

Initial Study / Proposed Mitigated Negative Declaration
**Intermediate Care Facility Project
at the California Medical Facility**



LEAD AGENCY:
CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION
Facilities Planning, Construction, and Management Division
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November 2008

EDAW | AECOM

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Lead Agency:

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Facilities Planning, Construction, and Management Division
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November 12, 2008

TO ALL INTERESTED PARTIES

Enclosed for your review is the Draft Initial Study and proposed Mitigated Negative Declaration (IS/MND) for a project that the California Department of Corrections and Rehabilitation (CDCR) is planning to undertake at the California Medical Facility (CMF) in Vacaville. To address mental health care needs of the inmate population, and to comply with court orders relating to mental health care of inmates, CDCR is proposing to construct an Intermediate Care Facility (ICF) at CMF. The proposed ICF would provide up to 64 inpatient mental health beds, as well as space for treatment and administrative and support services. The 44,000-square-foot facility would be constructed on existing CMF property, as would an associated parking lot with approximately 200 spaces. The existing secure perimeter, consisting of fencing and a perimeter road, would be expanded at the location of the ICF to encompass the new facility within the larger existing prison. Other improvements associated with the project would include the extension of existing water, sewer, natural gas, and electrical infrastructure to the new facility. The area of disturbance for the ICF and all associated components (including the parking lot) would total approximately 9 acres. The project has the potential to increase the capacity of CMF by 64 inmates, from an existing population of approximately 3,047 inmates to a future population of approximately 3,111. Staffing increases associated with the new facility would consist of as many as 163 new positions spread over three shifts.

The IS/MND has been prepared by EDAW under the direction of CDCR, in accordance with the California Environmental Quality Act (CEQA), the Public Resources Code 21000 *et seq*, and the State CEQA Guidelines 14 California Code of Regulations (CCR) 15000. The purpose of the document is to fully discuss the potential environmental impacts of the proposed project, and to identify measures to avoid, minimize, or mitigate such impacts.

The IS/MND is available for a 30-day public review period from November 13, 2008 through December 13, 2008. **Formal comments regarding the proposed project may be submitted in writing via mail, fax, or e-mail any time during this period, and should be sent no later than December 13.** Comments may be sent to:

John Sharp, Senior Environmental Planner
Facility Planning, Construction and Management
Department of Corrections and Rehabilitation
9838 Old Placerville Road, Suite B
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TO ALL INTERESTED PARTIES

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After comments are received from reviewing agencies and the public, CDCR may (1) give environmental approval to the proposed project; (2) undertake additional environmental studies; (3) modify the project; or (4) abandon the project. If the project is given environmental approval and funding were appropriated, CDCR could design and construct the project.

Copies of the IS/MND are available for review at the Solano County Resource Management Department, the City of Vacaville Community Development Department, the City of Fairfield Department of Planning and Development, the Suisun City Community Development Department, the Vacaville Public Library, and the Fairfield Civic Center Library. Copies may also be obtained at the above address upon request, and a digital version of the IS/MND can be found on the internet at http://www.cdcr.ca.gov/Reports_Research/Environmental/index.html. If you require additional information related to this project, please contact John Sharp, Senior Environmental Planner, at (916) 255-3013 or at John.Sharp@cdcr.ca.gov.

Sincerely,



Nancy MacKenzie, Chief
Environmental Planning Section
Office of Facility Planning, Construction and Management

Enclosure

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ACRONYMS AND ABBREVIATIONS

ADT	Average Daily Traffic
ADWF	average dry weather flow
AQAP	air quality attainment plan
ARB	California Air Resources Board
BMPs	Best Management Practices
BOD	Biochemical Oxygen Demand
CAAQS	California Ambient Air Quality Standards
Cal-OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CBC	California Building Standards Code
CDMG	California Division of Mines and Geology
CEQA	California Environmental Quality Act
City	City of Vacaville
CMF	California Medical Facility
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CRHR	California Register of Historic Resources
CSP	California State Prison
CSP Solano	California State Prison Solano
CTC	correctional treatment center
dB	decibels
DEIR	Draft Environmental Impact Report
Delta	Sacramento-San Joaquin Delta
DFG	California Department of Fish and Game
DMH	California Department of Mental Health
DTSC	California Department of Toxic Substances Control
EMS	Emergency Medical Services
EPA	U.S. Environmental Protection Agency

FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
HCP	Habitat Conservation Plan
HMP	habitat mitigation program
ICF	Intermediate Care Facility
in/sec	inches per second
kW	kilowatt
LOS	Level of Service
LUST	Leaking Underground Storage Tank
mgd	million gallons per day
MHSDS	Mental Health Services Delivery System
MLD	Most Likely Descendent
MSDSs	Material Safety Data Sheets
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
Pb	lead
PG&E	Pacific Gas & Electric Company
pga	peak ground acceleration
PM ₁₀	inhalable particulate matter
PM _{2.5}	fine particulate matter
PPV	peak particle velocity
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RMS	root mean square
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board

SIP	State Implementation Plan
SO ₂	sulfur dioxide
SVAB	Sacramento Valley Air Basin
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TSS	Total Suspended Solids
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VdB	velocity decibels
VFD	Vacaville Fire Department
VMT	vehicle miles traveled
VPP	Vacaville Psychiatric Program
WAPA	Western Area Power Authority
WDRs	Waste Discharge Requirements
WTP	Water Treatment Plant
YSAQMD	Yolo-Solano Air Quality Management District

1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

The U.S. District Court for the Eastern District of California, in the case known as *Coleman v. Wilson*, found the California Department of Corrections and Rehabilitation (CDCR) in violation of the Eighth Amendment to the United States Constitution with respect to the provision of constitutionally adequate mental health care to inmates incarcerated in CDCR prisons. The purpose of the proposed project (as defined herein) at the California Medical Facility, Vacaville (CMF) is to bring CDCR into compliance with the court order, which directs CDCR to construct and operate new mental health facilities that meet appropriate care standards at several prison sites, including CMF.

As described in Section 2.3 below, the *Coleman* court has ordered CDCR to construct a 64-bed Intermediate Care Facility (ICF) at the existing CMF, which is located approximately one mile south of Interstate 80 on state-owned land in the City of Vacaville, Solano County, California. Solano County is located northeast of the San Francisco Bay Area and southwest of Sacramento. The project would be constructed on state property in an abandoned orchard and would provide treatment, support services, and administration space. In order to meet appropriate care standards as set forth by the *Coleman* court, the facility must be approximately 45,000 square feet in size, together with associated components (including the parking lot) and would total approximately 9 acres. In addition to the court order directing CDCR to improve mental health care, the proposed project is authorized in the Budget Act of 2006 (Chapter 47, Statutes of 2006) for the preparation of preliminary plans,.

Under the present circumstances, CDCR may proceed directly to the preparation of preliminary plans without conducting environmental review under CEQA. The purposes of CEQA include: (i) informing public agencies and members of the public about the potential significant environmental effects of proposed activities, (ii) identifying ways to avoid or reduce environmental damage, and (iii) preventing damage to the environment by modifying projects to prevent such damage. However, under the Public Resources Code, CEQA does not apply where a public agency has no discretion to modify a project so as to avoid adverse impacts to the environment. Here, because of the *Coleman* order, CDCR must construct the proposed facility at CMF. CDCR cannot change the location of the proposed facility, decrease its capacity, limit the space required to provide appropriate mental health services to each inmate-patient, change the security level, modify the necessary staffing levels, or otherwise make major changes in the basic configuration of the proposed project without defying a federal court order. Furthermore, existing CDCR design policies mandate certain fencing, lighting, parking, landscaping and other security arrangements, while the California Building Code requires certain building standards (particularly in light of the potential risk of seismic activity). For all of these reasons, CDCR has, in fact, very little discretion about the manner in which the proposed ICF project will be constructed or operated.

Even given the substantial limits on CDCR's discretion, CDCR believes that it best serves the public by describing its proposal for the ICF project and requesting public comments on the potential environmental impacts of that project. Accordingly, CDCR has completed this Initial Study/Proposed Mitigated Negative Declaration (IS/Proposed MND). This document shows that the proposed ICF project will not have a significant adverse impact on the environment with the inclusion of proposed mitigation measures. CDCR is circulating the IS/Proposed MND for public comment to solicit the public's views on how CDCR can meet its obligation to provide adequate health care to inmates at CMF while minimizing the project's impacts on the environment.

As lead agency for the proposed ICF project, CDCR acknowledges that a potential future and wholly separate medical care project may also be proposed at CMF by the California Prison Healthcare Receivership Corporation (CPR). The CPR was established in 2005 by the U.S. District Court for the Northern District of California, which placed California's prison health care system into receivership in response to the April 2001 lawsuit in the case of *Plata v. Schwarzenegger*, which alleged inadequate medical care for prison inmates, as well as subsequent cases (including *Coleman*). The CPR is a non-profit organization established to bring California's prison health care

system into compliance with U.S. Constitutional requirements, and acts in the role of a state lead agency under the provisions of CEQA for medical healthcare correctional facilities. Serving in the role of a lead agency, the CPR has an independent task of determining the location and scope of facilities needed to meet *Plata* healthcare needs. Accordingly, CPR is responsible for the CEQA process related to the planning and construction of a separate healthcare correctional facility at CMF, if CPR decides to locate a facility at CMF. It is anticipated that if CPR does undertake the planning of an expansion of the medical care facilities at this prison that the proposed CDCR ICF project would be evaluated in the cumulative impact analysis of their CEQA document.

This document does not attempt to evaluate the potential cumulative impacts of the CPR and CDCR projects at CMF for at least three reasons. First, there are numerous and diverse ways that CPR could choose to construct its proposed facility. Until CPR makes a final decision on the footprint and location of the proposed facility, it would be speculative for CDCR to attempt to evaluate the cumulative impacts of the two projects, if any. Second, the CPR project has substantial uncertainty as it is not funded and a potential funding source has not been secured. Consequently, incorporating the CPR project, at this point, would prejudice the analysis of significant effects based on a project (CPR) that is so uncertain. Third, and most important, the *Coleman* court has determined that California is failing to provide adequate mental health care to inmate-patients. It is in the public interest, and has been ordered by the federal court, that CDCR provide constitutionally adequate care at the earliest possible date. Nothing in CEQA forsakes these obligations.

1.2 WHY THIS DOCUMENT?

This document has been prepared in accordance with CEQA (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). An initial study (IS) is prepared by a lead agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines Section 15063[a]), and thus to determine the appropriate environmental document. In accordance with State CEQA Guidelines Section 15070, a “public agency shall prepare...a proposed negative declaration or mitigated negative declaration...when: (a) The Initial Study shows that there is no substantial evidence...that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions would reduce potentially significant effects to a less-than-significant level.” In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the proposed project would not have a significant effect on the environment and, therefore, does not require the preparation of an Environmental Impact Report (EIR).

As described in this IS (Chapter 3), the proposed project would result in certain significant environmental impacts, but those impacts would be reduced to a less-than-significant level by implementation of revisions (in the form of mitigation measures) that have been agreed to and will be implemented by CDCR. Therefore, an IS/Proposed MND is the appropriate document for compliance with the requirements of CEQA. This IS/Proposed MND conforms to these requirements and to the content requirements of State CEQA Guidelines Section 15071.

Traffic impact, environmental site assessment, and geotechnical studies were prepared for the proposed project and are available for public review. The October 2008 *Traffic Impact Analysis for the California Medical Facility 64-Bed Intermediate Care Facility Project*, February 2008 *Geotechnical Investigation Report for the 64-Bed Intermediate Care Facility at California Medical Facility, Vacaville, California*, and May 2007 *Limited Phase I Environmental Site Assessment Proposed CDCR CMF 64-Bed IS-MND* are available for review at:

California Department of Corrections and Rehabilitation
Facilities Planning, Construction, and Management Division
Environmental Planning Section
9838 Old Placerville Road, Suite B
Sacramento, CA 95827
Phone: (916) 255-3013

Under CEQA, the lead agency is the public agency with primary responsibility over approval of the proposed project. The CDCR is the lead agency for the proposed court-mandated 64-bed Intermediate Care Facility. CDCR has directed the preparation of an analysis that complies with CEQA. At the direction of the CDCR, EDAW, Inc., environmental consultants, has prepared this document. The purpose of this document is to present to decision-makers and the public the environmental consequences of implementing the proposed project. This disclosure document is being made available to the public for review and comment. This IS/Proposed MND is available for a 30-day public review period from November 13 to December 13, 2008.

Comments on the IS/Proposed MND should be addressed to:

John Sharp
Environmental Planning Section
Facilities Planning, Construction, and Management Division
California Department of Corrections and Rehabilitation
9838 Old Placerville Road, Suite B
Sacramento, CA 95827
(916) 255-3013 Phone
(916) 255-3030 Fax

E-mail comments may be addressed to John.Sharp@cdcr.ca.gov.

If you have questions regarding the IS/Proposed MND, please call John Sharp at (916) 255-3013. If you wish to send written comments (including via e-mail), they must be postmarked by December 13, 2008.

After comments are received from the public and reviewing agencies, CDCR may (1) adopt the MND and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the project. If the project is approved and funded, CDCR could design and construct all or part of the project.

The IS/Proposed MND is available for review online at:
http://www.cdcr.ca.gov/Reports_Research/Environmental/index.html

A copy of this IS/Proposed MND is also available for public review at the following locations:

1. Solano County Resource Management Department
Planning Services Division
675 Texas Street, Suite 5500
Fairfield, CA 94533
2. City of Vacaville
Community Development Department
650 Merchant Street
Vacaville, CA 95688
3. City of Fairfield
Department of Planning and Development
1000 Webster Street
Fairfield, CA 94533
4. Suisun City Community Development Department
701 Civic Center Boulevard
Suisun City, CA 94585

5. Vacaville Public Library – Cultural Center
1020 Ulatis Drive
Vacaville, CA 95687
6. Fairfield Civic Center Library
1150 Kentucky Street
Fairfield, CA 94533

1.3 SUMMARY OF FINDINGS

Chapter 3 of this document contains the analysis and discussion of potential environmental impacts of the proposed project.

Based on the issues evaluated in that chapter, it was determined that the proposed project would have no impact related to the following issue areas:

- ▶ agricultural resources,
- ▶ land use and planning, and
- ▶ mineral resources.

Impacts of the proposed project were determined to be less-than-significant for the following issue areas:

- ▶ aesthetics,
- ▶ hazards and hazardous materials,
- ▶ hydrology and water quality,
- ▶ population and housing,
- ▶ public services,
- ▶ recreation,
- ▶ transportation/traffic, and
- ▶ utilities and service systems.

Impacts of the proposed project to the following issue areas would be less than significant with incorporation of the mitigation measures described in Chapter 4:

- ▶ air quality,
- ▶ biological resources,
- ▶ cultural resources,
- ▶ geology and soils, and
- ▶ noise.

CDCR has agreed to adopt each of the mitigation measures described in Chapter 4. A Mitigation Monitoring and Reporting Plan will be prepared and will include those mitigation measures that would reduce environmental impacts to the resource areas stated above.

1.4 ENVIRONMENTAL PERMITS

The proposed project may require the following permits and would be required to comply with applicable federal and state regulations:

- ▶ Erosion and surface water quality—Regional Water Quality Control Board (RWQCB) National Pollutant Discharge Elimination System (NPDES) permit (for construction), Storm Water Pollution Prevention Plan (SWPPP), and associated Best Management Practices (BMPs).
- ▶ Air quality—Yolo-Solano Air Quality Management District permit to operate, authority to construct, and compliance with related regulations.

1.5 DOCUMENT ORGANIZATION

This IS/Proposed MND is organized as follows:

Chapter 1: Introduction. This chapter provides an introduction to the environmental review process. It describes the purpose and organization of this document as well as presents a summary of findings.

Chapter 2: Project Description and Background. This chapter describes the purpose of and need for the proposed project, identifies project objectives, and provides a detailed description of the proposed project.

Chapter 3: Environmental Checklist. This chapter presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines if each of a range of impacts would result in no impact, a less-than-significant impact, a less-than-significant impact with mitigation incorporated, or a potentially significant impact. If any impacts were determined to be potentially significant, an EIR would be required. For this project, however, mitigation measures have been incorporated where needed to reduce all potentially significant impacts to a less-than-significant level.

Chapter 4: Summary of Mitigation Measures. This chapter summarizes the mitigation measures incorporated into the project and agreed to by CDCR as a result of the IS/Proposed MND.

Chapter 5: References. This chapter lists the references used in preparation of this IS/Proposed MND.

Chapter 6: List of Preparers. This chapter identifies report preparers.

Chapter 7: IS/Proposed MND Distribution List. This chapter provides the names and addresses of all parties who received copies of this document.

2 PROJECT DESCRIPTION AND BACKGROUND

2.1 INTRODUCTION

The court case *Coleman v. Wilson* found CDCR in violation of the Eighth Amendment to the United States Constitution with respect to the provision of constitutionally adequate mental health care to inmates incarcerated in CDCR prisons. The proposed project at the California Medical Facility (CMF) is inclusive of the court-approved plan that is intended to bring CDCR into compliance with the federal court order by calling for CDCR to construct and operate new mental health facilities at several prison sites, including CMF.

The proposed ICF project would provide up to 64 inpatient mental health beds, as well as treatment, support services, and administrative space. The ICF would be located generally within the secured perimeter of CMF, although the perimeter would be expanded to accommodate the project. The prison's existing lethal electrified fence line and perimeter road would be relocated to encompass the project site, and project improvements would include the extension of existing water, sewer, natural gas, and electrical infrastructure to the new facility. High-mast lighting would be constructed to provide required lighting. In addition, 1,437 flush control valves are being installed within CMF to reduce water use at the existing CMF facilities. The proposed facility would require approximately 163 new staff.

The CMF was constructed in 1955 to provide a centrally located medical institution for the health care needs of the male felon population in California's prisons. CMF houses a general acute care hospital; a correctional treatment center (CTC); a licensed elderly care unit; inpatient and outpatient psychiatric facilities; a hospice unit for terminally ill inmates; housing and treatment for inmates identified with AIDS/HIV; and general population and other special inmate housing. In addition, the California Department of Mental Health (DMH) operates a licensed, acute care psychiatric hospital (known as the Vacaville Psychiatric Program [VPP]) within the CMF. The VPP currently provides acute and intermediate inpatient mental health treatment for 300 mentally ill inmate patients.

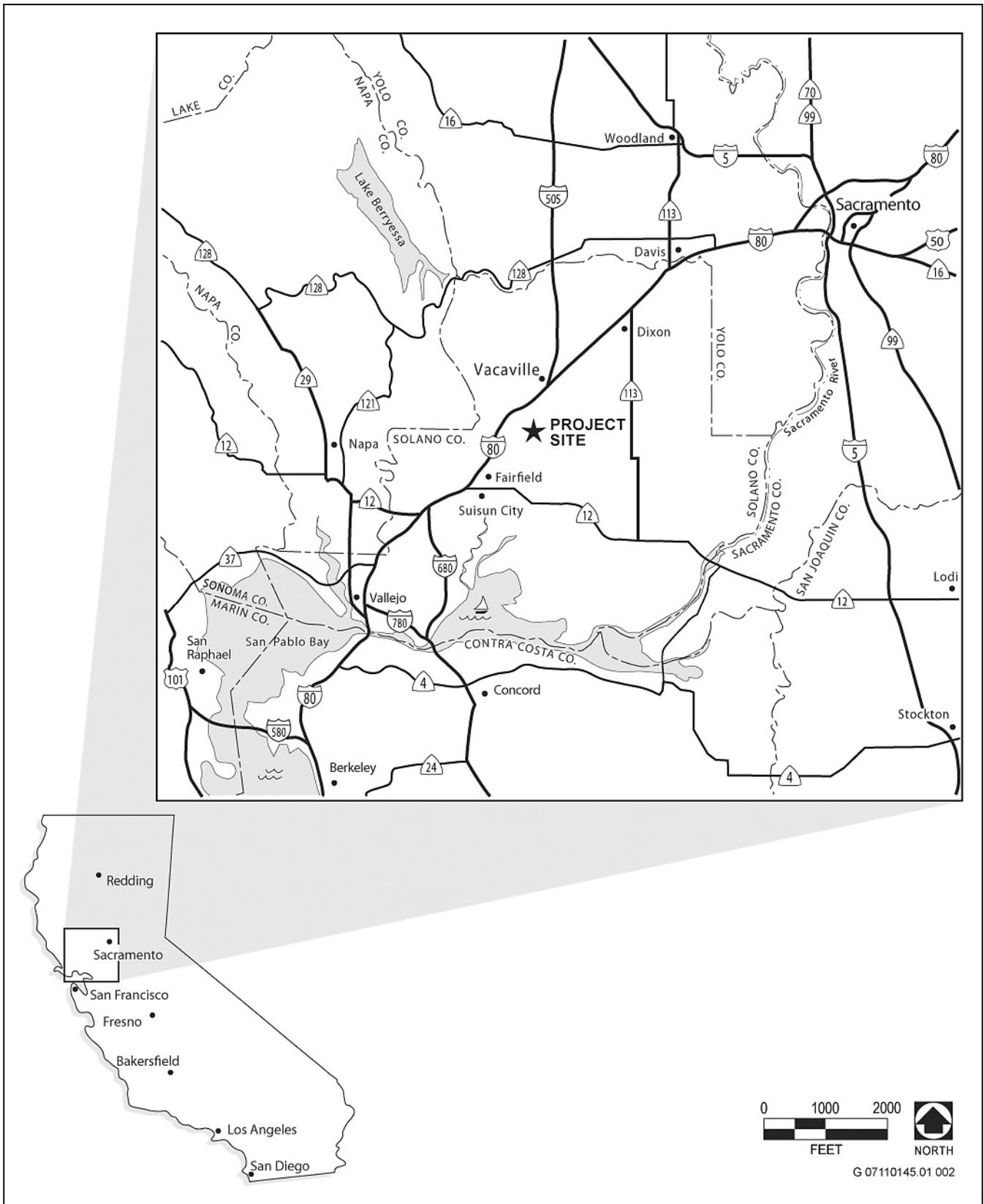
2.2 PROJECT LOCATION

The CMF is located on state-owned land in the City of Vacaville, Solano County, California (Exhibits 2-1 and 2-2). The 64-bed ICF project site is located on the grounds of the 317-acre CMF (Exhibits 2-2 and 2-3). Solano County is located northeast of the San Francisco Bay Area and southwest of Sacramento. The CMF is bounded by Peabody Road to the east and California Drive to the north. Interstate 80, located to the north (Exhibit 2-2), provides regional access to the project area. Local access to the CMF is provided by either California Drive or Peabody Road.

2.3 NEED FOR THE PROPOSED PROJECT

CDCR is required to construct the proposed project to comply with a federal court order which calls for the construction of new mental health facilities to be operated by CDCR at several prison sites, including CMF.

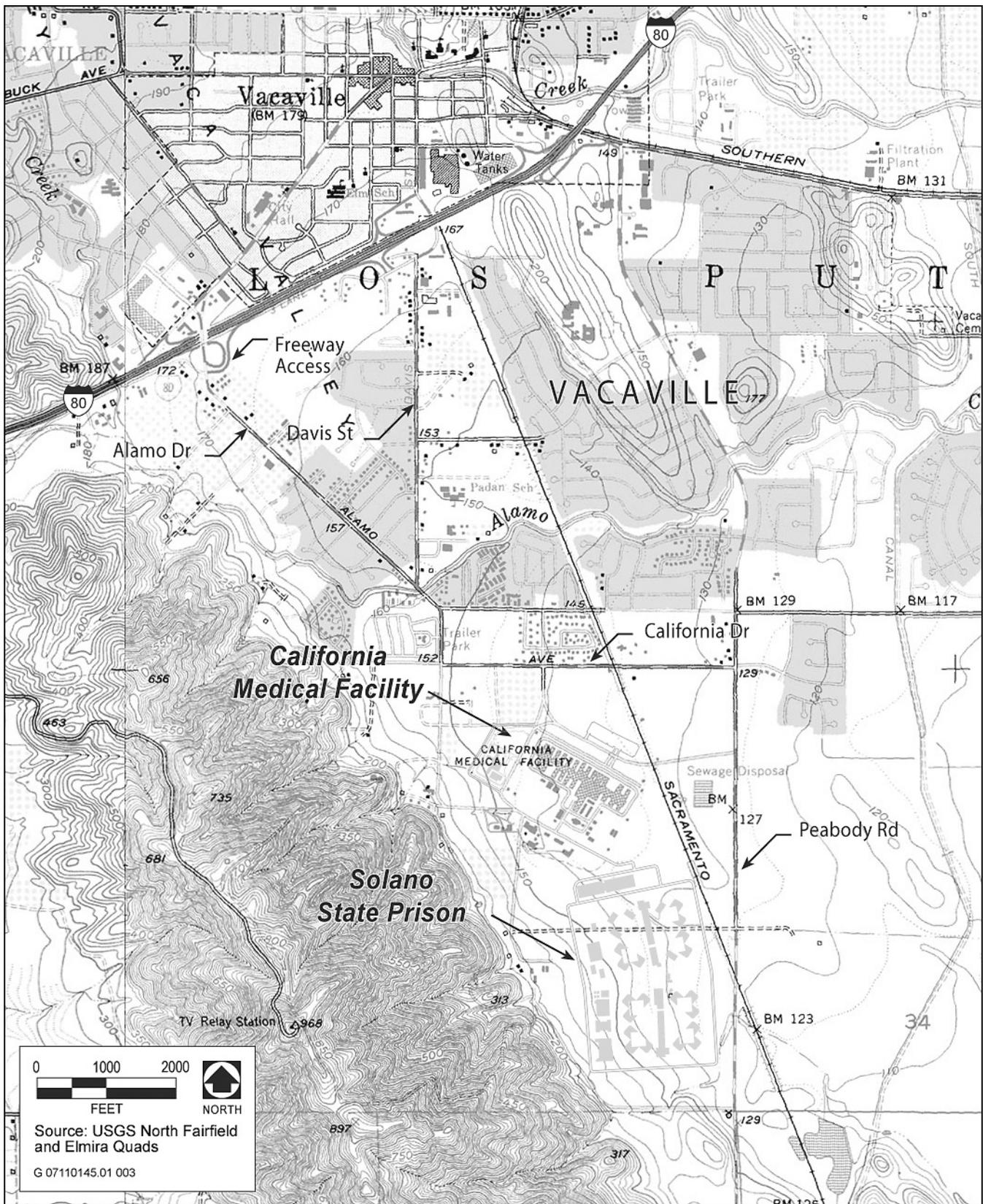
A series of court cases since the early 1990s contended CDCR is in violation of the Eighth Amendment to the United States Constitution by not providing constitutionally adequate health care (including mental health care) to prison inmates. These lawsuits resulted in the federal courts ordering CDCR to develop a plan to remedy the deficiencies. The program subsequently developed by CDCR to address mental health care needs is referred to as the Mental Health Services Delivery System (MHSDS). One component or level of care is "Inpatient Intermediate Care," which requires a licensed facility to treat and house patients for up to 9 months.



Source: EDAW 2006

Regional Location

Exhibit 2-1



Source: EDAW 2006

Site Vicinity

Exhibit 2-2



Source: Date Compiled by EDAW in 2008

Proposed Project Elements

Exhibit 2-3

In March, 2006, the *Coleman* court ordered CDCR to develop a plan to address the need for acute and intermediate inpatient beds for seriously ill male and female inmates. In April, 2006, as part of the required plan, CDCR proposed to construct 64 intermediate care beds at CMF. Because these beds would serve high custody security levels, all of these beds would be in single cells and would be operated for male inmates only. The anticipated completion date was June 2011. Later that year, in December 2006, CDCR updated its plan for the care of mentally-ill inmates. The December 2006 plan clarified that the 64 beds at CMF would be designed for Level IV high custody inmate-patients, stated that planning for the project was underway, and the project would continue to be completed in June 2011. On March 1, 2007, the *Coleman* court considered the December 2006 report and ordered the construction of the 64-bed intermediate care facility at CMF.

In the meantime, acting pursuant to the *Coleman* court's March 2006 order, CDCR requested that the California Legislature include a line item for the planning of the 64 bed intermediate care facility at CMF in the State of California's 2006/07 budget. The California Legislature responded by including in the 2006/07 Budget a line item that would fund preliminary plans for the proposed ICF project.

Thus, as a result of the *Coleman* court's order, CDCR is obliged to construct the proposed ICF project and the Legislature has appropriated funds for preliminary plans of the proposed ICF project.

2.4 PROJECT OBJECTIVES

The CMF plays an important role within CDCR by:

- ▶ providing a centrally located medical and psychiatric institution for the health care needs of the male felon population in California's prisons;
- ▶ providing work, academic education, vocational training, and specialized treatment for inmate populations; and
- ▶ providing community services, youth awareness programs, and drug and addiction treatment programs.

The proposed project is intended to achieve the following primary objectives:

- ▶ attain compliance with the federal court order to provide constitutionally adequate mental health care;
- ▶ provide a facility that is sufficiently sized to accommodate additional inpatient mental health care needs;
- ▶ ensure that safety and security criteria are met and can be efficiently executed, including considerations for sight lines and ambulance access (for transporting inmates who require hospital care offsite); and
- ▶ upgrade infrastructure capacity to meet current and projected needs.

2.5 DESCRIPTION OF PROPOSED FACILITIES

The proposed ICF project would provide up to 64 inpatient mental health beds, as well as treatment, support services, and administrative space. The prison's existing lethal electrified fence line and perimeter road would be moved to encompass the project site. In addition, the project includes construction of a parking lot and high-mast lighting. As of September 30, 2007, the CMF housed 3,047 inmates, with a maximum inmate capacity of 3,279. The proposed project would add 64 beds, increasing the total CMF inmate population to approximately 3,111. Proposed project facilities and components are described below.

2.5.1 FACILITIES AND OPERATIONS

The Vacaville Psychiatric Program (VPP) would be expanded to include an additional 64 intermediate care inpatient beds, bringing the total number of VPP inpatient beds to 364. The proposed 44,913-square-foot, one-story ICF would provide up to 64 inpatient mental health beds, as well as treatment, support services, and administration space. The new ICF would be operated by the DMH as part of the VPP, and would become licensed under Title 22, Chapter 12 as a 64-bed expansion to the existing CTC license issued to the CMF.

The 64-bed ICF would be constructed on state property in an abandoned orchard on the northwestern side of the CMF (Exhibits 2-2 and 2-3). The facility would include a small outdoor exercise yard. The existing lethal electrified fence line and perimeter security road would be relocated (i.e., “bulbed out”) to encompass the project site (Exhibits 2-3, 2-4, and 2-5). The area of disturbance for the ICF and associated project components would total approximately 9 acres. The project includes the addition of approximately 200 parking spaces. The proposed parking area would be constructed immediately to the northwest of the existing main CMF parking lot (Exhibits 2-3 and 2-4).

The ICF would be constructed of concrete, masonry and steel and would be designed to be consistent with the existing architectural style of the institution (Exhibit 2-5). The project would include construction of building pads, utility connections, and minor site grading. In addition, the project would include one 500 kilowatt (kW) diesel fired emergency generator.

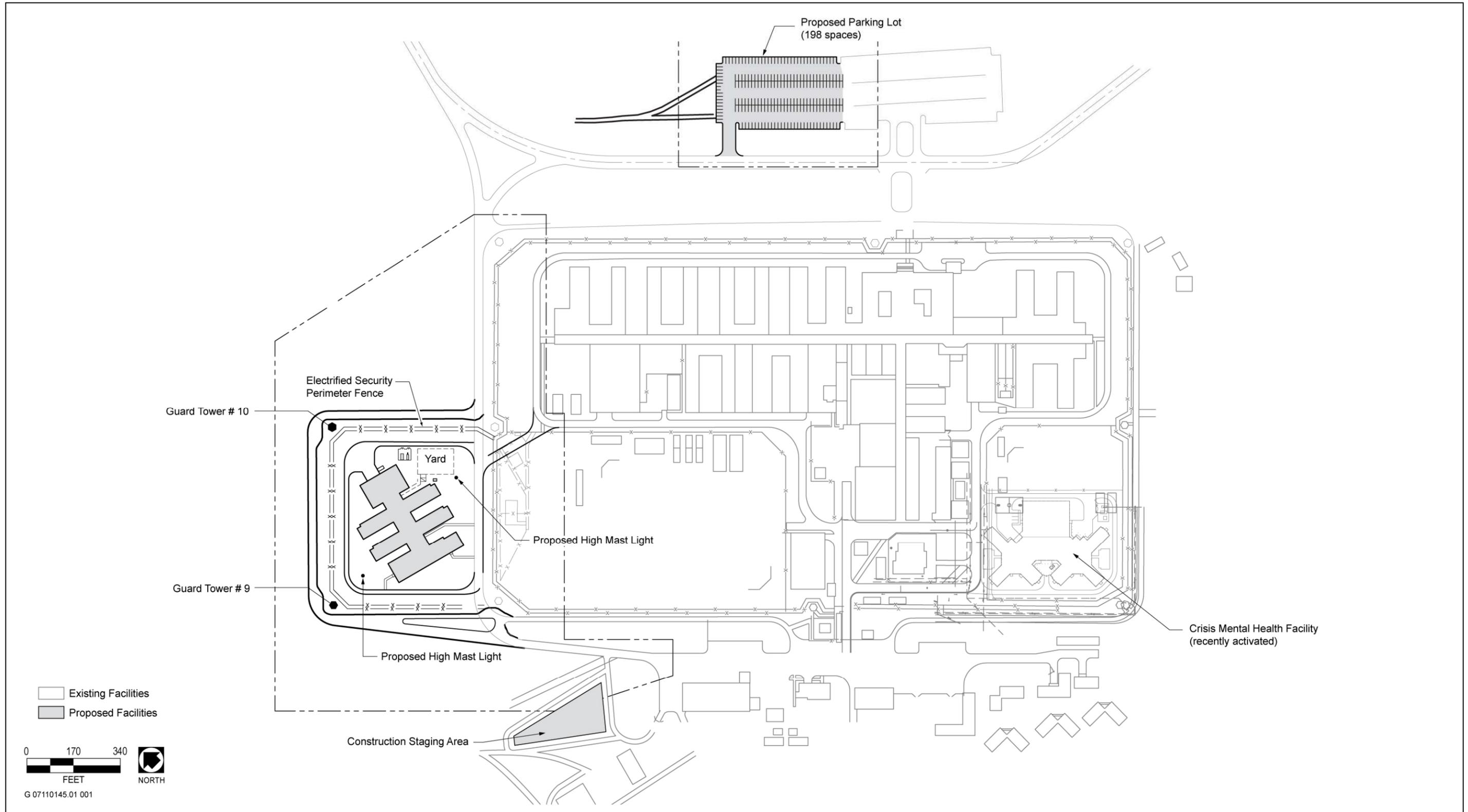
HIGH-MAST LIGHTING

High-mast lighting with glare cut-off shields, approximately 100 feet tall, would be constructed within the ICF complex (Exhibit 2-4). These lights would allow CDCR to provide services to inmates during the evening hours (up to 10:00 p.m.) while maintaining adequate security for the safety of staff and inmates. The proposed project involves installation of up to three high-mast lights, each providing twelve 1,000-watt high pressure sodium luminaries per pole. The lights would be illuminated at full power during the evening and reduced to half power and illumination after 10:00 p.m. when outdoor program activities are finished for the day. Light levels at each high mast light would be based on photometric (i.e., light intensity) calculations and CDCR design guidelines.

PERIMETER SECURITY

Perimeter security fencing for the ICF would involve expansion of the institution’s existing secure perimeter at the proposed location of the ICF (Exhibits 2-3, 2-4, and 2-5). The current perimeter security fencing at CMF consists of double cyclone fences topped with barbed tape and a lethal electrified fence (i.e., an “e-fence”) located between the double fences. The expanded fenceline would require the construction of two additional guard towers (each approximately 34 feet tall) as well as a vehicle sallyport (i.e., entry point) which would be constructed along the east fenceline of the facility (Exhibits 2-4 and 2-5).

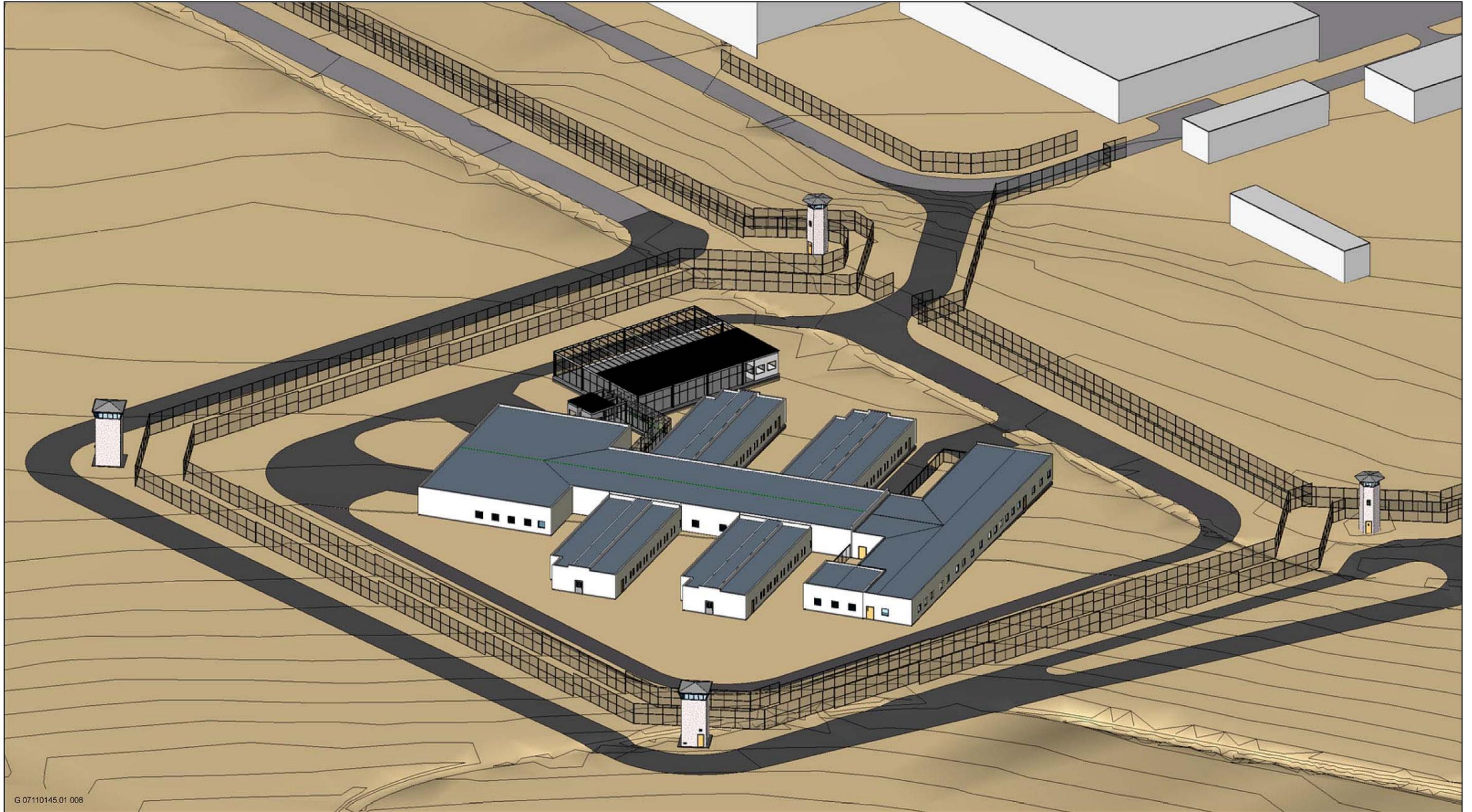
Alarms and electrical operation of the electrified fence would be divided into sections, allowing response to a specific location in the event of contact with the fence. If contact occurs, only the affected section would need to be shut off for the responding officers, allowing the remainder of the perimeter to remain electrified and secure. An internal alarm would sound when an object receives an electric charge by simultaneously contacting two wires; one wire and a detection ring or grounding post, or one wire and an electrical ground. The alarm would sound at the central control room and the pedestrian and vehicle entrance towers. A voice alarm signal would be transmitted to the watch commander and correctional officers on 24-hour-a-day roving patrol. Built-in safeguards would minimize or eliminate risk of injury to prison staff or visitors.



Source: Date Compiled by EDAW in 2008

Proposed Project Site Plan

Exhibit 2-4



G 07110145.01 008

Source: Nacht & Lewis Architects 2008

Proposed 64-Bed ICF Rendering

Exhibit 2-5

2.5.2 UTILITIES AND INFRASTRUCTURE

All required utilities, including water, sanitary sewer, storm drain, electrical, communications, and security electronics, are located in the general area of the proposed project site. In addition, 1,437 flush control valves are being installed to reduce per-capita water use at the prison.

POTABLE WATER

CDCR operates two prison facilities in the City of Vacaville: CMF and California State Prison Solano (CSP Solano). The facilities are adjacent to each other (Exhibit 2-2) and are served by the same water system, which is operated and maintained by CSP Solano staff. Domestic water is supplied to both facilities from the Solano Irrigation District's Putah South Canal. The raw water is treated at the CSP Solano Water Treatment Plant (WTP) and stored in holding tanks. CSP Solano also purchases water from the City of Vacaville for supplemental use or in case of emergency at both facilities. The City of Vacaville's water supply consists of two surface water sources (Lake Berryessa and the Sacramento Delta) and groundwater from twelve deep underground wells. A blend of groundwater from shallow CDCR wells and decanted CSP Solano WTP backwash provides water for landscape irrigation at the prisons.

WASTEWATER

Wastewater treatment is provided through the City of Vacaville's Easterly Wastewater Treatment Plant. The plant is located east of Vacaville in Elmira, California, and is capable of treating an average dry weather flow (ADWF) of 15 million gallons per day (mgd). Currently, the plant treats an average of 7.8 mgd. The total sanitary sewer capacity for CMF is 670,000 gallons per day.

OTHER UTILITIES AND SERVICES

Electricity is provided by Pacific Gas & Electric Company (PG&E) and the Western Area Power Authority (WAPA). Natural Gas is provided by PG&E. CMF employs Vacaville Sanitary Service to transport wastes to the Hay Road Landfill in Vacaville.

2.5.3 FACILITY STAFFING

The proposed facility would operate 24 hours a day, year-round, with three 8-hour shifts (watches). Current and projected future employment at the new facility is listed in Table 2-1. Implementation of the proposed project would result in an increase of approximately 163 employees at the 64-bed facility. New employees would include correctional officers, health care, administrative, and other types of support staff.

2.5.4 VISITATION

Visitors meeting with inmates housed at the ICF would be identified, screened, and searched at the visitor processing center at the existing CMF gate and then transported to the ICF. Based on current visitation of inmates at CMF, approximately 5 visitors (0.075 visitors per inmate multiplied by 64 inmates) would be expected at the ICF on each weekend day (see below). All staff and visitors entering the ICF would be processed through the visitor/staff processing building. Visitors would be identified and searched by CDCR staff prior to their visit.

All inmate visiting at the ICF would be scheduled with appropriate staff based on current policy. General and attorney visits would be conducted in accordance with CDCR's visitor policies and procedures. Open visiting, contact visiting booths, or non-contact booths would be provided based on inmate classification requirements. Visiting days at CMF are Saturdays, Sundays, and Fridays. Visiting hours are from 8:00 a.m. to 8:30 p.m. Saturdays and Sundays, and 12:30 p.m. to 7:30 p.m. on Fridays. Based on recent average visitor counts, approximately 0.02 visitors per inmate would be expected on Fridays (70 visitors divided by 3,047 inmates), 0.08

visitors per inmate would be expected on Saturdays (230 visitors divided by 3,047 inmates), and 0.07 visitors per inmate on Sundays (210 visitors divided by 3,047 inmates).

Table 2-1 CMF Current And Projected Future Prison Employment Levels			
Shift	Number of Employees at Existing Facility	Projected Employees for Proposed 64-bed ICF	Total Projected Future Employees (Existing plus Proposed Project)
First watch 10:00 p.m. to 6:00 a.m.	176	19	195
Second watch 6:00 a.m. to 2:00 p.m.	696	66	762
Third watch 2:00 p.m. to 10:00 p.m.	561	36	597
Other staff			
7:00 a.m. to 4:00 p.m.	387	21	408
8:00 a.m. to 5:00 p.m.	387	21	408
Total - all watches	2,207	163	2,370
Source: CDCR 2008			

2.5.5 EMERGENCY CONTINGENCY PLANS

The CMF has an Emergency Operations Plan tailored to the specific site needs of the institution in compliance with the California Emergency Services Act of 1970. The Plan specifies measures to be implemented within the facility during certain types of emergencies such as fire, flood, earthquake, war, or civil disturbance. Employees are trained in the use of emergency equipment and medical aid for these situations. The proposed facility will operate under the terms of the existing CMF Emergency Operations Plan. The Vacaville Fire Department currently provides fire protection, Emergency Medical Services (EMS) and ambulance transport service to the CMF. The existing Emergency Operations Plan would be updated to incorporate elements of the proposed project.

2.6 PROJECT CONSTRUCTION

CDCR anticipates that construction of the proposed project would begin in August 2009, with an estimated completion date of October 2011. Earth-moving equipment, including backhoes, front-end loaders, and dump trucks, would be used during excavation for utilities and building foundations. Concrete trucks and pumpers would be on-site during concrete pours for foundations and slabs; fork lifts would be used during erection of walls and delivery of materials from storage areas; and cranes would be operated for installation of precast panels, structural steel framing members, metal decking, and mechanical systems on the roof. Anywhere from 5 to 40 on-site workers would be involved in project construction at any given time. Construction work shifts would generally be between 6 a.m. and 4 p.m. Monday through Friday.

A construction staging area would be located on an approximately 1 acre developed area south of the proposed project site on state-owned land (Exhibits 2-3 and 2-4). The staging area would be used for construction vehicle, equipment, and materials storage. A small amount of fuels, lubricants, and solvents may be stored in this area. Parking for construction workers would be provided at the construction staging area and in the existing CMF visitor parking lot.

2.7 ENVIRONMENTAL PROTECTION

This section describes features of the proposed project that CDCR has adopted as part of the project design and construction process to reduce potential environmental impacts. In addition to these features, CDCR would adopt and implement the mitigation measures identified in Chapter 4 and incorporate them into the project design.

2.7.1 WATER QUALITY PROTECTION

Erosion is the process of soil particles being displaced and transported by wind or water. Project construction activities would disturb soils and vegetation, exposing the project site to possible erosion. CDCR or its contractor will retain a California registered civil engineer to prepare a Storm Water Pollution Prevention Plan (SWPPP) and any other necessary site-specific Waste Discharge Requirements (WDRs) or waivers under the Porter-Cologne Act. The SWPPP and other appropriate plans will identify and specify:

- ▶ the use of erosion and sediment-control best management practices (BMPs), including construction techniques that will reduce the potential for runoff as well as other measures to be implemented during construction;
- ▶ the means of waste disposal;
- ▶ the implementation of approved local plans, non-stormwater-management controls, permanent post-construction BMPs, and inspection and maintenance responsibilities;
- ▶ the pollutants that are likely to be used during construction that could be present in stormwater drainage and non-stormwater discharges, and other types of materials used for equipment operation;
- ▶ spill prevention and contingency measures, including measures to prevent or clean up spills of hazardous waste and of hazardous materials used for equipment operation, and emergency procedures for responding to spills;
- ▶ personnel training requirements and procedures that will be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP; and
- ▶ the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP.

All construction contractors will retain a copy of the approved SWPPP on the construction site.

In addition, CDCR will design and implement a drainage plan prepared by a registered civil engineer as part of the proposed project. The plan will be designed to safely retain, detain, and/or convey stormwater runoff through the project site. The drainage plan will include an accurate description of existing runoff and post-project runoff scenarios that take into account increases in impervious surfaces and other changes in potential runoff characteristics and any potential on-site upgrades that would be necessary to ensure adequate stormwater storage and to ensure conveyance does not increase above current levels. Such improvements would be designed and constructed such that adjacent or downstream properties would not be exposed to an increased potential for flooding.

Proposed project construction would disturb roughly 10 acres including the approximately one acre construction staging area, intermediate care medical facility, security fence and perimeter road, guard towers, and parking area. Consequently, implementation of the proposed project would trigger state and federal regulations that provide for protecting the quality of storm water discharge. The grading and erosion control plan would be consistent with the National Pollutant Discharge Elimination System (NPDES) permit required by the Central Valley Regional Water Quality Control Board (RWQCB). The plan will include the location, implementation schedule, and maintenance schedule of all erosion and sediment control measures, a description of measures designed to control dust and

stabilize the construction site road and entrance, and a description of the location and methods for storage and disposal of construction materials. Erosion and sediment control measures could include the use of detention basins, berms, swales, wattles, and silt fencing. The plan will include a stormwater pollution prevention plan (SWPPP), which would identify the activities that may cause pollutant discharge (including sediment) during storms and BMPs that would be employed to control pollutant discharge.

The SWPPP will identify construction techniques to reduce the potential for runoff, including minimizing site disturbance, controlling water flow over construction sites, stabilizing bare soil, ensuring proper site cleanup, and establishing permanent vegetative cover to reduce erosion by slowing runoff velocities, trapping sediment, and enhancing filtration and transpiration. In addition, the SWPPP would specify the erosion and sedimentation control measures to be implemented to minimize discharge of sediment into nearby drainage conveyances, such as silt fences, trench plugs, terraces, water bars, seeding and mulching, staked straw bales or wattles, sediment/silt basins and traps, geofabric, sandbag dikes, and temporary vegetation. To further control erosion and runoff, drainage swales, ditches, and earth dikes could convey surface runoff down sloping land, intercept and divert runoff to a watercourse or channel, prevent sheet flow over sloped surfaces, prevent runoff accumulation at the base of a grade, and avoid flood damage along roadways and facility infrastructure. The SWPPP would also specify spill prevention countermeasures, identify the types of materials used for equipment operation (including vehicle fluids such as fuel and hydraulic fluids), and identify measures to prevent or materials available to clean up hazardous material and waste spills. Emergency procedures for responding to spills would also be identified in the SWPPP.

2.7.2 EARTHQUAKE-RESISTANT DESIGN

CDCR is responsible for preparing a final geotechnical subsurface investigation report for the proposed facility before the approval of grading plans for all project phases. The geotechnical report will utilize strategic soil borings that provide information on soil strata at the project site, including the depth at which native soils are encountered. This report will include specific recommendations for the following project elements:

- ▶ site preparation and earthwork;
- ▶ appropriate sources and types of fill;
- ▶ potential need for soil amendments;
- ▶ structural foundations, including retaining wall design;
- ▶ grading practices;
- ▶ erosion/winterization;
- ▶ special geotechnical issues discovered on-site (e.g., groundwater and expansive/unstable soils);
- ▶ slope stability; and
- ▶ road, pavement, and parking areas.

The geotechnical investigation will include subsurface testing of soil and groundwater conditions and determine appropriate foundation designs that are consistent with the California Building Code (CBC). If the soils report indicates the presence of critically expansive soils or other soil problems that would lead to structural defect if not corrected, additional investigations may be required before design is completed. Structures constructed at the CMF would comply with the CBC.

3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION		
1. Project Title:	Intermediate Care Facility Project, California Medical Facility	
2. Lead Agency Name and Address:	California Department of Corrections and Rehabilitation 9838 Old Placerville Road, Suite B, Sacramento, CA 95827	
3. Contact Person and Phone Number:	John Sharp, Senior Environmental Planner, (916) 255-3013	
4. Project Location:	1600 California Drive, Vacaville, CA 94538	
5. Project Sponsor's Name and Address:	California Department of Corrections and Rehabilitation 9838 Old Placerville Road, Suite B, Sacramento, CA 94283	
6. General Plan Designation:	Public/Institutional	
7. Zoning:	Public/Institutional	
8. Description of Project: See Chapter 2, "Project Description and Background"		
9. Surrounding Land Uses and Setting:	See Chapter 2, "Project Description and Background"	
10. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)	Regional Water Quality Control Board (NPDES permit for construction), Yolo-Solano Air Quality Management District (permit to operate and authority to construct)	
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:		
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.		
<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture Resources	<input type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology / Soils
<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Hydrology / Water Quality	<input type="checkbox"/> Land Use / Planning
<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise	<input type="checkbox"/> Population / Housing
<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation	<input type="checkbox"/> Transportation / Traffic
<input type="checkbox"/> Utilities / Service Systems	<input type="checkbox"/> Mandatory Findings of Significance	<input checked="" type="checkbox"/> None with Mitigation

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

I find that although the proposed project **COULD** have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

I find that the proposed project **MAY** have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Nancy MacKenzie
Signature

11/10/08
Date

Nancy MacKenzie
Printed Name

Supervising Environmental Planner
Title

California Department of Corrections and Rehabilitation
Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less-than-Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
the significance criteria or threshold, if any, used to evaluate each question; and
the mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

High resolution visual simulations of the proposed 64-bed ICF were prepared for two representative viewpoints in the surrounding vicinity. A portion of the following discussion is based on that analysis.

ENVIRONMENTAL SETTING

Regional Setting

The California Medical Facility (CMF) is located in the City of Vacaville, Solano County, California (Exhibits 2-1 and 2-2). Solano County is located northeast of the San Francisco Bay Area and southwest of Sacramento. The project area is located visually against the eastern edge of the Coastal Range, which extends prominently to the north with farmland of the Capay Valley within the region to its east. The wetlands and tributaries of the Sacramento-San Joaquin Delta (Delta) extend east and southeast of the project area. Much of the area between the CMF and the Delta is farmland to the immediate northeast and east. The Delta empties into San Pablo Bay 24 miles to the southwest with several San Francisco Bay Area cities surrounding the Interstate 80 corridor, including the City of Fairfield, which is approximately 2 ½ miles southwest of the project site. Mount Diablo is within 30 miles to the south, and Travis Air Force Base is within 5 miles south of the project site.

Visual Setting

The 64-bed ICF project site is located on the grounds of the 317-acre CMF (Exhibit 2-3). The CMF is bounded by Peabody Road to the east and California Drive to the north. Regional access to the area is provided by Interstate 80 to the north, and local access to the CMF is provided by either California Drive or Peabody Road.

Views of the ICF site would be available from a limited number of locations due to view blockage; the area surrounding the site is largely developed and views are blocked to a degree by existing prison buildings, homes, and vegetation.

Representative viewpoints were selected to characterize the visual changes that would occur with implementation of the project as seen from the most sensitive viewpoints. Viewpoints were selected where relatively direct (i.e., unobstructed) publicly accessible views of the site are available. Based on a field-reconnaissance survey of potential representative viewpoints, two viewpoints were selected for detailed consideration. The viewpoints

include a view from Keating Park, which is the closest direct view of the site, and a view from a residence on California Drive, which provides the most unobstructed viewpoint from any roadway passing near the site. Photographs of existing site conditions were taken from each of these two viewpoints, and these photographs were then used to prepare photo simulations of the proposed project. The City of Vacaville (City) has expressed concern that the proposed ICF would adversely affect views from Al Patch Park and the planned Montessa Subdivision (Kuhn, pers. comm., 2007). Views from these locations are also considered below.

The following describes the existing visual setting of the project site from the Keating Park, California Drive, Al Patch Park, and the planned Montessa Subdivision viewpoints. Exhibit 3-1 identifies the location of the viewpoints that were considered in this analysis.

Keating Park Viewshed

Exhibit 3-2a, View 3, depicts the existing views of the ICF project site from the Keating Park viewpoint at the southeast corner of the park. This viewpoint is located directly north of the project site. The project site is in the middle ground view from this viewpoint. Foreground views include a row of recently planted oleanders, and background views include the Vaca Mountains. CDCR planted the row of oleanders against the south and east fence line of Keating Park in 2005 to block visual access to the CMF from Keating Park. Oleanders grow approximately 1 to 2 feet per year to a mature height of 8 to 12 feet tall, and would be expected to block views of the ICF in approximately 8 to 10 years. In January 2008, CDCR planted a row of redwood trees south of the Keating Park fence line (Exhibit 3-2a, View 1). Due to their expected size, the redwood trees will eventually dominate the viewshed as seen from the Keating Park viewpoint (Exhibit 3-2a, View 3). The existing orchard trees, which are no longer irrigated due to water conservation efforts and will eventually be removed (this is not connected with the project), fill the viewshed north and west of the CMF, south of California Drive, and east of the planned Montessa subdivision. The existing orchard will likely be replaced by open grass land.

Keating Park encompasses approximately 20 acres and is primarily used for active recreation. The park includes seven baseball diamonds as well as restrooms, grandstands, picnic tables, multi-purpose fields for youth ball and softball, and high-mast lighting for nighttime activities.

California Drive Viewshed

Exhibit 3-2b, View 4, depicts the existing views of the project site from the California Drive viewpoint near Mariposa Avenue. This viewpoint is located northeast of the project site. The project site is in the middle ground view from this viewpoint. Foreground views include a row of recently planted oleanders, and background views include the Vaca Mountains. An east-west line of mature elm trees that extends along the southern border of Keating Park east to Mariposa Avenue are also present in the middle ground. A row of tall palm trees lines the northern entrance to the CMF along the west side of Mariposa Avenue. Six single family residences northwest of the California Drive and Mariposa Avenue intersection have views of the Vaca Mountains in the background behind the line of elm trees. The existing oleanders along California Drive and orchard trees currently block much of the view to the south for these residences (Exhibit 3-2b, View 4).

Al Patch Park and Montessa Subdivision Viewsheds

Views toward the project area from Al Patch Park northeast of the CMF and southwest of the corner of California Drive and Peabody Road are blocked by an existing berm (Exhibit 3-2b, View 5). The Montessa subdivision is planned to be built on rising topography immediately west of Keating Park and approximately a quarter mile northwest of the proposed project site (Exhibit 3-1 and Exhibit 3-2a, View 2). Views of the ICF site from the planned Montessa subdivision are blocked by the east-west line of mature elm trees that extends along the southern border of Keating Park. Because views from Al Patch Park and the planned Montessa subdivision are blocked, these viewpoints are not considered further in this analysis.

DISCUSSION

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

Less-than-Significant Impact. The single-story, 44,913-square-foot ICF building would extend from the existing CMF facility into approximately 7 acres of the existing abandoned orchard to the west (Exhibit 3-1). The ICF site would be approximately 500 feet from the nearest sensitive receptor: the 20-acre Keating Park at the corner of Old Keating Road and California Drive. Background views of the scenic Vaca Mountains are available from both the Keating Park and California Drive viewpoints. Unobstructed views of the Vaca Mountains in the project area would be considered a scenic vista.

Views from the residences immediately north of California Drive are within a quarter mile of the approximately 7 acre ICF site, encompass the existing CMF site and Keating Park, and are framed by background views of the Vaca Mountains. As shown in Exhibit 3-3b, the oleanders would grow to block views of the proposed project elements, and the existing row of elm trees would also block views. The 100-foot-tall high mast lights would still be visible above and between this vegetation; however, views of these light poles would not be obtrusive a quarter mile away (Exhibit 3-3b). Implementation of the proposed project would not change background views of the scenic Vaca Mountains.

Because the existing vegetation screen of oleanders, redwoods, and elm trees would continue to grow to effectively block views of most project elements, background views of the scenic Vaca Mountains would be largely unchanged, and because the project would be visually consistent with other CMF development in the same viewshed, the proposed project would not have a substantial adverse effect on a scenic vista, and impacts would be less than significant.

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

No Impact. There are no scenic highways in the project vicinity. Therefore, no scenic resources would be damaged within a state scenic highway.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less-than-Significant Impact. The existing visual character of the project vicinity is largely residential with some commercial properties and views of the Vaca Mountain. The character of the immediate site vicinity is influenced by views of the Vaca Mountain and the CMF institutional buildings surrounded by vegetative screening on the highly developed 317-acre CMF site. While the 100-foot tall high mast lighting would be visible through the existing abandoned orchard and vegetation screen from California Drive, the proposed ICF building would be architecturally consistent with the existing CMF. Because proposed project elements would represent a relatively minor addition to the existing institution, would largely not be visible from California Drive, and would be architecturally consistent with existing institutional buildings, no substantial change would occur to the visual character or quality of the site and its surroundings, and impacts would be less than significant.

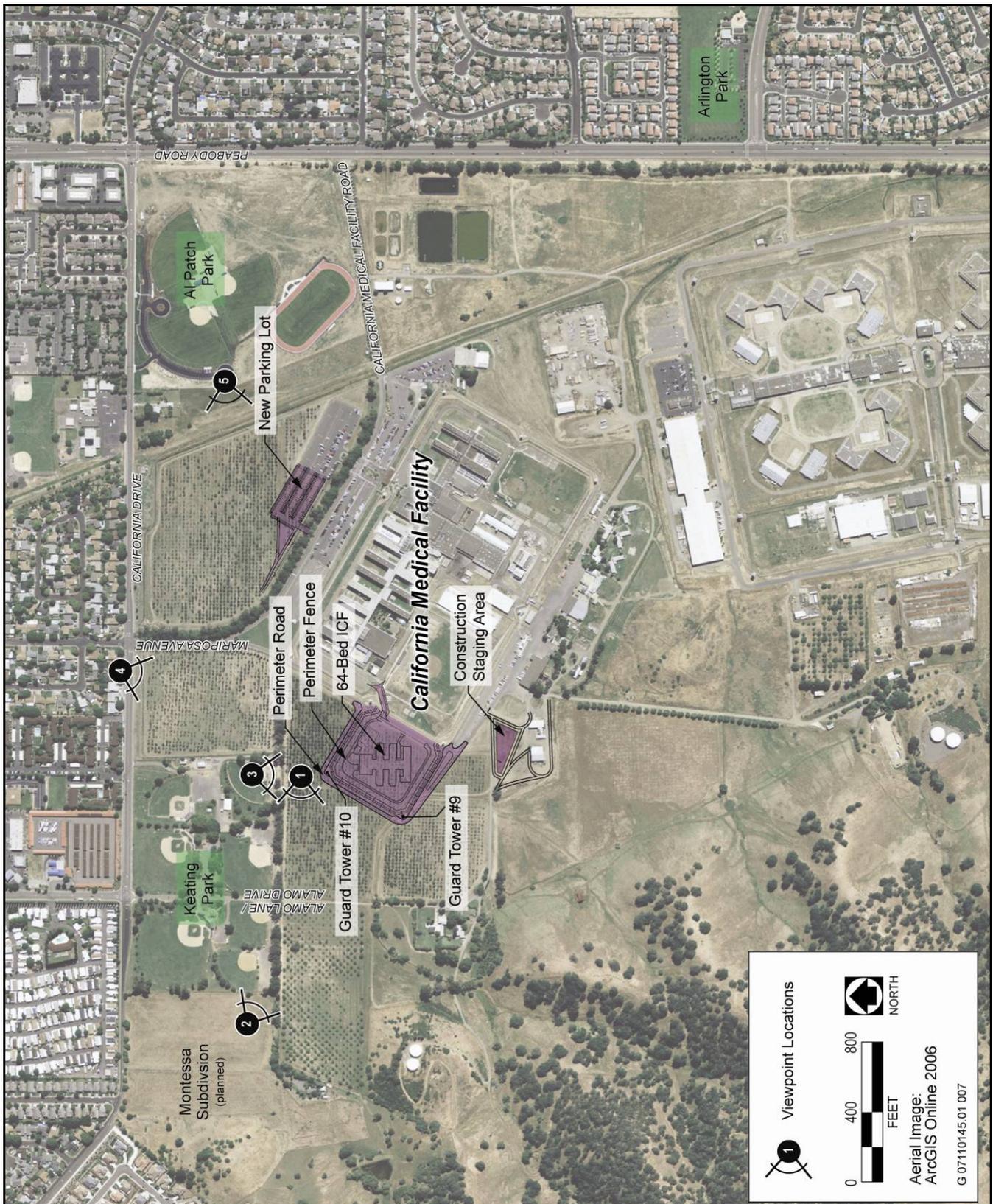
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less-than-Significant Impact. The CMF is currently well lit with on-site high mast and building lighting. In addition, high-mast lighting is used at Keating Park and Al Patch Park for nighttime outdoor recreation. Existing views of high-mast lighting (when in use) at Keating Park are as close as immediately across California Drive and extend toward the ICF site.

The project would require new lighting sources including high-mast lighting and building lighting at the 64-bed ICF site. High-mast lights would include glare shields, and light levels would be based on photometric (i.e., light intensity) calculations. With implementation of the proposed project, high-mast and building lighting would be added to an already illuminated area, and new lighting would be of a similar type and intensity as existing lighting.

From the Keating Park and California Drive viewpoints (Exhibits 3-3c and 3-3d), additional lighting would be visible with implementation of the proposed project. However, the growing oleander and redwood screening would increasingly block much of the nighttime light and glare in the project area. In addition, the existing row of elm trees would effectively screen the additional high-mast lighting (Exhibit 3-3c).

In summary, a small amount of light and glare from the 64-bed ICF building and high-mast lighting would be visible from California Drive and Keating Park above the oleander screening (Exhibits 3-3c and 3-3d). It would add, but not substantially, to the existing lighting already at the prison and surrounding parks. Further, the row of elm trees and the growing oleander and redwood screening would block the majority of the high-mast and building lighting, and any high-mast or building lighting visible between the elm trees or above the oleander would not be substantial. Therefore, because the project would not substantially alter nighttime lighting on the project site or from any of the surrounding viewpoints, nighttime light and glare impacts would be less than significant.



Source: EDAW 2008

Viewpoint Locations

Exhibit 3-1



View 1: Looking west along row of redwoods planted south of Keating Park in January 2008 (*EDAW 2008*)



View 2: Looking southeast toward the project site from the planned Montessa subdivision approximately one quarter mile away (*Field of Vision 2008*)



View 3: Looking south from bleachers in Keating Park (*Field of Vision 2008*)

Representative Photographs

Exhibit 3-2a



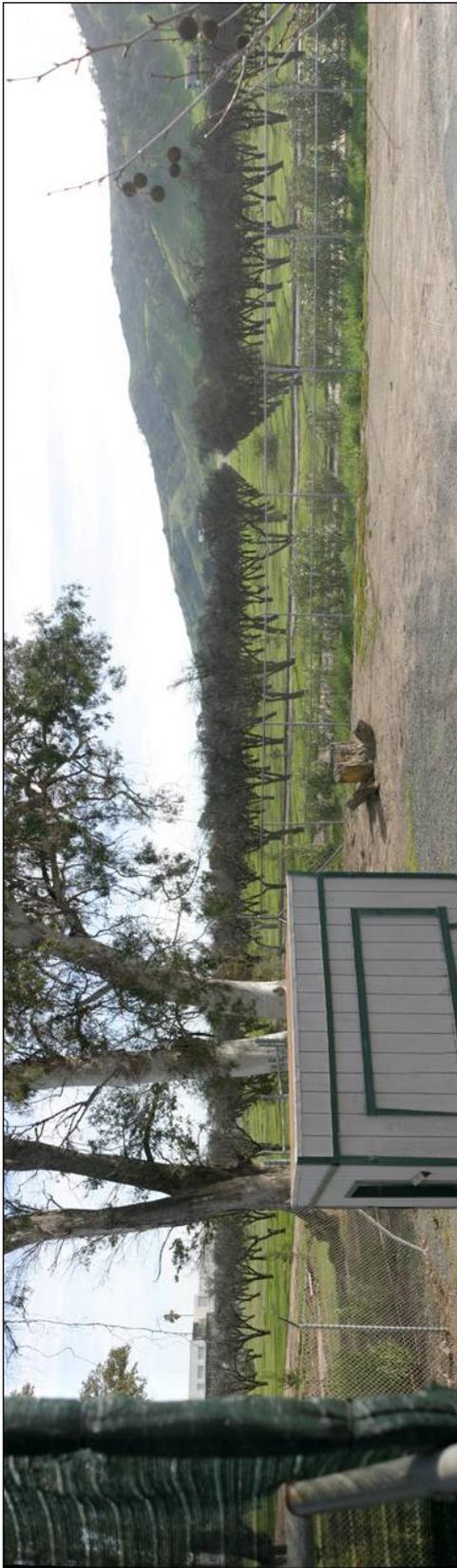
View 4: Looking south from residence on California Drive near Mariposa Avenue
(*Field of Vision 2008*)



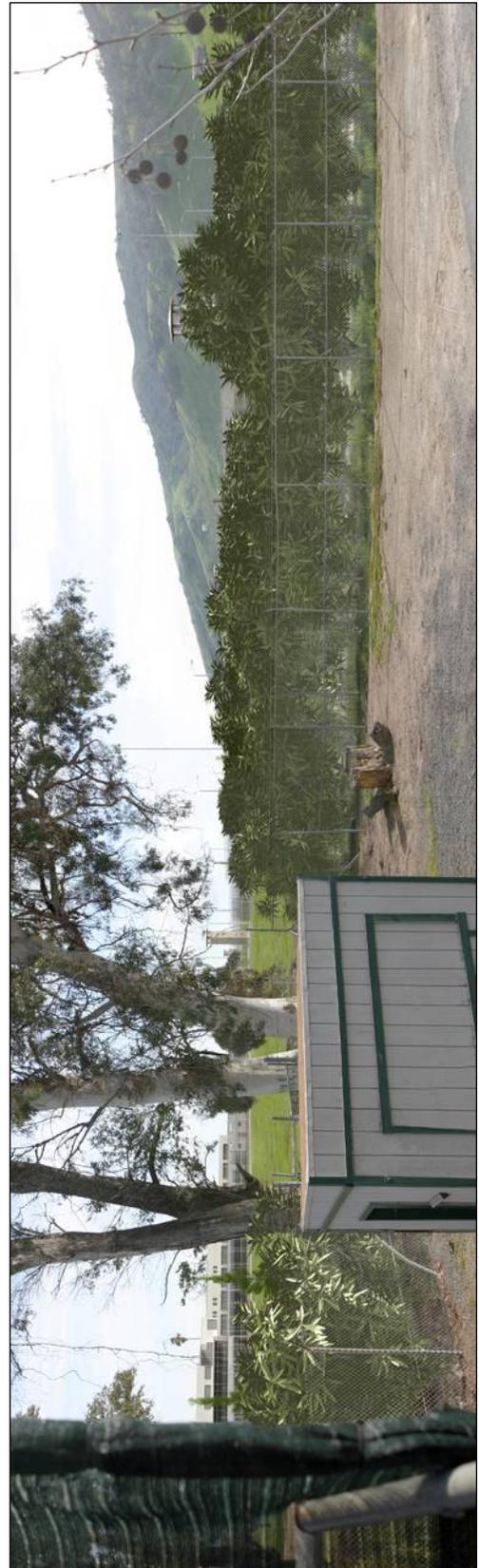
View 5: Looking southwest toward berm and the project area from Al Patch Park (*EDAW 2008*)

Representative Photographs

Exhibit 3-2b



Existing view (*Field of Vision 2008*)



Simulated project view (*Field of Vision 2008*)

Photo simulation looking south from bleachers in Keating Park

Exhibit 3-3a



Existing view (*Field of Vision 2008*)



Simulated project view (*Field of Vision 2008*)

Photo simulation looking south from residence on California Drive near Mariposa Avenue

Exhibit 3-3b



Existing night view (*Field of Vision 2008*)



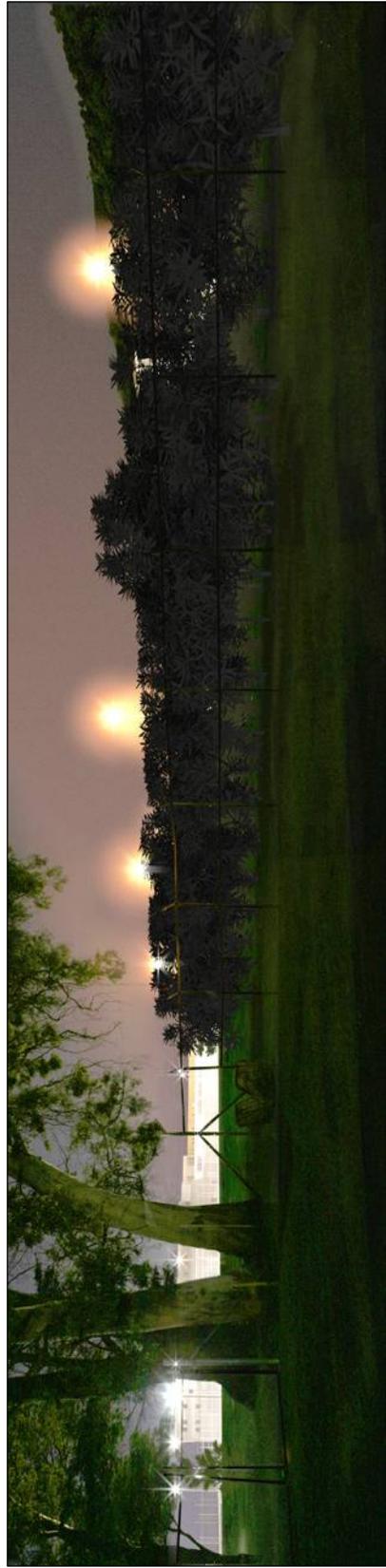
Simulated night view (*Field of Vision 2008*)

**Photo simulation looking south from residence on California Drive
near Mariposa Avenue**

Exhibit 3-3c



Existing night view (Field of Vision 2008)



Simulated night view (Field of Vision 2008)

Photo simulation looking south from bleachers in Keating Park

Exhibit 3-3d

3.2 AGRICULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agricultural Resources.				
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.</p> <p>Would the project:</p>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The 317-acre state-owned CMF site was converted from farmland to prison land uses in 1955. The proposed project sites (ICF building and parking area) would be located within the existing CMF property boundary, on approximately nine acres of abandoned orchard that is not used for agricultural purposes (see Exhibit 2-3). The proposed project sites are designated “Public/Institutional” under the *City of Vacaville General Plan* (1990) and conform to all applicable zoning requirements. Further, as a state project, CDCR is exempt from conformance with local plans and policies.

Farmlands are mapped by the State of California Department of Conservation under the Farmland Mapping and Monitoring Program (FMMP). The FMMP was created by the State of California to provide data for decision makers for use in planning for the current and future use of the State’s agricultural lands. Under the FMMP, land is delineated into the following eight categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban or Built-Up Land, Other Land, and Water. Mapping is conducted on a county-wide scale, with minimum mapping units of 10 acres unless otherwise specified. The land use on the CMF site prior to conversion to a state prison was farmland. The project sites are currently classified as Prime Farmland by the FMMP (California Department of Conservation 2006).

The City of Vacaville has not adopted any formal farmland mitigation policies or implementation plans requiring mitigation (such as the acquisition of agricultural easements or payment of in-lieu fees) for the conversion of farmland to urban uses (Carson, pers. comm., 2008).

DISCUSSION

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The land use on the proposed project sites was farmland prior to conversion to a state prison in 1955. The proposed project would be located on approximately nine acres of abandoned orchard, within the existing CMF property boundary. The proposed ICF and parking area sites are not currently used for agricultural production. Although the project sites are currently classified as Prime Farmland by the FMMP, the project sites would not be converted to a non-agricultural use because the sites are not currently used for agricultural purposes. Because the prison site was converted from farmland to state prison uses in 1955 and the project sites are not currently used for agricultural production, the proposed project would not result in conversion of agricultural land, and no impact would occur.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. The proposed project sites are located within the existing CMF property boundary. The CMF is zoned for institutional uses, and is not under a Williamson Act contract. Therefore, the project would not conflict with existing agricultural zoning or result in the conversion of any land currently under a Williamson Act contract. Therefore, no impact would occur.

c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

No Impact. Implementation of the proposed project would not result in conversion of farmland, and there are no project elements that would otherwise affect agricultural lands. Therefore, no impact would occur.

3.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The project sites are located in Solano County. The northeastern part of the county, which includes the CMF site, lies within the Sacramento Valley Air Basin (SVAB). Air quality in the basin is regulated by the U.S. Environmental Protection Agency (EPA), California Air Resources Board (ARB), and the Yolo-Solano Air Quality Management District (YSAQMD or the District). Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. The state and federal agencies have set ambient air quality standards for certain air pollutants to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) have been established for the following pollutants, identified as criteria pollutants: carbon monoxide (CO), ozone, sulfur dioxide (SO₂), nitrogen dioxide (NO₂), inhalable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead (Pb). There are California Ambient Air Quality Standards (CAAQS) for these criteria pollutants that are the same or more stringent than the corresponding federal standards. The CAAQS also includes standards for sulfates, hydrogen sulfide, and visibility.

Areas are classified by EPA and ARB as nonattainment areas for each criteria pollutant if the NAAQS or CAAQS have not been achieved. Air quality plans to attain and maintain the standards are required for nonattainment areas. The SVAB is designated as a federal and state nonattainment area for ozone; Solano County is designated as a state nonattainment area for PM₁₀ and attainment or unclassified for all other pollutants (Table 3-1).

Table 3-1 Attainment Status for Solano County Portion of Yolo-Solano Air Quality Management District		
Pollutant	Attainment Status	
	Federal	State
Ozone – 1-Hour	-- ^a	Nonattainment
Ozone – 8-hour	Nonattainment: Serious	
PM ₁₀	Unclassified/Attainment	Nonattainment
PM _{2.5}	Unclassified/Attainment	Unclassified
CO	Unclassified/Attainment	Attainment
NO ₂	Unclassified/Attainment	Attainment
SO ₂	Attainment	Attainment
Pb	No designation	Attainment
^a Repealed by law in June 2005 Sources: EPA 2008; ARB 2008		

The District is located within the boundaries of the SVAB. The SVAB encompasses eleven counties including all of Shasta, Tehama, Glenn, Colusa, Butte, Sutter, Yuba, Sacramento, and Yolo Counties, the westernmost portion of Placer County and the northeastern half of Solano County. The SVAB is bounded by the North Coast Ranges on the west and Northern Sierra Nevada Mountains on the east. The intervening terrain is relatively flat.

Hot dry summers and mild rainy winters characterize the Mediterranean climate of the SVAB. During the year the temperature may range from 20 to 115 degrees Fahrenheit with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches, and the rainy season generally occurs from November through March. The prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north. The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants under certain meteorological conditions.

The ozone season, May through October in the Sacramento Valley, is characterized by stagnant morning air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. Usually the evening breeze transports the airborne pollutants to the north out of the Sacramento Valley. During about half of the days from July to September, however, a phenomenon called the “Schultz Eddy” prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out, the Schultz Eddy causes the wind pattern to circle back to the south. Essentially, this phenomenon causes the air pollutants to be blown south toward the District. This phenomenon has the effect of exacerbating the pollution levels in the area and increases the likelihood of violating federal or state standards. The eddy normally dissipates around noon when the delta sea breeze arrives.

For 8-hour ozone attainment planning, the YSAQMD is included in the Sacramento Metro Nonattainment Area, also referred to as the Sacramento Federal Nonattainment Area. Thus, the YSAQMD air quality attainment plan (AQAP) is the attainment plan for the Sacramento Metro Nonattainment Area. On February 14, 2008, ARB asked EPA to reclassify the Sacramento Metro Nonattainment Area from “serious” to “severe-15” with an associated attainment deadline of June 15, 2019 (ARB 2008b, SMAQMD 2008). This request was made following a February 13, 2008 resolution by the YSAQMD board and similar requests from other districts in the nonattainment area. A Reasonable Further Progress report was submitted to EPA in April 2008, and the attainment plan will be submitted in summer of 2008.

The YSAQMD publication, *Handbook for Assessing and Mitigating Air Quality Impacts* (Handbook) is an advisory document that provides lead agencies, consultants, and project applicants with procedures for addressing air quality impacts in environmental documents (YSAQMD 2007). The Handbook was used to prepare this air quality section.

DISCUSSION

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

Less-than-Significant Impact. The emissions inventories used for developing the region's air quality attainment plans are based primarily on projected population growth and vehicle miles traveled (VMT) for the region based, in part, on the predicted growth identified in regional and community plans. Therefore, projects that would result in an increase in population or employment growth beyond that identified in regional or community plans could result in increases in VMT. As a result, increases in mobile source emissions attributable to such projects could conflict with the region's air quality planning efforts. Increases in VMT beyond that predicted in area plans would be considered to have a significant adverse incremental effect on the region's ability to attain and/or maintain state and federal ambient air quality standards. Further, the District has established thresholds of significance based on the California Environmental Quality Act (CEQA) environmental checklist.

As discussed in Section 3.12, "Population and Housing" of this IS/Proposed MND, the proposed project would not be considered growth inducing and would be consistent with the *City of Vacaville General Plan*. As such, implementing the proposed project would not result in an increase in VMT that would conflict with the Yolo-Solano AQAP, and operation of the proposed project would not conflict with or obstruct implementation of the applicable AQAP.

The proposed project also includes a 500 kilowatt diesel-engine driven emergency generator. It is anticipated that the generator would be test-operated monthly or bi-weekly for periods of less than one hour. Emissions from this stationary source would be evaluated by YSAQMD under their rules requiring permits prior to construction and prior to operation. Granting of the permits would be evidence that operation of the source would not conflict with the applicable air quality plan, violate any air quality standard, or contribute substantially to an existing or projected air quality violation.

Because implementing the proposed project would not result in an increase in VMT that would conflict with the Yolo-Solano AQAP, operating the proposed project would not conflict with or obstruct implementation of the applicable AQAP, and emissions from the 500 kilowatt generator would be evaluated by YSAQMD under their rules requiring permits prior to construction and prior to operation, these impacts would be considered less than significant.

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

Operational Emissions

Less-than-Significant Impact. The YSAQMD Handbook provides a procedure for initial screening of a project for the potential to exceed the District CEQA levels of significance (YSAQMD 2007). A screening level table classifies projects by size and land use type for comparison with proposed projects. The Handbook states that projects falling considerably (i.e., more than 10%) under these sizes may be safely assumed to need no quantification of ozone precursor emissions; although other factors such as toxic air contaminants (TACs), asbestos, and odors still need to be analyzed. Table 3-2 shows the hospital land use from the Handbook screening table for comparison with the proposed project. Because the proposed project, which would add a 44,913 square-foot building, is considerably less than the screening levels, it may be assumed that operational emissions of

PM₁₀, PM_{2.5}, and ozone precursors, which are reactive organic gases (ROG) and oxides of nitrogen (NO_x), would be less than significant.

Table 3-2 Project Size That May Exceed District Thresholds for ROG, NO_x, and PM₁₀		
Land Use	Project Size	
	Year 2007	Year 2010
Hospital (square feet)	195,000	225,000
Source: YSAQMD 2007		

As described in a) above, granting of permits for the proposed 500 kilowatt emergency generator demonstrates that operation of the source would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and impacts would be less than significant.

Construction Emissions

Less Than Significant with Mitigation Incorporated. The YSAQMD Handbook screening procedure does not consider construction emissions. Therefore, the URBEMIS emissions model was used to estimate construction emissions. Ozone is not a directly emitted pollutant; ROG and NO_x are directly emitted pollutants that are the principal compounds in forming ozone and are the emissions that are calculated.

The estimated emissions and associated CEQA thresholds are shown in Table 3-3. For purposes of estimating emissions, it was assumed that all project construction would occur in calendar year 2009. URBEMIS data sheets, including assumptions relative to phasing, grading, and equipment, are included as Appendix A of this IS/Proposed MND. As shown in Table 3-3, emissions would be less than the significance thresholds and the impact would be less than significant.

Table 3-3 Estimated Construction Emissions			
	Pollutant		
	ROG	NO _x	PM ₁₀
Estimated Project Construction Emissions ^a	0.6 Tons per year	2.2 Tons per year	46 Pounds per day
CEQA Significance Thresholds ^b	10 Tons per year	10 Tons per year	80 Pounds per day
^a Emissions calculated with URBEMIS 2007 version 9.2.4			
^b CEQA significance thresholds from YSAQMD 2007			

The PM₁₀ emissions do not assume any dust control, which is encouraged by YSAQMD, as follows: “Without control, dust emissions from grading, trenching, or land clearing can create nuisances or localized health impacts...even projects not exceeding district PM thresholds should implement best management practices to reduce dust emissions and avoid localized health impacts.” Although mitigation is not required to reduce PM₁₀ emissions to a less-than-significant level, the following air quality mitigation measure will be incorporated into the project:

Mitigation Measure AIR-1

CDCR shall require the construction contractor to employ best management practices for dust control during construction of the proposed project. At a minimum, active grading areas shall be watered at least twice daily unless existing moisture is sufficient to prevent the generation of visible dust plumes.

YSAQMD best management dust control measures are included as Table 5 of the Handbook and are appended to this IS/Proposed MND for convenience (see Appendix B). With implementation of Mitigation Measure AIR-1, the estimated maximum PM₁₀ emissions would be reduced from 46 pounds per day to 27 pounds per day, and impacts would be less than significant.

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

Less-than-Significant Impact. As shown in Table 3-3, Solano County is currently designated as a nonattainment area for the federal and state ozone standards and for the state PM₁₀ standard. The Handbook states that project emissions that are not consistent with the AQAP, State Implementation Plan (SIP), or exceed District thresholds will have a significant cumulative impact unless offset. As described in a) and b) above, proposed project emissions would be consistent with the AQAP and SIP, and would not exceed District thresholds.

The CEQA Guidelines (California Code of Regulations Title 14, Section 15000 et seq.) indicate that an adequate cumulative impact analysis considers a project over time and in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed. The Crisis Mental Health Treatment Facility project at CMF, currently under construction, would be considered a related project. CDCR evaluated air quality impacts and adopted mitigation measures for the project in 2004 (CDCR 2004), and construction of the project would not be concurrent with the proposed project. Therefore, the project would not contribute considerably to any cumulative construction emissions.

The Handbook states that for ozone precursors and PM₁₀, the analyses of plan consistency and comparison with District thresholds must meet the cumulative impact test. Because proposed project emissions would be consistent with the AQAP and SIP, would not exceed District thresholds, and would not contribute considerably to any cumulative emissions, the cumulative air quality impact of the proposed project would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less-than-Significant Impact. Long-term operation of the proposed project would not result in the continuous operation of any major stationary sources of emissions; the 500 kilowatt emergency generator would operate for short test periods either bi-weekly or monthly. Long-term emissions of the proposed project would be primarily associated with the operation of vehicles for employees commuting to and from the site, for transporting patients, for delivering supplies, and for visitors. The primary mobile source pollutant of concern for local exposure is carbon monoxide (CO). Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited, as CO disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to a severely congested roadway or intersection may reach unhealthy levels, affecting local sensitive receptors (residents, school children, hospital patients, and the elderly).

The YSAQMD has established the following CO screening criteria. If either of the following criteria is true of any intersection affected by proposed project traffic, then the project can be said to have the potential to create a violation of the CO standard.

- ▶ A traffic study for the project indicates that the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to an unacceptable LOS (typically LOS E or F); or
- ▶ A traffic study indicates that the project will substantially worsen an already existing peak-hour LOS F on one or more streets or at one or more intersections in the project vicinity. “Substantially worsen” includes situations where delay would increase by 10 seconds or more when project-generated traffic is included.

The project traffic analysis indicates that project traffic would not cause any intersections to degrade in service to an unacceptable LOS. The traffic analysis shows that two signalized intersections would operate at LOS F under cumulative conditions without the project. However, the addition of project traffic would not increase the delay at the intersections (DKS 2008). Therefore, there would be no potential for project traffic to result in a measurable increase in local CO concentrations, and there would be no impact.

Short-term grading and other construction activities would involve on-site heavy duty equipment, and would result in the generation of diesel particulate matter (diesel PM), which is a toxic air pollutant. The dose to which receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to toxic air contaminant (TAC) emission levels that exceed applicable standards). The use of grading and other construction equipment would be temporary, and in combination with the dispersive properties of diesel PM, would not expose sensitive receptors to substantial TAC concentrations. Because of the short-term period of proposed project construction, exposure of sensitive receptors to diesel PM would not be substantial, and the impact would be less than significant.

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

No Impact. Implementation of the proposed project would not generate odors that would affect a substantial number of people, nor would it place a substantial number of people near a facility that creates objectionable odors. Therefore, there would be no impact.

3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

Information presented in this section is based on review of existing information on biological resources in the project vicinity and a reconnaissance-level field survey of the project area conducted by EDAW biologists on April 11, 2007. The purpose of this survey was to characterize general biological resources on the proposed project sites and evaluate the potential for sensitive biological resources to occur in the project area.

General Biological Resources

The proposed project sites do not support any native vegetative communities and are located in abandoned prune and plum orchards. The orchards were actively managed for many years before being abandoned four years ago. The orchards have not been summer irrigated since that time and ground under the trees has not been cultivated.

The resulting host of ruderal herbaceous plant species is typical of agricultural fields where weeds are not sprayed and no active cultivation is underway. These plants include foxtail barley (*Hordeum murinum* var. *murinum*), broad-leaf filaree (*Erodium botrys*), Italian rye-grass (*Lolium multiflorum*), prickly lettuce (*Lactuca serriola*), soft chess (*Bromus hordeaceus*), and cheeseweed (*Malva parviflora*). The dense herbaceous understory is mowed at least three times a year during the growing season to control weeds.

Wildlife diversity at the project sites is expected to be low because of the relatively low-quality habitat provided by the ruderal vegetation and generally high levels of disturbance in the vicinity. Wildlife species observed or expected to occur on the project sites are limited to those adapted to disturbed conditions, such as northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), yellow-billed magpie (*Pica nuttalli*), wild turkey (*Meleagris gallopavo*), European starling (*Sturnus vulgaris*), turkey vulture (*Cathartes aura*), striped skunk (*Mephitis mephitis*), mule deer (*Odocoileus hemionus*), black-tailed jackrabbit (*Lepus californicus*), and California ground squirrel (*Spermophilus beecheyi*).

Sensitive Biological Resources

Sensitive biological resources include species and habitats that are protected by federal, state, or local resource conservation agencies and organizations. Within California, special-status plant and wildlife species are generally defined as those species that are legally protected or otherwise considered sensitive by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (DFG), and California Native Plant Society (CNPS). This includes species covered under the federal and California Endangered Species Act, those designated as species of concern by USFWS, and/or DFG, and those identified in the CNPS Inventory of Rare and Endangered Vascular Plants in California (CNPS 2001). DFG's California Natural Diversity Database (CNDDDB 2006) and CNPS's online database (CNPS 2006) were reviewed for documented occurrences of sensitive biological resources, including sensitive habitats and special-status species, in the project vicinity.

Special-status Plants

A total of 19 special-status plants are documented in the CNDDDB and/or CNPS databases as occurring within two miles of the project vicinity. These include species that occur primarily in vernal pool or alkali playa habitats. However, the highly disturbed conditions at the proposed project sites greatly limit potential of the sites to support any special-status plants. In addition, no vernal pool or alkali playa habitats occur at the project sites. Therefore, no special-status plants are expected to occur on the proposed project sites.

Special-status Wildlife

Based on results of the reconnaissance-level survey and review of existing information, including the CNDDDB, loggerhead shrike (*Lanius ludovicianus*), burrowing owl (*Athene cunicularia*) and Swainson's hawk (*Buteo swainsonii*) are the only special-status wildlife species with potential to occur on or near the proposed project sites. A number of additional species have been documented in the project vicinity, but are unlikely to occur because the project sites lack suitable habitat to support such species. These include species restricted to vernal pool and riparian habitats, which are not present on or adjacent to the proposed project sites.

The loggerhead shrike is a California Species of Special Concern that is present year-round in California. Loggerhead shrikes nest in shrubs and small trees in shrublands and open woodlands and typically forage in grasslands and agricultural fields (Shuford and Gradali 2008: 274). Loggerhead shrikes could nest and forage in the abandoned orchard on the project site.

Western burrowing owl is a California Species of Special Concern. Burrowing owls occur in open habitats, including disturbed areas close to human development. Burrows, typically those made by medium-sized mammals such as ground squirrels, are the essential component of burrowing owl habitat. During a survey conducted on the CMF property in 1994 (EDAW 1999), diagnostic signs of burrowing owls (i.e., pellet, feathers, whitewash) were

found. In addition, three burrowing owls have been electrocuted on the electrified fence at California State Prison (CSP) Solano, which is adjacent to the CMF. During the reconnaissance-level field survey on April 11, 2007, no evidence of burrowing owl occupation (i.e., pellet, feathers, whitewash) was observed. However, burrowing owls could occupy areas of suitable habitat in the future, based on the presence of suitable habitat (i.e., active California ground squirrel burrows on site) and their known occurrence in the project vicinity. They are most likely to occur in open areas, such as along the electrified fence perimeter.

Swainson's hawk is state listed as threatened. Swainson's hawks most commonly are found in grasslands, low shrublands, and agricultural habitats that include large trees for nesting. They nest in riparian woodlands, roadside trees, trees along field borders, and isolated trees. Nesting pairs frequently return to the same nest site for multiple years and decades. The proposed project sites are bordered by several rows of tall, ornamental trees (e.g., *Eucalyptus* spp.) that could provide potential nest sites for Swainson's hawks in the vicinity of the CMF.

Sensitive Habitats

Sensitive habitats include sensitive natural communities designated by DFG and listed in the California Natural Diversity Database, as well as wetlands and other waters of the United States subject to the jurisdiction of the United States Army Corps of Engineers (USACE) and lakes, rivers, and streams subject to jurisdiction of DFG. Based on a reconnaissance-level field survey of the project sites, no potentially sensitive habitats are located on the proposed project sites.

Statewide Electrified Fence Project

The proposed project includes expansion of a lethal electrified fence that is similar to those found at other state prisons in California, including CMF. After the prototype fence at Calipatria State Prison in Imperial County became operational in 1993, CDCR personnel found that unanticipated accidental wildlife electrocutions had occurred. To address this unexpected effect, consultation was conducted between CDCR, DFG, and USFWS. Based on this consultation, CDCR determined that a statewide EIR was needed to assess impacts on wildlife by operation of the electrified fence at 25 existing state prisons and two planned facilities, and to identify feasible mitigation measures (EDAW 1993, CDC 1999). CEQA documents prepared for the Statewide Electrified Fence Project include *Draft Environmental Impact Report (DEIR), Statewide Electrified Fence Project* (CDC 1996); *Final Environmental Impact Report (FEIR), Statewide Electrified Fence Project* (CDC 1997); and *FEIR Addendum, Statewide Electrified Fence Project* (CDC 1999).

Impacts of the electrified fence 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. The USFWS issued a Threatened and Endangered Species Take Permit covering 62 wildlife species to CDCR for the project on June 12, 2002. The permit expires in the year 2052 (EDAW 2003).

The approved Statewide Electrified Fence Project HCP includes numerous mitigation measures designed to minimize wildlife use of the areas nearest the electrified fence and to deter wildlife from making contact with the electrified fence. An extensive feasibility evaluation was conducted 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 measures include operations-related measures designed to modify or remove habitat or other attractants to wildlife from the secured perimeter area of each prison. Tier 2 involves installation of exclusion and deterrent devices on the electrified fences 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 Tier 1 and Tier 2 have been implemented. The plan also includes a wildlife mortality monitoring program that requires that a qualified biologist visit each institution with an operational electrified fence three times per year to identify carcasses of animals collected from the electrified fence perimeter by CDCR staff.

No take of species listed under the ESA or CESA has occurred since operation of the fences was initiated in 1991. Recognizing this, and based on habitat types, CDCR approved the construction and operation of electrified fences at six additional facilities without preparing an HCP. An extensive habitat mitigation program (HMP) was prepared that was identical to the mitigation requirements of the HCP. In all instances, CDCR has coordinated closely with USFWS and DFG on its e-fence program, including its decision to prepare an HCP. The existing electrified fence at CMF is covered by the Six Prison HMP (EDAW 2001) and not the Statewide HCP.

DISCUSSION

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?**

Less Than Significant with Mitigation Incorporated. Three special-status wildlife species have the potential to occur in the project area. The abandoned orchard provides potential foraging and nesting habitat for loggerhead shrike. Construction of the project could result in a maximum loss of one to two loggerhead shrike nests if they were present when the orchard is removed. Loss of these nests and habitat would not substantially affect the local population of loggerhead shrikes. Burrows on the project sites provide potential habitat for burrowing owl. Swainson's hawks could nest in the tall Eucalyptus trees bordering the project sites. In addition to Swainson's hawks, these Eucalyptus trees could provide potential nest sites for several species of common raptors, including red-tailed hawk, red-shouldered hawk, and great horned owl. Although these are not special-status species, raptors are protected under Section 3503.5 of the California Fish and Game Code, which prohibits the destruction of raptors and their active nests. Construction activity could result in destruction of occupied burrowing owl burrows. Construction activities could also disturb burrowing owls, Swainson's hawks, and common raptors nesting nearby the project sites. Such disturbance could cause nest abandonment and result in loss of active nests. These impacts to special-status wildlife and common raptors would be potentially significant.

Implementation of mitigation measures BIO-1 (burrowing owl) and BIO-2 (Swainson's hawk and other nesting raptors) would reduce these impacts to less-than-significant levels.

Mitigation Measure BIO-1

- ▶ Before the commencement of construction activity, a focused survey for burrowing owls shall be conducted by a qualified biologist, in accordance with DFG protocol (DFG 1995), to identify active burrows on and within 250 feet of the project sites. The preconstruction surveys shall be conducted no more than 30 days prior to the start of construction, regardless of the time of year in which construction occurs. If no occupied burrows are found in the survey area, no further mitigation is necessary.
- ▶ If an occupied burrow with an active nest is found, impacts shall be minimized by establishing a 250-foot buffer area around the burrow. No project activity shall occur within the buffer area until a qualified biologist confirms that the nest is no longer active. The size of the buffer area may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nesting pair.
- ▶ If feasible, 250-foot buffer areas shall also be established around all other occupied burrows. If an occupied burrow is present within the area to be disturbed during project construction, DFG shall be consulted regarding relocation of owls. Relocation would likely utilize passive techniques to encourage owls to move to alternative burrows outside of the impact area.

Mitigation Measure BIO-2

- ▶ If project activity would commence during the raptor nesting season (February 15 to September 15), preconstruction surveys shall be conducted in areas of suitable nesting habitat within 500 feet of project activity. Surveys shall be conducted within 14 days prior to commencement of project activity. If no active nests are found, no further mitigation shall be required.
- ▶ If active nests are found, impacts shall be avoided by establishment of appropriate buffers, as determined by a qualified biologist. No project activity shall commence within the buffer area until the biologist confirms that the nest is no longer active. Monitoring of the nest by a qualified biologist may be required if the activity has potential to adversely affect the nest.

Electrified Fence Impacts on Wildlife

The proposed project includes expansion of the existing electrified fence at CMF. The project would include installation and operation of approximately 1,440 feet of additional electrified fence within the security perimeter, which would likely result in wildlife electrocution. Lethal electrocution would result only when an animal touches two wires simultaneously or touches one wire and an electrical ground. Therefore, birds and other wildlife could come in contact with the electrified fence without being electrocuted. Based on monitoring data collected for the existing electrified fences at CMF and at other prisons, a number of native birds and mammals are likely to be killed on the electrified fence. Species found in urban areas near Vacaville and those associated with disturbed agricultural fields in the surrounding area would be at greatest risk of electrocution. Conversely, wildlife species that prefer native habitat and avoid urbanized and other developed areas would be at lowest risk of electrocution. Birds are by far the most common wildlife group electrocuted, with mammals making up a relatively small percentage.

Based on 7 years of wildlife mortality monitoring data from 2001 to the present at CMF (EDAW 2001-2008), the electrified fence has, on average, resulted in mortality of 37 native species per year. Only two “sensitive species” (defined as a California species of special concern or a common raptor species), loggerhead shrike and red-tailed hawk (*Buteo jamaicensis*), have been killed by the electrified fence at CMF since it became operational in December 2000. The most common species to be killed by the fence, in descending order are: Brewer’s blackbird (*Euphagus cyanocephalus*) (10 per year), house finch (seven per year), yellow-rumped warbler (*Dendroica coronata*) (6 per year), California ground squirrel (five per year), red-winged blackbird (*Agelaius phoeniceus*) (three per year), western bluebird (*Sialia mexicana*) (two per year), and northern mockingbird (one per year). Fifteen other native species have been killed, but at a rate of less than one individual per year.

The proposed expansion of the existing electrified fence would increase the potential for wildlife to come in contact with the lethal fence and be killed. However, the increase in fence line is relatively small and is not expected to substantially increase wildlife mortality rates. The species that may be killed by the operation of the proposed expanded fence and the associated rates of mortality are expected to be similar to the species and mortality rates associated with the existing fence.

In summary, expansion and operation of the proposed electrified fence is likely to result in wildlife mortality, and would result in the death of an undetermined number of animals. The large majority of electrocutions would result in the death of birds, some of which may be protected under the MBTA and the Fish and Game Code. This impact would not be expected to eliminate any resident or migratory bird species and it is not expected to reduce species diversity in the project vicinity. Although not expected, it is possible that the local population of one or more native birds, protected by the MBTA and the Fish and Game Code, could be substantially affected. Therefore, this would be a potentially significant impact.

Implementation of mitigation measure BIO-3 would reduce electrified fence impacts on wildlife to a less-than-significant level.

Mitigation Measure BIO-3

The proposed expanded electrified fence would be operated the same as the existing fence at CMF. Impacts to wildlife from the existing fence at CMF are mitigated through an HMP for the Six Prisons Project (EDAW 2001). Mortality to wildlife shall be avoided and minimized to the extent possible through continued implementation of the tiered mitigation program that was developed as part of the Statewide Electrified Fence Project and used by the Six Prisons Project. Habitat compensation (as described under Tier 3 of the mitigation program) is not proposed for this project because operation of the proposed expanded fence is not likely to substantially increase the wildlife mortality rate or kill different wildlife species than the existing fence. Formal consultation with USFWS and DFG and permitting under ESA and CESA is not proposed because no state or federally listed species or candidates for listing are considered at risk of electrocution. In addition, CDCR is committed to implementing the avoidance and minimization measures outlined below, that are currently implemented at the existing CMF e-fence, to off-set potential adverse effects to birds protected under MBTA and the California Fish and Game Code.

- ▶ Tier 1: The first tier of mitigation measures are those 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 would be applied to the proposed facility.
 - ▶ Tier 2: Second tier mitigation measures consist of both exclusion and deterrent devices. Tier 2 measures to be installed on the proposed electrified fence include a vertical netting system and anti-perching devices. CDCR would install ¾-inch mesh vertical netting enveloping both sides of the lower section of the electrified fence, which would otherwise present the greatest danger to wildlife species at risk of electrocution. Anti-perching wires, which consist of 2- to 4-inch pieces of stiff wire connected to an aluminum base, would be strategically attached to the tops of perching sites in and near the perimeter. Once installed, this wire would reduce the ability of birds to perch near the electrified fence, thus reducing exposure to accidental electrocutions.
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?**

No impact. The proposed project sites are dominated by prune and plum trees and weedy, ruderal vegetation. No riparian habitat or other sensitive natural communities are present on the sites. Therefore, no impact to these resources would occur.

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

No Impact. There are no potential jurisdictional wetlands or waters of the U.S. or other sensitive habitats within the footprint of the proposed project sites. Project-related construction and operational activities would not result in the removal, fill, or hydrologic interruption of any federally protected wetlands. Therefore, there would be no impact to federally protected wetlands.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

No Impact. The proposed project sites do not serve as an important wildlife movement corridor or nursery site. Wildlife corridors are features that provide connections between habitat patches that would otherwise be isolated

and unusable. Therefore, implementation of the proposed project would not interfere with the movement of wildlife or impede the use of a wildlife nursery site.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. No local policies or ordinances protecting biological resources that include the project sites have been adopted, and the proposed project would not be in conflict with any local policies or ordinances protecting biological resources. The Solano County Code includes no policies regarding tree preservation. Therefore, no impacts would occur.

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

No Impact. The proposed project would not conflict with the provisions of the Statewide Electrified Fence Project HCP. The existing electrified fence at CMF is not covered by the Statewide Electrified Fence Project HCP, nor would the proposed expanded electrified fence be covered by the HCP. Because no federally or state listed species were killed by the electrified fences since their operation began in 1991, subsequent electrified fences, including the one at CMF, were approved and constructed without preparation of an HCP. However, a comprehensive habitat management plan was prepared (EDAW 2001) and implemented by CDCR. The proposed mitigation measures to avoid and reduce wildlife mortality from operation of the expanded electrified fence at CMF are designed to be consistent with the Statewide Electrified Fence Project HCP, and the proposed mitigation for wildlife mortality from the project follows the tiered structure of the Statewide Electrified Fence Project HCP.

The *Draft Solano County Multi-Species Habitat Conservation Plan* has not yet been adopted, and therefore would not apply to the proposed project. Because the proposed project would not conflict with the provisions of an adopted HCP or other conservation plan, no impacts would occur.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A cultural resource assessment report based on information gathered during research and field investigations conducted in 2007 was prepared for the proposed project (EDAW 2008). The following discussion is based on that analysis.

ENVIRONMENTAL SETTING

The project area and its vicinity have been occupied and used by diverse peoples for thousands of years. The varied natural setting and accessibility to other areas of the bay and coastal regions have attracted a wide range of native and immigrant cultural groups. Evidence for prehistoric patterns of land use is located within the vicinity; however, the remains of major historic land use in the area are primarily limited to agricultural activities.

Background research coupled with field observations indicates the presence of one cultural resource (the existing CMF) in the proposed project area. The CMF was constructed in 1955 and includes eight approximately 30-foot tall guard towers. The CMF and associated guard towers are greater than 45 years of age and are considered potentially significant cultural resources. One of these towers, Guard Tower 7, is adjacent to the proposed 64-bed ICF site. The ICF would be constructed on the northwestern side of the CMF, and the existing prison lethal fence line and perimeter road would be “bulbed out” to encompass the new facility (Exhibits 2-2 and 2-3). Based on the proposed location of the ICF, project construction could result in the removal or modification of Guard Tower 7, potentially compromising the CMF’s historic significance. Therefore, an architectural assessment of Guard Tower 7 (including a California Register of Historic Resources [CRHR] evaluation) was conducted by an EDAW architectural historian in November 2007 (EDAW 2007).

As described in the architectural assessment, the guard towers at CMF do not appear to be associated with an important event or trend in local or state history (CRHR Criterion 1), nor are they known to be associated with an individual considered important in local history (CRHR Criterion 2). In addition, the structures do not embody distinguishing architectural or engineering characteristics, nor do they represent the work of a master (CRHR Criterion 3), and they do not appear likely to yield important primary information on historic construction techniques or technologies (CRHR Criterion 4). Therefore, these resources do not appear eligible for CRHR listing, and the buildings should not be included in the State’s Master List of Historical Resources maintained by the State Historic Preservation Officer, as described in PRC 5024 (d) (EDAW 2007).

DISCUSSION

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Less Than Significant with Mitigation Incorporated. Guard Tower 7 may be dismantled or modified as part of the proposed 64-bed ICF project, potentially compromising the CMF's historic significance. As described above, Guard Tower 7 does not appear eligible for CRHR listing, and it should not be included in the State's Master List of Historical Resources maintained by the State Historic Preservation Officer. Therefore, there would be no impact.

Regarding pre-historic resources, the project vicinity was considerably attractive to Native Americans as evidenced by a previously identified habitation site to the northeast of the current project area. Because of this sensitivity, there is a potential for the presence of subsurface archaeological deposits, which could be affected by project-related ground disturbing activities. Disturbance of, or damage to, buried resources if present would be a potentially significant impact. Implementation of Mitigation Measure CUL-1 would reduce potential impacts to unrecorded cultural resources to a less-than-significant level.

Mitigation Measure CUL-1

If unusual amounts of stone, bone, or shell, or significant quantities of historic-era artifacts are uncovered during construction activities, work within 50 feet of the specific construction site at which the suspected resources have been uncovered will be suspended and CDCR will consult with a qualified archaeologist. The archaeologist will conduct a detailed field investigation of the specific site to determine the significance of the find and recommend mitigation deemed necessary for the protection or recovery of any cultural resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA Section 21083.2. The CDCR will implement the mitigation before the resumption of construction activities at the affected area.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less Than Significant with Mitigation Incorporated. As described in a) above, disturbance of, or damage to buried resources, if present, would be a potentially significant impact. Implementation of Mitigation Measure CUL-1 would reduce potential impacts to unrecorded cultural resources to a less-than-significant level.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. A review of published geologic maps indicates that the project sites are underlain by Holocene-age (the last 11,000 years) alluvium (Wagner et al. 1987). By definition, in order to be considered a fossil, an object must be more than 11,000 years old. Therefore, project-related earth-moving activities would have no impact on unique paleontological resources.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant with Mitigation Incorporated. No human remains are known to occur on the project sites. However, because previous investigations in the region which have resulted in the discovery of human remains are often associated with Native American habitation locales, there is the potential for human remains to be uncovered at the project sites during ground disturbing activities. Disturbance of human remains would be a potentially significant impact. Implementation of Mitigation Measure CUL-2 would reduce this potentially significant impact to a less-than-significant level.

Mitigation Measure CUL-2

In accordance with the California Health and Safety Code, if human remains are uncovered during project-related ground-disturbing activities, the contractor and/or CDCR will immediately halt potentially damaging excavation in the area of the burial and notify the San Joaquin County Coroner and a professional archaeologist to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). Following the coroner's findings, the property owner, contractor or project proponent, an archaeologist, and the NAHC-designated Most Likely Descendent (MLD) shall 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 5097.9.

Upon the discovery of Native American remains, CDCR will ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards and practices) is not damaged or disturbed by further development activity until consultation with the MLD has taken place. The MLD shall have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. Assembly Bill 2641 (signed into law in 2006) suggests that the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. AB 2641(e) includes a list of site protection measures and states that the landowner shall comply with one or more of the following:

- ▶ Record the site with the NAHC or the appropriate Information Center
- ▶ Utilize an open-space or conservation zoning designation or easement
- ▶ Record a document with the county in which the property is located

If the NAHC is unable to identify a MLD or the MLD fails to make a recommendation within 48 hours after being granted access to the site, the landowner or their authorized representative will rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. The landowner or their authorized representative may also reinter the remains in a location not subject to further disturbance if they reject the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Adherence to these procedures and other provisions of the California Health and Safety Code and AB 2641(e) will reduce potential impacts to human remains to a less-than-significant level.

3.6 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A geotechnical report was prepared for the proposed project in early 2008 and is available for review (see Chapter 1, “Introduction”). In addition, a geotechnical report was prepared for another project at the CMF in 2004. A portion of the following discussion is based on the analyses contained in these reports.

ENVIRONMENTAL SETTING

The project area is located at the western edge of the Great Valley Geomorphic Province of California. The 64-bed ICF site is approximately 800 feet from the foot of the Vaca Mountains to the west. The topography levels out in the project vicinity with the 64-bed ICF site roughly between an elevation of 155 and 145 (Terraserver USA 2005). The project area is underlain by Holocene alluvium (Wagner, et al. 1987) and consists of the Brentwood clay loam (NRCS 1977) soil type. This soil is well drained with very slow runoff, and the erosion hazard is slight. In addition, more than 100 feet below the project sites, the bedrock strata of the Great Valley Sequence extends 275 miles along the western margin of the Great Valley and east of the Vaca Mountains in the project vicinity.

As discussed in Section 2.7, “Environmental Protection,” CDCR has incorporated water quality protection and earthquake-resistant design into the project description. CDCR would retain a California registered civil engineer to prepare a Storm Water Pollution Prevention Plan (SWPPP). In addition, CDCR would design and implement a drainage plan prepared by a registered civil engineer as part of the proposed project. The plan would be designed to safely retain, detain, and/or convey storm water runoff through the project site. Erosion and sediment control measures could include the use of detention basins, berms, swales, wattles, and silt fencing. CDCR would also require preparation of a geotechnical investigation report by a registered geotechnical engineer for the proposed 64-bed facility. The geotechnical investigation would include strategic soil borings that provide information on soil strata at the project site, including the depth at which native soils are encountered. To reduce potential hazards at the project site related to seismic activity, liquefaction, differential settlement, unstable soils, and soil corrosivity, CDCR would implement the necessary design and construction recommendations contained in the geotechnical report.

DISCUSSION

- a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

Less-than-Significant Impact. The Alquist-Priolo Act (Public Resources Code Sections 2621–2630) was passed in 1972 to mitigate the hazard of surface faulting to structures designed for human occupancy. Surface rupture is an actual cracking or breaking of the ground along a fault during an earthquake. Structures built over an active fault can be torn apart if the ground ruptures. Surface ground rupture along faults is generally limited to a linear zone a few yards wide. The Alquist-Priolo Act was created to prohibit the location of structures designed for human occupancy across the traces of active faults, thereby reducing the loss of life and property from an earthquake.

There are no active faults (i.e., having surface displacement within the last 10,000 years,) underlying the project area as shown in the most recent Alquist-Priolo Earthquake Fault Zoning Map.

An active tectonic boundary between the Sierra Nevada basement and the Coast Ranges lies buried beneath the entire western edge of the Great Valley. This system of faults is generally referred to as the Great Valley Fault. The project sites lie within Segment 4 of the Great Valley Fault. The most recent substantial event on the Great Valley Fault zone was the 1983 Coalinga earthquake (Fugro 2008) of magnitude 6.4, which caused the most severe damage in the City of Coalinga, California (USGS 2008), approximately 175 miles southeast of the project site. The Great Valley Fault is associated with a type of fault known as “blind thrust,” which typically have epicenters located approximately 1.2 to 3.1 miles below the surface and do not normally cause ground rupture.

The Vaca Fault is mapped approximately one-third mile west of the project site (Wagner, et al. 1987). The Vaca Fault has been identified as a possible source of the 1892 Vacaville-Winters earthquake. This earthquake had an estimated Richter magnitude of 6.4 and was centered in the English Hills area approximately seven miles north of the project sites. Although there is evidence that the Vaca Fault may be active, because surface ground rupture only occurs in a linear zone a few yards wide, surface rupture along the Vaca Fault would not adversely affect the project sites except, potentially, through ground shaking (see discussion below).

Because there are no active faults designated on the Alquist-Priolo Fault Zone maps underneath or adjacent to the project sites, the Great Valley Fault is a blind thrust fault that does not normally result in surface ground rupture,

and any surface ground rupture along the Vaca Fault would be located one-third mile west of the project sites, this impact is considered less than significant.

ii) Strong seismic ground shaking?

Less Than Significant with Mitigation Incorporated. Ground shaking, motion that occurs as a result of energy released during faulting, could result in damage or collapse of buildings and other structures, depending on the magnitude of the earthquake, the location of the epicenter, and the character and duration of the ground motion. Other factors that determine the amount of potential damage from strong seismic ground shaking are the characteristics of the underlying soil and rock, the building materials used, and the workmanship of the structure.

Ground motions from seismic activity can be estimated by probabilistic method at specified hazard levels. These levels are determined by projecting earthquake rates based on earthquake history and fault slip rates (CGS 2007). Ground shaking is expressed in terms of peak ground acceleration (pga) using a percentage of gravity (g) or a percentage of the earth’s normal gravitational strength. The intensity of ground shaking depends on the distance from the earthquake epicenter to the site, the magnitude of the earthquake, site soil conditions, and the characteristic of the source. According to the California Building Standards Code (CBC), the project area is located in Seismic Zone 4. This location implies a minimum horizontal acceleration of 0.4g for use in earthquake resistant design.

Table 3-4 Active Faults in the Project Vicinity			
Fault	Approximate Distance from the Project Site (miles)	Fault Type ¹	Maximum Moment Magnitude ²
Great Valley	0	B	6.6
Vaca Fault	0.3	— ³	— ³
Great Valley	2	B	6.5
Concord – Green Valley	9.9	A	6.2
Hunting Creek – Berryessa	14.9	B	7.1
West Napa	18	B	6.5
Dunnigan Hills	20	— ³	— ³
Greenville	24.2	B	6.6
Rodgers Creek	25.7	A	7.0
Hayward	30.1	A	7.1
Notes:			
¹ Designations from California Probabilistic Seismic Hazard Maps. Faults with an A classification are capable of producing large magnitude (M) events (M greater than 7.0), have a high rate of seismic activity (e.g., slip rates greater than 5 millimeters per year), and have well-constrained paleoseismic data (e.g., evidence of displacement within the last 700,000 years). Class B faults are those that lack paleoseismic data necessary to constrain the recurrence intervals of large-scale events. Faults with a B classification are capable of producing an event of M 6.5 or greater.			
² The moment magnitude scale is used by seismologists to compare the energy released by earthquakes. Unlike other magnitude scales, it does not saturate at the upper end, meaning there is no particular value beyond which all earthquakes have about the same magnitude, which makes it a particularly valuable tool for assessing large earthquakes.			
³ Not calculated by the California Geological Survey.			
Sources: Jennings 1994, Petersen et al. 1996			

Peak horizontal ground acceleration with 10 percent probability of being exceeded in 50 years or 100 years was calculated for firm rock, soft rock, and alluvium in percentage of gravity. According to Fugro West, Inc. (2008)

calculations, the project site has a peak ground acceleration of 0.56g for an event having a 10 percent chance of occurring within a 50-year timeframe and 0.71g for a 10 percent chance of occurring within a 100-year timeframe.

Earthquake activity along any of the active faults listed in Table 3-4 above could produce strong seismic ground shaking at the project sites. Further, in 1892, a Richter magnitude 6.5 earthquake caused considerable damage to the communities of Vacaville, Dixon, and Winters (Bennett 1987). Various potential fault locations have been theorized for the epicenter of that earthquake, including the Great Valley Seismic Source Zone to the west of the project site, as well as the Vaca Fault (Sims et al. 1973). Because several active faults are located within the regional vicinity of the CMF, project sites could be subjected to strong seismic ground shaking in the event of an earthquake.

Implementation of the following mitigation measure would reduce any potentially significant seismic ground shaking impacts to less-than-significant levels:

Mitigation Measure GEO-1

Before the approval of grading plans for all project phases, CDCR will have a final geotechnical subsurface investigation report prepared for the proposed project. The final geotechnical engineering report will address and make recommendations on the following:

- ▶ site preparation;
- ▶ appropriate sources and types of fill;
- ▶ potential need for soil amendments;
- ▶ road, pavement, and parking areas;
- ▶ structural foundations, including retaining wall design;
- ▶ grading practices;
- ▶ erosion/winterization;
- ▶ special problems discovered on-site (e.g., groundwater and expansive/unstable soils); and
- ▶ slope stability.

The final geotechnical investigation will include subsurface testing of soil and groundwater conditions and determine appropriate foundation designs that are consistent with the CBC. The final geotechnical investigation will also make recommendations for earthquake resistant design. If the soils report indicates the presence of critically expansive soils or other soil problems that would lead to structural defect if not corrected, additional investigations may be required before construction activity may begin. This will be noted on the project grading plans. Recommendations contained in the geotechnical engineering report will be noted on the grading plans and implemented as appropriate before construction activity begins. Design and construction of all new development in all phases of the project will be in accordance with the CBC. CDCR is responsible for providing for engineering inspection and certification that earthwork has been performed in conformity with recommendations contained in the report.

iii) **Seismic-related ground failure, including liquefaction?**

Less Than Significant with Mitigation Incorporated. Liquefaction is a process by which water-saturated materials (including soil, sediment, and certain types of volcanic deposits) lose strength and may fail during strong ground shaking. Liquefaction occurs when granular material is transformed from a solid state into a liquefied state as a consequence of increased pore-water pressure. Liquefaction is most commonly induced by strong ground shaking associated with earthquakes. In some cases, a complete loss of strength occurs and catastrophic ground failure may result. Factors determining the liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. According to a draft geotechnical report prepared by Fugro West, Inc. (2008), the potential for settlement of foundations from

liquefaction would be between 2 and 5 inches. Because the borings performed in the draft report do not provide a complete analysis of the potential for dynamic settlement, seismic-related ground failure and liquefaction impacts are considered potentially significant. Implementation of Mitigation Measure GEO-1 would reduce this impact to a less-than-significant level.

iv) Landslides?

Less-than-Significant Impact. The topography on the project sites is flat. The 64-bed ICF site is within approximately 800 feet to 0.5 mile from the toe of the slopes of the Vaca Mountains, which show varying indications of moderate to high susceptibility to debris flows and landslides. However, actual mapped debris flows and landslides are relatively few in the adjacent highland areas (Fugro West 2008) and are not located immediately adjacent to the project site. Therefore, because the project sites are flat and are located approximately 800 feet to 0.5 mile from the foot of the Vaca Mountains, potential landslide impacts are considered less than significant.

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

Less-than-Significant Impact. The proposed 64-bed ICF would be constructed on approximately 7 acres of an abandoned orchard and additional parking on the northeast side of the project site would cover approximately 2 acres. Surface soils at the project sites are composed of the Brentwood clay loam 0 to 2% slopes (NRCS 1977). This soil is well drained with very slow runoff and the erosion hazard is slight. Because construction would disturb 1 acre or more of land, CDCR would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit administered by the State Water Resources Control Board (SWRCB). Dischargers subject to the SWRCB's NPDES general permit for construction activity must develop and implement a SWPPP (see Section 2.7.1, "Water Quality Protection."). The SWPPP includes a site map and description of construction activities and identifies the Best Management Practices (BMPs) that would be employed to prevent soil erosion and discharge of other construction-related pollutants (e.g., petroleum products, solvents, paints, cement) that could contaminate nearby water resources. A monitoring program is generally required to ensure that BMPs are implemented according to the SWPPP and are effective at controlling discharges of stormwater-related pollutants. Compliance with NPDES permit requirements would ensure that potential impacts from soil erosion would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less-than-Significant Impact. According to Fugro West, Inc. (2008), the project site is generally underlain by 30 feet of stiff to hard, lean clay and silt with varying amounts of sand. Between 30 and 50 feet is interbedded loose to dense clayey sand and silty sand. Between 50 and 75 feet is hard fat clay. The deep borings excavated in 2003 (España 2004) indicated similar conditions. Permanent groundwater is expected to be 100 feet below the existing ground surface and excavations less than about 10 to 15 feet deep are not expected to encounter groundwater (Fugro West 2008). Thus, because the project site is underlain by stable soils and because groundwater is not expected to be encountered during excavation for project-related improvements, these impacts are considered less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?

Less Than Significant with Mitigation Incorporated. Expansive soils are soils that swell when subjected to moisture. Shrink/swell potential is the relative change in volume to be expected with changes in moisture content; that is, the extent to which the soil shrinks as it dries or swells when it gets wet. The extent of shrinking and

swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils can cause damage to building foundations, roads, and other structures.

The project site soils consist of Brentwood clay loam and the geotechnical report by Fugro West, Inc. (2008) considered the expansion potential of the soil at the project site to be low to medium. Because of this potential, damage to building foundations could occur without proper engineering controls. Implementation of Mitigation Measure GEO-1 would reduce this potentially significant impact to a less-than-significant level.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. Wastewater generated at CMF is discharged to the City of Vacaville's sewer system for conveyance to the City's Easterly Wastewater Treatment Plant for treatment and disposal. Because wastewater would not be treated at the project sites, project soils would not be used to treat raw wastewater. Therefore, impacts would not occur.

3.7 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

An environmental site assessment was prepared for the proposed project and is available for review (see Chapter 1, "Introduction"). As part of the site assessment, a visual inspection of the project area for hazardous materials was conducted on April 11, 2007 (ENSR 2007). A portion of the following discussion is based on that analysis.

ENVIRONMENTAL SETTING

Historical and Current Land Use

The proposed project area has been developed with agricultural crops from at least 1937 to the present. The 317-acre state-owned CMF site was converted from farmland to prison land uses in 1955. The proposed project sites (64-bed ICF building and parking area) would be located within the existing CMF property boundary, on approximately nine acres of abandoned orchard that is not used for agricultural purposes (see Exhibit 2-3). The CMF site is designated “Public/Institutional” under the *City of Vacaville General Plan* (1990).

Regulatory Agency Database Review

A computerized database search of various agency lists was conducted for the project sites and surrounding area to identify potential hazardous contamination sites. The CMF site is not listed as a Resource Conservation and Recovery Act (RCRA) generator of hazardous wastes according to the U.S. Environmental Protection Agency’s (EPA) Envirofacts database (EPA 2008). Also, the project sites are not listed on the California Department of Toxic Substances Control’s (DTSC) Hazardous Waste and Substances List (DTSC 2008) or the U.S. EPA’s Superfund National Priorities List (EPA 2008).

The CMF is listed as an active Leaking Underground Storage Tank (LUST) cleanup site (SWRCB 2008). A release of diesel fuel or gasoline was discovered in November 1986 near the maintenance building garage, located approximately 750 feet southeast of the proposed 64-bed ICF site. The USTs associated with the release were removed in 1988 and 1990, and contaminated soil was excavated and disposed of at an approved facility (ENSR 2007). A subsurface investigation of the site was performed in 2001 to define the extent of any impact to the soil and groundwater, and included the installation of 5 monitoring wells. The Solano County Environmental Health Services Division recently requested that additional investigations be conducted to further assess potential soil and groundwater impacts in the area (Kaltreider, pers. comm., 2008). Based on historic information from quarterly groundwater monitoring reports as well as recent data, groundwater flow beneath the maintenance building garage area is to the east-southeast or northeast (Aveggio, pers. comm., 2008).

DISCUSSION

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

Less-than-Significant Impact. Construction and operation of the proposed project would involve the routine transport and handling of hazardous substances such as diesel fuels, lubricants, solvents, asphalt, etc. Handling and transport of these materials could result in the exposure of workers to hazardous materials. However, the proposed project would not create a significant hazard to the public or the environment because project construction and operation would be in compliance with applicable federal, state, and local laws pertaining to the safe handling and transport of hazardous materials, including California Division of Occupational Safety and Health (Cal-OSHA) requirements. For example, the California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires preparation of Hazardous Materials Business Plans and disclosure of hazardous materials inventories. A Business Plan includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). In addition, Cal-OSHA’s regulations for the use of hazardous materials in the workplace, as detailed in CCR Title 8, include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal-OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and

preparation of health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that Material Safety Data Sheets (MSDSs) be available to employees and that employee information and training programs be documented. Therefore, this impact would be considered less than significant.

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

Less-than-Significant Impact. Potential groundwater contamination in the project area is addressed in this IS/Proposed MND under Section 3.8, “Hydrology and Water Quality.” Construction of the proposed project would involve the use of heavy construction equipment, which uses small amounts of hazardous materials such as oils, fuels, and other potentially flammable substances that are typically associated with construction activities. However, CDCR would establish a construction staging area where hazardous materials would be stored during construction. The staging and construction areas would conform to requirements of the SWPPP described in Section 3.8, “Hydrology and Water Quality” of this document. Furthermore, CDCR would require the construction contractor to prepare an accidental spill prevention and response plan. During construction and future operations, CDCR and its construction contractor would employ best management practices for spill control and prevention. With prevention and management in place, potential impacts from construction- and maintenance-related accidental spills of hazardous materials would be considered less than significant.

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

No Impact. There are no existing or proposed schools within one quarter mile of the proposed project sites. The nearest school is approximately one half mile to the north. Therefore, no impacts would occur related to emissions or handling of hazardous materials in close proximity to schools.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less-than-Significant Impact. The CMF site is not listed as a RCRA generator of hazardous wastes according to the EPA’s Envirofacts database (EPA 2008). In addition, the CMF site is not listed on the DTSC’s Hazardous Waste and Substances List (DTSC 2008) or the U.S. EPA’s Superfund National Priorities List (EPA 2008).

The CMF is listed as an active Leaking Underground Storage Tank (LUST) cleanup site (SWRCB 2008). A release of diesel fuel or gasoline was discovered in November 1986 near the maintenance building garage, located approximately 750 feet southeast of the proposed 64-bed ICF site. Although the USTs associated with the release were removed and a subsurface investigation of the area was performed in 2001, the Solano County Environmental Health Services Division recently requested that additional investigations be conducted to further assess potential soil and groundwater impacts in the area (Kaltreider, pers. comm., 2008). However, any soil or groundwater contamination from the area would not impact the proposed 64-bed ICF site because groundwater flow beneath the maintenance building garage area is to the east-southeast or northeast, away from the 64-bed ICF site, and the proposed project does not include the installation of any wells.

As described in the environmental site assessment prepared for the proposed project, the project sites do not appear to present a Recognized Environmental Condition (REC) at the property, nor are any nearby sites (including the maintenance building garage area LUST sites) expected to have impacted the project sites (ENSR 2007). The term “recognized environmental condition” means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property

or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include “de minimis” conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions (ASTM 2008).

Because the maintenance building garage area LUST sites are located approximately 750 feet southeast of the proposed 64-bed ICF site; groundwater from the LUST sites flows away from the ICF site and the project does not include the installation of any wells; and no RECs are associated with ICF site; the proposed project would not create a significant hazard to the public or the environment, and impacts would be less than significant.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

No Impact. There are two airports in the project vicinity: Nut Tree Airport located approximately 4 miles north of CMF, and Travis Air Force Base located approximately 5 miles southeast of CMF. Because the proposed project sites are not located within an airport land use plan or within 2 miles of a public airport, there are no potential impacts.

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

No Impact. The proposed project sites are not located in the vicinity of a private airstrip.

- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

No Impact. The CMF has an Emergency Preparedness Plan tailored to the specific site needs of the institution, in compliance with the California Emergency Services Act of 1970. The plan specifies measures to be implemented within the facility during certain types of emergencies, such as fire, flood, earthquake, war, and civil disturbance. Employees are trained in the use of emergency equipment and medical aid for these situations. The proposed project would operate under the terms of the site’s existing Emergency Preparedness Plan. Therefore, implementation of the proposed project would not physically interfere with or impair implementation of the emergency response plan.

- h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

No Impact. The proposed project involves construction of a 64-bed ICF and a parking lot within the existing secure perimeter at CMF. The CMF is located in an area of moderate fire hazard according to the *City of Vacaville General Plan* (1990). Adequate fire protection is in place in the form of the City of Vacaville fire station on Alamo Drive west of Peabody Road, approximately one half mile from the proposed project area.

3.8 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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 (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed project sites are located in a mixed residential and agricultural area. Land areas adjacent to the proposed 64-bed ICF site consist of orchards to the northeast, northwest, and southwest, and the existing CMF to the southeast. The CMF site is located at an elevation of approximately 150 feet above mean sea level. The site topography generally slopes toward the east, where surface water drainage flows via naturally occurring surface contours to the swale located near the southeastern and southwestern portion of the 64-bed ICF site. There are no permanent natural or manmade surface water features on the proposed 64-bed ICF site, and the site is not located in a Federal Emergency Management Agency (FEMA) 100- or 500-year flood zone (ENSR 2007). No monitoring data or information exists to characterize typical stormwater surface runoff water quality at the CMF site.

DISCUSSION

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

Less-than-Significant Impact. Short-term adverse storm events can occur during the winter months, when the majority of precipitation occurs in the proposed project area. During construction of the new facilities, water quality impacts could therefore happen without proper controls, since construction activities would extend through the rainy season. Soil loosened during grading, spills of fluids or fuels from vehicles and equipment or miscellaneous construction materials and debris, if mobilized and transported offsite in overland flow, could degrade groundwater quality. In the event of heavy rainfall, flow from construction areas could flow off-site and reach nearby surface water drainage conveyances. Because the area of ground disturbance affected by construction of new facility infrastructure and construction staging areas would exceed one acre, the proposed project sites would be subject to the requirements of the statewide National Pollutant Discharge Elimination System (NPDES) stormwater permit for construction activity (Order 98-08 DWQ). In addition, a SWPPP would be prepared and implemented as part of the proposed project (see Section 2.7, “Environmental Protection”). Post-construction runoff would consist largely of rainfall runoff from the roof of the proposed 64-bed ICF and the new parking lot, and would be conveyed into the existing stormwater drainage system. Because preparing and implementing a SWPPP is part of the proposed project and a SWPPP would sufficiently lessen the impact of water quality degradation from project-related construction activities, and post-construction runoff would be conveyed into the existing stormwater drainage system, these impacts would be less than significant.

Less-than-Significant Impact. Wastewater from the CMF is discharged to a 12 inch sewer line east of the facility at Peabody Road in accordance with an industrial user permit with the City of Vacaville (City). Wastewater treatment is provided through the City’s Easterly Wastewater Treatment Plant. The plant is located east of Vacaville in Elmira, and is capable of treating an average dry weather flow (ADWF) of 15 million gallons per day (mgd). Currently, the plant treats an average of 7.8 mgd. CMF operations are in compliance with the industrial user permit and, as shown in Table 3-5, wastewater discharges are well below permitted effluent limitations (Vandermeij, pers. comm., 2008). The additional increment of wastewater generated by 64 additional inmates and 163 employees following implementation of the project would be small, relative to the total CMF population of approximately 3,000. Because the chemical characteristics of the additional wastewater flows would be expected to be similar to existing flows, and any potential changes would not be expected to appreciably change the overall concentrations because the increment of additional flow is small relative to the total (please see Section 3.16, “Utilities and Service Systems,” for additional information), additional wastewater flows would not exceed permitted effluent limitations and impacts would be less than significant.

Table 3-5 California Medical Facility Wastewater Monitoring Data		
Parameter	June 2008 Monitoring Data	Effluent Limitation¹
Biochemical Oxygen Demand (BOD)	145 mg/l	514 mg/l
Total Suspended Solids (TSS)	132 mg/l	474 mg/l
Monthly Average Flow	352,759 gallons per day	642,895 gallons per day

¹ City of Vacaville Industrial User Permit No. MA03 1209
Source: CDCR Industrial User Self Monitoring Report Data 2008

- b) 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 (e.g., the production rate of pre existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?**

No Impact. The proposed project would result in a small incremental increase in impervious surface in the form of the roof of the proposed 64-bed ICF building and expanded parking lot. The increase in impervious surface area would be negligible (i.e., approximately 3 acres) relative to the existing 317-acre CMF facility and would be expected to have a negligible impact on recharge to the local groundwater basin. In addition, no water wells would be constructed for the proposed project. Therefore, the proposed project would have no impact to groundwater supply.

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

Less-than-Significant Impact. As noted in b), the increase in impervious surface area would be negligible relative to the existing 317-acre facility. The proposed project would not result in physical alteration of the course of drainage at the site that would result in substantial on- or off-site erosion or siltation.

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

Less-than-Significant Impact. The proposed project would introduce minor changes in the adsorption rate, drainage patterns, and rate and amount of surface water runoff on the CMF site. The proposed collection system would be expected to result in a minor increase (i.e., 3 acres out of the current 317) in the current peak rate of storm water runoff into the existing drainage channels. Preliminary drainage plans have not yet been developed for the project. However, the small additional increment in runoff would not be expected to appreciably alter off-site drainage rates or flooding. Therefore, the proposed project would have a less-than-significant impact.

- e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

No Impact. See response to d) above.

f) Otherwise substantially degrade water quality?

No Impact. See response to d) above.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The 64-bed ICF site is not located in a 100-year floodplain.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

No Impact. The 64-bed ICF site is not located in a 100-year floodplain.

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

No Impact. There are no dams or detention basins upstream of the site.

j) Result in inundation by seiche, tsunami, or mudflow?

No Impact. The project sites are located approximately 30 miles inland from the Pacific Ocean and are approximately 150 feet above the average mean sea level, well above the 0- to 20-foot wave potential from a seiche or tsunami. There are no dams or detention areas upstream of the site.

3.9 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Land Use and Planning. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

This section describes the existing on-site and surrounding land uses and evaluates the project’s potential effect on existing land uses. As a state agency, the California Department of Corrections and Rehabilitation (CDCR) must consider any federal or state land use policies. However, CDCR is exempt from local plans, policies, and regulations.

Site and Vicinity Setting

The project sites are located less than one mile from the southern Vacaville city limit. The proposed 64-bed ICF would be bordered to the southeast by the CMF with the California State Prison (CSP) beyond, to the southwest by open space along the foothills of the Vaca Mountains, to the northwest by undeveloped CDCR land with the planned Montessa subdivision and Keating Park beyond, and to the northeast by undeveloped CDCR land, Al Patch Park, and residences across California Drive (see Exhibits 2-2 and 3-1). Single family residences are north of California Drive and east of Peabody Road except for apartments due north of the proposed ICF, a storage facility west of them, a mobile home complex further west, a retail development due north of the proposed parking lot addition, commercial centers around California Drive and Peabody Road, and Foxboro Elementary School east of Peabody Road. The proposed ICF would have a buffer of undeveloped CDCR land that is at least 260 feet from Keating Park, which is the nearest land use outside CDCR property, and more than 1,130 feet from other land uses primarily north of California Drive as described above. Other land uses within one mile of the project site other than single family residences include Eugene Paden Elementary School to the north and Country Village Park to the east.

DISCUSSION

a) Physically divide an established community?

No Impact. The proposed project will not physically divide an established community. The CMF was established in 1955 and is surrounded by vacant hilly land (to the southwest), recreation areas (northwest and northeast), undeveloped CDCR land (to the west and north), and CSP Solano to the south. Primarily single family residential housing to the north and east of the proposed project site was built following construction of CMF. The proposed

project sites would be located on the existing prison grounds. Thus the project would not divide an established community and no impact would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed project sites are located on the grounds of the 317-acre CMF site (Exhibits 2-2 and 2-3). The CMF site is designated “Public/Institutional” under the *City of Vacaville General Plan* (1990), and is developed with a use that is consistent with this designation. The proposed 64-bed ICF and parking lot would be consistent with the general plan land use designation and zoning for the CMF site, and would not conflict with any adopted environmental plans, policies, or goals. Further, as a state project, CDCR is exempt from conformance with local general plan and zoning restrictions. Thus, there would be no impact.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed project includes the expansion of a lethal electrified fence at the CMF that is similar to those found at other state prisons in California. Impacts of the electrified fence on species covered by ESA and CESA, and migratory birds, were evaluated in 1999 when CDCR prepared a Habitat Conservation Plan (HCP) for the Statewide Electrified Fence Program. The USFWS issued a Threatened and Endangered Species Take Permit covering 62 wildlife species to CDCR for the project on June 12, 2002. The permit expires in the year 2052 (EDAW 2003). As described in Section 3.4, “Biological Resources,” CDCR has considered the requirements of the Statewide Electrified Fence HCP, and will adopt applicable mitigation measures.

No other local, regional, or state habitat conservation plans that include the project site have been adopted. Although the *Draft Solano County Multi-Species Habitat Conservation Plan* may be applicable to the project area in the future, that plan has not yet been adopted, and therefore would not apply to the proposed project. Potential burrowing owl impacts are addressed in Section 3.4, “Biological Resources.” Therefore, no impacts would occur.

3.10 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The project site is underlain by Holocene alluvium (Wagner, et al. 1987) and consists of the Brentwood clay loam (NRCS 1977) soil type. In addition, more than 100 feet below the project site, the bedrock strata of the Great Valley Sequence extends 275 miles along the western margin of the Great Valley and east of the Vaca Mountains in the project vicinity.

DISCUSSION

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The California Division of Mines and Geology (CDMG) has classified the project site as an MRZ-1 zone, where Dupras (1988) describes MRZ-1 “adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.” Because the project site does not contain a source of economically valuable mineral deposits, project implementation would not result in a significant loss of mineral resources. Therefore, there would be no impact.

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

No Impact. According to the *City of Vacaville General Plan*, there are no known mineral resource recovery sites on the project site or in the project vicinity (Vacaville 2007). Therefore, there would be no impact.

3.11 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Noise. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed project area is located south of California Drive and west of Peabody Road in Vacaville, California (Exhibits 2-2 and 2-3). Mariposa Avenue provides direct access to the existing CMF site. Interstate 80 is located approximately 1 ½ miles northwest of the facility and serves as a regional roadway to the City of Vacaville and the prison.

Off-site noise-sensitive receptors include offices, single-family residences, multi-family residences and a learning center. Off-site noise sensitive receptors are located to the north of the proposed project area along California Drive, at a distance of approximately 1,300 feet, and to the west at a distance of approximately 1,600 feet.

Sound levels are presented in logarithmic decibels (dB). Unless noted otherwise, sound levels expressed as dB are A-weighted sound levels. The *City of Vacaville Noise Element of the General Plan* and the Vacaville Municipal Code contain noise standards for evaluating the compatibility of proposed new development with the existing or anticipated noise environment. For transportation noise sources, the City of Vacaville (City) has established exterior and interior noise standards of 60 dB L_{dn} (day-night noise level) and 45 dB L_{dn}, respectively. For non-transportation noise sources, the City has established hourly and maximum noise level standards for both daytime and nighttime hours. Specifically, residential uses shall not be exposed to non-transportation hourly noise levels

exceeding 50 dBA L_{eq} (equivalent noise level) and 45 dB L_{eq} or maximum noise levels exceeding 70 dB and 65 dB for daytime and nighttime hours, respectively (City of Vacaville 1999a, 1999b).

An ambient noise survey was conducted within the project area by EDAW on May 8, 2007. The purpose of the ambient noise survey was to establish existing noise conditions within the project vicinity. Short-term noise measurements were taken at public parks to the north (Keating Park) and northeast (Al Patch Park) of the existing facility (Exhibit 3-1). The two parks were unoccupied during the noise survey. A long-term 24-hour noise measurement was conducted in the backyard of a residence located at 1571 California Drive. Results of the noise survey are shown in Table 3-6. A complete listing of interval data and 24-hour calculations are included as Appendix C of this IS/Proposed MND.

Table 3-6 Summary of Ambient Noise Measurements									
Short Term Noise Measurements									
	Location	Time	A-Weighted Decibel Sound Level						
			L_{eq}	L_{min}	L_{max}				
1	Keating Park – Southeast corner	1:00–1:15 p.m.	42.8	38.4	50.2				
2	Al Patch Park – Central west area	1:35–1:50 p.m.	46.4	42.4	56.0				
Long Term Noise Measurement									
LT-A ¹ CNEL	Average Hourly Daytime (7:00 a.m.– 7:00 p.m.)			Average Hourly Evening (7:00 p.m.– 10:00 p.m.)			Average Hourly Nighttime (10:00 p.m.–7:00 a.m.)		
	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
53.4	47.9	46.2	61.9	47.0	45.4	62.1	46.5	44.3	62.1
Notes: L_{eq} = energy-equivalent noise level; L_{min} = minimum noise level; L_{max} = maximum noise level; CNEL = community noise equivalent level; L_{50} = noise level exceeded 50% of the time period; LT = Long Term									
¹ Residential site located at 1571 California Drive.									
Source: May 8, 2007 Noise Survey Conducted by EDAW.									

DISCUSSION

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?**

Short-Term Construction Noise

On-Site Construction Activity

Less Than Significant with Mitigation Incorporated. Construction generally occurs in several discrete phases; each phase requires a specific complement of equipment with varying equipment type, quantity, and intensity. These variations in the operational characteristics of the equipment change the effect they have on the noise environment in the project vicinity. The effect of construction noise largely depends on the construction activities being performed on a given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment at the receptors.

The site preparation phase typically generates the highest noise levels due to on-site equipment associated with grading, compacting, and excavation. Specific equipment used during site preparation includes backhoes,

bulldozers, and loaders; excavation equipment such as graders and scrapers; and compaction equipment. Erection of large structural elements and mechanical systems could require the use of a crane for placement and assembly tasks, which may also generate substantial noise levels. Although a detailed construction equipment list is not currently available, it is expected that the primary sources of noise would include backhoes, compressors, bulldozers, excavators, and related equipment. Table 3-7 depicts the noise levels generated by various types of construction equipment.

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 tasks (e.g., jack hammers, power saws, pumps). Accordingly, 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 also typified by short periods of operation at full power followed by extended periods of operation at lower power, idling, or powered-off conditions. To more accurately account for variations in equipment power expenditures, “usage factors” based on duty cycle are applied to reference noise levels.

**Table 3-7
Construction Equipment Noise Emission Levels**

Equipment Type	Typical Noise Level (dB) at 50 feet	Usage Factor
Concrete Saw	90	20
Hoe Ram Extension	90	10
Jack Hammer	89	20
Grader	85	40
Pneumatic Tools	85	50
Scraper	84	40
Compactor	83	20
Concrete Breaker	82	20
Dozer	82	40
Concrete Pump	81	20
Crane, Mobile	81	16
Generator	81	50
Water Pump	81	50
Front-end Loader	79	40
Air Compressor	78	40
Backhoe	78	40
Asphalt Paver	77	50
Trucks	74-81	40

Notes: Assumes all equipment fitted with properly maintained and operational noise control device, per manufacturer specifications.
dB = A-weighted decibels

Source: Data Compiled by EDAW 2008; Federal Transit Administration 2006; Bolt, Beranek, and Newman 1981

As indicated in Table 3-7, operational noise levels for typical construction activities would range from 74 dB to 90 dB at a distance of 50 feet. Continuous combined noise levels generated by the simultaneous operation of the loudest pieces of equipment would result in noise levels of 93 dB at 50 feet. Accounting for the usage factor of

individual pieces of equipment, topographical shielding, and ground absorption effects, construction activities on the project site would be expected to result in hourly average noise levels of 88 dB L_{eq} at a distance of 50 feet. Maximum noise levels generated by construction activities are not predicted to exceed 93 dB L_{max} at 50 feet.

The closest off-site noise-sensitive receptors in the project vicinity are the single family residential dwellings located along California Drive, approximately 1,300 feet from the project boundary. Noise from localized point sources (such as construction sites) typically decreases by 6 to 7.5 dB with each doubling of distance from source to receptor. Conservatively assuming an attenuation rate of 6 dB per doubling of distance, construction operations and related activities are predicted to generate exterior hourly noise levels of 59.7 dB L_{eq} at the nearest off-site sensitive receptor when propagated from the acoustical center of construction operations. It should be noted that there is an existing orchard between the proposed site and nearest noise-sensitive receptors that would provide additional reduction in noise levels.

Based on the City's non-transportation standard, noise sources associated with construction activities are not considered to exceed the 50 dB L_{eq} for non-transportation sources. The existing noise level at the receiving property line is greater than 65 dB L_{dn} due to traffic noise (City of Vacaville 1999a). Table 10-4 of the *City of Vacaville Noise Element of the General Plan* states that if the existing noise levels exceed that of a proposed noise generator, these standards would not be applied to the new noise source unless the additional noise generated would increase the projected, combined noise levels a minimum of 3 dB (City of Vacaville 1999a). The combined noise level at the nearest receiving property line due to project construction and existing traffic noise is predicted to be 67 dB, or an increase of one decibel (an increase of less than 3 dB or more). However, construction activities occurring during the more noise-sensitive evening and nighttime hours could result in increased levels of annoyance and sleep disruption to occupants of these residences. Therefore, noise-generating construction activities that occur during the more noise-sensitive periods (7 p.m. to 7 a.m.) would be considered a potentially significant impact.

Because the proposed project would result in an exposure of persons to the generation of short-term construction noise levels in excess of standards established in the City general plan, this impact would be potentially significant. Implementation of the following mitigation measures would reduce construction-generated noise levels to a less-than-significant level:

Mitigation Measure NOISE-1

Noise-generating construction activities shall be limited to between the hours of 7:00 a.m. and 7:00 p.m.

Mitigation Measure NOISE-2

All construction vehicles or equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and acoustical shields or shrouds, in accordance with manufacturers' recommendations.

Mitigation Measure NOISE-3

Equipment engine doors or shrouds on motorized equipment shall be closed during equipment operation.

Mitigation Measure NOISE-4

When not in use, motorized construction equipment shall be turned off.

Off-site Construction-Generated Traffic

Less-than-Significant Impact. During the construction phase of the proposed project, the number of construction personnel would be expected to range from less than 5 to no more than 40 during peak operations. Conservatively assuming each worker arrives and departs the site twice per day, the number of passenger vehicle trips generated

during peak construction periods would not exceed 160 trips per day. In addition, construction related traffic would be expected to include the use of dump trucks, haul trucks, concrete trucks, and various deliveries of material and equipment occurring throughout the construction period. The number of construction related truck trips (one-way) would not be anticipated to exceed 20 trips per day for a total not to exceed 180 construction-related trips per day. Construction traffic would access the project site from California Drive and Mariposa Avenue. Based on a traffic volume increase of 180 trips per day, noise increases associated with project construction traffic would be less than 0.5 dB. A noise level increase of 3 dB is considered barely perceptible by an average healthy human ear; therefore, the addition of the construction-related vehicle trips in the project vicinity and resultant increase in traffic noise would not be perceptible, and construction-generated traffic noise levels would not exceed standards established by the City for transportation noise sources. As a result, construction-related traffic noise impacts would not result in an exceedance of City noise standards, and this impact would be less than significant.

Long-Term Operational Noise

On-Site Stationary-Source Noise

Less-than-Significant Impact. Long-term operation of the proposed facility would not involve the use of any major stationary noise sources or activities. Noise-generating equipment associated with the proposed facility would include a 500 kilowatt emergency backup generator and air ventilation equipment. In general, noise levels generated by building mechanical systems typically average between 55 and 85 dBA at 3 feet from the source (EPA 1971). Mechanical equipment is typically shielded from direct public exposure and housed on rooftops, within equipment rooms, or within exterior enclosures. The proposed emergency power generator would be located within an acoustic enclosure.

Noise-sensitive land uses in the vicinity of the project include residences located approximately 1,300 feet from the 64-bed ICF site. Based on this distance and assuming a maximum operational noise level of 85 dBA at 3 feet from the proposed facility, operational noise levels at the nearest residence would be less than 35 dBA. Consequently, stationary noise sources associated with the proposed project would not result in an exceedance of local noise standards, and impacts would be less than significant.

On-Site Traffic Noise

Less-than-Significant Impact. The proposed project also includes the addition of approximately 200 parking spaces located approximately 950 feet south of existing off-site noise-sensitive receptors. A typical single event noise level associated with parking is 72 dB at 50 feet. Assuming that each parking stall is filled and emptied once per hour (400 parking events), proposed project parking lot noise is expected to result in a noise level of 37 dBA at the nearest noise-sensitive receptor. Therefore, parking lot noise levels would not exceed the City's exterior or interior noise compatibility standards for residential dwellings, and impacts would be less than significant.

Off-Site Traffic Noise

Less-than-Significant Impact. The proposed project would require approximately 163 additional employees. Long-term operation of the proposed project would result in an increase in daily traffic volumes on the local roadway network and, consequently, an increase in noise levels from additional employees and other traffic sources along affected segments. The Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA- RD-77-108) was used to calculate traffic noise levels along affected roadways in the project vicinity. Average Daily Traffic (ADT) volumes, vehicle speeds, truck volumes and trip distribution estimates were obtained from the project traffic analysis (DKS 2008) and field observations. ADT volumes were calculated based on the traffic turning movements (AM Peak, PM Peak and Midday Peak Hour) using a multiplier of ten. Table 3-8 summarizes modeled L_{dn} noise levels at 100 feet from the roadway centerline for affected roadway segments in the project vicinity under existing and cumulative 2030 traffic scenarios, with and without project-generated traffic (see Appendix C for complete modeling inputs and results).

**Table 3-8
Predicted Traffic Noise Levels**

Roadway	Segment Location		L _{dn} at 100 Feet, dB ¹			
	From	To	No Project	Plus Project	Net Change	Significant Impact?
Existing Plus Project						
Alamo Drive*	Alamo Lane	Davis Street	65.1	65.2	0.1	No
Alamo Drive*	Alamo Lane	Mariposa Avenue	67.2	67.3	0.1	No
Alamo Drive	Mariposa Avenue	Peabody Road	69.0	69.0	0.0	No
Alamo Drive	Peabody Road	East of	68.4	68.4	0.0	No
California Drive	Alamo Lane	Mariposa Avenue	51.8	51.8	0.0	No
California Drive	Mariposa Avenue	Peabody Road	52.8	53.1	0.2	No
Peabody Road	Alamo Drive	California Dr.	66.3	66.4	0.0	No
Peabody Road	California Drive	South of	68.3	68.3	0.0	No
Mariposa Avenue	Alamo Drive	California Drive	57.0	57.1	0.1	No
Alamo Lane*	Alamo Drive	California Drive	52.0	52.1	0.1	No
Cumulative 2030 Plus Project						
Alamo Drive*	Alamo Lane	Davis Street	65.9	66.1	0.2	No
Alamo Drive*	Alamo Lane	Mariposa Avenue	68.1	68.1	0.0	No
Alamo Drive	Mariposa Avenue	Peabody Road	70.0	70.0	0.0	No
Alamo Drive	Peabody Road	East of	69.4	69.5	0.1	No
California Drive	Alamo Lane	Mariposa Avenue	57.4	57.4	0.0	No
California Drive	Mariposa Avenue	Peabody Road	57.2	57.3	0.0	No
Peabody Road	Alamo Drive	California Drive	67.9	67.9	0.0	No
Peabody Road	California Drive	South of	70.3	70.3	0.0	No
Mariposa Avenue	Alamo Drive	California Drive	49.8	50.3	0.5	No
Alamo Lane*	Alamo Drive	California Drive	51.8	52.8	1.0	No
Notes: dB = A-weighted decibels; L _{dn} = day-night average noise level						
¹ Traffic noise levels calculated at 100 feet from roadway centerline using the FHWA Traffic Noise Model based on traffic information (e.g., average daily traffic, vehicle speeds, roadway width) obtained from the data generated by DKS Associates used to prepare the traffic section for this report. Modeled estimates assume no natural or human-made shielding (e.g., vegetation, berms, walls, buildings). Refer to Appendix C for modeling input assumptions and output results.						
* AM Peak Hour turning movements used to calculate ADT; all other ADTs are based on PM Peak Hour turning movements.						
Source: Data modeled by EDAW 2008						

Based on volume, trip generation and distribution data from the traffic impact analysis report, project-generated traffic would increase traffic volumes by less than 1 percent on area roadways. To be considered noticeable, traffic noise must increase by at least 3 dB (Caltrans 1998). As shown in Table 3-8, the corresponding traffic noise increases of approximately 1.0 dB L_{dn} would be imperceptible. Thus, because project-generated traffic noise would increase by approximately 1 dB, traffic noise increases would not be considered noticeable and off-site traffic noise impacts would be less than significant.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact. Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. While effects of ground vibration may be imperceptible at low levels, they 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 structural damage.

A California Department of Transportation (Caltrans) guideline recommends a standard of 0.2 inches per second (in/sec) peak particle velocity (PPV) for the protection of normal residential buildings and 0.08 in/sec PPV for the protection of old or historically significant structures (Caltrans 2004). With respect to human response for residential uses (i.e., annoyance), the Federal Transit Administration recommends a maximum acceptable vibration standard of 80 velocity decibels (VdB) (Federal Transit Administration 2006).

Ground vibration levels associated with various types of construction equipment are summarized in Table 3-9.

Table 3-9 Representative Vibration Source Levels for Construction Equipment			
Equipment		PPV at 25 feet (in/sec) ¹	Approximate L _v (VdB) at 25 feet ²
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58
¹ Where PPV is the peak particle velocity. ² Where L _v is the velocity level in decibels (VdB) and based on the root mean square (RMS) velocity amplitude. Source: Federal Transit Administration 2006.			

The proposed project would not involve the use of any equipment or processes that would generate potentially high levels of ground vibration, such as pile drivers. Construction operations associated with the proposed project would be anticipated to include backhoes, loaders, compactors, and trucks; no pile driving would occur. Ground vibration generated during construction would be primarily associated with on-site truck activity. As shown in Table 3-9, trucks typically generate vibration levels of less than 0.08 in/sec PPV or 86 VdB at 25 feet. At the CMF (located at least 200 feet from the 64-bed ICF site), anticipated vibration levels would not be expected to exceed the recommended standards of 0.2 in/sec PPV or 80 VdB and therefore, there would be no potential for structural damage or annoyance to persons. Because the temporary construction vibration associated with on-site equipment would not be anticipated to expose sensitive receptors to or generate excessive groundborne vibration or groundborne noise levels, this impact would be considered less than significant.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-than-Significant Impact. As discussed in a) above, on-site operational noise levels attributable to the proposed project are not anticipated to exceed applicable noise standards and/or result in a noticeable increase (i.e., 3 dB or greater) in average daily ambient noise levels. Noise from the parking lot expansion, HVAC equipment, and other on-site stationary noise sources would not adversely affect nearby off-site sensitive receptors, including the single family residences located approximately 1,300 feet north of the project boundary. Thus, the long-term operational noise associated with on-site sources would not be anticipated to result in a substantial permanent increase in ambient noise levels in the proposed project area.

In addition, as discussed in a), the long-term operational noise associated with off-site traffic would not be anticipated to result in a noticeable increase (i.e., 3 dB or greater) in average daily ambient noise levels along any roadway segment in the project area. Thus, the long-term operational noise associated with off-site traffic is not anticipated to result in a substantial permanent increase in ambient noise levels in the proposed project area. As a result, the permanent increase in ambient noise levels in the project vicinity would not be substantial, and would be considered a less-than-significant impact.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant with Mitigation Incorporated. As discussed in a) above, construction activities associated with the project could temporarily increase noise levels in the area. The L_{max} noise standard for the City is 70 dB at the receiving property line. Maximum exterior noise levels would be approximately 93 dB L_{max} in the vicinity of the project site and approximately 64.7 dB L_{max} at the nearest off-site residence. Depending on the activities being performed, as well as the duration and hours during which activities occur, construction-generated noise levels could result in a substantial increase in ambient noise levels at nearby noise-sensitive receptors. As a result, noise-generating construction activities would be considered to have a potentially significant short-term impact. Implementation of Mitigation Measures NOISE-1 through NOISE-4 would reduce this impact to a less-than-significant level.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project sites are not located within two miles of an airport land use plan or in the vicinity of a public airport. The nearest airport, Nut Tree Airport, is located approximately 3 miles northeast of the project site. The nearest private airport is Travis Air Force Base, located approximately 4 miles southeast of the project area. Thus, the proposed project would not result in the exposure of people residing or working in the project area to excessive airport noise levels. As a result, the proposed project would have no impact with respect to airport noise.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project sites are not located within two miles of an airport land use plan or in the vicinity of a private airstrip. Thus, the proposed project would not result in the exposure of people residing or working in the project area to excessive noise levels because of aircraft activity at private airports. As a result, the proposed project would have no impact with respect to airport noise.

3.12 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Population and Housing.	Would the project:				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The CMF site is designated “Public/Institutional” under the *City of Vacaville General Plan* (1990). The proposed project, which would add 64 additional inmate beds, is consistent with this land use. The proposed facilities would only be accessed by inmates and staff at the correctional facility and would not serve any off-site development. Zip code data provided by CDCR indicates that existing CMF employees reside in several jurisdictions throughout the region (Table 3-10).

Jurisdiction	Current Employee Residence		Expected Distribution of Transferred Employees		Number of New Households ^c		Transferred Employees & Family Population ^d	
	Number	Percentage	75 % ^a	100 % ^b	75%	100%	75%	100%
Vacaville	772	35	43	57	38	50	114	150
Sacramento	397	18	22	29	19	25	57	75
Elk Grove	155	7	9	11	8	10	24	30
Fairfield	132	6	7	10	6	9	18	27
Other ^e	751	34	41	56	36	49	108	147
Total	2,207	100	122	163	107	143	321	429

^a Assumes 75% of all 163 new employees will relocate to the region.
^b Assumes 100% of all 163 new employees will relocate to the region.
^c Assumes a household size of 1.14 employees per household.
^d Assumes a household size of 3.00 persons.
^e Other includes jurisdictions that represented 5% or less of total employee population.
Source: CDCR CMF Employee Zip Code Data 2007

The City of Vacaville (City) has expressed concern that additional CMF inmates would induce people to move to Vacaville to be close to their incarcerated relatives and friends, increasing the City's population and further straining City housing programs. However, the City does not collect information as to why someone has moved to the City, or whether or not they have a friend or relative in prison (Kuhn, pers. comm., 2007). Assuming one-quarter of the project's 64 inmates induced people to move to the City, the City's population would increase by approximately 16 households or 42 people (64 inmates x 0.25 x 2.65 persons per household). With a population of 87,171, 42 additional people would increase the population of the City by 0.05 % (U.S. Census 2006). Because the proposed project would add a relatively small number of inmates and could increase the population of the City by 0.05%, additional inmates would not induce substantial visitor-related population growth in the area, and potential inmate visitor relocation impacts are not evaluated further in this IS/Proposed MND.

DISCUSSION

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less-than-Significant Impact. Implementation of the proposed project would require a maximum of 163 additional employees, some of which are projected to be new to the region. Because many of these new employment positions require a certain level of experience, relocation to the project area from outside the region by some existing correctional staff would be expected. Based on information collected for similar CDCR facilities, CDCR conservatively estimates that approximately 75% of new employment positions at correctional facilities are filled by personnel located outside the local area. Therefore, it is anticipated that approximately 75% of the new 64-bed ICF employees would come from outside the local area. In addition, it is anticipated that the majority of new employees who move to the region would bring their families.

The 64-bed ICF project site is located adjacent to the existing CMF in the City. Based on CDCR zip code data for existing CMF employees, future employees are most likely to reside in the following cities: Vacaville, Sacramento, Elk Grove and Fairfield. Based on employee data from other CDCR institutions, it is assumed that the average household size for CDCR employees is 3.00 persons, and that for each correctional facility employee household, an average of 1.14 people in that household work at the correctional facility (CDCR 1995). As shown in Table 3-10, if 75% of new employment positions at the project site are filled by personnel located outside the local area, implementation of the project would result in an increase of 321 persons and 107 households in the communities listed above. If 100% of new project-related employees and their families relocated to the area from outside the region, implementation of the project would result in an increase of 429 persons and 143 households. For both scenarios, persons and households would likely be distributed throughout the various jurisdictions similar to current conditions.

It is anticipated that the 163 new employees and their families would relocate to the region in 2011 and 2012. Between 2000 and 2006, the population of Solano County grew by approximately 28,306 persons to 422,848, and additional population increases are anticipated through 2020 (California Department of Finance 2006) and beyond. Assuming the population of Solano County grows by another 28,306 persons between 2006 and 2012 (same rate as the prior 6 years), Solano County would have a total population of 451,154 in 2012. If 75% of new project-related employees and their families relocate to the county by 2012, the project would contribute less than 1 ¼ % (321 persons divided by 28,306 persons) of the anticipated 2006 to 2012 population growth in Solano County. Neighboring Sacramento County is expected to grow by 218,291 persons between 2000 and 2010 (California Department of Finance 2007). Assuming the population of Sacramento County grows by an average of 21,829 persons per year, Sacramento County would add 43,658 persons in 2011 and 2012. If 100% of the new employees and their family members relocate to Sacramento County, the project would contribute less than 1% of the estimated population growth in 2011 and 2012.

In 2005, there were 134,624 occupied housing units in Solano County, and the vacancy rate was approximately 8.2%. Between 2000 and 2005, the number of occupied housing units in the county increased by 4,221 units, or approximately 844 units per year. During that same time period, the vacancy rate increased from 3.1% to 8.2% (U.S. Census 2005). The proposed project could result in the addition of up to 143 new households throughout the region. If growth trends continue as in the past, these 143 new households would account for a small fraction of existing and expected housing stock in Solano County and would not constitute substantial population growth. In addition, the increasing vacancy rate in the county indicates that adequate housing is available. Between 2000 and 2035, Sacramento County is expected to grow by approximately 265,749 new homes (Sacramento Area Council of Governments 2007). In 2000, Sacramento County had a total of 466,929 housing units (Sacramento Area Council of Governments 2002). Up to 143 new households in Sacramento County would account for a small fraction of existing and expected housing stock and also would not constitute substantial population growth.

Assuming 35% of new employees reside in the City of Vacaville (similar to current conditions), and 100% of new project-related employees and their families relocated to the area from outside the region, implementation of the project would result in an increase of 150 persons and 50 households. With a population of 87,171, an increase of 150 people would increase the population of the City by less than 1%. Furthermore, assuming a 2.8% vacancy rate in 2011 and 2012 (U.S. Census 2006), adequate housing would be available to accommodate 50 additional households.

In summary, the proposed project would not contribute to substantial population growth in the region as a result of employee relocation from outside the region. Projected growth estimates for the region indicate population increases through the year 2030, and new employees and their families would account for only a small fraction of the forecasted population growth. In addition, an analysis of existing and anticipated housing units in Solano and Sacramento counties and the City of Vacaville indicates that the housing supply is adequate to accommodate the 143 new households distributed throughout various regional jurisdictions. Because new employees and their families would contribute a small fraction of the forecasted population growth in Solano and Sacramento counties, and new households would account for a small fraction of existing and anticipated housing stock in the region, project-related regional population increases are not considered substantial enough to necessitate new homes or infrastructure, and impacts would be considered less than significant.

b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project sites would be placed next to the existing CMF in an abandoned orchard, and the sites are located within the perimeter of the existing CMF property and would not displace any existing homes. Therefore, no impact would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project sites would be placed next to the existing CMF in an abandoned orchard, and the sites are located within the perimeter of the existing CMF property and would not displace any people. Therefore, no impact would occur.

3.13 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or 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 for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

Emergency Response Services

The Vacaville Fire Department (VFD) provides fire suppression, rescue, hazardous materials and non-fire emergency response services for the City of Vacaville (City). In addition, the VFD provides emergency medical services (EMS) for the City and surrounding area, including advanced and basic life support transport service. The VFD also provides code enforcement, fire and life safety public education and fire investigation services for the City (City of Vacaville 2007). The VFD provides EMS and ambulance transport services to the CMF.

The VFD currently has four stations: Station 71 on South Orchard Avenue in the northwest, Station 72 on Ulatis Drive in the east, Station 73 on Eubanks Court in the Interchange Business Park, and Station 74 on Alamo Drive in the south. VFD has a staff of 82 people providing services 24 hours per day. A total of 69 emergency response personnel work on three operation shifts, with a minimum daily shift staffing of 19 emergency response personnel plus one Battalion Chief. This staffing goal is met in most areas of the City. The Department is currently able to dispatch three engines, one truck, one medic unit and one Battalion Chief to reported incidents. All engines are Class A pumpers capable of pumping 1,500 gallons per minute. Other emergency vehicles prepared to combat fire include a wildland fire apparatus, a 3,000 gallon water tender and a medium-rescue squad unit (City of Vacaville 2004). The VFD has established an emergency response standard of arriving at critical fire and medical calls within seven minutes, 90% of the time.

The City has raised concerns about an existing reimbursement mechanism between the City and the State of California (Kuhn, pers. comm., 2007). According to the City, the current ambulance transport fee schedule does not provide full cost recovery for City-provided ambulance transport and EMS services that are provided to CMF. As a result, the City covers some of the cost for these services. Because reimbursement matters are administrative in nature and not environmental, this issue is not evaluated further in this IS/Proposed MND.

DISCUSSION

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or 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 for any of the public services:**

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

Less-than-Significant Impact. The Vacaville Fire Department (VFD) currently provides emergency services to the CMF. The VFD would continue to provide emergency services to the proposed 64-bed ICF. Additional CMF inmates could potentially increase emergency response calls to the VFD and decrease the VFD's ability to maintain the current level of emergency service without a decrease in response times to the Vacaville community (Kuhn, pers. comm., 2007). This impact would be potentially significant if construction of the proposed project would require the VFD to construct new facilities or alter existing facilities to maintain its performance objectives, and the construction of those improvements would result in substantial adverse physical impacts. During the one year period ending June 30, 2008, the VFD responded to 356 (an average of 30 per month) medical-related emergency response calls at the CMF (Kendrick, pers. comm., 2008). Therefore, based on an inmate population of 3,047, the VFD receives approximately 0.01 monthly calls per inmate. The proposed project would increase the inmate population by 64 to approximately 3,111 inmates, increasing the number of monthly medical-related emergency response calls to 31.

The VFD currently has four stations and a staff of 82 people including a total of 69 emergency response personnel and a minimum daily shift staffing of 19 emergency response personnel and one Battalion Chief. Because the project would add a relatively small number of inmates, the VFD would receive one additional monthly medical-related emergency response call, and the VFD maintains four stations and 69 emergency response personnel, the proposed project would not require the VFD to construct new facilities or alter existing facilities to maintain its performance objectives (possibly resulting in substantial adverse physical impacts), and impacts would be less than significant.

CMF is a correctional facility that employs on-site staff to monitor inmates and visitors. The CDCR staffs correctional facilities with fully armed officers and handles all law enforcement needs at its facilities. Therefore, the proposed project would not interfere with local law enforcement agency services.

Because the proposed project would generate new employment opportunities, there would be a potential for growth-induced population increases and associated public services demands. Implementation of the proposed project would result in an increase of 163 new employees. As discussed in Section 3.12, "Population and Housing," based on actual employee distribution patterns of CDCR employees at CMF, approximately 35% of the 163 employees would be projected to live in the City of Vacaville, and approximately 18% would be projected to live in the City of Sacramento. Smaller percentages of employees would be projected to live in Elk Grove, Fairfield, and other cities. In addition, based on CDCR estimates, it is anticipated that approximately 75% of the new CMF employees would come from outside the local area, and 25% of the new employment positions would be filled by existing area residents. Because it is estimated that approximately 25% of the new employees would

come from the local area, and all new employees would be distributed among several cities and two counties throughout the region, increased public services demand in any one area would be low.

Assuming 35% of new employees reside in the City of Vacaville (similar to current conditions), and 100% of new project-related employees and their families relocated to the area from outside the region, implementation of the project would result in an increase of 150 people and 50 households. With a population of 87,171, an increase of 150 people would increase the population of the City by less than 1%. Furthermore, assuming a 2.8% vacancy rate in 2011 and 2012 (U.S. Census 2006), adequate housing would be available to accommodate 50 additional households. Demand for public services that may occur as a result of these 150 people would not be expected to result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities. Therefore, this impact would be less than significant.

The families of relocated employees would bring school-age children to the cities in which they relocate. This could result in overcrowding of school facilities, although given the expected wide distribution of employee residences (see Section 3.12, "Population and Housing,"), it is not expected that new residences would result in the demand for a full classroom in any school district in which they are located. Homes that are constructed in these communities would be subject to any adopted school impact fees, which are used to partially fund the construction of schools. Although these fees are not typically sufficient to fully fund construction costs, prior state legislation (SB 50) has deemed that payment of school fees is full mitigation of school impacts, under CEQA. Further, in addition to school impact fees, school districts have a variety of other funding sources that offset the cost of constructing new schools, including matching state funds and various local bond fund opportunities (although many require voter approval). Given the wide distribution of expected new employee residences, the relatively low number of residences in any one community, and the legislative finding that payment of school impact fees constitutes full funding of school impacts, impacts to schools would be less than significant.

3.14 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

Implementation of the proposed project would result in an increase of an estimated 163 new staff at the CMF. The CMF provides adequate on-site recreational facilities for its prison inmate population, and the proposed project would not affect those facilities.

DISCUSSION

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

Less-than-Significant Impact. Because the proposed project would generate new employment opportunities, there would be a potential for growth-induced population increases. Implementation of the proposed project would result in an increase of 163 new employees. As discussed in Section 3.12, “Population and Housing,” based on actual employee distribution patterns of CDCR employees at the CMF, approximately 35% of the 163 employees would be projected to live in the City of Vacaville (City), and approximately 18% would be projected to live in the City of Sacramento. Smaller percentages of employees would be projected to live in Elk Grove (7%) and Fairfield (8%). Approximately 34% of the 163 employees are expected to reside throughout the region in other jurisdictions.

In addition, based on CDCR estimates, it is anticipated that approximately 75% of the new CMF employees would come from outside the local area, and 25% of the new employment positions would be filled by existing area residents. Assuming 35% of new employees reside in the City (similar to current conditions), and 75% of new project-related employees and their families relocated to the area from outside the region, implementation of the project would result in an increase of 114 people and 38 households in the City. With a population of 87,171, an increase of 114 people would increase the population of the City by less than 1%, and such an increase would not substantially deteriorate local parks and recreational facilities.

Because it is estimated that approximately 25% of the new employees would come from the local area, and all new employees would be distributed among several cities throughout the region, increased demand for recreational facilities in any one area would be low. More specifically, any increase in the use of existing neighborhood and regional parks or other recreational facilities that may occur as a result of these new employees

would not be substantial in any one community and would not be expected to cause substantial physical deterioration of these facilities. This impact would be considered less than significant.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Less-than-Significant Impact. Recreational facilities for prison inmates are already provided on-site, and the proposed project does not include construction of new parks or modifications to existing off-site recreational facilities. As discussed in a) above, implementation of the proposed project would not result in the substantial physical deterioration of existing recreational facilities, either on- or off-site. Therefore, the recreational needs for the proposed staffing increase of 163 new employees would be served by existing recreational facilities in the region, and the project would not require any new recreational facilities. Because the project does not include and would not require the construction or expansion of recreational facilities, this impact would be considered less than significant.

3.15 TRANSPORTATION/TRAFFIC

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Transportation/Traffic. Would the project:				
a) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A traffic impact study was prepared for the proposed project (DKS 2008) and is available for review (see Chapter 1, “Introduction”). The following discussion is based on that analysis.

The project study area for the traffic impact analysis was determined through consultation with the City of Vacaville (City). Five scenarios were analyzed:

- ▶ existing conditions,
- ▶ background conditions,
- ▶ project conditions,
- ▶ cumulative year 2030 without project conditions, and
- ▶ cumulative year 2030 with project conditions.

Vehicle turning movement counts were provided by the City for seven of the nine study intersections. To supplement data provided by the City, DKS conducted new weekday intersection turning movement counts in June 2007 for the two remaining intersections.

The traffic impact study analyzed the following nine intersections (Exhibit 3-4):

- ▶ 1. Alamo Drive and Merchant Street
- ▶ 2. Alamo Drive and Interstate 80 Northbound On-ramp

- ▶ 3. Alamo Lane and Alamo Drive
- ▶ 4. Alamo Lane and California Drive
- ▶ 5. Mariposa Avenue and Alamo Drive
- ▶ 6. Mariposa Avenue and California Drive
- ▶ 7. Peabody Road and Alamo Drive
- ▶ 8. Peabody Road and California Drive
- ▶ 9. Alamo Drive and Davis Street

The traffic impact study also analyzed the following four freeway segments along Interstate 80:

- ▶ 1. West of Alamo Drive
- ▶ 2. Alamo Drive to Davis Street
- ▶ 3. Davis Street to Monte Vista
- ▶ 4. East of Monte Vista

ENVIRONMENTAL SETTING

Exhibit 3-4 illustrates the existing street system serving the project site. Regional access is provided by Interstate 80 and Peabody Road. Local access is provided by Alamo Drive, California Drive, Alamo Lane and Mariposa Avenue.

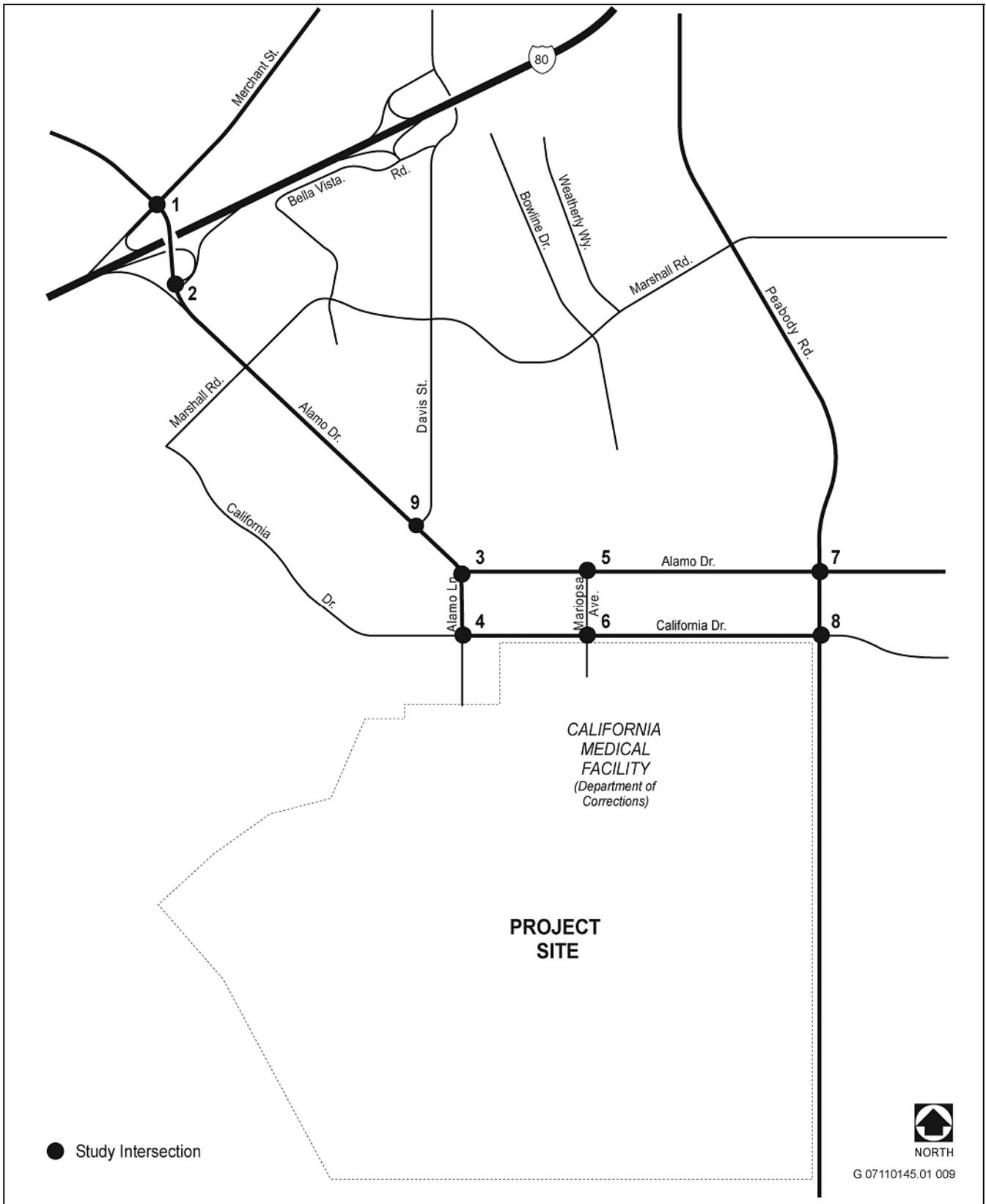
All study intersections and roadway segments currently operate at an acceptable level of service for the existing condition scenario, with the exception of the Alamo Drive and Merchant Street intersection and the Alamo Drive and Interstate 80 Northbound on-ramp intersection. The Alamo Drive and Merchant Street intersection currently operates at Level of Service (LOS) E during the a.m. peak hour, while the Alamo Drive and Interstate 80 on-ramp intersection currently operates at LOS E during the p.m. peak hour.

All study intersections currently operate at an acceptable level of service under background conditions based on intersection level of service standards established by the City. The background condition scenario includes the traffic expected to be generated by approved and planned projects prior to completion of the proposed project. Level of service under the background condition scenario is based on peak-hour traffic derived from the City's Citywide TP+ travel model.

DISCUSSION

- a) **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)?**

Less-than-Significant Impact. The proposed project would employ an estimated 163 people and would generate approximately 217 daily trips, of which 68 are projected for the a.m. peak hour (45 in, 23 out), 111 for the midday peak hour (30 in, 81 out), and 38 for the p.m. peak hour (11 in, 27 out). Trip generation rates for the proposed project were based on the Institute of Transportation Engineers Trip Generation Manual and include all trip purposes such as staff, visitors, and deliveries.



Source: DKS Associates 2008

Study Intersections and Surrounding Roadway Network

Exhibit 3-4

According to City level of service standards, an acceptable level of service is defined as LOS C or better at all intersections during the peak hours. However, LOS D may be acceptable during the peak hours under certain circumstances, and the *City of Vacaville General Plan* allows LOS E and LOS F with specific findings. For this traffic impact analysis, the City considers a traffic impact significant if:

- ▶ the addition of project traffic causes a signalized or all-way stop controlled intersection LOS under background conditions to deteriorate from an acceptable level of service to LOS E or worse (i.e., a volume to capacity ratio greater than 0.90); or
- ▶ an intersection under background (or cumulative no project) conditions already operates at LOS E or worse, and under project conditions, the volume to capacity ratio value increases by 0.02 or more.

All study intersections would operate acceptably at LOS D conditions or better with the addition of project traffic (i.e., project conditions) during the a.m., p.m., and midday peak hours. In addition, proposed project traffic would not cause the level of service on roadway segments to degrade to unacceptable conditions. Therefore, traffic impacts from the addition of project-related trips to intersections and roadway segments would be less than significant.

Under cumulative year 2030 baseline no project and with project conditions, two of the nine study intersections would operate below acceptable levels. The addition of cumulative year 2030 growth would cause the Alamo Drive and Merchant Street intersection and the Alamo Drive and Interstate 80 Northbound on-ramp intersection to operate at LOS F during the p.m. peak hour. However, according to the City's significant impact criteria, because the project would not cause an increase in the volume to capacity ratio of more than 0.02, impacts under cumulative 2030 with project conditions would be less than significant.

Project construction would result in short-term traffic increases on local roadways during off-peak hours. Proposed project construction work shifts would occur between 6 a.m. and 4 p.m., Monday through Friday, and construction activities could require up to 60 daily vehicle trips. Because construction workers would arrive and depart during off-peak hours and would avoid conflicts with adjacent street peak hour traffic conditions, construction traffic impacts would be less than significant.

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

Less-than-Significant Impact. As discussed under a) above, under cumulative year 2030 baseline conditions, two of the nine study intersections would operate below acceptable levels. Cumulative year 2030 growth would cause the Alamo Drive and Merchant Street intersection and the Alamo Drive and Interstate 80 Northbound on-ramp intersection to operate at LOS F during the p.m. peak hour. However, because the project would not cause an increase in the volume to capacity ratio of more than 0.02, impacts under cumulative 2030 with project conditions would be less than significant.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The proposed project does not propose any uses that could have any effect on air traffic patterns. Therefore, there would be no impact.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The project site is located on the grounds of the existing CMF property. Existing roadways on the CMF site were designed to safely serve the facility, and proposed project construction will employ a standard

design that is consistent with new CDCR structures as well as the existing CMF. The proposed 64-bed ICF would be constructed in an abandoned orchard on the northwestern side of the CMF and the existing prison lethal fence line and perimeter road would be “bulbed out” to encompass the project site (Exhibits 2-3 and 2-4). The new perimeter road would allow on-site traffic to flow smoothly around the 64-bed ICF. Because project construction and operation would not increase hazards due to a design feature or incompatible use, there would be no impact.

e) Result in inadequate emergency access?

No Impact. Existing emergency access to the project site is adequate. Proposed project construction activities would occur entirely on the existing CMF grounds and would not change or impair emergency vehicle access to the facility. Project operation would result in the generation of 217 daily trips and would not hamper emergency access. Because emergency access is and would remain adequate, no impact would occur.

f) Result in inadequate parking capacity?

No Impact. There are 1,110 existing parking spaces at the CMF site. Of the 1,110 parking spaces, approximately 20 are for ADA parking, 16 are for motorcycle parking, and approximately 19 are designated for visitors. Additionally, there are three 20-minute parking spaces near the administration building. On-street parking is permitted along the north side of California Drive immediately adjacent to the CMF entrance at Mariposa Avenue, and was observed to be sparsely used by local residents (DKS 2008). Overflow parking is provided at an unstriped parking lot along Palm Drive east of the visitor lot.

An estimated 163 additional employees would generate a need for an additional 34 parking spaces during the weekday a.m. peak hour, 56 parking spaces during the midday peak hour, and 19 parking spaces during the p.m. peak hour (DKS 2008). As many as 41 parking spaces would be needed to accommodate temporary construction activity. Therefore, the project would generate a need for up to 150 parking spaces, of which 41 would be temporary. The project includes the addition of approximately 200 parking spaces. The proposed parking area would be constructed immediately to the northwest of the existing main CMF parking lot (Exhibits 2-3 and 2-4). Based on the existing and proposed parking supply, observed parking utilization, and the relatively small additional project demand, the parking needs of the project would be accommodated on-site (DKS 2008). Therefore, parking is adequate for the proposed project, and there would be no impact.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. The proposed project would be located within the perimeter of the CMF property and would not conflict with adopted policies, plans, or programs supporting alternative transportation.

3.16 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Utilities and Service Systems. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed Intermediate Care Facility (ICF) would provide up to 64 inpatient mental health beds. As of September 30, 2007, the California Medical Facility (CMF) housed 3,047 inmates. The recently completed and activated Crisis Mental Health Facility includes 50 beds, and increased the total number of inmates to 3,097. The proposed project would add 64 beds, increasing the total CMF inmate population to approximately 3,161.

In addition to the CMF, CDCR also operates the California State Prison (CSP) Solano in the vicinity of the proposed project site. As shown on Exhibit 2-2, the CMF is located just north of CSP Solano in the City of Vacaville (City).

WATER CONSERVATION DEVICES

As described in Chapter 2, "Project Description and Background," CDCR is currently implementing a program to install water conservation devices (also called flush control valves) at a number of CDCR facilities throughout the state. Installation of 1,200 devices at CSP Solano was completed in November 2007, and 1,437 devices will be

installed at CMF by November 2008 (prior to activation of the 64-bed ICF). The devices have been found to significantly reduce water usage and wastewater flows (see Table 3-11). Based on an analysis of available flow data conducted by CDCR, wastewater flows at CSP Solano were reduced by approximately 12% after installation of the devices. In general, CDCR has determined that installation of the devices reduces water usage and wastewater flows by approximately 15%. The analysis in this IS/Proposed MND conservatively assumes a 10% reduction. The construction schedule for this program can be found at Appendix D.

Table 3-11				
CSP Solano Wastewater Flows (gallons per inmate)				
2007 (pre-installation)			2008 (post-installation)	
April	4,439		April	3,270
May	4,453		May	3,460
Source: CDCR 2008				

WASTEWATER

CMF and CSP Solano each have independent wastewater collection systems. These systems each flow to unique points of collection in the City’s sanitary sewer collection system. Wastewater treatment is provided for both prisons by the City at the City’s Easterly Wastewater Treatment Plant. The plant is located east of Vacaville in Elmira, California, and is capable of treating an average dry weather flow (ADWF) of 15 million gallons per day (mgd). Currently, the plant treats an average of approximately 7.8 mgd. The City issued each prison an Industrial User Permit authorizing the prisons to release wastewater to the City’s collection system. According to CMF’s January 2, 2007 user permit, CMF wastewater discharges are limited to 642,895 gallons per day (monthly average dry weather flow).

WATER SUPPLY

The CMF and CSP Solano facilities are adjacent to each other and are served by the same water system. The water system is operated and maintained by CSP Solano staff. Domestic water is supplied to both facilities from the Solano Irrigation District’s Putah South Canal. CDCR has entitlements to 1,200 acre-feet of untreated water per year (an average of approximately 1.07 mgd) from the Solano Irrigation District (SID). The raw water is treated at the CSP Solano Water Treatment Plant (WTP) and stored in on-site holding tanks.

CDCR also purchases water from the City for supplemental use or in case of emergency. In accordance with CDCR’s Joint Powers Agreement with the City, the City provides the facilities up to 1 mgd with an annual limit of 560 acre-feet per year. Penalties and surcharges are applied to water deliveries over the 1 mgd limit. The City’s water supply consists of two surface water sources (Lake Berryessa and the Sacramento Delta) and groundwater from twelve deep underground wells. A blend of groundwater from shallow CDCR wells and decanted CSP Solano WTP backwash provides water for landscape irrigation at the prisons.

STORMWATER

The CMF and CSP Solano prisons have independent storm drainage systems that discharge to on-site drainage ditches. Stormwater runoff from CMF generally drains from the northwest to the southeast. The on-site drainage system at CMF utilizes surface flow, drain-inlets, and underground storm drains. The water from these drains flows to the existing detention basin located to the southeast of CMF between CSP Solano and Peabody Road.

ELECTRICITY, NATURAL GAS, AND SOLID WASTE

Electricity is provided by Pacific Gas & Electric Company (PG&E) and the Western Area Power Authority (WAPA). Natural Gas is provided by PG&E. CMF employs Vacaville Sanitary Service to transport wastes to the Hay Road Landfill in Vacaville.

DISCUSSION

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

Less-than-Significant Impact. Wastewater from the CMF is discharged to a 12-inch sewer line east of the facility at Peabody Road in accordance with the Industrial User Permit dated January 2, 2007. CMF operations currently comply with the industrial user permit. Sampling results for the months of April, May, and June 2008 indicate that the facility is in compliance with permitted effluent discharge limitations. As shown in Table 3-12, wastewater discharges are well below permitted effluent limitations (Vandermeij, pers. comm., 2008).

The additional increment of wastewater generated by 64 additional inmates following implementation of the project would be small, relative to the total CMF inmate population of 3,047. Because the chemical characteristics of the additional wastewater flows would be expected to be similar to existing flows, and any potential changes would not be expected to appreciably change the overall concentrations because the increment of additional flow is small relative to the total, project-related wastewater flows would not exceed permitted effluent limitations and impacts would be less than significant.

Parameter	June 2008 Monitoring Data	Effluent Limitation ¹
Biochemical Oxygen Demand (BOD)	145 mg/l	514 mg/l
Total Suspended Solids (TSS)	132 mg/l	474 mg/l
Monthly Average Flow	352,759 gallons per day	642,895 gallons per day

¹ City of Vacaville Industrial User Permit No. MA03 1209
Source: CDCR Industrial User Self Monitoring Report Data 2008

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

No Impact. Based on an analysis of average daily wastewater flow data, the average daily wastewater flow rate for CMF is 147 gallons per inmate per day (gp/d). This wastewater generation rate includes flows from staff, inmates, visitors, and support staff. Based on a wastewater flow rate of 147 gp/d and an existing inmate population of 3,097 (including the 50 crisis beds), existing CMF wastewater flows are approximately 455,259 gallons per day. Post-project wastewater flows not considering the water conservation devices would increase by 9,408 gallons per day to 464,667 gallons per day. Considering a 10% wastewater flow reduction from installation of the water conservation devices (i.e., flows of 132 gp/d), average daily post-project flows would be 417,252 gallons per day (132 gp/d x 3,161 inmates). Because post-project wastewater flows would be less than existing flows, no new or expanded wastewater treatment facilities would be required, and there would be no impact.

As discussed above, the CMF and CSP Solano facilities are adjacent to each other and are served by the same water system, which is operated and maintained by CSP Solano staff. SID water is treated at the CSP Solano

Water Treatment Plant (WTP) and stored in holding tanks. Based on an analysis of data collected from CMF and CSP Solano, the combined average daily water usage rate for both facilities is 144 gpid. This average accounts for staff and other uses. In addition, this combined average usage rate is greater than CMF's average daily water consumption rate of 126 gpid. Assuming a conservative water demand factor of 144 gpid and an existing inmate population of 3,097, existing CMF average daily water demand is 445,968 gallons per day. Post-project water demand not considering the water conservation devices would increase by 9,216 gallons per day to 455,184 gallons per day. Considering a 10% water usage reduction from installation of the water conservation devices at CMF (i.e., usage of 130 gpid), average post-project water usage would be 410,930 gallons per day (130 gpid X 3,161 inmates). Because post-project water usage would be less than existing usage, no new or expanded water treatment facilities would be required, and there would be no impact.

The proposed project would involve a small amount of trench excavation for installation of water and sewer lines. However, these improvements would be entirely on-site, and no improvements would be necessary for any off-site potable water or sewer systems to convey the incremental flows, and there would be no impact.

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

Less-than-Significant Impact. A stormwater detention basin is located southeast of the CMF between CSP Solano and Peabody Road to accommodate runoff from the CMF site. The proposed project would involve the construction of approximately 9 acres of impervious surface, and these new facilities would require minor modifications to the existing stormwater drainage infrastructure. However, as described in Section 3.8, "Hydrology and Water Quality," the proposed project would not result in physical alteration of the drainage course in a manner which would result in substantial on- or off-site erosion or siltation, and the grading and drainage conveyances associated with proposed project construction would be designed in accordance with applicable standards. A site visit was conducted in 2007 to evaluate proposed project site conditions. Although preliminary drainage plans have not yet been developed for the proposed project, sufficient land area is available at the project site to accommodate any necessary stormwater drainage facilities, and any new or expanded stormwater drainage facilities would be located within a previously developed portion of the CMF property.

Because the project would not result in physical alteration of the drainage course in a manner that would result in substantial on- or off-site erosion or siltation, any new or expanded stormwater drainage facilities would be located on previously disturbed areas of the CMF site, and sufficient land area is available to accommodate any necessary stormwater drainage facilities at the project site, impacts related to stormwater drainage facility construction would be less than significant.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. CDCR has entitlements to 1,200 acre-feet of untreated water per year (an average of approximately 1.07 mgd) from the SID, and purchases water from the City for supplemental use or in case of emergency. In accordance with CDCR's Joint Powers Agreement with the City, the City provides the facilities up to 1 mgd with an annual limit of 560 acre-feet. Historically, the facilities have taken approximately 1,000 acre-feet of SID water per year. In 2006, CDCR used approximately 1,019 acre-feet SID water and 640 acre-feet of City water.

Surface water from SID's Putah South Canal is generally available to the facilities. However, the water supply is restricted for short periods of time during the year. The canal undergoes regularly scheduled chemical treatments throughout the year to control biological growth. These routine, temporary restrictions following treatment of the canal with copper sulfate for algae control restrict the use of canal water for approximately 4 hours per week. During chemical treatment of the canal, the facilities receive no SID water and must rely on the City water supply and on-site storage. In addition, the canal is shutdown for two to three weeks each year for routine canal

maintenance. These maintenance activities require a full shutdown of the canal, during which no water is conveyed to the prisons for treatment, storage, and distribution. High turbidity events caused by winter storms can also restrict the use of the water for 2-3 days. Scheduled shutdowns of the canal have caused the prisons to draw water volumes that have exceeded the 1 mgd allotment from the City.

Based on a water demand factor of 144 gpid, the combined average daily water demand for both CMF and CSP Solano is 1.3 mgd (or 1,456 acre-feet per year). Because SID and City water supplies (2.07 mgd) exceed the combined average daily demand of 1.3 mgd, and the annual water supply of 1,760 acre-feet per year from SID and the City exceeds existing use by approximately 304 acre-feet, sufficient water supplies are available to meet current water demands at the prisons. Furthermore, as described in b) above, existing CMF average daily water demand is 445,968 gallons per day. Considering a 10% water usage reduction from installation of the water conservation devices at CMF (i.e., usage of 130 gpid), average daily post-project water usage would be 410,930 gallons per day. Because post-project water demand would be less than existing demand, and sufficient water supplies are available to meet current water demands, construction of the proposed project would not result in additional demand for water, and there would be no impact.

e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?

No Impact. The City issued each prison an Industrial User Permit authorizing the prisons to release process and domestic wastewater to the City's collection system. According to CMF's user permit, CMF wastewater discharges are limited to 642,895 gallons per day. As described in b) above, considering a 10% flow reduction from installation of the water conservation devices (i.e., flows of 135 gpid), average daily post-project flows would be 426,735 gallons per day. Because post-project wastewater flows would be less than existing flows, construction of the proposed project would not result in additional wastewater treatment demand, and there would be no impact.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less-than-Significant Impact. Operation of the proposed project would result in the generation of additional solid waste. Solid waste from CMF is currently transported to the Hay Road Landfill in Vacaville. The Hay Road Landfill has an estimated remaining capacity of approximately 21.8 million cubic yards and is expected to reach its capacity in 2077 (CIWMB 2008). Based on CDCR estimates, the average solid waste generation rate is 8.5 pounds per inmate per day. Therefore, the proposed project would generate approximately 544 pounds of solid waste per day (8.5 multiplied by 64). The increased solid waste production represents a small increase relative to overall existing production, and the Hay Road Landfill has adequate capacity to serve projected waste disposal needs of the community well into the future. Because the Hay Road Landfill has sufficient capacity to serve the project's solid waste disposal needs, impacts would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less-than-Significant Impact. Solid waste from operations would be collected on a regular basis and would be disposed of at a landfill permitted to receive the solid waste generated by the proposed project. Thus, the proposed project would comply with all federal, state, and local statutes and regulations related to solid waste and this impact is considered less than significant.

3.17 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Authority: Public Resources Code Sections 21083 and 21087.

Reference: Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.3, 21093, 21094, 21151; *Sundstrom v. County of Mendocino*, 202 Cal.App.3d 296 (1988); *Leonoff v. Monterey Board of Supervisors*, 222 Cal.App.3d 1337 (1990).

DISCUSSION

- a) **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

Less-than-Significant Impact. As evaluated in this IS/Proposed MND, the proposed project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory. Mitigation measures to protect limited adverse environmental effects that could occur to burrowing owls, Swainson’s hawks, other nesting raptors, and unknown cultural resources are listed herein. The CDCR has agreed to implement all required mitigation measures, and thus there would be a less-than-significant impact from project implementation.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

Less-than-Significant Impact. The CMF owns a total of approximately 917 acres. Approximately 317 acres are used for the CMF, which provides a buffer zone as well as prison facilities. Cumulative air quality and traffic impacts are considered in Section 3.3, “Air Quality” and Section 3.15, “Transportation/Traffic” in this IS/Proposed MND, respectively.

As described in the impact analyses in Sections 3.1 through 3.16 of this IS/Proposed MND, any significant impacts of the project would be reduced to a less-than-significant level following incorporation of the mitigation measures as listed herein. In no instance would the project combine with impacts of related development to add considerably to any cumulative impacts in the region, and impacts would be considered less than significant.

With respect to global climate change (caused by entrainment of carbon gases in the atmosphere), this issue, which in turn can affect sea level rise, snow pack, wildfires, and other issues, is a dynamic, world-wide concern caused by long-term industrial development. The project would add a 64-bed ICF and a parking lot at the existing CMF site. Air emissions from construction and operation of the facility (including emissions from traffic) are minimal and within limits established by applicable air quality attainment plans. In fact, because it is unlikely that the proposed project would increase VMT for the region, it is not likely that there would be substantial new emissions associated with the project’s operations. Moreover, the project would be designed to meet and obtain the U.S. Green Building Council’s LEED Certification for New Construction, assuring minimal energy use and therefore further minimizing emissions from operations. Therefore, the proposed project would not considerably contribute to carbon gases to the atmosphere, and would therefore not result in a cumulatively significant impact.

- c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?**

No Impact. As discussed in the analysis above, the project will not have environmental effects that will cause substantial adverse direct or indirect effects on human beings.

4 SUMMARY OF MITIGATION MEASURES

Mitigation measures that will be incorporated into project construction and operation to protect the environment are summarized below.

Air Quality

Mitigation Measure AIR-1

CDCR shall require the construction contractor to employ best management practices for dust control during construction of the proposed project. At a minimum, active grading areas shall be watered at least twice daily unless existing moisture is sufficient to prevent the generation of visible dust plumes.

Biological Resources

Mitigation Measure BIO-1

- ▶ Before the commencement of construction activity, a focused survey for burrowing owls shall be conducted by a qualified biologist, in accordance with DFG protocol (DFG 1995), to identify active burrows on and within 250 feet of the project sites. The preconstruction surveys shall be conducted no more than 30 days prior to the start of construction, regardless of the time of year in which construction occurs. If no occupied burrows are found in the survey area, no further mitigation is necessary.
- ▶ If an occupied burrow with an active nest is found, impacts shall be minimized by establishing a 250-foot buffer area around the burrow. No project activity shall occur within the buffer area until a qualified biologist confirms that the nest is no longer active. The size of the buffer area may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nesting pair.
- ▶ If feasible, 250-foot buffer areas shall also be established around all other occupied burrows. If an occupied burrow is present within the area to be disturbed during project construction, DFG shall be consulted regarding relocation of owls. Relocation would likely utilize passive techniques to encourage owls to move to alternative burrows outside of the impact area.

Mitigation Measure BIO-2

- ▶ If project activity would commence during the raptor nesting season (February 15 to September 15), preconstruction surveys shall be conducted in areas of suitable nesting habitat within 500 feet of project activity. Surveys shall be conducted within 14 days prior to commencement of project activity. If no active nests are found, no further mitigation shall be required.
- ▶ If active nests are found, impacts shall be avoided by establishment of appropriate buffers, as determined by a qualified biologist. No project activity shall commence within the buffer area until the biologist confirms that the nest is no longer active. Monitoring of the nest by a qualified biologist may be required if the activity has potential to adversely affect the nest.

Mitigation Measure BIO-3

The proposed expanded electrified fence would be operated the same as the existing fence at CMF. Impacts to wildlife from the existing fence at CMF are mitigated through an HMP for the Six Prisons Project (EDAW 2001). Mortality to wildlife shall be avoided and minimized to the extent possible through continued implementation of the tiered mitigation program that was developed as part of the Statewide Electrified Fence Project and used by the Six Prisons Project. Habitat compensation (as described under Tier 3 of the mitigation program) is not

proposed for this project because operation of the proposed expanded fence is not likely to substantially increase the wildlife mortality rate or kill different wildlife species than the existing fence. Formal consultation with USFWS and DFG and permitting under ESA and CESA is not proposed because no state or federally listed species or candidates for listing are considered at risk of electrocution. In addition, CDCR is committed to implementing the avoidance and minimization measures outlined below, that are currently implemented at the existing CMF e-fence, to off-set potential adverse effects to birds protected under MBTA and the California Fish and Game Code.

- ▶ Tier 1: The first tier of mitigation measures are those 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 would be applied to the proposed facility.
- ▶ Tier 2: Second tier mitigation measures consist of both exclusion and deterrent devices. Tier 2 measures to be installed on the proposed electrified fence include a vertical netting system and anti-perching devices. CDCR would install ¾-inch mesh vertical netting enveloping both sides of the lower section of the electrified fence, which would otherwise present the greatest danger to wildlife species at risk of electrocution. Anti-perching wires, which consist of 2- to 4-inch pieces of stiff wire connected to an aluminum base, would be strategically attached to the tops of perching sites in and near the perimeter. Once installed, this wire would reduce the ability of birds to perch near the electrified fence, thus reducing exposure to accidental electrocutions.

Cultural Resources

Mitigation Measure CUL-1

If unusual amounts of stone, bone, or shell, or significant quantities of historic-era artifacts are uncovered during construction activities, work within 50 feet of the specific construction site at which the suspected resources have been uncovered will be suspended and CDCR will consult with a qualified archaeologist. The archaeologist will conduct a detailed field investigation of the specific site to determine the significance of the find and recommend mitigation deemed necessary for the protection or recovery of any cultural resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA Section 21083.2. The CDCR will implement the mitigation before the resumption of construction activities at the affected area.

Mitigation Measure CUL-2

In accordance with the California Health and Safety Code, if human remains are uncovered during project-related ground-disturbing activities, the contractor and/or CDCR will immediately halt potentially damaging excavation in the area of the burial and notify the San Joaquin County Coroner and a professional archaeologist to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). Following the coroner's findings, the property owner, contractor or project proponent, an archaeologist, and the NAHC-designated Most Likely Descendent (MLD) shall 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 5097.9.

Upon the discovery of Native American remains, CDCR will ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards and practices) is not damaged or disturbed by further development activity until consultation with the MLD has taken place. The MLD shall have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the

remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. Assembly Bill 2641 (signed into law in 2006) suggests that the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. AB 2641(e) includes a list of site protection measures and states that the landowner shall comply with one or more of the following:

- ▶ Record the site with the NAHC or the appropriate Information Center
- ▶ Utilize an open-space or conservation zoning designation or easement
- ▶ Record a document with the county in which the property is located

If the NAHC is unable to identify a MLD or the MLD fails to make a recommendation within 48 hours after being granted access to the site, the landowner or their authorized representative will rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. The landowner or their authorized representative may also reinter the remains in a location not subject to further disturbance if they reject the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Geology and Soils

Mitigation Measure GEO-1

Before the approval of grading plans for all project phases, CDCR will have a final geotechnical subsurface investigation report prepared for the proposed project. The final geotechnical engineering report will address and make recommendations on the following:

- ▶ site preparation;
- ▶ appropriate sources and types of fill;
- ▶ potential need for soil amendments;
- ▶ road, pavement, and parking areas;
- ▶ structural foundations, including retaining wall design;
- ▶ grading practices;
- ▶ erosion/winterization;
- ▶ special problems discovered on-site (e.g., groundwater and expansive/unstable soils); and
- ▶ slope stability.

The final geotechnical investigation will include subsurface testing of soil and groundwater conditions and determine appropriate foundation designs that are consistent with the CBC. The final geotechnical investigation will also make recommendations for earthquake resistant design. If the soils report indicates the presence of critically expansive soils or other soil problems that would lead to structural defect if not corrected, additional investigations may be required before construction activity may begin. This will be noted on the project grading plans. Recommendations contained in the geotechnical engineering report will be noted on the grading plans and implemented as appropriate before construction activity begins. Design and construction of all new development in all phases of the project will be in accordance with the CBC. CDCR is responsible for providing for engineering inspection and certification that earthwork has been performed in conformity with recommendations contained in the report.

Noise

Mitigation Measure NOISE-1

Noise-generating construction activities shall be limited to between the hours of 7:00 a.m. and 7:00 p.m.

Mitigation Measure NOISE-2

All construction vehicles or equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and acoustical shields or shrouds, in accordance with manufacturers' recommendations.

Mitigation Measure NOISE-3

Equipment engine doors or shrouds on motorized equipment shall be closed during equipment operation.

Mitigation Measure NOISE-4

When not in use, motorized construction equipment shall be turned off.

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Vandermeij, Sean. Correctional plant supervisor. California Medical Facility, California Department of Corrections and Rehabilitation, Vacaville, CA. July 11, 2008—email to John Sharp of CDCR regarding the CMF wastewater permit and associated monitoring reports.

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Central Valley Region, Sacramento Office
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

Yolo/Solano Air Quality Management District
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Davis, CA 95616
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Fairfield, CA 94533

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Suisun City, CA 94585

Solano County Transportation Department
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Suisun City, CA 94585-2061

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Fairfield, CA 94533

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Solano County LAFCO
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Fairfield, CA 94533

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Fairfield, CA 94533

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Fairfield, CA 94533

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Fairfield, CA 94533

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Vacaville, CA 95688

Vacaville City Manager
650 Merchant Street
Vacaville, CA 95688

Vacaville Public Works Department
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Vacaville Sanitary Service
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Fairfield, CA 94533

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1020 Ulatis Drive
Vacaville, CA 95687

Fairfield Civic Center Library
1150 Kentucky Street
Fairfield, CA 94533

Other

PG&E
158 Peabody Road
Vacaville, CA 95687

APPENDIX A

Air Modeling

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\kurtzj\My Documents\Active\CDCR CMF\CMF Urbemis\CMF const 032308.urb924

Project Name: CDCR CMF Construction

Project Location: Solano County in Yolo-Solano AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>
2009 TOTALS (tons/year unmitigated)	0.63	2.17
2009 TOTALS (tons/year mitigated)	0.63	2.17
Percent Reduction	0.00	0.00

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\kurtzj\My Documents\Active\CDCR CMF\CMF Urbemis\CMF const 032308.urb924

Project Name: CDCR CMF Construction

Project Location: Solano County in Yolo-Solano AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	<u>ROG</u>	<u>NOx</u>
2009	0.63	2.17
Fine Grading 01/05/2009-	0.10	0.80
Fine Grading Dust	0.00	0.00
Fine Grading Off Road Diesel	0.10	0.79
Fine Grading On Road Diesel	0.00	0.00
Fine Grading Worker Trips	0.00	0.00
Building 02/01/2009-10/30/2009	0.14	1.02
Building Off Road Diesel	0.13	0.95
Building Vendor Trips	0.00	0.05
Building Worker Trips	0.01	0.02
Asphalt 03/01/2009-04/30/2009	0.05	0.28
Paving Off-Gas	0.00	0.00
Paving Off Road Diesel	0.05	0.28
Paving On Road Diesel	0.00	0.00
Paving Worker Trips	0.00	0.00
Asphalt 09/30/2009-10/14/2009	0.01	0.07
Paving Off-Gas	0.00	0.00
Paving Off Road Diesel	0.01	0.07
Paving On Road Diesel	0.00	0.00
Paving Worker Trips	0.00	0.00
Coating 09/30/2009-10/30/2009	0.33	0.00
Architectural Coating	0.33	0.00
Coating Worker Trips	0.00	0.00

Phase Assumptions

Phase: Fine Grading 1/5/2009 - 3/27/2009 - Default Fine Site Grading Description

Total Acres Disturbed: 13

Maximum Daily Acreage Disturbed: 4.25

Page: 1

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Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 3/1/2009 - 4/30/2009 - Default Paving Description

Acres to be Paved: 0.5

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Paving 9/30/2009 - 10/14/2009 - Paving around ICF

Acres to be Paved: 0.58

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 2/1/2009 - 10/30/2009 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 9/30/2009 - 10/30/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 100

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\kurtzj\My Documents\Active\CDCR CMF\CMF Urbemis\CMF const 032308.urb924

Project Name: CDCR CMF Construction

Project Location: Solano County in Yolo-Solano AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>
2009 TOTALS (lbs/day unmitigated)	42.53	3.10	45.64	8.89	2.85	11.74
2009 TOTALS (lbs/day mitigated)	24.07	3.10	27.17	5.03	2.85	7.88

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\kurtzj\My Documents\Active\CDCR CMF\CMF Urbemis\CMF const 032308.urb924

Project Name: CDCR CMF Construction

Project Location: Solano County in Yolo-Solano AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>
Time Slice 1/5/2009-1/30/2009 Active	42.50	1.34	43.84	8.88	1.23	10.11
Days: 20						
Fine Grading 01/05/2009-	42.50	1.34	43.84	8.88	1.23	10.11
03/27/2009						
Fine Grading Dust	42.50	0.00	42.50	8.88	0.00	8.88
Fine Grading Off Road Diesel	0.00	1.33	1.33	0.00	1.23	1.23
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00
Time Slice 2/2/2009-2/27/2009 Active	42.52	2.00	44.53	8.88	1.84	10.73
Days: 20						
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Fine Grading 01/05/2009-	42.50	1.34	43.84	8.88	1.23	10.11
03/27/2009						
Fine Grading Dust	42.50	0.00	42.50	8.88	0.00	8.88
Fine Grading Off Road Diesel	0.00	1.33	1.33	0.00	1.23	1.23
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00
Time Slice 3/2/2009-3/27/2009 Active	42.53	3.10	45.64	8.89	2.85	11.74
Days: 20						
Asphalt 03/01/2009-04/30/2009	0.01	1.10	1.11	0.00	1.01	1.01
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	1.09	1.09	0.00	1.00	1.00
Paving On Road Diesel	0.00	0.00	0.01	0.00	0.00	0.00

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Paving Worker Trips	0.01	0.01	0.01	0.00	0.00	0.01
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Fine Grading 01/05/2009-03/27/2009	42.50	1.34	43.84	8.88	1.23	10.11
Fine Grading Dust	42.50	0.00	42.50	8.88	0.00	8.88
Fine Grading Off Road Diesel	0.00	1.33	1.33	0.00	1.23	1.23
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00
Time Slice 3/30/2009-4/30/2009 Active Days: 24	0.03	1.76	1.79	0.01	1.62	1.63
Asphalt 03/01/2009-04/30/2009	0.01	1.10	1.11	0.00	1.01	1.01
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	1.09	1.09	0.00	1.00	1.00
Paving On Road Diesel	0.00	0.00	0.01	0.00	0.00	0.00
Paving Worker Trips	0.01	0.01	0.01	0.00	0.00	0.01
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Time Slice 5/1/2009-9/29/2009 Active Days: 108	0.02	0.67	0.69	0.01	0.61	0.62
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Time Slice 9/30/2009-10/14/2009 Active Days: 11	0.03	1.78	1.82	0.01	1.64	1.65
Asphalt 09/30/2009-10/14/2009	0.01	1.12	1.13	0.00	1.03	1.03
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	1.09	1.09	0.00	1.00	1.00
Paving On Road Diesel	0.00	0.02	0.03	0.00	0.02	0.02

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Paving Worker Trips	0.01	0.01	0.01	0.00	0.00	0.01
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Coating 09/30/2009-10/30/2009	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Time Slice 10/15/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Active Days: 12						
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Coating 09/30/2009-10/30/2009	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00

Phase Assumptions

Phase: Fine Grading 1/5/2009 - 3/27/2009 - Default Fine Site Grading Description

Total Acres Disturbed: 13

Maximum Daily Acreage Disturbed: 4.25

Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 3/1/2009 - 4/30/2009 - Default Paving Description

Acres to be Paved: 0.5

Off-Road Equipment:

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4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Paving 9/30/2009 - 10/14/2009 - Paving around ICF

Acres to be Paved: 0.58

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 2/1/2009 - 10/30/2009 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 9/30/2009 - 10/30/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 100

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Mitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\kurtzj\My Documents\Active\CDCR CMF\CMF Urbemis\CMF const 032308.urb924

Project Name: CDCR CMF Construction

Project Location: Solano County in Yolo-Solano AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>
Time Slice 1/5/2009-1/30/2009 Active	24.04	1.34	25.38	5.02	1.23	6.25
Days: 20						
Fine Grading 01/05/2009-03/27/2009	24.04	1.34	25.38	5.02	1.23	6.25
Fine Grading Dust	24.03	0.00	24.03	5.02	0.00	5.02
Fine Grading Off Road Diesel	0.00	1.33	1.33	0.00	1.23	1.23
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00
Time Slice 2/2/2009-2/27/2009 Active	24.06	2.00	26.06	5.03	1.84	6.87
Days: 20						
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Fine Grading 01/05/2009-03/27/2009	24.04	1.34	25.38	5.02	1.23	6.25
Fine Grading Dust	24.03	0.00	24.03	5.02	0.00	5.02
Fine Grading Off Road Diesel	0.00	1.33	1.33	0.00	1.23	1.23
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00
Time Slice 3/2/2009-3/27/2009 Active	<u>24.07</u>	<u>3.10</u>	<u>27.17</u>	<u>5.03</u>	<u>2.85</u>	<u>7.88</u>
Days: 20						
Asphalt 03/01/2009-04/30/2009	0.01	1.10	1.11	0.00	1.01	1.01
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	1.09	1.09	0.00	1.00	1.00
Paving On Road Diesel	0.00	0.00	0.01	0.00	0.00	0.00

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Paving Worker Trips	0.01	0.01	0.01	0.00	0.00	0.01
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Fine Grading 01/05/2009-03/27/2009	24.04	1.34	25.38	5.02	1.23	6.25
Fine Grading Dust	24.03	0.00	24.03	5.02	0.00	5.02
Fine Grading Off Road Diesel	0.00	1.33	1.33	0.00	1.23	1.23
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00
Time Slice 3/30/2009-4/30/2009 Active Days: 24	0.03	1.76	1.79	0.01	1.62	1.63
Asphalt 03/01/2009-04/30/2009	0.01	1.10	1.11	0.00	1.01	1.01
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	1.09	1.09	0.00	1.00	1.00
Paving On Road Diesel	0.00	0.00	0.01	0.00	0.00	0.00
Paving Worker Trips	0.01	0.01	0.01	0.00	0.00	0.01
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Time Slice 5/1/2009-9/29/2009 Active Days: 108	0.02	0.67	0.69	0.01	0.61	0.62
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Time Slice 9/30/2009-10/14/2009 Active Days: 11	0.03	1.78	1.82	0.01	1.64	1.65
Asphalt 09/30/2009-10/14/2009	0.01	1.12	1.13	0.00	1.03	1.03
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	1.09	1.09	0.00	1.00	1.00
Paving On Road Diesel	0.00	0.02	0.03	0.00	0.02	0.02

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Paving Worker Trips	0.01	0.01	0.01	0.00	0.00	0.01
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Coating 09/30/2009-10/30/2009	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Time Slice 10/15/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Active Days: 12						
Building 02/01/2009-10/30/2009	0.02	0.67	0.69	0.01	0.61	0.62
Building Off Road Diesel	0.00	0.63	0.63	0.00	0.58	0.58
Building Vendor Trips	0.00	0.02	0.03	0.00	0.02	0.02
Building Worker Trips	0.02	0.01	0.03	0.01	0.01	0.01
Coating 09/30/2009-10/30/2009	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/5/2009 - 3/27/2009 - Default Fine Site Grading Description
For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Phase Assumptions

Phase: Fine Grading 1/5/2009 - 3/27/2009 - Default Fine Site Grading Description

Total Acres Disturbed: 13

Maximum Daily Acreage Disturbed: 4.25

Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Phase: Paving 3/1/2009 - 4/30/2009 - Default Paving Description

Acres to be Paved: 0.5

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Paving 9/30/2009 - 10/14/2009 - Paving around ICF

Acres to be Paved: 0.58

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 2/1/2009 - 10/30/2009 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 9/30/2009 - 10/30/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 100

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

APPENDIX B

YSAQMD Best Management Dust Control Measures

Table 5. Construction Dust Mitigation Measures

Mitigation Measure	Source Category	Effective	References
Water all active construction sites at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.	Fugitive emissions from active, unpaved construction areas	50%	U.S. EPA, "AP-42, Vol. I." Pg. 11.2.4-1.
Haul trucks shall maintain at least 2 feet of freeboard.	Spills from haul trucks	90%	Monterey Bay Unified APCD
Cover all trucks hauling dirt, sand, or loose materials.	Spills from haul trucks	90%	Monterey Bay Unified APCD
Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area.	Wind erosion from inactive areas	Up to 80%	U.S. EPA, "AP-42, Vol. I." Pg. 11.2.4-1.
Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).	Wind erosion from inactive areas	Up to 80%	South Coast AQMD, "SIP for PM ₁₀ in the Coachella Valley" 1990. Pg. 5-15
Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.	Wind erosion from inactive areas	4% (15% for mature trees)	South Coast AQMD, "SIP for PM ₁₀ in the Coachella Valley" 1990. Pg. 5-15
Plant vegetative ground cover in disturbed areas as soon as possible.	Wind erosion from inactive areas	5%-99% (based on planting plan)	South Coast AQMD, "SIP for PM ₁₀ in the Coachella Valley" 1990. Pg. 5-15
Cover inactive storage piles.	Wind erosion from storage piles	Up to 90%	U.S. EPA "AP-42, Vol. I." Pg. 11.2.3-4)
Sweep streets if visible soil material is carried out from the construction site.	On-road entrained PM ₁₀	14%	U.S. EPA Report Number EPA-600/R-95-171
Treat accesses to a distance of 100 feet from the paved road with a 6 to 12 inch layer of wood chips or mulch.	Mud/dirt carryout on-road entrained PM ₁₀	27-33%	U.S. EPA Report Number EPA-600/R-95-171
Treat accesses to a distance of 100 feet from the paved road with a 6-inch layer of gravel.	Mud/dirt carryout on-road entrained PM ₁₀	42-52%	U.S. EPA Report Number EPA-600/R-95-171
Note: The effectiveness of 2 or more mitigation measures that address the same source of emissions would not be the sum of both measures.			

APPENDIX C

Noise Modeling

Appendix X1
Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet



Project: CMF Vacaville 64-Bed
Date: May 8, 2007
Site: A

Hour	Leq	Lmax	L50	L90
15:00	46.2	61.1	44.2	40.6
16:00	47.4	62.7	44.7	41.3
17:00	46.3	59.2	44.3	41.6
18:00	48.6	68.6	45.5	42.0
19:00	47.4	62.9	45.1	42.3
20:00	46.2	60.0	44.9	42.8
21:00	47.3	63.4	46.1	44.4
22:00	46.3	66.5	45.0	43.4
23:00	43.9	57.0	43.4	42.1
0:00	44.8	74.0	42.6	41.1
1:00	42.0	66.0	41.3	39.5
2:00	41.5	59.2	40.9	39.2
3:00	42.4	50.4	42.0	40.2
4:00	45.5	56.7	45.0	42.6
5:00	50.0	60.5	48.5	46.4
6:00	51.0	68.5	49.8	48.4
7:00	49.2	60.2	48.1	46.1
8:00	47.9	59.4	47.0	45.2
9:00	47.9	64.2	47.0	45.3
10:00	48.8	62.0	47.9	46.2
11:00	48.7	59.5	47.8	45.3
12:00	46.6	61.7	45.0	42.5
13:00	47.9	60.9	46.7	44.5
14:00	48.5	63.9	46.6	44.1

Averages				
	Leq	Lmax	L50	L90
Daytime (7 a.m. - 7 p.m.)	47.9	61.9	46.2	43.7
Evening (7 p.m. - 9 p.m.)	47.0	62.1	45.4	43.2
Nighttime (9 p.m. - 7 a.m.)	46.5	62.1	44.3	42.5

Uppermost-Level				
	Leq	Lmax	L50	L90
Daytime (7 a.m. - 7 p.m.)	49.2	68.6	48.1	46.2
Evening (7 p.m. - 9 p.m.)	47.4	63.4	46.1	44.4
Nighttime (9 p.m. - 7 a.m.)	51.0	74.0	49.8	48.4

Percentage of Energy	
Daytime	57%
Evening	12%
Nighttime	31%

Calculated CNEL, dBA
53.4

Appendix C
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet

Project Name : CMF-Vacaville
Project Number : 7110145.02
Modeling Condition : Cumulative 2030 No Project Condition
Ground Type : Hard
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT



Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	Alamo Drive	Alamo Ln.	Davis St.	19920	35	100	96.5	2	1.5	87		13	
2	Alamo Drive	Alamo Ln.	Mariposa Ave.	18550	45	100	96.5	2	1.5	87		13	
3	Alamo Drive	Mariposa Ave.	Peabody Rd.	29170	45	100	96.5	2	1.5	87		13	
4	Alamo Drive	Peabody Rd.	East of	25300	45	100	96.5	2	1.5	87		13	
5	California Drive	Alamo Ln.	Mariposa Ave.	7400	25	100	98	1.5	0.5	87		13	
6	California Drive	Mariposa Ave.	Peabody Rd.	7110	25	100	98	1.5	0.5	87		13	
7	Peabody Road	Alamo Dr.	California Dr.	31990	35	100	97	1.5	1.5	87		13	
8	Peabody Road	California Dr.	South of	31310	45	100	97	1.5	1.5	87		13	
9	Mariposa Avenue	Alamo Dr.	California Dr.	1280	25	100	98	1.5	0.5	87		13	
10	Alamo Lane	Alamo Dr.	California Dr.	2010	25	100	98	1.5	0.5	87		13	

Appendix C
Traffic Noise Prediction Model, (FWHA RD-77-108)
Predicted Noise Levels

Project Name : CMF-Vacaville
Project Number : 7110145.02
Modeling Condition : Cumulative 2030 No Project Condition
Metric (Leq, Ldn, CNEL) : Ldn



Segment	Roadway	Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Alamo Drive	Alamo Ln.	Davis St.	63.7	56.5	60.5	65.9	39	123	390	1234	3902
2	Alamo Drive	Alamo Ln.	Mariposa Ave.	66.5	57.9	61.2	68.1	64	203	641	2028	6414
3	Alamo Drive	Mariposa Ave.	Peabody Rd.	68.5	59.9	63.1	70.0	101	319	1009	3190	10086
4	Alamo Drive	Peabody Rd.	East of	67.9	59.3	62.5	69.4	87	277	875	2766	8748
5	California Drive	Alamo Ln.	Mariposa Ave.	55.2	48.7	51.6	57.4	6	17	55	174	552
6	California Drive	Mariposa Ave.	Peabody Rd.	55.1	48.5	51.4	57.2	5	17	53	168	530
7	Peabody Road	Alamo Dr.	California Dr.	65.8	57.3	62.5	67.9	61	193	610	1930	6105
8	Peabody Road	California Dr.	South of	68.8	59.0	63.5	70.3	106	335	1060	3353	10604
9	Mariposa Avenue	Alamo Dr.	California Dr.	47.6	41.1	43.9	49.8	1	3	10	30	95
10	Alamo Lane	Alamo Dr.	California Dr.	49.6	43.0	45.9	51.8	1	5	15	47	150

Appendix C
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet

Project Name : CMF-Vacaville
Project Number : 7110145.02
Modeling Condition : Cumulative 2030 Plus Project Condition
Ground Type : Hard
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT



Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	Alamo Drive	Alamo Ln.	Davis St.	20750	35	100	96.5	2	1.5	87		13	
2	Alamo Drive	Alamo Ln.	Mariposa Ave.	18570	45	100	96.5	2	1.5	87		13	
3	Alamo Drive	Mariposa Ave.	Peabody Rd.	29220	45	100	96.5	2	1.5	87		13	
4	Alamo Drive	Peabody Rd.	East of	25840	45	100	96.5	2	1.5	87		13	
5	California Drive	Alamo Ln.	Mariposa Ave.	7410	25	100	98	1.5	0.5	87		13	
6	California Drive	Mariposa Ave.	Peabody Rd.	7150	25	100	98	1.5	0.5	87		13	
7	Peabody Road	Alamo Dr.	California Dr.	32070	35	100	97	1.5	1.5	87		13	
8	Peabody Road	California Dr.	South of	31360	45	100	97	1.5	1.5	87		13	
9	Mariposa Avenue	Alamo Dr.	California Dr.	1430	25	100	98	1.5	0.5	87		13	
10	Alamo Lane	Alamo Dr.	California Dr.	2550	25	100	98	1.5	0.5	87		13	

Appendix C
Traffic Noise Prediction Model, (FWHA RD-77-108)
Predicted Noise Levels

Project Name : CMF-Vacaville
Project Number : 7110145.02
Modeling Condition : Cumulative 2030 Plus Project Condition
Metric (Leq, Ldn, CNEL) : Ldn



Segment	Roadway	Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Alamo Drive	Alamo Ln.	Davis St.	63.9	56.7	60.7	66.1	41	129	406	1285	4064
2	Alamo Drive	Alamo Ln.	Mariposa Ave.	66.5	57.9	61.2	68.1	64	203	642	2031	6421
3	Alamo Drive	Mariposa Ave.	Peabody Rd.	68.5	59.9	63.2	70.0	101	320	1010	3195	10104
4	Alamo Drive	Peabody Rd.	East of	68.0	59.4	62.6	69.5	89	283	893	2825	8935
5	California Drive	Alamo Ln.	Mariposa Ave.	55.2	48.7	51.6	57.4	6	17	55	175	553
6	California Drive	Mariposa Ave.	Peabody Rd.	55.1	48.6	51.4	57.3	5	17	53	169	533
7	Peabody Road	Alamo Dr.	California Dr.	65.8	57.4	62.6	67.9	61	194	612	1935	6120
8	Peabody Road	California Dr.	South of	68.8	59.0	63.5	70.3	106	336	1062	3359	10621
9	Mariposa Avenue	Alamo Dr.	California Dr.	48.1	41.6	44.4	50.3	1	3	11	34	107
10	Alamo Lane	Alamo Dr.	California Dr.	50.6	44.1	46.9	52.8	2	6	19	60	190

Appendix C
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : CMF-Vacaville
Project Number : 7110145.02
Modeling Condition : Existing Condition
Ground Type : Hard
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	Alamo Drive	Alamo Ln.	Davis St.	16510	35	100	96.5	2	1.5	87		13	
2	Alamo Drive	Alamo Ln.	Mariposa Ave.	15260	45	100	96.5	2	1.5	87		13	
3	Alamo Drive	Mariposa Ave.	Peabody Rd.	23170	45	100	96.5	2	1.5	87		13	
4	Alamo Drive	Peabody Rd.	East of	19820	45	100	96.5	2	1.5	87		13	
5	California Drive	Alamo Ln.	Mariposa Ave.	2020	25	100	98	1.5	0.5	87		13	
6	California Drive	Mariposa Ave.	Peabody Rd.	2570	25	100	98	1.5	0.5	87		13	
7	Peabody Road	Alamo Dr.	California Dr.	22540	35	100	97	1.5	1.5	87		13	
8	Peabody Road	California Dr.	South of	19970	45	100	97	1.5	1.5	87		13	
9	Mariposa Avenue	Alamo Dr.	California Dr.	6730	25	100	98	1.5	0.5	87		13	
10	Alamo Lane	Alamo Dr.	California Dr.	2130	25	100	98	1.5	0.5	87		13	

Appendix C
Traffic Noise Prediction Model, (FWHA RD-77-108)
Predicted Noise Levels

Project Name : CMF-Vacaville
Project Number : 7110145.02
Modeling Condition : Existing Condition
Metric (Leq, Ldn, CNEL) : Ldn



Segment	Roadway	Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Alamo Drive	Alamo Ln.	Davis St.	62.9	55.7	59.7	65.1	32	102	323	1023	3234
2	Alamo Drive	Alamo Ln.	Mariposa Ave.	65.7	57.1	60.3	67.2	53	167	528	1669	5277
3	Alamo Drive	Mariposa Ave.	Peabody Rd.	67.5	58.9	62.1	69.0	80	253	801	2534	8012
4	Alamo Drive	Peabody Rd.	East of	66.8	58.2	61.5	68.4	69	217	685	2167	6853
5	California Drive	Alamo Ln.	Mariposa Ave.	49.6	43.1	45.9	51.8	2	5	15	48	151
6	California Drive	Mariposa Ave.	Peabody Rd.	50.6	44.1	47.0	52.8	2	6	19	61	192
7	Peabody Road	Alamo Dr.	California Dr.	64.2	55.8	61.0	66.3	43	136	430	1360	4301
8	Peabody Road	California Dr.	South of	66.9	57.0	61.5	68.3	68	214	676	2139	6763
9	Mariposa Avenue	Alamo Dr.	California Dr.	54.8	48.3	51.2	57.0	5	16	50	159	502
10	Alamo Lane	Alamo Dr.	California Dr.	49.8	43.3	46.2	52.0	2	5	16	50	159

Appendix C
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : CMF-Vacaville
Project Number : 7110145.02
Modeling Condition : Existing Plus Project Condition
Ground Type : Hard
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	Alamo Drive	Alamo Ln.	Davis St.	16840	35	100	96.5	2	1.5	87		13	
2	Alamo Drive	Alamo Ln.	Mariposa Ave.	15550	45	100	96.5	2	1.5	87		13	
3	Alamo Drive	Mariposa Ave.	Peabody Rd.	23220	45	100	96.5	2	1.5	87		13	
4	Alamo Drive	Peabody Rd.	East of	19860	45	100	96.5	2	1.5	87		13	
5	California Drive	Alamo Ln.	Mariposa Ave.	2030	25	100	98	1.5	0.5	87		13	
6	California Drive	Mariposa Ave.	Peabody Rd.	2710	25	100	98	1.5	0.5	87		13	
7	Peabody Road	Alamo Dr.	California Dr.	22620	35	100	97	1.5	1.5	87		13	
8	Peabody Road	California Dr.	South of	20180	45	100	97	1.5	1.5	87		13	
9	Mariposa Avenue	Alamo Dr.	California Dr.	6880	25	100	98	1.5	0.5	87		13	
10	Alamo Lane	Alamo Dr.	California Dr.	2170	25	100	98	1.5	0.5	87		13	

Appendix C
Traffic Noise Prediction Model, (FWHA RD-77-108)
Predicted Noise Levels

Project Name : CMF-Vacaville
Project Number : 7110145.02
Modeling Condition : Existing Plus Project Condition
Metric (Leq, Ldn, CNEL) : Ldn



Segment	Roadway	Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Alamo Drive	Alamo Ln.	Davis St.	63.0	55.8	59.8	65.2	33	104	330	1043	3299
2	Alamo Drive	Alamo Ln.	Mariposa Ave.	65.7	57.2	60.4	67.3	54	170	538	1700	5377
3	Alamo Drive	Mariposa Ave.	Peabody Rd.	67.5	58.9	62.2	69.0	80	254	803	2539	8029
4	Alamo Drive	Peabody Rd.	East of	66.8	58.2	61.5	68.4	69	217	687	2172	6867
5	California Drive	Alamo Ln.	Mariposa Ave.	49.6	43.1	45.9	51.8	2	5	15	48	151
6	California Drive	Mariposa Ave.	Peabody Rd.	50.9	44.3	47.2	53.1	2	6	20	64	202
7	Peabody Road	Alamo Dr.	California Dr.	64.3	55.8	61.0	66.4	43	137	432	1365	4317
8	Peabody Road	California Dr.	South of	66.9	57.0	61.5	68.3	68	216	683	2161	6834
9	Mariposa Avenue	Alamo Dr.	California Dr.	54.9	48.4	51.3	57.1	5	16	51	162	513
10	Alamo Lane	Alamo Dr.	California Dr.	49.9	43.4	46.2	52.1	2	5	16	51	162

APPENDIX D

Water Conservation Devices Construction Schedule

**Statewide Water Conservation Devices
Construction Schedule
As of 6/13/08**

Facility	Region	# of Devices	Devices Installed	Construction Start	Construction Completion	% of completion	C22-B	Comments
CMF	I	1437	0	4/21/08	10/31/08	20%	1590	Valve materials were received on 5/27/08. The electrical change order work is 60% complete and the installation of the WCD is to begin on 6/16.
DVI	I	1530	0	4/14/08	2/8/09	30%	1572	The valve materials were received on 5/30/08. The electrical change order work 75% complete. Valve installation will begin on 6/16/08.
FSP	I	1482	0	6/24/08	10/14/08	5%	1571	% represents Procurement activities; the vendor had estimated a delivery date of 5/5 but is unable to confirm an actual delivery date.
PBSP	I	2180	496	4/23/08	10/29/08	20%	1569	The electrical including change order work is 60% complete. 496 devices have been installed to date.
SCC	I	500	0	6/16/08	7/31/08	5%	1591	Received WCDs on 5/12/08. The institution has requested that the vendor provide training and product demonstration prior to starting the project. The demonstration occurred on 6/6/08 and a SMAD meeting was scheduled. The installation will begin on 6/16/08.
SAC	I	1636	0	4/7/08	7/18/08	10%	1589	Construction activities on the electrical circuits are in progress. The valve installation will begin on 6/16/08.
SQ	I	800	0	5/28/08	10/15/08	5%	1573	% represents Procurement activities; on hold pending the institution's waiver request for the use of Icon valves.
Total Region I		9565	496					
CTF	II	2616	6	4/21/2008	11/24/2008	24%	1574	% represents Procurement activities. Proceeding with electrical work in the plumbing phases. Six devices installed to date.

**Statewide Water Conservation Devices
Construction Schedule
As of 6/13/08**

Facility	Region	# of Devices	Devices Installed	Construction Start	Construction Completion	% of completion	C22-B	Comments
NKSP	II	1692	1300	3/17/2008	7/9/2008	77%	1567	Construction activities continue as 1300 devices have been installed to date.
KVSP	II	2248	900	3/10/2008	8/1/2008	45%	1570	Construction activities continue as 900 devices have been installed to date.
SATF	II	1612	1400	2/25/2008	6/12/2008	90%	1588	Construction activities continue as 1400 devices have been installed to date.
WSP	II	1700	500	4/1/2008	7/23/2008	30%	1568	Construction activities continue as 500 devices have been installed to date.
Total Region II		9868	4106					

CAL	III	2100	330	3/18/08	10/16/08	16%	1565	Construction activities have started as 330 devices have been installed to date.
LAC	III	2100	1400	2/4/08	8/25/08	67%	1566	Construction activities continue as 1400 devices have been installed to date.
RJD	III	2000	730	3/18/08	10/10/08	37%	1587	Construction activities continue as 730 devices have been installed to date.
Total Region III		6200	2460					
Total All Regions		25633	7062					

**Statewide Water Conservation Devices
Construction Schedule
As of 6/13/08**

Facility	Region	# of Devices	Devices Installed	Construction Start	Construction Completion	% of completion	C22-B	Comments
Current Funded Projects								
SVSP	II	2124	1742	8/6/2007	2/28/2008	81%	1453	Project pending delivery of new devices (500 devices). Installed 1742 out of 2144 (102 WCDs for HU D9 via project savings).
CCI	II	1524	650	11/20/2007	7/15/2008	36%	1451	Construction activities slowed due to lock downs from a staff assault and Chicken Pox.
CMC	II	2425	75	12/17/2007	10/28/2008	15%	1475	Electrical construction activities are 90% complete. 75 WCDs have been installed.
ISP	III	2000	2000	9/17/2007	5/17/2008	95%	1450	The installation for all 2000 devices have been completed. IWL staff are currently providing additional bracing to the tail pieces that are impacted by the amount of pressure developed during the flush cycle.
Total Current Funded		8073	4467					
Completed Projects								
HDSP Phase II	I	600	600	1/2/2007	3/30/2007	100%	1390	
CCC - Lassen Units	I	500	500	2/20/2007	4/27/2007	100%	1409	
SOL	I	1200	1200	5/23/2007	11/19/2007	100%	1477	
MCSP	I	1500	1500	7/9/2007	11/29/2007	99%	1476	Vendor to replace PB
COR Z 180s	II	2040	2040	7/24/2006	10/19/2006	100%	1284	
COR	II	740	740	6/1/2007	11/9/2007	100%	1519	
COR	II	1400	1400	6/1/2007	12/21/2007	100%	1474	
PVSP	II	2100	2100	7/23/2007	2/15/2008	99%	1452	Processing 60 day letter.
CEN	III	2080	2080	3/5/2007	10/5/2007	100%	1413	
Total Completed		12160	12160					