 (12.9)	A (B)	1.3 (12.7)	A (B)
12. SR 124/SR 88	SSSC	D	3.7 (9.4)	A (A)	2.9 (10.2)	A (B)	2.8 (10.5)	A (B)
13. SR 104/SR 88/Jackson Valley Road	SSSC	D	11.1 (31.9)	B (D)	8.1 (29.2)	A (D)	17.1 **(86.6)**	C **(F)**

Notes: Unacceptable operations are highlighted in **bold** text.
[1] SSSC = Side-Street Stop Control
[2] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The midday peak hour is between 1:00 p.m. and 3:00 p.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[3] Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side-street stop-controlled intersections.
Source: Fehr & Peers 2013

As indicated in the table, the following study intersection operates at an unacceptable LOS under existing conditions:

- SR 104/SR 88/Jackson Valley Road (p.m. peak hour).

It should be noted that the lane configuration and traffic control at the Main Street/Preston Avenue intersection required modification to the Synchro 7 network to accurately analyze operations because of the non-standard orientation of the intersection, in which the westbound movement is uncontrolled but both the southbound and eastbound movements are controlled. To analyze the intersection's operations, the eastbound stop-controlled leg was entered as a northbound leg. The left-turn factors, right-turn factors, and saturation flow rates for each movement were adjusted to reflect the appropriate movements at the intersection.

EXISTING ROADWAY SEGMENT LEVEL OF SERVICE

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 for the study roadway segments. All of the study roadway segments operate at acceptable levels of service.

Table 3.11-4 Roadway Segment Levels of Service Results – Existing Conditions

Roadway	Location	Roadway Type	Volume[1]	LOS	Volume-to-Capacity Ratio
Michigan Bar Road	North of SR 104	Collector, Class III	2,200	B	0.13
SR 104	West of Michigan Bar Road	Collector, Class II	2,400	B	0.14
SR 104	East of MCSP Driveway	Collector, Class II	4,300	C	0.25
SR 124 (E. Plymouth Highway)	North of SR 104	Arterial, Class II	4,500	B	0.24
S. Ione Street	South of Main Street	Arterial, Class II	6,200	C	0.33
S. Church Street	South of Main Street	Arterial, Class II	6,000	C	0.32
Preston Road	North of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	7,400	C	0.39
Preston Road	South of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	9,300	C	0.49
Main Street	Between Preston Avenue and S. Church Street	Arterial, Class II	9,400	D	0.50
SR 88	West of SR 124	Arterial, Class I	9,400	C	0.47
SR 88	East of SR 104	Arterial, Class I	8,500	C	0.42

Notes: Unacceptable operations are highlighted in **bold** text.
[1] Two-way daily traffic volumes.
Source: Fehr & Peers, 2013

3.11.2 REGULATORY CONSIDERATIONS

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

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws related to transportation are applicable to the development of the infill facility.

STATE AND REGIONAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Caltrans Transportation Concept Reports – Transportation Concept Reports are "long-term planning documents that evaluate the conditions of a given State highway, and establish a vision of what that highway should look like at the end of the twenty-year planning period and includes improvements necessary to achieve this concept."
- 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.

LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

The MCSP 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.

AMADOR COUNTY GENERAL PLAN CIRCULATION ELEMENT AND REGIONAL TRANSPORTATION PLAN

The 2004 *Regional Transportation Plan Update* (ACTC, 2006) was prepared concurrently with the Circulation Element of the *Amador County General Plan* (Amador County, 2006). The RTP and General Plan Circulation Element provide goals and policies for future planning. The RTP also identifies roadway improvement programs, priorities, and funding.

CITY OF IONE GENERAL PLAN

The City of Ione *General Plan* (2009) provides "the framework for all future growth and development within the City." The Circulation Element describes existing and future transportation conditions within the City and provides goals, policies, and actions to guide the development of the future roadway network.

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 the transportation impact analysis, the level II infill correctional facilities at the MCSP 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

Intersections

ACTC's *Amador County Transportation Impact Study Guidelines* (2009) provides guidance for determining when a project will cause a significant impact at an intersection. The development of a single, level II infill correctional facility or a level II infill correctional facility complex at the MCSP Infill Site would cause a significant impact at a study intersection if it would:

- degrade operations from an acceptable LOS to an unacceptable LOS or
- increase delay at an unsignalized intersection operating at an unacceptable level by five or more seconds and the intersection satisfies the Manual of Traffic Control Devices (MUTCD) peak hour volumes warrant for traffic signal installation.

Roadway Segments

The development of a single, level II infill correctional facility or a level II infill correctional facility complex at the MCSP Infill Site would cause a significant impact to a study roadway segment if it would:

- degrade operations from an acceptable LOS to an unacceptable LOS or
- increase the volume-to-capacity (v/c) ratio on roadway segment operating at an unacceptable level by 0.05 or more.

Construction Traffic

The development of a single, level II infill correctional facility or a level II infill correctional facility at the MCSP Infill Site would cause a significant impact if intersection or roadway LOS would temporarily degrade from an acceptable LOS to an unacceptable LOS because of 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

Bicycle, pedestrian, and transit facilities: Development at the MCSP Infill Site could generate some demand for bicycle, pedestrian, and transit facilities. Based on employee zip code data used to develop the project trip distribution, approximately 18% of the new employees are expected to live in Ione. Most of the anticipated trips would be less than two miles in length. As noted above, there are existing opportunities in the vicinity of the infill site (outside of CDCR property) for bicyclists and for the use of existing transit (bus) opportunities. However, development of the infill site would remain internal to existing CDCR property and would not extend outside of MCSP such that potential conflicts with existing alternative transportation opportunities or the plans, policies, or programs designed to promote alternative transportation would occur.

Custody staff are required to bring their personal protection equipment to work each day. This equipment would make travel by walking, bicycling, and transit very difficult. For that reason, the existing employees typically use automobiles to commute to and from the prison site. Any new employees are expected to continue this trend. Therefore, the bicycle, pedestrian, and transit demand would primarily be visitors. Visitors are only allowed on weekends and holidays, which are low-demand traffic periods. Transportation facilities are designed based on the peak period demand. The additional demand created by visitors would be accommodated within the existing capacity for the various modes. Further, due to the type of development contemplated at the MCSP Infill Site, the potential for substantial increase in demand for alternative transportation is considered minimal. No impact would occur and this issue is not discussed further.

Emergency vehicle access: Emergency vehicle access to the MCSP Infill Site would be provided via the main MCSP entry point on SR 104. 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 the existing internal roadways of MCSP would occur with development of the infill site. In addition, the level II infill correctional facility driveway and internal roadways would be designed to accommodate emergency vehicles in accordance with California Fire Code requirements. Therefore, implementation of a level II infill correctional facility at the MCSP Infill Site would include adequate emergency vehicle access to the existing CDCR property, and no impacts are anticipated. This issue is not discussed further.

Airport hazards: Impacts related to potential hazards from airport operations are addressed in Section 3.6, “Hazards and Hazardous Materials” of this volume of the DEIR.

Hazardous design features: As noted above, development of the infill site would involve construction of a level II infill correctional facility internal to existing CDCR property and would not modify the existing roadway network at MCSP. While a new temporary access road would be provided off SR 104, this facility would meet Caltrans design and siting requirements for encroachment on a State highway facility. As such, the contemplated development of the MCSP Infill Site would not be expected to substantially increase hazards due to a design feature. Operations at MCSP would continue as they currently do with the parking and internal circulation necessary for a level II infill correctional facility contained within the limits of the infill site. No impact is anticipated, and hazardous design features are not discussed further.

Potential relinquishment of SR 16 by Caltrans: Caltrans plans to relinquish SR 16 between US 50 and Grant Line Road in Sacramento County in the near future, pending the completion of a corridor planning study, project report, and transportation system analysis and evaluation. Caltrans’ reason for relinquishing SR 16 is that they recognize the inevitable development that will occur along SR 16 and that the optimal way to improve the roadway to meet local, regional, and interregional user needs is through local ownership and operation of the facility. The Amador Region (cities and County) is opposed to relinquishment and wants the route/segment to stay in the State highway system as part of the IRRS, if not a “focus route,” which is a designation used by Caltrans for roadways that are the highest priority for improvement.

With respect to the potential relinquishment of SR 16 by Caltrans to local agencies, the contemplated development of the infill site is not located along SR 16 and would not result in an unacceptable LOS at any location along SR 16. As shown in Exhibits 3.11-3 and 3.11-4 below, the distribution of development-related traffic during peak hours along SR 16 would be minimal. Furthermore, as discussed below in the potential transportation impacts associated with the contemplated development, the LOS along SR 16 at locations potentially affected by the contemplated development would not result in an unacceptable LOS nor require mitigation. Substantial interregional travel would not occur as a result of implementation of level II infill correctional facilities at the MCSP Infill Site. As a result, no impacts with respect to the potential relinquishment of SR 16 by Caltrans would result from development of the infill site. This issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

This section presents an analysis of the following scenarios:

- Existing plus Single Facility,
- Existing plus Complex,
- Existing plus Approved Projects,
- Existing plus Approved Projects plus Single Facility,
- Existing plus Approved Projects plus Complex,
- Cumulative Year 2035,
- Cumulative Year 2035 plus Single Facility, and
- Cumulative Year 2035 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 1, 2, 4, and 5. 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.

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

WEEKDAY PROJECT TRIP GENERATION

The weekday daily, a.m., midday, and p.m. peak hour trip generation estimates for the single, level II infill correctional facility and the level II infill correctional facility complex at the MCSP Infill Site are summarized in Tables 3.11-5 and 3.11-6, respectively.

The development of a single facility is projected to generate a total of 396 daily trips, with 84 trips occurring during the a.m. peak hour of adjacent street traffic and 84 trips occurring during the p.m. peak hour of adjacent street traffic. During the midday peak hour of the infill site (i.e., the peak hour in which the infill facility generates the most traffic, 1:30 p.m. to 2:30 p.m.), the single facility is expected to generate 94 trips.

The development of the complex is projected to generate a total of 764 daily trips, with 152 trips occurring during the a.m. peak hour of adjacent street traffic and 152 trips occurring during the p.m. peak hour of adjacent street traffic. During the midday peak hour of the infill site (i.e., the peak hour in which the infill facility generates the most traffic, 1:30 p.m. to 2:30 p.m.), the complex is expected to generate 193 trips.

WEEKEND PROJECT TRIP GENERATION

Weekend trip generation estimates, including visitor traffic, were developed to provide a comparison to the weekday trip generation. The estimates were developed based on the following information:

Complex Design

The proposed complex would employ 244 additional weekend 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.),
- 3 new support staff employees during the first watch (10:00 p.m. to 6:00 a.m.),
- 24 new support staff employees during the second watch (8:00 a.m. to 5:00 p.m.), and
- 10 new support staff employees during the third watch (2:00 p.m. to 10:00 p.m.).

Single Facility Design

The single facility would employ 129 additional weekend 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.),
- 17 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.).

Inmate Transfers

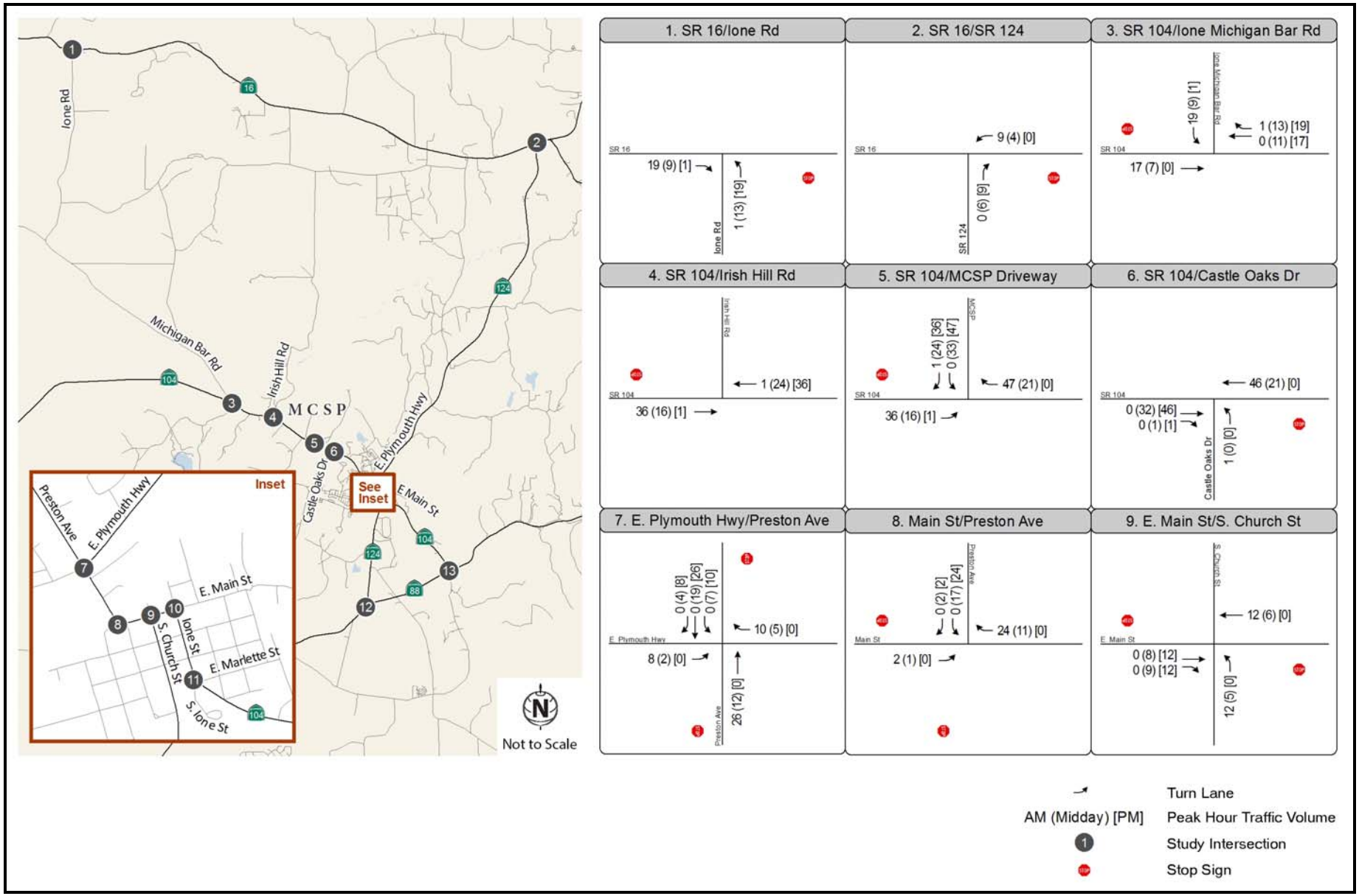
The infill facility would generate a negligible number of additional weekday a.m. and p.m. peak-hour trips (i.e., less than five per day). The transfer of inmates would be conducted in accordance with CDCR's existing inmate transfer system, and therefore is not considered a part of the proposed project requiring evaluation under CEQA. Therefore, the trip generation estimates for the level II infill correctional facility do not specifically address these trips.

Visitor Traffic

Visitors would only be allowed on weekends and holidays. Data obtained from CDCR shows that approximately 15 percent of inmates receive visitors on a typical weekend day. Visiting hours are held from 8:00 a.m. to 3:00 p.m.

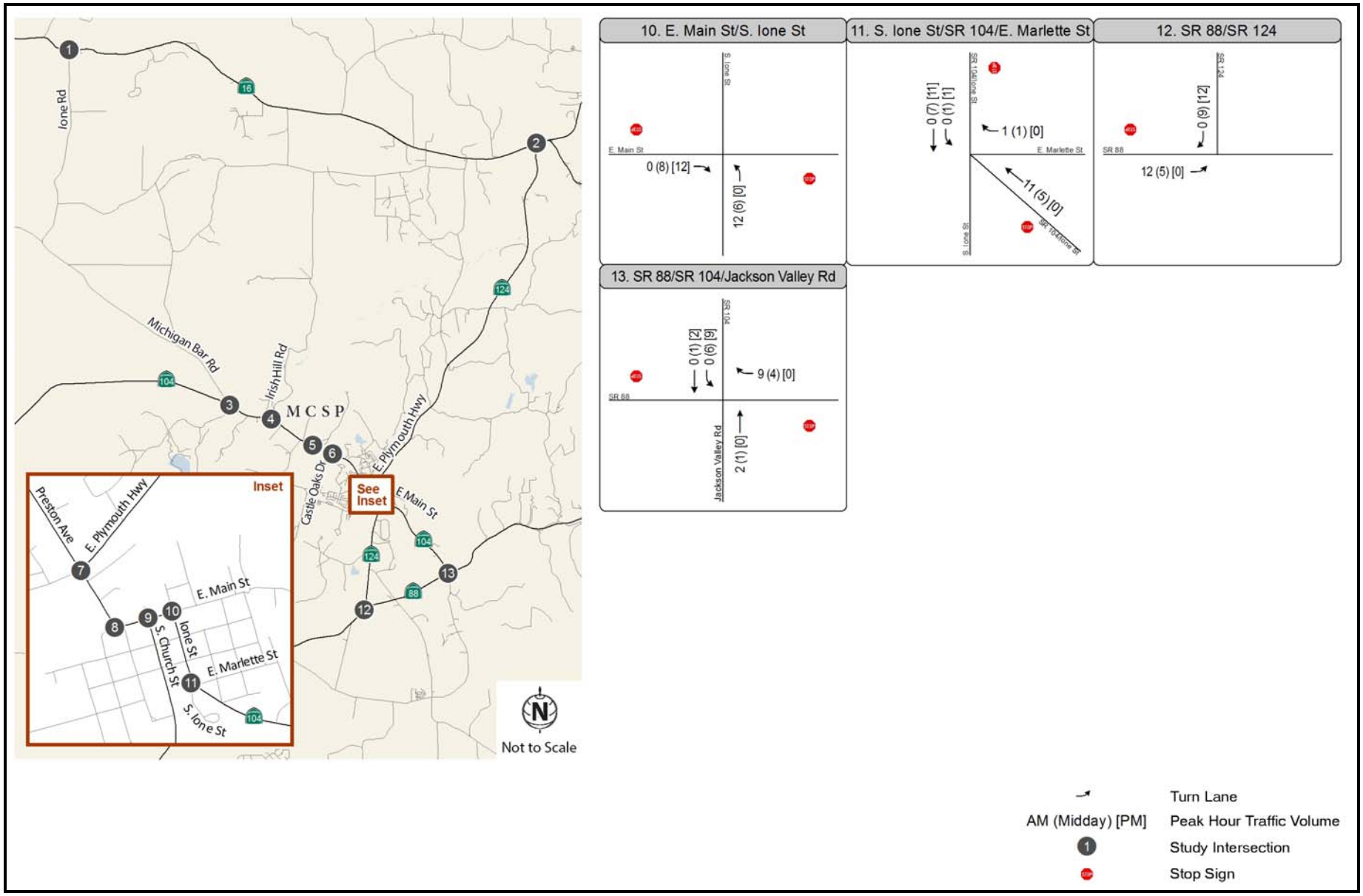
Estimates of potential trips generated by visitors were developed using the following key assumptions:

- all visitors would make two trips per day (i.e., one trip to the site and one trip from the site);
- 50 percent of visitors would arrive between 7:00 a.m. and 8:00 a.m., and 50 percent of visitors would leave between 3:00 p.m. and 4:00 p.m.;
- the remaining visitors would arrive either between 6:00 a.m. and 7:00 a.m. or evenly throughout the day between 8:00 a.m. and 3:00 p.m.; and
- all visitors would leave evenly throughout the day between 8:00 a.m. and 3:00 p.m.



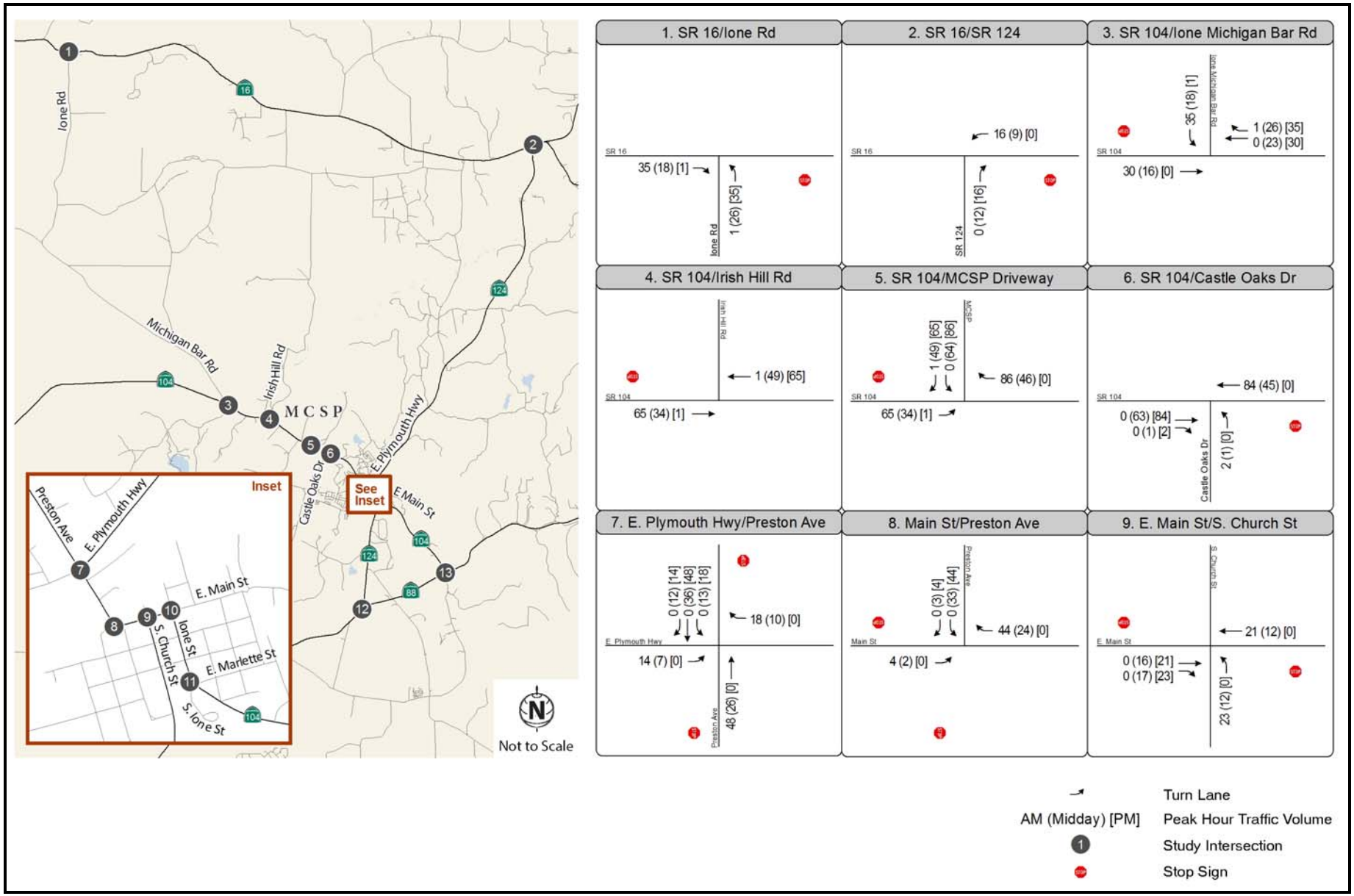
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-3 Trip Distribution and Assignment – Single Facility (1 of 2)



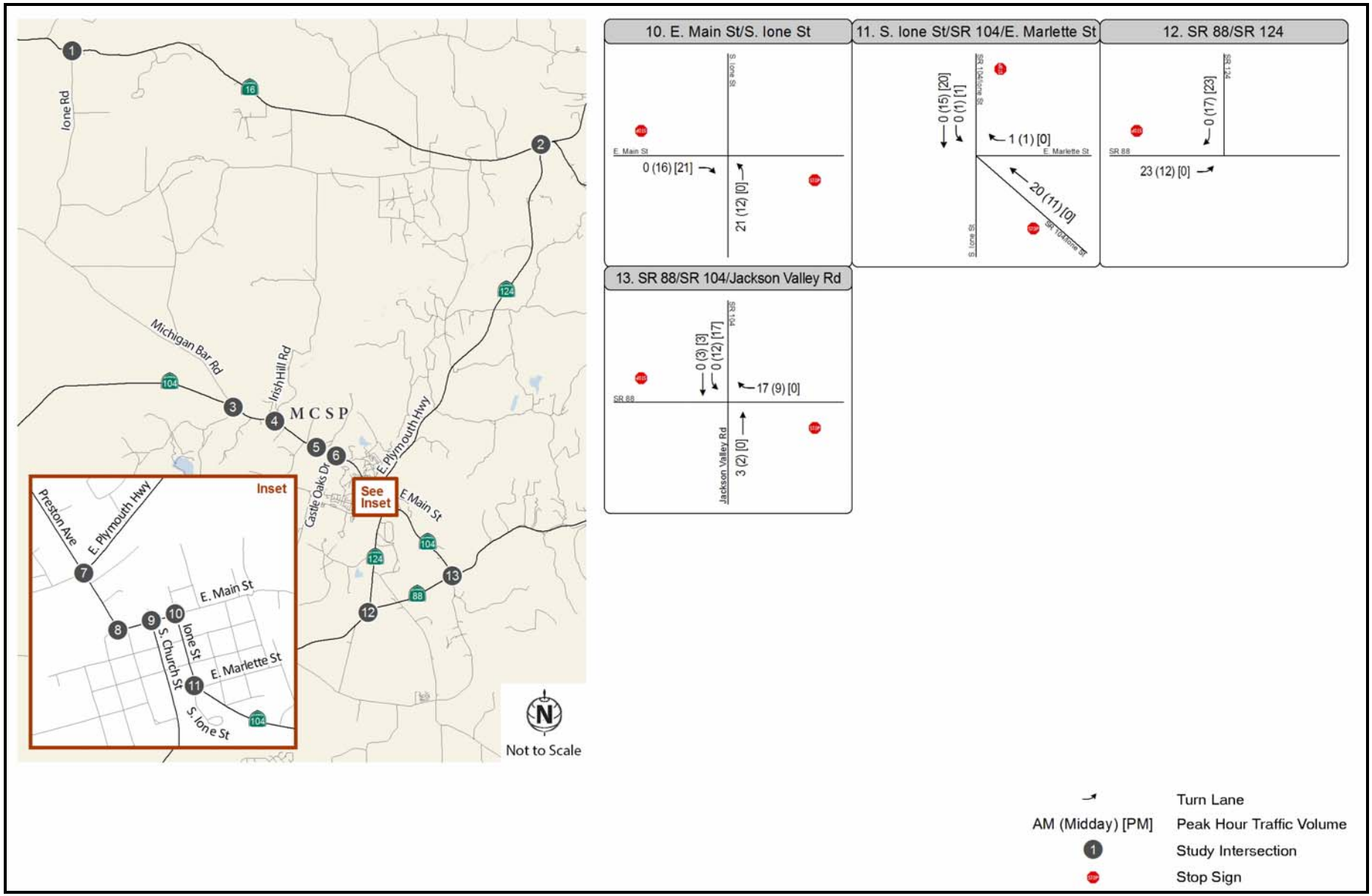
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-3 Trip Distribution and Assignment – Single Facility (2 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-4 Trip Distribution and Assignment– Complex (1 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-4 Trip Distribution and Assignment– Complex (2 of 2)

Table 3.11-5 Estimated Weekday Trip Generation – Level II Infill Correctional Facility Complex at MCSP

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[1]		
				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 MCSP Infill Facility Trips			**764**	**113**	**35**	**148**	**151**	**1**	**152**	**80**	**113**	**193**	**1**	**151**	**152**

Notes: [1] The a.m. and p.m. peak hours of adjacent street traffic correspond with the morning and evening commute peak hours which fall between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. For analysis purposes, it was assumed that all employees that arrive during the a.m. and p.m. peak hours arrive within one hour of each other.
Source: Fehr & Peers 2013

Table 3.11-6 Estimated Weekday Trip Generation – Single, Level II Infill Correction Facility at MCSP

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[1]		
				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 MCSP Infill Facility Trips			**396**	**57**	**18**	**75**	**83**	**1**	**84**	**37**	**57**	**94**	**1**	**83**	**84**

Notes: [1] The a.m. and p.m. peak hours of adjacent street traffic correspond with the morning and evening commute peak hours which fall between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. For analysis purposes, it was assumed that all employees that arrive during the a.m. and p.m. peak hours arrive within one hour of each other.
Source: Fehr & Peers 2013

Delivery and Service Vehicles

Delivery and service vehicles would not operate on weekend days.

The weekend daily a.m., Midday, and p.m. peak hour trip generation estimates for the infill facility are summarized in Tables 3.11-7 and 3.11-8.

The development of the proposed level II infill correctional facility complex would generate a total of 964 daily trips, with 143 trips occurring during the a.m. peak hour of adjacent street traffic and 24 trips occurring during the p.m. peak hour of adjacent street traffic on a typical weekend day. During the midday peak hour of the infill site (i.e., the peak hour in which the infill facility generates the most traffic, 1:30 p.m. to 2:30 p.m.), the complex is expected to generate 257 trips on a typical weekend day.

The development of a single, level II infill correctional facility is projected to generate a total of 624 daily trips, with 77 trips occurring during the a.m. peak hour of adjacent street traffic and 17 trips occurring during the p.m. peak hour of adjacent street traffic on a typical weekend day. During the midday peak hour of the infill site (i.e., the peak hour in which the infill facility generates the most traffic, 1:30 p.m. to 2:30 p.m.), the single facility is expected to generate 128 trips on a typical weekend day.

Because traffic volumes on public roadways are typically lower on weekends than they are on weekdays, the traffic study does not include weekend analysis. Transportation facilities are designed to accommodate peak period demand, which typically occurs on weekdays during commute times. Weekend demand is usually much lower, which means there is additional capacity in the network. The traffic generated by the single facility or complex on a weekend would not result in additional impacts beyond those identified in this analysis.

TRIP DISTRIBUTION

Traffic generated by the development of the level II infill correctional facility at the MCSP Infill Site 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:

- 20% travels to/from west on SR 104,
- 23% travels to/from north on Ione Michigan Bar Road,
- 11% travels to/from northeast on SR 124,
- 11% travels to/from east on SR 88,
- 15% travels to/from west on SR 88,
- 2% travels to/from south on Jackson Valley Road, and
- 18% stays within the City of Ione.

Exhibit 3.11-3 shows the a.m., midday, and p.m. peak hour trip distribution and assignment for the single facility. Exhibit 3.11-4 shows the a.m., midday, and p.m. peak hour trip distribution and assignment for the complex.

EXISTING PLUS LEVEL II INFILL CORRECTIONAL FACILITY CONDITIONS

To evaluate the potential impacts of the development of the infill facility at the MCSP Infill Site on the local roadway system, traffic generated by the infill facility was added to the existing traffic volumes for existing plus project conditions analysis.

Table 3.11-7 Estimated Weekend Trip Generation – Level II Infill Correctional Facility Complex at MCSP

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[1]		
				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.)	3	3	6	0	3	3	0	0	0	0	0	0	0	0	0
2nd Watch (6a.m.-2p.m.)	24	24	48	0	0	0	24	0	24	0	0	0	0	24	24
3rd Watch (2p.m.-10p.m.)	10	10	20	0	0	0	0	0	0	10	0	10	0	0	0
Support Staff Subtotal	*37*	*37*	*74*	*0*	*3*	*3*	*24*	*0*	*24*	*10*	*0*	*10*	*0*	*24*	*24*
Employee Trip Total	***244***	***244***	***488***	***113***	***31***	***144***	***24***	***0***	***24***	***76***	***113***	***189***	***0***	***24***	***24***
Visitor Trips															
Visitors	238	238	476	0	0	0	119	0	119	34	34	68	0	0	0
Visitor Trip Total	***238***	***238***	***476***	***0***	***0***	***0***	***119***	***0***	***119***	***34***	***34***	***68***	***0***	***0***	***0***
Total MCSP Infill Facility Trips			**964**	**113**	**31**	**144**	**143**	**0**	**143**	**110**	**147**	**257**	**0**	**24**	**24**

Notes: [1] The a.m. and p.m. peak hours of adjacent street traffic corresponds with the morning and evening commute peak hours and fall between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. For analysis purposes it was assumed that all employees that arrive during the a.m. and p.m. peak hours arrive within one hour of each other.
Source: Fehr & Peers 2013

Table 3.11-8 Estimated Weekend Trip Generation – Single, Level II Infill Correctional Facility at MCSP

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[1]		
				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.)	17	17	34	0	0	0	17	0	17	0	0	0	0	17	17
3rd Watch (2p.m.-10p.m.)	6	6	12	0	0	0	0	0	0	6	0	6	0	0	0
Support Staff Subtotal	*25*	*25*	*50*	*0*	*2*	*2*	*17*	*0*	*17*	*6*	*0*	*6*	*0*	*17*	*17*
Employee Trip Total	***193***	***193***	***386***	***57***	***18***	***75***	***17***	***0***	***17***	***37***	***57***	***94***	***0***	***17***	***17***
Visitor Trips															
Visitors	119	119	238	0	0	0	60	0	60	17	17	34	0	0	0
Visitor Trip Total	***119***	***119***	***238***	***0***	***0***	***0***	***60***	***0***	***60***	***17***	***17***	***34***	***0***	***0***	***0***
Total MCSP Infill Facility Trips			**624**	**57**	**18**	**75**	**77**	**0**	**77**	**54**	**74**	**128**	**0**	**17**	**17**

Notes: [1] The a.m. and p.m. peak hours of adjacent street traffic corresponds with the morning and evening commute peak hours and fall between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. For analysis purposes it was assumed that all employees that arrive during the a.m. and p.m. peak hours arrive within one hour of each other.
Source: Fehr & Peers 2013

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.11-1a: Impacts on Intersection Operations [Complex]

An intersection LOS analysis of the existing plus level II infill correctional facility complex conditions was performed using Synchro 7 software, which utilizes *HCM 2000* methodology. Exhibit 3.11-5 shows the intersection turning-movement volumes for a level II infill correctional facility complex, and Table 3.11-9 shows the LOS results at the study intersections for a complex. Under existing conditions, the SR 104/SR 88/Jackson Valley Road intersection operates at an unacceptable LOS during the p.m. peak hour. The traffic generated by the development of the level II infill correctional facility complex would increase the delay of the side street movement by more than five seconds during this period. Additionally, this intersection meets the peak hour signal warrant based on the *California Manual on Uniform Traffic Control Devices (MUTCD)* (Caltrans, 2012) under existing plus project conditions. Therefore, the development of a level II infill correctional facility complex would exacerbate unacceptable operating conditions at this intersection. In addition and as noted above, although the City of Ione considers LOS F acceptable at several of the study intersections, Caltrans does not accept LOS F for those intersections that coincide with Caltrans facilities. As shown in Table 3.11-9, two intersections (Preston Avenue [SR 104]/E. Plymouth Highway [SR 124] and Main Street/Preston Avenue) would continue to operate unacceptably per Caltrans standards and operations would further degrade with operation of the proposed complex at MCSP. Refer to Appendix 3D of this volume for the technical calculations.

Development of a level II infill correctional facility complex at the MCSP Infill Site would result in the unacceptable degradation of intersection operations in the vicinity of the infill site with operation of the proposed complex. This would be a significant impact.

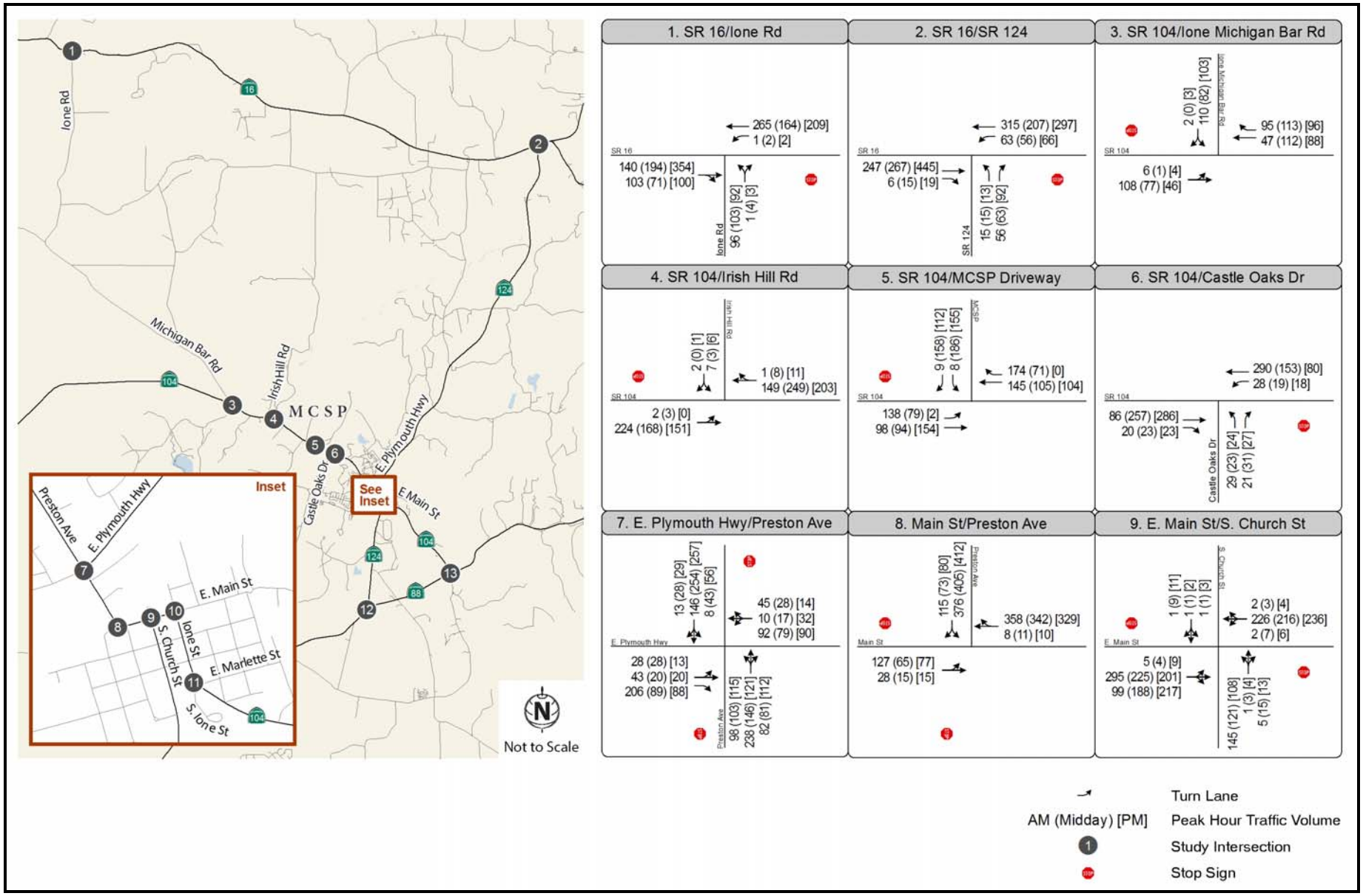
Mitigation Measures

Mitigation Measure 3.11-1

CDCR will pay the County's regional transportation fee, which would include CDCR's fair share contribution towards the installation of a traffic signal at the intersection of SR 104, SR 88, and Jackson Valley Road. This mitigation measure will be implemented prior to occupancy.

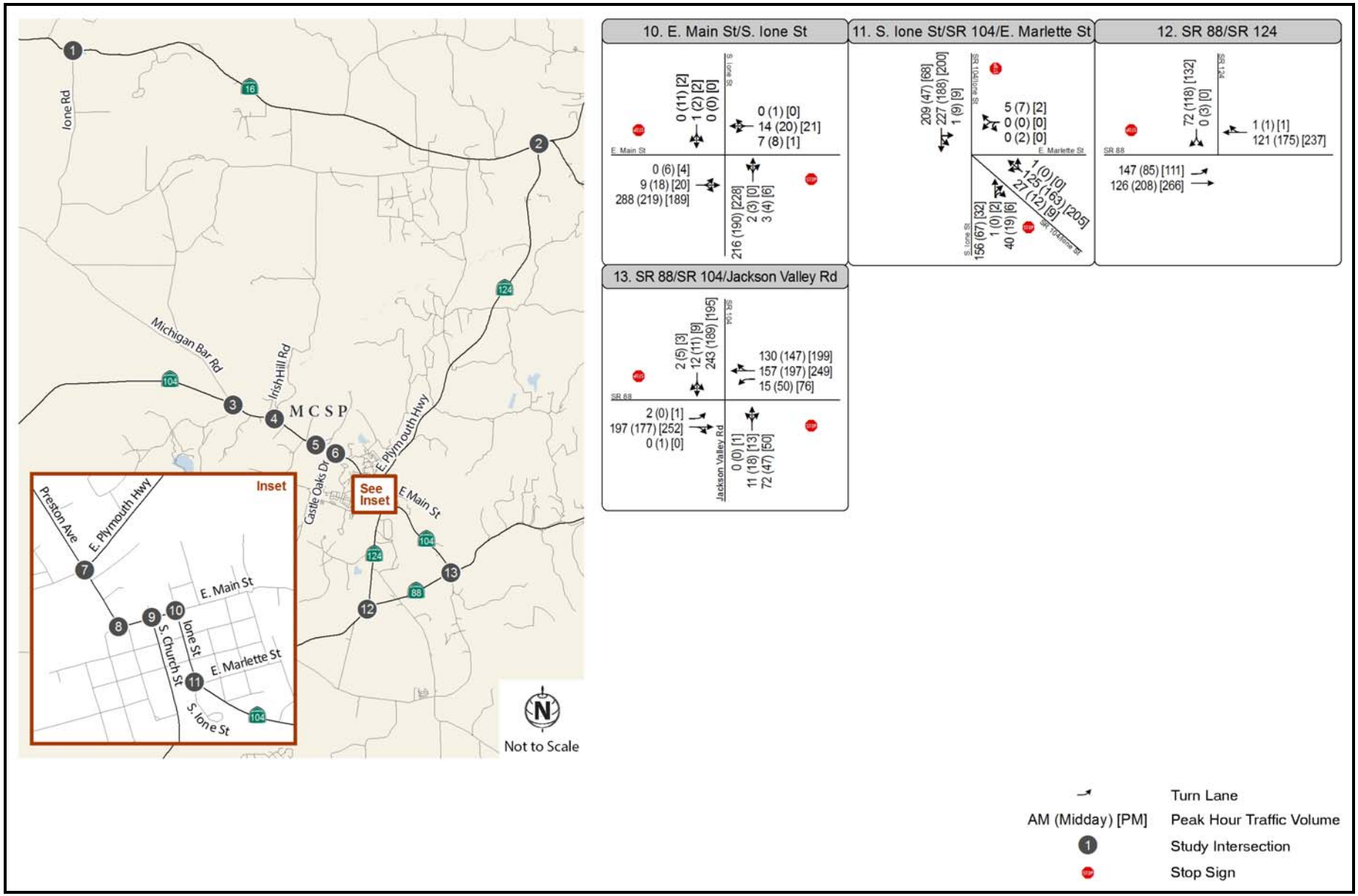
Significance after Mitigation

Signalization of the SR 104/SR 88/Jackson Valley Road intersection would reduce the delay at the intersection to an acceptable level during the p.m. peak hour. This intersection meets the peak hour signal warrant based on the requirements outlined in the MUTCD even under existing (without the proposed complex) conditions. Implementation of this mitigation measure would provide LOS B operations with the level II infill correctional facility complex. However, implementation of Mitigation Measure 3.11-1 is within the responsibility and jurisdiction of another public agency, Caltrans, and not CDCR. Further, Caltrans and Amador County have indicated that there are no proposed or planned improvements at this intersection and thus, payment of regional transportation fees would not be expected to result in direct improvement of this intersection. Since signalization is not a planned improvement and could not be guaranteed prior to initiation of operation of the proposed complex, operations at the intersection of SR 104, SR 88, and Jackson Valley Road would likely continue to be unacceptable. In addition, as noted above, operations at two study intersections would not exceed City of Ione LOS standards for the intersection, but would, with and without the proposed complex, exceed Caltrans standards for those state facilities. Improvement of these intersections would likely have secondary impacts, especially related to removal or modification of historic resources, which would likely be significant due to the presence of a nearby historic district (refer to Section 3.3, "Cultural Resources" of this volume). As a result, implementation of this mitigation is considered infeasible. Impacts to intersections would be **significant and unavoidable** with implementation of the proposed complex.



Source: Data compiled by Fehr & Peers in 2010

Exhibit 3.11-5 Existing plus Complex Traffic Volumes (1 of 2)



Source: Data compiled by Fehr & Peers in 2010

Exhibit 3.11-5 Existing plus Complex Traffic Volumes (2 of 2)

Table 3.11-9 Intersection Peak-Hour Level of Service Results – Existing plus Level II Infill Correctional Facility Complex Conditions

Intersection	Traffic Control[1]	Min. Acceptable LOS	Existing						Existing Plus Complex					
			AM Peak[2]		Midday Peak[2]		PM Peak[2]		AM Peak[2]		Midday Peak[2]		PM Peak[2]	
			Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1. SR 16 (Jackson Rd)/ Ione Road	SSSC	E	2.2 (13.2)	A (B)	2.0 (12.1)	A (B)	1.2 (14.2)	A (B)	2.2 (13.5)	A (B)	2.5 (12.7)	A (B)	1.9 (15.2)	A (C)
2. SR 16/SR 24	SSSC	C	1.7 (11.3)	A (B)	1.9 (11.7)	A (B)	1.9 (13.0)	A (B)	1.9 (11.4)	A (B)	2.2 (11.8)	A (B)	2.1 (13.0)	A (B)
3. SR 104/Ione Michigan Bar Road	SSSC	C	2.8 (10.4)	A (B)	2.2 (10.3)	A (B)	3.9 (9.9)	A (A)	3.5 (11.1)	A (B)	2.4 (11.1)	A (B)	3.3 (10.3)	A (B)
4. SR 104/ Irish Hill Road	SSSC	C	0.3 (10.2)	A (B)	0.2 (11.5)	A (B)	0.2 (10.4)	A (B)	0.3 (10.6)	A (B)	0.2 (12.4)	A (B)	0.2 (11.0)	A (B)
5. SR 104/ MCSP Driveway	SSSC	E	1.7 (10.3)	A (B)	5.6 (11.5)	A (B)	3.0 (10.1)	A (B)	2.2 (11.5)	A (B)	7.0 (14.1)	A (B)	5.3 (10.9)	A (B)
6. SR 104/ Castle Oaks Drive	SSSC	E	1.8 (11.0)	A (B)	1.8 (11.5)	A (B)	1.8 (11.2)	A (B)	1.6 (11.9)	A (B)	1.5 (12.9)	A (B)	1.6 (12.2)	A (B)
7. Preston Avenue (SR 104)/E. Plymouth Highway (SR 124)	SSSC	F	18.8 (99.3)	C (F)	7.2 (25.1)	A (D)	9.1 (35.3)	A (E)	25.1 (135.1)	D (F)	8.0 (30.7)	A (D)	11.0 (51.1)	B (F)
8. Main Street/ Preston Avenue	SSSC	F	78.3 (149.3)	F (F)	15.8 (28.0)	C (D)	16.1 (28.9)	C (D)	93.7 (>150)	F (F)	20.8 (37.4)	C (E)	21.5 (37.8)	C (E)
9. E. Main Street/ S. Church Street	SSSC	F	4.9 (27.1)	A (D)	3.6 (19.2)	A (C)	3.3 (17.7)	A (C)	6.8 (34.5)	A (D)	4.1 (21.9)	A (C)	3.3 (18.7)	A (C)
10. E. Main Street/S. Ione Street	SSSC	F	5.7 (14.3)	A (B)	5.7 (12.8)	A (B)	6.1 (11.4)	A (B)	6.3 (15.1)	A (C)	5.9 (13.3)	A (B)	5.9 (11.5)	A (B)
11. SR 104/S. Ione Street/ E. Marlette Street	SSSC	F	10.1 (37.9)	B (E)	2.8 (12.9)	A (B)	1.3 (12.7)	A (B)	11.0 (42.3)	B (E)	2.8 (13.4)	A (B)	1.3 (13.0)	A (B)
12. SR 124/ SR 88	SSSC	D	3.7 (9.4)	A (A)	2.9 (10.2)	A (B)	2.8 (10.5)	A (B)	3.9 (9.4)	A (A)	3.3 (10.3)	A (B)	3.1 (10.7)	A (B)
13. SR 104/ SR 88/ Jackson Valley Road	SSSC	D	11.1 (31.9)	B (D)	8.1 (29.2)	A (D)	17.1 **(86.6)**	C **(F)**	11.4 (33.6)	B (D)	9.2 (32.7)	A (D)	23.2 **(111.0)**	C **(F)**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
1 SSSC = Side Street Stop Control
2 The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The midday peak hour is between 1:00 p.m. and 3:00 p.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
3 Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side-street stop-controlled intersections.
Source: Fehr & Peers 2013

Impact 3.11-2a: Impacts on Roadway Segment Operations [Complex]

Daily traffic volumes on each study roadway segment were projected under existing plus complex conditions. Table 3.11-10 summarizes the projected daily volumes and LOS on each analyzed segment for the level II infill correctional facility complex. Traffic generated by the development of a complex at the MCSP Infill Site would not cause the study roadway segments to operate at unacceptable LOS and the impact at these locations would be less than significant.

Table 3.11-10 Roadway Segment Level of Service Results – Existing plus Level II Infill Correctional Facility Complex Conditions

Roadway	Location	Roadway Type	Existing			Existing plus Complex		
			Volume[1]	LOS	v/c Ratio[2]	Volume[1]	LOS	v/c Ratio[2]
Michigan Bar Road	North of SR 104	Collector, Class III	2,200	B	0.13	2,376	B	0.14
SR 104	West of Michigan Bar Road	Collector, Class II	2,400	B	0.14	2,553	B	0.15
SR 104	East of MCSP Driveway	Collector, Class II	4,300	C	0.25	4,735	C	0.28
SR 124 (E. Plymouth Highway)	North of SR 104	Arterial, Class II	4,500	B	0.24	4,584	B	0.24
S. Ione Street	South of Main Street	Arterial, Class II	6,200	C	0.333	6,306	C	0.33
S. Church Street	South of Main Street	Arterial, Class II	6,000	C	0.32	6,115	C	0.32
Preston Road	North of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	7,400	C	0.39	7,814	C	0.41
Preston Road	South of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	9,300	C	0.49	9,542	D	0.50
Main Street	Between Preston Avenue and S. Church Street	Arterial, Class II	9,400	D	0.50	9,621	D	0.51
SR 88	West of SR 124	Arterial, Class I	9,400	C	0.47	9,515	C	0.47
SR 88	East of SR 104	Arterial, Class I	8,500	C	0.42	8,584	C	0.42

Notes: Unacceptable operations are highlighted in **bold** text.
[1] Two-way daily traffic volumes
[2] v/c = volume-to-capacity
Source: Fehr & Peers 2013

Development of a level II infill correctional facility complex at the MCSP Infill Site would not result in the unacceptable operations of roadway segments. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.11-3a: Impacts on Parking [Complex]

A parking accumulation analysis was performed to determine the maximum parking demand for the MCSP 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 contemplated level II infill correctional facility (single or complex) 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 employees arrive for their shift 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 at some time within one hour after their shift ends.

As shown in Table 3.11-11, 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 580 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 a visitor (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 3.11-11 Estimated Weekday Parking Demand – Level II Infill Correctional Facility Complex

Hour Beginning	Hour Ending	Watch1	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 MCSP 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.

Impact 3.11-4a: Construction-Related Traffic Impacts [Complex]

During the construction phases, trucks and construction workers accessing the site would generate traffic to and from the MCSP 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 at the California Health Care Facility (CHCF) site in Stockton, California, which is currently under construction. Construction traffic was scaled based on the relative sizes of projects.
- The number of truck trips during demolition/site preparation and grading were calculated based on the cubic yards of material to be moved to/from the site.
- The number 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 level II infill correctional facility complex at the MCSP Infill Site, including concurrent phases (phases that partially overlap), based on the number of expected construction employees and the number of truck trips. It should be noted that construction worker parking would be provided onsite within the disturbance area or within the former PYCF athletic fields and would not be necessary offsite.

Table 3.11-12 Estimated Construction Trip Generation – Level II Infill Correctional Facility 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	123	1,034	Demolition = 2 months; 1 month concurrent with grading
Grading	818	92	909	1,026	Grading = 3 months; 1 month concurrent with demolition; 1 month concurrent with utilities
Utilities	96	20	116	1,624	Utilities = 8 months; 1 month concurrent with grading; 6 months concurrent with building construction
Building Construction	1,488	20	1,508		Building Construction = 23months; 6 months concurrent with utilities

Notes:
[1] Based on data provided by CDCR regarding 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

As noted in Chapter 2, “Project Description,” of this volume of the DEIR and shown in Exhibit 3.11-6, CDCR would construct a temporary construction access road to the infill site at the intersection of Castle Oaks Drive and SR 104 when construction activities begin. This access road would be used only during construction. The land associated with the construction access road would be returned to pre-development conditions upon completion of construction. Use of this road during construction would reduce potential queuing concerns at the entrance to the existing MCSP. Temporary restriping along SR 104 would be provided at Castle Oaks Drive to allow for a dedicated left-turn from SR 104 onto the access road and a dedicated merge lane for traffic entering onto SR 104 from the access road. The

temporary striping would be fully removed once construction of the infill site is complete. The access road gate would be closed and locked upon completion of construction.

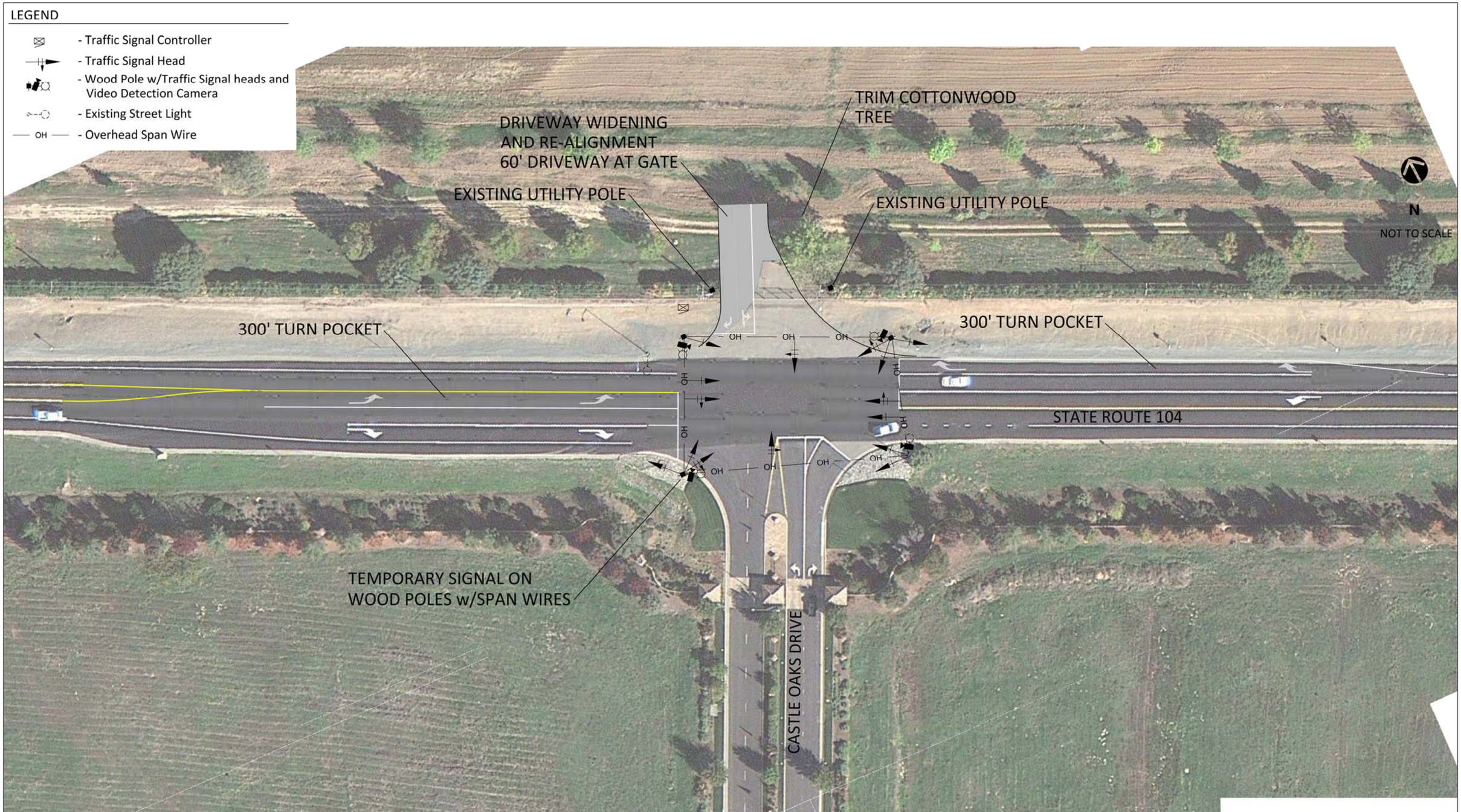
Before deciding to construct a temporary construction access road, CDCR had also evaluated the following three options for construction access:

- Construction access through the existing MCSP entrance – This option would require construction workers, construction-related deliveries, and haul trucks to enter through MCSP's secure entrance. This access point would be shared with existing MCSP staff and would require clearance for each individual vehicle, resulting in the potential for traffic delays that could disrupt existing MCSP operations. Additionally, if construction traffic would be required to stop at the guard station, queues could back up to SR 104 and cause further delay along that roadway. Because use of this entrance would present the potential for security risks and traffic delays along SR 104, it was determined to be infeasible.
- Construction access along Waterman Road – This option would require expansion of an existing access road that passes north of the CAL FIRE Academy to the existing Waterman Road. The terrain through this area varies and, to allow two-way traffic by haul trucks, extensive grading could be required through largely undisturbed areas that may have sensitive biological resources. Waterman Road itself is a narrow roadway with poor sight lines, scattered single-family residences, and an entrance from SR 104 that is directly adjacent to additional single-family residences. Haul truck traffic on this roadway could result in elevated noise levels, as well as other construction-related traffic disturbances. For this reason, and because of the possible biological concerns along the existing access road, this potential access route was determined to be infeasible.
- Construction access via the existing CAL FIRE Academy entrance – Use of the existing CAL FIRE Academy entrance would require that construction traffic turn left immediately upon entering from SR 104 via either a right turn or left turn. This would present potential conflicts with existing CAL FIRE operations, as well as potential damage to the existing gate mechanism at the CAL FIRE Academy entrance. In addition, the sight lines from the CAL FIRE entrance extend for approximately 2,000 feet to the west, but only 700 feet to the southeast along SR 104, in contrast to sight lines of at least 2,000 feet in either direction along SR 104 that are available at the proposed temporary access point. Limited sight lines could contribute to potential vehicle conflicts between motorists along SR 104 and construction traffic associated with the level II infill facility at MCSP. For these reasons, the use of the existing CAL FIRE Academy entrance was considered feasible but not preferable to the proposed entrance.

The construction activities for a level II infill correctional facility complex are anticipated to generate between 116 and 1,624 daily trips, depending on the phase(s). Implementation of the MCSP Infill Site would generate an estimated 1,624 daily trips during the peak period of construction traffic for a complex. The peak period is anticipated to be the six months when utilities and building construction are occurring concurrently. These trips, when added to the local roadway network, could result in many of the same traffic impacts described for operation of the complex at the MCSP Infill Site.

The traffic impacts during construction would depend on the construction workers' shifts. Construction traffic could result in temporary impacts at the following facilities that currently operate at or near their LOS thresholds:

- SR 16/SR 24 (a.m., midday, and p.m. peak hours) – operates at LOS B; threshold = LOS C
- SR 104/Ione Michigan Bar Road (a.m. and Midday peak hours) – operates at LOS B; threshold = LOS C
- SR 104/Irish Hill Road (a.m., midday, and p.m. peak hours) – operates at LOS B; threshold = LOS C
- SR 104/SR 88/Jackson Valley Road (a.m., midday, and p.m. peak hours) – operates at LOS D and LOS F; threshold = LOS D



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Source: Adapted by Ascent Environmental 2013

Exhibit 3.11-6

State Route 104/Castle Oaks Drive Conceptual Construction Entrance

With implementation of a level II infill correctional facility complex at the MCSP Infill Site, construction traffic could result in significant short-term traffic impacts on local roadways. Therefore, this impact would be significant.

Mitigation Measures

Mitigation Measure 3.11-4

CDCR will prepare a construction traffic management plan (TMP) in consultation with the applicable transportation entities, including Caltrans (for state roadway facilities) and the City of Ione. The applicant will 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 coordination 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 MCSP to 27 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 (such as a temporary signal or flagging that would be developed in consultation with the applicable transportation entities) 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, if necessary, specify mitigations to:

- avoid or minimize the use of haul routes where the pavement condition is physically deficient, according to each jurisdictions' standards, or
- enter into mitigation agreements to improve the physical condition of haul routes that are in a physically deficient condition.

Determination of whether the pavement condition is "acceptable" or "deficient" will be defined by the presiding jurisdiction's pavement management criteria.

The TMP will also prescribe haul routes and shall require the inclusion of approved routes for all construction-related vehicles (including commercial deliveries) within the construction specifications for development of the infill site. The construction contractor shall limit construction-related vehicles to use of SR 88, SR 104, and SR 124 for the transportation of materials to and from the infill site. The construction contractor will not use Ione-Michigan Bar Road, Tonzi Road, or Sutter Ione Road. Monthly monitoring reports will be prepared by the construction contractor and submitted to CDCR, Amador County, and the City of Ione identifying which haul routes were used and at what frequency. The construction contractor will be solely responsible for responding to complaints regarding use of unapproved haul routes by construction-related vehicles and

secure an appropriate method of enforcement, including contracting, if necessary, with the Amador County Sheriff.

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. However, the details of these improvements cannot feasibly be developed at this time. 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 identified above. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable.**

EXISTING PLUS APPROVED PROJECTS CONDITIONS

Existing plus approved projects (E+AP) conditions are assumed to represent a short-term future scenario in which planned and approved projects in the area have been constructed, but no other growth has occurred. This section presents the traffic operations analysis for the E+AP conditions scenario.

Existing plus Approved Projects Conditions Roadway Network

No additional roadway network improvements are assumed for the E+AP conditions scenario.

Existing plus Approved Projects Traffic Projections

E+AP conditions traffic forecasts were developed based on information provided in the recently approved *Newman Ridge Quarry Traffic Impact Study* (Abrams Associates 2012). The Newman Ridge Quarry study was prepared for a proposed quarry located about three miles west of Ione on SR 104. The study was used as a reference to develop the Existing plus Approved Projects traffic forecasts. This approach was confirmed with staff from Amador County and ACTC. The Newman Ridge Quarry study includes a list of approved projects and corresponding peak hour traffic volume data. Table 3.11-13 shows the list of approved projects included in the Newman Ridge study.

Table 3.11-13 Approved Projects Assumed in Existing Plus Approved Projects Analysis

Project Name	Location	Size/Description
Amador Central Business Park (Martell Business Park)	Martell	47.76 acres, 53 lots
Castle Oaks Hotel	Ione	80 rooms
Castle Oaks Subdivision	Ione	647 single family units
Castle Oaks Retail	Ione	100,000 sq. ft. of use on 10 acres
Gold Rush Ranch & Golf Resort	Sutter Creek	1,775 residential units 57,000 sq. ft. commercial 60-room hotel
Jackson Valley Quarry Expansion Project	Buena Vista	Increase of about 6,000 tons per day, about 273 new truck loads per day
Lake Camanche Village Unit 3B	Camanche Village	250 single family units
Wildflower	Ione	277 single family units

Source: *Newman Ridge Quarry Traffic Impact Study*, Abrams Associates, 2012

Intersection turning movement forecasts were developed using the traffic volumes from the approved projects in Table 3.11-13, as well as traffic volumes generated by the Newman Ridge Quarry project (provided in Figure A2 of the *Newman Ridge Quarry Traffic Impact Study*). Because the Newman Ridge study did not include all of the study intersections included in this analysis, traffic volumes were developed for the additional study intersections using the same methods used in the Newman Ridge study. That study concluded that the traffic volumes would increase by 22% due to construction of the approved projects. Therefore, the existing volumes were increased by 22% to develop the E+AP traffic forecasts. In some cases, this methodology resulted in E+AP traffic volumes that were greater than the cumulative traffic forecasts estimated by the ACTC TDF Model. In those cases, the E+AP volumes were made equal to the cumulative traffic volumes. Exhibit 3.11-7 presents the E+AP turning movement traffic volumes.

Daily roadway segment traffic volume forecasts were developed using the same methods used in the Newman Ridge study (and described above). For locations where the E+AP volumes were higher than the cumulative volumes, the E+AP volumes were made equal to the cumulative volumes. This presents a conservative analysis of the E+AP scenarios.

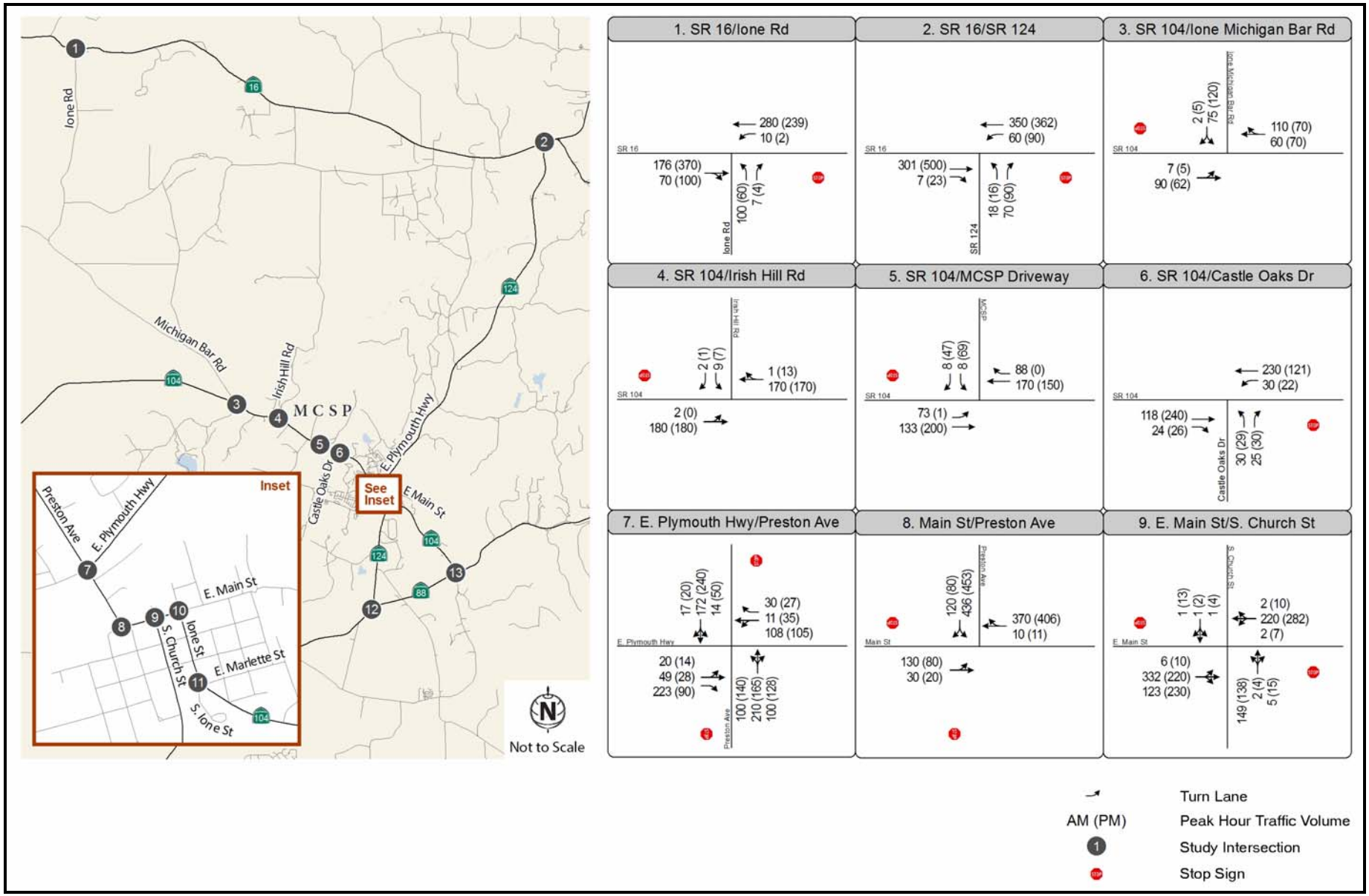
E+AP plus project traffic volumes were developed by adding the traffic that would be generated by a single, level II infill correctional facility or a level II infill correctional facility complex (shown in Exhibits 3.11-3 and 3.11-4) to the E+AP volumes. Exhibit 3.11-8 (for a single facility) and Exhibit 3.11-9 (for a complex) present the E+AP plus project traffic volumes.

Midday Peak Hour Volumes

An evaluation of the midday peak hour was performed under existing and existing plus level II infill correctional facility conditions to determine if traffic generated by the infill facility would cause an impact when combined with school traffic. An evaluation of the midday peak hour was not performed for the E+AP scenarios for the following reasons:

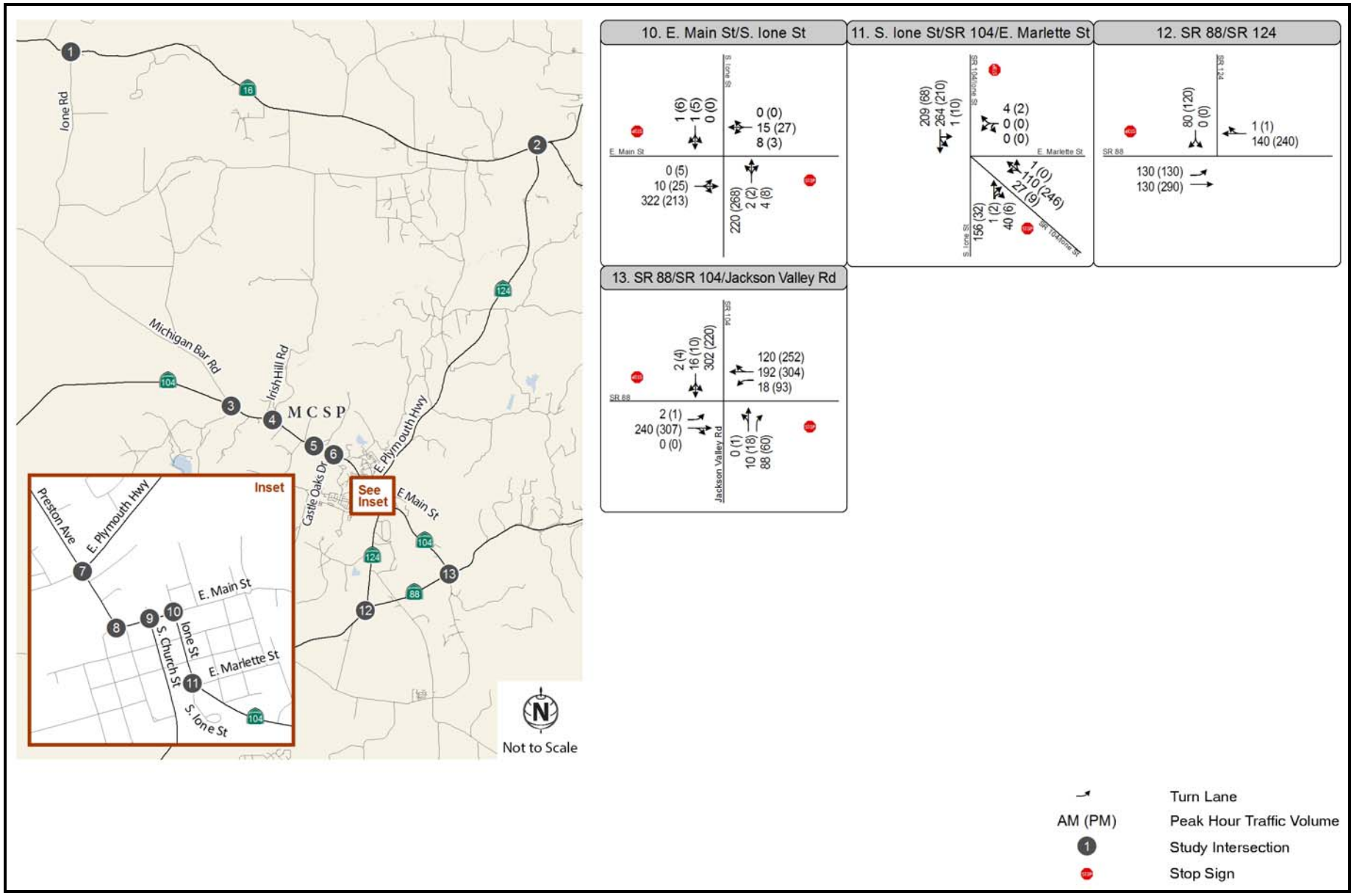
- A comparison of existing and existing plus project conditions traffic volumes was performed between the a.m., midday, and p.m. peak hours. The comparison showed that the midday peak hour traffic volumes were lower than the a.m. and/or p.m. peak hour traffic volumes at nine of the 13 study intersections for the existing, existing plus level II infill correctional facility (single facility), and existing plus level II infill correctional facility (complex) conditions.
- Because the midday peak hour volumes are less than the a.m. and/or p.m. peak hour volumes at the nine study intersections, it is reasonable to conclude that the delay and LOS during the midday peak hour will be less than what is reported for the a.m. and/or p.m. peak hours under E+AP conditions (i.e., if an impact is generated during the midday peak hour, it will also be generated during the a.m. and/or p.m. peak hours and will be accounted for in the analysis).
- An evaluation of the existing plus project conditions analyses shows that the variation in delay between the a.m., midday, and p.m. peak hours is minimal (less than 3 seconds) for intersections 3-6. Intersections 3-6 operate at acceptable levels of service (LOS B or better) under E+AP plus level II infill correctional facility conditions for the single facility and complex during the a.m. and p.m. peak hours. It is reasonable to conclude that these intersections will also operate at acceptable levels of service during the midday peak hour for E+AP plus project conditions as the highest level of traffic volumes, regardless of development of the infill site, would occur during these two periods.

Therefore, the midday peak hour intersection analysis is not needed for the E+AP conditions scenarios.



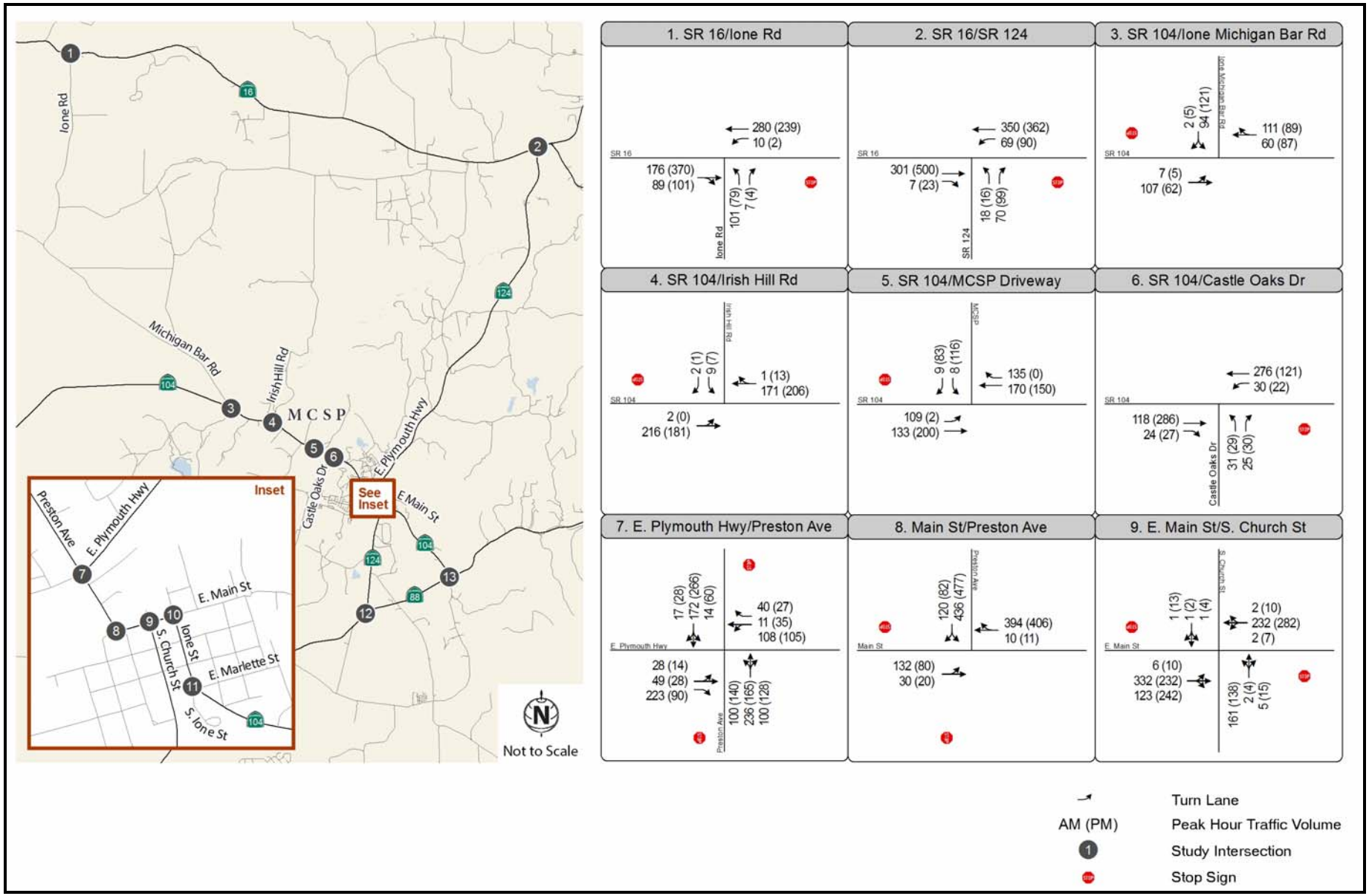
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-7 Existing plus Approved Projects Traffic Volumes (1 of 2)



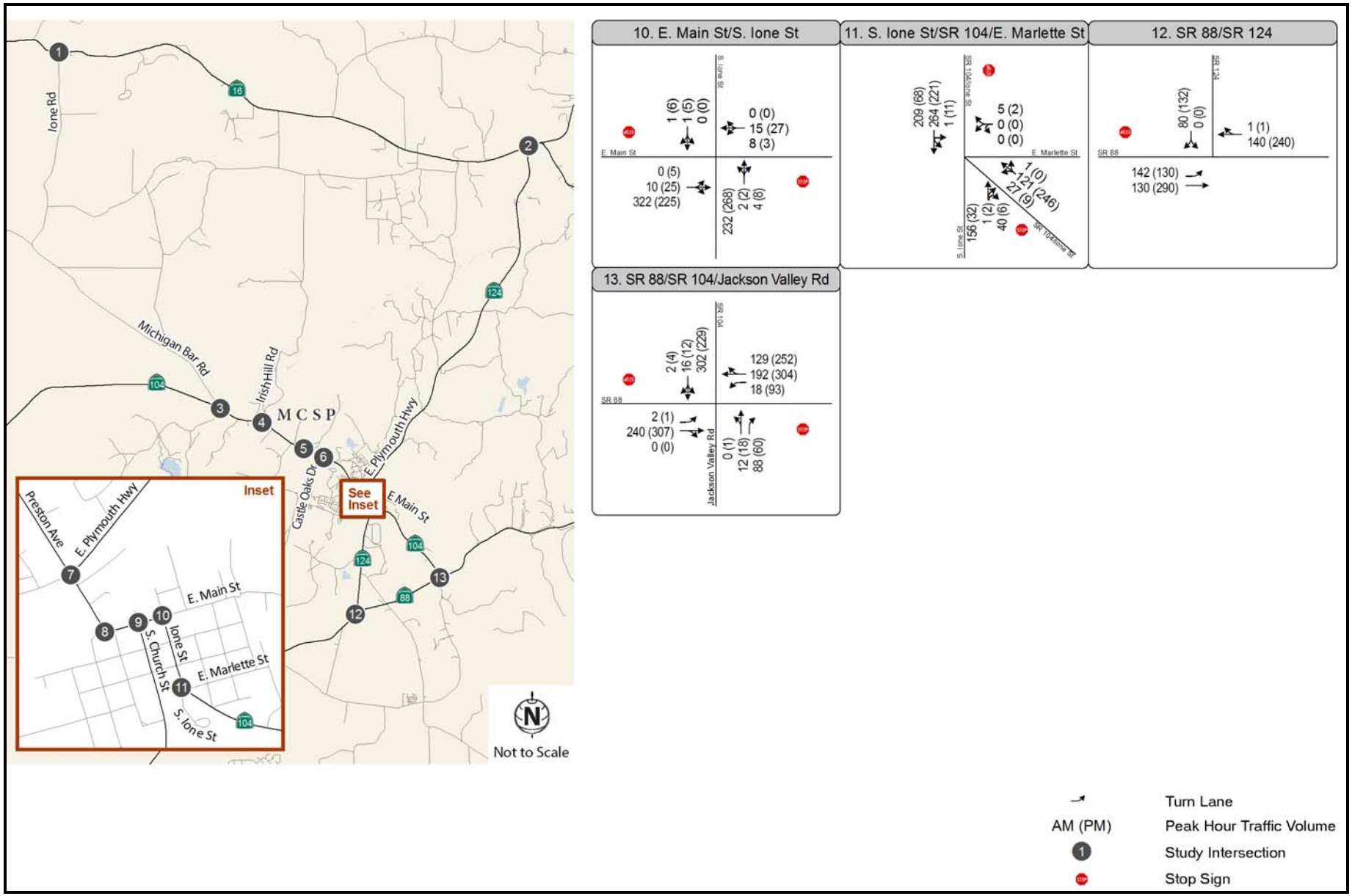
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-7 Existing plus Approved Projects Traffic Volumes (2 of 2)



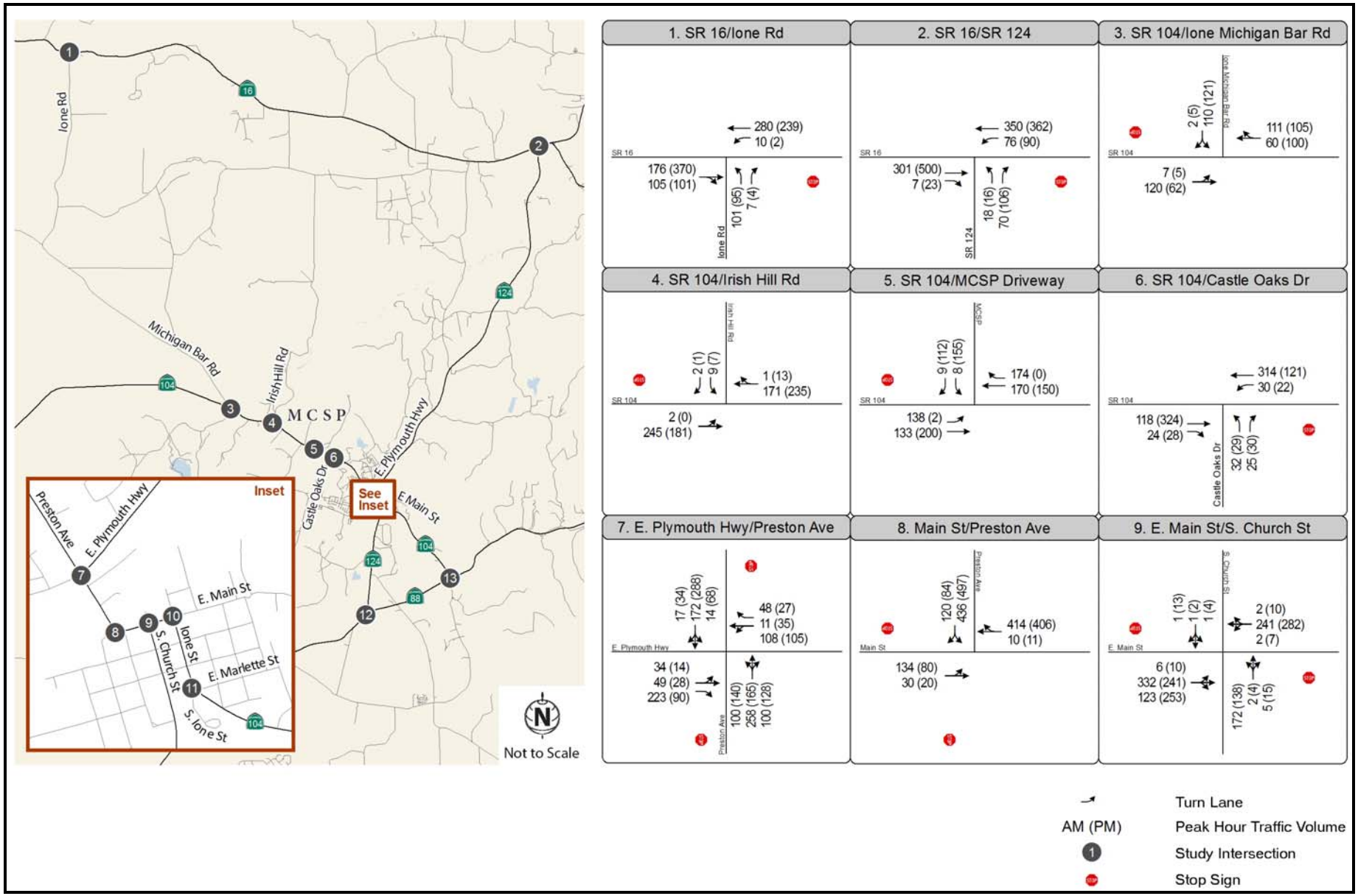
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-8 Existing plus Approved Projects plus Single Facility Traffic Volumes (1 of 2)



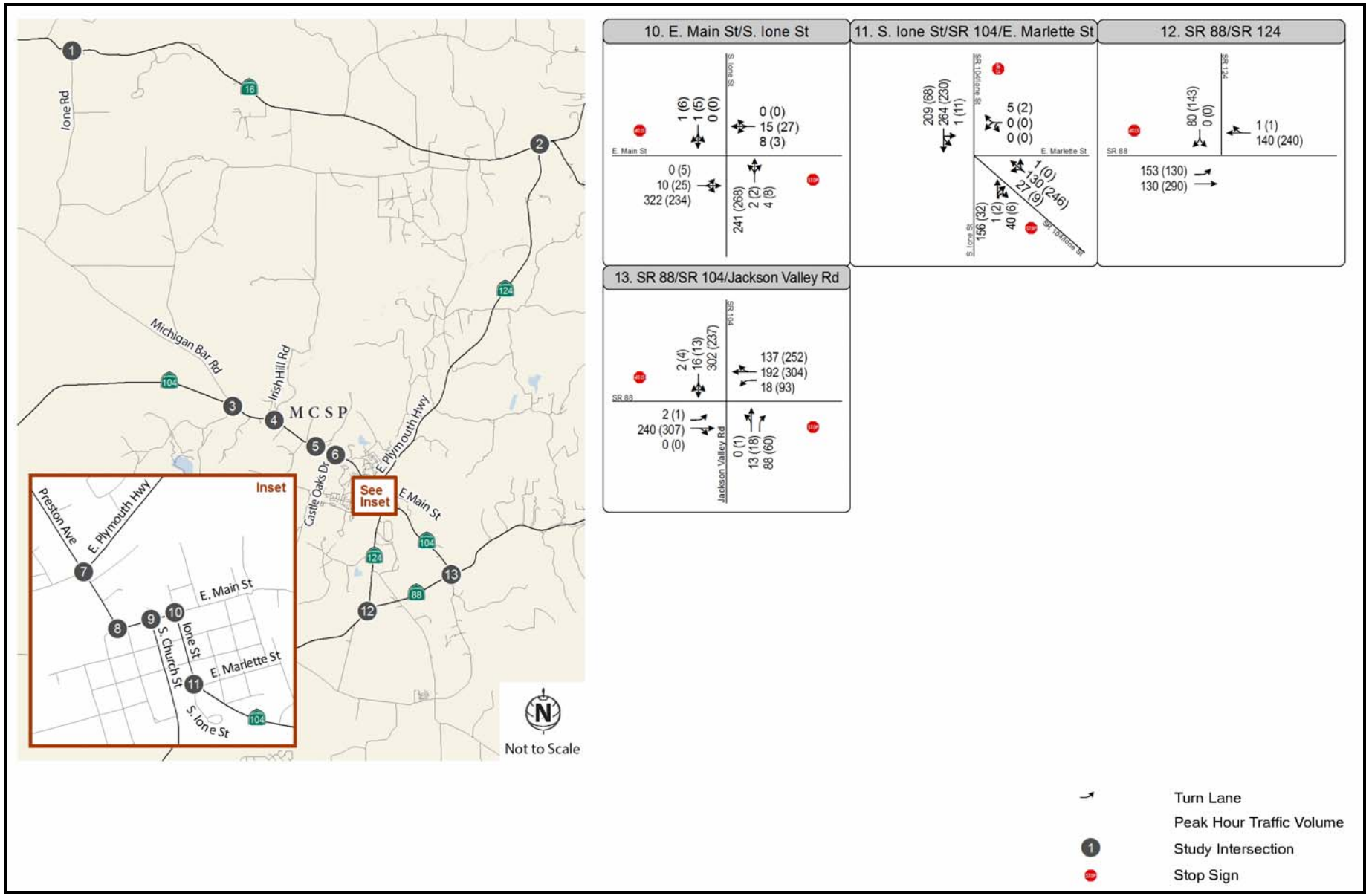
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-8 Existing plus Approved Projects plus Single Facility Traffic Volumes (2 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-9 Existing plus Approved Projects plus Complex Traffic Volumes (1 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-9 Existing plus Approved Projects plus Complex Traffic Volumes (2 of 2)

EXISTING PLUS APPROVED PROJECTS PLUS LEVEL II INFILL FACILITY COMPLEX TRAFFIC OPERATIONS IMPACTS

Peak hour intersection and daily roadway segment LOS analyses were performed under E+AP and E+AP plus level II infill facility conditions to determine the potential impacts of the development of a level II infill correctional facility at the MCSP Infill Site. The E+AP and E+AP plus level II infill correctional facility analyses use existing heavy vehicle percentages and intersection peak hour factors.

Impact 3.11-5a: Existing Plus Approved Projects Impacts on Intersection Operations [Complex]

Intersection LOS analysis for E+AP plus level II infill correctional facility conditions was performed using Synchro 7 software, which utilizes *HCM 2000* methodology. Table 3.11-14 shows the E+AP plus level II infill correctional facility LOS results at the study intersections for the complex. Under E+AP conditions, the SR 104/SR 88/Jackson Valley Road intersection operates at an unacceptable LOS. The traffic generated by the development of a complex would increase the delay of the side-street movement by more than five seconds and the intersection meets the *MUTCD*'s peak hour signal warrant. Therefore, the development of the complex would create a significant impact at this location. In addition and as noted above, although the City of Ione considers LOS F acceptable at several of the study intersections, Caltrans does not accept LOS F for those intersections that coincide with Caltrans facilities. As shown in Table 3.11-14, four of the study intersections involving state facilities would continue to operate unacceptably per Caltrans standards under E+AP conditions and operations would further degrade with operation of the proposed complex at MCSP. Refer to Appendix 3D of this volume for the technical calculations.

Table 3.11-14 Intersection Level of Service Results – Existing plus Approved Projects Plus Level II Infill Correctional Facility Complex Conditions

Intersection	Traffic Control[1]	Min. Accept-able LOS	Existing plus Approved Projects				Existing plus Approved Projects plus Complex			
			AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
			Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1. SR 16 (Jackson Road)/Ione Road	SSSC	E	2.5 (14.3)	A (B)	1.3 (14.9)	A (B)	2.4 (14.6)	A (B)	2.0 (16.2)	A (C)
2. SR 16/SR 24	SSSC	C	1.9 (12.2)	A (B)	2.2 (14.4)	A (B)	2.1 (12.4)	A (B)	2.3 (14.5)	A (B)
3. SR 104/Ione Michigan Bar Road	SSSC	C	2.6 (10.8)	A (B)	4.0 (10.4)	A (B)	3.3 (11.6)	A (B)	3.5 (10.8)	A (B)
4. SR 104/Irish Hill Road	SSSC	C	0.4 (10.6)	A (B)	0.2 (11.0)	A (B)	0.3 (11.1)	A (B)	0.2 (11.7)	A (B)
5. SR 104/ MCSP Driveway	SSSC	E	1.5 (10.6)	A (B)	2.5 (10.5)	A (B)	2.0 (11.8)	A (B)	4.7 (11.5)	A (B)
6. SR 104/ Castle Oaks Drive	SSSC	E	1.8 (11.6)	A (B)	1.8 (12.3)	A (B)	1.6 (12.6)	A (B)	1.6 (13.5)	A (B)
7. Preston Avenue (SR 104)/E. Plymouth Highway (SR 124)	SSSC	F	47.5 (>150)	E (F)	20.1 (100.2)	C (F)	62.8 (>150)	F (F)	30.0 (>150)	D (F)
8. Main Street/ Preston Avenue	SSSC	F	>150 (>150)	F (F)	40.1 (76.3)	E (F)	>150 (>150)	F (F)	57.8 (106.7)	F (F)
9. E. Main Street/ S. Church Street	SSSC	F	8.3 (44.1)	A (E)	4.6 (24.8)	A (C)	13.2 (64.7)	B (F)	4.8 (26.9)	A (D)

Table 3.11-14 Intersection Level of Service Results – Existing plus Approved Projects Plus Level II Infill Correctional Facility Complex Conditions

10. E. Main Street/ S. Ione Street	SSSC	F	6.5 (16.4)	A (C)	6.7 (12.8)	A (B)	7.3 (17.5)	A (C)	6.5 (13.0)	A (B)
11. SR 104/S. Ione Street/E. Marlette Street	SSSC	F	12.2 (48.5)	B (E)	1.3 (13.7)	A (B)	13.4 (55.1)	B (F)	1.3 (14.1)	A (B)
12. SR 124/SR 88	SSSC	D	3.7 (9.6)	A (A)	3.0 (10.6)	A (B)	4.0 (9.6)	A (A)	3.3 (10.9)	A (B)
13. SR 104/SR 88/ Jackson Valley Road	SSSC	D	34.4 **(102.7)**	D **(F)**	**72.1 (>150)**	**F (F)**	36.4 **(111.1)**	E **(F)**	**88.7 (>150)**	**F (F)**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] SSSC = Side-Street Stop-Control
[2] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[3] Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side-street stop-controlled intersections.
Source: Fehr & Peers 2013

Development of a level II infill correctional facility complex at the MCSP Infill Site would result in the unacceptable degradation of intersection operations in the vicinity of the infill site with operation of the proposed complex. This would be a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.11-1.

Significance after Mitigation

Implementation of Mitigation Measure 3.11-1 would reduce impacts resulting from operation of a level II infill correctional facility complex at MCSP under E+AP plus level II infill correctional complex conditions to a less-than-significant level. The intersection would operate at LOS C in the p.m. peak hour with the installation of a traffic signal. However, as noted above, implementation of Mitigation Measure 3.11-1 is within the responsibility and jurisdiction of another public agency, Caltrans, and not CDCR, and Caltrans and Amador County have indicated that there are no proposed or planned improvements at this intersection, and thus, payment of regional transportation fees would not be expected to result in direct improvement of this intersection. Since signalization is not a planned improvement and could not be guaranteed prior to initiation of operation of the proposed complex, operations at the intersection of SR 104, SR 88, and Jackson Valley Road would likely continue to be unacceptable under E+AP conditions with the proposed complex. In addition, as noted above, operations at four study intersections that involve state facilities would not exceed City of Ione LOS standards for the intersection, but would, with and without the proposed complex, exceed Caltrans standards for those state facilities. Improvement of these intersections would likely have secondary impacts, especially related to historic resources, that would likely be significant due to the presence of a nearby historic district (refer to Section 3.3, “Cultural Resources” of this volume). As a result, implementation of this mitigation is considered infeasible. Impacts to intersections would be **significant and unavoidable** with implementation of the proposed complex.

Impact 3.11-6a: Existing Plus Approved Projects Impacts on Roadway Segment Operations [Complex]

Daily traffic volumes on each study roadway segment were projected under E+AP plus level II infill facility conditions. Table 3.11-15 summarizes the projected daily volumes and LOS on each study segment for a complex at the MCSP Infill Site. Similar to the evaluation for a single facility, traffic generated by the development of a complex at the MCSP Infill Site would add traffic to SR 88 east of its

intersection with SR 104. This segment would operate at unacceptable LOS under E+AP conditions; therefore, development of a complex at the MCSP Infill Site would cause a significant impact.

Table 3.11-15 Roadway Segment Level of Service Results – Existing plus Approved Projects plus Project Conditions (Complex)

Roadway	Location	Roadway Type	Existing plus Approved Projects			Existing plus Approved Projects plus Complex		
			Volume[1]	LOS	v/c Ratio[2]	Volume[1]	LOS	v/c Ratio[2]
Michigan Bar Road	North of SR 104	Collector, Class III	2,560	B	0.15	2,736	B	0.16
SR 104	West of Michigan Bar Road	Collector, Class II	2,870	B	0.17	3,023	B	0.18
SR 104	East of MCSP Driveway	Collector, Class II	5,520	C	0.33	5,955	C	0.35
SR 124 (E. Plymouth Highway)	North of SR 104	Arterial, Class II	5,590	C	0.30	5,674	C	0.30
S. Ione Street	South of Main Street	Arterial, Class II	7,710	C	0.41	7,816	C	0.41
S. Church Street	South of Main Street	Arterial, Class II	7,370	C	0.39	7,485	C	0.40
Preston Road	North of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	8,960	C	0.47	9,374	D	0.50
Preston Road	South of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	11,540	D	0.61	11,782	D	0.62
Main Street	Between Preston Avenue and S. Church Street	Arterial, Class II	11,670	D	0.62	11,891	D	0.63
SR 88	West of SR 124	Arterial, Class I	10,160	C	0.50	10,275	C	0.51
SR 88	East of SR 104	Arterial, Class I	**10,520**	**D**	**0.52**	**10,604**	**D**	**0.52**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] Two-way daily traffic volumes
[2] v/c = volume-to-capacity
Source: Fehr & Peers 2013

Development of a level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of its intersection with SR 104, which would operate at an unacceptable level without the infill site under E+AP conditions. Developing the complex would exacerbate those unacceptable operating conditions. This would be a significant impact.

Mitigation Measures

No feasible mitigation is available.

Significance after Mitigation

Development of a level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of its intersection with SR 104, which would operate at unacceptable LOS D under E+AP conditions. The impact could be mitigated by widening SR 88 to four lanes; however, SR 88 is under Caltrans jurisdiction, and Caltrans currently has no plans to widen the roadway. As a result, the cost of such an improvement would not be accommodated as part of a

capital improvement program, and the cost for such an improvement, including property acquisition, planning, engineering, and construction, would likely be the responsibility of the mitigating party, which, in this case, would be CDCR. Due to the potential costs (greater than 5 million dollars) associated with this improvement, considering that a level II infill correctional facility complex would represent 0.8% of the daily traffic along this segment under E+AP conditions, widening of this segment as mitigation is considered infeasible because the cost would not be proportional to the level of impact generated by the proposed project and there would be no mechanism for reimbursement of costs that are not the responsibility of CDCR. There is no other feasible mitigation measure that could improve traffic conditions along this roadway segment. Therefore, this impact would remain **significant and unavoidable.**

CUMULATIVE (2035) CONDITIONS

Long-term cumulative conditions are assumed to be represented by 2035 conditions. This section presents the traffic operations analysis for the cumulative conditions scenario.

Cumulative Roadway Network

There are no planned roadway network improvements that would directly affect the study intersections or roadway segments.

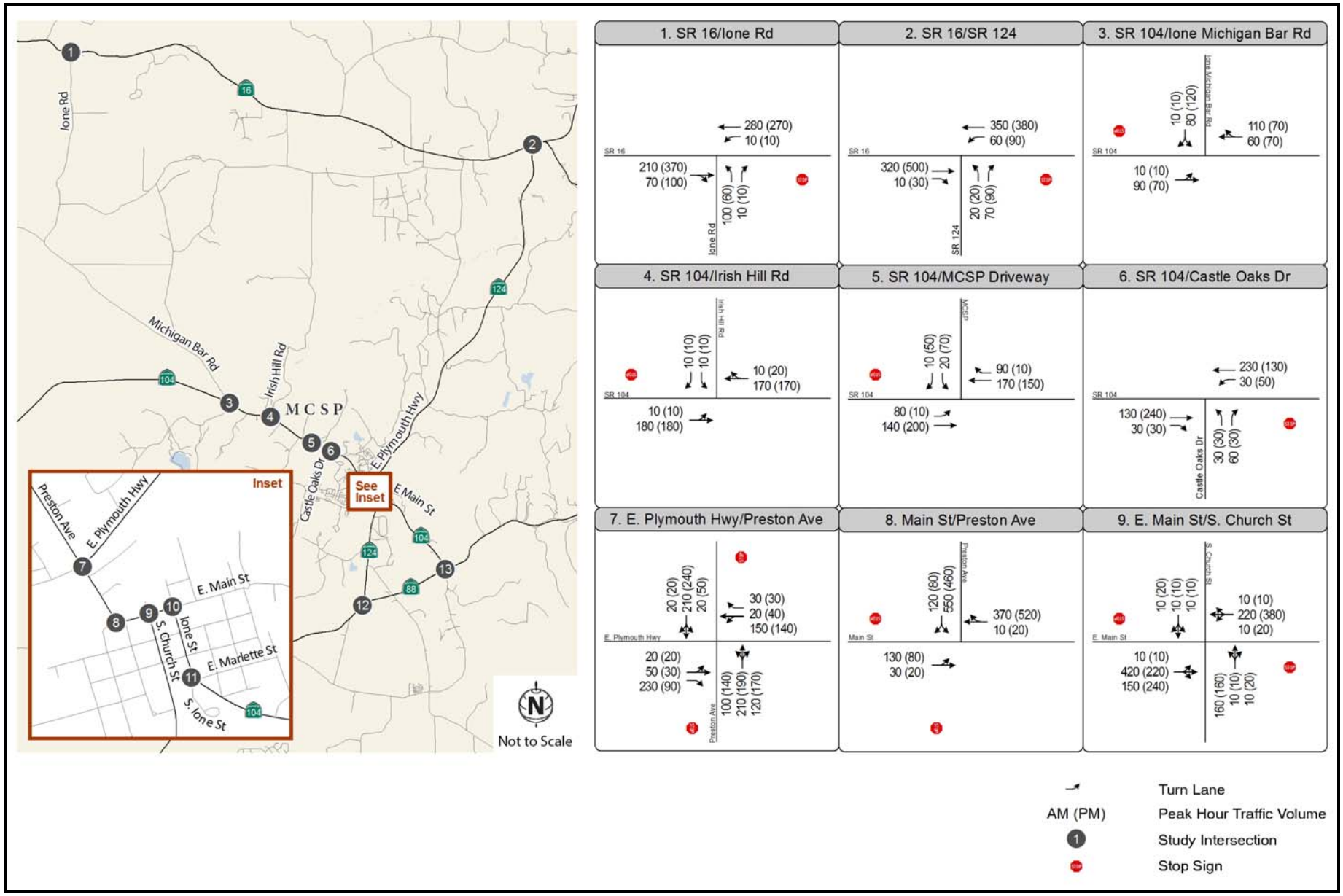
Cumulative Traffic Projections

Traffic forecasts representing 2035 were developed using ACTC TDF Model, which includes all planned and approved land use development in the area. Traffic forecasts were developed using the difference method, in which the growth between the future year and base year model volumes was added to existing traffic counts. Exhibit 3.11-10 presents the cumulative no project traffic volumes.

Cumulative plus level II infill correctional facility traffic volumes were developed by adding the traffic generated by the contemplated single facility and complex (shown in Exhibits 3.11-3 and 3.11-4, respectively) to the cumulative no project volumes. Exhibit 3.11-11 (single facility) and Exhibit 3.11-12 (complex) present the cumulative plus level II infill correctional facility traffic volumes.

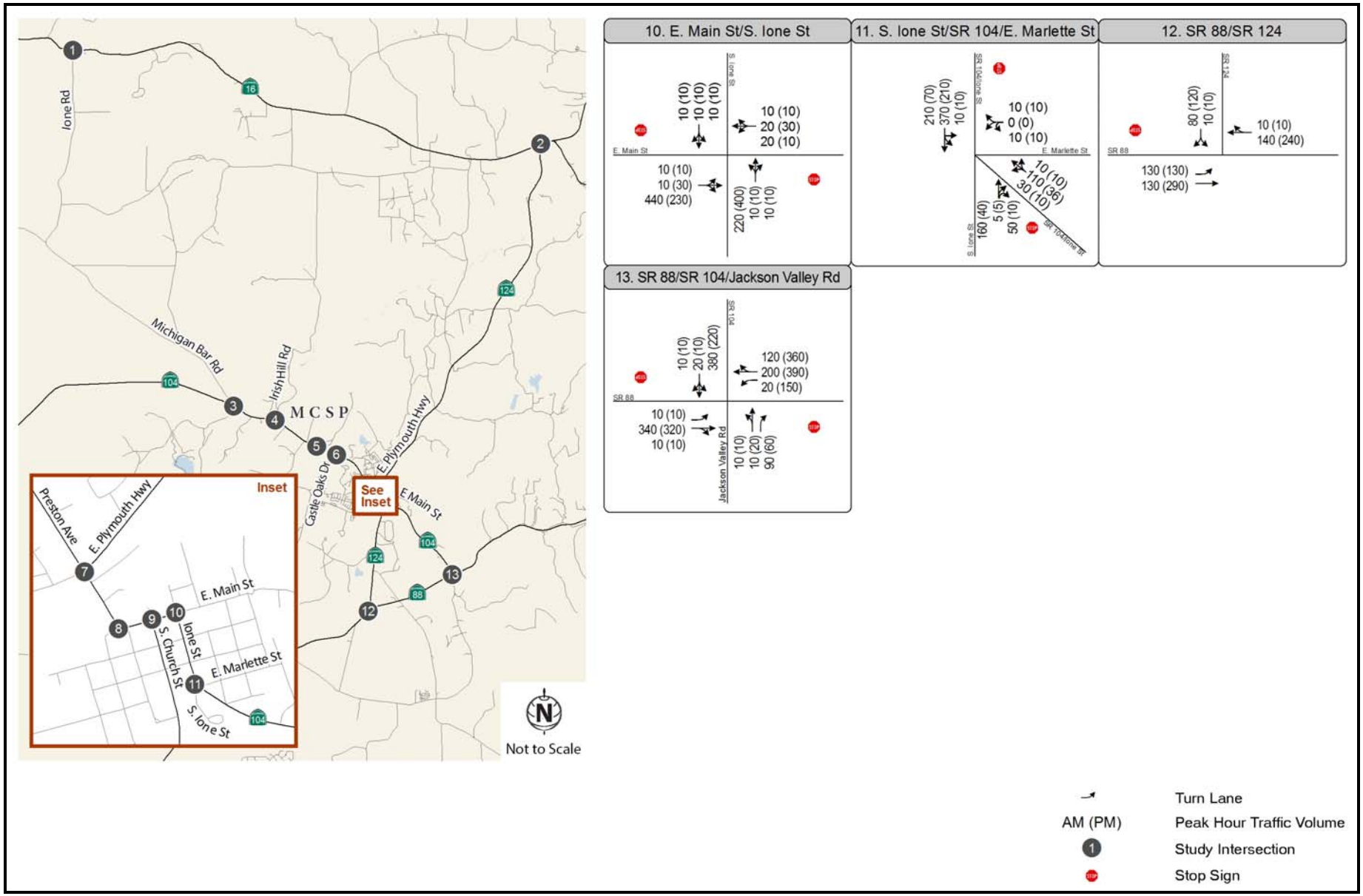
CUMULATIVE (2035) PLUS LEVEL II INFILL CORRECTIONAL FACILITY TRAFFIC IMPACTS

This study analyzes peak hour intersection operations under cumulative no project and cumulative plus level II infill correctional facility conditions to determine the potential impacts of the single facility and the complex on traffic operations. The cumulative no project and cumulative plus level II infill correctional facility analyses use existing heavy vehicle percentages and intersection peak hour factors.



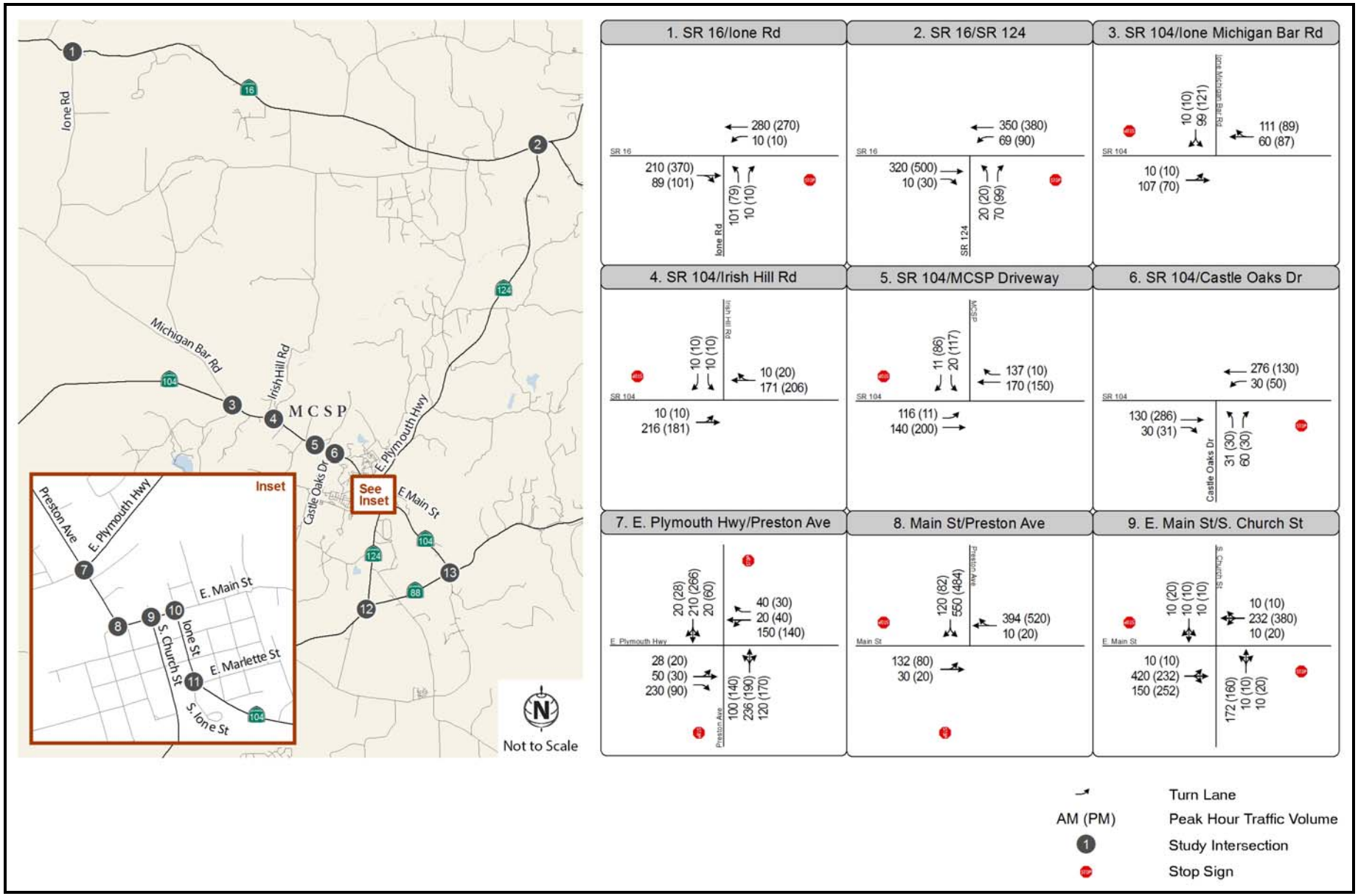
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-10 Cumulative No Project Traffic Volumes (1 of 2)



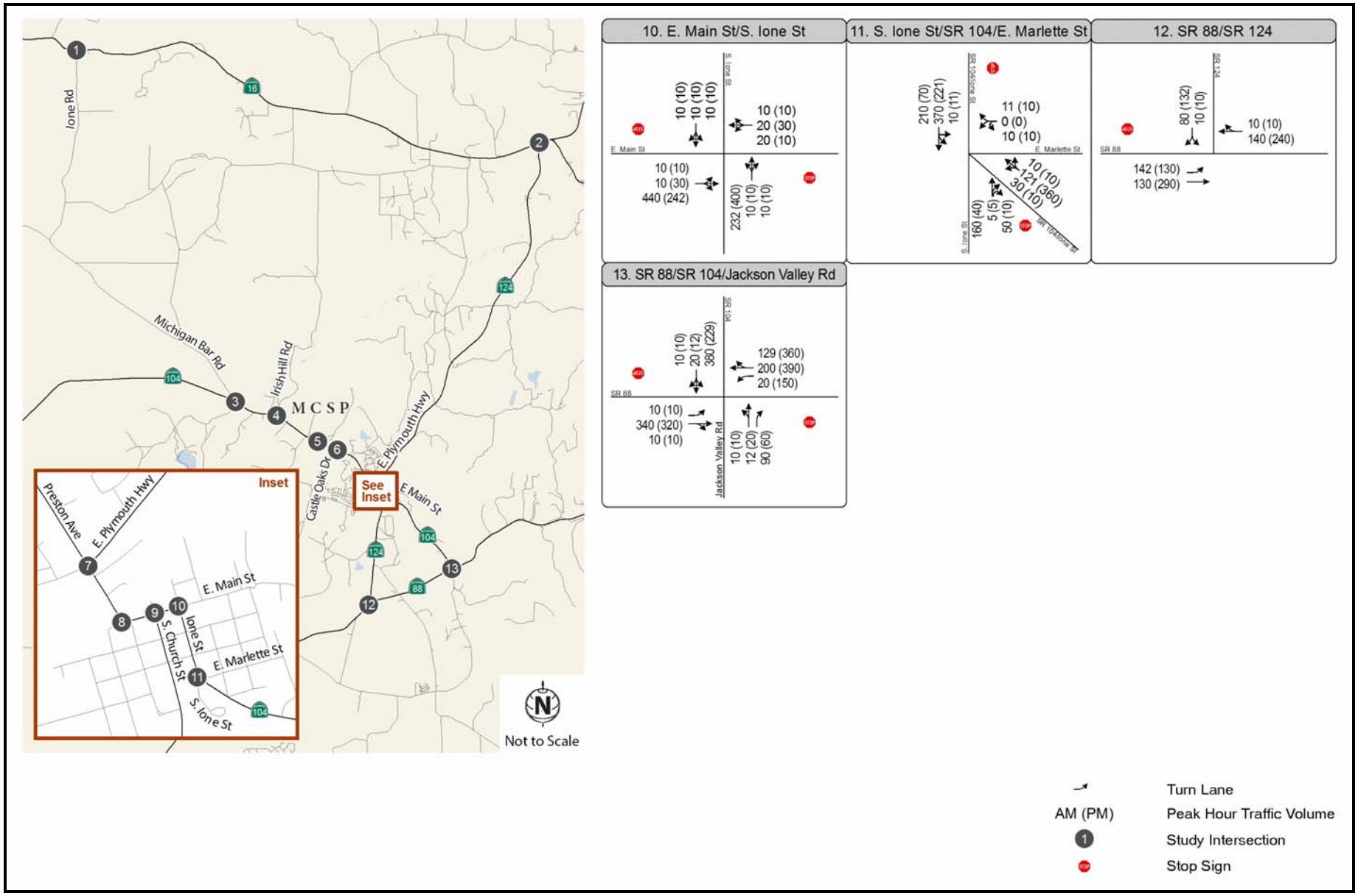
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-10 Cumulative No Project Traffic Volumes (2 of 2)



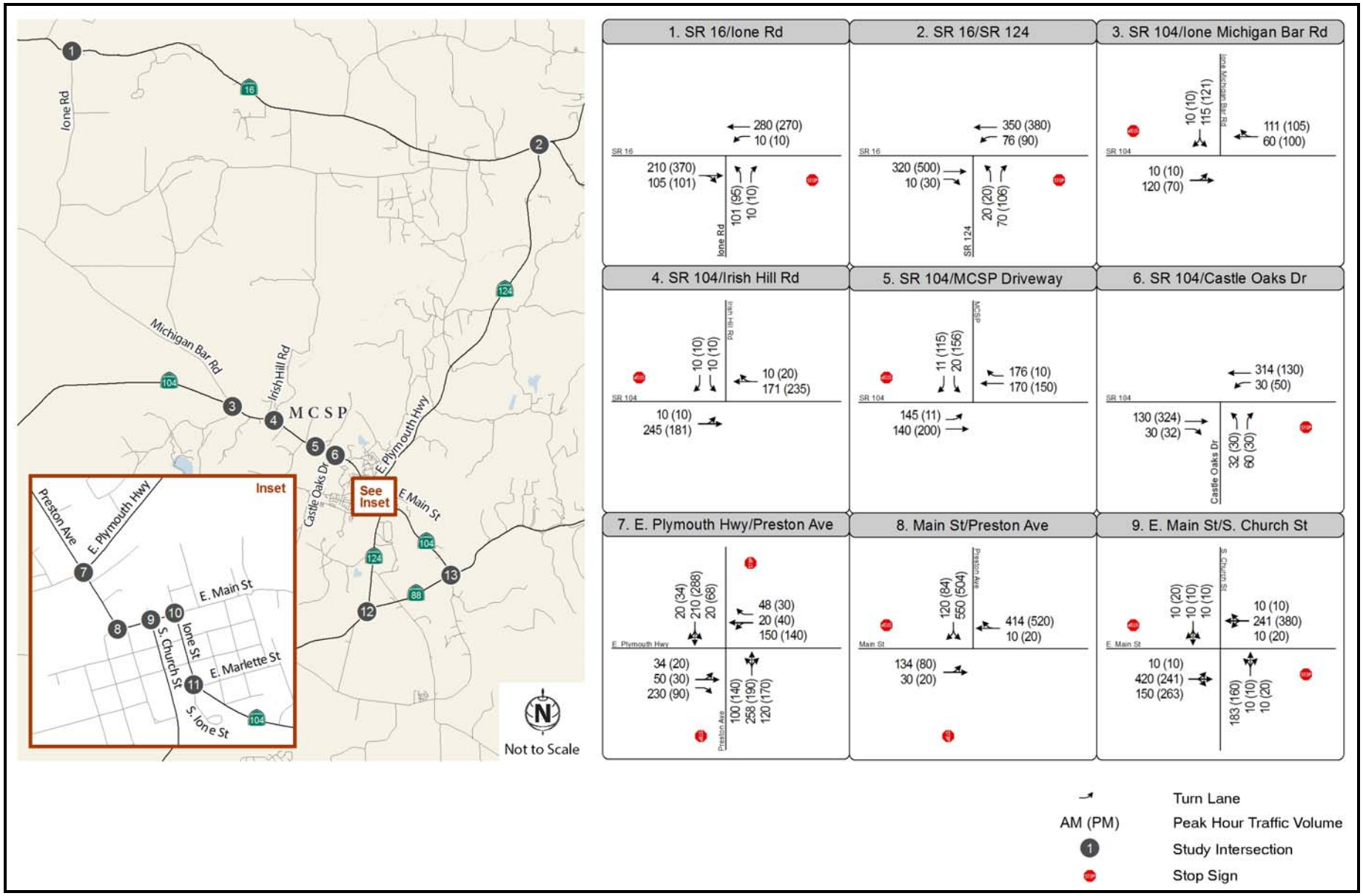
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-11 Cumulative plus Project Traffic Volumes – Single Facility (1 of 2)



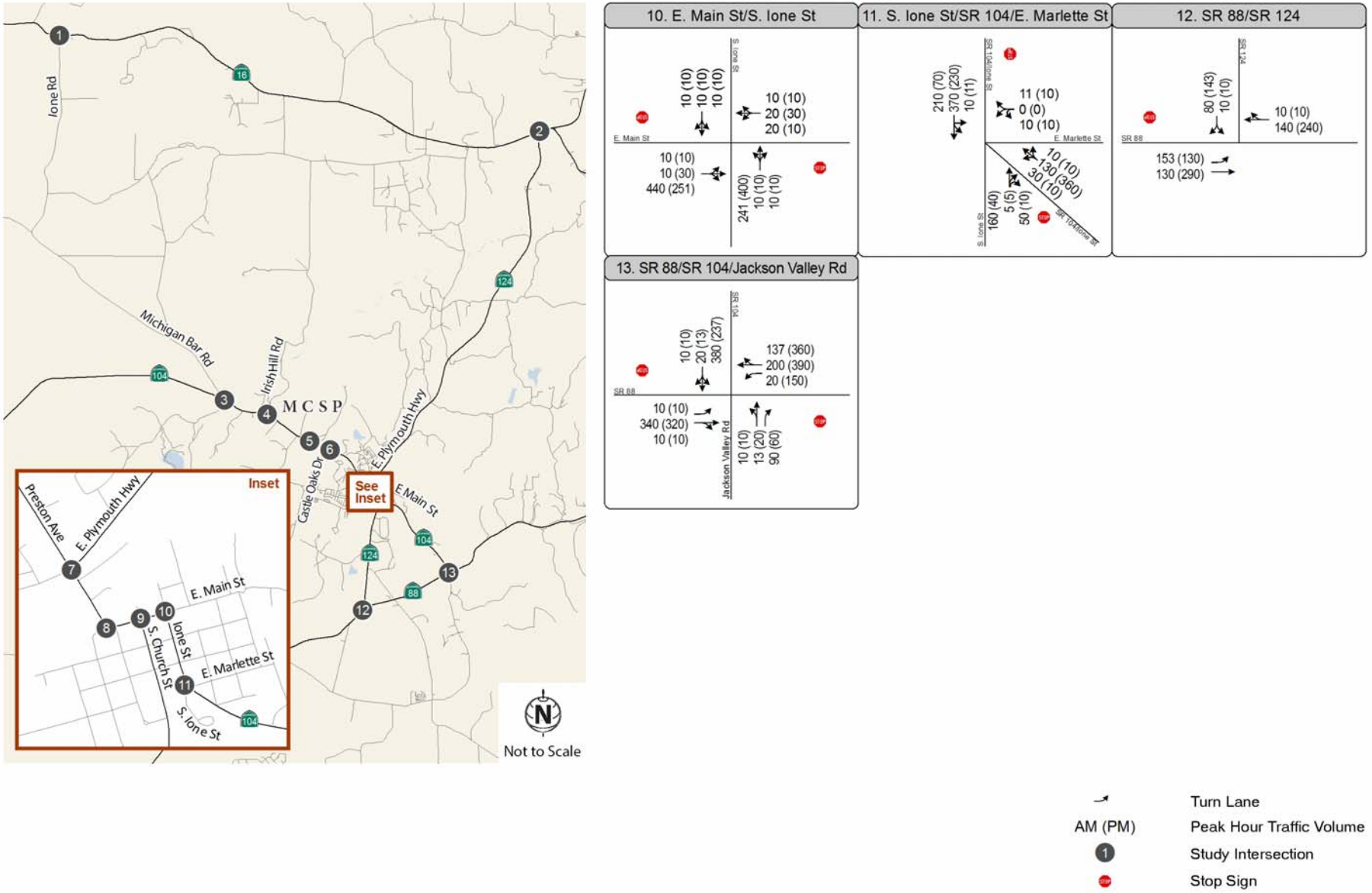
Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-11 Cumulative plus Project Traffic Volumes – Single Facility (2 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-12 Cumulative plus Project Traffic Volumes – Complex (1 of 2)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-12 Cumulative plus Project Traffic Volumes – Complex (2 of 2)

Impact 3.11-7a: Cumulative Impacts on Intersection Operations [Complex]

Intersection LOS analysis for cumulative plus level II infill correctional facility conditions was performed using Synchro 7 analysis software, which utilizes *HCM 2000* methodology. Table 3.11-16 shows the cumulative plus level II infill correctional facility LOS at the study intersections for a complex. Under cumulative conditions, the SR 104/SR 88/Jackson Valley Road intersection would operate at an unacceptable LOS. The traffic generated by development of the level II infill correctional facility complex would increase the delay of the side-street movement by more than five seconds and the intersection meets the MUCTD's peak hour signal warrant. Therefore, the development of a complex would create an impact at this location. In addition and as noted above, although the City of Ione considers LOS F acceptable at several of the study intersections, Caltrans does not accept LOS F for those intersections that coincide with Caltrans facilities. As shown in Table 3.11-16, four of these intersections involving state facilities would continue to operate unacceptably per Caltrans standards under cumulative conditions and operations would further degrade with operation of the proposed complex at MCSP. Refer to Appendix 3D in this volume for the technical calculations.

Development of a level II infill correctional facility complex at the MCSP Infill Site would result in the unacceptable degradation of intersection operations in the vicinity of the infill site with operation of the proposed complex. This would be a significant impact.

Table 3.11-16 Intersection Level of Service Results – Cumulative plus Project Conditions (Complex)

Intersection	Traffic Control[1]	Min. Accept-able LOS	Cumulative				Cumulative plus Complex			
			AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
			Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1. SR 16 (Jackson Road)/ Ione Road	SSSC	E	2.5 (14.8)	A (B)	1.4 (15.4)	A (C)	2.5 (15.1)	A (C)	2.2 (16.9)	A (C)
2. SR 16/SR 24	SSSC	C	2.0 (12.6)	A (B)	2.2 (14.9)	A (B)	2.1 (12.9)	A (B)	2.4 (14.9)	A (B)
3. SR 104/Ione Michigan Bar Road	SSSC	C	2.9 (10.9)	A (B)	4.1 (10.6)	A (B)	3.6 (11.8)	A (B)	3.7 (11.0)	A (B)
4. SR 104/ Irish Hill Road	SSSC	C	0.8 (10.2)	A (B)	0.8 (10.5)	A (B)	0.7 (10.5)	A (B)	0.7 (11.1)	A (B)
5. SR 104/ MCSP Driveway	SSSC	E	1.8 (10.9)	A (B)	2.6 (10.7)	A (B)	2.3 (12.2)	A (B)	4.8 (11.8)	A (B)
6. SR 104/ Castle Oaks Drive	SSSC	E	2.2 (11.8)	A (B)	2.2 (13.5)	A (B)	2.0 (12.7)	A (B)	2.0 (14.9)	A (B)
7. Preston Avenue (SR 104)/E. Plymouth Highway (SR 124)	SSSC	F	137.9 (>150)	F (F)	48.2 (>150)	E (F)	>150 (>150)	F (F)	68.6 (>150)	F (F)
8. Main Street/ Preston Avenue	SSSC	F	>150 (>150)	F (F)	68.8 (147.1)	F (F)	>150 (>150)	F (F)	93.1 (>150)	F (F)
9. E. Main Street/ S. Church Street	SSSC	F	29.2 (>150)	D (F)	9.6 (50.8)	A (F)	47.2 (>150)	E (F)	10.6 (58.8)	B (F)
10. E. Main Street/S. Ione Street	SSSC	F	11.2 (33.6)	B (D)	11.3 (19.5)	B (C)	14.1 (40.5)	B (E)	11.3 (20.2)	B (C)
11. SR 104/S. Ione Street/E. Marlette Street	SSSC	F	36.6 (>150)	E (F)	1.9 (16.3)	A (C)	40.4 (>150)	E (F)	1.9 (16.8)	A (C)
12. SR 124/ SR 88	SSSC	D	3.9 (10.4)	A (B)	3.2 (11.7)	A (B)	4.2 (10.6)	A (B)	3.5 (11.9)	A (B)
13. SR 104/ SR 88/ Jackson Valley Road	SSSC	D	**128.9 (>150)**	**F (F)**	**>150 (>150)**	**F (F)**	**133.2 (>150)**	**F (F)**	**>150 (>150)**	**F (F)**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] SSSC = Side-Street Stop-Control
[2] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[3] Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side-street stop-controlled intersections.
Source: Fehr & Peers 2013

Mitigation Measures

Implement Mitigation Measure 3.11-1.

Significance after Mitigation

Implementation of Mitigation Measure 3.11-1 would reduce impacts resulting from operation of a level II infill correctional facility complex at the MCSP Infill Site under cumulative plus level II infill correctional facility conditions to a less-than-significant level. This intersection would operate at LOS C in the a.m. and p.m. peak hours with the installation of a traffic signal. However, as noted above, implementation of Mitigation Measure 3.11-1 is within the responsibility and jurisdiction of another public agency, Caltrans, and not CDCR, and Caltrans and Amador County have indicated that there are no proposed or planned improvements at this intersection, and thus, payment of regional transportation fees would not be expected to result in direct improvement of this intersection. Since signalization is not a planned improvement and could not be guaranteed prior to initiation of operation of the proposed complex, operations at the intersection of SR 104, SR 88, and Jackson Valley Road would likely continue to be unacceptable under cumulative conditions with the proposed complex. In addition, as noted above, operations at four study intersections within the City of Ione that involve state facilities would not exceed City of Ione LOS standards for those intersections, but would exceed Caltrans standards for those state facilities. Improvement of these intersections would likely have secondary impacts, especially related to historic resources, that would likely be significant due to the presence of a nearby historic district (refer to Section 3.3, “Cultural Resources” of this volume). As a result, implementation of this mitigation is considered infeasible. Impacts to intersections would be **significant and unavoidable** with implementation of the proposed complex.

Impact 3.11-8a: Cumulative Impacts on Roadway Segment Operations [Complex]

Daily traffic volumes on each study roadway segment were projected under cumulative plus project conditions. Table 3.11-17 summarizes the projected daily volumes and LOS on each study segment for the complex. Traffic generated by development of a level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of its intersection with SR 104. This segment operates at an unacceptable LOS under cumulative conditions; therefore, development of a complex at the MCSP Infill Site would cause a significant impact.

Development of a level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of its intersection with SR 104, which would operate at an unacceptable level without the infill site under cumulative conditions. Developing the complex would exacerbate those unacceptable operating conditions. This would be a significant impact.

Mitigation Measures

No feasible mitigation is available.

Significance after Mitigation

Development of a level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of its intersection with SR 104, which would operate at unacceptable LOS D operations under cumulative conditions. The impact could be mitigated by widening SR 88 to four lanes; however SR 88 is under Caltrans jurisdiction, and Caltrans currently has no plans to widen the roadway. As a result, the cost of such an improvement would not be accommodated as part of a capital improvement program, and the cost for such an improvement, including property acquisition, planning, engineering, and construction, would likely be the responsibility of the mitigating party, which, in this case, would be CDCR. Due to the potential costs (greater than five million dollars) associated with this improvement, considering that a level II infill

correctional facility complex would represent 0.6% of the daily traffic along this segment under cumulative conditions, widening of this segment as mitigation is considered infeasible because the cost would not be proportional to the level of impact generated by the project and there would be no mechanism for reimbursement of costs that are not the responsibility of CDCR. There is no other feasible mitigation measure that could improve traffic conditions along this roadway segment. Therefore, this impact would remain **significant and unavoidable.**

Table 3.11-17 Roadway Segment Level of Service Results – Cumulative plus Project Conditions (Complex)

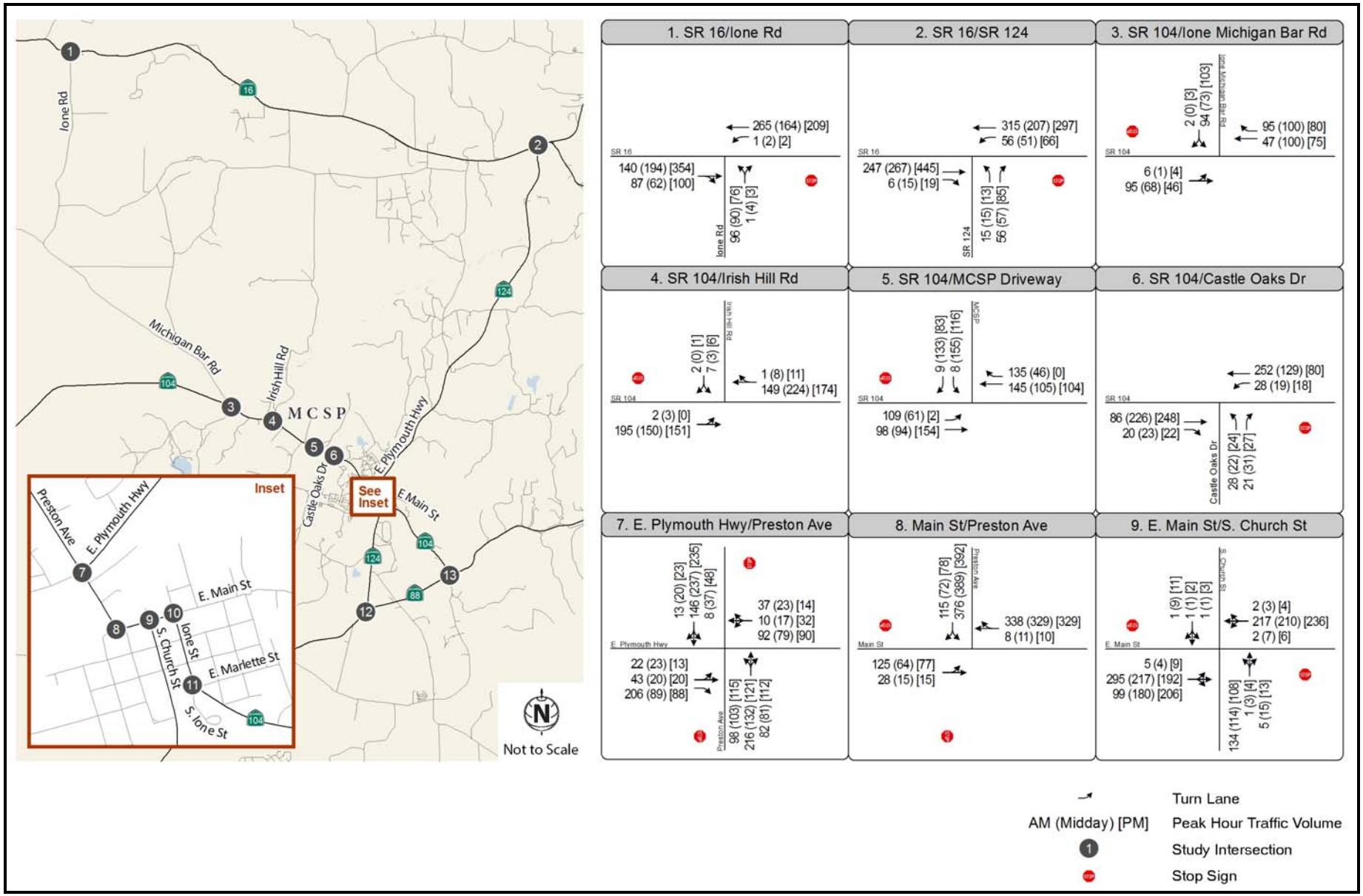
Roadway	Location	Roadway Type	Cumulative			Cumulative plus Complex		
			Volume[1]	LOS	v/c Ratio[2]	Volume[1]	LOS	v/c Ratio[2]
Michigan Bar Road	North of SR 104	Collector, Class III	2,560	B	0.15	2,736	B	0.16
SR 104	West of Michigan Bar Road	Collector, Class II	2,870	B	0.17	3,023	B	0.18
SR 104	East of MCSP Driveway	Collector, Class II	5,520	C	0.33	5,955	C	0.35
SR 124 (E. Plymouth Highway)	North of SR 104	Arterial, Class II	6,430	C	0.34	6,514	C	0.34
S. Ione Street	South of Main Street	Arterial, Class II	9,220	C	0.49	9,326	D	0.49
S. Church Street	South of Main Street	Arterial, Class II	7,480	C	0.40	7,595	C	0.40
Preston Road	North of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	10,860	D	0.57	11,274	D	0.60
Preston Road	South of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	10,560	D	0.56	10,802	D	0.57
Main Street	Between Preston Avenue and S. Church Street	Arterial, Class II	13,050	D	0.69	13,271	D	0.70
SR 88	West of SR 124	Arterial, Class I	10,160	C	0.50	10,275	C	0.51
SR 88	East of SR 104	Arterial, Class I	**14,820**	**D**	**0.73**	**14,904**	**D**	**0.74**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] Two-way daily traffic volumes
[2] v/c = volume-to-capacity
Source: Fehr & Peers 2013

ALTERNATIVE SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

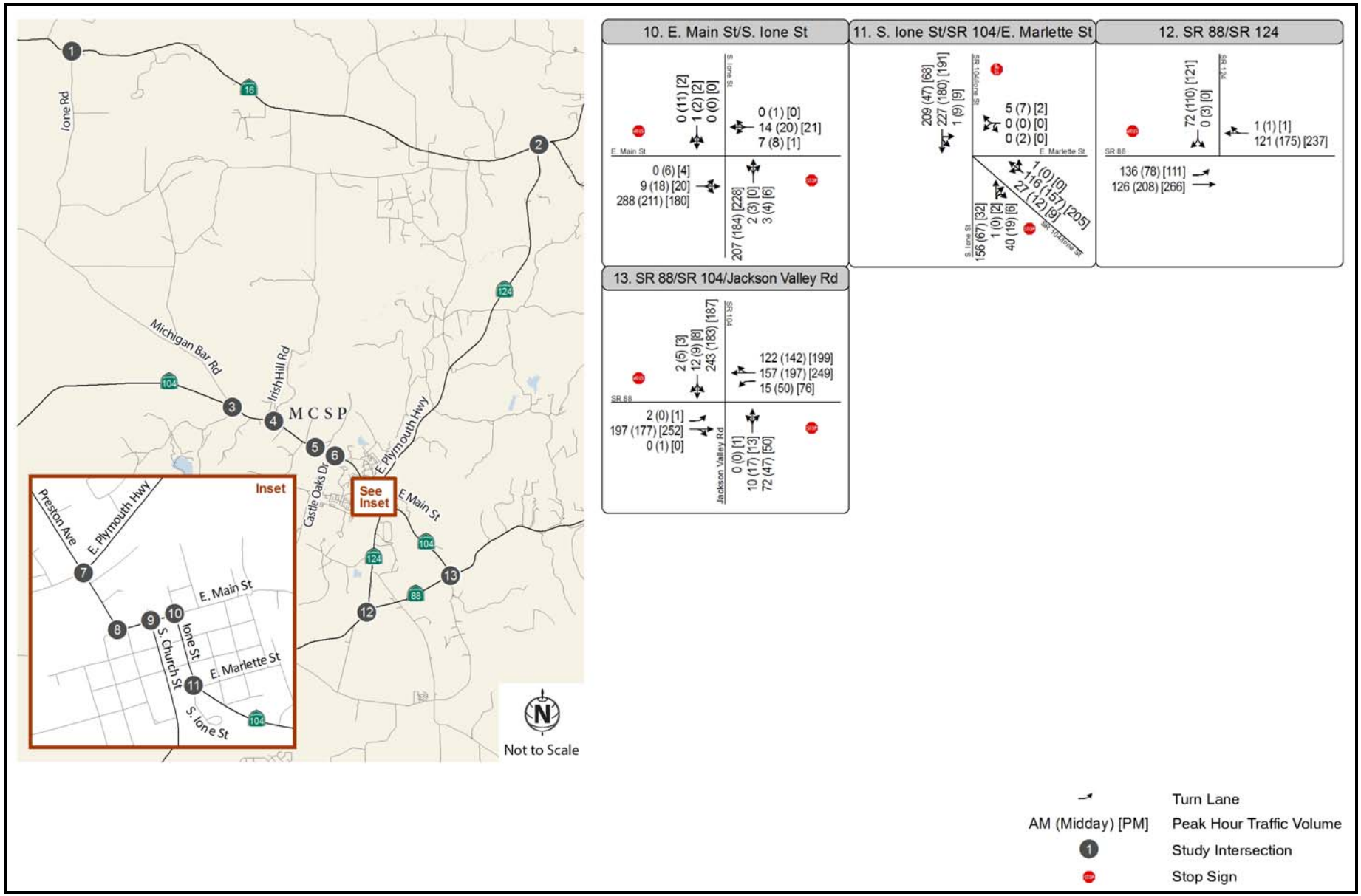
Impact 3.11-1b: Impacts on Intersection Operations [Single Facility]

Exhibit 3.11-13 shows the turning movement volumes for a single facility, and Table 3.11-18 shows the LOS results at the study intersections for the single facility. The operation of a single, level II infill correctional facility at the MCSP Infill Site would add traffic to intersections in Ione that currently operate at LOS F. However, the City's General Plan states that LOS F conditions are acceptable on Main Street, Church Street, Preston Avenue, and Ione Street; therefore, the addition of project-related traffic would not result in a significant impact.



Source: Data compiled by Fehr & Peers in 2010

Exhibit 3.11-13 Existing plus Single Facility Traffic Volumes (1 of 2)



Source: Data compiled by Fehr & Peers in 2010

Exhibit 3.11-13 Existing plus Single Facility Traffic Volumes (2 of 2)

Table 3.11-18 Intersection Peak-Hour Level of Service Results – Existing plus Single, Level II Facility Conditions

Intersection	Traffic Control[1]	Min. Acceptable LOS	Existing						Existing plus Single Infill Facility					
			AM Peak[2]		Midday Peak[2]		PM Peak[2]		AM Peak[2]		Midday Peak[2]		PM Peak[2]	
			Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1. SR 16 (Jackson Road)/ Ione Road	SSSC	E	2.2 (13.2)	A (B)	2.0 (12.1)	A (B)	1.2 (14.2)	A (B)	2.2 (13.4)	A (B)	2.3 (12.4)	A (B)	1.6 (14.8)	A (B)
2. SR 16/SR 24	SSSC	C	1.7 (11.3)	A (B)	1.9 (11.7)	A (B)	1.9 (13.0)	A (B)	1.8 (11.4)	A (B)	2.1 (11.7)	A (B)	2.0 (13.0)	A (B)
3. SR 104/Ione Michigan Bar Road	SSSC	C	2.8 (10.4)	A (B)	2.2 (10.3)	A (B)	3.9 (9.9)	A (A)	3.2 (10.8)	A (B)	2.3 (10.7)	A (B)	3.6 (10.2)	A (B)
4. SR 104/ Irish Hill Road	SSSC	C	0.3 (10.2)	A (B)	0.2 (11.5)	A (B)	0.2 (10.4)	A (B)	0.3 (10.4)	A (B)	0.2 (11.9)	A (B)	0.2 (10.7)	A (B)
5. SR 104/ MCSP Driveway	SSSC	E	1.7 (10.3)	A (B)	5.6 (11.5)	A (B)	3.0 (10.1)	A (B)	2.0 (10.9)	A (B)	6.3 (12.5)	A (B)	4.4 (10.5)	A (B)
6. SR 104/ Castle Oaks Drive	SSSC	E	1.8 (11.0)	A (B)	1.8 (11.5)	A (B)	1.8 (11.2)	A (B)	1.6 (11.5)	A (B)	1.6 (12.2)	A (B)	1.7 (11.7)	A (B)
7. Preston Avenue (SR 104)/E. Plymouth Highway (SR 124)	SSSC	F	18.8 (99.3)	C (F)	7.2 (25.1)	A (D)	9.1 (35.3)	A (E)	22.0 (117.6)	C (F)	7.5 (27.6)	A (D)	10.0 (43.1)	A (E)
8. Main Street/ Preston Avenue	SSSC	F	78.3 (149.3)	F (F)	15.8 (28.0)	C (D)	16.1 (28.9)	C (D)	86.4 (169.4)	F (F)	18.1 (32.2)	C (D)	18.7 (33.2)	C (D)
9. E. Main Street/ S. Church Street	SSSC	F	4.9 (27.1)	A (D)	3.6 (19.2)	A (C)	3.3 (17.7)	A (C)	5.8 (30.6)	A (D)	3.8 (20.4)	A (C)	3.3 (18.2)	A (C)
10. E. Main Street/S. Ione Street	SSSC	F	5.7 (14.3)	A (B)	5.7 (12.8)	A (B)	6.1 (11.4)	A (B)	6.0 (14.8)	A (B)	5.8 (13.0)	A (B)	5.9 (11.4)	A (B)
11. SR 104/S. Ione Street/E. Marlette Street	SSSC	F	10.1 (37.9)	B (E)	2.8 (12.9)	A (B)	1.3 (12.7)	A (B)	10.6 (40.4)	B (E)	2.8 (13.2)	A (B)	1.3 (12.8)	A (B)
12. SR 124/ SR 88	SSSC	D	3.7 (9.4)	A (A)	2.9 (10.2)	A (B)	2.8 (10.5)	A (B)	3.8 (9.4)	A (A)	3.1 (10.3)	A (B)	3.0 (10.6)	A (B)
13. SR 104/ SR 88/ Jackson Valley Road	SSSC	D	11.1 (31.9)	B (D)	8.1 (29.2)	A (D)	17.1 **(86.6)**	C **(F)**	11.3 (32.9)	B (D)	8.6 (30.7)	A (D)	20.2 **(99.2)**	C **(F)**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] SSSC = Side-Street Stop Control
[2] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The midday peak hour is between 1:00 p.m. and 3:00 p.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[3] Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side street stop controlled intersections.
Source: Fehr & Peers 2013

Similar to what was described for the complex above (see Impact 3.11-1a), the intersection of SR 104/SR 88/Jackson Valley Road intersection currently operates at an unacceptable LOS during the p.m. peak hour. The traffic generated by development of the single, level II infill correctional facility would increase the delay of the side street movement by more than five seconds during this period. Therefore, the development of the single facility would exacerbate unacceptable operating conditions at the SR 104/SR 88/Jackson Valley Road intersection. Additionally and similar to what was described for the complex above, two study intersections within the City of Ione would continue to operate unacceptably per Caltrans standards and operations would further degrade with operation of the proposed complex at MCSP. Refer to Appendix 4D in this volume for the technical calculations.

Development of a single, level II infill correctional facility at the MCSP Infill Site would result in the unacceptable degradation of intersection operations in the vicinity of the infill site. This would be a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.11-1.

Significance after Mitigation

Signalization of the SR 104/SR 88/Jackson Valley Road intersection would reduce the delay at the intersection to an acceptable level during the p.m. peak hour. This intersection meets the peak hour signal warrant based on the requirements outlined in the MUTCD. Implementation of this mitigation measure would provide LOS B operations with the single, level II infill correctional facilities. However, implementation of Mitigation Measure 3.11-1 is within the responsibility and jurisdiction of another public agency, Caltrans, and not CDCR. Further, Caltrans has indicated that there are no proposed or planned improvements at this intersection. Since signalization is not a planned improvement, and thus, payment of regional transportation fees would not be expected to result in direct improvement of this intersection. Since signalization of this intersection could not be guaranteed prior to initiation of operation of a single facility at MCSP, operations at the intersection of SR 104, SR 88, and Jackson Valley Road would likely continue to be unacceptable. In addition, as noted above, operations at two study intersections would not exceed City of Ione LOS standards for the intersection, but would, with and without the single facility, exceed Caltrans standards for those state facilities. Improvement of these intersections would likely have secondary impacts, especially related to historic resources, that would likely be significant due to the presence of a nearby historic district (refer to Section 3.3, “Cultural Resources” of this volume). As a result, implementation of this mitigation is considered infeasible. Impacts to intersections would be **significant and unavoidable** with implementation of a single, level II infill correctional facility.

Impact 3.11-2b: Impacts on Roadway Segment Operations [Single Facility]

Table 3.11-19 summarizes the projected daily volumes and LOS on each study segment for the single facility. Traffic generated by the development of a single, level II infill correctional facility at the MCSP Infill Site would not cause the roadway segments to operate at unacceptable LOS and the impact at these locations would be less than significant.

Table 3.11-19 Roadway Segment Level of Service Results – Existing plus Single, Level II Facility Conditions

Roadway	Location	Roadway Type	Existing			Existing plus Single Facility		
			Volume[1]	LOS	v/c Ratio[2]	Volume[1]	LOS	v/c Ratio[2]
Michigan Bar Road	North of SR 104	Collector, Class III	2,200	B	0.13	2,291	B	0.14
SR 104	West of Michigan Bar Road	Collector, Class II	2,400	B	0.14	2,479	B	0.15
SR 104	East of MCSP Driveway	Collector, Class II	4,300	C	0.25	4,526	C	0.27
SR 124 (E. Plymouth Highway)	North of SR 104	Arterial, Class II	4,500	B	0.24	4,544	B	0.24
S. Ione Street	South of Main Street	Arterial, Class II	6,200	C	0.33	6,255	C	0.33
S. Church Street	South of Main Street	Arterial, Class II	6,000	C	0.32	6,059	C	0.32
Preston Road	North of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	7,400	C	0.39	7,615	C	0.40
Preston Road	South of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	9,300	C	0.49	9,425	C	0.50
Main Street	Between Preston Avenue and S. Church Street	Arterial, Class II	9,400	D	0.50	9,514	D	0.50
SR 88	West of SR 124	Arterial, Class I	9,400	C	0.47	9,459	C	0.47
SR 88	East of SR 104	Arterial, Class I	8,500	C	0.42	8,544	C	0.42

Notes: Unacceptable operations highlighted in **bold** text.
[1] Two-way daily traffic volumes
[2] v/c = volume-to-capacity
Source: Fehr & Peers 2013

Development of a single, level II infill correctional facility at the MCSP Infill Site would not result in unacceptable operations at roadway segments. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.11-3b: Impacts on Parking [Single Facility]

A parking accumulation analysis was performed to determine the maximum parking demand for the MCSP 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 contemplated level II infill correctional facility (single or complex) 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 employees arrive for their shift 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 at some time within one hour after their shift ends.

For a description of parking demand calculations used in this analysis, see Impact 3.11-3a above. As shown in Table 3.11-20, 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 295 parking spaces, which is more than the peak demand on a typical weekday. Furthermore and as noted above, the 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 a visitor (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 the single, level II facility on the MCSP 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 3.11-20 Estimated Weekday Parking Demand – Single, Level II Infill Facility

Hour Beginning	Hour Ending	Watch1	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**
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 3.11-4b: Construction-Related Traffic Impacts [Single Facility]

For a description of construction-traffic trip generation assumptions used in this analysis, please see Impact 3.11-4a above. Table 3.11-21 shows the estimated trip generation during each phase of construction for a single facility at the MCSP Infill Site, including concurrent phases (phases that partially overlap), based on the number of expected construction employees and the number of truck trips.

Table 3.11-21 Estimated Construction Trip Generation – Single, Level II 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	7	57	462	Demolition = 2 months; 1 month concurrent with grading
Grading	364	41	405	467	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 = 23months; 6 months concurrent with utilities

Notes:
[1] Based on data provided by CDCR regarding 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

As noted in Chapter 2, “Project Description,” of this volume of the DEIR, CDCR would construct a temporary construction access road to the infill site at the intersection of Castle Oaks Drive and SR 104 when construction activities begin. This access road is described in detail under Impact 3.11-4a above. It should be noted that construction worker parking would be provided onsite within the disturbance area or within the former PYCF athletic fields and would not be necessary offsite.

The construction activities of a single facility are expected to generate between 57 and 744 daily trips, depending on the phase(s). Development of a level II infill correctional facility at the MCSP Infill Site would generate an estimated 744 daily trips during the peak period of construction traffic, anticipated to be the six months when utilities and building construction are taking place concurrently. These trips, when added to the local roadway network, could result in some of the same traffic impacts described for the operation of a level II infill correctional facility at MCSP Infill Site. The development of the single facility is expected to generate 396 daily trips, which is more than the trip generation of the demolition/site preparation or utilities phase. During those single phases (approximately 2 months in duration), construction impacts would be the same as or less than those for operation of the single facility. For the remainder of the construction period (i.e., during the grading and building construction phases and the concurrent phases), the daily trip generation would vary from 405 daily trips to 744 daily trips.

The traffic impacts during construction would depend on the construction workers’ shifts. Refer to Impact 3.11-4a above for facilities that currently operate at or near their LOS thresholds and could be temporarily impacted by construction traffic.

With development of a single, level II infill correctional facility at the MCSP Infill Site, construction traffic could result in significant short-term traffic impacts on several local intersections. Therefore, this impact would be significant.

Mitigation Measures

Implement Mitigation Measure 3.11-4.

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. However, the details of these improvements cannot feasibly be developed at this time. 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 identified above. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable.**

Impact 3.11-5b: Existing Plus Approved Projects Impacts on Intersection Operations [Single Facility]

Table 3.11-22 shows the E+AP plus level II infill correctional facilities LOS results at the study intersections for a single facility. The single facility would add traffic to intersections within the City of Ione that operate at LOS F. However, the City's General Plan states that LOS F conditions are acceptable on Main Street, Church Street, Preston Avenue, and Ione Street; therefore, the addition of project traffic does not result in a significant impact.

Under E+AP conditions, the SR 104/SR 88/Jackson Valley Road intersection operates at an unacceptable LOS. The traffic generated by the development of the single facility would increase the delay of the side-street movement by more than five seconds and the intersection meets the *MUTCD*'s peak hour signal warrant. Therefore, the development of the single facility would create a significant impact at this location. In addition and as noted above, although the City of Ione considers LOS F acceptable at several of the study intersections, Caltrans does not accept LOS F for those intersections that coincide with Caltrans facilities. As shown in Table 3.11-22, four intersections within the City of Ione involving state facilities would continue to operate unacceptably per Caltrans standards under E+AP conditions and operations would further degrade with operation of a single facility at MCSP. Refer to Appendix 3D of this volume for the technical calculations.

Development of a single, level II infill correctional facility at the MCSP Infill Site would result in the unacceptable degradation of intersection operations in the vicinity of the infill site. This would be a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.11-1.

Table 3.11-22 Intersection Level of Service Results – Existing plus Approved Projects Plus Single, Level II Facility Conditions

Intersection	Traffic Control[1]	Min. Acceptable LOS	Existing plus Approved Projects				Existing Plus Approved Projects Plus Single Facility			
			AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
			Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1. SR 16 (Jackson Road)/ Ione Road	SSSC	E	2.5 (14.3)	A (B)	1.3 (14.9)	A (B)	2.5 (14.5)	A (B)	1.6 (15.6)	A (C)
2. SR 16/SR 24	SSSC	C	1.9 (12.2)	A (B)	2.2 (14.4)	A (B)	2.0 (12.4)	A (B)	2.3 (14.5)	A (B)
3. SR 104/Ione Michigan Bar Road	SSSC	C	2.6 (10.8)	A (B)	4.0 (10.4)	A (B)	3.0 (11.2)	A (B)	3.7 (10.6)	A (B)
4. SR 104/ Irish Hill Road	SSSC	C	0.4 (10.6)	A (B)	0.2 (11.0)	A (B)	0.3 (10.9)	A (B)	0.2 (11.4)	A (B)
5. SR 104/ MCSP Driveway	SSSC	E	1.5 (10.6)	A (B)	2.5 (10.5)	A (B)	1.8 (11.2)	A (B)	3.8 (11.0)	A (B)
6. SR 104/ Castle Oaks Drive	SSSC	E	1.8 (11.6)	A (B)	1.8 (12.3)	A (B)	1.6 (12.1)	A (B)	1.7 (12.9)	A (B)
7. Preston Avenue (SR 104)/E. Plymouth Highway (SR 124)	SSSC	F	47.5 (>150)	E (F)	20.1 (100.2)	C (F)	55.4 (>150)	F (F)	25.0 (135.6)	C (F)
8. Main Street/ Preston Avenue	SSSC	F	>150 (>150)	F (F)	40.1 (76.3)	E (F)	>150 (>150)	F (F)	49.1 (92.0)	E (F)
9. E. Main Street/ S. Church Street	SSSC	F	8.3 (44.1)	A (E)	4.6 (24.8)	A (C)	10.6 (53.6)	B (F)	4.7 (26.0)	A (D)
10. E. Main Street/S. Ione Street	SSSC	F	6.5 (16.4)	A (C)	6.7 (12.8)	A (B)	6.9 (17.0)	A (C)	6.6 (12.9)	A (B)
11. SR 104/S. Ione Street/E. Marlette Street	SSSC	F	12.2 (48.5)	B (E)	1.3 (13.7)	A (B)	12.9 (52.2)	B (F)	1.3 (13.9)	A (B)
12. SR 124/ SR 88	SSSC	D	3.7 (9.6)	A (A)	3.0 (10.6)	A (B)	3.9 (9.6)	A (A)	3.1 (10.8)	A (B)
13. SR 104/ SR 88/ Jackson Valley Road	SSSC	D	34.4 **(102.7)**	D **(F)**	**72.1 (>150)**	**F (F)**	**35.6 (107.5)**	**E (F)**	**81.0 (>150)**	**F (F)**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] SSSC = Side-Street Stop-Control
[2] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[3] Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side-street stop-controlled intersections.
Source: Fehr & Peers 2013

Significance after Mitigation

Implementation of Mitigation Measure 3.11-1 would reduce impacts resulting from operation of a single, level II infill correctional facility at the MCSP Infill Site under E+AP plus level II infill correctional facility conditions to a less-than-significant level. The intersection would operate at LOS C in the p.m. peak hour with the installation of a traffic signal. Implementation of Mitigation Measure 3.11-1 is within the responsibility and jurisdiction of another public agency, Caltrans, and not CDCR. Caltrans has indicated that there are no proposed or planned improvements at this intersection, and thus, payment of regional transportation fees would not be expected to result in direct improvement of this intersection. Since signalization is not a planned improvement and could not be guaranteed prior to initiation of operation of a single facility at MCSP, operations at the intersection of SR 104, SR 88, and Jackson Valley Road would likely continue to be unacceptable under E+AP conditions with a single facility. In addition, as noted above, operations at four study intersections that involve state facilities would not exceed City of

Ione LOS standards for the intersection, but would, with and without a single facility at MCSP, exceed Caltrans standards for those state facilities. Improvement of these four study intersections would likely have secondary impacts, especially related to historic resources, that would likely be significant due to the presence of a nearby historic district (refer to Section 3.3, "Cultural Resources" of this volume). As a result, implementation of this mitigation is considered infeasible. Impacts to intersections would be **significant and unavoidable** with implementation of a single, level II infill correctional facility at MCSP.

Impact 3.11-6b: Existing Plus Approved Projects Impacts on Roadway Segment Operations [Single Facility]

Table 3.11-23 summarizes the projected daily volumes and LOS on each study segment for a single facility at the MCSP Infill Site. Traffic generated by the development of a single facility at the MCSP Infill Site would add traffic to SR 88 east of its intersection with SR 104. This segment operates at an unacceptable LOS under E+AP conditions; therefore, development of a single facility at the MCSP Infill Site would result in a significant impact to this segment.

Table 3.11-23 Roadway Segment Level of Service Results – Existing plus Approved Projects plus Project Conditions (Single Facility)

Roadway	Location	Roadway Type	Existing plus Approved Projects			Existing plus Approved Projects plus Single Facility		
			Volume[1]	LOS	v/c Ratio[2]	Volume[1]	LOS	v/c Ratio[2]
Michigan Bar Road	North of SR 104	Collector, Class III	2,560	B	0.15	2,651	B	0.16
SR 104	West of Michigan Bar Road	Collector, Class II	2,870	B	0.17	2,949	B	0.17
SR 104	East of MCSP Driveway	Collector, Class II	5,520	C	0.33	5,746	C	0.34
SR 124 (E. Plymouth Highway)	North of SR 104	Arterial, Class II	5,590	C	0.30	5,634	C	0.30
S. Ione Street	South of Main Street	Arterial, Class II	7,710	C	0.41	7,765	C	0.41
S. Church Street	South of Main Street	Arterial, Class II	7,370	C	0.39	7,429	C	0.39
Preston Road	North of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	8,960	C	0.47	9,175	C	0.49
Preston Road	South of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	11,540	D	0.61	11,665	D	0.62
Main Street	Between Preston Avenue and S. Church Street	Arterial, Class II	11,670	D	0.62	11,784	D	0.62
SR 88	West of SR 124	Arterial, Class I	10,160	C	0.50	10,219	C	0.51
SR 88	East of SR 104	Arterial, Class I	**10,520**	**D**	**0.52**	**10,564**	**D**	**0.52**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] Two-way daily traffic volumes
[2] v/c = volume-to-capacity
Source: Fehr & Peers 2013

Development of a single, level II infill correctional facility at the MCSP Infill Site would add traffic to SR 88, east of SR 104, which would operate at an unacceptable level without the infill site under E+AP conditions. Developing the single facility would exacerbate those unacceptable operating conditions. This would be a potentially significant impact.

Mitigation Measures

No feasible mitigation is available.

Significance after Mitigation

Development of a level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of its intersection with SR 104, which would operate at unacceptable LOS D under E+AP conditions. The impact could be mitigated by widening SR 88 to four lanes; however, SR 88 is under Caltrans jurisdiction, and Caltrans currently has no plans to widen the roadway. As a result, the cost of such an improvement would not be accommodated as part of a capital improvement program, and the cost for such an improvement, including property acquisition, planning, engineering, and construction, would likely be the responsibility of the mitigating party, which, in this case, would be CDCR. Due to the potential costs (greater than five million dollars) associated with this improvement, considering that a single, level II infill correctional facility would represent 0.4% of the daily traffic along this segment under E+AP conditions, widening of this segment as mitigation is considered infeasible because the cost would not be proportional to the level of impact generated by the project contrary to CEQA and there would be no mechanism for reimbursement of costs that are not the responsibility of CDCR. There is no other feasible mitigation measure that could improve traffic conditions along this roadway segment. Therefore, this impact would remain **significant and unavoidable.**

Impact 3.11-7b: Cumulative Impacts on Intersection Operations [Single Facility]

Table 3.11-24 shows the cumulative plus level II infill correctional facility LOS results at the study intersections for a single facility. The single, level II infill correctional facilities would add traffic to intersections within the City of Ione that currently operate at LOS F. However, the City's General Plan states that LOS F conditions are acceptable on Main Street, Church Street, Preston Avenue, and Ione Street; therefore, the addition of project traffic does not result in a significant impact.

Under cumulative conditions, the SR 104/SR 88/Jackson Valley Road intersection would operate at an unacceptable LOS. The traffic generated by the development of the single facility would increase the delay of the side-street movement by more than five seconds and the intersection meets the MUCTD's peak hour signal warrant. Therefore, development of the single facility would create an impact at this location. In addition and as noted above, although the City of Ione considers LOS F acceptable at several of the study intersections, Caltrans does not accept LOS F for those intersections that coincide with Caltrans facilities. As shown in Table 3.11-24, four intersections within the City of Ione involving state facilities would continue to operate unacceptably per Caltrans standards under cumulative conditions and operations would further degrade with operation of a single facility at MCSP. Refer to Appendix 3D in this volume for the technical calculations.

Development of a single, level II infill correctional facility at the MCSP Infill Site would result in the unacceptable degradation of intersection operations in the vicinity of the infill site. This would be a significant impact.

Table 3.11-24 Intersection Level of Service Results – Cumulative Plus Project Conditions (Single Facility)

Intersection	Traffic Control[1]	Min. Accept-able LOS	Cumulative				Cumulative plus Single Facility			
			AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
			Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1. SR 16 (Jackson Road)/ Ione Road	SSSC	E	2.5 (14.8)	A (B)	1.4 (15.4)	A (C)	2.5 (15.0)	A (B)	1.8 (16.2)	A (C)
2. SR 16/SR 24	SSSC	C	2.0 (12.6)	A (B)	2.2 (14.9)	A (B)	2.1 (12.8)	A (B)	2.3 (14.9)	A (B)
3. SR 104/Ione Michigan Bar Road	SSSC	C	2.9 (10.9)	A (B)	4.1 (10.6)	A (B)	3.3 (11.3)	A (B)	3.9 (10.8)	A (B)
4. SR 104/Irish Hill Road	SSSC	C	0.8 (10.2)	A (B)	0.8 (10.5)	A (B)	0.7 (10.4)	A (B)	0.7 (10.8)	A (B)
5. SR 104/ MCSP Driveway	SSSC	E	1.8 (10.9)	A (B)	2.6 (10.7)	A (B)	2.1 (11.5)	A (B)	3.9 (11.2)	A (B)
6. SR 104/ Castle Oaks Drive	SSSC	E	2.2 (11.8)	A (B)	2.2 (13.5)	A (B)	2.1 (12.3)	A (B)	2.1 (14.2)	A (B)
7. Preston Avenue (SR 104)/E. Plymouth Highway (SR 124)	SSSC	F	137.9 (>150)	F (F)	48.2 (>150)	E (F)	>150 (>150)	F (F)	58.9 (>150)	F (F)
8. Main Street/ Preston Avenue	SSSC	F	>150 (>150)	F (F)	68.8 (147.1)	F (F)	>150 (>150)	F (F)	81.6 (>150)	F (F)
9. E. Main Street/ S. Church Street	SSSC	F	29.2 (>150)	D (F)	9.6 (50.8)	A (F)	38.1 (>150)	E (F)	10.2 (55.0)	B (F)
10. E. Main Street/S. Ione Street	SSSC	F	11.2 (33.6)	B (D)	11.3 (19.5)	B (C)	12.7 (37.2)	B (E)	11.3 (19.9)	B (C)
11. SR 104/S. Ione Street/E. Marlette Street	SSSC	F	36.6 (>150)	E (F)	1.9 (16.3)	A (C)	38.8 (>150)	E (F)	1.9 (16.5)	A (C)
12. SR 124/ SR 88	SSSC	D	3.9 (10.4)	A (B)	3.2 (11.7)	A (B)	4.1 (10.5)	A (B)	3.4 (11.8)	A (B)
13. SR 104/ SR 88/ Jackson Valley Road	SSSC	D	**128.9 (>150)**	**F (F)**	**>150 (>150)**	**F (F)**	**131.5 (>150)**	**F (F)**	**>150 (>150)**	**F (F)**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] SSSC = Side-Street Stop-Control
[2] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[3] Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side-street stop-controlled intersections.
Source: Fehr & Peers 2013

Mitigation Measures

Implement Mitigation Measure 3.11-1.

Significance after Mitigation

As described for existing plus level II infill correctional facility and E+AP plus level II infill correctional facility conditions, implementation of Mitigation Measure 3.11-1 would reduce impacts resulting from operation of a single, level II infill correctional facility at the MCSP Infill Site under cumulative plus level II infill correctional facility conditions to a less-than-significant level. This intersection would operate at LOS C in the a.m. and p.m. peak hours with the installation of a traffic signal. Implementation of Mitigation Measure 3.11-1 is within the responsibility and jurisdiction of another public agency, Caltrans, and not CDCR. Caltrans has indicated that there are no proposed or planned improvements at this intersection, and thus, payment of regional transportation fees would not be expected to result in direct improvement of this intersection. Since signalization is not a planned improvement and could not be guaranteed

prior to initiation of operation of a single facility at MCSP, operations at the intersection of SR 104, SR 88, and Jackson Valley Road would likely continue to be unacceptable under cumulative conditions with a single facility. In addition, as noted above, operations at four study intersections that involve state facilities would not exceed City of Ione LOS standards for the intersection, but would, with and without a single facility at MCSP, exceed Caltrans standards for those state facilities. Improvement of these four study intersections would likely have secondary impacts, especially related to historic resources, that would likely be significant due to the presence of a nearby historic district (refer to Section 3.3, "Cultural Resources" of this volume). As a result, implementation of this mitigation is considered infeasible. Impacts to intersections would be **significant and unavoidable** with implementation of a single, level II infill correctional facility at MCSP.

Impact 3.11-8b: Cumulative Impacts on Roadway Segment Operations [Single Facility]

Table 3.11-25 summarizes the projected daily volumes and LOS on each study segment for a single, level II infill correctional facility under cumulative conditions. Traffic generated by development of a single facility at the MCSP Infill Site would add traffic to SR 88 east of its intersection with SR 104. This segment operates at an unacceptable LOS under cumulative conditions; therefore, development of a single, level II infill facility at the MCSP Infill Site would cause a significant impact.

Table 3.11-25 Roadway Segment Level of Service Results – Cumulative plus Project Conditions (Single Facility)

Roadway	Location	Roadway Type	Cumulative			Cumulative Plus Single Facility		
			Volume[1]	LOS	v/c Ratio[2]	Volume[1]	LOS	v/c Ratio[2]
Michigan Bar Road	North of SR 104	Collector, Class III	2,560	B	0.15	2,651	B	0.16
SR 104	West of Michigan Bar Road	Collector, Class II	2,870	B	0.17	2,949	B	0.17
SR 104	East of MCSP Driveway	Collector, Class II	5,520	C	0.33	5,746	C	0.34
SR 124 (E. Plymouth Highway)	North of SR 104	Arterial, Class II	6,430	C	0.34	6,474	C	0.34
S. Ione Street	South of Main Street	Arterial, Class II	9,220	C	0.49	9,275	C	0.49
S. Church Street	South of Main Street	Arterial, Class II	7,480	C	0.40	7,539	C	0.40
Preston Road	North of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	10,860	D	0.57	11,075	D	0.59
Preston Road	South of E. Plymouth Highway/Shakeley Lane	Arterial, Class II	10,560	D	0.56	10,685	D	0.57
Main Street	Between Preston Avenue and S. Church Street	Arterial, Class II	13,050	D	0.69	13,164	D	0.70
SR 88	West of SR 124	Arterial, Class I	10,160	C	0.50	10,219	C	0.51
SR 88	East of SR 104	Arterial, Class I	**14,820**	**D**	**0.73**	**14,864**	**D**	**0.74**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] Two-way daily traffic volumes
[2] v/c = volume-to-capacity
Source: Fehr & Peers 2013

Development of a single, level II infill correctional facility at the MCSP Infill Site would add traffic to SR 88, which would operate at an unacceptable level without the infill site under cumulative conditions. Developing the single facility would exacerbate those unacceptable operating conditions. This would be a significant impact.

Mitigation Measures

No feasible mitigation is available.

Significance after Mitigation

Development of a single, level II infill correctional facility at the MCSP Infill Site would add traffic to SR 88 east of its intersection with SR 104, which would operate at unacceptable LOS D operations under cumulative conditions. The impact could be mitigated by widening SR 88 to four lanes; however SR 88 is under Caltrans jurisdiction, and Caltrans currently has no plans to widen the roadway. As a result, the cost of such an improvement would not be accommodated as part of a capital improvement program, and the cost for such an improvement, including property acquisition, planning, engineering, and construction, would likely be the responsibility of the mitigating party, which, in this case, would be CDCR. Due to the potential costs (greater than five million dollars) associated with this improvement, considering that a single, level II infill correctional facility would represent 0.3% of the daily traffic along this segment under cumulative conditions, widening of this segment as mitigation is considered infeasible because the cost would not be proportional to the level of impact generated by the project and there would be no mechanism for reimbursement of costs that are not the responsibility of CDCR. There is no other feasible mitigation measure that could improve traffic conditions along this roadway segment. Therefore, this impact would remain **significant and unavoidable.**

3.12 UTILITIES

This section evaluates the adequacy of existing and planned future utilities to serve Mule Creek State Prison (MCSP) and evaluates the potential effect of level II infill correctional facilities at the MCSP Infill Site 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 impact analysis has been organized into two parts. The first part addresses the proposed level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site. The analysis provided in this section is based on consultation with the project engineers, California Department of Corrections and Rehabilitation (CDCR) staff, and information from numerous sources, including the following (available for review at CDCR at the address shown on the cover page of this document, unless otherwise noted):

- *Population Management Site and Infrastructure Survey, Mule Creek State Prison, Ione* (Kitchell 2007);
- *Joint Powers Agreement between Amador County Water Agency and the Department of Corrections* (Amador Water Agency1986);
- Waste Discharge Requirements, Central Valley Regional Water Quality Control Board Order No. 5-00-088; and
- *Amador Water Agency Urban Water Management Plan* (Amador Water Agency 2011)

Storm drainage, surface water quality, 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 MCSP 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-development runoff levels, such as 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 contemplated development’s drainage system would be designed to appropriately accommodate the stormwater runoff generated from the new level II correctional facility to maintain pre-development conditions. Therefore, 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

EXISTING AND FUTURE WATER SUPPLY AND DEMAND – AMADOR WATER AGENCY

The Amador Water Agency (AWA) provides potable and raw water to more than 25,000 residents of Amador County for municipal, industrial, and irrigation uses. AWA has four general service areas: Amador Water System (AWS), Central Amador Water Project System, La Mel Heights, and Lake Camanche Village. MCSP is located in the AWS, which receives water from the Mokelumne River via Lake Tabeaud and provides raw and treated water to its customers. The following discussion is extracted from the 2010 Urban Water Management Plan (Amador Water Agency 2011).

The AWS delivery system consists of approximately 120 miles of water main pipeline for potable water customers and 23 miles of conveyance canals for raw water customers. Treated water supplied to AWS customers comes from one of two water treatment plants operated by AWS, the Ione Water Treatment Plant and the Tanner Water Treatment Plant.

The AWA is a planning partner in the Mokelumne, Amador, and Calaveras Integrated Regional Water Management Plan (IRWMP) planning region. AWA entered into a Memorandum of Understanding dated October 3, 2006, to coordinate water resources planning and implementation activities throughout the region. The IRWMP process is built on the premise that, after much stakeholder input and planning, an assortment of integrated, feasibility, cost-effective, and environmentally sound water resource management strategies and options would be identified, prioritized, and developed to meet an array of needs, goals and objectives defined by the stakeholders within the region. The desired outcome for this IRWMP is an implementation plan that meets the goals and objectives determined throughout the planning process and one that reflects the communities' priorities as identified through stakeholder outreach and involvement.

Surface Water Supplies

Surface water accounts for approximately 97 percent of AWA's total water supply and the entirety of water supplies within the AWS. For the entire service area, AWA has surface water rights up to 15,000 acre-feet per year (afy) at a rate not to exceed 30 cubic feet per second (cfs). Surface water is obtained from the Mokelumne River watershed, primarily from snowmelt.

Reclaimed Water

AWA is currently preparing a Regional Approach for Water Reuse Project that would maximize water recycling by developing a regional recycled water supply in lieu of raw and potable water. This effort is being funded by a Proposition 84 grant through the Sierra Nevada Conservancy and will be coordinated with local wastewater and planning agencies that have been identified as potential partners in the region. Additionally, multiple non-governmental agencies, organizations, and interested parties have been identified to participate in future stakeholder workshops on the project. The project is anticipated to be complete in 2013.

Currently, the only treated wastewater that meets reclaimed water standards within the AWS is collected and treated by the City of Ione. This water is then applied to the Castle Oaks Golf Course for irrigation. AWA does not produce any reclaimed water.

Groundwater

Groundwater accounts for approximately 3% of the AWA's total supply and is only used in the communities of La Mel Heights and Lake Camanche Village. The AWA operates one groundwater well in the La Mel Heights area with a safe yield of 50 afy. A second well is available as backup in the event

the first well needs maintenance. AWA also operates four wells in the Lake Camanche Village Area. The four wells have a combined capacity of 1,306 afy.

AWA Water Demand

The AWA has prepared the *Amador Water Agency Urban Water Management Plan* (UWMP) (AWA 2011*).* The UWMP was prepared in compliance with the California Water Code, Division 6, Part 2.6. The purpose of the plan is to support AWA's long-term resource planning and ensure that adequate water supplies are available to meet existing and future water demand. The UWMP contains data on AWA's existing and projected water demand and how supplies would meet this demand over a 25-year planning horizon during normal, dry, and multiple-dry water years. Table 3.12-1 presents AWA's existing and projected future water demand within its entire service area.

Table 3.12-1 Amador Water Agency Existing and Projected Future Water Demand (afy)

2010 (Actual)	2015	2020	2025	2030
3,129	3,590	4,574	5,218	5,879

Source: AWA 2011

AWA Water Supplies

AWA has identified existing and projected future water supplies to meet demand within its service area over the next 20 years (Table 3.12-2).

Table 3.12-2 Amador Water Agency – Existing and Projected Future Water Supplies (afy)

	2010	2015	2020	2025	2030
Surface Water	16,150	17,200	17,200	17,200	17,200
Groundwater	296	269	442	511	581
Total Supply	**16,446**	**17,569**	**17,642**	**17,711**	**17,781**
Demand	3,129	3,590	4,574	5,218	5,879
Available Supply	**13,317**	**13,979**	**13,068**	**12,493**	**11,902**

Source: AWA 2011

AWA Water Supply Reliability

The AWA's UWMP evaluated the reliability of its surface water and groundwater supplies to meet demands during normal, single-dry, and multiple-dry years. Based on observations of the water system during past multiple-dry year conditions, such as the period from 1988 to 1994, spring runoff has reliably filled storage reservoirs within the Mokelumne River watershed to near capacity (AWA 2011). Even during severe drought conditions, such as those that occurred in 1976–1977 and the prolonged drought between 1988 and 1994, storage reservoir minimum capacities were met and full contracted annual water entitlements were delivered. Therefore, AWA's surface water supplies are considered to be highly reliable.

With regards to groundwater, AWA operates one groundwater well in the La Mel Heights area, with an additional well providing backup and redundancy in the event of outages. This well has run continuously through varying climatic conditions and has produced a steady yield. This well is considered to be highly reliable (AWA 2011).

With regard to groundwater wells in the Lake Camanche Village area, AWA is currently in the process of preparing a Groundwater Sustainability Study. The purpose of this study is to determine the number of connections the groundwater wells can reliably supply. AWA indicated that to date, the system has supplied sufficient water to meet demand (AWA 2011). While the study is ongoing to determine the number of connections the groundwater wells can serve, there is no evidence that operation of these

wells has not been reliable and has not met existing demands. Therefore, these groundwater wells are considered to be highly reliable.

GLOBAL CLIMATE CHANGE AND WATER SUPPLY

In recent years, scientific consensus has begun to accept that Earth's climate is changing, and this consensus 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 substantially in the future because of human activity (IPCC 2001, 2007). Extensive background information on global climate change, including modeling and trends, is found in Chapter 4, "Cumulative Impacts," of this volume.

Today, the issue of global climate change has begun to play an increasing role in scientific and policy debates in multiple issue areas. Of particular concern are the existing and potential future effects of global climate change on hydrologic systems and water management (e.g., domestic water supply, agricultural water supplies, flood control, and water quality). There is evidence that global climate change has already had an effect on California's hydrologic system; for example, historical data indicate a trend toward declining volumes of spring and summer runoff from the Sierra Nevada.

The California Water Plan (Bulletin 160) first briefly addressed climate change in 1993 (DWR 1994). This analysis has most recently been expanded and refined in the 2005 update of the California Water Plan, which explores a wide range of climate impacts and risks, including risks to water resources (Kiparsky and Gleick 2005, Roos 2005). The 2005 update also describes efforts that should be taken to quantitatively evaluate climate change effects for the next update of the California Water Plan (DWR 2005).

Water Supply Projections

Several recent studies have shown that existing water-supply systems are sensitive to climate change. 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, although groundwater recharge reduction, higher evaporation, and shorter rainfall seasons can 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 unknown.

DWR's 2005 report focused on climate change impacts on State Water Project (SWP) operations and on the Sacramento–San Joaquin River Delta (Delta). The results of that analysis 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 scenarios. The study concluded that most mitigation alternatives that were examined satisfied only 87 percent to 96 percent of environmental targets in the Sacramento River system, and less than 80 percent of environmental targets in the San Joaquin River 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:

- Methodologically, it is useful and realistic to include a wide range of hydrologic effects, changes in population and water demands, and changes in system operations in studies of climate change.
- A broad range of climate-warming scenarios shows substantial increase in wet-season flows and substantial 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 adapt economically 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 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

As described by several projections, the overall conclusion is that climate change is expected to have a greater effect in Southern California than Northern California. For example, for 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 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 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 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 in 2050, with Southern California shouldering the brunt of this decrease.

EXISTING WATER SERVICE AT MCSP

As noted above, water is supplied to MCSP by AWA. The Tanner Reservoir receives water from the Mokulumne River watershed. AWA conveys water from the Tanner Reservoir via the Ione pipeline to the Ione Water Treatment Plant (WTP), which has a treatment capacity of 3.3 million gallons per day (mgd). Treated water from this plant is supplied to MCSP via an 18-inch diameter pipe.

A Joint Powers Agreement (JPA) between CDCR and AWA was established in April 1986 and amended in 1987 that enumerated the supplies to CDCR and responsibilities of AWA and CDCR with respect to water supplies to MCSP. This agreement required CDCR to design and construct major components and improvements to AWA infrastructure, which allowed for a total WTP capacity of 2.5 mgd.

The existing JPA requires AWA to provide potable water service as follows (Table 3.12-3):

- MCSP at an average daily volume not to exceed 1,085,000 gallons per day (gpd) and at a peak day rate not to exceed 1,334,000 gpd;
- emergency flows to MCSP for fire prevention/control at a rate not less than 3,000 gallons per minute for 2 hours; and
- at least 200 additional homes or residences, or the commercial equivalent thereof, to be located within or adjacent to the City of Ione for a total average daily volume not to exceed 115,000 gpd and at a peak day rate not to exceed 311,850 gpd.

Table 3.12-3 AWA Water Allocation

Customer	Average Day (gpd)	Peak Day (gpd)
MCSP (potable)	1,085,000	1,334,000
MCSP fire flow	350,0000[1]	n/a
Residential and Commercial	115,000	311,850

Notes: [1]equivalent to 3,000 gallons per minute for 2 hours.
Source: MCSP and AWA Joint Powers 1986

Due to a combination of water conservation and reduced inmate population daily and annual water use at MCSP has dropped in recent years. Data are available for the years 2007 through 2012. Annual water use has dropped from 787 afy in 2007 to 508 afy in 2012. Average daily water use over this same period has decreased from 702,780 gpd (2007) to 453,000 gpd (2012) (Vanir 2013a). Taking into account the December 31, 2012 inmate population data for MCSP, this equates to approximately 158 gallons per day per inmate.

WASTEWATER

The MCSP Wastewater Treatment Plant (WWTP) was constructed as part of MCSP and began operation in 1988. The WWTP is a secondary treatment facility that operates under Waste Discharge Requirements (WDRs) described in the Central Valley Regional Water Quality Control Board's (RWQCB's) Order No. 5-00-088 (April 2000). The WWTP treats wastewater flows from MCSP, the Preston Youth Correctional Facility (PYCF), and the California Department of Forestry and Fire Protection (CAL FIRE) Academy. The WWTP design consists of an oxidation ditch, two clarifiers, chlorination facilities (for disinfection), a belt filter press operation for dewatering sludge, and a 4,000-gallon hypochlorination storage tank. Solids produced by the WWTP are dewatered with a belt filter press and then stored in a covered, concrete-lined drying area. When the material is sufficiently dried, it is collected by Liberty Compost and hauled to Kern County, where it is converted into Class A compost.

The WWTP is designed for an average dry-weather flow of 0.74 mgd and peak wet-weather flow of 2.2 mgd. Influent to the WWTP comes from three sources: MCSP, the PYCF, and the CAL FIRE Academy. The PYCF was closed in June 2011, and CDCR has no current plans for reuse or alternative use of the facility. As a result, minimal flows are currently associated with the PYCF. Additionally, inmate population at MCSP has been reduced over the past few years. Together, this has resulted in a substantial reduction in flow rates to the WWTP. Based on available data from MCSP, the average, minimum, and maximum flow rates over the past three years to the WWTP are provided in Table 3.12-4.

Table 3.12-4 MCSP WWTP flows, January 2010–December 2012		
	Total (gpd)	Per Inmate (gpid)[1]
Average (2012)	435,897	153
Minimum	352,255	N/A
Maximum	604,194	N/A
[1] Based on monthly 2012 population data Source: Vanir 2012a		

Effluent is discharged to three different end uses: the 296 acres of spray irrigation fields located on the MCSP grounds; the 525-af storage reservoir; and/or an existing 10-inch pipeline to the Ione WWTP (operated by the Amador Regional Sanitation Authority [ARSA]).

HISTORICAL OPERATIONS

In 2006, the Central Valley RWQCB issued a Consideration of a Cease and Desist Order (CDO), noting several alleged violations of the following conditions of the MCSP WWTP's existing WDR Order No. 5-00-088: (1) mechanical failure and operator error resulting in runoff conditions in violation of WDR No.5-00-088 (approximately 32,000 gallons were released in 1 month); (2) violation of the reporting process for notification of noncompliance; (3) failure to file required reports in proper fashion; (4) evidence of system overload at the WWTP; and (5) discharge from the WWTP for May, July, and August 2006 that exceeded the prescribed limits. For further information regarding this notice, refer to Section 3.7, "Hydrology and Water Quality," of this volume of the DEIR.

Since that time, CDCR has implemented corrective measures, including water conservation devices, such as toilet flushing limitations and low-flow appliances (Poston 2013). However, as of the time of release of this DEIR, the cease-and-desist order was still in place. CDCR is in the process of upgrading the existing WWTP to address the conditions identified by the Central Valley RWQCB that are allegedly out of compliance with the MCSP WWTP WDRs. Upgrades include a secondary clarifier, a mixed liquor splitter box, a chlorine contact basin, a disinfected secondary effluent pump station, motor speed controls for return activated sludge pumps, and other improvements designed to bring the plant into compliance with NPDES permit requirements and to discharge the cease-and-desist order. The upgrades/improvements are expected to be completed in the third quarter of 2014 (Vanir 2013).

ELECTRICAL SERVICE

Electricity is provided to MCSP by Pacific Gas and Electric Company (PG&E). PG&E is one of the largest combination natural gas and electric utilities in the United States. The company provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. PG&E provides electrical service to approximately 5.1 million customers. CDCR has received approval to upgrade its onsite electrical system to resolve current deficiencies; upgrades include a new 60 kV substation and two 2-megawatt generators (CDCR 2013). The site's existing emergency system is backed up by two generators, each rated 750 kilowatts KW). Based on available data from MCSP, existing prison facilities use and average approximately 3,250 kW of electricity per month, peaking at 3,911 in June 2011 (Vanir 2012b).

NATURAL GAS

PG&E also provides natural gas service to MCSP. Within PG&E's service area, PG&E provides natural gas service to approximately 4.3 million customers within its service area and delivers natural gas to MCSP from high-pressure gas mains that extend along the southern boundary of MCSP. A 10-inch gas main runs in a generally east-west direction along the north side of SR-104/Michigan Bar Road. MCSP

is served directly from this main by a service lateral and a PG&E metered pressure-regulating station. Natural gas is used at the facilities for space heating, water heating, cooking, and laundry. Based on available data from MCSP, existing prison facilities use an average of 111,153 therms, peaking at 150,240 therms for the month of July 2011 (Vanir 2012c).

SOLID WASTE

CDCR contracts with Amador County for solid waste disposal services. Amador County contracts the collection, transport, and disposal of solid waste to ACES Waste Services, Inc., a private solid waste disposal company located in Pine Grove. The area encompassing the infill site is currently served by ACES. Amador County has a residential recycling program in place for the entire county. In less populated areas, colored recycling bags are provided by ACES for recycling pickup. Both programs accept a wide range of materials, do not require sorting, and are free to all customers.

Solid waste is transferred by ACES to the Western Amador Recycling Facility (WARF), also known as the Buena Vista Transfer Station, located in Buena Vista (near Ione). The Buena Vista Transfer Station is permitted to accept a maximum daily disposal of 333 tons. In addition, ACES runs the Pine Grove Public Transfer Station in Pine Grove. Each station varies in what waste and recycle materials are accepted at the site, such as agricultural, construction/demolition, industrial, and mixed municipal waste, as well as tires.

From the transfer station, solid waste is transported to the end point of disposal at either the Forward Landfill in Manteca or the Sacramento County Landfill (Kiefer Landfill) in Sloughhouse (approximately 9 miles east of Sacramento) (Ione 2009).

Forward Landfill occupies 567 acres and has a maximum permitted capacity of 51,040,000 cubic yards with a remaining capacity of 23,700,000 cubic yards. The landfill is permitted to accept up to 8,688 tons per day (CalRecycle 2013)

The Kiefer Landfill has a maximum capacity to 2064 of 117,400,000 cubic yards, and a remaining capacity of 112,900,000 cubic yards. The landfill is permitted to accept up to 10,815 tons per day (CalRecycle 2013).

3.12.2 REGULATORY CONSIDERATIONS

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

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

The only federal plan or policy applicable to the project is related to potential transportation of hazardous materials (medical waste).

- Hazardous Materials Transportation Act - the transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act (HMTA), which is administered by the US Department of Transportation (DOT). The HMTA governs the safe transportation of hazardous materials by all modes, excluding bulk transportation by water.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

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.
- 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 contemplated development 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** is 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.

CITY OF IONE GENERAL PLAN

The following policies from Chapter 8, "Public Facilities Element" of the City of Ione General Plan relating to utilities and service systems are considered in relation to the contemplated development at the MCSP Infill Site:

- **Policy PF-1.1:** Require sufficient capacity in all public facilities to maintain desired service levels and avoid capacity shortages or other negative effects on safety and quality of life.
- **Policy PF-1.3:** The City shall require new development to provide adequate facilities and services or pay its fair share of the cost for facilities needed to provide services to accommodate growth, except for special circumstances when the City grants an impact fee reduction or waiver, such as to promote low-income housing programs or infill development projects.
- **Policy PF-2.1:** The City shall collaborate with local and regional service providers to ensure adequate and efficient provision of public facilities and services.
- **Policy PF-3.1:** Increase efficiencies in water use, wastewater generation and the handling of storm water runoff through best practices in sustainable water management.
- **Policy PF-4.3:** The City shall require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs. At a minimum, the water distribution system shall meet all pressure requirements outlined in the California Department of Public Health/Waterworks Standards.
- **Policy PF-5.1:** The City will maintain sufficient sewer capacity to accommodate future development that has been entitled or could be entitled under the land use patterns adopted in this General Plan.
- **Policy PF-5.3:** The City shall continue to take actions necessary to meet water quality discharge standards in the operation of its wastewater treatment facilities.
- **Policy PF-5.5:** The City shall consider the use of best available control technology appropriate to dispose of treated effluent based upon factors of reliability, economic feasibility, and the ability to meet discharge permit requirements.
- **Policy PF-11.1:** The City shall consult with Pacific Gas and Electric Company for the planning and extension of gas and electrical facilities.

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 MCSP Infill Site would result in a significant impact relating to utilities if it would do any of the following:

- result in a lack of 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.

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

Section 3.7 "Hydrology and Water Quality," of this volume reviews project impacts to stormwater drainage facilities. Therefore, this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

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

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.12-1a: Impacts on Water Supply and Treatment Facilities [Complex]

A level II infill correctional facility complex would house a total of 1,584 inmates at full buildout. CDCR assumes an average daily water demand factor of 150 gallons per inmate per day (gpid) based on the design of the facility and the use of water conservation devices throughout. (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, the estimated average daily water demand of the proposed complex would be 237,600 gpd (266 afy).

As discussed above, water is supplied to MCSP by AWA via an existing 18-inch water line to MCSP. These facilities have been sized to handle the maximum deliveries outlined in the JPA. The existing JPA between AWA and CDCR allocates an average of 1,085,000 gpd and a peak of 1,334,000 gpd. Table 3.12-5 provides the estimated potable water demand of a complex added to existing demand at MCSP. As shown, the anticipated demand, 690,600 gpd average and 1,243,080 gpd peak, is less than the existing allocation agreement. Therefore, no new water treatment facilities would be required with implementation of the contemplated development.

Table 3.12-5 Estimated Potable Water Demand – Complex

Facility	Average Daily Demand (gallons)	Peak Day[1]
Existing MCSP demand	453,000	815,400
Level II Infill Correctional Facility	237,600	427,680
Total	**690,600**	1,243,080
Allocation	1,085,000	1,334,000
Remaining Capacity	394,400	**90,920**

Notes : [1] Assumes peaking factor of 1.8
Source: Analysis by Ascent in 2013.

Long-Term Water Sufficiency Analysis

Consistent with the requirements of State CEQA Guidelines Section 15155, existing and projected future normal-year water supplies and demands are presented in Table 3.12-6. Note, CDCR is not required to comply with the requirements of Section 15155, which prescribes water supply assessment approaches for city and county projects of certain sizes, but the analysis presented herein is intended to provide the information prescribed by these guidelines. This includes a determination of supply sufficiency over the next 20 years under normal, drought, and multi-year drought conditions. Consistent with the requirements of State CEQA Guidelines Section 15155, existing and projected future normal year water supplies and demands are presented in Table 3.12-6.

Table 3.12-6 Summary of Existing and Projected Future Water Supplies and Demands for Complex (Normal, Single Dry, and Multiple Dry Water Years) (afy)

	2010	2012	2020	2025	2030
Demand					
AWA	8,407	9,052	10,498	11,407	12,356
MCSP Infill Development of a Complex	266	266	266	266	266
Total Demand	8,673	9,318	10,764	11,673	12,622
Supplies					
Normal Year, Single Dry Year, and Multiple Dry Years[a]	16,446	17,469	17,469	17,469	17,469
Remaining Supplies	**7,773**	**8,151**	**6,705**	**5,796**	**4,847**

Notes: [a] AWA determined that during normal, single dry, and multiple dry water years, 100% of its water supplies would be available.
Source: AWA 2011

As shown in Table 3.12-6, total water supply is greater than total water demand for all water year types, and a water surplus of at least 4,847 af is available in all years. Existing plus project demand at MCSP would total 774 afy, which is less than recent demands at MCSP (787 afy in 2007). Therefore, sufficient water supplies are available to serve the contemplated development from existing resources and to continue to serve the site in the long term.

Because existing water supplies are sufficient to serve the level II infill correctional facility complex from existing resources and entitlements and no new water treatment facilities would be required the

construction of which could result in environmental impacts, implementation of the level II infill correctional facility complex at the MCSP Infill Site would result in ***less-than-significant*** *water supply and treatment facility impacts.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-2a: Impacts on Wastewater Treatment Facilities and Permits [Complex]

Implementation of the proposed level II infill correctional facility complex at the MCSP Infill Site would increase the flow of wastewater from MCSP in order to serve increased population at the infill site. However, this additional flow would not exceed historical maximum flows that occurred in 2007. As discussed above, MCSP relies on its onsite WWTP to treat wastewater. Given the estimated sewage flow rate projection of 140 gpid identified in Chapter 2, "Project Description" of this volume of the DEIR, the proposed complex would generate approximately 221,760 gpd of wastewater, as shown in Table 3.12-7. The greatest monthly demand at MCSP in 2012 was 15,713,000 gallons in March 2012. As described above, the daily average demand during a peak month is considered an appropriate comparison for assessing potential peak demand conditions at the infill site. Consistent with this methodology, the daily average from the peak month (March 2012) is 181 gpid, which is used as a demand factor to determine the peak day in this analysis. Based on December 2012 inmate population at MCSP and the projected population of the proposed complex, peak flows at the WWTP are anticipated to be 805,269 gpd.

Table 3.12-7 Projected Wastewater Flows – Complex

	Number of Inmates	CDCR Flow Rate (gpid)	Total gpd
Existing MCSP Facility[1]	2,865[1]	153[2]	435,897
CalFire Dorms	—	—	25,000
Proposed Complex	1,584[3]	140[3]	221,760
		Total Daily Average Projected Flows:	**682,657**
		Existing WWTP & Disposal System Capacity is 740,000 gpd Percentage of Plant Capacity	*92%*
		Remaining Plant Capacity	*8%*

Notes:
1. December 2012 inmate population.
2. Actual per inmate sewage generation flow rates for 2013; similar to average for 2011-2012.
3. CalFire Dorm wastewater flows are evaluated at maximum allowable. Actual flow rates currently range between 1,000 – 5,000 gpd.
4. New dorm inmate population and per inmate sewage generation flow rates are firm design criteria set by CDCR.
Source: Vanir 2013, calculations by Ascent in 2013.

As shown in Table 3.12-7, the average and peak flows at MCSP inclusive of development of the proposed level II infill correctional facility complex at MCSP are not anticipated to exceed average or peak flow allowances under the Central Valley RWQCB WDRs. As described in Chapter 1, "Introduction" of this volume of the DEIR, CDCR is required to further reduce inmate population statewide and has established facility specific population targets that it will achieve by the conclusion of 2013. With respect to MCSP, this target is 2,400 inmates, approximately 500 inmates fewer than existing (as of the release of the NOP). Based on this, wastewater flows at MCSP upon initiation of operation of the proposed complex are anticipated to be approximately 630,000 gpd, which would represent an 8 percent increase in available capacity at the WWTP. However, in both instances, the project would utilize a substantial portion of remaining capacity. While the existing plant capacity may be sufficient to accommodate the increases associated with the project, there is also the potential that a margin of capacity greater than 8% may be prudent to handle occasional flow increases (such as from a regional laundry or from weather-related needs). This EIR includes consideration in the impact

analysis (e.g. construction impacts) of modifying the plant to accommodate additional flows. CDCR will work closely with the RWQCB to ensure the plant is appropriately sized for project flows.

The proposed level II infill correctional facility complex would be built on the current spray field sites (Spray Fields 4 (portion) and 5), resulting in a net loss of available spray field acreage. This would result in a reduction of up to 103 acres from the existing 296 net acres of spray fields. Additional information on the spray fields is provided in Section 3.7, "Hydrology" of this volume of the DEIR. As described in Section 3.7, the City of Ione is currently developing its own irrigation/spray fields. CDCR would coordinate with the City of Ione to provide and develop additional spray fields to ensure adequate disposal capacity for MCSP-treated secondary effluent as part of the proposed project. CDCR also anticipates providing funding for its proportionate share of operation of the City's spray fields. Storage of MCSP-treated effluent at the City of Ione WWTP may be necessary, but is not anticipated to require substantial upgrades due to the flow equalization provided by Preston Reservoir. Additional engineering evaluation will occur to verify storage requirements. CDCR would provide cost share on storage improvements, leasing up to 100 acres of additional fields (as shown in Exhibit 2-5 of Chapter 2, "Project Description" of this volume), and implementation of irrigation supply and tailwater return facilities for recycled water irrigation reuse of MCSP-treated secondary effluent. CDCR would also provide cost share for monitoring wells and irrigation site isolation to prevent tailwater from leaving site. The additional irrigated land area is located west of the proposed improvements to the City of Ione WWTP irrigation areas. The land (approximately 100 acres) at this location is flat and is currently in agricultural production. As a result, this land is anticipated to provide better effluent disposal opportunities than the current Spray Fields 4 and 5. CDCR may ultimately decide to move all spray field operations (in addition to those associated with accommodating project changes) to offsite agricultural fields, and if they do so, they would need to evaluate the impacts to the offsite fields under CEQA.

Onsite treated effluent storage and offsite infrastructure improvements (i.e., irrigation pipelines, berms, tailwater return facilities) would be constructed within disturbed areas and developed areas, within the identified boundary of disturbance. The potential environmental impacts of construction and operation of the proposed level II infill correctional facility complex, including utility connections and the expanded spray fields needed to serve the project, have been considered and evaluated throughout the environmental resource sections in Chapter 3 of this volume of the DEIR; however, the primary effect of this project would be to provide irrigation of these fields with recycled water. Where necessary, recommended mitigation would substantially reduce construction-related impacts associated with onsite and offsite wastewater facility improvements.

The estimated wastewater flows from MCSP, inclusive of the proposed level II correctional facility complex, would not exceed the currently permitted daily discharge allowance for MCSP. However, CDCR will work with the RWQCB to ensure the plant has an adequate margin of capacity, and may ultimately modify capacity as needed. Further, as part of the proposed project, additional effluent disposal facilities would be developed to handle any reduction in capacity associated with the closure of Spray Fields 4 and 5. Therefore, adequate wastewater treatment services are available and no new facilities beyond what is included as part of the proposed project, would be required that could result in significant environmental impacts. This would be considered a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-3a: Impacts on Electricity and Natural Gas Facilities [Complex]

Implementation of a level II infill correctional facility complex would result in an increase in demand for electricity and natural gas at the infill site. 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

6,176 kilo volt-amps (kVA) (Vanir 2013b). The specific amount of electricity needed to operate the infill facility would be determined when the design is finalized.

A complex at MCSP would require construction of additional onsite electrical equipment, which would likely consist of a new 12-kV service line, switchgear, transformers, and backup power generation. The emergency generators and necessary equipment would be installed adjacent to existing electrical equipment associated with the continued operation of MCSP to provide electrical power to the main facility, along with 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 predetermined areas of the facility for up to 72 hours. The new lines, switchgear, and other electrical infrastructure would be constructed at existing, highly developed onsite areas. No substantial offsite improvements would be necessary to accommodate the electrical demands of a complex at MCSP.

Construction and operation of a level II infill correctional facility complex at MCSP would also result in an increase in natural gas demand at MCSP. Although the amount of demand has not been fully defined, project engineers estimate that a new 3-inch gas line would deliver a sufficient supply, with a peak demand of 16.99 cubic feet per hour (cfh) or 16,985 mbh (thousand Btu per hour) (Vanir 2013c). The specific amount of natural gas needed to operate the complex would be determined when the design is completed. Implementation of the contemplated development is not expected to require offsite natural gas infrastructure improvements. Onsite improvements would include minor trenching work in previously disturbed areas, including the site access roadway that would be paved as part of the contemplated development.

The potential environmental impacts of construction and operation of a complex, 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 electrical and natural gas improvements.

CDCR would continue to coordinate with PG&E, the local gas and electricity service provider, regarding service for the level II infill correctional facility at MCSP. PG&E has the capacity to serve the projected demands of a level II infill correctional facility complex with existing regional infrastructure and systemwide utility capacity. Additional demand due to 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. The existing power service lines accommodate the service area, including MCSP, and could accommodate the contemplated development. PG&E is responsible for all improvements and maintenance of its facilities and utilities infrastructure. 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 in highly developed onsite areas, and no offsite improvements would be necessary to accommodate the natural gas demands of the contemplated development, impacts associated with the construction of new electrical and natural gas facilities for the level II infill correctional facility complex at the MCSP Infill Site would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-4a: Solid Waste Facilities Impacts [Complex]

Based on CDCR estimates, the average solid waste generation rate is 3.6 pounds per inmate per day. As of December 2012, MCSP housed 2,865 inmates; using CDCR’s average solid waste generation rate, existing solid waste generation is approximately 10,310 pounds per day. 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 multiplied by 1,583 inmates). This would constitute a 56-percent increase in waste generated by CDCR.

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 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.

Solid waste for the infill facility would be collected by ACES and delivered to the WARF, which can accept up to 333 tons per day in the daily throughput of this facility. Similarly, the average daily tonnage of a level II infill correctional facility complex is not anticipated to exceed the remaining capacity of nearby local landfills (Forward and Kiefer Landfills) based on remaining capacity of those facilities. The addition of approximately 2.85 tons would not be a substantial increase. CDCR would comply with all federal, state, and local statutes and regulations related to solid waste.

Medical waste, which would be minor and associated with health care units included in the facility, would be transported in accordance with the HMTA, and disposed of at appropriate facilities. Because medical waste would be minor, it is expected that it would be accommodated without meaningfully effecting capacity at any disposal facility.

Although a level II infill correctional facility complex would increase solid waste generation at MCSP, both during construction and operation, the Forward Landfill and Kiefer Landfill are projected to have sufficient capacity to accept the increased solid waste, and the contemplated development would not consume a substantial amount of the available capacity of these landfills or medical waste disposal facilities, 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 SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.12-1b: Impacts on Water Supply and Treatment Facilities [Single Facility]

A single, level II infill correctional facility would house 792 inmates at full buildout. Assuming similar demand factors as those identified above for a complex (see Impact 3.12-1a above), the anticipated water demand of a single, level II infill correctional facility would be 118,800 gpd (133 afy).

As discussed above, water is supplied to MCSP by AWA via an existing 18-inch water line. These facilities have been sized to handle the maximum deliveries outlined in the JPA. The existing JPA between AWA and CDCR allocates an average of 1,085,000 gpd and a peak of 1,334,000 gpd. Table 3.12-8 provides the estimated potable water demand of a single, level II infill correctional facility added to existing demand at MCSP. As shown, the anticipated demand, 571,800 gpd average and 1,029,240 gpd peak, is less than the existing allocation agreement. Therefore, no new water treatment facilities would be required with implementation of the contemplated development.

Table 3.12-8 Estimated Potable Water Demand –Single Facility		
Facility	Average Daily Demand (gallons)	Peak Day[1]
Existing MCSP demand	453,000	815,400
Single facility	118,800	213,840
Total	**571,800**	**1,029,240**
Allocation	1,085,000	1,334,000
Remaining Supply	**513,200**	**304,760**

Notes : [1] Assumes peaking factor of 1.8
Source: Analysis by Ascent in 2013.

Long-Term Water Sufficiency Analysis

Consistent with the requirements of State CEQA Guidelines Section 15155(see note in Impact 3.12-1a above), existing and projected future normal-year water supplies and demands are presented in Table 3.12-9.

As shown in Table 3.12-9, total water supply is greater than total water demand for all water year types and t a water surplus of at least 4,980 af is available in all years. Moreover, although the project would add a demand of 133 afy, this would bring total demand at MCSP to 641 afy, which is substantially below historic uses (up to 787 afy as recently as 2007) at MCSP. Therefore, sufficient water supplies are available to serve the contemplated development from existing resources and to continue to serve the site in the long term.

Table 3.12-9 Summary of Existing and Projected Future Water Supplies and Demands for Single Facility (Normal, Single Dry, and Multiple Dry Water Years) (afy)					
	2010	2012	2020	2025	2030
Demand					
AWA	8,407	9,052	10,498	11,407	12,356
MCSP Infill Development of a Single Facility	133	133	133	133	133
Total Demand	8,540	9,185	10,631	11,540	12,489
Supplies					
Normal Year, Single Dry Year, and Multiple Dry Years[a]	16,446	17,469	17,469	17,469	17,469
Remaining Supplies	**7,906**	**8,293**	**6,838**	**5,929**	**4,980**

[a] AWA determined that during normal, single dry, and multiple dry water years, 100% of its water supplies would be available.
Source: AWA 2011

Because existing water supplies are sufficient to serve the contemplated development from existing resources and entitlements and no new water treatment facilities would be required, the construction of which could result in environmental impacts, implementation of the single, level II correctional facility at the MCSP Infill Site would result in ***less-than-significant*** *water supply and treatment facility impacts.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-2b: Impacts on Wastewater Treatment Facilities and Permits [Single Facility]

Implementation of a single, level II infill correctional facility would increase the flow of wastewater from the MCSP facility beyond existing conditions to serve increased population at the infill site. However, this additional flow would not exceed historical maximum flows that occurred in 2007. As discussed above, MCSP relies on its onsite WWTP to treat wastewater. Given the estimated sewage flow rate projection of 140 gpid identified in Chapter 2, “Project Description” of this volume of the DEIR, the

proposed complex would generate approximately 110,880 gpd of wastewater, as shown in Table 3.12-10. The greatest monthly demand at MCSP in 2012 was 15,713,000 gallons in March 2012. As described above, the daily average demand during a peak month is considered an appropriate comparison for assessing potential peak demand conditions at the infill site. Consistent with this methodology, the daily average from the peak month (March 2012) is 181 gpid, which is used as a demand factor to determine the peak day in this analysis. Based on December 2012 inmate population at MCSP and the projected population of the proposed complex, peak flows at the WWTP are anticipated to be 661,917 gpd.

Table 3.12-10 Projected Wastewater Flows – Single Facility

	Number of Inmates	CDCR Flow Rate (gpid)	Total gpd
Existing MCSP Facility[1]	2,865[1]	153[2]	435,897
CalFire Dorms	—	—	25,000
Single Facility	792[3]	140[3]	110,880
		Total Daily Average Projected Flows:	**571,777**
		Existing WWTP & Disposal System Capacity is 740,000 gpd Percentage of Plant Capacity	***77%***
		Remaining Plant Capacity	***23%***

Notes:
1. December 2012 inmate population.
2. Actual per inmate sewage generation flow rates for 2013; similar to average for 2011-2012.
3. CalFire Dorm wastewater flows are evaluated at maximum allowable. Actual flow rates currently range between 1,000 – 5,000 gpd.
4. New dorm inmate population and per inmate sewage generation flow rates are firm design criteria set by CDCR.
Source: Vanir 2013, calculations by Ascent in 2013.

As shown in Table 3.12-8, the average and peak flows at MCSP inclusive of development of a single facility at MCSP are not anticipated to exceed average or peak flow allowances under the Central Valley RWQCB WDRs. As described in Chapter 1, “Introduction” of this volume of the DEIR, CDCR is required to further reduce inmate population statewide and has established facility specific population targets that it will achieve by the conclusion of 2013. With respect to MCSP, this target is 2,400 inmates. Based on this, wastewater flows at MCSP upon initiation of operation of a single, level II infill correctional facility are anticipated to be approximately 520,000 gpd, which would represent an 8 percent increase in available capacity at the WWTP.

A single, level II infill correctional facility would be built on the current spray field sites, resulting in a net loss of available spray field acreage. This would result in a reduction of up to 103 acres from the existing 296 net acres of spray fields. As described above (discussion under “complex”), the City of Ione is currently developing its own irrigation/spray fields. CDCR would coordinate with the City of Ione to provide and develop additional spray fields to ensure adequate disposal capacity for MCSP-treated secondary effluent as part of the proposed project. CDCR also anticipates providing funding for its proportionate share of operation of the City’s spray fields. Storage of MCSP-treated effluent at the City of Ione WWTP may be necessary, but is not anticipated to require substantial upgrades due to the flow equalization provided by Preston Reservoir. Additional engineering evaluation will occur to verify storage requirements at the Ione WWTP. CDCR would provide cost share on any offsite storage improvements, leasing additional fields and implementation of irrigation supply and tailwater return facilities for recycled water irrigation reuse of MCSP treated secondary effluent. CDCR would also provide cost share for monitoring wells and irrigation site isolation to prevent tailwater from leaving site. The additional irrigated land area is located west of the proposed improvements to the City of Ione WWTP irrigation areas. The land at this location is flat and is currently in agricultural production.

Onsite treated effluent storage and offsite infrastructure improvements (i.e., irrigation pipelines, berms, tailwater return facilities) would be constructed within disturbed and/or developed areas, within the

identified boundary of disturbance. The potential environmental impacts of construction and operation of a single, level II infill correctional facility, including utility connections, have been considered and evaluated throughout the environmental resource sections in Chapter 3 of this volume of the DEIR; however, the primary effect of this project would be to provide irrigation of these fields with recycled water. Where necessary, recommended mitigation would substantially reduce construction-related impacts associated with onsite and offsite wastewater facility improvements.

The estimated wastewater flows from MCSP, inclusive of the contemplated single, level II correctional facility, would not exceed the currently permitted daily discharge allowance for MCSP. Further, as part of the proposed project, additional effluent disposal facilities would be developed to handle any reduction in capacity associated with the closure of Spray Fields 4 and 5. Therefore, adequate wastewater treatment services are available and no new facilities beyond what is included as part of the project, would be required that could result in significant environmental impacts. This would be considered a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-3b: Impacts on Electricity and Natural Gas Facilities [Single Facility]

Implementation of the single facility would result in an increase in demand for electricity at the infill site. Although the demand has not been fully defined, project engineers have estimated a single facility would require a new line that would deliver a peak of 3,099 kVA (Vanir 2013b). The specific amount of electricity needed to operate the infill facility would be determined when the design is finalized.

A single facility at MCSP would require construction of additional onsite electrical equipment, which would likely consist of a new 12-kV service line, switchgear, transformers, and a backup power generation. The emergency generators and necessary equipment to provide electrical power to the main facility would be installed adjacent to existing electrical equipment associated with the continued operation of MCSP, along with 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 predetermined areas of the facility for up to 72 hours. The new lines, switchgear, and other electrical infrastructure would be constructed at existing, highly developed onsite areas. No substantial offsite improvements would be necessary to accommodate the additional electrical demands of a single facility at MCSP.

Construction and operation of a single, level II infill correctional facility at MCSP would also result in an increase in natural gas demand at MCSP. Although the amount of demand has not been fully defined, project engineers estimate that a new 3-inch gas line would deliver a sufficient supply, with a peak demand of 9.65 cfh or 9,650 mbh (Vanir 2013c). The specific amount of natural gas needed to operate the single facility would be determined when the design is completed. Implementation of the contemplated development is not expected to require offsite natural gas infrastructure improvements. Onsite improvements would include minor trenching work in previously disturbed areas, including the site access roadway that would be paved as part of the contemplated development.

The potential environmental impacts of construction and operation of a single, level II infill correctional 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 electrical and natural gas improvements.

CDCR would continue to coordinate with PG&E, the local gas and electricity service provider, regarding service for the single facility at MCSP. PG&E has the capacity to serve the infill facility's electrical and gas demand with existing regional infrastructure and systemwide utility capacity. Additional demand

due to the single, level II infill correctional facility is not anticipated to require offsite improvements, such as higher load-bearing transmission lines, or improvements to substations. The existing power service lines accommodate the service area, including MCSP, and could accommodate the contemplated development. PG&E is responsible for all improvements and maintenance of its facilities and utilities infrastructure.

Because minor electrical and natural gas infrastructure improvements would be constructed in highly developed onsite areas, and no offsite improvements would be necessary to accommodate the natural gas demands of the contemplated development, impacts associated with the construction of new electrical and natural gas facilities for the single, level II correctional facility at the MCSP Infill Site would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-4b: Solid Waste Facilities Impacts [Single Facility]

Based on CDCR estimates, the average solid waste generation rate is 3.6 pounds per inmate per day. Considering that, as of December 2012 MCSP housed 2,865 inmates, existing solid waste generation is approximately 10,310 pounds per day. Operation of a single, level II correctional facility at the MCSP Infill Site would be anticipated to generate an additional 2,850 pounds of solid waste per day (3.6 pounds x 792 inmates). This would constitute a 28-percent increase in waste generated by CDCR.

The single, 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. 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.

Solid waste from the infill facility would be collected by ACES and delivered to the WARF, which can accept up to 333 tons per day. The addition of approximately 1.4 tons would not be a substantial increase in the daily throughput of this facility. Similarly, the average daily tonnage of a single, level II infill correctional facility is not anticipated to exceed the remaining capacity of nearby local landfills (Forward and Kiefer Landfills) based on the remaining capacity of those facilities. CDCR would comply with all federal, state, and local statutes and regulations related to solid waste, including the reduction of solid waste production.

Medical waste, which would be minor and associated with health care units included in the facility, would be transported in accordance with the HMTA, and disposed at appropriate facilities. Because medical waste would be minor, it is expected that it would be accommodated without meaningfully effecting capacity at any disposal facility.

Although a single, level II correctional facility would increase solid waste generation at MCSP, both during construction and operation, the Forward Landfill and Kiefer Landfill are projected to have sufficient capacity to accept the increased solid waste and the contemplated development would not consume a substantial amount of the available capacity of these landfills or medical waste disposal facilities, 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.

3.13 VISUAL RESOURCES

This section describes the existing visual characteristics and visual quality of the Mule Creek State Prison (MCSP) Infill Site and the surrounding area, and evaluates the effects on the visual environment resulting from the development of a level II infill correctional facility, including light-and-glare-related impacts. The impact analysis has been organized into two parts. The first part addresses the proposed level II infill correctional facility complex that is being considered for construction at the MCSP Infill Site. The second part addresses an alternative plan for the MCSP Infill Site that would involve construction of a single, level II infill correctional facility. The latter is considered an alternative to the proposed project for the MCSP Infill Site. 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.

This visual resources analysis is based on field surveys of the infill site and surrounding areas and interpretation and analysis of existing views of the infill site and surrounding area. Visual simulations are used to draw conclusions regarding the appearance and effects of the contemplated development on visual resources.

3.13.1 EXISTING CONDITIONS

The MCSP is located in the northwestern portion of the city of Ione. The city of Ione is located in western Amador County in the transitional zone between the Sierra Nevada foothills and the Central Valley. The natural and rural landscapes dominate the visual environment in the area surrounding the City. The rolling terrain of the foothills with grasslands, oak woodlands, and small streams and drainages with riparian woodlands set against the backdrop of the Sierra Nevada mountains, comprise the primary visual resources of the area.

VISUAL CHARACTER OF THE SURROUNDING AREA

The city of Ione is a small rural community of about 5 square miles. The commercial core in the downtown area is approximately 1.3 miles south of the infill site. The commercial core is comprised of small shops, restaurants, and government offices, including the City Hall. A variety of architectural styles indicative of construction from the late 19th century and early 20th century are reflected in structures in the downtown core area (City of Ione 2009a: p. 4.12). Residential neighborhoods are located in the downtown core and to the north and west of downtown. Residential neighborhoods are

made up primarily single family homes. Sutter Creek flows on the north side of the downtown core and separates the core from the northern portion of the City.

To the north of the downtown core, on the north side of SR 104 are several state facilities, including the now-closed Preston Youth Correctional Facility (PYCF), the California Department of Forestry and Fire Protection (CAL FIRE), Fire Protection Training Academy, and MCSP. For the most part, the architecture associated with these state facilities consists of industrial-style, low rise buildings and extensive paved and turfed areas. A point of architectural and historic interest is the Preston Castle, located on a rise in the grounds of the PYCF. The Preston Castle is a 46,000 square foot, four-story Romanesque Revival structure that was built in the 1890s located approximately 0.7 mile from the infill site (See Section 3.3, Cultural Resources). Preston Castle is listed as CHL #867 and is on the National Register of Historic Places (NRHP). Preston Castle is visible from various points in the surrounding area, including southbound SR 104 near the MCSP. The northern elevation of the structure faces toward the infill site. However, as described in Section 3.3, Cultural Resources, the infill site is not visible from this elevation. (Refer to Section 3.3 Cultural Resources).

The area surrounding the state-owned CDCR property where the infill site is located is largely used for grazing and agriculture. Property north of SR 104 to the west of the existing MCSP (Toma Property) is undeveloped and consists of grazing land and oak woodlands traversed by Dry Creek which flows from north to south. The area to the south of SR 104 is agricultural land with scattered ranch houses. The Ione General Plan notes that the area between Irish Hill Road and the MCSP (including the Toma Property) along SR 104 provides a visual corridor and gateway to Ione (City of Ione 2009b: pp. 3-44 to 3-45).

VISUAL CHARACTER OF THE INFILL SITE

The infill site is located on state-owned property and is adjacent to the existing MCSP. The CAL FIRE training facility is located to the south of the infill site. The state property frontage along SR 104 is forested and landscaped with trees and hedges.

The infill site is undeveloped and vegetated with dense stands of oaks and foothill pines that predominantly line the edges of the disturbance area (refer to Exhibit 2-2 in Chapter 2, “Project Description,” of this volume). Intermittent drainages with cottonwoods, and small seasonal wetlands are scattered on the site (Refer to Section 3.2, Biological Resources). The ground has been disturbed by discing as the site is currently used for spray fields for the wastewater treatment system. The terrain slopes toward the southwest with the upper portion of the infill site approximately 100 feet higher than SR 104. The infill site is separated from the MCSP facilities to the west by a strip of natural oak woodland. Adjacent MCSP facilities include the Mule Creek Reservoir to the northwest and firing range to the west.

To the south of the infill site are Preston Reservoir and the CAL FIRE training facility. To the southeast of the infill site property is undeveloped and vegetated with oak woodlands and grasslands. The area between the infill site and Waterman Road is crossed by a number of unpaved roads and there is a residence situated on a hilltop approximately 0.6 mile to the east of the infill site.

Scenic resources in the area generally consist of the surrounding rural, agricultural, and natural landscapes that include views of oak woodlands, grasslands on rolling hills, pastures, tree-lined creeks and drainages, and scattered rural structures such as barns. Scenic resources within the city of Ione include the Preston Castle, tree-lined neighborhoods, Sutter Creek, and the architecturally interesting downtown. No scenic vistas, defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit the general public, were identified for the viewsheds that include the infill site.

With respect to the proposed spray fields, the area is largely flat with low lying vegetation with tree-lined creeks and drainages, as well as scatter rural structures. No scenic vistas were identified in/around the proposed spray fields.

VISIBILITY FROM OFFSITE AREAS

A field reconnaissance was conducted in January of 2013 to survey potential viewing points that would represent common views toward the MCSP Infill Site. Photographs were taken from various viewpoints outside the prison facilities to determine the visibility of the infill site from public roads, public open space 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. Based on the reconnaissance, three viewpoints were selected for detailed analysis, including visual simulations. Nighttime photographs were taken from these viewpoints on March 27, 2013. Exhibit 3.13-1 shows the location of photographs and orientation of the selected viewpoints. It is important to note that the visual simulations take into account a potential level II infill correctional facility complex as that would represent the greater level of development at the infill site.

Viewer groups or receptors with views of the infill site would potentially include residents of the Ione area traveling on SR 104 and other nearby roadways, property owners, and ranch employees on adjacent private property.

The following representative viewpoints include views from SR 104 at the entrance to the Castle Oaks residential neighborhood and golf course to the south of the infill site, the private property adjacent to the west side of MCSP property and a view from Waterman Road on the east side of the MCSP property.

VIEWPOINT 1 VIEW NORTH FROM CASTLE OAKS ENTRY AT STATE ROUTE 104

This viewpoint is located at the intersection of SR 104 and Castle Oaks Drive, approximately 0.7 mile southwest of the infill site. The view to the northeast, toward the infill site from this point, includes SR 104, a chain link fence, landscaping, utility poles and utility line in the immediate foreground. Trees in the foreground, beyond the roadway, landscaping, and fencing block distant views of the infill site, as shown in Exhibit 3.13-2. As shown in Exhibit 3.13-3, from this viewpoint the infill site is below the line of site because of vegetation and intervening topography; therefore, there are no views available of the infill site. . Receptors at the viewpoint include residents of the Castle Oaks community, golf course patrons leaving Castle Oaks Golf Course.

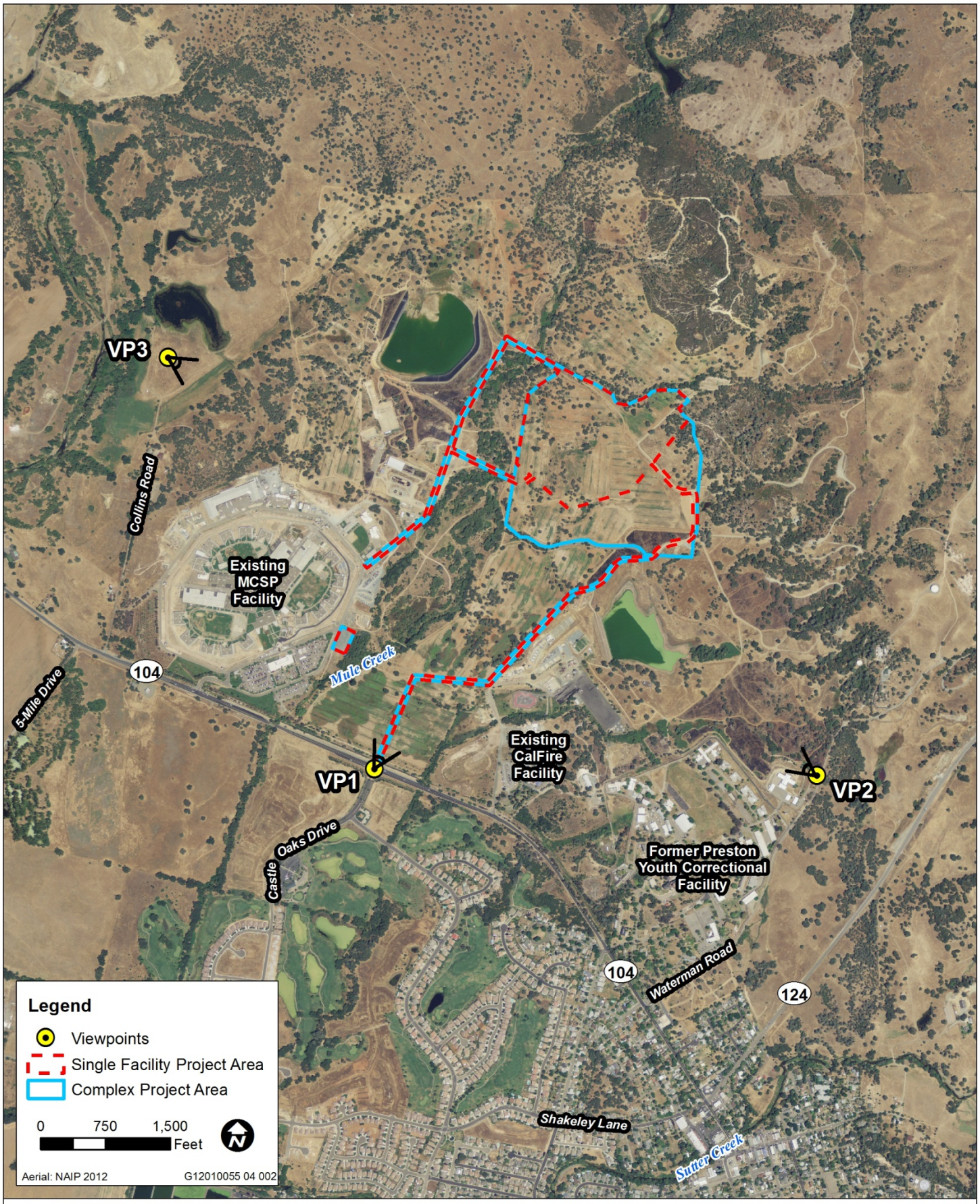
VIEWPOINT 2 VIEW NORTHWEST FROM WATERMAN ROAD NEAR PRESTON YOUTH FACILITY

This viewpoint is located approximately 0.6 mile southeast of the infill site on Waterman Road, in the vicinity of the now closed PYCF. The view to the northwest toward the infill site includes oak woodlands and grass covered rolling hills and portions of the PYCF. Some features of the existing MCSP are visible in the background. The view is of naturally wooded landscape with openings that allow distant views through the trees. The oak woodland and grassland provide seasonal displays of changing vegetation. However, security fencing and paved areas associated with the PYCF, visible on the left of the view, intrude and detract somewhat from the foreground view. The infill site, which is lower in elevation than this viewpoint, is screened by trees, as shown in Exhibit 3.13-4.

Receptors of this view include residents with homes along the Waterman Road, ranchers and ranch employees, and motorists using Waterman Road to cut between SR 124 and 104 and the city of Ione.

VIEWPOINT 3 VIEW EAST FROM TOMA PROPERTY

This viewpoint provides views toward the infill site from a hilltop located on the private property (Toma Property) located approximately 0.3 mile northwest of the existing MCSP and 0.8 mile to the west of the infill site. The view is of a minimally disturbed natural or rural landscape with oak woodlands and grasslands and is free of intrusive or distracting elements such as fencing, roads, or utility lines. The view includes an open grassland area with a stock pond in the foreground. The infill site is not visible in this view and is blocked by intervening hills located west of the infill site, as shown in Exhibit 3.13-5. Receptors for this view include ranch workers and property owners.



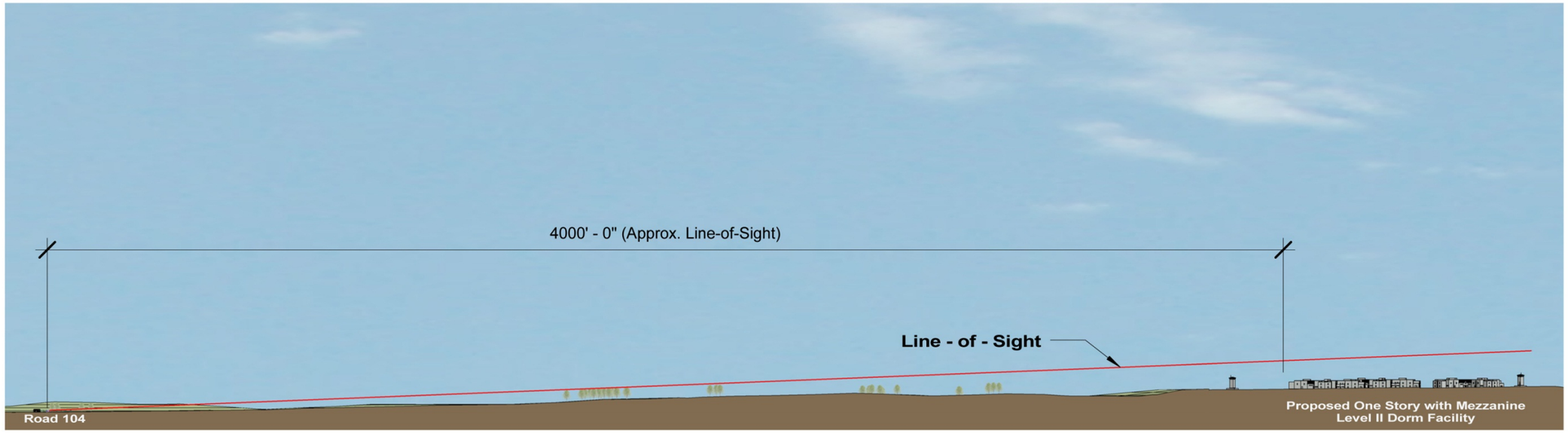
Source: adapted by Ascent Environmental 2013

Exhibit 3.13-1 Locations of Viewpoints and Visual Simulations

Source: ICF 2013, adapted by Ascent Environmental 2013

Exhibit 3.13-2

Viewpoint 1



1 Line-of-Sight Profile
1" = 400'-0"

X12010055 04 003

Source: ICF 2013, adapted by Ascent Environmental 2013

Exhibit 3.13-3

MCSP Sight Profile from Viewpoint 1

Source: ICF 2013, adapted by Ascent Environmental 2013

Exhibit 3.13-4

Viewpoint 2

Source: ICF 2013, adapted by Ascent Environmental 2013

Exhibit 3.13-5

Viewpoint 3

LIGHT AND GLARE CONDITIONS

Nighttime lighting sources in the area surrounding the city of Ione include mining and agricultural operations, ranch complexes and scattered residences. In general, in the area surrounding the city, ambient nighttime illumination levels are very low. Glare, which occurs during the daytime as result of sun reflecting off of glass, metal surfaces or other reflective architectural coatings, is low in this area as well. Within the urbanized area of the city of Ione, nighttime lighting sources include stationary sources such as structure illumination (house lights, street lights, commercial building lights, lighted signs, and recreational field lighting) and mobile sources (automobiles and trucks). The MCSP is a major source of nighttime lighting on the northern edge of the City. The facility has numerous perimeter lights on standards that are up to 50 feet high, and yard lighting that is mounted on high masts that are up to 100 feet in height. Existing lighting from MCSP is visible from adjacent properties. From Viewpoint 1, the lighting from the existing MCSP is visible to the northwest of Castle Oaks Drive/SR 104 intersection as shown in Exhibit 3.13-6. From Viewpoint 2, the security lighting from the existing PYCF is visible in the foreground and security lighting and high-mast lighting from the existing MCSP correctional facility is visible in the background as shown in Exhibit 3.13-7. From Viewpoint 3, the lighting from the existing MCSP facility is prominent as shown in Exhibit 3.13-8.

3.13.2 REGULATORY BACKGROUND

A list of the federal and state plans, policies, regulations, and laws relating to visual resources that are applicable to the MCSP 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.

CITY OF IONE GENERAL PLAN

In maintaining the community's vision the Ione General Plan provides policies and direction that support the preservation of Ione's unique character and the surrounding setting, revitalization and enhancement of the downtown area. The following goals and policies reflect the City's concerns regarding visual resources in the vicinity of the infill site.

Land Use Element

- **Policy LU-2.4:** Promote high quality, efficient, and cohesive land utilization that minimizes negative impacts (e.g., traffic congestion and visual blight) and environmental hazards (e.g., flood, soil instability) on adjacent areas and infrastructure and preserve existing and future residential areas from encroachment of incompatible activities and land uses.

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, a level II infill correctional facility at the MCSP 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

Because no Officially Designated or Eligible State Scenic Highways are within the vicinity of the infill site, the infill facility would have no effect on scenic resources, including scenic trees, geologic features, rock outcroppings, and historic buildings located within a State Scenic Highway. Therefore, this topic is not evaluated further in the DEIR.

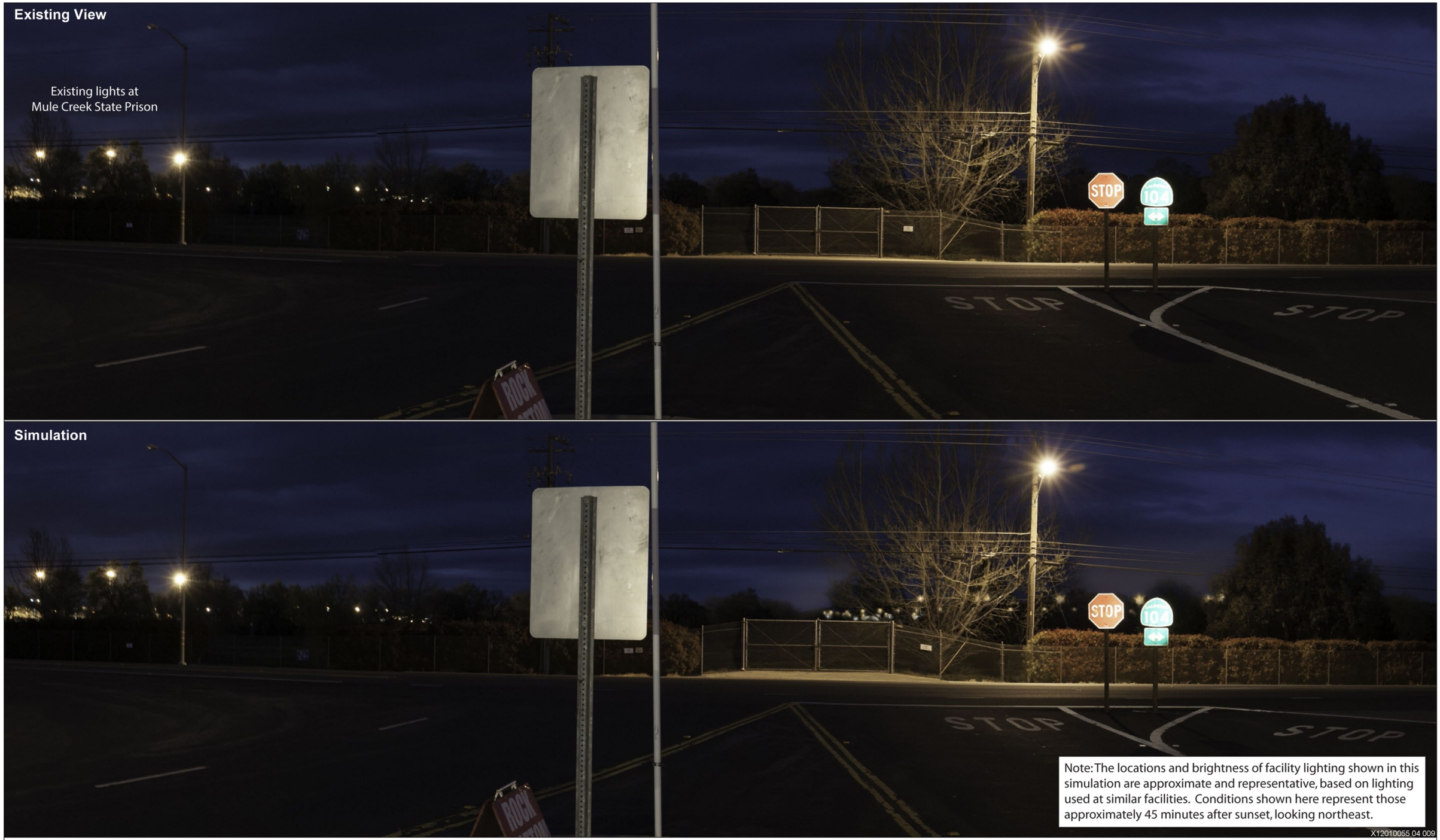
PROJECT IMPACTS AND MITIGATION MEASURES

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

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

Impact 3.13-1a: Potential to Substantially Degrade a Scenic Vista [Complex]

A scenic vista is generally considered a view which has remarkable or unique scenery or resources that are indigenous to an area. While the MCSP Infill Site and proposed spray field location consist of natural and rural landscape features, they are not considered to possess visual resources that are remarkable for the area, nor would they be considered to provide a scenic vista when viewed from surrounding areas. Views of the site from publicly accessible offsite areas are largely blocked by terrain or screened by dense vegetation. The complex would be visually consistent with nearby uses, and would not substantially alter the viewshed in which it is located when viewed from offsite locations, as shown in Exhibit 3.13-2, Viewpoint 1 and Exhibit 3.13-4, Viewpoint 2. The proposed spray fields would appear similar to existing conditions with only minor irrigation equipment visible during operation.



Source: ICF 2013, adapted by Ascent Environmental 2013

Exhibit 3.13-6

Nighttime View of Existing and Simulated Lighting of Level II Infill Correctional Facility from Viewpoint 1 at MCSP

Source: ICF 2013, adapted by Ascent Environmental 2013

Exhibit 3.13-7

Nighttime View of Existing and Simulated Lighting of Level II Infill Correctional Facility from Viewpoint 2 at MCSP

Source: ICF 2013, adapted by Ascent Environmental 2013

Exhibit 3.13-8

Nighttime View of Existing and Simulated Lighting of Level II Infill Correctional Facility from Viewpoint 3 at MCSP

The MCSP Infill Site is not considered to possess visual resources that are remarkable for the area, and the level II infill correctional facility complex would be minimally visible within the viewshed in which it is located. Further, the complex would be visually consistent with nearby institutional uses. Therefore, construction of a complex at the MCSP Infill Site would not result in a substantial adverse effect on 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 [Complex]

A level II infill correctional facility complex at the MCSP Infill Site would cover approximately 60 acres, would include 6 separate dormitory housing units (three on either side of the contemplated facility), and each housing unit would be approximately 26 feet tall. A communal recreational area would be located centrally between the three housing units on each side of the complex. The complex would include accessory and support structures and inmate programming space. Chapter 3, “Project Description” in Volume 1 of the DEIR, provides detailed descriptions of the single level II infill correctional facilities.

The existing visual character of the site is of a moderately disturbed natural landscape. Oak woodlands occupy the rolling hills; however, the grasslands have been disturbed by discing. Development of the complex would substantially alter the visual character of the site by clearing vegetation and re-contouring the site. Housing facilities would replace the rural/semi-natural landscape with institutional structures, hard surfaces, chain link security fencing and other security structures, lighting standards, and guard towers. However, the complex would be consistent with the appearance of the nearby existing MCSP facility and the infill site is minimally visible to the public from surrounding offsite viewpoints. Exhibit 3.13-3, shows that due to intervening terrain and vegetation, the complex would not be in the line-of-sight for viewers at the intersection of Castle Oaks Drive and SR 104 (Viewpoint 1).This line of sight graphic is generally representative of most views of the site from SR 104 within proximity of MCSP. The small simulation provided in Exhibit 3.13-2, shows the construction access/secondary access road in the center of this view. The gravel-surfaced secondary access road would not substantially detract from the view because it would be similar in appearance to ranch roads in the vicinity and would be consistent with the rural character of the Ione area. The structures of the complex would be almost entirely screened by vegetation. Similarly, the complex would not be visible from Viewpoint 2, Waterman Road (Exhibit 3.13-4), due to screening by trees in the foreground, and would not be visible from Viewpoint 5 on the Toma property (Exhibit 3.13-5) due to the intervening terrain and vegetation. The views selected for this analysis offer the greatest visibility of the site from surrounding publicly accessible areas. Views of the single infill facility from publicly accessible offsite areas would be largely blocked by terrain or screened by dense vegetation. Therefore, alterations made to the site for the development of the complex would not substantially alter the existing visual character of the surrounding area.

The proposed spray fields are currently active agricultural fields and would remain agricultural during operation. Views of the spray fields would remain largely unchanged with only minor above ground irrigation equipment visible upon completion. Therefore, the additional spray fields would not substantially alter the existing visual character of the surrounding area.

Views of the level II infill correctional facility complex at the MCSP Infill Site from publicly accessible offsite areas would be largely blocked by terrain or screened by dense vegetation. Therefore, alterations made as a result of the development of the correctional facility would not alter the existing visual character of the surrounding area. This impact is considered ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 4.13-3a: Light and Glare Impacts [Complex]

The level II infill correctional facility complex would be constructed with similar materials used for the existing MCSP facilities. Because it is essential that CDCR maintain adequate site security and line-of-sight, non-reflective materials are used in building design. Additionally, the level II infill correctional facility complex would be minimally visible from the surrounding area. Therefore, the complex would not result in any daytime glare-related impacts.

CDCR uses lighting in all its new facilities, which is designed to cast light only where needed, and to cut off glare to offsite areas. Similar to lighting at the existing MCSP 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 complex perimeter. This perimeter fence lighting would be angled in towards the facility and perimeter security zones.

As described above, under Existing Conditions, the existing MCSP facility is a source of substantial nighttime light that affects the surrounding area. The complex would introduce new sources of nighttime lighting in the vicinity of the MCSP Infill Site because the site is setback from SR 104 by approximately 0.6 mile (see Exhibit 3.13-6, Viewpoint 1), located 0.7 mile from the nearest existing residential neighborhood (Castle Oaks), and out of direct view from publicly accessible areas due to terrain and vegetation. While the complex would extend the lighted area that is visible in the background (Viewpoint 1 and 2), this lighting would not dominate the nighttime landscape and would not create substantial new source of glare that would affect nighttime views along SR 104, in nearby neighborhoods, or from publicly accessible viewpoints to the south of the MCSP Infill Site (see Exhibit 3.13-7, Viewpoint 2). As shown in Viewpoint 3 (Exhibit 3.13-8), facility complex would result in minimal casting of skyglow from the proposed lighting, but luminaries would not be visible from distant location because of the distance and screening by trees growing along the intervening ridge top. The simulated nighttime views from three viewpoints in the area surrounding the infill site show that terrain and/or trees mostly block or screen the lights from the selected viewpoints. Therefore, lighting associated with the proposed complex would not substantially alter nighttime light and glare conditions in the surrounding area.

The level II infill correctional facility complex at the MCSP Infill Site would be constructed with similar non-reflective materials used for the existing MCSP facilities and the complex would be minimally visible from the surrounding area. Therefore, the proposed complex would not result in any daytime glare-related impacts. While the complex would introduce new sources of nighttime lighting in the vicinity of the infill site, simulated nighttime views show that terrain and/or trees block or screen the lights from the selected viewpoints. The complex is also set far enough back from offsite areas that the lighting associated with the complex would not substantially alter nighttime light conditions in the surrounding area. This impact is considered ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

Impact 3.13-1b: Potential to Substantially Degrade a Scenic Vista [Single Facility]

As discussed above for the complex (see Impact 3.13-1b), the MCSP Infill Site is not considered to possess visual resources that are remarkable for the area, nor would it be considered to provide a scenic vista when viewed from surrounding areas. Views of the site from publicly accessible offsite areas are largely blocked by terrain or screened by dense vegetation. The single, level II infill facility would be visually consistent with nearby uses, and would not substantially alter the viewshed in which it is located when viewed from offsite locations, as shown in Exhibit 3.13-2, Viewpoint 1 and Exhibit 3.13-4, Viewpoint 2.

The MCSP Infill Site is not considered to possess visual resources that are remarkable for the area, and the single, level II infill facility would be minimally visible within the viewshed in which it is located. Further, the infill facility would be visually consistent with nearby institutional uses. Therefore, construction of a single, level II infill correctional facility at the MCSP Infill Site would not result in a substantial adverse effect on 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 [Single Facility]

The single, level II infill correctional facility would be generally pentagonal in shape, would cover approximately 35 acres upon completion of construction, and would include three separate housing units that would be approximately 26 feet tall. Similar to the complex (see Impact 3.13-2b above), the single facility would include accessory and support structures and inmate programming space. However, some of these spaces would be smaller in size than the complex design to accommodate a smaller population. Chapter 3, “Project Description” in Volume 1 of the DEIR, provides detailed descriptions of the single, level II infill correctional facility.

Similar to the complex analyzed under Impact 3.13-2a above, the single facility would be consistent with the appearance of the nearby existing MCSP facility and the infill site is minimally visible to the public from surrounding viewpoints; the structures of the level II infill correctional facility complex would be almost entirely screened by vegetation or blocked by terrain, as shown in Exhibit 3.2-3. Because views of the complex from publicly accessible offsite areas would be largely blocked by terrain or almost entirely screened by dense vegetation, alterations made to the MCSP Infill Site for development of the single, level II infill correctional facility would not substantially alter the existing visual character of the surrounding area.

Views of the single, level II infill correctional facility at the MCSP Infill Site from publicly accessible offsite areas would be largely blocked by terrain or screened by dense vegetation. Therefore, alterations made to the MCSP Infill Site for the development of the single facility would not alter the existing visual character of the surrounding area. This impact is considered ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 4.13-3b: Light and Glare Impacts [Single Facility]

As with the complex(see Impact 4.13-3a above), the single, level II infill correctional facility would be constructed with similar materials used for the existing MCSP facilities (ex. non-reflective materials) and would be minimally visible from the surrounding area. Therefore, the single, level II infill correctional facility would not result in any daytime glare-related impacts.

Similar to the complex (see Impact 4.13-3a above), the single facility would extend the lighted area that is visible in the background (Viewpoint 1 and 2) but would not dominate the nighttime landscape and would not create substantial new source of glare that would affect nighttime views along SR 104, in nearby neighborhoods, or from publicly accessible viewpoints to the south of the infill site (see Exhibit 3.13-7, Viewpoint 2). As shown in Viewpoint 3 (Exhibit 3.13-8), the single facility would result in minimal casting of skyglow from the proposed lighting, but luminaries would not be visible from distant location because of the distance and screening by trees growing along the intervening ridge top. The simulated nighttime views from three viewpoints in the area surrounding the MCSP Infill Site show that terrain and/or trees mostly block or screen the lights from the selected viewpoints. Therefore, lighting

associated with the single facility would not substantially alter nighttime light and glare conditions in the surrounding area.

The single, level II infill correctional facility at the MCSP Infill Site would be constructed with similar non-reflective materials used for the existing MCSP facilities and the level II infill correctional facility would be minimally visible from the surrounding area. Therefore, the single facility would not result in any daytime glare-related impacts. While the single facility would introduce new sources of nighttime lighting in the vicinity of the MCSP Infill Site, simulated nighttime views show that terrain and/or trees block or screen the lights from the selected viewpoints or that the facility is set far enough back from offsite areas that the lighting associated with the infill facility would not substantially alter nighttime light conditions in the surrounding area. This impact is considered ***less than significant****.*

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 adds a considerable contribution to the 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 a less-than-significant level.

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 Mule Creek State Prison (MCSP) in combination with other projects throughout the Amador County 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 level II infill correctional facility complex at the MCSP Infill Site or a single, level II infill correctional facility. 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 level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP 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 in the vicinity of the MCSP Infill Site and the City of Ione that have some relation to the environmental impacts of construction and operation of a level II infill correctional facility at MCSP. This analysis is based on information obtained from the City of Ione and Amador County and is consistent with the cumulative projects evaluated in the analysis of cumulative transportation impacts in Section 3.11, “Transportation,” of this volume.

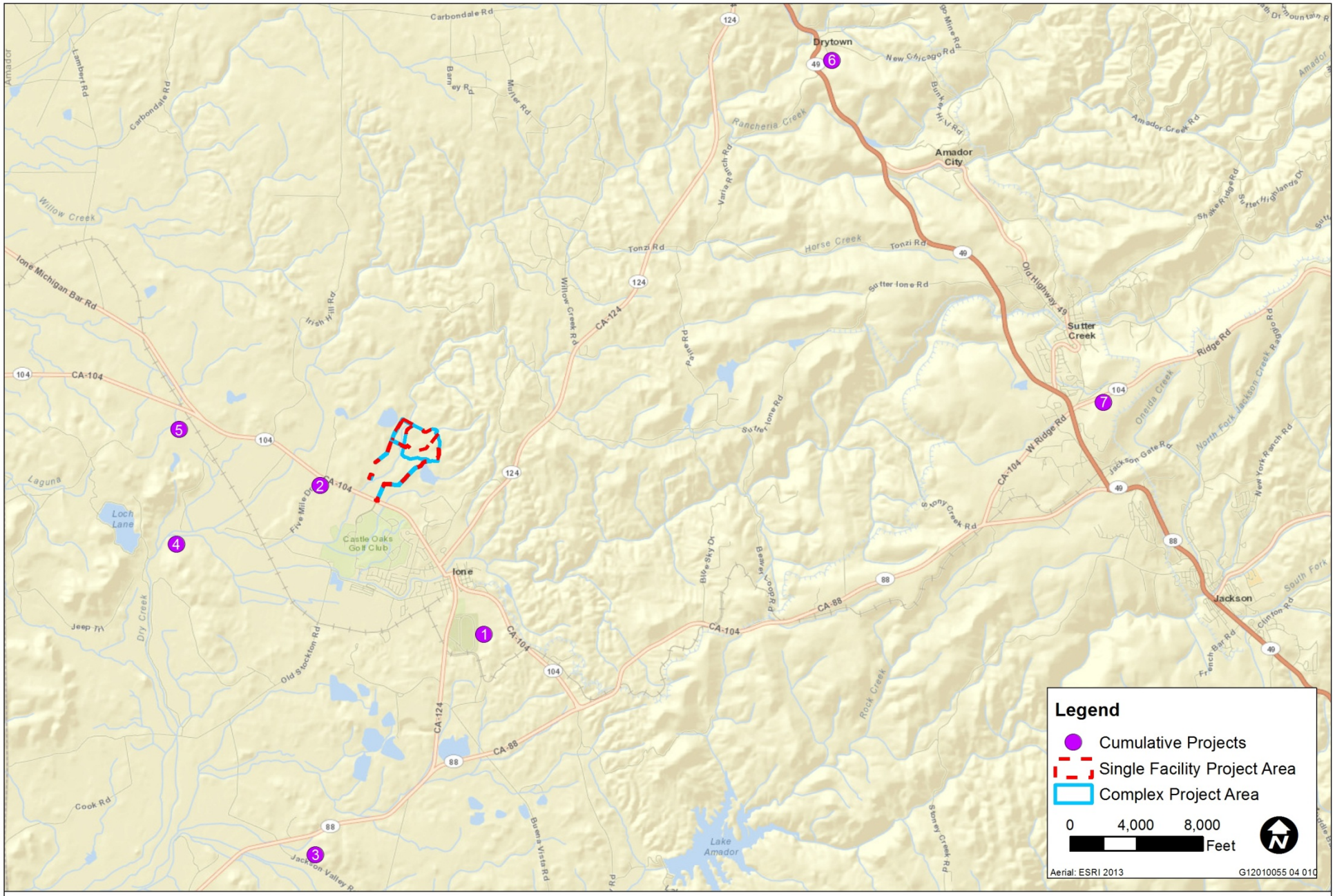
Table 4-1 List of Projects in the Vicinity of the MCSP Infill Site

Exhibit 4-1 Map Key	Project Name	Developed or Proposed Land Use	Size (Acreage and/or Dwelling Units)	Jurisdiction
	MCSP Medical Facility Improvements*	Modernization/improvement of existing medical space	36,700 gsf	CDCR
1	Wildflower	Residential	85 acres/276 DUs	City of Ione
2	Castle Oaks Subdivision	Residential	475 DUs/100,000 gsf retail/80 room hotel	City of Ione
3	Jackson Valley Quarry	Industrial	85.7 acres	Amador County
4	Newman Ridge Quarry	Industrial	278 acres	Amador County
5	Edwin Center	Industrial	113 acres	Amador County
6	Thomas Estates	Residential	18.84 acres/17 DUs	Amador County
7	East Ridge Business Park	Commercial	9.7 acres	Amador County

Notes: CDCR = California Department of Corrections and Rehabilitation; DU = dwelling units; gsf = gross square feet; MCSP = Mule Creek State Prison;
* No capacity or staffing increases; facility improvements only.
Source: City of Ione and Amador County.

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 MCSP 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 MCSP 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.



Source: Adapted by Ascent Environmental 2013

Exhibit 4-1

Approximate Locations of Cumulative Projects

Table 4-2 Geographic Scope of Cumulative Impacts	
Resource Issue	Geographic Area
Air Quality and Climate Change	Regional (Mountain Counties Air Basin–pollutant emissions that have regional effects) Local (immediate project vicinity—pollutant emissions that are highly localized) Global (greenhouse gas emissions)
Biological Resources	Local (project vicinity)
Cultural Resources	Local (limited to CDCR property)
Employment, Population, and Housing	Regional (Sacramento, Amador, and San Joaquin Counties) and local (Cities of Ione and Elk Grove)
Geology, Soils, Seismicity, Minerals, 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 (Sacramento, Amador, and San Joaquin Counties) and local (Cities of Ione and Elk Grove)
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 Amador County Air Pollution Control District (ACAPCD) acknowledges that the entire Mountain Counties Air Basin (MCAB) 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 MCAB (including, but not limited to, the projects listed in Table 4-1).Cumulative ambient air quality conditions would be significant. ACAPCD has not established thresholds of significance for CEQA evaluations of air quality impacts. Therefore, CEQA thresholds established by the Sacramento Metropolitan Air Quality Management District (SMAQMD) were used to evaluate emissions anticipated from development of the level II infill correctional facility. Using SMAQMD thresholds is considered appropriate, in part, because air quality conditions in the western portion of Amador County are considered to be similar to those in Sacramento County and because of pollution transport from Sacramento to Amador County, as discussed in Section 3.1, “Air Quality,” in this volume of the DEIR.

SMAQMD considers emissions of oxides of nitrogen (NO_X) from an individual project that exceed the 85-lbs/day threshold to be a substantial contribution to this basin-wide (i.e., cumulative) impact. As described in Impact 3.1-1, construction-generated emissions of NO_X at the MCSP Infill Site would

exceed SMAQMD's daily threshold during all 3 construction years for the proposed complex and during the 2014 construction year for the single facility. This is considered a significant cumulative impact. Implementation of NO_X emission reduction measures in Mitigation Measure 3.1-1a, which include minimizing land disturbance, watering graded areas, street sweeping, limited vehicle speeds, and revegetation, would reduce emissions by an average of 25 percent. After implementation of these measures, construction activities associated with the level II infill correctional facility would continue to produce more than 85 lbs/day of NO_X in 2014 and 2015 for the proposed complex and in 2014 for a single facility. CDCR would use Tier IV–certified construction equipment to the extent feasible; however, availability of such equipment is limited and it is not possible to ascertain the proportion of equipment that meets these requirements that could be employed onsite during construction. Emissions of NO_X would be reduced to the extent feasible; however, reductions would not be adequate to reduce emissions below SMAQMD's threshold. This would be a considerable contribution to a significant cumulative air quality impact.

Construction of the contemplated level II infill correctional facility would also generate substantial amounts of respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}) and fine particulate matter with an aerodynamic diameter of 2.5 micrometers ($PM_{2.5}$). Fugitive dust control measures consistent with Amador Air district Rule 218 are not currently part of the project description. Therefore, emissions of fugitive dust during construction could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations. This is considered to be a significant cumulative impact.

Implementation of dust control measures contained in Mitigation Measure 3.1-1b, including compliance with ACAPCD Rule 218, would reduce impacts associated with emissions of PM_{10} and $PM_{2.5}$ to a less-than-significant level. Assuming that all related projects, including those listed in Table 4-1, also implement all feasible PM_{10} control measures consistent with ACAPCD guidelines and regulations, construction emissions from related projects may be reduced to less-than-significant levels, although it is likely that larger projects could result in significant and unavoidable air quality impacts on their own. Given the attainment status of the MCAB for PM_{10}, and $PM_{2.5}$, temporary fugitive dust emissions from construction of the infill facility are not anticipated to exacerbate PM_{10} and $PM_{2.5}$ conditions in the air basin. The DEIR includes all available feasible mitigation to reduce the contribution from project construction to PM_{10} and $PM_{2.5}$ concentrations. However, feasible mitigation measures for NO_X emissions are not sufficient to reduce the potential cumulative contribution to below a level that is considerable.

The MCAB is in nonattainment status for ozone. This is a result of past cumulative development in the basin, as well as transport of pollutants from other basins. New development, including the infill facility at MCSP, would be required to comply with ACAPCD measures that would reduce potential new construction emissions of criteria pollutants and ozone precursors. However, adding construction of related projects to a cumulatively adverse condition would exacerbate air quality impacts. The contribution of the level II infill correctional facility (proposed complex or single facility) to this impact from NO_X emissions would be considerable. CDCR will implement mitigation measures for Impact 3.1-1; however, reductions achieved through these measures would not reduce NO_X emissions below SMAQMD's threshold. Therefore, cumulative short-term construction-related emissions, while mitigated to the extent feasible, would contribution to a cumulative air quality impact. This would be a ***significant and unavoidable*** *cumulative air quality impact.*

LONG-TERM OPERATION IMPACTS

Because MCAB is currently designated as a nonattainment area for ozone, stationary- 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 either the proposed level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP Infill Site would result in regional emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ from area and mobile sources, but these levels would not exceed SMAQMD's significance thresholds for ROG and NO_X and would not generate substantial operational emissions of PM_{10}, $PM_{2.5}$, or toxic air contaminants (TAC). Also, long-term operation of an infill facility at MCSP (the proposed complex or single facility) would not result in concentrations of, carbon monoxide (CO) or other criteria air pollutants that would exceed ambient air quality standards; or emissions of TAC, including diesel PM, that would result in the exposure of sensitive receptors to substantial pollutant concentrations. Emissions from stationary sources of emissions would be regulated through the ACAPCD's permitting process. SMAQMD's thresholds, which, as noted above, are used because ACAPCD has not established thresholds for CEQA purposes, 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. The area under SMAQMD's jurisdiction is also designated as a nonattainment area for ozone, similar to the MCAB, and SMAQMD's thresholds are thus considered appropriate. Consequently, the infill facility would not contribute to an increase in regional emissions (the projected emissions inventory for the MCAB) of criteria pollutants that would conflict with the emissions budget used for regional air quality planning (i.e., ACAPCD's air quality attainment plans).

Several projects within the cumulative context, including Newman Ridge Quarry and Jackson Valley Quarry, may contribute long-term pollutant concentrations that could affect local sensitive receptors. However, a level II infill correctional facility within MCSP would not generate substantial levels of vehicular, especially truck, traffic and would be located no less than 2,500 feet from the nearest sensitive receptor and approximately 2 miles from the nearest cumulative project that may contribute long-term pollutant concentrations that could affect sensitive receptors (the Castle Oaks subdivision is not considered a potential substantial pollutant generator). ARB has established advisory recommendations for several land use types to prevent potential air-quality-related health effects (ARB 2007). These advisory recommendations generally establish buffer distances of up to 1,000 feet. As the contemplated level II infill correctional facility would be located more than 2,500 feet from potential contributing sources or sensitive receptors, the operation of a level II infill correctional facility at the infill site is not considered cumulatively considerable and would not contribute to potentially substantial pollutant concentrations that could affect sensitive receptors.

Operation of a level II infill correctional facility (proposed complex or single facility) at the MCSP Infill Site would generate emissions that are below ACAPCD thresholds, which were established to reach attainment with air quality standards. Further, the contemplated infill facility 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 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 contemplated development would result in a ***less-than-significant*** *cumulative air quality impact.*

4.4.2 BIOLOGICAL RESOURCES

Habitat for biological resources has been reduced in the region over time, as land has been converted for agricultural, mining, and urban purposes. It is expected that habitat value would continue to decrease as commercial and residential development progresses in the region. Therefore, a cumulative impact on special-status species exists.

As described in Section 3.2, "Biological Resources," in Chapter 3 this volume, the MCSP property provides limited habitat for biological resources. Development of a level II correctional facility on the MCSP Infill Site (proposed complex or single facility) would result in the fill of a seasonal stream and wetlands that provide low-quality habitat, as well as the removal of riparian woodland and mature oak

trees that provide suitable nesting habitat for common and special-status raptors and other birds. Special-status plants and bat colonies could also be adversely affected. However, these potential impacts on biological resources resulting from development of a level II infill correctional facility at MCSP would be mitigated to less-than-significant levels with implementation of the mitigation measures described in Section 3.2, "Biological Resources." Furthermore, the MCSP Infill Site consists of low-quality, disturbed habitat surrounded by continually disked spray fields. It is unlikely that large or important populations of any special-status species exist on the MCSP Infill Site, and no high-quality habitat important to the long-term conservation of any species in the region is present on the infill site. Therefore, the incremental contribution of the level II infill correctional facility to the cumulative impact on special-status species in the region would not be cumulatively considerable.

Operation of a lethal electrified fence at the proposed infill site with the proposed complex or the single facility could result in the death (i.e., 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 this volume, it is not expected that the construction and operation of a level II infill correctional facility at the MCSP 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. Mitigation recommended in Section 3.2 and committed to by CDCR as the applicant and lead agency would result in CDCR's coordination with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (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, the project would not substantively contribute to reduction of any affected species. Therefore, the infill facility's contribution to impacts on native wildlife populations would not be cumulatively considerable.

Cumulative development could result in significant biological resource impacts. However, with implementation of the mitigation measures proposed for the MCSP Infill Site, the contribution to these impacts attributable to the construction and operation of level II infill correctional facilities at the MCSP Infill Site (proposed complex or single facility) 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

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, Sacramento, Amador, and San Joaquin Counties (including the cities of Ione and Elk Grove) are projected to experience cumulative population growth (see Table 3.4-1 in Chapter 3 for projected 2025 populations for these counties and cities). This population growth is regulated and monitored by each respective jurisdiction. It is anticipated 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, 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.

Implementation of the proposed level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP 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 Sacramento County would receive the largest percentage (37 percent) of new MCSP employees. At a local level, the City of Ione would receive 17 percent of new employees. 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 MCSP 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 level II infill correctional facilities at the MCSP Infill Site (proposed complex or single facility) would result in population growth that would be indistinguishable from 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 MCSP 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 Amador County 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. 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 potential for wildland fire in the vicinity of the MCSP Infill Site. The fire hazard associated with a new level II infill correctional facility at MCSP 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 MCSP 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 potential for wildland fire in the MCSP 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 level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP 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 MCSP 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 MCSP Infill Site, which would provide some treatment of pollutants and would maintain the infill site's pre-project levels of stormwater runoff. In addition, as noted in Section 3.7, "Hydrology and Water Quality" of this volume of the DEIR, the wastewater associated with level II infill correctional facilities at MCSP would be treated at the onsite MCSP wastewater treatment plant (WWTP), and the resulting effluent would be sprayed onto available spray fields at either Greenrock Ranch or MCSP. As a result, the treated effluent from the infill site could contribute to known water quality conditions in the area. However, it should be noted that the projected amount of effluent coming

from the MCSP WWTP would be less than historic flows. Further, the MCSP WWTP is currently undergoing modifications to assist in attaining the objectives of its existing waste discharge requirements (WDRs). As a result, the quality of effluent originating from the MCSP WWTP would be expected to improve compared to existing conditions. Further, alfalfa crops at the proposed spray fields have significantly higher water and nutrient requirements; therefore, irrigation reuse at this site would either likely require less land to accommodate the additional MCSP flows, or would allow greater uptake of nitrogen and TDS when applied to the same amount of land. Therefore, the potential for the operation of a level II infill correctional facility at MCSP to adversely affect long-term water quality conditions would be less than cumulatively considerable.

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 level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP 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 MCSP 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 MCSP Infill Site (with the proposed complex or a single facility), 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 reduce peak flow discharge rates to pre-project levels and improve water quality. All Regional Water Quality Control Board (RWQCB) 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 waterbodies. 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, level II infill correctional facilities at the MCSP Infill Site (proposed complex or a single facility) 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 MCSP 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 level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP 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 City of Ione's and Amador County's General Plans. Therefore, cumulative land use impacts would be less than significant.

The cumulative loss of farmland in the region is considered an adverse cumulative condition. However, as discussed in Section 3.4, "Land Use, Agriculture, and Forestry Resources," in Chapter 3 of this volume, development of level II infill correctional facilities at the MSCP Infill Site (proposed complex or single facility) 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 MCSP 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 level II infill correctional facilities at the MCSP Infill Site (proposed complex or single facility) 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

As described in Section 3.9 in Chapter 3 of this volume, noise is a localized occurrence and attenuates with distance. No projects shown in Exhibit 4-1 are located close enough (i.e., 1,000 feet) to the MCSP Infill Site that they could combine with noise from development at the infill site. Therefore, there is not a cumulative noise impact.

Construction of the proposed level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP Infill Site would result in site-specific noise impacts and would not otherwise expose offsite receptors to significant construction noise. County noise regulations limit construction activities to daytime hours; noise levels are not directly additive and attenuate rapidly with distance. 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 MCSP Infill Site. As such, construction vibration at the infill site (proposed complex or single facility) would not be considered cumulatively considerable.

As described in Section 3.9, "Noise," noise levels associated with operation of a level II infill correctional facility at the MCSP Infill Site would not result in noise levels that exceed state exterior or interior noise compatibility standards. Further, as noted in Tables 3.9-19, 3.9-20, 3.9-21, and 3.9-22, potential operational noise levels associated with an infill facility at MCSP as perceived at offsite receptors would

be substantially less than (>10 dBA below) Title 24 standards. As such, development of the infill site (proposed complex or single facility) would not be considered cumulatively considerable such that noise levels may exceed state noise compatibility standards. Therefore, the development 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 3.9-14, 3.9-15, 3.9-17, and 3.9-18 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 two study roadway segments, primarily as a result of increased traffic from other local development; these increases would nonetheless represent a significant cumulative impact. Although the contemplated development of the proposed level II infill correctional facility complex or a single, level II infill correctional facility 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 (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 MCSP Infill Site.

Development of the proposed level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP 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 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 complex or single facility) would result in a considerable contribution to significant cumulative traffic 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 the development of a level II infill correctional facility at the MCSP 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. Further, any new housing to accommodate cumulative development would be required, in school districts with overcrowding, to pay adopted school impact fees, which is considered full mitigation under CEQA. As described in Section 3.10, "Public Services," in Chapter 3 of this volume, the new level II infill correctional facility would utilize existing MCSP 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 (Ione Police Department, Ione Fire Department, and CAL FIRE) could be required if an incident at the infill site were to exceed the capabilities of onsite personnel, this backup assistance is currently provided for MCSP by these agencies, and a new level II correctional facility would not be expected to substantially increase the demand for these agencies to provide this backup assistance. Therefore, the project (proposed complex or single facility) would not result in a cumulatively considerable contribution such that a new significant cumulative public services impact would occur.

Development of the proposed level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP Infill Site would not result in a substantial population increase throughout the region and would utilize existing MCSP 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

The geographic area that could be affected by the level II infill correctional facility at the MCSP Infill Site is the area that is served by water supplies from the Amador County Water Agency, the source of MCSP water supply. As discussed in Section 3.12, "Utilities," in Chapter 3 of this volume, the existing Joint Powers Agreement between Amador County Water Agency and CDCR allocates an average of 1,085,000 gpd and a peak of 1,334,000 gallons per day (gpd). Development of a level II infill correctional facility at the MCSP Infill Site, combined with the existing MCSP facilities, would require up to 795,440 gpd (average) and 1,327,280 gpd (peak), which is less than the existing allocation agreement. Therefore, no new or expanded entitlements would be required, and the project (proposed complex or single facility) would not change or otherwise affect the ability of Amador County Water Agency to meet its cumulative water supply demands.

CDCR relies on water provided through a Joint Powers Agreement for 1,085,000 gpd for the existing MCSP facilities. Because the MCSP facility, including operation of the proposed level II infill correctional facility complex or a single, level II infill correctional facility, would demand less water than the existing agreement's allocation to CDCR, the project would not would not change or otherwise affect the ability of Amador County Water Agency to meet its cumulative water supply demands. This would be a ***less-than-significant*** *cumulative water supply impact, and the infill facility would not make a considerable contribution such that a new significant cumulative water supply impact would occur.*

WASTEWATER TREATMENT

Cumulative development in Ione and Amador County would be required to provide or fund the necessary wastewater treatment disposal and treatment facilities to serve those developments, consistent with relevant local policies. The MCSP Wastewater Treatment Plant (WWTP) operates under Waste Discharge Requirements (WDRs) described in the Central Valley RWQCB Order No. 5-00-088, which limits average dry weather discharge to 0.74 million gallons per day (mgd) and peak wet weather discharge to 2.2 mgd. The MCSP WWTP is below these limits, with an average dry weather discharge of 0.5 mgd and peak wet water discharge of 0.63 mgd. Most of the effluent is disposed onsite in spray fields located, in part, on the MCSP Infill Site. Some treated effluent is sent to City of Ione storage ponds for use as recycled water. The City's treatment process has encountered deficiencies, and the City's proposed solution involves expanding wastewater disposal spray fields.

CDCR's MCSP WWTP has been operating with certain deficiencies in its treatment/disposal process, and CDCR is in the process of designing upgrades to bring the plant into compliance with its permits. Development of a level II correctional facility at the MCSP Infill Site would generate up to 0.2 mgd and

0.29 mgd discharge for average dry and peak wet weather flows, respectively. Although the average and peak flows resulting from development of the MCSP Infill Site are not anticipated to exceed average or peak flow allowances under the RWQCB permit, development of a level II infill correctional facility complex would result in a net loss of available recycled water spray field acreage, with a reduction of approximately 100 acres from the existing spray fields. To accommodate this reduction, CDCR would, as part of the contemplated level II infill correctional facility at the MCSP Infill Site, extend the wastewater effluent disposal system that is currently being constructed by the City of Ione to offsite spray fields. CDCR would need to add 75–100 acres to the City's spray field expansion project. The potential environmental impacts of extending the effluent disposal system and additional spray fields are fully analyzed in this volume . Development of a single, level II infill correctional facility or a level II infill correctional facility complex at the MCSP Infill Site would result in a **less-than-significant** cumulative wastewater treatment impact and would not result in a considerable contribution such that a new significant cumulative wastewater treatment impact would occur.

Development of the proposed level II infill correctional facility complex or a single, level II correctional facility at the MCSP Infill Site would not exceed the wastewater treatment capacity or effluent permit limits at the MCSP WWTP. However, development of a level II infill correctional facility complex at the MCSP Infill Site would result in the loss of approximately 100 acres of spray fields used for land application of recycled wastewater from the MCSP WWTP. To provide sufficient spray fields, the project would include extension of the City of Ione's effluent disposal system and utilization of other spray fields, the impacts of which are analyzed in this volume. Because the project would not exceed the capacity of the existing MCSP WWTP and adequate spray fields would be provided offsite, development of the proposed level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP Infill Site would result in a ***less-than-significant*** *cumulative wastewater treatment impact and would not result in a considerable contribution such that a new significant cumulative wastewater treatment impact would occur.*

SOLID WASTE, ELECTRICITY, AND NATURAL GAS

The level II infill correctional facilities proposed at the MCSP Infill Site, in combination with cumulative development in the region, would increase demand for solid waste disposal capacity; however, however, substantial capacity is available in local landfill facilities to meet this demand. Therefore cumulative solid waste impacts would be less than significant. Development of level II infill correctional facilities at the MCSP Infill Site would result in a contribution of up to 2.85 tons of the maximum volume accepted each day. This would constitute a very small percent of the daily 333 tons of solid waste accepted at the Western Amador Recycling Facility. 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 complex or single facility) 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 MCSP Infill Site, in combination with cumulative development in the region, would result in an increase in electrical and natural gas demands. Pacific Gas and Electric Company (PG&E), the local gas and electricity service provider, 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. Development of a level II infill correctional facility at the infill site would not limit PG&E's ability to serve other existing and future development in the region. CDCR would continue to coordinate with PG&E regarding service for the potential level II infill facility at MCSP. Therefore, the project (proposed complex or single facility) would not have a considerable contribution such that a new significant cumulative electricity impact would occur.

The Western Amador Recycling Facility and PG&E have adequate capacity to meet the demands associated with the level II infill correction facility (proposed complex or single facility) at the MCSP Infill

Site. Therefore, the development of the proposed level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP 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

Development of past and current projects and future proposed projects continue to alter the visual environment of Ione and the surrounding area. In general, the visual resource impacts of the cumulative projects listed in Table 4-1 are site specific and would not necessarily combine with other projects that are not in the same viewshed to create a cumulative impact. Any related projects in close proximity to the MCSP Infill Site would be most likely to result in cumulative impacts to visual resources in combination with the impacts of the infill site development. For the MCSP Infill Site, there are no related projects that are close enough that a cumulative effect would occur in the viewsheds that include the infill site. Therefore, development of the proposed level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP Infill Site would not make a substantial contribution to any significant cumulative impact related to viewsheds.

Light sources in the vicinity of the infill site include perimeter lights, parking lot and entry lights, and high-mast lights at the existing MCSP facilities; street lights at the Castle Oaks subdivision and SR 104/Castle Oaks Drive intersection; security lights at the nearby CAL FIRE facilities; Preston Youth Correction Facility perimeter lights; and street lights, residential lighting, and commercial lighting in the City of Ione. While lighting would increase at the 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 MCSP and the adjacent 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 level II infill correctional facility complex or a single, level II infill correctional facility at the MCSP 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 complex or single facility) would not result in a considerable contribution to a significant cumulative visual resources impact and would result in ***less-than-significant*** *cumulative visual impacts.*

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5 OTHER CEQA SECTIONS

5.1 SIGNIFICANT UNAVOIDABLE IMPACTS

5.1.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT GUIDELINES

Section 21100(b)(2)(A) of the California Environmental Quality Act (CEQA) provides that an 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 MCSP Infill Site with a level II correctional facility 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," determines 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 reasonably foreseeable future projects. After implementation of the recommended mitigation measures, most of the impacts associated with development of level II infill correctional facilities at the MCSP Infill Site would be reduced to a less-than-significant level. The following impacts are considered significant and unavoidable; that is, no feasible mitigation (or additional mitigation) is available to reduce the potential impacts to a less-than-significant level. Chapter 5, "Alternatives" in Volume 1 of this DEIR considers alternatives to the contemplated development that may be capable of reducing or avoiding some of these impacts.

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

PROPOSED LEVEL II INFILL CORRECTIONAL FACILITY COMPLEX

AIR QUALITY

Impact 3.1-1a: Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors Impacts

With development of the proposed level II infill correctional facility complex at the MCSP 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 identified above. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable**.

TRANSPORTATION

Impact 3.11-4a: Construction-Related Traffic Impacts

With development of the proposed level II infill correctional facility complex at the MCSP 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 identified above. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable**.

Impact 3.11-6a: Existing plus Approved Projects Impacts on Roadway Segment Operations

Development of the proposed level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of SR 104, which would operate at unacceptable LOS D under Existing Plus Approved Projects (E+AP) conditions. The impact could be mitigated by widening SR 88 to four lanes; however, SR 88 is under Caltrans jurisdiction, and Caltrans currently has no plans to widen the roadway. As a result, the cost of such an improvement would not be accommodated as part of a capital improvement program, and the cost for such an improvement, including property acquisition, planning, engineering, and construction, would likely be the responsibility of the mitigating party, which, in this case, would be CDCR. Due to the potential costs associated with this improvement, considering that the proposed level II infill correctional facility would represent a small percentage of the daily traffic along this segment under E+AP conditions, widening of this segment as mitigation is considered infeasible because the cost would not be proportional to the level of impact generated by the project and there would be no mechanism for reimbursement of costs that are not the responsibility of CDCR. There is no other feasible mitigation measure that could improve traffic conditions along this roadway segment. Therefore, this impact would remain **significant and unavoidable**.

Impact 3.11-8a: Cumulative Impacts on Roadway Segment Operations

Development of the proposed level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of SR 104, which would operate at unacceptable LOS D operations under cumulative conditions. The impact could be mitigated by widening SR 88 to four lanes; however SR 88 is under Caltrans jurisdiction, and Caltrans currently has no plans to widen the roadway. As a result, the cost of such an improvement would not be accommodated as part of a capital improvement program, and the cost for such an improvement, including property acquisition, planning, engineering, and construction, would likely be the responsibility of the mitigating party, which, in this case, would be CDCR. Due to the potential costs associated with this improvement, considering that the proposed level II infill correctional facility complex would represent a small percentage of the daily traffic along this segment under cumulative conditions, widening of this segment as mitigation is considered infeasible because the cost would not be proportional to the level of impact generated by the project and there would be no mechanism for reimbursement of costs that are not the responsibility of CDCR.. There is no other feasible mitigation measure that could improve traffic conditions along this roadway segment. Therefore, this impact would remain **significant and unavoidable**.

ALTERNATIVE SINGLE, LEVEL II INFILL CORRECTIONAL FACILITY

AIR QUALITY

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

With development of a single, level II infill correctional facility complex at the MCSP 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 identified above. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable**.

TRANSPORTATION

Impact 3.11-4b: Construction-Related Traffic Impacts

With development of a single, level II infill correctional facility complex at the MCSP 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 identified above. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable**.

Impact 3.11-6b: Existing plus Approved Projects Impacts on Roadway Segment Operations

Development of a single, level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of SR 104, which would operate at unacceptable LOS D under E+AP conditions. The impact could be mitigated by widening SR 88 to four lanes; however, SR 88 is under Caltrans jurisdiction, and Caltrans currently has no plans to widen the roadway. As a result, the cost of such an improvement would not be accommodated as part of a capital improvement program, and the cost for such an improvement, including property acquisition, planning, engineering, and construction, would likely be the responsibility of the mitigating party, which, in this case, would be CDCR. Due to the potential costs associated with this improvement, considering that a single, level II infill correctional facility would represent a small percentage of the daily traffic along this segment under E+AP conditions, widening of this segment as mitigation is considered infeasible because the cost would not be proportional to the level of impact generated by the project and there would be no mechanism for reimbursement of costs that are not the responsibility of CDCR. There is no other feasible mitigation measure that could improve traffic conditions along this roadway segment. Therefore, this impact would remain **significant and unavoidable**.

Impact 3.11-8b: Cumulative Impacts on Roadway Segment Operations

Development of a single, level II infill correctional facility complex at the MCSP Infill Site would add traffic to SR 88 east of SR 104, which would operate at unacceptable LOS D operations under

cumulative conditions. The impact could be mitigated by widening SR 88 to four lanes; however SR 88 is under Caltrans jurisdiction, and Caltrans currently has no plans to widen the roadway. As a result, the cost of such an improvement would not be accommodated as part of a capital improvement program, and the cost for such an improvement, including property acquisition, planning, engineering, and construction, would likely be the responsibility of the mitigating party, which, in this case, would be CDCR. Due to the potential costs associated with this improvement, considering that a single, level II infill correctional facility would represent a small percentage of the daily traffic along this segment under cumulative conditions, widening of this segment as mitigation is considered infeasible because the cost would not be proportional to the level of impact generated by the project and there would be no mechanism for reimbursement of costs that are not the responsibility of CDCR.. There is no other feasible mitigation measure that could improve traffic conditions along this roadway segment. Therefore, this impact would 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 a project should it be implemented.

The 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 development would result in the irreversible and irretrievable commitment of energy and material resources during construction, operation, and maintenance, including the following resources:

- 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 Arnold 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 of this draft environmental impact report (DEIR), CDCR has committed to meeting or exceeding LEED Silver standards for the contemplated level II infill facilities. The design process would operate under the expectation of best long-term cost and environmental value, having a direct connection to the concept of sustainability and a possible result of LEED Gold or Platinum. As part of this process, efforts would be made to utilize recycled and renewable materials, and the buildings would be designed using energy-efficient technologies. Some nonrenewable resources would still be required, however. These nonrenewable resources are expected to account for a minimal portion of the region's resources and would not affect the availability of similar 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 contemplated development 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

CEQA Section 21100(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 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 contemplated development.

5.3.2 GROWTH-INDUCING IMPACTS OF THE PROJECT

Construction of a level II infill correctional facility at MCSP would foster substantial short-term and long-economic growth associated with construction-related and operational employment opportunities. Construction would begin 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. 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 contemplated facility would employ up to 193 people for a single facility and 377 people for 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 the MCSP, and given that most induced jobs would require skill levels that could be provided by existing residents of the region (i.e., City of Ione and other nearby cities), induced employment is not anticipated to have a substantial effect on population growth. Implementation of a level II infill correctional facility at MCSP 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 contemplated development 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 contemplated development is unlikely to tax existing local or regional community service facilities based on the anticipated geographic distribution of projected employees (see Section 3.10, "Public Services," for additional discussion).

Although the contemplated development 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 service providers to serve their existing customers, nor would it require the construction of new facilities to serve the contemplated development. This growth would be widely dispersed throughout Amador, San Joaquin, and Sacramento Counties and would not result in an increased demand for housing in these areas. As noted in Section 3.4, "Employment, Population,

and Housing," the population and employment growth expected with implementation of the infill development would not exceed the projections of local general plans in the communities surrounding the infill site. Additionally, the contemplated development of level II infill correctional facilities would not extend infrastructure and public services to serve areas outside of the existing CDCR property, which includes the infill site and MCSP. It should be noted that, with respect to MCSP, CDCR would expand the City of Ione's offsite effluent disposal system for the purpose of handling effluent flows that would otherwise have been dispersed at the infill site. Effluent disposal or wastewater treatment capacity would not be created offsite that would allow for future growth.

In conclusion, the contemplated 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 residents, 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 contemplated development would account for only a small percentage of existing housing, and the current high number of foreclosures in the region caused by current economic conditions may result in decreased demand. Further, the contemplated development would not meaningfully affect employment or other growth in the region, given the size of the regional economy. Therefore, the contemplated development would not contribute to substantial population growth.

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CHAPTER 4, CUMULATIVE IMPACTS

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CHAPTER 5, OTHER CEQA CONSIDERATIONS

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