

# California Men's Colony Expansion Project

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## Draft Traffic Impact Analysis

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## TRANSPORTATION AND TRAFFIC

### ***ENVIRONMENTAL SETTING***

The California Department of Corrections and Rehabilitation (CDCR) California Men's Colony (CMC) is located in western San Luis Obispo County, California, approximately one mile north of the City of San Luis Obispo's northern boundary. The institution is located in a rural setting along State Route (SR) 1, and is situated immediately to the northeast of the intersection of SR-1 and Colony Drive, which provide the regional and local access to the project site. The CMC facility is approximately 356 acres and includes existing facilities such as housing barracks and buildings, medical facilities, operations and maintenance buildings, and recreational yard areas. The existing facility consists of an East and West facility. The proposed project site is located within the northeastern portion of the East facility.

### **ROADWAY SYSTEM**

#### **STREET CLASSIFICATIONS**

The existing circulation network is composed of expressways, arterial streets, collector streets and local streets. While not specifically described in the San Luis Obispo County *Transportation Plan*, June 1979, the following are typical definitions for the street classifications.

#### ***FREEWAYS AND EXPRESSWAYS***

Freeways and expressways are typically major divided highways designed for high-speed travel with few or no intersections.

#### ***ARTERIAL STREETS***

Arterial streets are designed to primarily serve intra-urban travel, collecting traffic from lower order streets and conveying it to and from other parts of the City. Access to abutting property is subordinate to the primary function of moving traffic.

#### ***COLLECTOR STREETS***

Collector streets are designed to serve neighborhood traffic, providing links between local streets and arterials, and access to abutting property.

#### ***LOCAL STREETS***

Local streets intended to provide direct access to destinations within a residential or business district and provide access to abutting property as a primary function.

The locations studied in this report are located in both San Luis Obispo County and the City of San Luis Obispo and consist of arterials and collectors. Streets near the project area and in the surrounding area which may be affected by the project include:

**State Route 1 (SR-1) – Santa Rosa Street** is a four-lane arterial located west of the project site. SR-1 travels north-south through the City of San Luis Obispo and provides regional access to the Men's Colony. The posted speed limit along SR-1 is 65 mph near Colony Drive, 55 mph north of Highland Drive, and 45 mph south Highland Drive. SR-1 is a Caltrans facility.



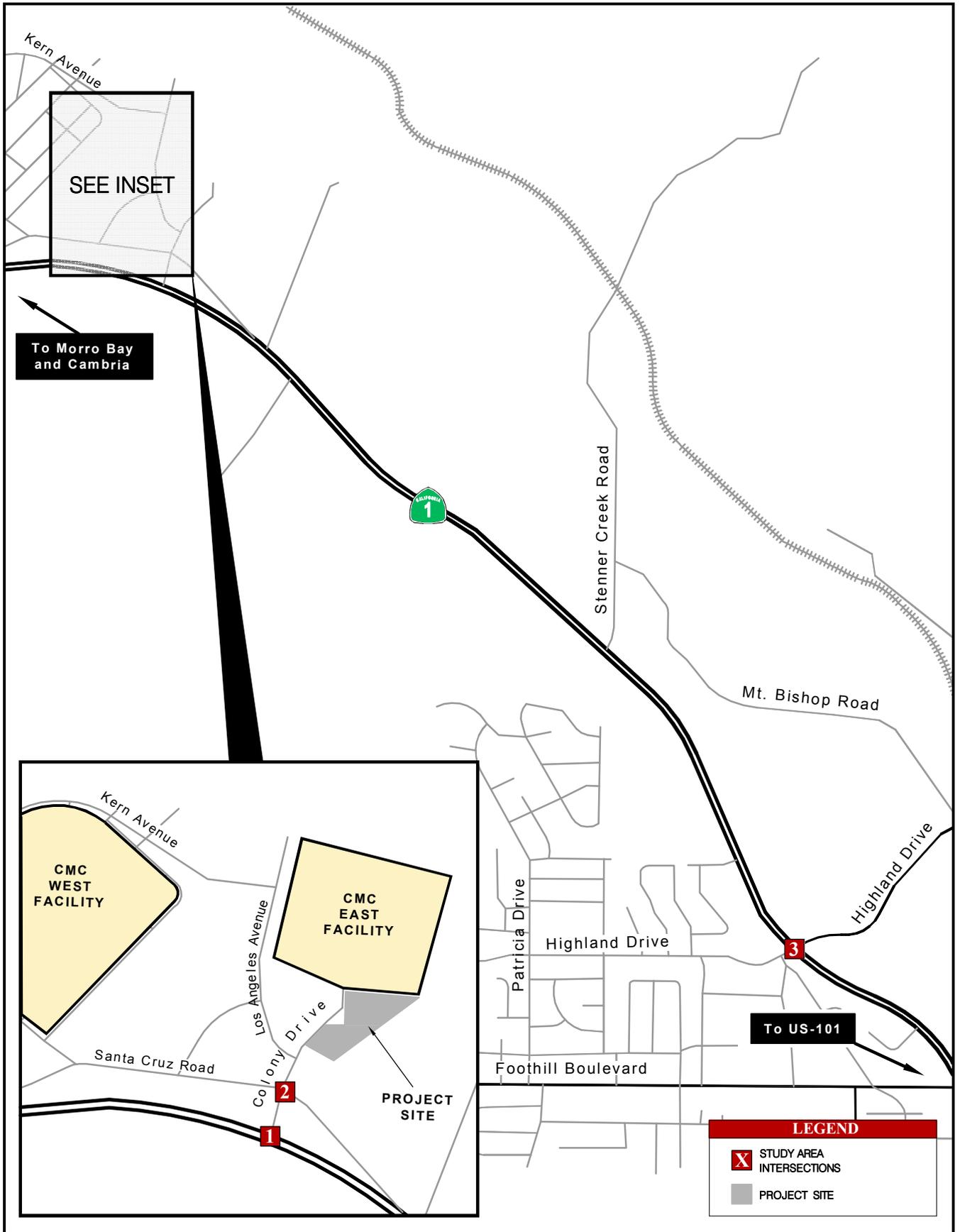
**Colony Drive** is a two-lane roadway operating similar to a collector street that travels east-west within the study area. Colony Drive provides local access to abutting property and serves as the primary entrance to the Men's Colony, where the road terminates. The posted speed limit along Colony Drive is 25 mph.

**Santa Cruz Road** is a two-lane roadway operating similar to a collector street that travels north-south within the study area, generally located between Colony Drive and Kern Avenue to the north. Santa Cruz Road provides direct access to the West facility.

**Los Angeles Avenue** is a two-lane roadway operating similar to a local street that travels north-south within the study area, adjacent to the existing facility. Los Angeles Avenue provides secondary access to the visitor parking lot and maintenance facilities.

**Highland Drive** is a two-lane roadway that travels east-west through the study area. It is classified by the City of San Luis Obispo as an arterial east of SR-1 and as a collector west of SR-1. Highland Drive serves as one of the primary entrances to the Cal Poly campus. The posted speed limit along Highland Drive is 30 mph east of SR-1 and 25 mph west of SR-1.

**Figure 1** shows the study area and existing circulation network.





## TRANSIT SYSTEM

There are two transit operators with bus routes within the study area. The San Luis Obispo Regional Transit Authority (RTA) was formed through an agreement between the County of San Luis Obispo and each of the seven cities incorporated within the County (Arroyo Grande, Atascadero, El Paso de Robles, Grover Beach, Morro Bay, Pismo Beach, and San Luis Obispo) to provide intercity fixed route service and ADA paratransit service throughout San Luis Obispo County. The RTA operates Monday through Friday, 6:00 am to 9:45 pm with limited weekend schedules. RTA operates two routes along SR-1 near the CMC facility, Route 12A and Route 12B. Neither route provides a stop near the facility; however, the CMC is a flag stop where busses can stop to pick up or drop off passengers by calling ahead. Route 12A operates one bus every hour, while Route 12B operates three busses the entire day.

The primary transit system in the City of San Luis Obispo is provided and operated by First Transit. While not providing bus routes near the CMC facility, there are two routes within the study area, Route 6a and Route 6b. Both routes travel to Cal Poly University along Highland Drive through the SR-1 intersection.

## BICYCLE AND PEDESTRIAN SYSTEM

Within the City and County of San Luis Obispo, there are three types of bicycle facilities:

- Class I:** Dedicated bicycle/pedestrian path
- Class II:** Striped bicycle lane and corresponding signs for bicycle-only use
- Class III:** Signed routes shared by either vehicles or pedestrians

According to the *County Bikeways Plan, 2005 Update*, SR-1 is designated as a Class II facility and has a substantial shoulder (Caltrans design standards include an 8-foot shoulder) for most of its length from the City of San Luis Obispo to Cayucos. However, at the SR-1/Colony Drive intersection, the northbound right turn lane encroaches into the shoulder narrowing the width between the right turn lane and edge of pavement. SR-1 is signed as a bike route and there are no pavement markings. According to the County plan, a parallel route may be constructed in the future as adjacent roadways and properties are developed. The parallel route would be a combination of Class II and III bikeways on parallel roads with Class I bikeways connecting them. Class II bike lanes are also provided along Highland Drive near the SR-1 intersection.

Currently, there are no sidewalks or pedestrian paths along Colony Drive, Santa Cruz Road, and SR-1 near the project site. However, there are pedestrian signals and push buttons on the east side of the SR-1/Colony Drive intersection. Sidewalks are provided along SR-1 south of Highland Drive and along Highland Drive at the SR-1 intersection. Marked crosswalks and pedestrian signals are provided on the south and west leg of the intersection.

## PARKING

There are currently two surface parking lots at the CMC East facility. The western parking lot (Lot A) includes 317 spaces for visitors and CMC staff. Lot A has access driveways on Colony Drive and Los Angeles Avenue. The eastern parking lot (Lot B), which will be relocated with the construction of the project, has access driveways on Colony Drive and contains 407 parking



spaces for CMC staff only. To assess the existing parking conditions at the CMC East facility, parking surveys were conducted on Friday, June 19, 2009 from 1:30 p.m. to 2:30 p.m. CMC staff identified Friday between 1:00 p.m. and 3:00 p.m. as the period with the highest combined employee and visitor parking demand. **Table 1** summarizes the existing parking occupancy and supply.

**Table 1: Existing CMC East Facility Parking Occupancy**

Parking Location	Parking Supply (spaces)	Occupied Spaces
<b>Lot East A</b>		
General Staff / Visitor Parking	290	256
20-Minute Parking	14	10
Handicap Parking	13	6
<i>Subtotal Lot East A</i>	<i>317</i>	<i>272</i>
<i>% Occupancy</i>		<i>86%</i>
<b>Lot East B</b>		
General Staff Parking	404	304
Handicap Parking	3	2
<i>Subtotal Lot East B</i>	<i>407</i>	<i>306</i>
<i>% Occupancy</i>		<i>75%</i>
<b>Total</b>	<b>724</b>	<b>578</b>
<b>% Occupancy</b>		<b>80%</b>

As shown in **Table 1**, the parking lots at the CMC East facility are currently 80 percent occupied during the peak demand periods. Current site plans indicate that the proposed project will require the removal of a portion of Lot East B, which will leave approximately 189 of the existing Lot East B parking supply remaining.

## TRAFFIC TERMINOLOGY AND ASSESSMENT METHODS

This section assesses vehicular traffic on roadways and at intersections, using both level of service calculations and signal warrant tests. These terms are described below.

### LEVEL OF SERVICE STANDARDS

Level of Service (LOS) is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or at an intersection during a specific time interval. It ranges from LOS A (very little delay) to LOS F (long delays and congestion). **Table 2** provides a definition for each level of service category.

**Table 2: Level of Service Definitions**

Level of Service	Description
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream. At signalized intersections, turning movements are easily made and all queues clear in a single signal cycle.
B	Stable traffic. Traffic flows smoothly with few delays. An occasional approach phase is fully utilized. Drivers begin to feel somewhat restricted within platoons of vehicles.
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays. Major approach phases fully utilized. Backups may develop behind turning vehicles.
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours. Queues may develop but dissipate rapidly, without excessive delays.
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.
F	Forced or breakdown flow that causes reduced capacity. Traffic demand exceeds the capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.

Source: Transportation Research Board, *Highway Capacity Manual 2000*, National Research Council, 2000.

All LOS analysis for this report was completed using the TRAFFIX<sup>®</sup> software.

### SIGNALIZED INTERSECTIONS

Intersection level of service is measured as the average control delay in seconds per vehicle. Control delay is the portion of the total delay experienced by drivers at intersections that is attributable to traffic signal operation. It includes the delay for decelerating to a stop at a signal, moving slowly in a queue of vehicles, stopped delay, and acceleration after the signal turns green. To evaluate signalized intersections, the operations method of the *Highway Capacity Manual*, Transportation Research Board, National Research Council, 2000 (HCM2000) was utilized. **Table 3** summarizes the relationship between the level of service rating and control delay for signalized intersections.

### UNSIGNALIZED INTERSECTIONS

To evaluate unsignalized intersections, the operations method of the HCM2000 was also utilized. This methodology determines the LOS based on delay. The delay is reported for the worst approach when the intersection is controlled with one- or two-way stop signs. The delay is an average for all approaches when the intersection is controlled with all-way stop signs. The LOS criteria for unsignalized intersections are also summarized in **Table 3**.

**Table 3: Level of Service Definitions for Signalized and Unsignalized Intersections**

Level of Service	Signalized Intersection Control Delay (seconds/vehicle)	Unsignalized Intersection Control Delay (seconds/vehicle)
A	≤ 10	0 to 10
B	> 10 – 20	> 10 to 15
C	> 20 – 35	> 15 to 25
D	> 35 – 55	> 25 to 35
E	> 55 – 80	> 35 to 50
F	> 80	> 50

Source: Transportation Research Board, *Highway Capacity Manual 2000*, National Research Council, 2000.

**TRAFFIC SIGNAL WARRANTS**

Traffic signals are used to provide an orderly flow of traffic through an intersection. Many times, they are needed to offer side street traffic an opportunity to access a major road where high volumes and/or high vehicle speeds impede crossing or turn movements. Signals do not, however, increase the capacity of an intersection. In fact, they often slightly reduce the number of total vehicles that can pass through an intersection in a given period of time. Signals can also cause an increase in traffic accidents if installed at inappropriate locations.

Tests for determining whether a traffic signal should be considered for installation have been developed. These tests, called “warrants,” consider criteria such as traffic volume, pedestrian volume, presence of school children, and accident history. There are eleven warrants used in the State of California in deciding whether to install a traffic signal. Usually, two or more warrants must be met before a signal is considered. Warrant #3 is for Peak Hour Volumes. An intersection meets Warrant #3 when peak hourly volumes on the major street and the minor street exceed specified values for any one hour of an average day. When an intersection meets Warrant #3, there is a strong indication that a detailed signal warrant analysis covering all possible warrants is appropriate, as described in the 2003 Manual of Uniform Traffic Control Devices (MUTCD) and the California supplement to the 2003 MUTCD. In areas with populations of less than 10,000 or at locations where speeds on an uncontrolled intersection approach are greater than 40 miles per hour, a rural peak hour warrant is used for evaluation. At all other locations, an urban warrant is used for evaluation.

It is possible that an unsignalized intersection will not meet signal warrants, even though one or more movements may experience LOS F operations. Although vehicles stopped on minor streets may experience long delays of one minute or more, there would not be an overall benefit if the higher numbers of vehicles on the major street were stopped in favor of the few vehicles on the minor street. The signal warrant analysis balances major street and minor street delays, and may indicate that there is overall benefit if drivers for some turn movements from the minor street continue to experience (LOS E or F) delays.

## EXISTING CONDITIONS OPERATIONS ASSESSMENT

### INTERSECTION OPERATION ANALYSIS

#### **STUDY LOCATIONS**

The study area consists of three intersections, which were evaluated under existing conditions for the AM and PM peak hour and are listed below:

- SR-1 / Colony Drive
- Colony Drive / Santa Cruz Road
- SR-1 / Highland Drive

#### **EXISTING TRAFFIC VOLUMES**

Twenty-four hour traffic counts were collected for three consecutive weekdays, from June 16 to June 18, 2009 near the existing facility. The counts were collected along Colony Drive east of SR-1, Colony Drive east of Los Angeles Avenue, and Los Angeles Avenue north of Colony Drive.

Peak hour turning movement counts were also collected at the three study intersections between 7:00-9:00 AM and 4:00-6:00 PM on June 16, 2009. The traffic counts at the SR-1 / Highland Drive intersection were collected while Cal Poly University and Cuesta College were out of session. However, traffic counts were collected in April 2008 at this intersection as part of the Cal Poly Technology Park Project, when the local universities and schools were in session. When compared to the June 16, 2009 counts, the April 2008 counts were higher. Therefore, the April 2008 peak hour counts at SR-1/Highland Avenue were utilized in the existing scenario.

A field visit was conducted to observe intersection geometry, intersection control, bus stop locations, pedestrian accessibility, and general traffic conditions. The existing conditions traffic control and geometry are shown in **Figure 2**. The existing traffic volumes are shown in **Figure 3**.

#### **EXISTING INTERSECTION LEVEL OF SERVICE**

**Table 4** summarizes the existing intersection levels of service for the AM and PM peak hours, utilizing existing timings at the signalized intersections (obtained from Caltrans).

**Table 4: Existing Conditions – Intersection Levels of Service**

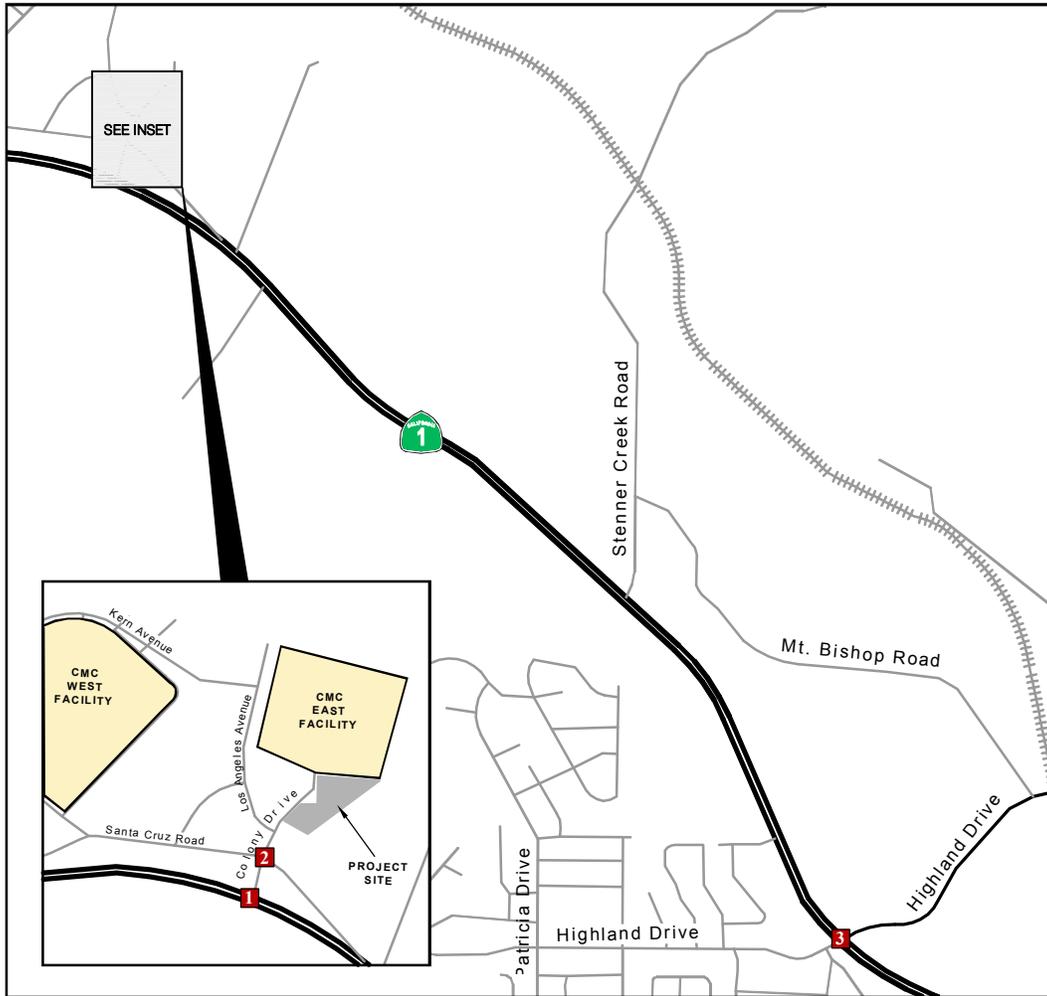
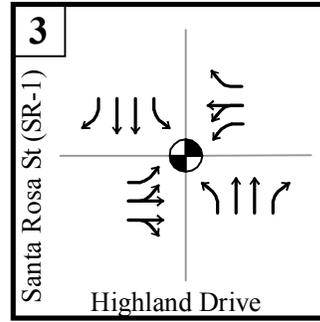
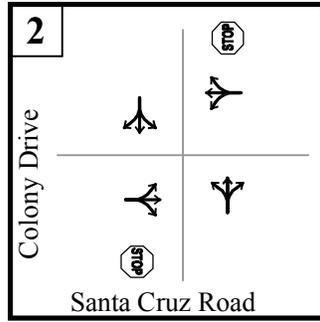
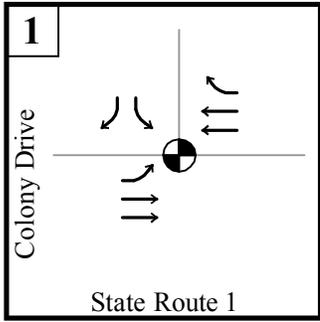
Intersection	Intersection Control	LOS Standard	Existing			
			AM Peak		PM Peak	
			Delay	LOS	Delay	LOS
1- Colony Dr / State Route 1	Signal	C/D <sup>1</sup>	6.1	A	15.9	B
2- Colony Dr / Santa Cruz Road	TWSC	D	14.6	B	12.8	B
3- State Route 1 / Highland Drive	Signal	C/D <sup>1</sup>	22.1	C	27.6	C

TWSC – Two-way Stop-controlled (LOS reported for worst-case movement)

LOS based on 2000 HCM

(1) The City of San Luis Obispo LOS threshold is LOS D or better. Caltrans has established the cusp of LOS C/D as the minimum acceptable standard for the intersection of Highland Drive with Highway 1.

The signalized and unsignalized intersections in the study area operate at acceptable levels of service in the AM and PM peak hours.



LEGEND	
	STUDY AREA INTERSECTIONS
	PROJECT SITE
	TRAFFIC SIGNAL
	STOP SIGN

FIGURE 2  
EXISTING CONDITIONS  
LANE GEOMETRY AND TRAFFIC CONTROL

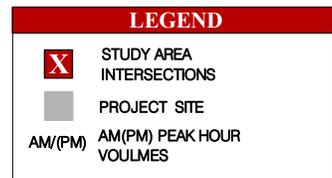
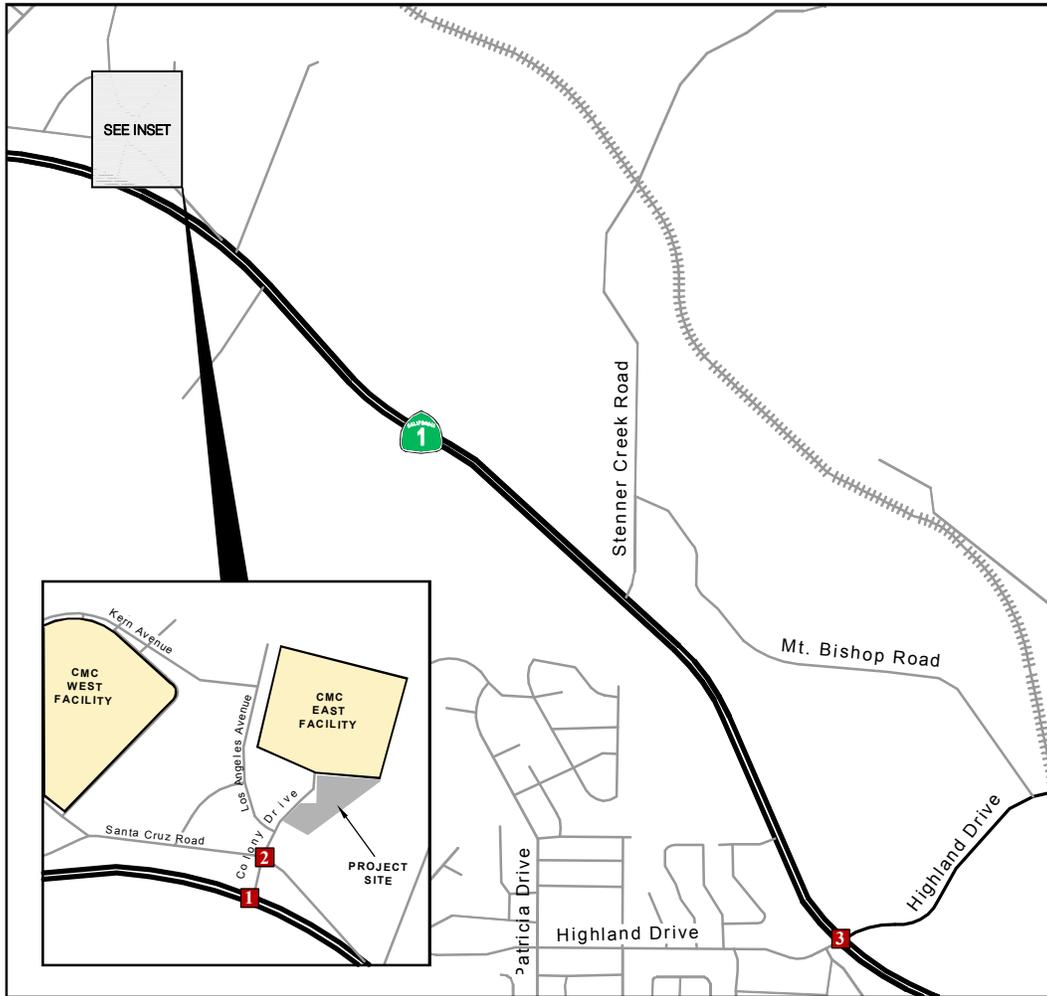
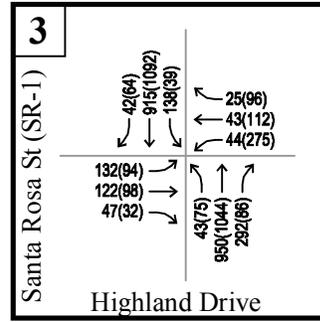
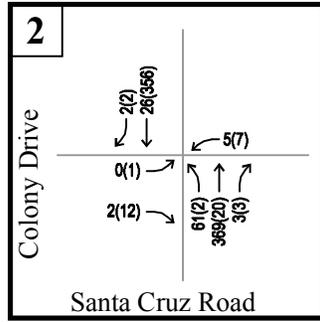
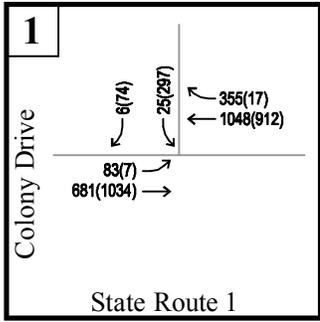


FIGURE 3  
EXISTING CONDITIONS  
PEAK HOUR INTERSECTION VOLUMES

## ***PROJECT IMPACTS AND MITIGATION MEASURES***

### **PROJECT DESCRIPTION**

The proposed project consists of the construction of a 50-bed mental health crisis bed (MHCB) facility and would feature approximately 45,000 square feet of space for housing, treatment, and support and administrative services. For the purposes of this analysis, it is assumed that the project may directly or indirectly result in an increase of as many as 50 additional inmates and 200 additional staff. This would potentially increase CMC's inmate count from a total of approximately 6,586 to as many as 6,636. The number of staff at the facility would potentially increase from the existing total of approximately 2,135 to a projected total of as many as 2,335. It is important to note that the estimated addition of as many as 50 inmates and 200 staff is intended to capture any possible increases resulting directly from the activation of the proposed MHCB facility, as well as any possible increases resulting indirectly when the existing outpatient housing unit (OHU) facility is re-purposed. The OHU currently operates as the temporary MHCB facility. Because the ultimate use of the existing OHU is not known at the present time, it is not possible to precisely predict future increases in either inmates or staffing. It is probable, however, that the number of new inmates and staff resulting directly and indirectly from activation of the MHCB would in reality prove to be less than 50 inmates and less than 200 staff.

The current site plans indicate that the proposed project will be constructed within the existing 407-space staff parking lot for the east facility, Lot B. This will require the removal of all but 189 of the existing spaces in this lot. The parking spaces proposed to be eliminated will be replaced with a new 316-space parking lot constructed south of Lot B. Additionally, a new 189-space parking lot will be constructed adjacent to Lot A, resulting in approximately 505 new parking spaces for the entire facility. The future parking supply will include 506 spaces in Lot A for visitor/staff parking and 505 spaces in Lot B for staff only, resulting in a total future parking supply of 1,011 spaces.

### **ANALYSIS SCENARIOS**

The analysis scenarios for the proposed California Men's Colony expansion are as follows:

- Near Term (Existing Conditions + Approved Developments)
- Near Term Plus Project (Existing Conditions + Approved Developments + Project)
- Cumulative (2030) Without Project
- Cumulative (2030) Plus Project

All intersections evaluated in the existing conditions analysis are evaluated in all other analysis scenarios.

### **STANDARDS OF SIGNIFICANCE**

#### **INTERSECTION PEAK HOUR LEVEL OF SERVICE**

Since the study area intersections along SR-1 are maintained and operated by Caltrans, the state's significance criteria is utilized to determine potential impacts. The Caltrans' Guide for the Preparation of Traffic Impact Studies (2002) states, "Caltrans endeavors to maintain a target LOS



at the transition between LOS “C” and LOS “D” on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS (e.g., LOS E or F), the existing measure of effectiveness should be maintained.”

### **PEDESTRIAN, BICYCLE, AND TRANSIT**

Impact criteria for bicycle and pedestrian facilities and transit system are in accordance with standard engineering practices. Pedestrian impacts are considered significant if the project disrupts existing, or interferes with planned pedestrian facilities, creates a high demand for pedestrians at locations that lack pedestrian facilities, or creates inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards. Bicycle impacts are considered significant if the project disrupts existing, or interferes with planned bicycle facilities, or creates inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards. Transit impacts are considered significant if the project disrupts existing, or interferes with planned transit services or facilities, creates demand for public transit services above that which is provided or planned, or creates inconsistencies with adopted transit system plans, guidelines, policies, or standards.

### **PROJECT TRIP GENERATION**

The Institute of Transportation Engineers’ (ITE), *Trip Generation, 8<sup>th</sup> Edition*, contains limited information on trip generation rates for detention facilities. Trip rates are provided under ITE Land Use Category 571 (Prison); however, these rates are derived from only two data points. Furthermore, the two data points are from surveyed prisons with 30 to 350 employees. The California Men’s Colony currently has 2,135 employees and is anticipated to add an additional 200 employees in conjunction with the proposed expansion project. For these reasons, a site specific trip generation rate was derived from the AM and PM peak hours for the existing California Men’s Colony and compared to the ITE rate for similar facilities. Detailed trip generation calculations are provided in the **Appendix**

Twenty-four hour traffic counts were collected for three consecutive weekdays, from June 16 to June 18, 2009 along Colony Drive east of State Route (SR) 1, the entrance to the existing facility, to capture only the CMC’s traffic.

Trip generation rates are based on an independent variable which is used to calculate existing trip generation and estimate future trip generation. The independent variable could include square footage, number of employees, or number of beds/inmates. For this analysis, the number of employees was used to represent the independent variable, which is also consistent with the independent variable used in the ITE *Trip Generation, 8<sup>th</sup> Edition* for prisons.

The expansion of the CMC facility includes the addition of 200 employees. The trip generation for the expansion was determined utilizing the trip generation rates developed specifically for this facility. **Table 5** shows the AM and PM peak hour trips for the proposed expansion.

**Table 5: California Men’s Colony Facility Trip Generation**

Land Use Designation	Number of Employees	AM Peak Hour Trips			PM Peak Hour Trips		
		In	Out	Total	In	Out	Total
CMC Expansion	200	37	3	40	2	27	29

(1) Trip generation rates based upon a trip generation study performed for the existing California Men’s Colony facility. Methodology and calculation are documented in a trip generation memo by Kimley-Horn and Associates, Inc., June 23, 2009 with updated calculations performed September 2009 to reflect revised staffing projections. See **Appendix** for details.

## PROJECT TRIP DISTRIBUTION

The direction of travel (trip distribution) of CMC project trips is based on existing peak hour turning movement counts collected at the intersection of SR 1 and Colony Drive on Tuesday, June 16, 2009, and the general orientation of population sources to the site. **Table 6** summarizes the traffic distribution assumed for this traffic study. Using these distribution percentages, project traffic is assigned to the adjacent roadway network.

**Table 6: Trip Distribution**

Description	Percent Distribution
SR-1 North (Morro Bay)	20%
SR-1 South of Highland	65%
Highland Drive East	5%
Highland Drive West	10%
<b>TOTAL</b>	<b>100%</b>

## NEAR TERM SCENARIO

This scenario establishes a near-term baseline condition against which the project’s impacts will be evaluated. It represents traffic conditions that will exist once development that has been approved is built and occupied. In conjunction with the County staff and Cal Poly University staff, two approved projects were identified in proximity to the project site. These approved projects were determined to add traffic to the study area intersections.

### **APPROVED DEVELOPMENTS AND PLANNED TRANSPORTATION IMPROVEMENTS**

Traffic projections from two approved developments have been included in both of the near-term scenarios. The sources of these traffic projections are:

- ❑ Cal Poly Technology Park Project Traffic and Circulation Study, May 7, 2008
- ❑ Student Housing North Draft Environmental Impact Report, June 2003

The AM and PM peak hour traffic volumes that the development adds to the study intersections have been added to existing volumes to represent near term traffic conditions. Both traffic studies included the intersection of SR-1/Highland Drive, but neither study included SR-1/Colony Drive. Therefore, the additional trips traveling on SR-1 north of Highland Drive were assumed to be traveling through the Colony Drive intersection, remaining on SR-1.

There are no planned or proposed roadway improvements within the study area.

The intersection LOS of the near-term scenario is shown in **Table 7** and the projected peak hour intersection turning movement volumes during the AM and PM peak hours are illustrated in **Figure 4**. The existing intersection geometry and traffic control shown in **Figure 2** was utilized in the near-term analysis.

As shown in **Table 7**, all study area intersections continue to operate at acceptable LOS during the AM and PM peak hours.

**Table 7: Near-Term No Project – Intersection Levels of Service**

Intersection	Intersection Control	LOS Standard	Near-Term No Project			
			AM Peak		PM Peak	
			Delay	LOS	Delay	LOS
1- Colony Dr / State Route 1	Signal	C/D <sup>1</sup>	6.1	A	15.9	B
2- Colony Dr / Santa Cruz Rd	TWSC	D	14.6	B	12.8	B
3- State Route 1 / Highland Dr	Signal	C/D <sup>1</sup>	23.5	C	28.3	C

TWSC – Two-way Stop-controlled (LOS reported for worst-case movement)  
LOS based on 2000 HCM.

(1) The City of San Luis Obispo LOS threshold is LOS D or better. Caltrans has established the cusp of LOS C/D as the minimum acceptable standard for the intersection of Highland Drive with Highway 1.

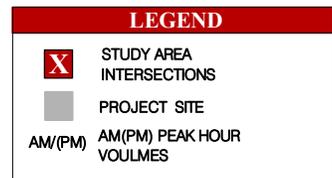
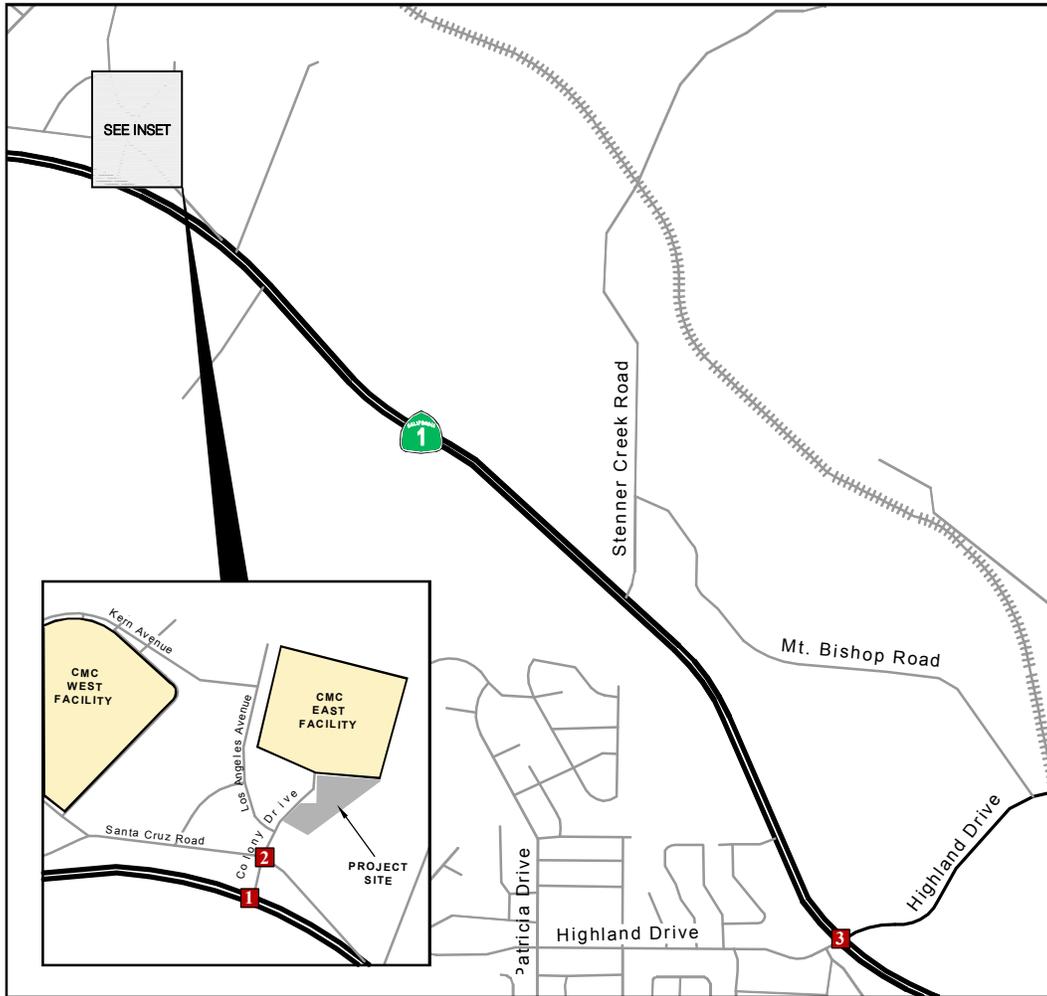
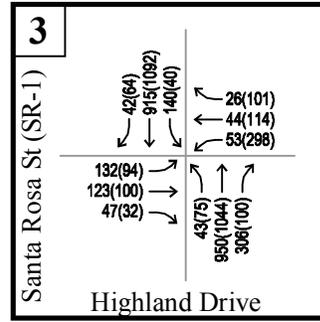
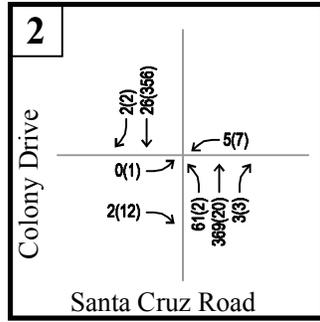
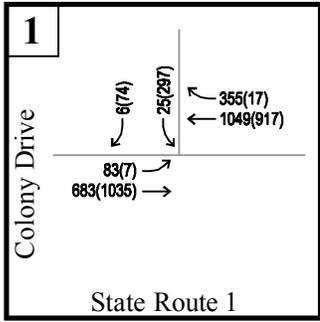


FIGURE 4  
NEAR-TERM CONDITIONS  
PEAK HOUR INTERSECTION VOLUMES

## NEAR TERM PLUS PROJECT SCENARIO IMPACT ANALYSIS

### INTERSECTION OPERATIONS

**Impact TRAF-1: Development of the Project would result in increases in traffic volumes at study area intersections.**

The traffic generated by the CMC expansion project was added to the Near-Term Scenario conditions to evaluate the Near-Term Plus Project Scenario. The study area intersection LOS is shown in **Table 8** and the projected peak hour intersection turning movement volumes during the AM and PM peak hours are illustrated in **Figure 5**. The existing intersection geometry and traffic control shown in **Figure 2** was utilized.

**Table 8: Near-Term Plus Project – Intersection Levels of Service**

Intersection	Intersection Control	LOS Standard	Near-Term Plus Project			
			AM Peak		PM Peak	
			Delay	LOS	Delay	LOS
1- Colony Dr / State Route 1	Signal	C/D <sup>1</sup>	6.6	A	16.8	B
2- Colony Dr / Santa Cruz Rd	TWSC	D	15.4	C	13.3	B
3- State Route 1 / Highland Dr	Signal	C/D <sup>1</sup>	23.5	C	28.2	C

TWSC – Two-way Stop-controlled (LOS reported for worst-case movement)  
LOS based on 2000 HCM

(1) The City of San Luis Obispo LOS threshold is LOS D or better. Caltrans has established the cusp of LOS C/D as the minimum acceptable standard for the intersection of Highland Drive with Highway 1.

The decrease in overall intersection delay at SR-1/Highland Drive is due to developing a modified signal timing plan.

As shown in **Table 8**, all study area intersections continue to operate at acceptable LOS during the AM and PM peak hours and operate within Caltrans’ established level of service standards.

**Mitigation Measure TRAF-1:** None required.

**Significance after Mitigation:** Since the addition of project traffic does not cause study intersections currently operating at acceptable LOS to degrade to an unacceptable LOS, the impact is considered to be less than significant, and no mitigation measures are required.

### PEDESTRIAN, BICYCLE, AND TRANSIT

**Impact TRAF-2: Development of the Project may generate pedestrian, bicycle, and transit trips, which would use the existing network within the project area.**

Due to its rural location, it is unlikely that staff or visitors walk to the facility. Furthermore, those who use transit can access the bus (through a flag stop) within the facility. It is expected that the development of the Project will generate negligible pedestrian demand. Therefore, the Project would not create any adverse impacts to pedestrians.

The Project would not create any changes to existing bicycle facilities, nor would its traffic generation interfere with bicycle travel. Therefore, the Project would not result in any adverse impacts to bicyclists.

The Project would not interfere with existing transit service or transit stops and may potentially generate transit ridership. Currently, there is not a scheduled stop at the facility; however, there is

a flag stop for the County's Regional Transit Authority. Additional passengers generated by the project would be accommodated by the existing service and impact to transit services would not be considered significant.

**Mitigation Measure TRAF-2:** None required.

**Significance after Mitigation:** Less than significant.

### **PARKING**

**Impact TRAF-3: Development of the Project would result in a net reduction in the facilities' overall parking supply and cause an increase in parking demand.**

The existing 407 parking spaces provided in Lot B will be reduced to approximately 189 spaces, resulting in a net decrease of approximately 218 existing parking spaces with the construction of the proposed project. In addition, the increase in CMC staff and inmates in conjunction with the project is anticipated to increase the parking demand at the CMC East facility. The Institute of Transportation Engineers' (ITE), *Parking Generation, 3<sup>rd</sup> Edition* is commonly used to estimate the parking demand generated by proposed developments; however, *Parking Generation* does not contain data for detention facilities. Therefore, a site specific parking generation rate was derived for the peak period at the existing CMC East facility utilizing the peak hour parking counts.

Currently, based on the existing staffing plan, there are approximately 1,948 CMC employees scheduled between 1:30 p.m. and 2:30 p.m., the peak period for parking demand. The proposed project is expected to add 163 employees during this period. A parking generation rate for the existing CMC East facility was calculated using employees as an independent variable, calculated to be approximately 0.297 spaces per employee. Detailed parking demand calculations are provided in the **Appendix**<sup>1</sup>. Based on this parking generation rate developed specifically for the existing facility, the proposed project is anticipated to generate an additional demand of 48 parking spaces based on the additional 163 employees.

The existing site provides 724 surface parking spaces. The proposed development will be constructed in a portion of Lot B, removing approximately 218 spaces. The proposed new parking lot, located to the south of Lot B, will include 316 new spaces, and the proposed new parking located adjacent to Lot A will include 189 new spaces. The construction of the project will result in a net total of 1,011 parking spaces. **Table 9** compares the future available parking supply to the projected parking demand with the addition of the proposed project.

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<sup>1</sup> Parking generation estimates based upon a parking generation study performed for the existing California Men's Colony facility. Methodology and calculation are documented in a parking generation memo by Kimley-Horn and Associates, Inc., June 30, 2009 with updated calculations performed September 2009 to reflect revised staffing projections. See **Appendix** for details.

**Table 9: CMC East Facility Parking Occupancy With Proposed Project**

<b>Existing Parking Supply</b>	<b>724 spaces</b>
Spaces removed for construction (East Lot B)	- 218 spaces
Subtotal	506 spaces
New parking lot construction (Lot B)	+ 316 spaces
New parking lot construction (Lot A)	+ 189 spaces
<b>Future Parking Supply</b>	<b>1,011 spaces</b>
<b>Existing Parking Demand</b>	<b>578 spaces</b> 80% of existing supply
Additional Parking Demand With Project	48 spaces
<b>Future Parking Demand</b>	<b>626 spaces</b> 62% of future supply
<b>Surplus / Deficit</b>	<b>Surplus of 385 spaces</b>

The above parking analysis represents the highest parking demand scenario as identified by CDCR staff. The peak parking period for the facility was identified between 1:30 PM and 2:30 PM on a Friday due to the shift change at 2:00 PM and the high visitation rates on Friday afternoons. Therefore, the parking analysis was evaluated for the highest parking scenario. With the additional parking demand created by the Project, added to the existing peak Friday staff and visitor demand, the CMC parking facilities will be 62 percent occupied with a surplus of 385 parking spaces. Therefore the proposed elimination of parking, combined with the proposed new parking, will accommodate the expansion of the CMC

**Mitigation Measure TRAF-3:** None required.

**Significance after Mitigation:** Less than significant.

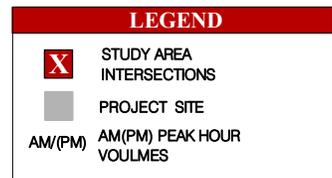
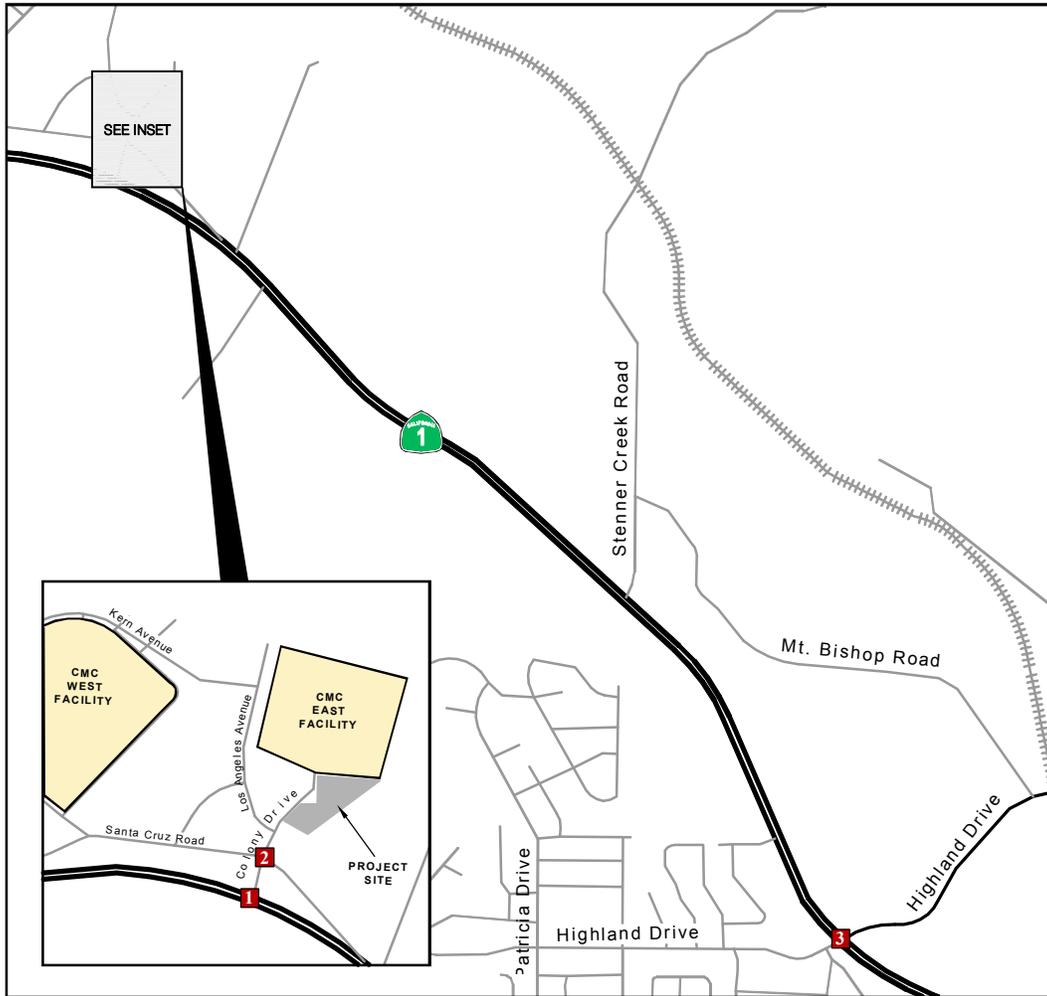
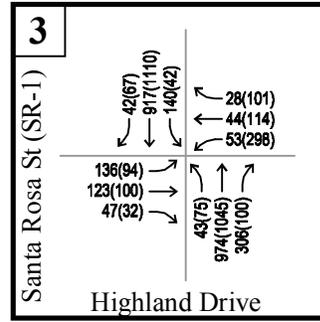
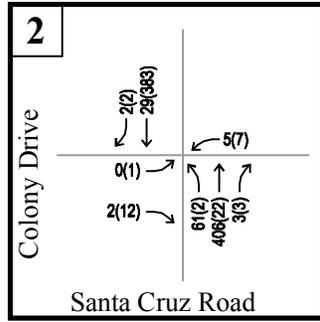
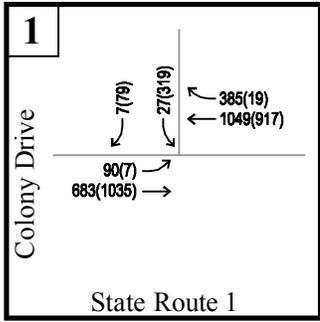


FIGURE 5  
NEAR-TERM PLUS PROJECT CONDITIONS  
PEAK HOUR INTERSECTION VOLUMES

## IMPACTS ON CUMULATIVE CONDITIONS

Cumulative baseline traffic projections establish background conditions for the evaluation of the project in the future and form the basis for determining and comparing cumulative impacts. This step in the analysis makes it possible to identify long-term traffic impacts, and the proposed project's contribution to those impacts.

Cumulative traffic volumes at the study intersections were estimated for year 2030 by using growth rates derived from the San Luis Obispo Council of Governments (SLOCOG) travel demand forecasting model. Land use data is included in the model on a traffic analysis zone (TAZ) level of detail. Model trip generation is performed with algorithms that reflect land use, population, employment, income levels, auto ownership, persons per household and other socio-economic factors specific to the area. The model's trip generation is "calibrated" to match local conditions. Using the land use, socioeconomic data, and network (street and intersection) data, the model distributes or allocates trips to/from each TAZ, or land use area. The model then assigns the trips to the roadway network based on least cost (time and/or distance) path. The model output is in the form of directional link volumes. The SLOCOG model includes a weekday AM peak period and PM peak period volume component.

Model output files, including directional link volumes, were received from SLOCOG and utilized to develop future traffic projections. Volumes from the model were used to forecast weekday AM and PM peak hour volumes for the Cumulative (2030) No Project scenario. The growth in the link volumes between the base year model (2004) and the forecast year model (2030) was used to develop an annual growth rate. The growth rate was applied to existing link volumes on roadways and at intersections, resulting in Cumulative No Project forecast volumes.

Many of the local streets within the study area are not represented in the SLOCOG model. Traffic volumes from the base year model and forecast year model were compared for the study area roadways that are represented in the current model. An overall growth rate of one percent per year was calculated; therefore, this growth rate was applied to the existing (2008 and 2009) traffic counts to project intersection turning movement volumes for the Cumulative (2030) No Project conditions, with the exception of Colony Drive and Santa Cruz Road. The growth rate was not applied to these roadways since they only access the Men's Colony, and the No Project scenario assumes no development of the CMC facility. The projected Cumulative No Project peak hour traffic volumes are illustrated in **Figure 6**.

Utilizing the existing intersection geometry and traffic control shown in **Figure 2**, the study area intersections LOS is shown in **Table 10**. As shown in **Table 10**, all study area intersections are projected to continue to operate at acceptable LOS during the AM and PM peak hours.



**Table 10: Cumulative No Project – Intersection Levels of Service**

Intersection	Intersection Control	LOS Standard	2030 Cumulative No Project			
			AM Peak		PM Peak	
			Delay	LOS	Delay	LOS
1- Colony Dr / State Route 1	Signal	C/D <sup>1</sup>	5.7	A	15.7	B
2- Colony Dr / Santa Cruz Rd	TWSC	D	14.6	B	12.8	B
3- State Route 1 / Highland Dr	Signal	C/D <sup>1</sup>	25.1	C	31.3	C

TWSC – Two-way Stop-controlled (LOS reported for worst-case movement)  
LOS based on 2000 HCM

(1) The City of San Luis Obispo LOS threshold is LOS D or better. Caltrans has established the cusp of LOS C/D as the minimum acceptable standard for the intersection of Highland Drive with Highway 1.

There is decrease in overall intersection delay at SR-1/Colony Drive when compared to the Near-Term No Project scenario due to additional through trips on SR-1 getting a longer green time at the intersection; however, the minor approach delays increase.

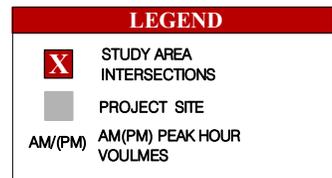
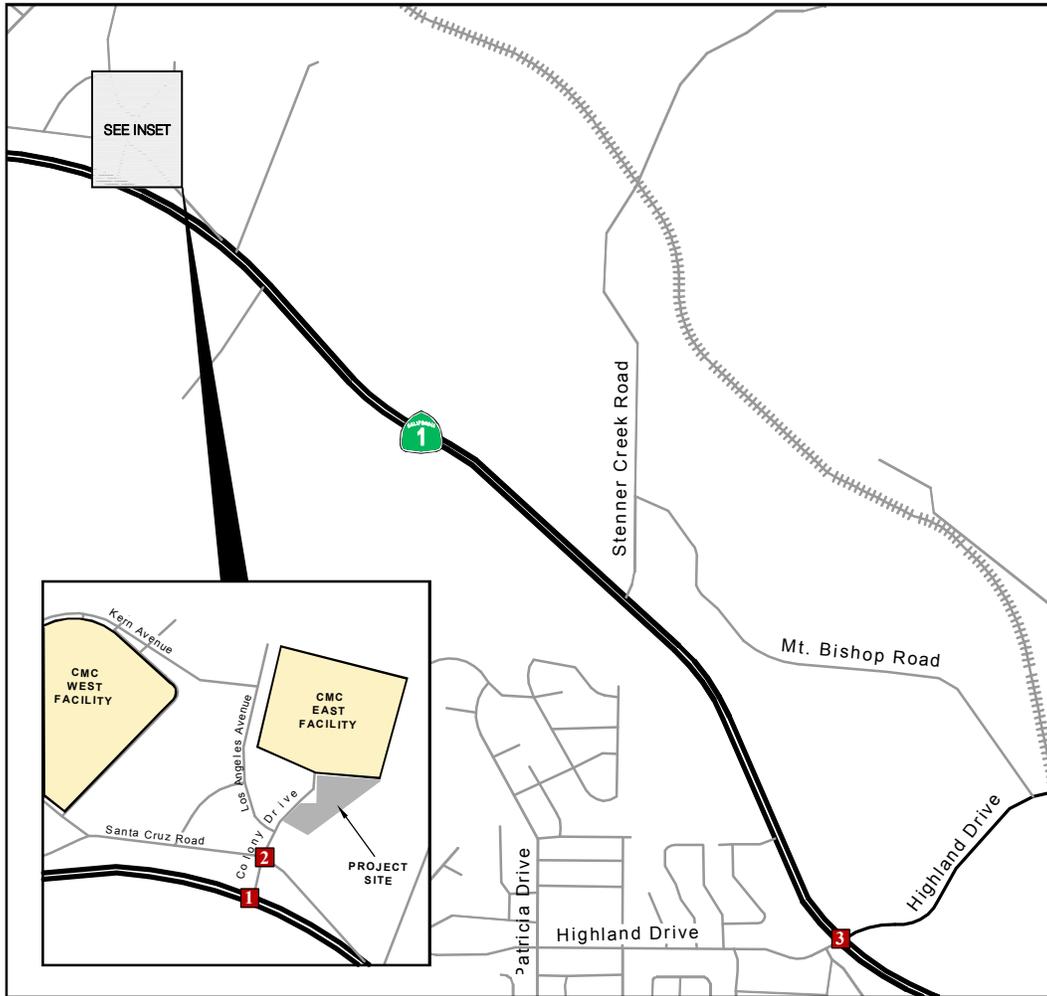
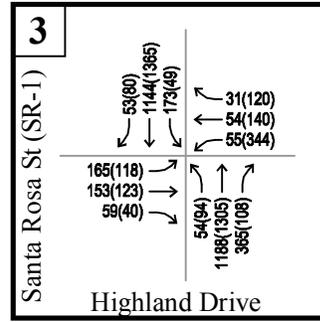
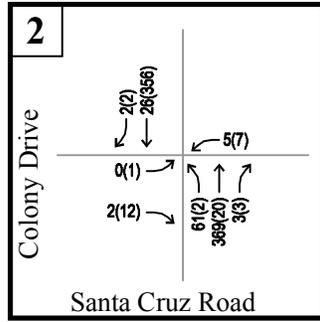
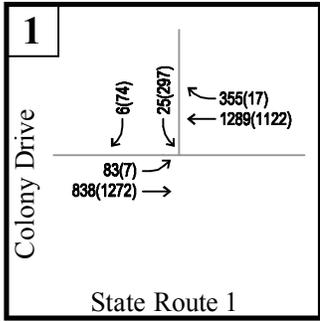


FIGURE 6  
 CUMULATIVE (2030) NO PROJECT  
 PEAK HOUR INTERSECTION VOLUMES

## CUMULATIVE PLUS PROJECT SCENARIO IMPACT ANALYSIS

### INTERSECTION OPERATIONS

**Impact TRAF-4: Development of the Project would result in increases in traffic volumes at study area intersections.**

The traffic generated by the CMC expansion project was added to the Cumulative No Project Scenario conditions to evaluate the Cumulative Plus Project Scenario. The study intersection LOS is shown in **Table 11** and the projected peak hour intersection turning movement volumes during the AM and PM peak hours are illustrated in **Figure 7**. The existing intersection geometry and traffic control shown in **Figure 2** was utilized in the analysis.

**Table 11: Cumulative Plus Project – Intersection Levels of Service**

Intersection	Intersection Control	LOS Standard	2030 Cumulative Plus Project			
			AM Peak		PM Peak	
			Delay	LOS	Delay	LOS
1- Colony Dr / State Route 1	Signal	C/D <sup>1</sup>	6.2	A	16.6	B
2- Colony Dr / Santa Cruz Rd	TWSC	D	15.4	C	13.3	B
3- State Route 1 / Highland Dr	Signal	C/D <sup>1</sup>	25.2	C	31.3	C

TWSC – Two-way Stop-controlled (LOS reported for worst-case movement)  
LOS based on 2000 HCM

(1) The City of San Luis Obispo LOS threshold is LOS D or better. Caltrans has established the cusp of LOS C/D as the minimum acceptable standard for the intersection of Highland Drive with Highway 1.

As shown in **Table 11**, all study intersections continue to operate at acceptable LOS during the AM and PM peak hours and operate within Caltrans’ established level of service standards.

**Mitigation Measure TRAF-4:** None required.

**Significance after Mitigation:** Since the addition of project traffic does not cause study intersections currently operating at acceptable LOS to degrade to an unacceptable LOS, the impact is considered to be less than significant, and no mitigation measures are required.

### PEDESTRIAN, BICYCLE, AND TRANSIT

**Impact TRAF-5: Development of the Project may generate pedestrian, bicycle, and transit trips, which would use the existing network within the project area.**

Refer to Impact TRAF-2 for discussion.

**Mitigation Measure TRAF-5:** None required.

**Significance after Mitigation:** Less than significant.



**PARKING**

**Impact TRAF-6: Development of the Project would result in increases in parking demand.**

Refer to Impact TRAF-3 for discussion.

**Mitigation Measure TRAF-6:** None required.

**Significance after Mitigation:** Less than significant.

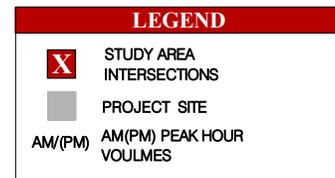
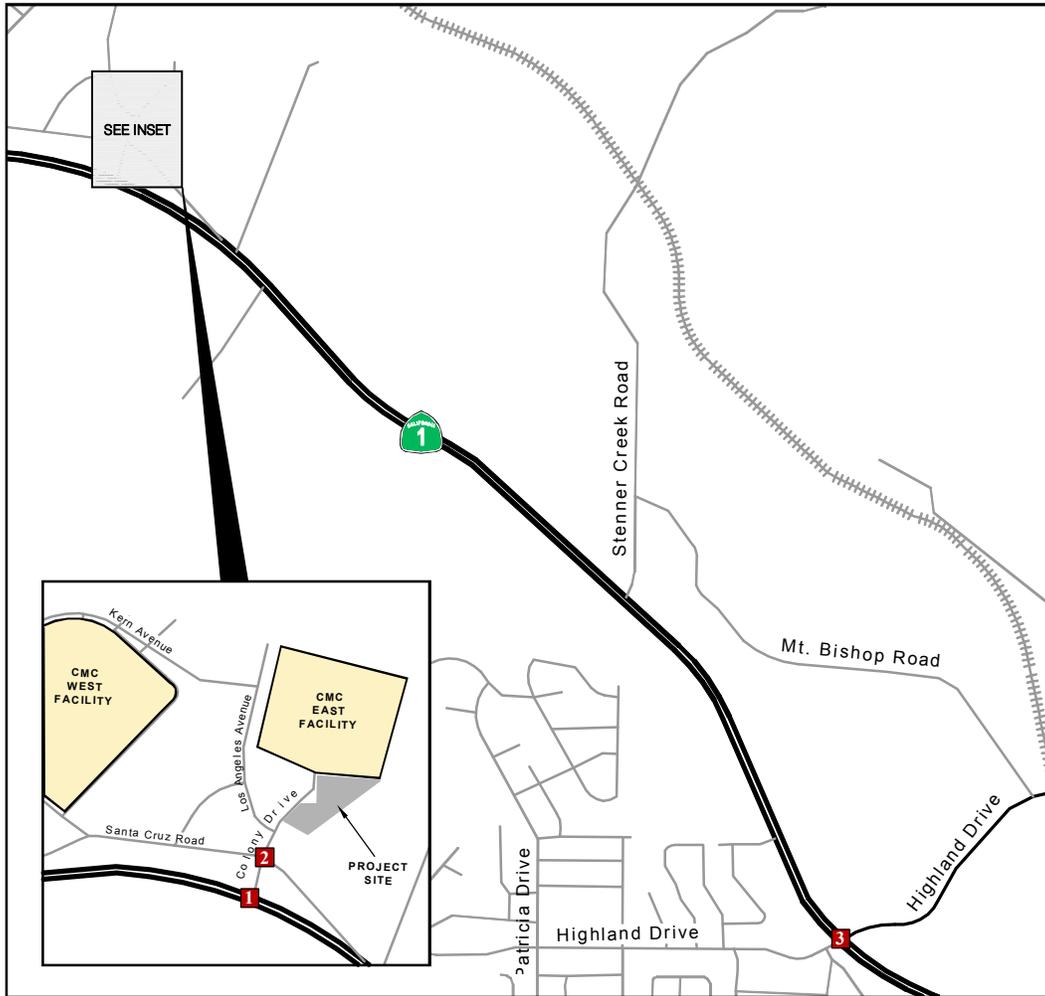
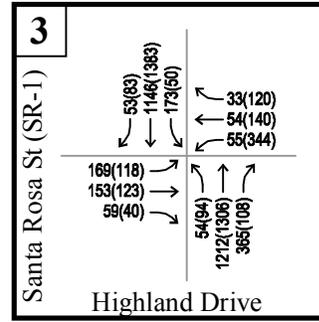
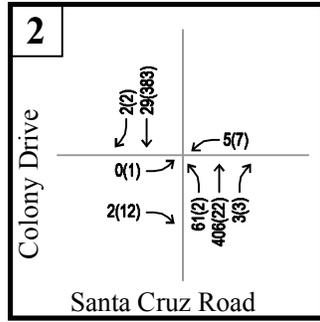
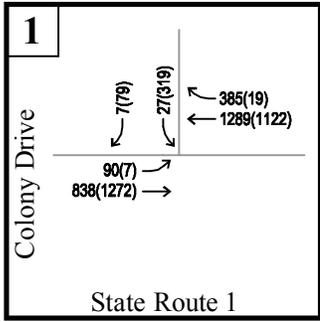


FIGURE 7  
 CUMULATIVE (2030) PLUS PROJECT  
 PEAK HOUR INTERSECTION VOLUMES



## ***REFERENCES – TRAFFIC, TRANSPORTATION, AND CIRCULATION***

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Kimley-Horn  
and Associates, Inc.

## **APPENDIX**