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**TIERED INITIAL STUDY WITH
MITIGATED NEGATIVE DECLARATION**
Capital SouthEast Connector – A1/A2 Kammerer Road Project



Prepared for:
Capital SouthEast Connector Joint Powers Authority
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GENERAL INFORMATION ABOUT THIS DOCUMENT

What's in this document:

This Initial Study (IS) examines the potential environmental impacts of the proposed Capital SouthEast Connector – A1/A2 Kammerer Road Project (Project) located in the City of Elk Grove and in a portion of unincorporated Sacramento County, California. The document describes the Project being adopted, the existing environment that could be affected by the Project, the potential impacts from the Project, and the adopted avoidance, minimization and/or mitigation measures.

The Capital SouthEast Connector Joint Powers Authority (Connector JPA) is the California Environmental Quality Act (CEQA) lead agency for the preparation of this Mitigated Negative Declaration (MND) for the Project. The Connector JPA was formed in December 2006 and includes the Cities of Elk Grove, Folsom and Rancho Cordova, and El Dorado and Sacramento Counties. For this Project, responsible agencies will be City of Elk Grove, and Sacramento County.

The Connector JPA has determined that a MND is the appropriate environmental document for the Project. This IS examines and presents the environmental impacts of the Project. The Connector JPA Program Environmental Impact Report (Connector JPA PEIR) analyzed impacts of the entire 34-mile long Capital SouthEast Connector Project. For any potentially significant impacts not previously addressed in the Connector JPA PEIR, Project specific avoidance, minimization and/or mitigation measures will be implemented to reduce the impact to a less than significant level. All mitigation measures associated with the Connector JPA PEIR, applicable to this Project segment, will be implemented as part of this Project for previously identified significant and unavoidable impacts. Therefore, a Tiered MND will be the adopted environmental document for this Project. Formatting of this document follows standards of CEQA.

The Tiered Initial Study with Mitigated Negative Declaration (IS/MND) was circulated to the public for review and comment from February 28, 2018 to April 2, 2018. The comments received, and their responses are shown in Appendix I: Public Comments. Elsewhere throughout this document, a line in the left margin indicates a change has been made since the draft environmental document was circulated to the public.

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Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

BRIEF PROJECT DESCRIPTION

The Connector JPA proposes to improve a segment of Kammerer Road between Bruceville Road and State Route 99 (SR-99) to a four-lane thoroughfare and create a new four-lane expressway between Bruceville Road and the Interstate 5 (I-5)/Hood Franklin Road Interchange.

The Project functions independently and will provide a link in the roadway infrastructure that serves the City of Elk Grove and Sacramento County. Kammerer Road between SR-99 and Bruceville Road will be widened to a four-lane thoroughfare, and a new four-lane expressway with a center median will be constructed west of existing Kammerer Road, between I-5 and Bruceville Road. The expressway will require a grade separated crossing of the Union Pacific Railroad line. Both the thoroughfare and the expressway will include a Class I bidirectional, multiuse pathway along the northern extent of the roadway. The thoroughfare will also include Class II bike lanes within the roadway shoulders in both directions. Additional Project features will include utility relocation, potential new utilities, drainage improvements, and drainage facilities. The Project is anticipated to be constructed in phases.

The Project is anticipated to be phased from a 2-lane to a 4-lane facility in coordination of implementation of the overall Connector Program described in the PEIR, in order to meet traffic demands for the next 20 years. See Section 1.1 for a complete project description.

The Project meets the goals of the proposed project analyzed in the Connector JPA PEIR. The goals of the Program include improving mobility, access, and connections between residential and nonresidential land uses, which have been compromised by increasing congestion, and to assist in preservation of open space and threatened habitats. The Project is intended to link employment centers and residential areas in the transportation corridor and contribute to the remedy for current and future deficiencies in transportation capacity, safety, and land use compatibility. The Project is also intended to improve regional traffic operations, reduce existing and projected congestion, and provide a vital component of the east-west gap closure.

An environmental analysis study area was developed to encompass the construction footprint required for all Project components detailed above, including I-5 interchange design options. This single impact analysis is appropriate as it allows for all possible construction impacts and calculates the entire Project's overall environmental impact.

Depending on funding availability, the opening year of the first phase of construction could begin as early as 2020, and could require approximately 25 months to complete.

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DETERMINATION

The Connector JPA has adopted a Tiered Mitigated Negative Declaration (MND) for this Project. The determination has been made based on comments received by interested individual and agencies during the 30-day public circulation between February 28, 2018 and April 2, 2018.

This determination concludes that the Project will not have a significant impact on the environment with the inclusion of appropriate avoidance, minimization, and mitigation measures included herein. From the results of the Initial Study, the Connector JPA has determined the Project would not have a significant impact on the environment for the following reasons:

The Project would have no impact to mineral resources; a less than significant impact to recreation; and a less than significant impact with mitigation incorporated to aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation/traffic, utilities and mandatory findings of significance.

The Project would not result in any new potentially significant impacts not previously identified within the PEIR to greenhouse gases.

Derek Minnema
Executive Director
Capital SouthEast Connector Joint Powers Authority

Date

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EXECUTIVE SUMMARY

The Project is located in the City of Elk Grove and Sacramento County, California. The extent of the Project area is from the SR-99 and Kammerer Road interchange to the I-5 and Hood Franklin Road interchange.

The Project functions independently and will provide a link in the roadway infrastructure that serves the City of Elk Grove and Sacramento County. The Project is anticipated to be phased from a 2-lane to a 4-lane facility. Kammerer Road between SR-99 and Bruceville Road will be widened to a four-lane thoroughfare, and a new four-lane expressway, with a center median, will be constructed west of Kammerer Road, between I-5 and Bruceville Road. The expressway will require a grade separated crossing of the Union Pacific Railroad line and include modifications to the I-5 interchange. Both the thoroughfare and the expressway will include a Class I bidirectional, multiuse pathway along the northern extent of the roadway. The thoroughfare will also include Class II bike lanes within the roadway shoulders in both directions. Additional Project features will include utility relocation, potential new utilities, drainage improvements, and drainage facilities.

The Project meets the goals of the proposed Project analyzed in the Connector JPA PEIR. The goals include improving mobility, access, and connections between residential and nonresidential land uses, which have been compromised by increasing congestion, and to assist in preservation of open space and threatened habitats. The Project is intended to link employment centers and residential areas in the corridor and contribute to the remedy for current and future deficiencies in transportation capacity, safety, and land use compatibility.

The Project is needed because existing roadways in the Project vicinity and adjacent transportation corridors between the SR-99 and I-5 Hood Franklin Road interchange are insufficient to meet existing and forecasted traffic demand; planned growth in the Project area is expected to increase, which will lead to deteriorating Level of Service (LOS) and traffic conditions; existing Kammerer Road is insufficient for pedestrian and bicycle traffic; and the Project area needs an east-west evacuation route that is higher than the 100-year flood elevation to enable normal mobility and emergency vehicle access.

The Project has received federal funding administered through the Federal Highway Administration (FHWA). The California Department of Transportation (Caltrans), as assigned by the FHWA as the National Environmental Policy Act (NEPA) lead agency, will prepare a separate NEPA Environmental Assessment (EA) that will assess the environmental impacts under NEPA. Environmental analysis provided by required NEPA technical documents has been incorporated in support of CEQA determinations where applicable. The Project is anticipated to be in full compliance with all NEPA requirements.

This environmental document is prepared in conformance with the requirements of CEQA Public Resources Code 21000-21178 and CEQA Guidelines. The Connector JPA is the Lead Agency for CEQA implementation. The City of Elk Grove and the Sacramento County will be responsible agencies.

The following Table summarizes the potential impacts of the adopted Project.

Summary of Potential Impacts

Resource	Potential Impacts	Summary of Avoidance, Minimization, and/or Mitigation Measures
Aesthetics	Less than significant with mitigation incorporated.	Construction staging and storage, construction lighting plan, and operational lighting incorporated.
Agriculture and Forest Resources	Less than significant with mitigation incorporated.	Prime farmland land conversion and avoidance. Impacts to farmland will be mitigated for at a 1:1 ratio.
Air Quality	Less than significant with mitigation incorporated.	Exhaust emissions controls, dust mitigation plan, maximum daily disturbed land area, and SMAQMD emissions control practices.
Biological Resources	Less than significant with mitigation incorporated.	Environmentally Sensitive Area Fencing; Environmental Awareness Training, National Pollutant Discharge Elimination System (NPDES) 402 permit, Section 401 Certification, 1602 Streambed Alteration Agreement, Section 404 permit compliance, native tree replacement; pre-construction surveys; Swainson's hawk foraging habitat mitigation, mitigation for special-status plants, pre-construction burrowing owl surveys, giant garter snake foraging and nesting habitat mitigation, and invasive species prevention.
Cultural Resources	Less than significant with mitigation incorporated.	Compliance with stipulations of Programmatic Agreement and regulations relating to discovered human and/or Native American remains.
Geology and Soils	Less than significant with mitigation incorporated.	Design Project to California seismic standards, and geotechnical evaluation for proposed structures.
Greenhouse Gas Emissions	No new significant impacts not previously identified within the PEIR.	Incorporate the use of energy-efficient lighting, such as LED traffic signals, implement SMAQMD BMPs, and conduct a Carbon Sequestration Feasibility Study and Cost Benefit Analysis for Tree Planting.

Resource	Potential Impacts	Summary of Avoidance, Minimization, and/or Mitigation Measures
Hazards and Hazardous Materials	Less than significant with mitigation incorporated.	Soil sampling and proper handling, ADL investigation, chemically treated wood disposal, leaking transformers protocol, striping plan, Phase II soil testing for potential pesticides and asbestos presence.
Hydrology and Water Quality	Less than significant with mitigation incorporated.	Standard BMPs and Storm Water Management Plan.
Land Use and Planning	Less than significant with mitigation incorporated.	None necessary or proposed.
Noise	Less than significant with mitigation incorporated.	Sound barriers subject to final design, and local sound/noise compliance.
Population and Housing	Less than significant with mitigation incorporated.	Project will comply with the Uniform Relocation Assistance Real Property Acquisition Policies Act of 1970 for potential residential relocations.
Public Services	Less than significant with mitigation incorporated.	Construction phasing, signage, and traffic control plan.
Recreation	Less than significant.	None necessary or proposed.
Transportation/Traffic	Less than significant with mitigation incorporated.	Construction phasing, signage, and Traffic Management Plan.
Tribal Cultural Resources	Less than significant with mitigation incorporated.	Compliance with stipulations of Programmatic Agreement and regulations relating to discovered human and/or Native American remains.
Utilities and Service Systems	Less than significant with mitigation incorporated.	Employ low-intensity development techniques and features to maintain current drainages, design of Project will include landscaping and irrigation plan, and demolition debris will be recycled.

Resource	Potential Impacts	Summary of Avoidance, Minimization, and/or Mitigation Measures
Mandatory Findings of Significance	No new significant impacts not previously identified within the Connector JPA PEIR.	<p>Refer to aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation/traffic, and utilities measures.</p> <p>The Project did not identify any new significant and unavoidable impacts under greenhouse gas emissions outside of what was previously identified in the PEIR.</p>

The detailed CEQA checklist summarizing specific Project impacts is included in Appendix A.

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List of Abbreviations

AB	Assembly Bill
ADT	Average Daily Traffic
APE	Area of Potential Effects
AST	Above Ground Storage Tank
AUL	Activity and Use Limitations
BA	Biological Assessment
Blueprint	SACOG's Preferred Blueprint Scenario
BMPs	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal-CAA	California Clean Air Act
Cal EPA	California Environmental Protection Agency
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCP	Comprehensive Conservation Plan
CCSD	Cosumnes Community Services District
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CDWR	California Department of Water Resources

Central Valley RWQCB	Central Valley Regional Water Quality Control Board
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFG	California Fish and Game
CH₄	Methane
City	City of Elk Grove
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO₂	carbon dioxide
Connector JPA	Capital SouthEast Connector Joint Powers Authority
County	Sacramento County
CT-EMFAC	Caltrans Emission Factors Model
CWA	Clean Water Act
dBA	Decibel A-weighted
dbh	diameter at breast height
DLAE	District Local Assistance Engineer
DPR	California Department of Parks and Recreation
DTSC	California Department of Toxic Substances Control
ECA	Essential Connectivity Area
EDR	Environmental Data Resources
EIR	Environmental Impact Report
E.O.	Executive Order
ESA	Environmentally Sensitive Area

FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GHG	greenhouse gases
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
HOV	High-occupancy vehicles
HUC	Hydrologic Unit Code
H₂S	Hydrogen Sulfide
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ISA	Initial Site Assessment
ITS	Intelligent Transportation System
I-5	Interstate 5
Lb	Pound
Ldn	day-night average sound level
Leq	equivalent continuous sound level
LID	Low impact development
Lmax	maximum sound level
MLRA	Major Land Resource Area
LOS	Level of Service
LRU	Land Resource Unit
MBTA	Migratory Bird Treaty Act
MMRP	Mitigation Monitoring and Reporting Program

MND	Mitigated Negative Declaration
Mph	miles per hour
MRZ	Mineral Resource Zone
MSL	mean sea level
MTIP	Metropolitan Transportation Improvement Program
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NCIC	North Central Information Center
NES	Natural Environment Study
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NOA	Naturally Occurring Asbestos
NO₂	nitrogen dioxide
N₂O	nitrous oxide
NOX	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
Stone Lakes NWR	Stone Lakes National Wildlife Refuge
O₃	Ozone
OPR	Office of Planning and Research
PeMS	California Freeway Performance Measure System

PG&E	Pacific Gas and Electric
Pb	Lead
PEIR	Programmatic Environmental Impact Report
PM	particulate matter
PRC	Public Resources Code
Project	Capital SouthEast Connector A1/A2 Kammerer Road Project
PS&E	Plans Specifications and Estimates
RECs	Recognized Environmental Conditions
ROG	Reactive organic compounds
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SACSIM	Sacramento Activity-Based Travel Simulation Model
SCS	Sustainable Communities Strategy
SCWA	Sacramento County Water Agency
SEPA	Southeast Policy Area
SF₆	Sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SMUD	Sacramento Municipal Utilities District
SO₂	sulfur dioxide
SPA	Special Planning Area
SR	State Route
SRCSD	Sacramento Regional County Sanitation District
SSHCP	South Sacramento Habitat Conservation Plan
SSQP	Sacramento Stormwater Quality Partnership

SWPPP	Storm Water Pollution Prevention Plan
SWRCB	Sacramento Water Resources Control Board
TCR	Tribal Cultural Resource
TCMs	Transportation Control Measures
TMDL	Total Maximum Daily Load
TMP	Traffic Management Plan
UBC	Uniform Building Code
UPA	Urban Policy Area
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USB	Urban Service Boundary
USDA	United States Department of Agriculture
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VELB	Valley Elderberry Longhorn Beetle
VIA	Visual Impact Assessment
VOC	Volatile Organic Compounds
VMT	Vehicle miles traveled
WDRs	Water Discharge Requirements

1.0 PROPOSED PROJECT

1.1 Project Description

The Capital SouthEast Connector A1/A2 Segment - Kammerer Road Project (Project) is located in unincorporated Sacramento County (County) and a portion of the City of Elk Grove (City). The Project proposes to connect State Route (SR) 99 to Interstate 5 (I-5) in an east-west alignment. The Project will replace an existing portion of Kammerer Road with a four-lane thoroughfare, construct a new four-lane expressway section to I-5, and implement railroad grade separation and interchange improvements as discussed below.

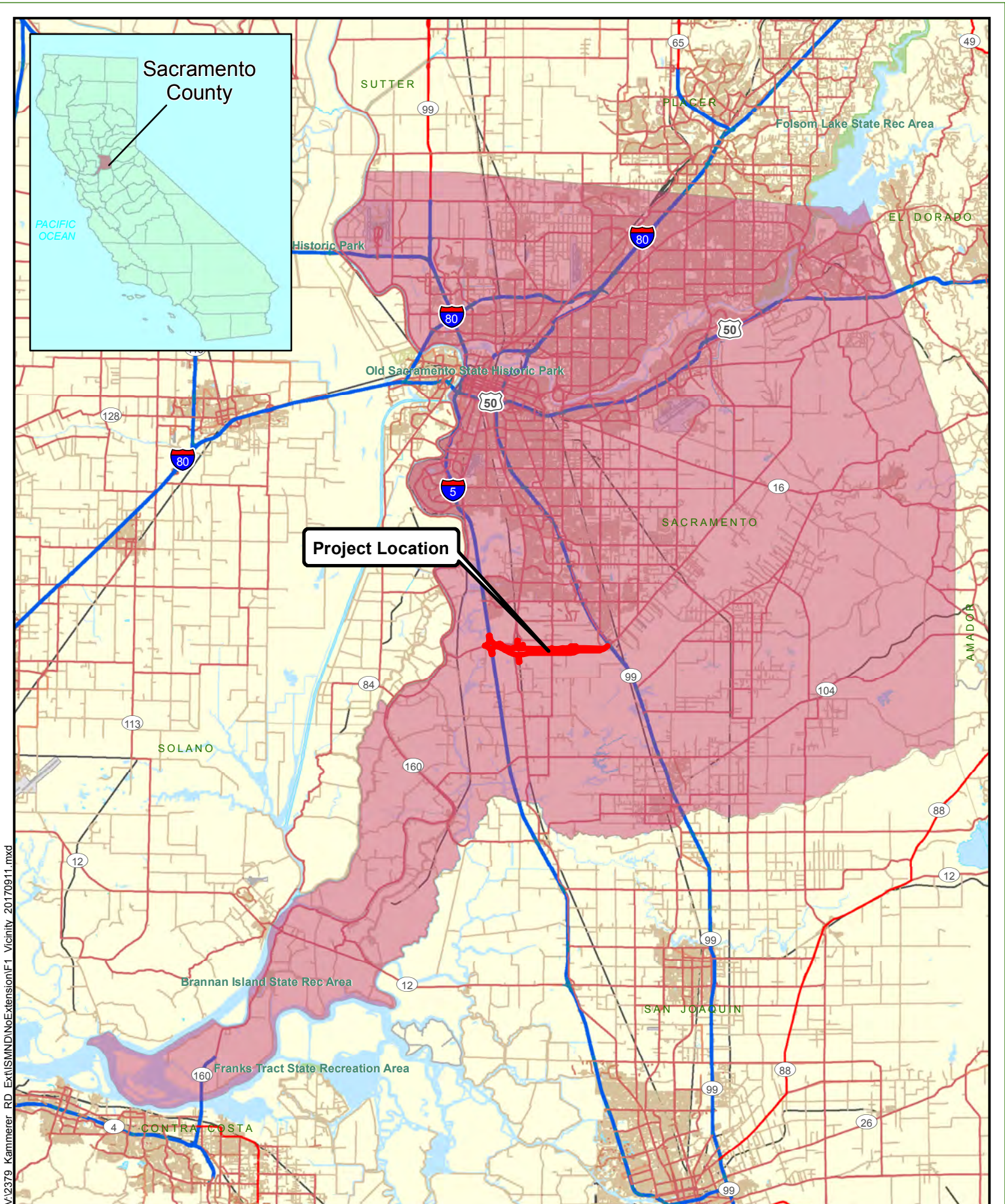
The Capital SouthEast Connector Joint Powers Authority (Connector JPA) is the California Environmental Quality Act (CEQA) lead agency. The City of Elk Grove and Sacramento County are Responsible Agencies. The California Department of Transportation (Caltrans) is the National Environmental Policy Act (NEPA) lead agency. The Project meets the goals of the proposed Project analyzed in the Connector JPA Program Environmental Impact Report (Connector JPA PEIR), which was certified in 2012.

The total length of the Project is approximately 5.75 miles. Kammerer Road is currently a two-lane undivided roadway which begins at the SR-99 Grant Line Road/Kammerer Interchange and extends west from SR-99 and terminates at Bruceville Road. There is an existing interchange at I-5/Hood-Franklin Road from which the eastern leg of Hood-Franklin Road currently terminates at Franklin Boulevard. The proposed Project would connect the segments through construction of a four-lane facility, two travel lanes in each direction, with a multi-use path adjacent the west-bound travel lane, and a Class II Bicycle Lane along both travel directions between SR-99 and Bruceville Road. The Project will require utility relocations, potential new utilities, right-of-way acquisitions, drainage improvements, temporary construction easements, and staging areas. **Figure 1** shows the regional Project vicinity, **Figure 2** shows the Project location with surrounding streets, and **Figure 3** shows the proposed Project features.

Dependent upon funding, the Connector JPA or the Implementing Agency, may construct all or part of this Project. Should construction phasing of this Project be necessary, initial construction may consist of a two-lane facility; however, other construction phasing may be considered. While the two-lane facility will operate at an acceptable Level of Service (LOS) in the immediate future, anticipated future conditions would approach an unacceptable LOS. As funding and traffic conditions warrant, the four-lane facility will be constructed.

It should be noted that the Connector JPA PEIR identifies a future project concept including full interchange reconstruction and grade separated intersections; however, these future improvements are not part of this Project. This Project does consider both the physical and environmental constraints that would influence the design for future interchanges, and CEQA analysis for the Project includes environmental clearance of full interchange design alternatives, if and when determined necessary.

The Project is included in the Sacramento Area Council of Government's (SACOG) 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (2016 MTP/SCS). The Project is also included in SACOG's 2017/2020 Metropolitan Transportation Improvement Program (MTIP) as project numbers SAC24114 (Kammerer Road Widening) and SAC24094 (Kammerer Road Extension) and SAC25087 (Capital SouthEast Connector A2, Kammerer Road Reconstruction). Additionally, SACOG has updated SAC24094 with Administrative Modification #21, stating the Project may be phased from a 2-lane to a 4-lane facility.



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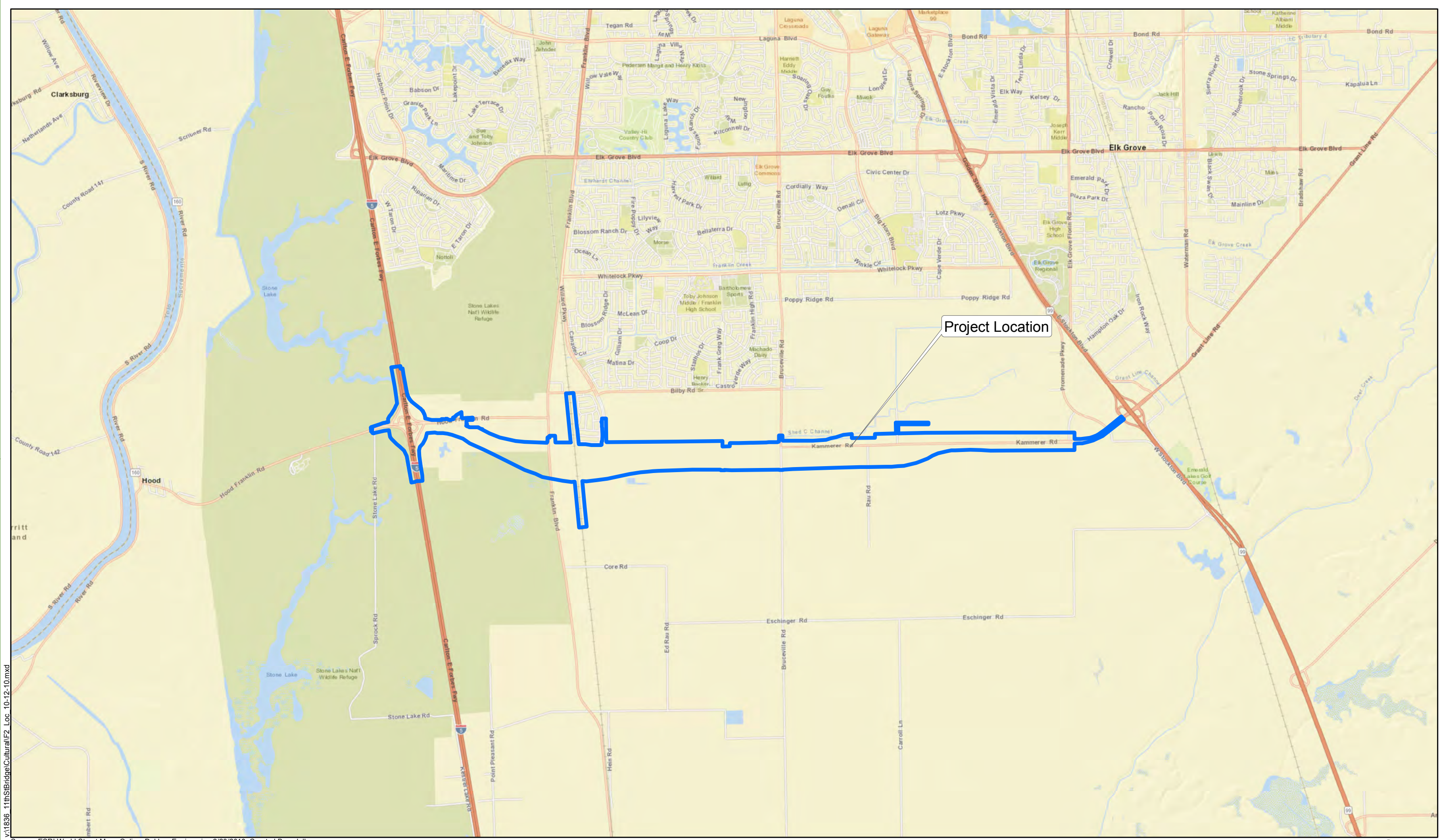
Source: ESRI 2008; Dokken Engineering 2/22/2018; Created By: adellas



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FIGURE 1
Project Vicinity

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Project
City of Elk Grove and Sacramento County, California



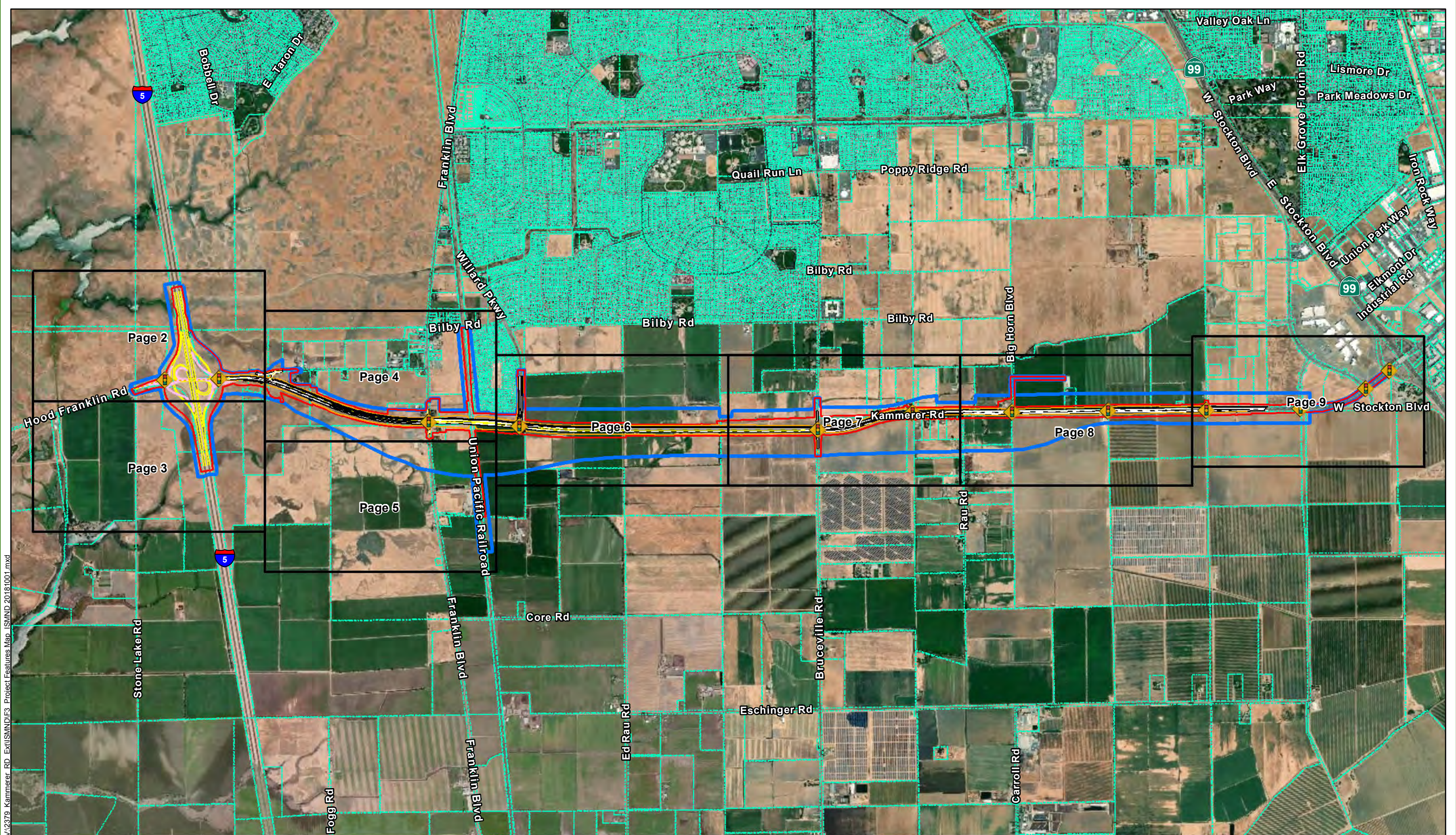
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Source: ESRI World Street Maps Online; Dokken Engineering 2/23/2018; Created By: adellas



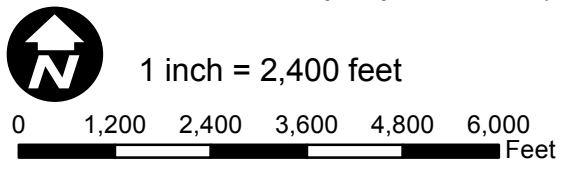
FIGURE 2
Project Location

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Project
City of Elk Grove and Sacramento County, California



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Source: ESRI Aerials 6/21/2016; Dokken Engineering 12/5/2018; Created By: brianm



Potential Impact Area	Signalized Intersection	Edge of Pavement	Cut/Fill Line
Project Study Area	Roundabout Intersection Control	Multi-Use Path	Pavement Marking
Parcels	Future Interchange Concept		

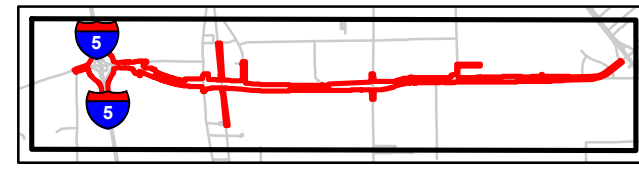
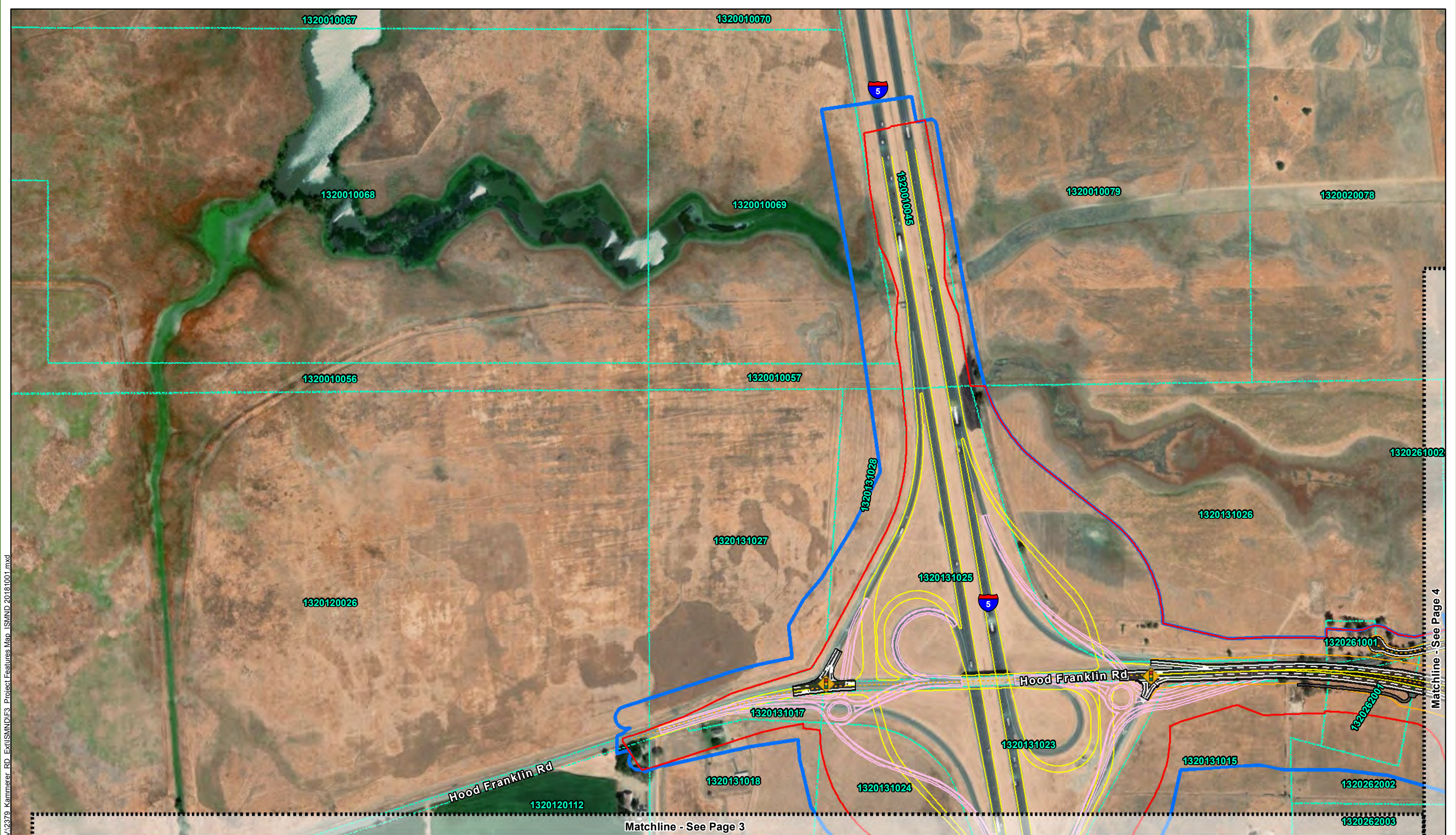
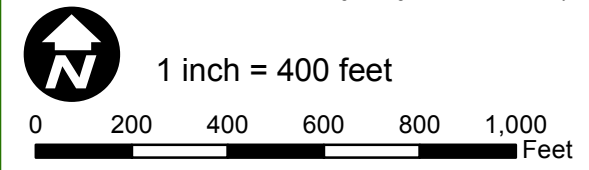


FIGURE 3
Project Features
Page 1 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

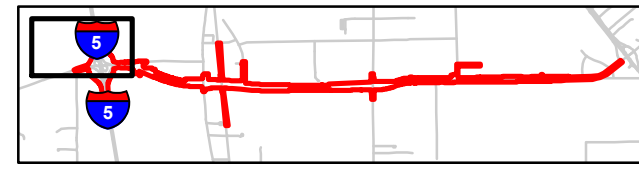


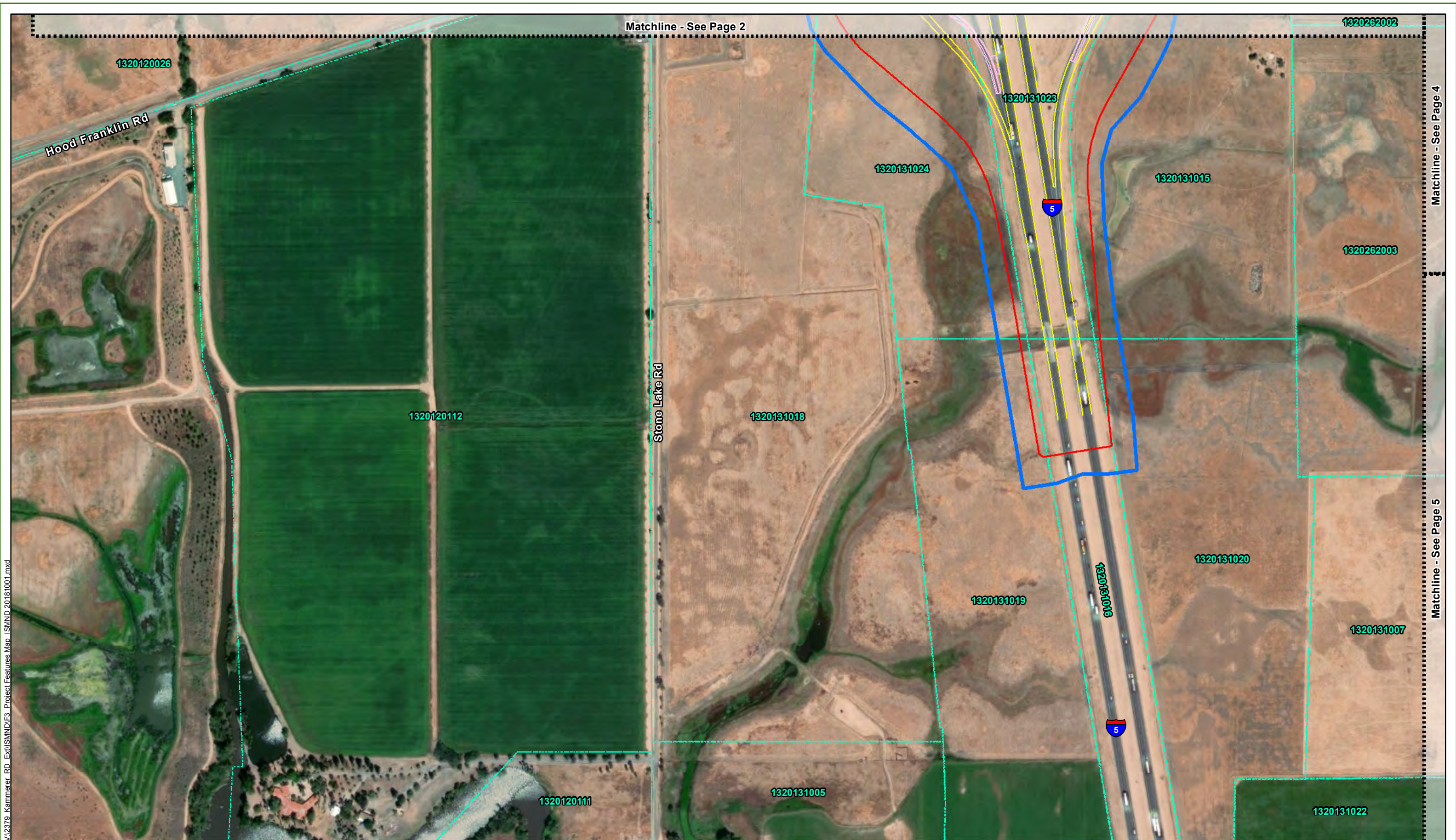
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Source: ESRI Aerials 6/21/2016; Dokken Engineering 12/5/2018; Created By: brianm



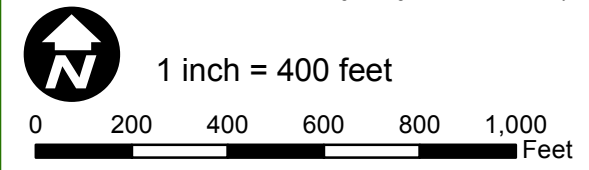
Potential Impact Area	Signalized Intersection	Edge of Pavement	Cut/Fill Line
Project Study Area	Roundabout Intersection Control	Multi-Use Path	Pavement Marking
Parcels	Future Interchange Concept		





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Source: ESRI Aerials 6/21/2016; Dokken Engineering 12/5/2018; Created By: brianm



	Potential Impact Area		Signalized Intersection		Edge of Pavement		Cut/Fill Line
	Project Study Area		Roundabout Intersection Control		Multi-Use Path		Pavement Marking
	Parcels		Future Interchange Concept				

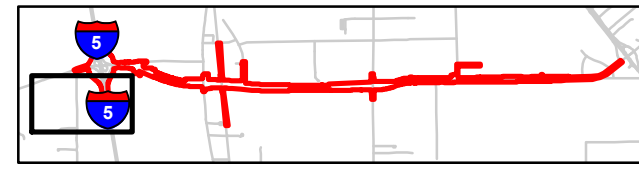
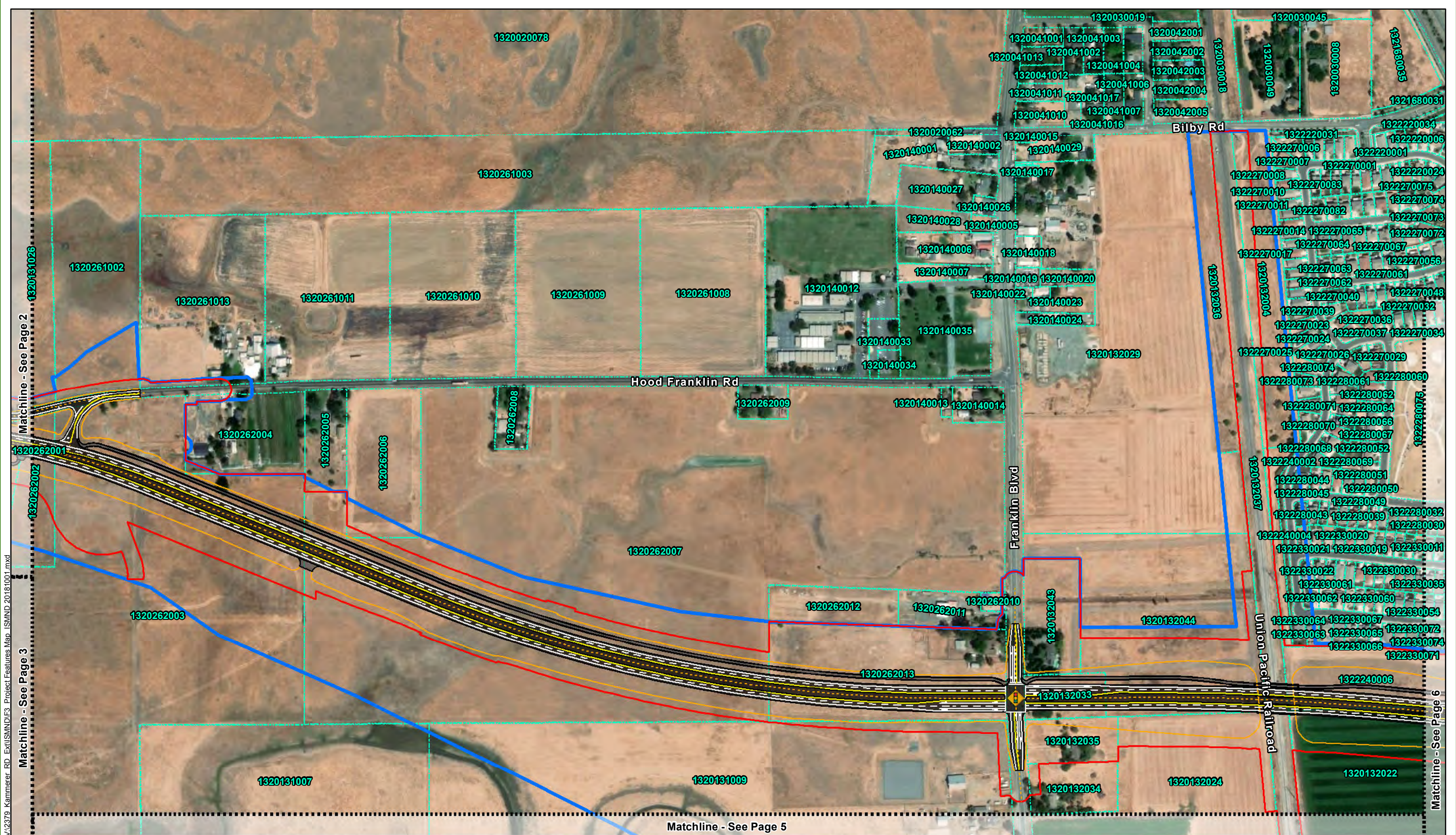


FIGURE 3
Project Features
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



Source: ESRI Aerials 6/21/2016; Dokken Engineering 12/5/2018; Created By: brianm

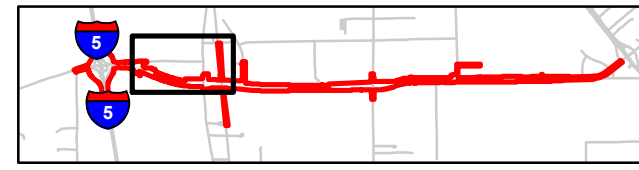
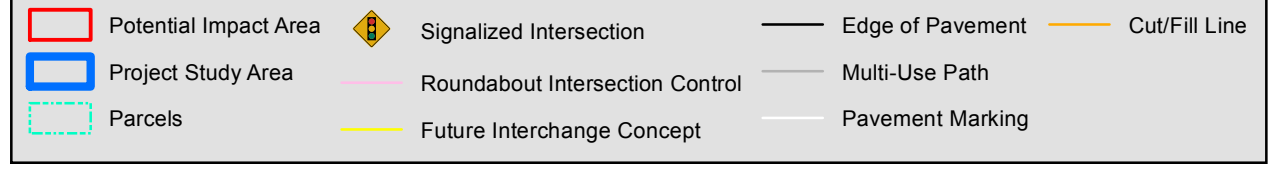
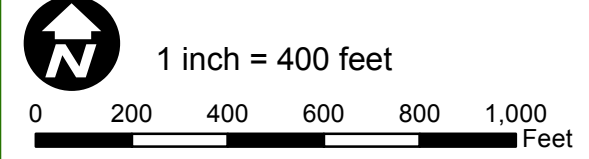
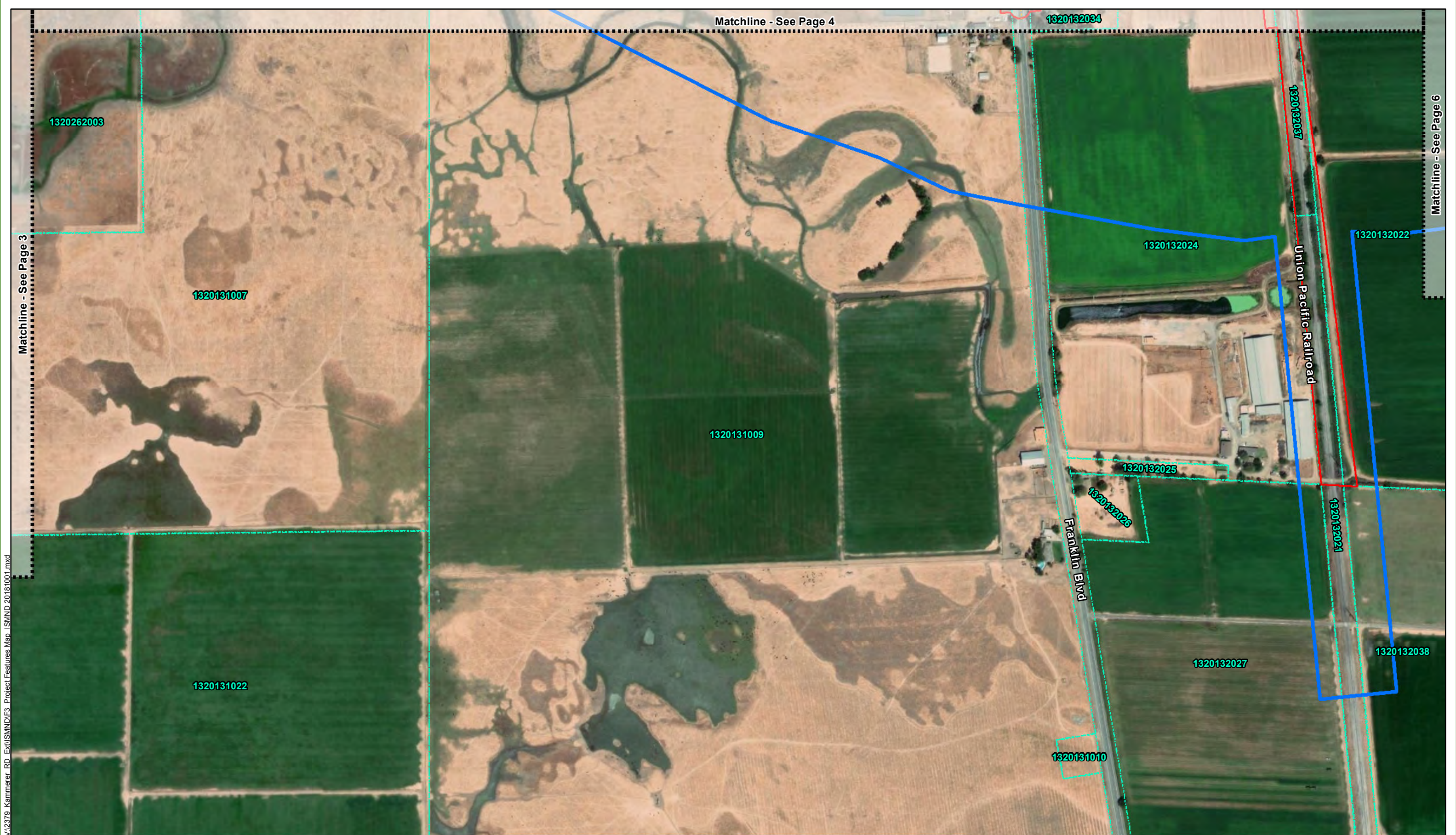
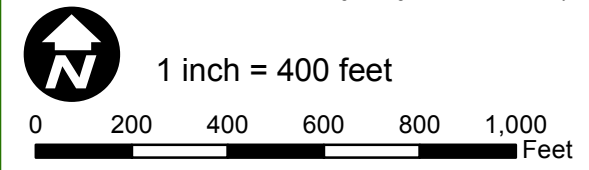


FIGURE 3
Project Features
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 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Aerials 6/21/2016; Dokken Engineering 12/5/2018; Created By: brianm



Potential Impact Area	Signalized Intersection	Edge of Pavement	Cut/Fill Line
Project Study Area	Roundabout Intersection Control	Multi-Use Path	Pavement Marking
Parcels	Future Interchange Concept		

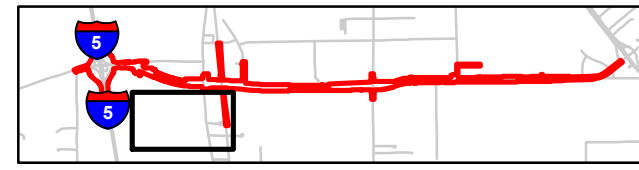
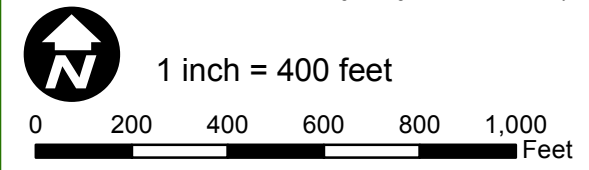


FIGURE 3
Project Features
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Aerials 6/21/2016; Dokken Engineering 12/5/2018; Created By: brianm



	Potential Impact Area		Signalized Intersection		Edge of Pavement		Cut/Fill Line
	Project Study Area		Roundabout Intersection Control		Multi-Use Path		Pavement Marking
	Parcels		Future Interchange Concept				

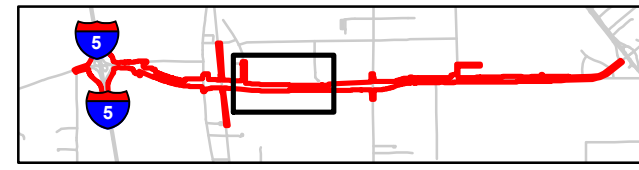
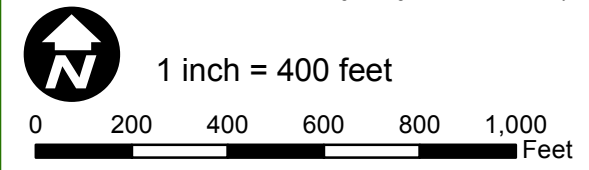


FIGURE 3
Project Features
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Aerials 6/21/2016; Dokken Engineering 12/5/2018; Created By: brianm



Potential Impact Area	Signalized Intersection	Edge of Pavement	Cut/Fill Line
Project Study Area	Roundabout Intersection Control	Multi-Use Path	Pavement Marking
Parcels	Future Interchange Concept		

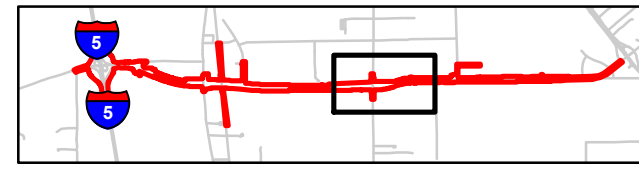
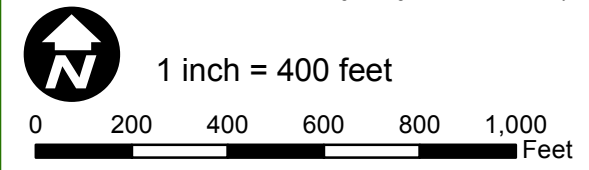


FIGURE 3
Project Features
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Aerials 6/21/2016; Dokken Engineering 12/5/2018; Created By: brianm



	Potential Impact Area		Signalized Intersection		Edge of Pavement		Cut/Fill Line
	Project Study Area		Roundabout Intersection Control		Multi-Use Path		Pavement Marking
	Parcels		Future Interchange Concept				

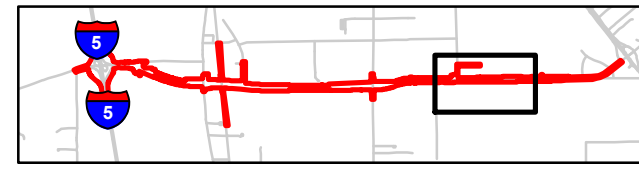
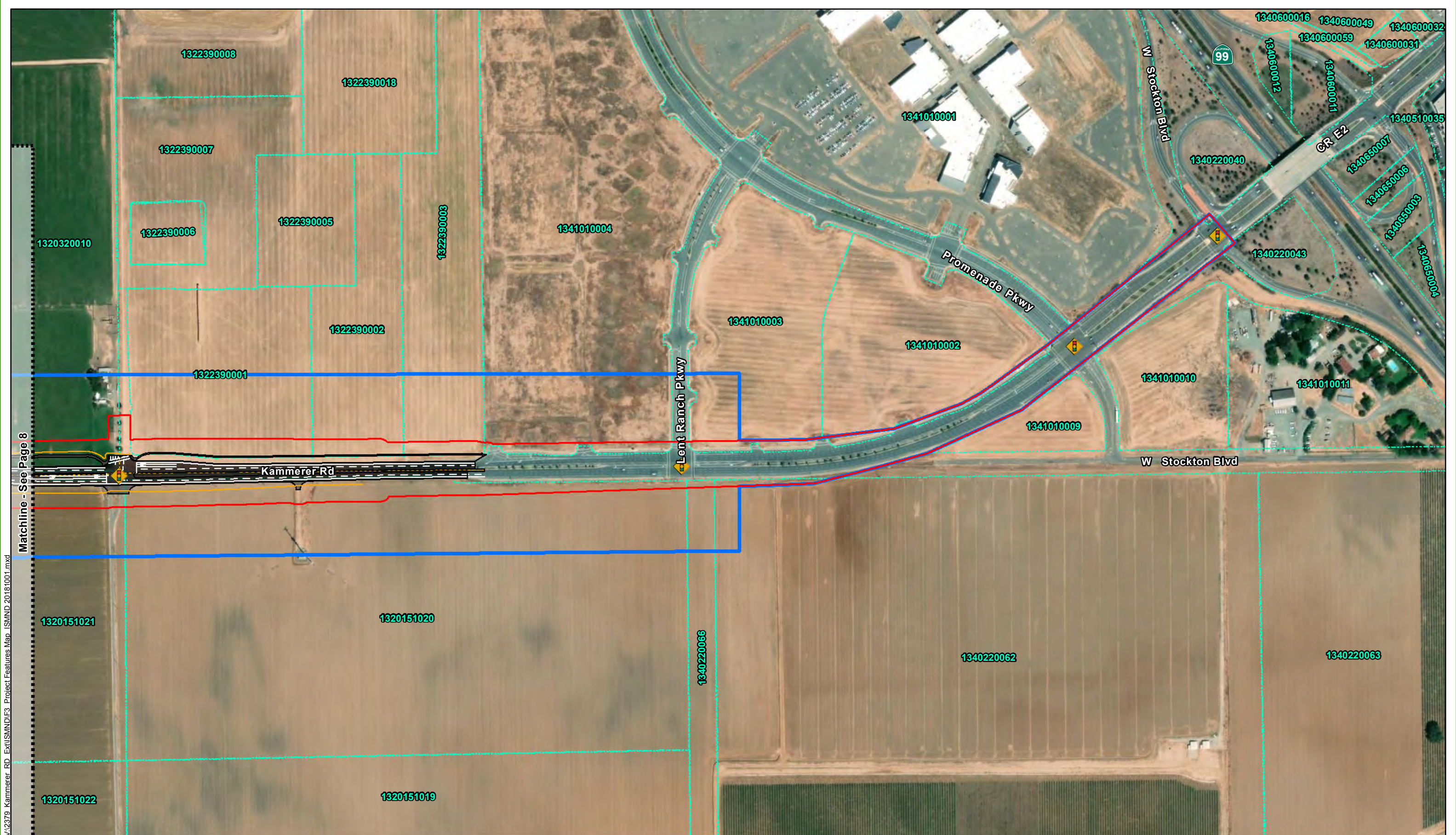


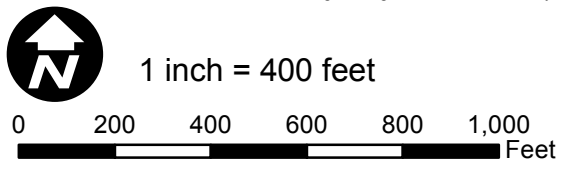
FIGURE 3
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



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Matchline - See Page 8

Source: ESRI Aerials 6/21/2016; Dokken Engineering 12/5/2018; Created By: brianm



	Potential Impact Area		Signalized Intersection		Edge of Pavement		Cut/Fill Line
	Project Study Area		Roundabout Intersection Control		Multi-Use Path		Pavement Marking
	Parcels		Future Interchange Concept				

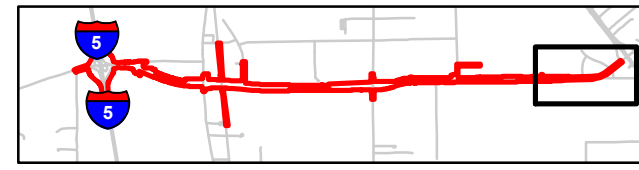


FIGURE 3
Project Features
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 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

1.2 Purpose and Objectives

The Project meets the goals of the proposed project analyzed in the Connector JPA PEIR. The goals include improving mobility, access, and connections between residential and nonresidential land uses, which have been compromised by increasing congestion, and to assist in preservation of open space and threatened habitats.

Specifically, the purpose of the Project is to improve regional traffic operations, reduce existing and projected congestion, and provide a vital component of the east-west gap closure.

The Project's objectives include:

- Aiding economic vitality by improving the link to I-5 for residential areas and employment centers in the Project vicinity;
- Improving traffic operations by improving east-west circulation in the City and in the south County and improving route continuity;
- Relieving congestion and high travel time and delays in the Project vicinity and adjacent transportation corridors by addressing existing and projected traffic congestion in the Project vicinity and adjacent transportation corridors, including constrained traffic operations at the I-5 interchange;
- Supporting planned growth by implementing transportation plans that support sustainable planned growth and development patterns and principles from SACOG's MTP/SCS 2035, adopted in 2016;
- Improving the circulation of traffic and reduce the number of motorists who must "double back" to get to their destinations (out of direction travel);
- Providing an east-west evacuation route that is higher than the 100-year flood elevation;
- Providing a limited-access facility; and
- Enhancing mobility options within the Project Corridor, including opportunities for improved vehicular, transit, bicycle, and pedestrian movements, as well as emergency vehicle access.

1.3 Need

The Project is needed because:

- Existing roadways in the Project vicinity and adjacent transportation corridors between the SR-99 and I-5 Hood Franklin Road interchange are insufficient to meet existing and forecasted traffic demand;
- Planned growth in the Project area is expected to increase, which will lead to deteriorating LOS and traffic conditions;
- Existing Kammerer Road is insufficient for pedestrian and bicycle traffic; and
- The Project area needs an east-west evacuation route that is higher than the 100-year flood elevation to enable normal mobility and emergency vehicle access.

1.4 Project Design

An environmental analysis study area was developed to encompass the construction footprint required for all Project components detailed below, including the I-5 interchange design options. This approach is appropriate as it is consistent with the Connector JPA PEIR and allows for all possible construction impacts and calculates the entire Project's overall environmental impact.

From the SR-99/Grant Line Road/Kammerer Road interchange to Bruceville Road, the Project would replace the existing Kammerer Road for approximately 2.5 miles to create a limited-access four-lane thoroughfare, a main surface arterial road with limited access. The eastern extent would conform to the existing six-lane section that intersects with the interchange at SR-99. The proposed right-of-way would accommodate two lanes in each direction with shoulders, a median, utilities, a multiuse pathway on the north side of the roadway, and drainage improvements.

Project design features for the Project from SR-99 to Bruceville Road include the following:

- Four through lanes (two lanes in each direction) with turn lanes at intersections;
- Shoulders;
- Median of varying width;
- Signage;
- Multiuse path (adjacent west-bound travel lane);
- Class II Bicycle Lane (in each direction)
- Drainage facilities;
- New and relocated public utility facilities;
- New signalized connection with Collector 2 (future SEPA project roadway);
- Connection with Rau Road;
- Signalized connection at McMillan Road (future Big Horn Boulevard);
- New signalized connection at Collector 1 (future SEPA project roadway); and,
- New signalized connection at Lotz Parkway (future project).

From Bruceville Road to the I-5/Hood Franklin Road Interchange, the Project would construct approximately 3.25 miles of new roadway. The new road would be constructed as a limited-access four-lane expressway, an access controlled roadway and a railroad grade separation. The proposed right-of-way would accommodate two lanes in each direction with shoulders, a median, utilities, a multiuse pathway on the north side of the roadway, and drainage improvements.

At the western end, the Project will tie into the I-5/Hood Franklin Road Interchange. Connection of the roadway and interchange will include intersection control improvements consisting of either a signalized intersection or a roundabout intersection.

Project design features for the Project from Bruceville Road to the I-5 interchange include the following:

- Four through lanes (two lanes in each direction) with turn lanes at intersections;
- Shoulders;
- Median of varying width;
- Signage;
- Multiuse path (adjacent west-bound travel lane);
- Drainage facilities;
- New and relocated public utility facilities;

- New connection at Hood Franklin Road;
- New signalized connection at Franklin Boulevard;
- New signalized connection at Willard Parkway;
- New signalized connection at Bruceville Road; and,
- Grade separated crossing at UPRR.

The opening year of the first phase of construction could begin as early as 2020.

1.5 CEQA Tiering

CEQA Guidelines section 15152 and Public Resources Code sections 21000-21178 allow a Mitigated Negative Declaration (MND) to be adopted when an Environmental Impact Report (EIR) has previously been prepared for a program, policy, plan or ordinance. The later project must be consistent with that program or other action. In order to tier from an EIR, the later project must be consistent with the general plan and zoning of the applicable City or county. The MND must clearly state that it is being tiered upon a previous EIR, reference that EIR, and state where a copy of the EIR can be examined.

In addition, the Office of Planning and Research (OPR 2018) recommends use of an MND when:

- The Project is consistent with the program, policy, plan or ordinance for which the previous EIR was prepared.
- The Project is consistent with the general plan and zoning of the applicable City or county.
- The Project, as revised or mitigated, will not result in any significant effects which were not examined in the previous EIR.

This IS/MND for the Project is tiering off the Connector JPA PEIR. The Connector JPA PEIR can be found on the Connector JPA website: <http://www.connectorjpa.net/Project-documents/>. The Project is consistent with the program for which the Connector JPA PEIR was prepared. The Project is consistent with the general plan and zoning of the City and County. For any potentially significant impacts not previously addressed in the Connector JPA PEIR, Project specific avoidance, minimization and/or mitigation measures would be implemented to reduce the impact to a less than significant level.

Mitigation measures specified within the Connector JPA PEIR that are applicable to the Project are referenced in each environmental section of this document and incorporated into the Project specific measures, as well as in the Mandatory Findings of Significance.

Measures within the Connector JPA PEIR that have Plans Specifications and Estimates (PS&E) or Final Design referenced within the measure, are referring to the PS&E phase as the next step in the development of the Project. The PS&E step is the most appropriate time for implementation of these measures, as it is during the PS&E stage in which final engineering decisions are made and permits are acquired from the regulatory agencies.

1.6 Responsible Agencies

The responsible agencies for the Tiered IS/MND are the Connector JPA member jurisdictions within the Project area: City of Elk Grove and Sacramento County.

1.7 Required Permits and Approvals

The following consultations and environmental permits will be obtained as listed below:

Table 1. Permits/Approvals Required

Agency	Permit/Approval	Status
State Water Resources Control Board	Section 401 Certification	Prior to Construction
California Department of Fish and Wildlife	1602 Streambed Alteration Agreement (SAA)	Prior to Construction
U.S. Army Corps of Engineers	Section 404 Permit	Prior to Construction
Regional Water Quality Control Board	National Pollutant Discharge Elimination System 402 General Permit for Storm Water Discharges Associated with Construction Activity	Prior to Construction
U.S. Fish and Wildlife Service	Biological Opinion	Obtained
South Sacramento Habitat Conservation Plan (SSHCP)	SSHCP Consistency (If Approved)	Prior to Construction
Union Pacific Railroad	Grade Separated Overhead Application Approval	Prior to Construction
California Public Utilities Commission	Grade Separated Overhead Application Approval	Prior to Construction
California Department of Transportation	Encroachment Permit	Prior to Construction
Sacramento County	Encroachment Permit	Prior to Construction
City of Elk Grove	Encroachment Permit	Prior to Construction
City of Elk Grove	Swainson's Hawk Mitigation Fees	Prior to Construction
City of Elk Grove	Tree Permit	Prior to Construction
Sacramento Municipal Utility District	Utilities Coordination	Prior to Construction
Pacific Gas and Electric Company	Utilities Coordination	Prior to Construction
MCI (Verizon)	Utilities Coordination	Prior to Construction
Sacramento Area Sewer District	Utilities Coordination	Prior to Construction
Sacramento Regional – County Sanitation District	Utilities Coordination	Prior to Construction

2.0 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

This chapter explains the impacts that the Project would have on the human, physical, and biological environments in the Project area. It describes the existing environment that could be affected by the Project, potential impacts from the Project, and avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow. It should be noted that impacts have been determined using preliminary engineering design.

2.1 Aesthetics

REGULATORY SETTING

CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of aesthetic, natural, scenic and historic environmental qualities (CA Public Resources Code Section 21001[b]).”

The visual character of an area is defined by identifying its landscape components (e.g., water, vegetation, and human development) that form distinct visual units (areas). These units are further identified by their pattern elements (form, line, color, texture) and pattern character (dominance, scale diversity, continuity). Any change in visual character cannot be described as positive or negative until the viewer’s response to the change is considered. For example, if the public prefers the established visual character of an area’s landscape, any change that would affect the character of that landscape can be evaluated as negative.

California Environmental Quality Act

CEQA, as amended, requires public agencies to regulate activities that may affect the quality of the environment so that major consideration is given to preventing damage to the environment. CEQA includes requirements for the consideration of project impacts to scenic resources, and requires that appropriate mitigation measures are included in a project with potential to adversely affect scenic resources, such as a scenic highway.

State Scenic Highway Program

California’s State Scenic Highway Program was created by the legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq., and these highways are identified in Section 263. No segments of I-5 or SR-99 are designated as a scenic highway or are eligible for designation in the County.

Sacramento County General Plan

The County General Plan (amended November 2011) guides future development in the County, including a portion of the Project area. The following General Plan policies in the Circulation Element and Land Use Element guide the development of the visual character of the County.

Policy CI-53: Roadway improvements along established scenic corridors shall be designed and constructed so as to minimize impacts to the scenic qualities of the corridor.

Policy CI-60: Encourage maintenance of natural roadside vegetation and landscaping with native plants which usually provide the best habitats for native wildlife.

Policy LU-17: Support implementation of the design review program on a project-by-project basis to ensure that all development applications positively contribute to the immediate neighborhood and the surrounding community.

Policy LU-18: Encourage development that complements the aesthetic style and character of existing development nearby to help build a cohesive identity for the area.

Policy LU-31: Strive to achieve a natural nighttime environment and an uncompromised public view of the night sky by reducing light pollution.

City of Elk Grove General Plan

The City General Plan (as amended) guides future development in the City, including the Project area. The following General Plan policies contained in the Conservation and Air Quality Element, Land Use Element, and Public Facilities and Finance Element guide the development of the visual character of the City Planning Area.

Policy CAQ-8: Large trees (both native and nonnative) are an important aesthetic (and, in some cases, biological) resource. Trees which function as an important part of the City's or a neighborhood's aesthetic character or as a natural habitat should be retained to the extent possible during the development of new structures, roadways (public and private, including roadway widening) parks, drainage channels, and other uses and structures. If trees cannot be preserved onsite, offsite mitigation or payment of an in-lieu fee may be required by the City. Where possible, trees planted for mitigation should be located in the same watershed as the trees, which were removed. Trees that cannot be protected shall be replaced either onsite or off-site as required by the City.

Policy LU-1: The City of Elk Grove recognizes the value of using the City's land use authority to regulate the use of land within the City, the uses which can take place upon lands in Elk Grove, the arrangement of public and private buildings, and the design of public and private development in order to create an attractive, vibrant community which fulfills the goals expressed in [the] General Plan.

Policy LU-38: Reduce the unsightly appearance of overhead and aboveground utilities.

Policy PF-4: The City shall require new utility infrastructure for electrical, natural gas and other infrastructure services, avoid sensitive resources, be located so as to not be visually obtrusive, and if possible, be located within roadway rights-of-ways or existing utility easements.

The FHWA *Guidelines for the Visual Impact Assessment for Highway Projects* (2015) was used to determine the visual quality of the Project study area. Because the proposed Project is acquiring federal funding and Caltrans will be the NEPA lead agency (as delegated by FHWA), this category of technical study is required to be completed for the Project. The FHWA uses three criteria to measure visual quality: vividness, intactness, and unity, which are defined as follows.

- Vividness: The visual power or memorability of landscape components as they combine in distinctive visual patterns.
- Intactness: The visual integrity of the natural and human built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.
- Unity: The visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of the individual components in the landscape.

As Caltrans is the NEPA lead agency, The Caltrans *Questionnaire to Determine Visual Impact Assessment (VIA) Level* was completed. The score from this assessment determined that a fully developed VIA would be required for the Project. The information contained in this section reflects that of the VIA prepared for the Project in October 2015, and updated in November 2017.

AFFECTED ENVIRONMENT

The visual setting of the Project is also referred to as the corridor or Project corridor, which is defined as the area of land that is visible from, adjacent to, and outside the Project's right-of-way (defined in the VIA as "highway"), and is determined by topography, vegetation, and viewing distance.

The Project is located in the Central Valley of Northern California. The landscape is characterized by flat land with scattered trees. Land uses within the corridor are primarily farmsteads with scattered neighborhoods as well as some areas of light commercial development. The proposed Project extends for approximately 5.5 miles from the I-5/Hood Franklin Road Interchange to SR-99. The Stone Lakes National Wildlife Refuge (Stone Lakes NWR) is located in Sacramento County, south of the City of Sacramento, west of the City, and west of the proposed Project. Stone Lakes NWR offers a number of scenic resource observation opportunities, including wildlife observation guided walks and wildlife observation paddle tours, and access to the blue heron trails.

The regional landscape establishes the general visual environment of the proposed Project, while the specific visual environment upon which this assessment is focused is determined by definition of landscape units in the Project viewshed. A viewshed is defined as the area visible from a specific point within the line-of-sight. Viewsheds vary depending on the viewer's height, slope, and obstructions.

Elevation within the Project area ranges between approximately 45 feet above mean sea level (MSL) in the west to approximately 5 feet MSL in the east. Dominant visual characteristics in the Project area from SR-99 to Bruceville Road include Kammerer Road, agricultural land and activities, vacant land, and residential and agricultural structures north and south of the roadway. From Bruceville Road to I-5, the dominant visual characteristics include agricultural land and activities and residential and agricultural structures.

Existing Visual Resources

Visual resources of the Project setting are defined by assessing visual character and visual quality in the Project Study Area as identified below.

Visual Character

Visual character includes attributes such as form, line, color, and texture, and is used to describe, not evaluate; that is, these attributes are considered neither good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change. Changes in visual character can be identified by how visually compatible a proposed Project would be with the existing condition by using visual character attributes as an indicator. For the proposed Project, the following attributes were considered:

- Form – visual mass or shape
- Dominance – position, size, or contrast
- Scale – apparent size as it relates to the surroundings

The dominant visual characteristics in the Project area include Kammerer Road, the I-5/Hood Franklin Road and SR-99/Kammerer Interchanges, residential and rural properties, agricultural lands, Union Pacific Railroad (UPRR) tracks, existing transmission lines and towers, and activities on both sides of the existing, and the proposed extension of, Kammerer Road. The roadway is two lanes with no shoulders, curbs, gutters, or sidewalks, except for a small segment of sidewalk on the north side of Kammerer Road immediately west of the Kammerer Road/Lent Ranch Parkway intersection. Residences and a few businesses are located along Kammerer Road and along driveways and side streets off of Kammerer Road. Several parcels seen from Kammerer Road are undeveloped or vacant and consist of expanses of flat land covered by annual grasses. Shallow drainage ditches run along the existing roadway and a large drainage channel extends from SR-99 to Bruceville Road.

Urban/ruderal, grassland, wetland, and vernal pool habitats are present in the Project area. The most noticeable habitats to the typical viewer traveling through or residing in the Project area are urban/ruderal and grassland. The majority of views experienced in this area are of a flat landscape covered by grasses with a sparse distribution of trees and residential structures.

Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the Project viewshed. Public attitudes validate the assessed level of quality and predict how changes to the Project corridor can affect these attitudes. This process helps identify specific methods for addressing each visual impact that may occur as a result of the Project. The three criteria for evaluating visual quality are defined below:

- Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
- Intactness is the visual integrity of the visual features in the landscape and the extent to which the existing landscape is free from nontypical visual intrusions.
- Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

These three criteria are assigned a number from the Visual Quality Evaluation scale ranging from 1 (very low) to 7 (very high) following guidelines contained in the *Visual Impact Assessment for Highway Projects* and as analyzed in the VIA prepared for this Project. Once each quality (vividness (V), intactness (I), and unity (U)) have been assigned an individual rating, the visual quality (VQ) can be calculated by the sum of the ratings divided by 3 ($VQ = (V+I+U)/3$).

The visual corridor in the Project area is composed of elements that combine to create a visual environment with moderately low to moderate vividness. The residential structures seen from Kammerer Road and adjacent roadways are not visibly unique; some are at the end of long driveways and mostly surrounded by vegetation that screens them from view. The agricultural structures/barns are commonplace in this area of the County. Kammerer Road is framed by large expanses of agricultural and undeveloped land to the north and south with fences, weedy vegetation, and grasses lining the majority of the length of the roadway. The stretches of open grasslands and agricultural parcels over the vastly flat landscape surrounding the Project area offer visually agreeable views from the roadway, which are more commonly observed in this area of the County, than in the majority of City. Stone Lakes NWR covers approximately 11,550 acres west of the I-5/Hood Franklin Road Interchange, and offers views of undisturbed and open expanses of land that can be seen from the interchange. Viewpoints in and outside of the Project area with views of natural landscapes uninterrupted by the presence of man-made structures were rated moderately high for vividness.

The visual intactness is moderate for the majority of viewpoints in the Project area. The areas surrounding Kammerer Road, Bruceville Road, Franklin Boulevard, Hood Franklin Road, and the I-5/Hood Franklin Road Interchange are composed of agricultural, residential, and open space land uses. These land uses are interspersed with one another; for example, residential structures are frequently seen on, adjacent to, and near agricultural parcels and undeveloped open space areas, as the majority of land in the Project area is agricultural or undeveloped. Agricultural and open space areas blend together in the Project area. The landscape is relatively free from encroaching elements within a quarter mile of the proposed Project except for the stretches of roadway, residential structures, and overhead utilities. North of the Project area, higher-density residential areas are present.

Visual unity is moderately high for the majority of the viewpoints throughout the Project area. The agricultural, residential, and open space land uses in the Project area have moderately high visual coherence as the landscape is rarely interrupted by man-made structures, except for fences, overhead utilities, and residential and agricultural structures that are generally seen as mild to moderate interruptions to the natural flat landscape. Agricultural and undeveloped parcels exist along Kammerer Road, Bruceville Road, Franklin Boulevard, Hood Franklin Road, and the I-5/Hood Franklin Road Interchange in harmony with one another.

Viewers and Viewer Response

The population affected by the Project is composed of *viewers*. Viewers are people whose views of the landscape may be altered by the proposed Project—either because the landscape itself has changed or their perception of the landscape has changed.

Existing Viewer Groups

There are two major types of viewer groups for highway projects: highway neighbors and highway users. Each viewer group has its own particular level of *viewer exposure* and *viewer sensitivity*, resulting in distinct and predictable visual concerns for each group, which help to predict their responses to visual changes.

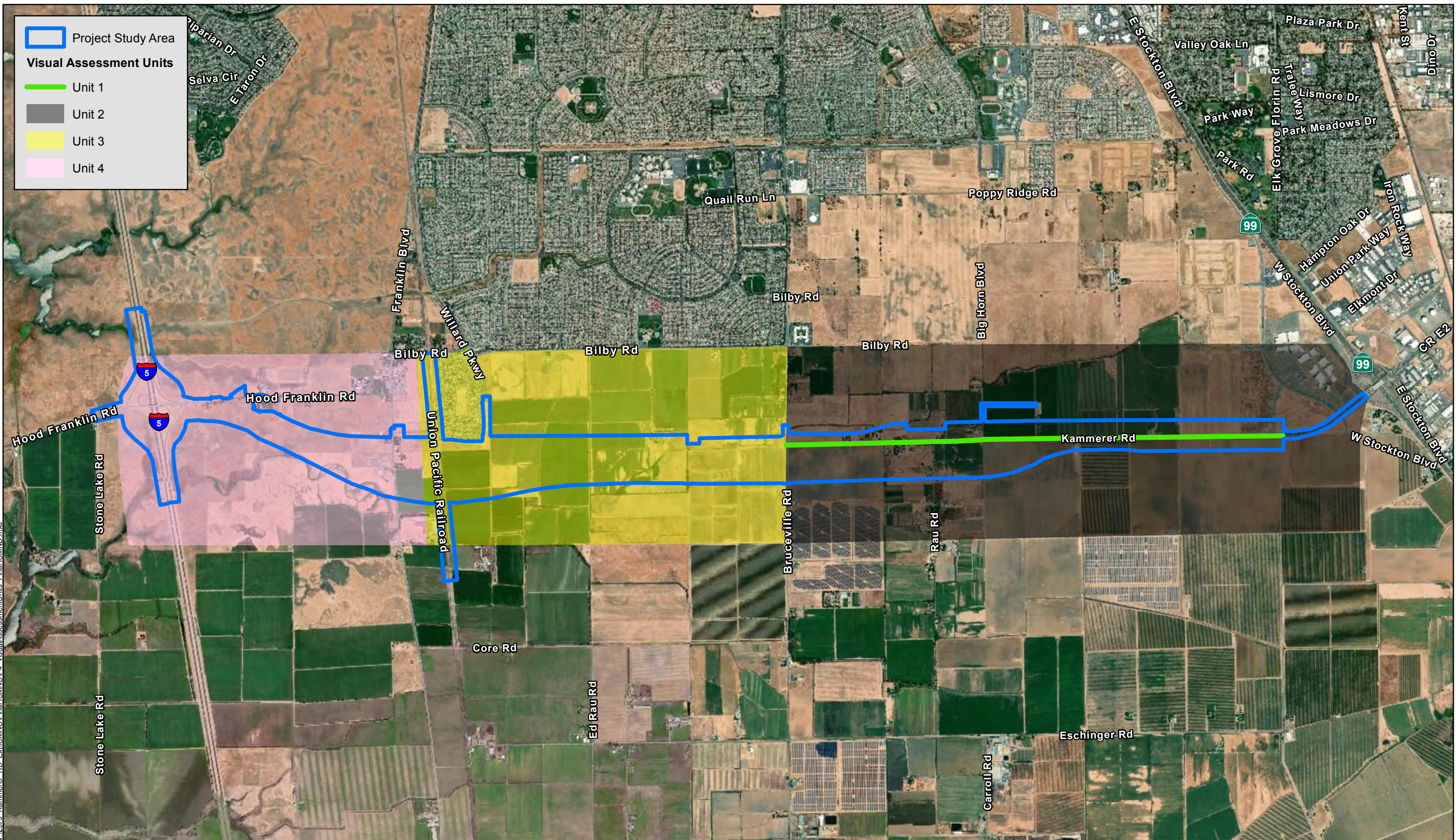
- Highway neighbors are people who have views to the road. They can be subdivided into different viewer groups by land use. For example, residential, commercial, industrial, retail, institutional, civic, educational, recreational, and agricultural land uses may generate highway neighbors or viewer groups with distinct reasons for being in the corridor and therefore having distinct responses to changes in visual resources. For the proposed Project, the following highway neighbors were considered:
 - Residential viewers along Kammerer Road, Bruceville Road, Franklin Boulevard.
 - Residential viewers in the Rancho Verde subdivision.
- Highway users are people who have views from the road. They can be subdivided into different viewer groups in two different ways—by mode of travel or by reason for travel. For example, subdividing highway users by mode of travel may yield pedestrians, bicyclists, transit riders, car drivers and passengers, and truck drivers. Dividing viewer groups by reason for travel creates categories like tourists, commuters, and haulers. It is also possible to use both mode and reason for travel simultaneously, creating a category such as bicycling tourists. For the proposed Project, the following highway users were considered:
 - Viewers on Kammerer Road, Hood Franklin Road, and the I-5/Hood Franklin Road Interchange
 - Viewers on Bruceville Road and Franklin Boulevard
 - Residential viewers along Kammerer Road, Bruceville Road, and Franklin Boulevard
 - Tourists and motorists driving for pleasure.

Visual Assessment Units and Key Viewpoints

Visual Assessment Units

For the purpose of this analysis, the Project area was divided into a series of “outdoor rooms” or *visual assessment units*. Each visual assessment unit has its own visual character and visual quality. It is typically defined by the limits of a particular viewshed. A landscape unit will often correspond to a place or district that is commonly known to local viewers. For this Project, the following four visual assessment units were identified (**Figure 4**).

- Visual Assessment Unit 1: This landscape unit consists of views from existing Kammerer Road as motorists travel in the eastbound or westbound directions through the eastern portion of the Project area. The primary landscape features along this portion of the corridor between SR-99 and I-5 include the roadway in the foreground framed by agricultural and vacant, undeveloped areas, covered by crops and annual grasses, with a sparse distribution of residential properties in the middle ground. In both the eastbound and westbound directions, viewers of the road experience a vastly flat landscape with sights of overhead utilities, residential and agricultural structures, and clusters of various trees in the middle ground and background.



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Source: ESRI Maps Online; Dokken Engineering 10/9/2018; Created By: adellas

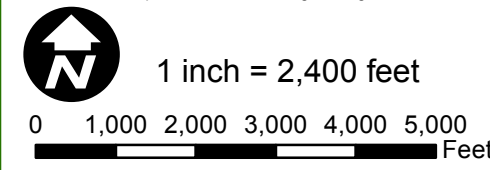


FIGURE 4
Visual Assessment Units

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Extension Project
City of Elk Grove and Sacramento County, California

- Visual Assessment Unit 2: This landscape unit consists of views from roads and a highway, which intersect existing Kammerer Road as motorists travel in the northbound or southbound directions toward or away from Kammerer Road. Specifically, these roadways and the highway are SR-99, Promenade Parkway, Lent Ranch Parkway, McMillan Road, Rau Road, and Bruceville Road. This landscape unit also consists of views representing what is visible from residences along existing Kammerer Road and the adjacent roadways. This area was identified to represent the landscape of the residential, agricultural, and vacant properties located north and south of existing Kammerer Road. The primary landscape features in this unit consist of Kammerer Road in the foreground, middle ground, and background (depending on the location of the viewpoint), the roadways and the highway listed above, and a vastly flat landscape in all directions. Along Kammerer Road, McMillan Road, Rau Road, and Bruceville Road, residential structures, fences, and various trees are seen in the foreground and middle ground.
- Visual Assessment Unit 3: This landscape unit is similar to Visual Assessment Unit 2; however, because Kammerer Road terminates at Bruceville Road, fewer residential structures are present along the Project alignment within unit 3; however, there is a residential housing development to the north of the proposed Project alignment. This landscape unit consists primarily of agricultural and undeveloped, vacant land. The landscape is also vastly flat and open in all directions. Bilby Road represents the northern limit of this landscape unit as the land use changes from agricultural south of Bilby Road to neighborhood-residential north of Bilby Road. This unit also includes the Rancho Verde subdivision, which will have views of the UPRR overhead grade separation for the expressway segment of Kammerer Road.
- Visual Assessment Unit 4: This landscape unit includes the historic Town of Franklin, and the I-5/Hood Franklin Road Interchange and surrounding area. Franklin is a small unincorporated town in the County with an area of approximately 2 square miles and a population of approximately 160 people. The town primarily exists along Franklin Boulevard and Hood Franklin Road. This landscape unit consists of views from Franklin Boulevard and residences along Franklin Boulevard, Hood Franklin Road, and the I-5/Hood Franklin Road Interchange. The primary landscape features along Franklin Boulevard consist of residential structures, businesses, a cemetery, and a school in the foreground and middle ground and agricultural and open space land in the background. Along Hood Franklin Road and at the I-5/Hood Franklin Road Interchange, the landscape is essentially flat for as far as a viewer's eyes can see, except for the elevated I-5/Hood Franklin Road overpass. Stone Lakes NWR is located near the western portion of the Project area and the I-5/Hood Franklin Road Interchange and covers approximately 11,550 acres of open space.

Key Viewpoints

Because it is not feasible to analyze all the views in which the proposed Project would be seen, it is necessary to select a number of key views associated with visual assessment units that would most clearly demonstrate the change in the Project's visual resources. Key views also represent the viewer groups that have the highest potential to be affected by the Project, considering exposure and sensitivity. The following are brief descriptions of the 21 key viewpoints selected for the evaluation in the VIA. Ratings of vividness, intactness, and unity for each of these existing viewpoints is provided in **Table 2**. Representative photographs of existing conditions at the 22 key viewpoints can be found in **Table 3**. **Figure 5** depicts the location and direction of each viewpoint.

Table 2. Existing Visual Quality Ratings for Key Viewpoints


Visual Assessment Unit	Key Viewpoint	Vividness	Intactness	Unity	Overall Visual Quality ¹	Visual Quality Rating ¹
1	1	2.25	3.75	4.00	3.33	Moderately Low
	3	2.33	3.67	4.00	3.33	Moderately Low
	4	2.17	4.25	5.25	3.89	Moderate
	5	2.33	5.75	5.75	4.61	Moderately High
	6	2.33	4.00	4.25	3.52	Moderate
	8	2.42	5.50	5.50	4.47	Moderately Low
2	2	2.33	4.50	4.50	3.78	Moderate
	7	2.25	4.25	4.38	3.63	Moderate
	10	2.17	5.13	5.75	4.35	Moderately Low
3	9	2.17	5.50	5.75	4.47	Moderate
	11	2.75	4.50	5.75	4.33	Moderate
	12	2.25	4.75	4.89	3.96	Moderate
	16	2.67	5.25	5.75	4.56	Moderately High
	22	3.00	4.00	5.00	4.00	Moderate
4	13	1.83	4.25	4.50	3.53	Moderate
	14	2.25	3.88	5.00	3.71	Moderate
	15	2.63	5.75	5.75	4.71	Moderately High
	17	2.33	4.50	5.75	4.19	Moderate
	18	2.17	4.00	4.00	3.39	Moderately Low
	19	2.17	4.25	5.00	3.81	Moderate
	20	2.50	5.38	5.75	4.54	Moderately High
	21	2.08	5.50	5.50	4.36	Moderate


Source: Visual Impact Assessment (Caltrans 2015; Caltrans 2017)


Notes:



¹Overall Visual Quality = average of the vividness, intactness, and unity ratings for the subject viewpoint. Ratings of vividness, intactness, and unity for each existing viewpoint, are assigned on the following scale: 1 (Very Low), 2 (Low), 3 (Moderately Low), 4 (Moderate), 5 (Moderately High), 6 (High), and 7 (very high). These results are provided in **Table 3**. Once each quality (vividness (V), intactness (I), and unity (U)) have been assigned an individual rating, the visual quality (VQ) can be calculated by the sum of the ratings divided by 3 (VQ = (V+I+U)/3).



Table 3. Representative Photographs of Existing Conditions



Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions		
1	1			
1	3			



Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions	
1	4		
1	5		



Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions	
1	6		
1	8		



Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions		
2	2			
2	7			



Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions	
2	10		
3	9		



Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions	
3	11		
3	12		

Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions
3	16	
3	22	

Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions	
4	13		
4	14		

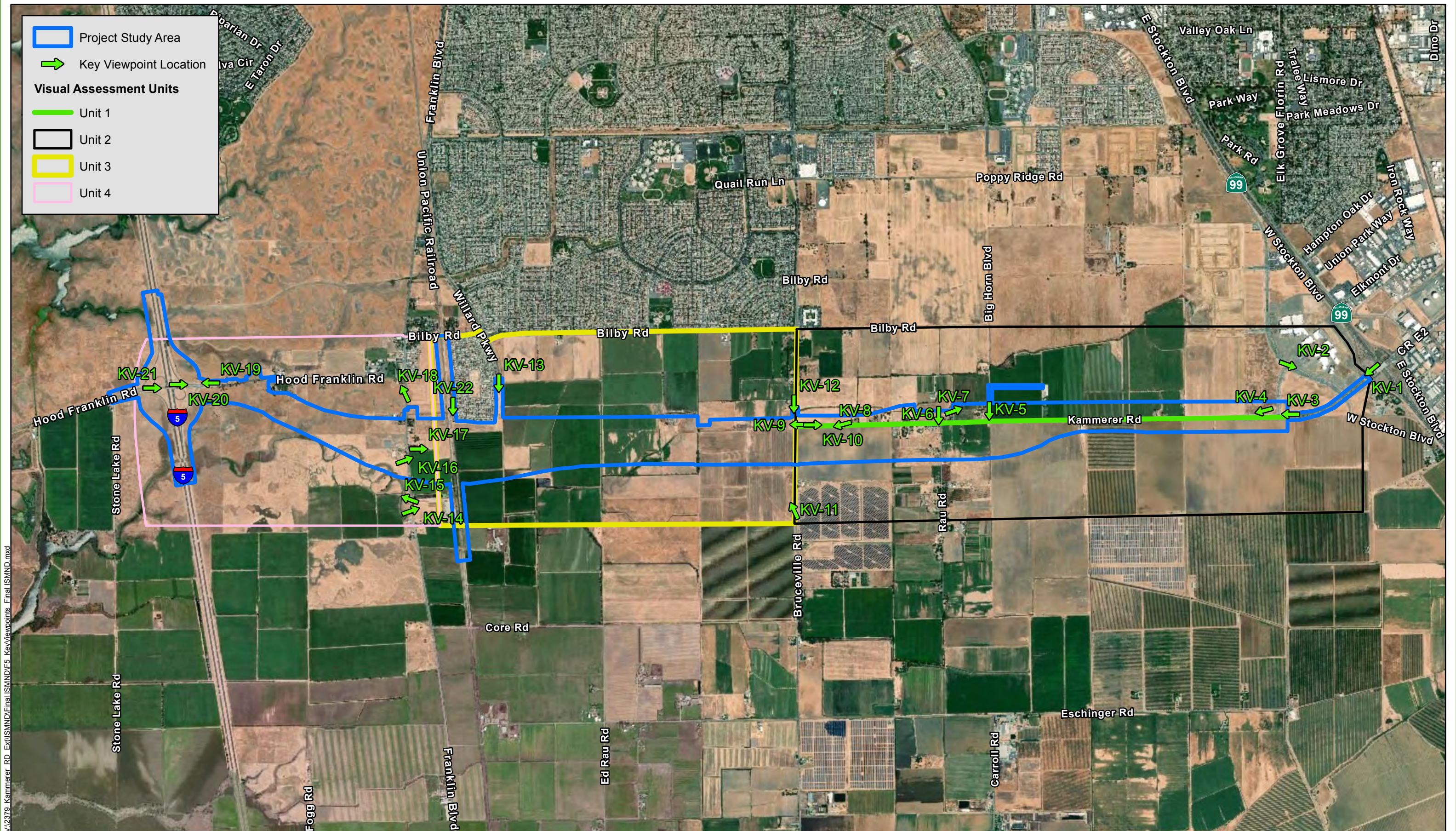
Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions		
4	15			
4	17			

Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions	
4	18		
4	19		

Visual Assessment Unit	Key Viewpoint	Photograph of Existing Conditions	
4	20		
4	21		

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Project Study Area
➔ Key Viewpoint Location
Visual Assessment Units
 Unit 1
 Unit 2
 Unit 3
 Unit 4



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Source: ESRI Maps Online; Dokken Engineering 10/10/2018; Created By: brianm

1 inch = 2,400 feet
 0 1,000 2,000 3,000 4,000 5,000
 Feet

FIGURE 5
Key Viewpoints

Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

Visual Assessment Unit 1

- **Key Viewpoint 1** represents a motorist's view approaching Kammerer Road in the westbound direction from the SR-99/Kammerer Road overpass facing southwest toward the intersection of Kammerer Road and Promenade Parkway. The foreground and middle ground of this view consist almost entirely of the six-lane roadway, and the background view consists of vast expanses of undeveloped and agricultural lands over a relatively flat landscape for nearly as far as the eye can see. Visual quality is rated as moderately low at this viewpoint.
- **Key Viewpoint 3** represents a motorist's view traveling west on Kammerer Road, approaching the Kammerer Road/Lent Ranch Parkway intersection looking west. This viewpoint was photographed facing west on Kammerer Road east of the Kammerer Road/Lent Ranch Parkway intersection. From Key Viewpoint 3, motorists view Kammerer Road as a six-lane roadway tapering down to one lane in each direction, separated by a median with left-turn and right-turn pockets at the intersection and sidewalk along the westbound side of the roadway. In this view, expanses of open space over a flat landscape are visible north and south of Kammerer Road, separated by the roadway, and overhead utilities and trees are seen in the middle ground and background. Vegetation consists primarily of annual grasses. Key Viewpoint 3, and the views it represents, is of moderately low visual quality.
- **Key Viewpoint 4** represents a motorist's view from along Kammerer Road, west of Lent Ranch Parkway looking southwest. This viewpoint was photographed on the eastbound side of Kammerer Road approximately 12 feet west of Lent Ranch Parkway facing southwest. From this viewpoint, overhead power lines frame Kammerer Road to the south and stretches of flat land extend north and south of Kammerer Road. At this point along Kammerer Road, the roadway tapers down from six lanes to two lanes. Key Viewpoint 4, and the view it represents, is of moderate visual quality.
- **Key Viewpoint 5** represents a motorist's view at the intersection of Kammerer Road and McMillan Road looking south and a resident's view north of Kammerer Road along McMillan Road looking south. This viewpoint was photographed at the intersection of Kammerer Road and McMillan Road facing south. In the foreground of this view, weedy vegetation and a fence run along the eastbound lane of Kammerer Road and overhead power lines are visible. The middle ground and background are composed of a flat and open landscape covered primarily by annual grasses with a sparse distribution of trees at the farthest point of visibility. Visual quality is rated as moderately high at this viewpoint.
- **Key Viewpoint 6** represents a motorist's view traveling along Kammerer Road looking south. This viewpoint was photographed along the westbound side of Kammerer Road at the intersection of Kammerer Road and Rau Road. In this view, residential properties and other man-made structures are seen west of Rau Road. Trees are distributed more frequently throughout and the landscape is less open and uninterrupted at this viewpoint than at other viewpoints along Kammerer Road. Visual quality is rated as moderate at this viewpoint.
- **Key Viewpoint 8** represents a motorist's view traveling along Kammerer Road looking south, just west of the proposed roadway known as Collector 2, and the views of residents north of Kammerer Road and west of Collector 2 looking south. This viewpoint was photographed along Kammerer Road west of Collector 2 facing south. The foreground of this view is composed of Kammerer Road, framed along the eastbound side of the roadway by a drainage channel and natural vegetation. In the middle ground and

background, wide open expanses of flat landscape covered by grasses fill the viewshed, and clusters of trees and man-made structures are present along the visible limits of the background. Visual quality is rated as moderate at this viewpoint.

Visual Assessment Unit 2

- **Key Viewpoint 2** represents a motorist's view of the landscape surrounding Kammerer Road north of the roadway as the motorist travels southeast on Promenade Parkway through the Promenade Parkway/Lent Ranch Parkway intersection approximately one-third mile north of Kammerer Road. This viewpoint was photographed at the Promenade Parkway/Lent Ranch Parkway intersection facing south. At this distance, Kammerer Road is noticeable as vehicles travel in the eastbound and westbound directions. Grasses covering the landscape in the middle ground and background north and south of Kammerer Road blend in such a way that minimizes the appearance of Kammerer Road. Visual quality is rated as moderate at this viewpoint.
- **Key Viewpoint 7** represents a motorist's view traveling north or south of Rau Road looking east and a resident's view along the west side of Rau Road looking northeast. This viewpoint was photographed facing northeast on Rau Road, approximately one-quarter mile south of Kammerer Road. The majority of this view is composed of an undeveloped, flat parcel of land with a cluster of trees in the background, shielding parts of structures from view. Signs of encroachment are minimal at this viewpoint and include overhead power lines, few man-made structures, and fencing. Visual quality is rated as moderate at this viewpoint.
- **Key Viewpoint 10** represents the view of the Kammerer Road/Bruceville Road intersection looking east. This viewpoint was photographed along the northbound side of Bruceville Road at the intersection of Kammerer Road and Bruceville Road facing east. In this view, Bruceville Road is lined by a narrow gravel shoulder and weedy vegetation along a drainage channel. In the middle ground and background, a wide expanse of flat open land is seen to the north and south of Kammerer Road, which bisects the landscape, and clusters of trees and man-made structures are present in the background. **Figure 6** shows a comparative visual simulation of Key Viewpoint 10 under existing conditions and the proposed Project. Visual quality is rated as moderate at this viewpoint.

Visual Assessment Unit 3

- **Key Viewpoint 9** represents a motorist's view at the intersection of Kammerer Road and Bruceville Road looking west. This viewpoint was photographed at the Kammerer Road/Bruceville Road intersection facing west toward the proposed Kammerer Road extension. In this view, agricultural and open space lands dominate the viewshed, and overhead utilities and grazing activities are seen within the relatively uninterrupted natural landscape. **Figure 7** shows a comparative visual simulation of Key Viewpoint 9 under existing conditions and the proposed Project. Visual quality is rated as moderate at this viewpoint.
- **Key Viewpoint 11** represents the view traveling north along Bruceville Road toward Kammerer Road looking northwest. This viewpoint was photographed along Bruceville Road approximately one-half mile south of Kammerer Road facing northwest. This view is primarily composed of undeveloped land covered by grasses throughout the middle ground and background of the view. Overhead power lines are visible in the foreground along Bruceville Road and clusters of trees are seen far off in the distance, lining the landscape to the west. Visual quality is rated as moderate at this viewpoint.

Figure 6. Key Viewpoint 10 Comparison of Existing Conditions and Proposed Project



Key Viewpoint 10 – Existing Condition



Key Viewpoint 10 – Proposed Condition

Figure 7. Key Viewpoint 9 Comparison of Existing Conditions and Proposed Project



Key Viewpoint 9 – Existing Condition



Key Viewpoint 9 – Proposed Condition

- **Key Viewpoint 12** represents a motorist's view from Bruceville Road north of the Kammerer Road/Bruceville Road intersection looking south. The photograph at Key Viewpoint 12 was taken along Bruceville Road approximately one-tenth mile north of Kammerer Road facing south toward Kammerer Road. From this viewpoint, fences, grasslands, grazing activities, and overhead utilities are visible in the foreground, middle ground, and background. The consistency of the vegetation north and south of Kammerer Road minimizes the appearance of the roadway. Visual quality is rated as moderate at this viewpoint.
- **Key Viewpoint 16** represents a motorist's view traveling along Franklin Boulevard looking northeast. This viewpoint was photographed along Franklin Boulevard approximately one-half mile south of Hood Franklin Road. From this viewpoint, motorists and the residents on the west side of Franklin Boulevard have a relatively unobstructed view of the flat landscape, aside from clusters of trees along Franklin Boulevard and surrounding residences along the roadway. Parcels in the foreground, middle ground, and background are undeveloped, agricultural, or residential. **Figure 8** shows a comparative visual simulation of Key Viewpoint 16 under existing conditions and the proposed Project. Visual quality from this viewpoint is rated as moderately high.
- **Key Viewpoint 22** represents motorists' and resident's views from within the Rancho Verde residential community north of the proposed UPRR grade separation. This viewpoint was photographed on Fossil Way approximately 300 feet north of the intersection of Fossil Way and Tusk Way looking south. Residential homes, fences, masonry walls, and residential streets and associated landscaping are present in the foreground and middle ground. The background is largely unobscured; however, transmission lines run north-south outside of the residential community and fade into the distance. **Figure 9** shows a comparative visual simulation of Key Viewpoint 18 under existing conditions and the proposed Project. The overall visual quality is rated as moderate under existing conditions.

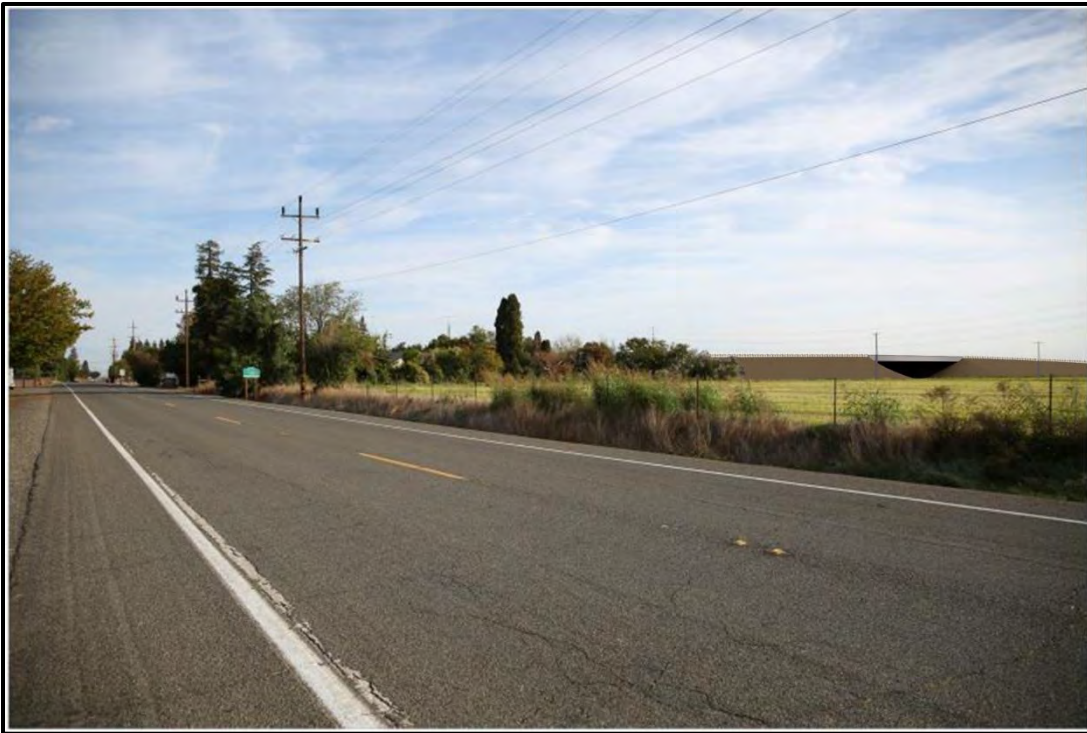
Visual Assessment Unit 4

- **Key Viewpoint 13** represents motorists' and residents' views from Willard Parkway, north of the proposed Kammerer Road extension. This viewpoint was photographed on Willard Parkway approximately one-third mile north of the proposed Project, looking south, near a residential subdivision. Man-made structures are present in the middle ground and background and include fencing, walls, and unidentifiable structures in the distance. Visual quality is rated as moderate at this viewpoint.
- **Key Viewpoint 14** represents the view traveling north on Franklin Boulevard looking northeast. This viewpoint was photographed along Franklin Boulevard approximately one-quarter mile south of Hood Franklin Road. In the foreground, the eastern edge of Franklin Boulevard is met by gravel along a narrow ditch, which is lined by fencing to the east. The middle ground is composed of grassland over relatively flat terrain. In the background, trees are sparsely distributed and overhead power lines span across the landscape running north to south. A residential subdivision is present to the north in the background.

Figure 8. Key Viewpoint 16 Comparison of Existing Conditions and Proposed Project

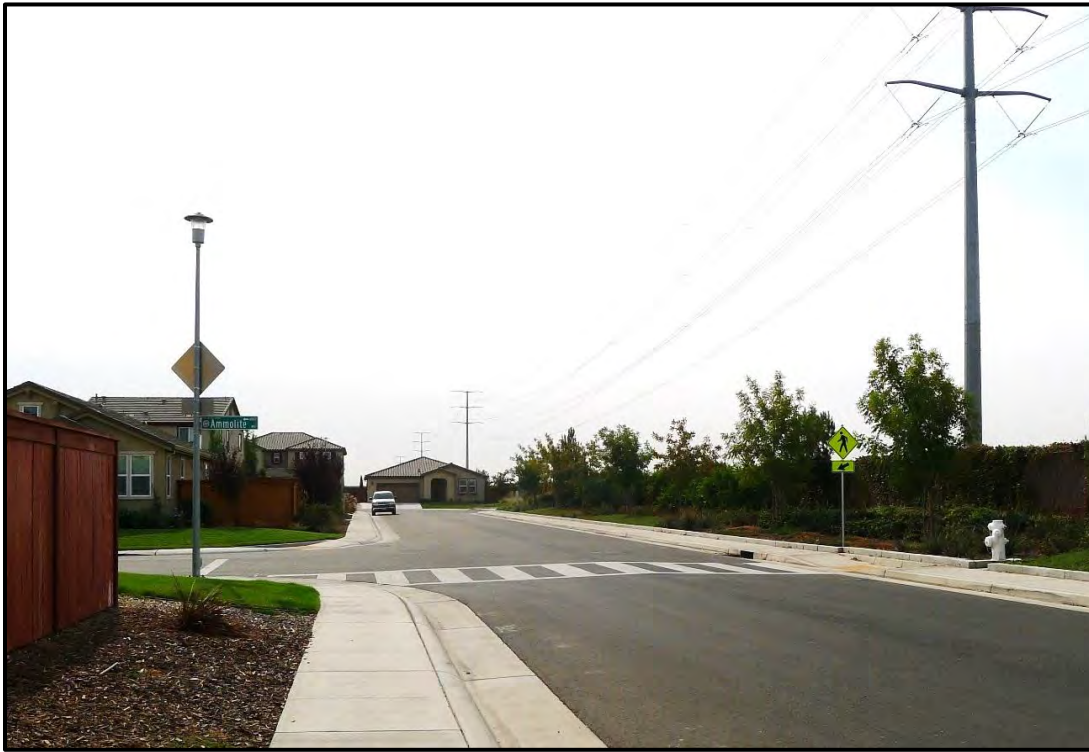


Key Viewpoint 16 – Existing Condition



Key Viewpoint 16 – Proposed Condition

Figure 9. Key Viewpoint 22 Comparison of Existing Conditions and Proposed Project



Key Viewpoint 22 – Existing Condition



Key Viewpoint 22 – Proposed Condition

- **Key Viewpoint 15** represents a motorist's view traveling along Franklin Boulevard looking northwest. This viewpoint was photographed along Franklin Boulevard approximately three-quarter mile south of Hood Franklin Road, south of the proposed South Alignment roadway extension, facing northwest. From this viewpoint, motorists can see Stone Lakes NWR property in the background and wetland features in the middle ground. The landscape is primarily natural and free from encroachment elements. Visual quality from this viewpoint is rated the highest out of the 21 viewpoints discussed.
- **Key Viewpoint 17** represents a motorist's view along Franklin Boulevard looking east toward a dirt road along the roadway. This viewpoint was photographed along Franklin Boulevard south of Hood Franklin Road. In this view, a dirt road, overhead utility poles and lines, and agricultural and undeveloped parcels of land are seen in the foreground, middle ground, and background, and a residential subdivision is visible to the north in the background of the view. The overall visual quality at this viewpoint is rated as moderate.
- **Key Viewpoint 18** represents a motorist's view traveling south on Franklin Boulevard looking south. This viewpoint was photographed along Franklin Boulevard approximately one-tenth mile north of Hood Franklin Road facing south. In this view, Franklin Boulevard is framed by gravel and grasses to the west and grasses and fencing to the east in the foreground and middle ground. In the background, a variety of trees are present along Hood Franklin Road. Street signs are visible in the foreground and middle ground, and overhead power lines are visible throughout the viewshed. **Figure 10** shows a comparative visual simulation of Key Viewpoint 18 under existing conditions and the proposed Project. Visual quality is rated as moderately low at this viewpoint.
- **Key Viewpoint 19** represents a motorist's view traveling west on Hood Franklin Road toward the I-5/Hood Franklin Road Interchange. This viewpoint was photographed along Hood Franklin Road approximately one-quarter mile east of the center of the I-5/Hood Franklin Road overpass, facing west. In this view, Hood Franklin Road and the interchange are the focus, with fenced undeveloped parcels to the north and south of the roadway. A variety of sparsely distributed trees are present in the foreground, middle ground, and background. Man-made elements within this view include Hood Franklin Road and the interchange, fences, road signs, and overhead utilities. Visual quality is rated as moderate at this viewpoint.
- **Key Viewpoint 20** represents a motorist's view traveling east over the I-5/Hood Franklin Road Interchange looking east. This viewpoint was photographed to the east of the center of the overpass, facing east. The viewpoint is composed of two-lane Hood Franklin Road and the northbound on- and off-ramps of I-5. Landcover in the foreground and middle ground consists primarily of annual grasses and a sparse distribution of trees, and clusters of trees are seen in the background. Visual quality is rated as moderately high at this viewpoint.
- **Key Viewpoint 21** represents a motorist's view traveling east on Hood Franklin Road approaching the I-5 southbound on-ramp looking east. This viewpoint was photographed along Hood Franklin Road just west of the I-5/Hood Franklin Road Interchange facing east). The majority of land in this view is covered by pavement or gravel with grasses on either side of Hood Franklin Road and the overpass between the roadway and on- and off-ramps. Numerous man-made elements such as the pavement, roadway signs, and poles lining the interchange are present in this view. However, the land surrounding the interchange consists of relatively flat topography and open space covered by grassland, much like the land in many other views in the corridor. Visual quality is rated as moderate at this viewpoint.

Figure 10. Key Viewpoint 18 Comparison of Existing Conditions and Proposed Project



Key Viewpoint 18 – Existing Condition



Key Viewpoint 18 – Proposed Condition

Scenic Corridors and Scenic Highways

According to the Caltrans California Scenic Highway Mapping System (2011), there are no designated scenic corridors or scenic highways within the Project area.

ENVIRONMENTAL CONSEQUENCES

The visual impacts of a project are determined by assessing both changes to the visual resources (resource change) and predicting viewer response to those changes. These impacts can be beneficial or detrimental and are rated on a scale from low to high as follows:

- **Low:** Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require mitigation.
- **Moderate:** Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices.
- **Moderately High:** Moderate adverse visual resource change with moderate viewer response or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than five years to mitigate.
- **High:** A high level of adverse change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment cannot mitigate the impacts. Viewer response level is high. An alternative project design may be required to avoid highly adverse impacts.

Method for Predicting Viewer Response

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes brought about by a highway project.

Viewer Sensitivity

Viewer sensitivity is a measure of the viewer's recognition of a particular object. It has three attributes: activity, awareness, and local values. Activity relates to the preoccupation of viewers—are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings? The more that viewers are actually observing their surroundings, the more sensitivity they will have to changes in visual resources. Awareness relates to the focus of view—the focus is wide and the view general, or the focus is narrow and the view specific. The more specific the awareness, the more sensitive a viewer is to change. Local values and attitudes also affect viewer sensitivity. If the viewer group values aesthetics in general or if a specific visual resource has been protected by local, State, or national designation, it is likely that viewers will be more sensitive to visible changes. High viewer sensitivity helps predict that viewers will have a high concern for any visual change.

The Project area is composed of elements that combine to create a visual environment with low to moderately low vividness, and moderate to moderately high intactness and unity. Man-made structures in the Project area are not visibly unique and many are only partially visible from the roadways as they are surrounded by vegetation that screens them from view. The stretches of open grasslands and agricultural parcels over the vastly flat landscape surrounding the Project

area offer visually open views from the roadway, which are commonly observed in this area of the County. The landscape is relatively free from encroaching elements within a quarter-mile of the proposed Project except for urban street networks, including stretches of roadway; residential, agricultural, public, and commercial structures; and overhead utilities. Views of the surrounding landscape are rarely interrupted by man-made structures, except for the occasional presence of residential, agricultural, and commercial structures, resulting in a moderate to moderately high visual coherence within the Project area.

Viewer Exposure

Viewer exposure is a measure of the viewer's ability to see a particular object. Viewer exposure has three attributes: location, quantity, and duration. Location relates to the position of the viewer in relationship to the object being viewed. The closer the viewer is to the object, the higher the exposure. Quantity refers to how many people see the object. The more people who can see an object or the greater frequency with which an object is seen, the more exposure the object has to viewers. Duration refers to how long a viewer is able to keep an object in view. The longer an object can be kept in view, the higher the exposure. High viewer exposure helps predict that viewers will have a response to a visual change.

Viewsheds vary according to the type and location of the viewer.

- **Local Motorists:** For motorists along Kammerer Road, Bruceville Road, Franklin Boulevard, Hood Franklin Road, and adjacent roadways, the viewshed includes views of agricultural lands and activities, residential properties, open space, and vacant parcels. Drivers traveling through the Project area would have views of the newly widened four-lane roadway and extension of the roadway, but exposure of these views would be relatively short in duration as they pass through the area. Driver focus is expected to remain primarily on the roadway itself, rather than on the surrounding views. Passengers would have a higher awareness of the surrounding views.
- **Local Residents/Employees:** Local residents and business owners/employees using this route for commuting purposes would be expected to have a higher sensitivity to changes in visual appearance, due to their familiarity of the area.
- **Nonlocal Motorists:** Tourists or other nonlocal drivers traveling through the area would be expected to have a somewhat higher awareness of the visual characteristics of the area but would not be as sensitive to changes in the visual setting. Kammerer Road is most likely rarely used by tourists and nonlocal motorists, as no restaurants, gas stations, or rest stops exist along the roadway. However, tourists may use the Project area as a route to Stone Lakes NWR. Because the visual characteristics of the extended Kammerer Road will be similar to that of the widened Kammerer Road configuration, changes in the landscape resulting from the proposed Project are not likely to be obvious to this viewer group.

Group Viewer Response

The narrative descriptions of viewer exposure and viewer sensitivity for each viewer group were merged to establish the overall viewer response of each group.

Viewers on Kammerer Road, Hood Franklin Road, and the I-5/Hood Franklin Road Interchange

Drivers traveling along Kammerer Road (Viewpoints 1, 3, 4, 6, 8, 9, and 10), Hood Franklin Road (Viewpoint 18), and the I-5/Hood Franklin Road Interchange (Viewpoints 19, 20, and 21) would have views of the new widened and extended configuration of the roadway, but existing viewer sensitivity for this group is relatively low since most of the viewers are commuter motorists traveling on Kammerer Road who would be exposed to the Project on a daily or weekly basis. The typical commuter motorists are focused on driving and work-related activities rather than on the views seen during regular commutes, and will therefore have a low level of sensitivity to the widened and extended configuration of Kammerer Road.

Viewers on Bruceville Road and Franklin Boulevard

Drivers traveling north and south on Bruceville Road (Viewpoints 11 and 12) and Franklin Boulevard (Viewpoints 14, 15, 16, and 17) include commuter motorists and residents who would have views of the new widened and extended configuration of the roadway as they approach or pass Kammerer Road. This viewer group has both low and high viewer sensitivity. The commuter motorists, exposed to these views on a daily or weekly basis, are less likely to focus on the scenic quality and visual resources of the landscape and would have a relatively low sensitivity, while the residents are more likely to take in their surroundings and have a relatively high sensitivity.

Residential Viewers along Kammerer Road, Bruceville Road, Franklin Boulevard, and Rancho Verde Residential Community

Residents along Kammerer Road (Viewpoints 6, 7, and 8), Bruceville Road (Viewpoint 12), in the Town of Franklin along Franklin Boulevard (Viewpoints 16, 17, and 18), and within the Rancho Verde residential community (Viewpoint 22) would have views of the widened and extended configuration of the roadway, depending on the location of the residence. The majority of drivers along side streets to Kammerer Road, Bruceville Road, and Franklin Boulevard are residents of the area and would also have views of the new widened and extended configuration of the roadway. Residents of homes with direct views of existing Kammerer Road and the area between Bruceville Road and I-5/Hood Franklin Road Interchange where the roadway will be extended are expected to have a relatively high level of sensitivity to changes in visual resources and scenic quality of the landscape. This viewer group is more likely to focus on details of the landscape in view of their place of residence and would therefore have a higher level of sensitivity.

Tourists and Motorists Driving for Pleasure

Drivers traveling through the area for the first time as a tourist or traveling along the roadway for the purpose of gazing about the landscape to experience the scenic quality and visual resources have a relatively high level of sensitivity. Tourists may use the Project area as a route to Stone Lakes NWR. Aside from these potential tourists, the number of tourists traveling through the Project area is relatively low as options for gas stations, rest stops, and restaurants are limited within the Project area.

Visual Quality Comparison

The **Table 4** below summarizes the visual quality ratings at each key viewpoint under existing, and the proposed Project conditions.

Table 4. Visual Quality Comparison – Existing and Proposed Project

Key Viewpoint	Project	Vividness	Intactness	Unity	Overall Visual Quality ¹	VQ Difference
Visual Assessment Unit 1						
1	Existing	2.25	3.75	4.00	3.33	--
	Proposed Project	2.25	3.63	4.00	3.29	-0.04
3	Existing	2.33	3.67	4.00	3.33	--
	Proposed Project	2.33	3.38	3.88	3.20	-0.13
4	Existing	2.17	4.25	5.25	3.89	--
	Proposed Project	2.17	4.00	5.00	3.75	-0.17
5	Existing	2.33	5.75	5.75	4.61	--
	Proposed Project	2.17	4.75	5.38	4.10	-0.51
6	Existing	2.33	4.00	4.25	3.52	--
	Proposed Project	2.17	4.00	4.25	3.47	-0.05
8	Existing	2.42	5.50	5.50	4.47	--
	Proposed Project	2.42	5.38	5.50	4.43	-0.04
Visual Assessment Unit 2						
2	Existing	2.33	4.50	4.50	3.78	--
	Proposed Project	2.33	4.38	4.50	3.74	-0.04
7	Existing	2.25	4.25	4.38	3.63	--
	Proposed Project	2.25	4.25	4.38	3.63	-0.00
10	Existing	2.17	5.13	5.75	4.35	--
	Proposed Project	2.00	3.50	4.50	3.33	-1.02
Visual Assessment Unit 3						
9	Existing	2.17	5.50	5.75	4.47	--
	Proposed Project	2.00	4.00	4.25	3.42	-1.05
11	Existing	2.75	4.50	5.75	4.33	--
	Proposed Project	2.75	4.50	5.75	4.33	-0.00
12	Existing	2.25	4.75	4.89	3.96	--
	Proposed Project	2.17	3.75	4.00	3.30	-0.66

Key Viewpoint	Project	Vividness	Intactness	Unity	Overall Visual Quality ¹	VQ Difference
16	Existing	2.67	5.25	5.75	4.56	--
	Proposed Project	2.33	5.00	5.25	4.19	-0.37
22	Existing	3.00	4.00	5.00	4.00	-0.0
	Proposed Project	2.5	3.5	4.5	3.5	-0.5
Visual Assessment Unit 4						
13	Existing	1.83	4.25	4.50	3.53	--
	Proposed Project	1.83	4.00	4.50	3.44	-0.09
14	Existing	2.25	3.88	5.00	3.71	--
	Proposed Project	2.25	3.50	4.75	3.50	-0.21
15	Existing	2.63	5.75	5.75	4.71	--
	Proposed Project	2.63	5.75	5.75	4.71	-0.00
17	Existing	2.33	4.50	5.75	4.19	--
	Proposed Project	2.33	4.13	5.50	3.98	-0.21
18	Existing	2.17	4.00	4.00	3.39	--
	Proposed Project	2.17	3.88	3.75	3.26	-0.13
19	Existing	2.17	4.25	5.00	3.81	--
	Proposed Project	2.17	4.13	4.63	3.64	-0.17
20	Existing	2.50	5.38	5.75	4.54	--
	Proposed Project	2.50	5.13	5.50	4.38	-0.16
21	Existing	2.08	5.50	5.50	4.36	--
	Proposed Project	2.08	5.38	5.50	4.32	-0.04

Source: Visual Impact Assessment (Caltrans 2015; Caltrans 2017)

Notes:

¹ Overall Visual Quality = average of the vividness, intactness, and unity ratings for the subject viewpoint

Summary of Visual Impacts

The **Table 5** below summarizes and compares the narrative ratings for visual resource change, viewer response, and visual impacts between build conditions for each key viewpoint.

Table 5. Summary of Key View Narrative Ratings

Visual Assessment Unit	Key Viewpoint	Proposed Project		
		Resource Change	Viewer Response	Visual Impact
1	1	ML	M	ML
	3	ML	L	L
	4	L	ML	L
	5	M	M	M
	6	ML	L	ML
	8	L	L	L
2	2	M	M	M
	7	L	L	L
	10	M	ML	M
3	9	ML	ML	ML
	11	L	L	L
	12	ML	L	L
	16	L	L	L
	22	ML	M	ML
4	13	L	L	L
	14	ML	ML	ML
	15	L	L	L
	17	ML	ML	ML
	18	L	L	L
	19	L	L	L
	20	L	L	L
	21	L	L	L

Source: Visual Impact Assessment (Caltrans 2015; Caltrans 2017); L = Low; ML = Moderately low; M = Moderate

Roadway Improvements

The proposed Project would cause a low level of change in the visual environment between SR-99 and Bruceville Road and a moderate level of change in the visual environment between Bruceville Road and I-5, as seen from the identified key viewpoints. Under the proposed Project, views from each viewpoint between SR-99 and Bruceville Road would change slightly due to the widened roadway along the existing alignment of Kammerer Road under the proposed Project, but the overall visual character would remain similar to existing conditions. From Bruceville Road to I-5, changes to the visual character of the views from each viewpoint are more substantial than between SR-99 and Bruceville Road due to the extension of Kammerer Road as a new roadway and the UPRR overhead grade separation structure (see Appendix H. Preliminary Grade

Separation Profile Pending UPRR Approval). The approach fill and the UPRR overhead grade separation structure would obstruct views of the surrounding landscape at some locations within the Project viewshed. Design and construction of the overhead grade separation structure may incorporate design features to minimize the appearance of the structure. These design features may include vegetative cover and the use of cut and fill around the structure, so it appears to grow out of and blend in with the surrounding landscape.

Changes in the Project area as seen from the identified key viewpoints would be viewed by motorists and residents along Kammerer Road, Bruceville Road, Franklin Boulevard, side streets, and surrounding areas. Based on the existing conditions and the proposed Project conditions analyzed in the VIA, the proposed Project will result in moderately low-level impacts east of Bruceville Road and moderate to moderately high-level impacts west of Bruceville Road. The proposed Project would not impact a designated landmark, historic resources, visually significant trees, or rock outcroppings, and would therefore have a less than significant impact on visual features. In regard to the exposure and sensitivity for each of the viewer groups, the moderately low through moderately high level of impacts of the proposed Project on the views represented by the key viewpoints may be reduced through implementation of minimization and mitigation measures. Mitigation measures **VIS-1** through **VIS-6** will be implemented to avoid and minimize affects to viewers throughout the Project corridor.

Lighting and Glare

The main source of daytime glare in the area is from sunlight reflecting from structures with reflective surfaces such as windows. Building materials (e.g., reflective glass and polished surfaces) are the most substantial sources of glare. The amount of glare depends on the intensity and direction of sunlight, which is more acute at sunrise and sunset because the angle of the sun is lower during these times.

A source of glare during the nighttime hours is artificial light. The sources of new and increased nighttime lighting and illumination include residential properties in the Project area, lighting from nonresidential uses, lights associated with vehicular travel (e.g., car headlights), and street lighting. Implementation of the Project would introduce new sources of nighttime lighting and illumination levels in the Project area due to the placement of street lighting along the roadway and the addition of traffic signals at some intersections between the I-5/Hood Franklin Road Interchange and SR-99.

Reflection off of street light poles and traffic signal poles would add to daytime glare in the Project area. At night, this lighting could result in “spillover” lighting, which is defined as artificial lighting that spills over onto adjacent properties. Spillover lighting from the widened and extended roadway could interrupt sleeping patterns or cause other nuisances to neighboring residents. Additionally, headlights from vehicles traveling on the widened and extended roadway and the UPRR overhead grade separation structure would add to the overall nighttime glare, particularly due to the higher elevation of the UPRR overhead grade separation structures.

Daytime and nighttime glare from street lighting and traffic signals would be similar throughout the Project area and would be highest for Key Viewpoints 5, 7, 10, 11, 13, 15, 17, 19, and 22S. Lighting impacts would be considered moderately high. Therefore, mitigation measures **VIS-1** and **VIS-2** shall be implemented.

Temporary Construction

During construction of the Project, there would be temporary visual impacts associated with on-site storage of construction materials and debris, movement of soil, and other construction activities that would be visible to viewers in the area. These activities would be visible from all viewpoints to varying degrees depending on the phase of construction and distance of the viewer from the construction site. However, these changes in the visual makeup of the Project area are temporary, and necessary in the interest of safety for roadway users. Therefore, due to the temporary nature of the impacts, the loss of views and visual quality during construction is not considered significant.

Some work for the proposed Project may occur after daylight hours. Construction lighting would be required for these activities. This lighting could result in spillover lighting. Spillover lighting from the Project area would interrupt sleeping patterns or cause other nuisances to neighboring residents. In addition, lighting would disturb drivers passing by these construction activities.

The presence of construction personnel and equipment working on the roadways, intersections, and the UPRR overhead would be short term and, therefore, not result in significant impacts. Temporary construction impacts would be considered moderate, and mitigation is required to reduce the level of impacts.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measures AES-1 and AES-2 has been incorporated into the following Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to aesthetics would be reduced to a less than significant level:

VIS-1: Areas that have removed trees, shrubs and created soil disturbance due to construction activities will be re-established by applying a permanent erosion control and planting trees and shrubs where they are deemed appropriate. All finished slopes and graded areas shall be hydroseeded with a permanent seed mix composed of native plant species indigenous to the area.

VIS-2: All disturbed areas including staging of vehicles and equipment will be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native species.

VIS-3: To minimize visual impacts of staged construction equipment, adherence of Caltrans Standard Specification for Construction would occur. Construction materials and debris shall be stored away from highly visible areas, which shall include, but not be limited to, residences along Kammerer Road, Bruceville Road, Franklin Boulevard, and the Rancho Verde residential development.

VIS-4: To minimize visual impacts to the Rancho Verde residential development, design and construction of the overhead grade separation structure would incorporate design features

to minimize the appearance of the structure. These design features may include vegetative cover and the use of cut and fill around the structure, so it appears to grow out of and blend in with the surrounding landscape. Any hydroseed or vegetation cover would be composed of native species.

VIS-5: During the final design of the Project, the implementing agency will prepare and implement a plan for construction lighting that minimizes the release of light and glare either upward or toward properties and residences adjoining the construction site. At a minimum, the plan will contain the following elements:

- To minimize trespass lighting to the skies, use full cutoff luminaires. Full cutoff luminaires are designed to not emit any light above 90 degrees, thereby reducing sky glow.
- Use internal or external shields when necessary to minimize light trespass onto neighboring properties.

VIS-6: Operational lighting of the Project will be designed for safety and will include features that minimize the release of light and glare either upward or toward properties and residences adjoining the Project corridor. The lighting design will conform to all applicable City, County, State, Federal and public safety standards, as appropriate. Features could include shielding lighting elements, using lower voltage lighting, incorporating downward casting lighting, using lighting features that conform to the visual character of the area, and similar design measures as listed below:

- Consider the least intrusive lighting when improvements are made at an intersection, when lighting is needed for safety reason, or when a new intersection is constructed.
- Minimize continuous roadway lighting,
- Calculate the optimum location, height and spacing for alternative lighting solutions at each intersection using computer software.
- Do not permit the use of high pressure sodium lamps. Metal halide is preferred because of the more natural color rendition and pure white light.
- Minimize trespass lighting to the skies by using full cutoff luminaires. Full cutoff luminaires are designed to not emit any light above 90 degrees, thereby reducing sky glow.
- Reduce the amount of light required for an intersection by using Caltrans, Sacramento County, and City of Elk Grove minimum requirements as appropriate.
- Use internal or external shields when necessary to minimize light trespass onto neighboring properties.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to less than significant impacts after mitigation to aesthetics. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to aesthetics would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to aesthetics.

2.2 Agriculture and Forest Resources

REGULATORY SETTING

California Environmental Quality Act

CEQA requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

The California Land Conservation Act of 1965, commonly known as the Williamson Act, enables local governments to form contracts with private landowners to promote the continued use of the relevant land in agricultural or related open space use. In return, landowners receive property tax assessments that are based on farming and open space uses instead of full market value. Local governments receive an annual subvention (subsidy) of forgone property tax revenues from the state via the Open Space Subvention Act of 1971.

The Williamson Act empowers local governments to establish “agricultural preserves” consisting of lands devoted to agricultural uses and other compatible uses. When such preserves are established, the locality may offer owners of agricultural land that is included in the preserves the opportunity to enter into annually renewable contracts that restrict the land to agricultural use for at least 10 years (i.e., the contract continues to run for 10 years following the first date upon which the contract is not renewed). In return, the landowner is guaranteed a relatively stable tax base, founded on the value of the land for agricultural/open space use only and unaffected by its development potential.

Cancellation of a Williamson Act contract involves an extensive review and approval process, in addition to payment by the landowner of fees of up to 12.5% of the property value. The local jurisdiction approving the cancellation must make either one of the following findings:

- that the cancellation is consistent with the purpose of the California Land Conservation Act (Section 51282[a][1] of the California Government Code), or
- that the cancellation is in the public interest (Section 51282[a][2] of the California Government Code).

To support the finding that the cancellation of a Williamson Act contract is consistent with the purpose of the California Land Conservation Act, all of the following sub-findings must be made:

- that the cancellation is for land on which a notice of nonrenewal has been served in accordance with Section 51245 of the California Government Code;
- that cancellation is not likely to result in the removal of adjacent lands from agricultural use;
- that cancellation is for an alternative use that is consistent with the applicable provisions of the City or County general plan;
- that cancellation will not result in discontinuous patterns of urban development; and
- that there is no proximate noncontracted land that is both available and suitable for the use to which it is proposed the contracted land be put, or that development of the

contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

To support the finding that the cancellation of a Williamson Act contract is in the public interest, both of the following sub-findings must be made:

- that other public concerns substantially outweigh the objectives of the Williamson Act; and
- that there is no proximate noncontracted land that is both available and suitable for the use to which it is proposed the contracted land be put, or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

Sacramento County General Plan

The County General Plan (amended November 2011) guides future development in the County, including a portion of the proposed Project area. The following General Plan policies in the Agricultural Element guide development while maintaining the agricultural productivity of the land in the County.

Policy AG-1: The County shall protect prime, statewide importance, unique and local importance farmlands located outside of the Urban Services Boundary (USB) from urban encroachment.

Policy AG-2: The County shall not accept applications for General Plan amendments outside the USB redesignating prime, statewide importance, unique and local importance farmlands or lands with intensive agricultural investments to agricultural/residential or urban use (i.e., residential, commercial, industrial) unless the applicant demonstrates that the request is consistent with the General Plan Agriculture-Residential expansion policies (please refer to Land Use Element Policies regarding Agriculture-Residential uses).

Policy AG-3: The County shall permit agricultural uses on buffers, provided such uses are conducted in a manner compatible with urban uses. Buffers shall be used to separate farming practices incompatible with adjacent urban uses. Any homeowners' association or similar entity within the development shall assist in determining compatible use. Buffers shall not adversely conflict with agricultural uses on adjoining property.

Policy AG-5: Projects resulting in the conversion of more than fifty (50) acres of farmland shall be mitigated within Sacramento County, except as specified in the paragraph below, based on a 1:1 ratio, for the loss of the following farmland categories through the specific planning process or individual project entitlement requests to provide in-kind or similar resource value protection (such as easements for agricultural purposes):

- prime, statewide importance, unique, local importance, and grazing farmlands located outside the USB;
- prime, statewide importance, unique, and local importance farmlands located inside the USB.

The Board of Supervisors retains the authority to override impacts to Unique, Local, and Grazing farmlands, but not with respect to Prime and Statewide farmlands.

However, if that land is also required to provide mitigation pursuant to a Sacramento County endorsed or approved Habitat Conservation Plan (HCP), then the Board of Supervisors may consider the mitigation land provided in accordance with the HCP as meeting the requirements of this section including land outside of Sacramento County.

Note: This policy is not tied to any maps contained in the Agricultural Element. Instead, the most current Important Farmland map from the Department of Conservation should be used to calculate mitigation.

Policy AG-29: The County shall minimize flood risks to agricultural lands resulting from new urban developments by:

- Requiring that such developments incorporate adequate runoff control structures and/or
- Assisting implementing comprehensive drainage management plans to mitigate increased risks of farmland flooding resulting from such developments.

City of Elk Grove General Plan

The City General Plan (as amended) guides future development in the City, including the proposed Project area. The following General Plan policies contained in the Conservation and Air Quality and Land Use Elements guide the development in agricultural areas and conversions in the City Planning Area.

Policy CAQ-2: The loss of agricultural productivity on lands designated for urban uses within the city limits as of January 2004 is accepted as a consequence of the development of Elk Grove. As discussed in the Land Use Element, the City's land use concept for the Planning Area outside the 2004 city limits anticipates the retention of significant areas of agricultural production outside the current city limits.

Policy CAQ-3: The City considers the only mitigation for the loss of agricultural land to consist of the creation of new agricultural land in the Sacramento region equal in area, productivity, and other characteristics to the area that would be lost due to development. The protection of existing agricultural land through the purchase of fee title or easements is not considered by the City to provide mitigation, since programs of this type result in a net loss of farmland.

Policy CAQ-4: While agricultural uses are anticipated to be phased out within the city limits, the City recognizes the right of these uses to continue as long as individual owners/farmers desire. The City shall not require buffers between farmland and urban uses, relying instead on the following actions to address the impacts of farming on urban uses:

- Implement the City’s “Right to Farm” ordinance.
- Prospective buyers of property adjacent to agricultural land shall be notified through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities as per provisions of the City’s right-to-farm ordinance.

Policy LU-7: The City encourages disclosure of potential land use compatibility issues such as noise, dust, odors, etc., in order to provide potential purchasers with complete information to make informed decisions about purchasing property.

AFFECTED ENVIRONMENT

To identify Prime and Unique Farmland within the Project area, a U.S. Department of Agriculture (USDA) Farmland Conversion Impact Rating Form AD-106 was completed and submitted to the Natural Resource Conservation Service (NRCS) local Field Office for review. The USDA Farmland Conversion Impact Rating Form AD-106 for the proposed Project is attached to this document under Appendix B.

Evaluation of Project impacts was conducted in Parts I and III of Form AD-106, which documents the potential impacts as a result of the proposed Project to the adjacent soils mapped as suitable farmland. The proposed Project encompasses approximately 385 acres of land, where approximately 328.31 acres of suitable farmland soils were determined to be within the Project’s Potential Impact Area.

Of the 328.31 acres approximately 3.06 acres were determined to be Prime Farmland, 101.82 acres were determined to be Farmland of Statewide Importance, 174.22 acres were determined to be Farmland of Local Importance, 48.73 acres were determined to be Grazing Land, and 0.48 acres were determined to be Unique Farmland.

The corridor assessment portion of the form (Part VI of Form AD-106) reflects the general suitability of farmland in the proposed Project corridor for protection/preservation. The total site assessment score for the proposed Project was low (93 points out of 160), but this does indicate that the impacts to farmland located within Project corridor needed to be evaluated. The score is due to the active farmlands adjacent to and within the proposed Project area and the relative size of the farms in comparison to the rest of the farms within the County.

The points of both the NRCS Land Evaluation (Part V of Form AD-106) and the corridor assessment (Part VI of Form AD-106), totaled to 93, as found in Part VII of Form AD-106. This is a combination of the relative value of the farmland and total corridor assessment. The threshold for consideration of avoidance alternatives for impacts for farmlands is a score of 160 or higher. As the score is 93, no further evaluation of impacts to farmlands or avoidance alternatives is required.

There are no Williamson Act Contract Lands within the Project area, and no impacts to Williamson Contract Lands is anticipated.

There are no forests or forest resources located within the Project area.

ENVIRONMENTAL CONSEQUENCES

Project impacts to important farmland resources would not occur within previously designated right-of-way, including UPRR and Caltrans right-of-way. These areas have already been approved as non-agricultural lands. Additionally, all farmland resources within previously approved development areas were not assessed for impacts due to these areas having previous requirements for farmland impacts during their respective environmental processes.

Project implementation would result in the conversion of approximately 1.5 acres of Prime Farmland, 35.72 acres of Farmland of Statewide Importance, 95.46 acres of Farmland of Local Importance, and 3.75 acres of Grazing Land, for a total of 136.43 acres. The results of the farmlands assessment indicate that the farmland in the Project is not of significant value for consideration of protection.

Table 6 below describes the acres of mapped soils in the Project area to be converted either directly or indirectly for temporary staging areas as a result of the proposed Project (**Figure 11**).

Table 6. Proposed Farmland Impacts

	Prime Farmland (acres)	Farmland of Statewide Importance (acres)	Farmland of Local Importance (acres)	Grazing Land (acres)	Total (acres)
Impacted Area	1.5	35.72	95.46	3.75	136.43

The Project is consistent with state and local farmland protection programs and policies. During final design of the Project, impacts to significant farmland resources will be refined. With the implementation of avoidance, minimization and/or mitigation measures **AG-1** and **AG-2** in compliance with the Connector JPA PEIR, the proposed Project would have a less than significant effect on agriculture and forest resources.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measure LU-1 has been incorporated into the following Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to agriculture and forest resources would be reduced to a less than significant level:

AG-1: The proposed Project shall be designed to avoid or minimize the direct conversion of important farmland to nonagricultural uses and indirect conversion of farmland through severance or fragmentation. During future design phases, the implementing agency will locate the proposed Project to avoid or minimize loss of agricultural lands and the potential for fragmenting agricultural lands or production in a manner that would make them uneconomical to farm, to the extent that doing so would not compromise safety or standard design criteria for a road of this type.

AG-2: For important farmland (prime, statewide, unique, grazing and local) converted by the Project, either directly or indirectly as described above, important farmland of the same category will be permanently protected from development at a minimum ratio of 1:1. Productive offsite agricultural land subject to conversion will be protected through the purchase or transfer of its development rights and establishment of a farmland conservation easement over the agricultural land pursuant to California Civil Code Section 815, et seq. or other statute providing for its conservation in perpetuity for agricultural use. The implementing agency will provide funds to an agricultural land trust or similar nongovernmental entity for the purchase of agricultural land or development rights on agricultural and establishment of a farmland conservation easement. The implementing agency shall fund only a land trust or nongovernmental entity with an established record of responsible agricultural land stewardship.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to farmland resources. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to farmland resources would occur.

The Project would have a **less than significant impact with mitigation incorporated** relating to agriculture and forest resources.

- Project Study Area
- Potential Impact Area

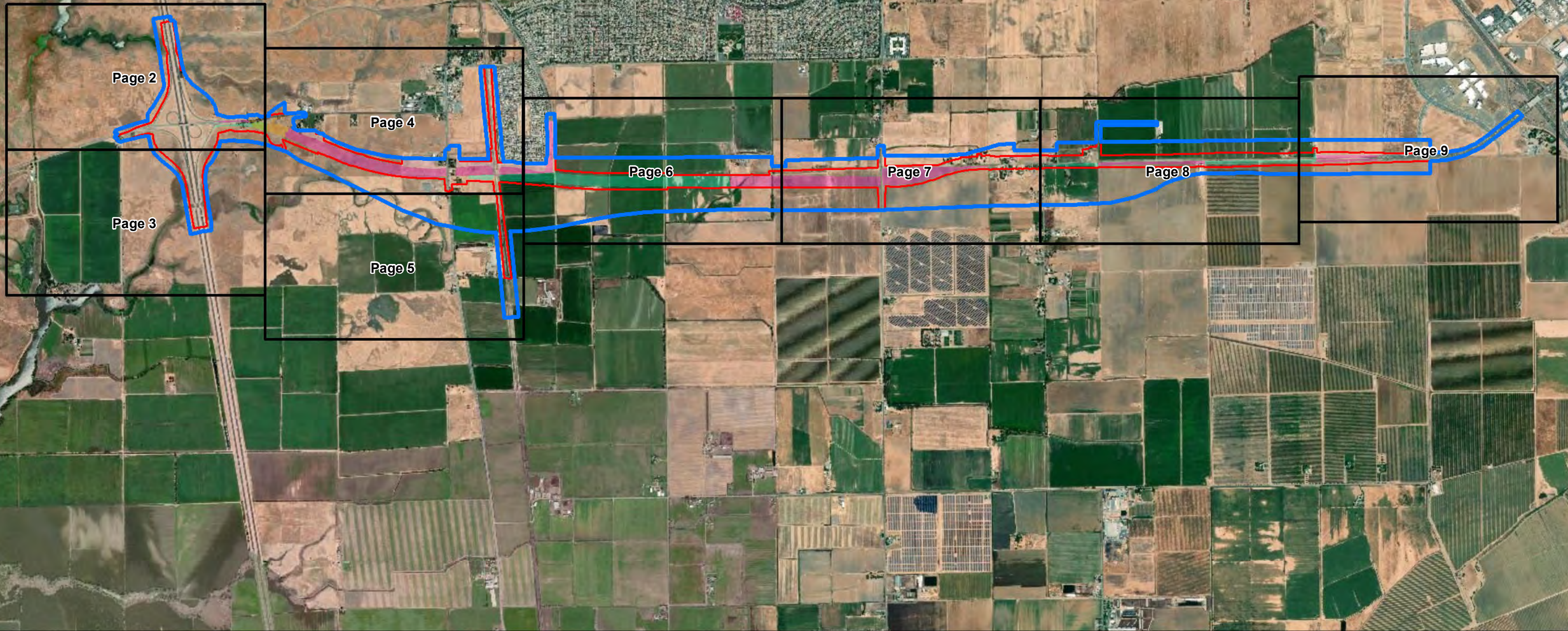
Farmland Impacts

Direct

- Grazing Land (3.47 acres)
- Farmland of Local Importance (83.22 acres)
- Farmland of Statewide Importance (35.67 acres)
- Prime Farmland (1.41 acres)

Indirect

- Grazing Land (0.28 acres)
- Farmland of Local Importance (12.24 acres)
- Farmland of Statewide Importance (0.05 acres)
- Prime Farmland (0.09 acres)



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Source: ESRI Maps Online; Dokken Engineering 10/10/2018; Created By: brianm



0 1,200 2,400 3,600 4,800 6,000 Feet

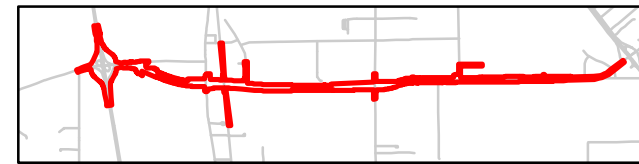










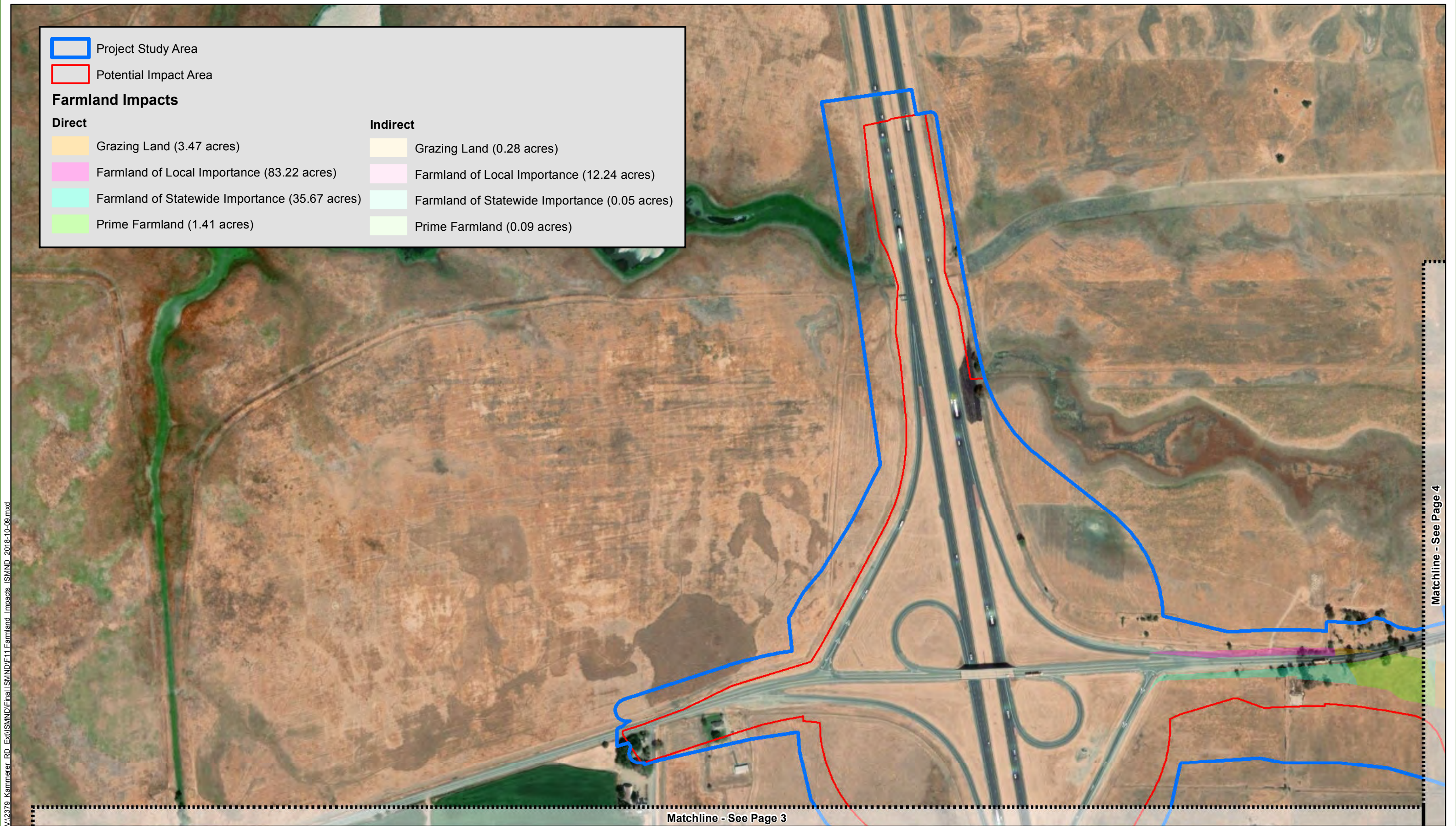


FIGURE 11
Farmland Impacts
Page 1 of 9

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Extension Project
City of Elk Grove and Sacramento County, California

	Project Study Area
	Potential Impact Area
Farmland Impacts	
Direct	
	Grazing Land (3.47 acres)
	Farmland of Local Importance (83.22 acres)
	Farmland of Statewide Importance (35.67 acres)
	Prime Farmland (1.41 acres)
Indirect	
	Grazing Land (0.28 acres)
	Farmland of Local Importance (12.24 acres)
	Farmland of Statewide Importance (0.05 acres)
	Prime Farmland (0.09 acres)



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Matchline - See Page 4

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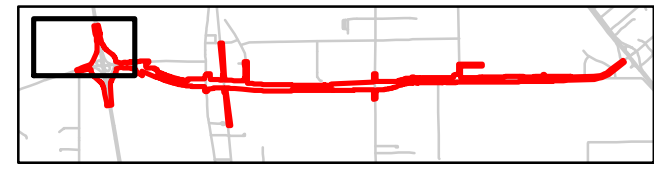
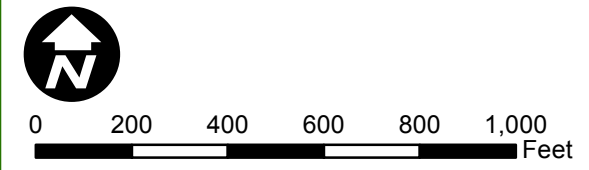
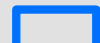
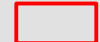




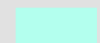

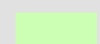



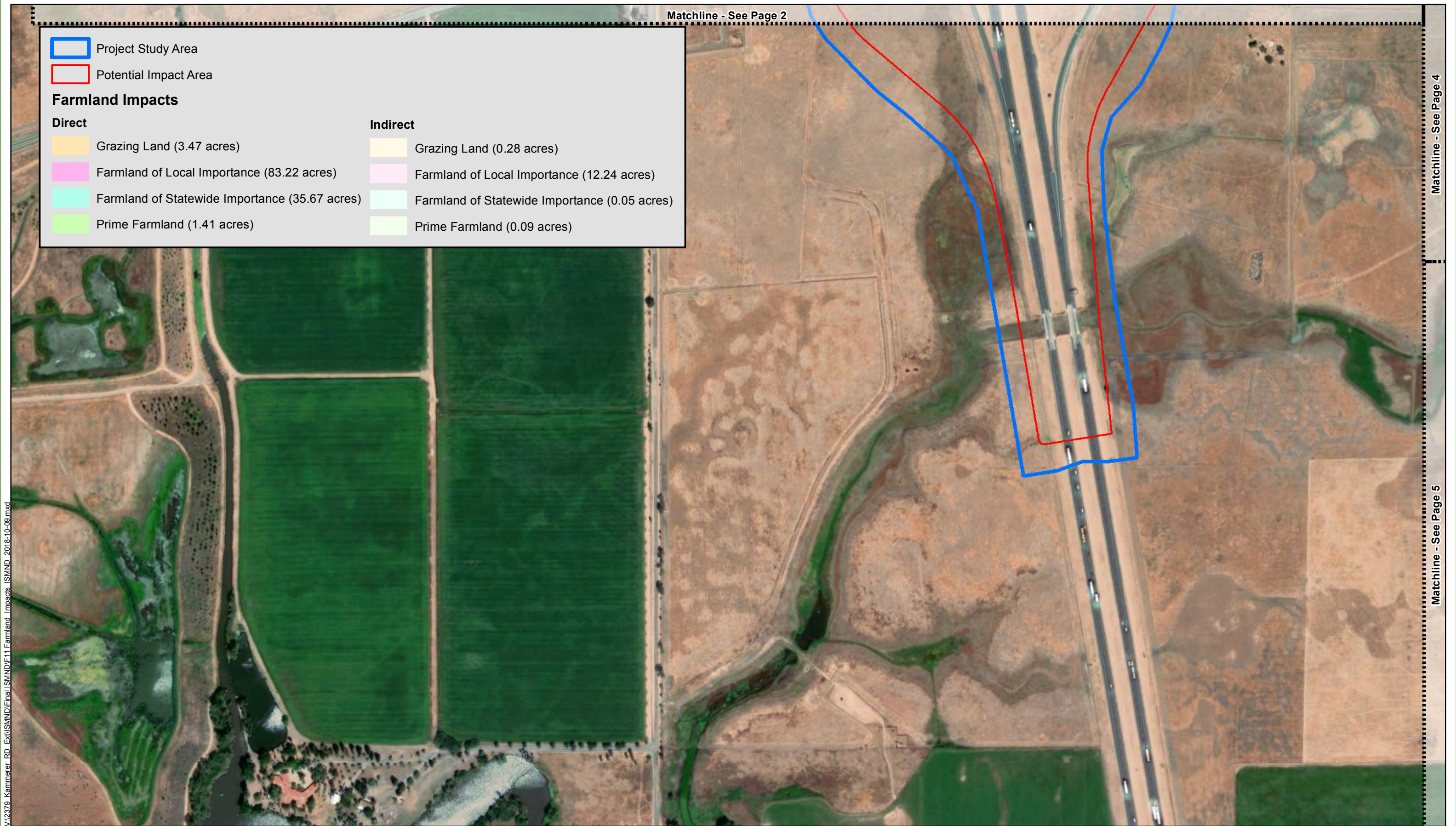
FIGURE 11
Farmland Impacts
Page 2 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

Matchline - See Page 2

-  Project Study Area
-  Potential Impact Area

Farmland Impacts

Direct	Indirect
 Grazing Land (3.47 acres)	 Grazing Land (0.28 acres)
 Farmland of Local Importance (83.22 acres)	 Farmland of Local Importance (12.24 acres)
 Farmland of Statewide Importance (35.67 acres)	 Farmland of Statewide Importance (0.05 acres)
 Prime Farmland (1.41 acres)	 Prime Farmland (0.09 acres)



Matchline - See Page 4

Matchline - See Page 5

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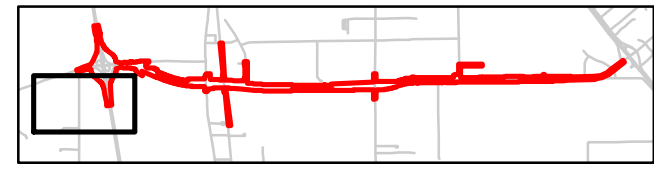
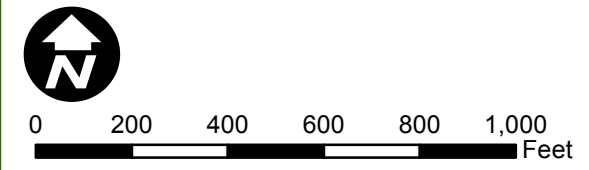










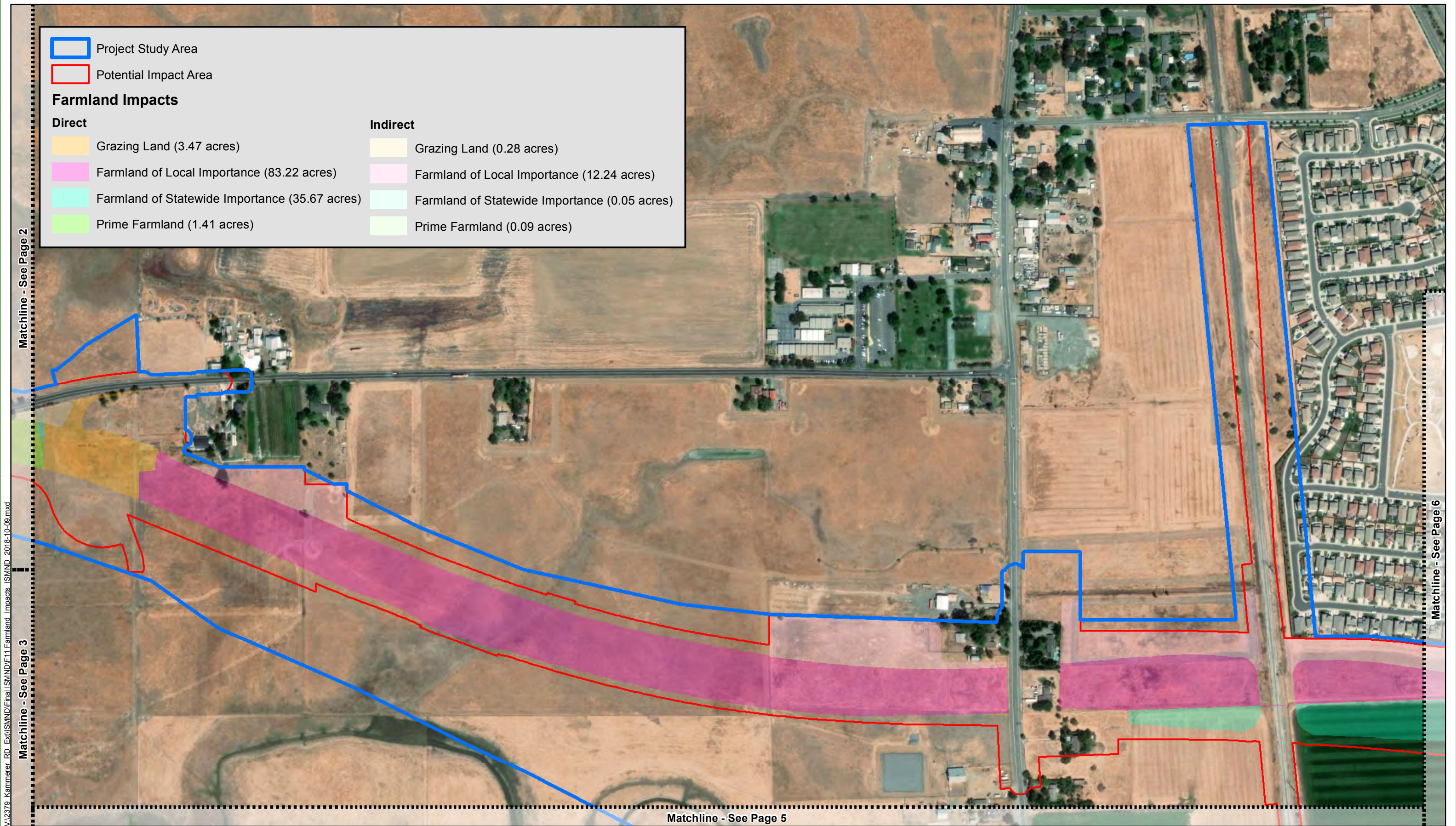


FIGURE 11
Farmland Impacts
Page 3 of 9

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Extension Project
City of Elk Grove and Sacramento County, California

	Project Study Area
	Potential Impact Area
Farmland Impacts	
Direct	
	Grazing Land (3.47 acres)
	Farmland of Local Importance (83.22 acres)
	Farmland of Statewide Importance (35.67 acres)
	Prime Farmland (1.41 acres)
Indirect	
	Grazing Land (0.28 acres)
	Farmland of Local Importance (12.24 acres)
	Farmland of Statewide Importance (0.05 acres)
	Prime Farmland (0.09 acres)



Matchline - See Page 2

Matchline - See Page 3

Matchline - See Page 5

Matchline - See Page 6

Source: ESRI Maps Online; Dokken Engineering 10/10/2018; Created By: briann

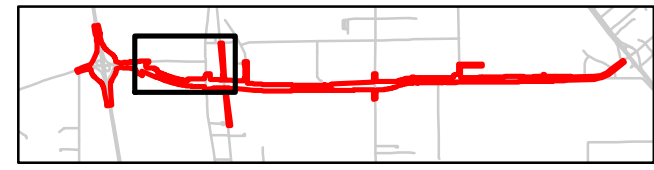
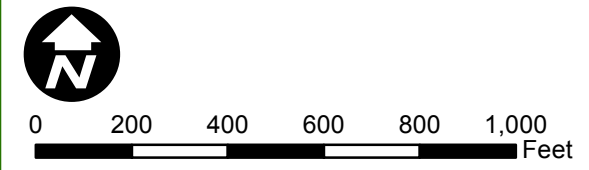












FIGURE 11
Farmland Impacts
Page 4 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

-  Project Study Area
-  Potential Impact Area

Farmland Impacts

Direct	Indirect
 Grazing Land (3.47 acres)	 Grazing Land (0.28 acres)
 Farmland of Local Importance (83.22 acres)	 Farmland of Local Importance (12.24 acres)
 Farmland of Statewide Importance (35.67 acres)	 Farmland of Statewide Importance (0.05 acres)
 Prime Farmland (1.41 acres)	 Prime Farmland (0.09 acres)

Matchline - See Page 3

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Matchline - See Page 6

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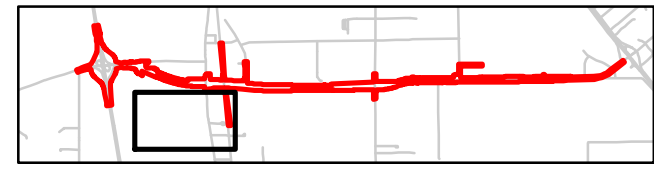
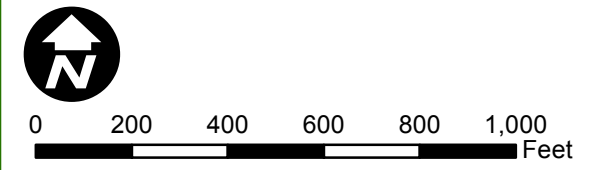
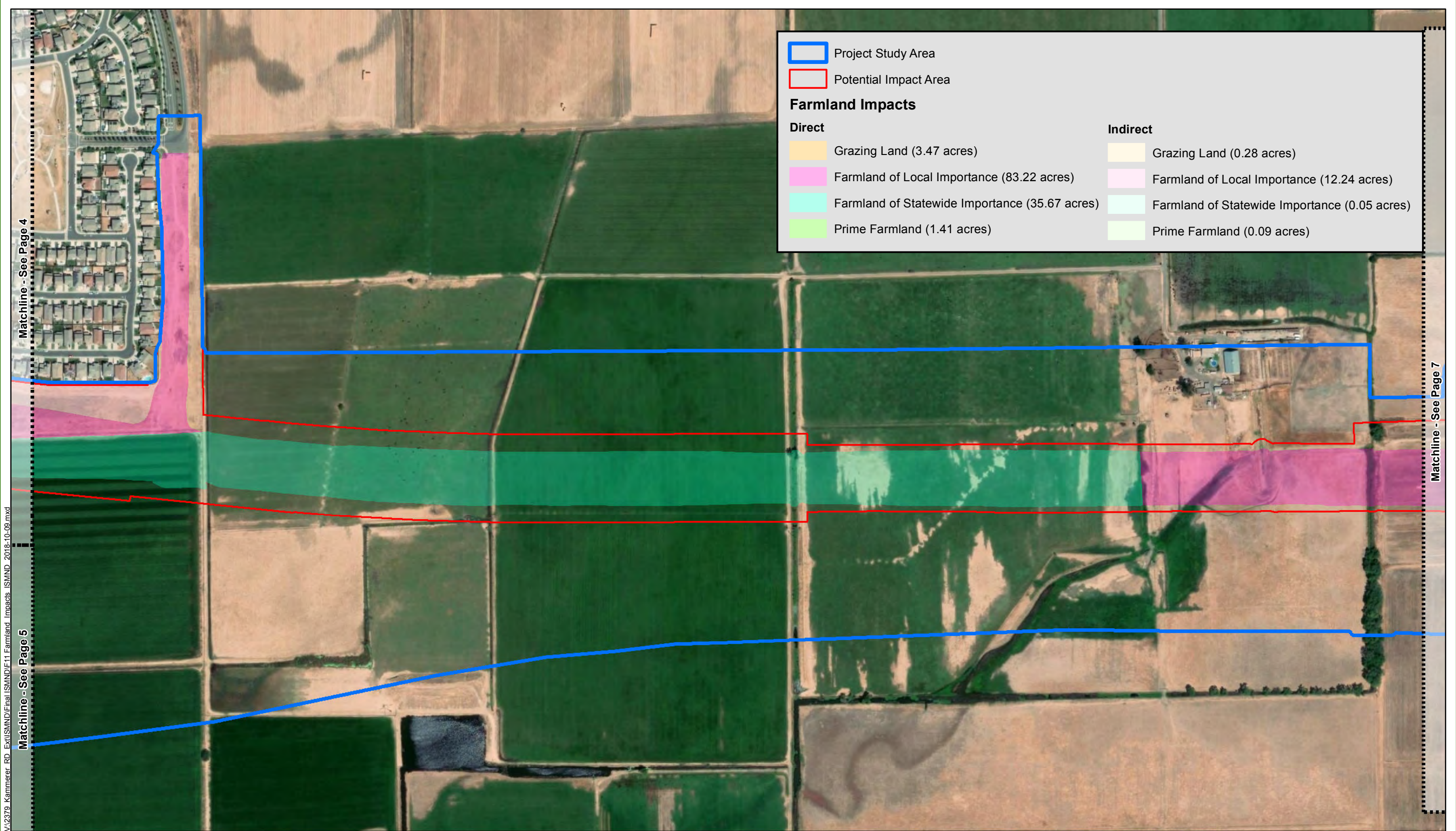


FIGURE 11
Farmland Impacts
Page 5 of 9

Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



	Project Study Area		
	Potential Impact Area		
Farmland Impacts			
Direct		Indirect	
	Grazing Land (3.47 acres)		Grazing Land (0.28 acres)
	Farmland of Local Importance (83.22 acres)		Farmland of Local Importance (12.24 acres)
	Farmland of Statewide Importance (35.67 acres)		Farmland of Statewide Importance (0.05 acres)
	Prime Farmland (1.41 acres)		Prime Farmland (0.09 acres)

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Source: ESRI Maps Online; Dokken Engineering 10/10/2018; Created By: briann

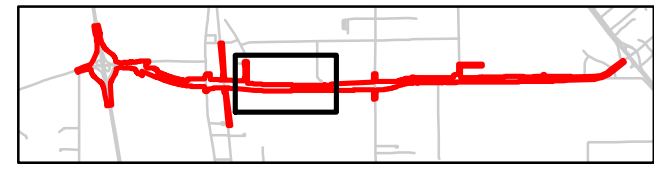
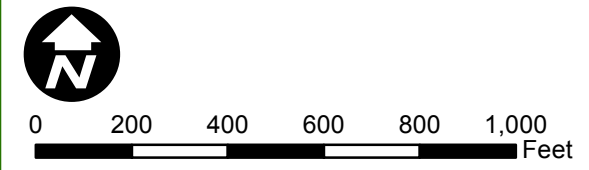










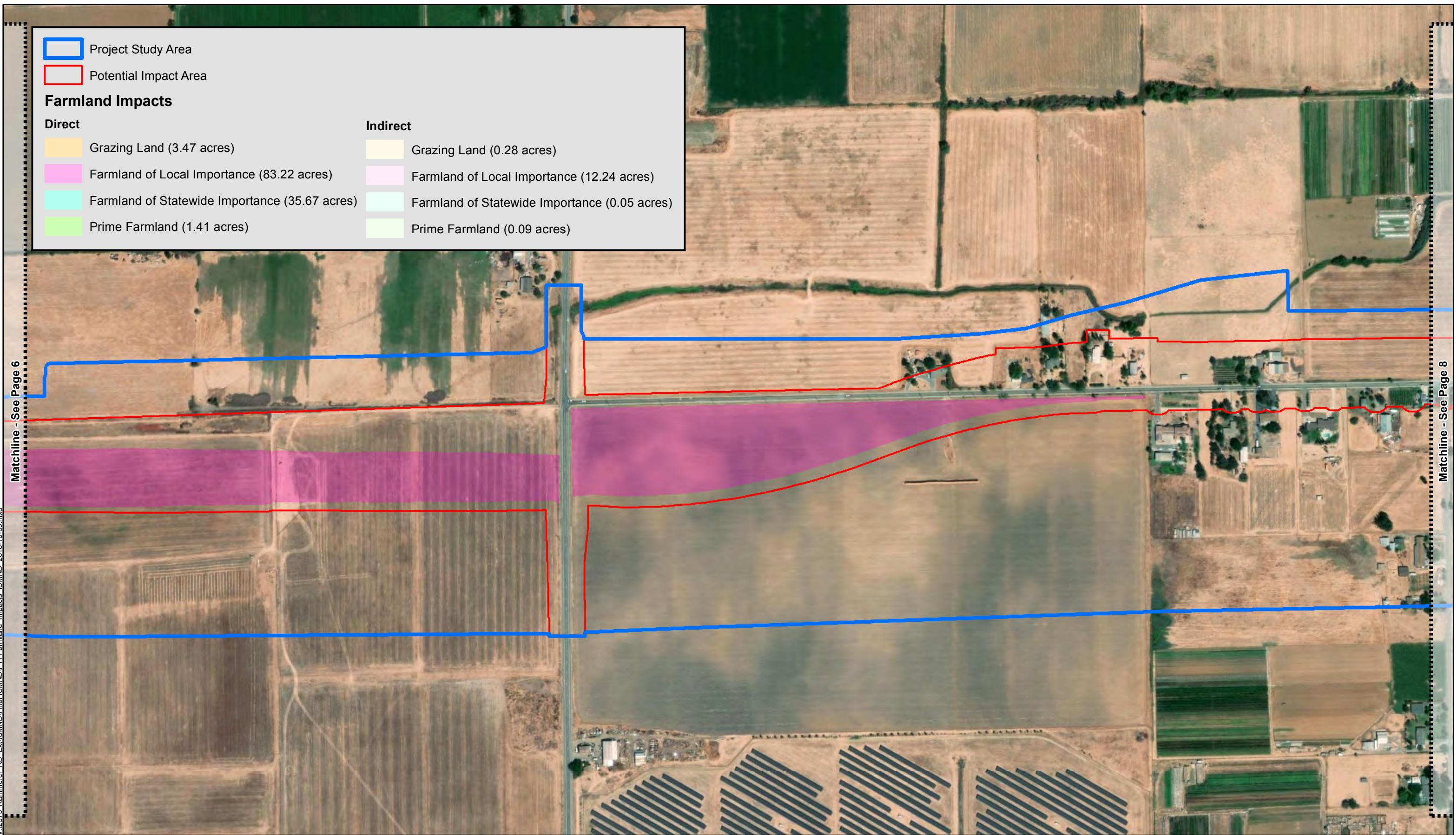


FIGURE 11
Farmland Impacts
Page 6 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

	Project Study Area
	Potential Impact Area
Farmland Impacts	
Direct	
	Grazing Land (3.47 acres)
	Farmland of Local Importance (83.22 acres)
	Farmland of Statewide Importance (35.67 acres)
	Prime Farmland (1.41 acres)
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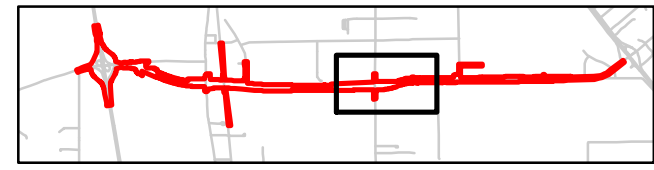
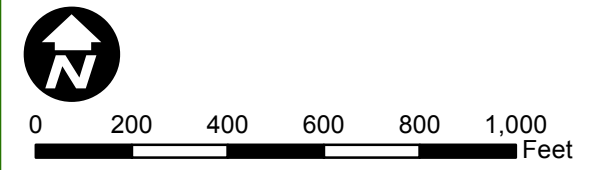
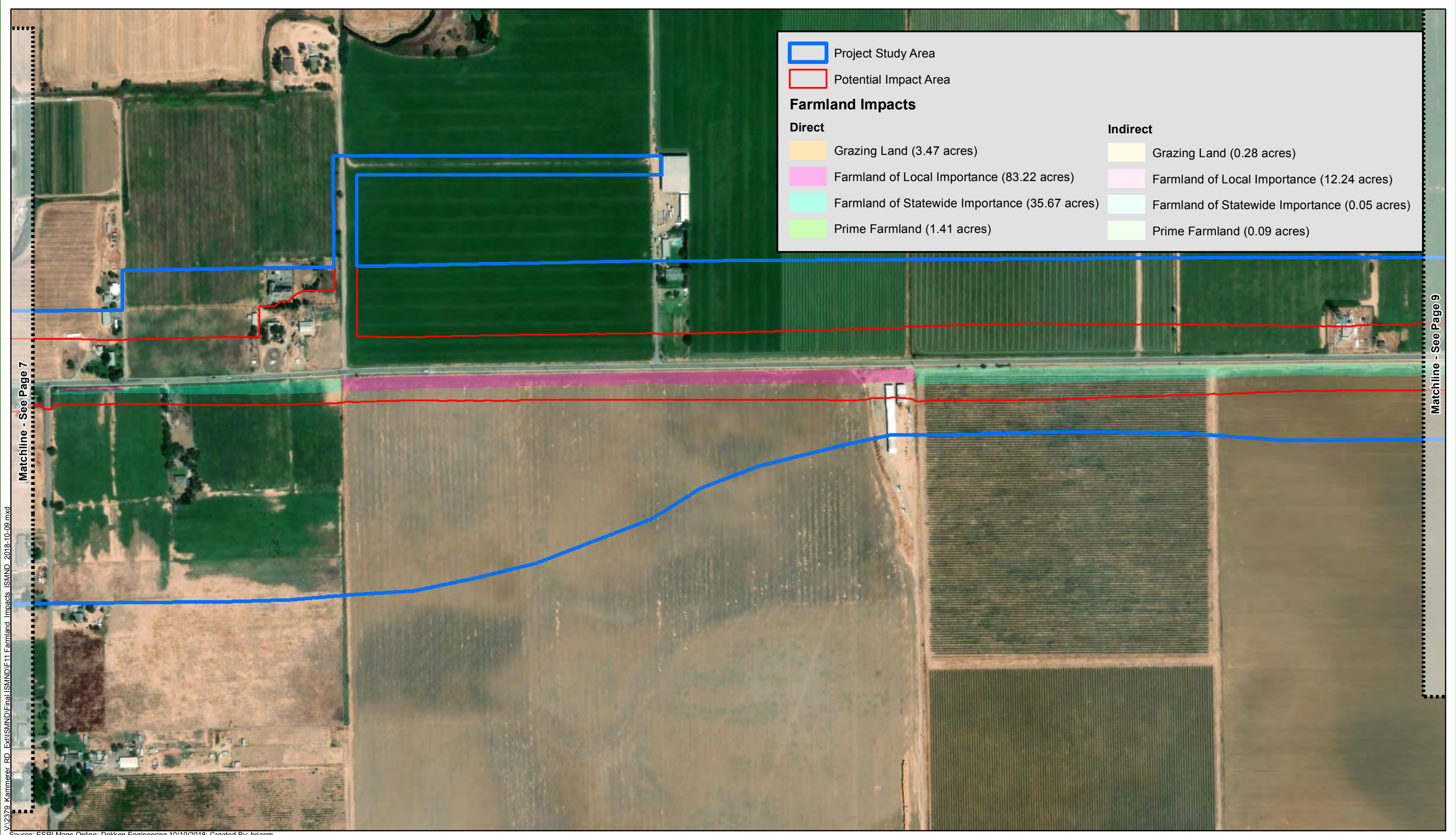


FIGURE 11
Farmland Impacts
Page 7 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



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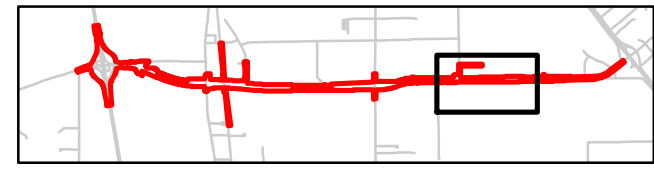
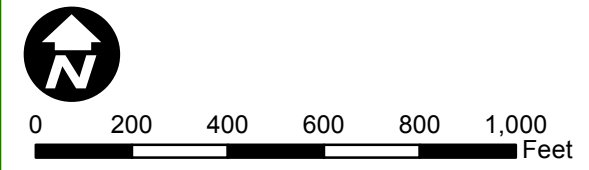










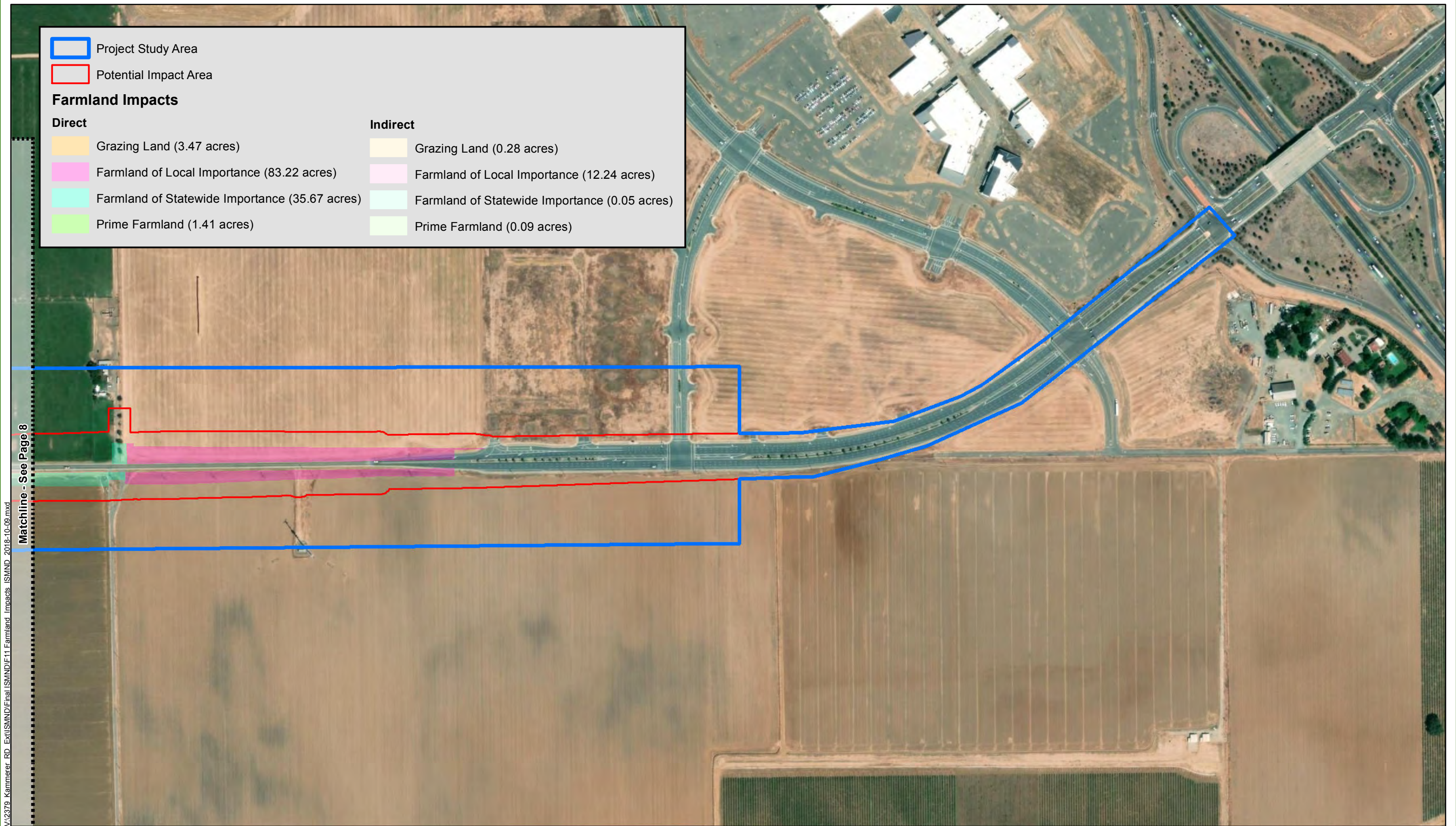


FIGURE 11
Farmland Impacts
Page 8 of 9

Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

	Project Study Area
	Potential Impact Area
Farmland Impacts	
Direct	
	Grazing Land (3.47 acres)
	Farmland of Local Importance (83.22 acres)
	Farmland of Statewide Importance (35.67 acres)
	Prime Farmland (1.41 acres)
Indirect	
	Grazing Land (0.28 acres)
	Farmland of Local Importance (12.24 acres)
	Farmland of Statewide Importance (0.05 acres)
	Prime Farmland (0.09 acres)



Matchline - See Page 8

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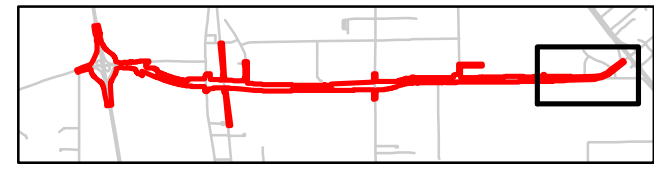
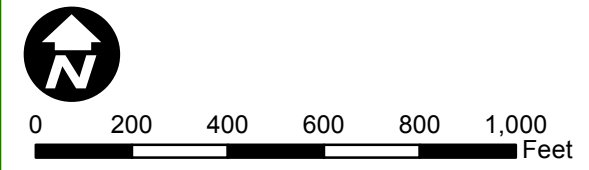


FIGURE 11
Farmland Impacts
Page 9 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

2.3 Air Quality

REGULATORY SETTING

The Federal Clean Air Act (CAA), as amended, is the primary federal law that governs air quality, and the California Clean Air Act is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (CARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are referred to as National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5}), and sulfur dioxide (SO₂). In addition, federal and state standards exist for lead (Pb) and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics). Some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal and State Ambient Air Quality Standards

California and the federal government have established standards for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). The pollutants of greatest concern in the Project area are ozone, PM_{2.5} and PM₁₀. **Table 7** displays state and federal standards for a variety of pollutants.

State Regulations

Responsibility for achieving the California Ambient Air Quality Standards (CAAQS) is placed on the CARB and local air districts, and is to be achieved through district-level air quality management plans that will be incorporated into the State Implementation Plan (SIP). In California, the EPA delegates authority to prepare SIPs to the CARB, which in turn delegates that authority to individual air districts.

CARB established state air quality standards, maintains oversight authority in air quality planning, develops programs for reducing emissions from motor vehicles, develops air emission inventories, collects air quality and meteorological data, and approves SIPs.

The California Clean Air Act (Cal-CAA) of 1967 substantially added to the authority and responsibilities of air districts. The Cal-CAA designates air districts as lead air quality planning agencies, requires them to prepare air quality plans, and grants them authority to implement transportation control measures (TCMs). The California CAA also requires that local and regional air districts expeditiously adopt and prepare an air quality attainment plan if the district violates the CAAQS. These clean air plans are specifically designed to attain these standards and must be designed to achieve an annual 5 percent reduction in district-wide emissions of each nonattainment pollutant or its precursors.

Table 7. Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁸	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5}) ⁸	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ⁹	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹⁰	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹⁰	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹⁰	—	
Lead ^{11,12}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹³	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹¹	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (6/4/13)

Table 7 Continued

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
9. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
10. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
11. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
12. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
13. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (6/4/13)

The Cal-CAA requires state air quality standards to be met as expeditiously as practicable, unlike the federal CAA, which sets precise attainment deadlines. Instead, it establishes increasingly stringent requirements for areas that will require more time to achieve the standards. In addition, the Cal-CAA emphasizes the control of “indirect and area-wide sources” of air pollutant emissions and gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish TCMs.

Local Regulations

Sacramento Metropolitan Air Quality Management District (SMAQMD)

The Project corridor is located within the jurisdiction of the SMAQMD. As previously discussed, under the Cal-CAA, the SMAQMD is required to develop an air quality plan for nonattainment criteria pollutants within the air district. Counties within the Sacramento area (Sacramento, Yolo, and portions of Placer, El Dorado, Solano, and Sutter) have adopted the 2009 Sacramento Metropolitan Area 8-Hour Ozone Attainment Plan. This plan outlines strategies to achieve the health-based ozone standard. The Sacramento region is also in the process of developing a plan to address PM.

The Project is subject to SMAQMD rules and regulations at the time of construction, and may be subject to specific SMAQMD, as well as other rules, as listed below. These rules have been adopted by the SMAQMD to reduce emissions throughout the district. Failure to comply with any applicable district rule would be a violation subject to district enforcement action.

- Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower is required to have a SMAQMD permit or a California Air Resources Board portable equipment registration. Other general types of uses that require a permit include dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.
- Rule 402 (Nuisance): Prohibits the discharge of air containments which cause injury, detriment, nuisance, or annoyance.
- Rule 403 (Fugitive Dust): Regulates operations which periodically may cause fugitive dust.
- Rule 404 (Particulate Matter): Limits the quantity of PM through concentration limits.
- Rule 412 (Stationary Internal Combustion Engines): Limits emissions of NO_x, CO, and nonmethane hydrocarbons from stationary internal combustion engines. (If construction requires engines rated at more than 50 brake horsepower.)
- Rule 417: Wood Burning Appliances. Effective October 26, 2007, this rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

- Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.
- Rule 453 (Cutback and Emulsified Asphalt Paving): Limits emissions of ROGs from the use of cutback and emulsified asphalt paving materials, paving, and maintenance operations.
- Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

Sacramento General Plan

The Sacramento County's General Plan is a set of policies, programs, and maps that form a blueprint for physical development in the unincorporated county. The plan addresses important community issues such as new growth, housing needs, and environmental protection. The following policies are from the Air Quality Element:

- Policy AQ-1:** New development shall be designed to promote pedestrian/bicycle access and circulation to encourage community residents to use alternative modes of transportation to conserve air quality and minimize direct and indirect emission of air contaminants.
- Policy AQ-3:** Buffers and/or other appropriate mitigation shall be established on a project-by-project basis and incorporated during review to provide for protection of sensitive receptors from sources of air pollution or odor. The California Air Resources Board's "Air Quality and Land Use Handbook: A Community Health Perspective", and the AQMD's approved Protocol (Protocol for Evaluating the Location of Sensitive Land uses Adjacent to Major Roadways) shall be utilized when establishing these buffers.
- Policy AQ-4:** Developments which meet or exceed thresholds of significance for ozone precursor pollutants as adopted by the SMAQMD, shall be deemed to have a significant environmental impact. An Air Quality Mitigation Plan shall be submitted to the Sacramento County prior to project approval, subject to review and recommendation as to technical adequacy by the Sacramento Metropolitan Air Quality Management District.
- Policy AQ-10:** Encourage vehicle trip reduction and improved air quality by requiring development projects that exceed the SMAQMD's significance thresholds for operational emissions to provide on-going, cost-effective mechanisms for transportation services that help reduce the demand for existing roadway infrastructure.
- Policy AQ-16:** Prohibit the idling of on-and off-road engines when the vehicle is not moving or when the off-road equipment is not performing work for a period of time greater than five minutes in any one-hour period.
- Policy AQ-19:** Require all feasible reductions in emissions for the operation of construction vehicles and equipment on major land development and roadway construction projects.

Policy AQ-22: Reduce greenhouse gas emissions from County operations as well as private development.

City of Elk Grove General Plan

The City's General Plan identifies specific goals, objectives, and policies regarding natural resources (City of Elk Grove 2009). The plan serves as the overall guiding policy document for land use, development, and environmental quality for the City. The following policies are included in the Conservation and Air Quality Element of the General Plan (as amended):

Policy CAQ-26: It is the policy of the City to minimize pollutant emissions from all City facilities and operations to the extent feasible and consistent with the City's need to provide a high level of public service.

Policy CAQ-28: The City shall emphasize "demand management" strategies which seek to reduce single-occupant vehicle use in order to achieve state and federal air quality plan objectives.

Policy CAQ-30: All new development projects which have the potential to result in substantial air quality impacts shall incorporate design, construction, and/or operational features to result in a reduction in emissions equal to 15 percent compared to an "unmitigated baseline" project. An "unmitigated baseline project" is a development project which is built and/or operated without the implementation of trip-reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.

Policy CAQ-32: As part of the environmental review of projects, the City shall identify the air quality impacts of development proposals to avoid significant adverse impacts and require appropriate mitigation measures, potentially including- in the case of project which may conflict with applicable air quality plans-emission reductions in addition to those required by Policy CAQ-30.

Policy CAQ-33: The City shall require that public and private development projects use low emission vehicles and equipment as part of project construction and operation, unless determined to be infeasible.

AFFECTED ENVIRONMENT

The Project is located in a Mediterranean climate with hot, dry summers and cool, rainy winters. The Project is located in the California Dry Steppe Province ecological subregion, Great Valley Section, and ecological subsection of Hardpan Terraces where the Project elevation ranges between approximately 45 feet above MSL in the west to approximately 5 feet MSL in the east. The average maximum temperature is 73.6 degrees Fahrenheit and the average minimum temperature is 48.1 degrees Fahrenheit. Average total precipitation is 17.93 inches annually (Western Regional Climate Center, 2017). Sacramento County is within State designated nonattainment for ozone (8-hour and 1-hour) and PM₁₀. The Project location is within an attainment or unclassified zone for all other CAAQS criteria pollutants.

The Federal CAA requires the EPA to designate areas as attainment, nonattainment, or unclassified for the National Ambient Air Quality Standards (NAAQS). These designations are similar to their State-level counterparts. Areas that were nonattainment but have recently

achieved attainment are referred to as maintenance areas. **Table 8** provides a summary of the NAAQS and CAAQS attainment status in the vicinity of the Project.

Table 8. NAAQS and CAAQS Attainment Status for Sacramento County

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – 8-Hour	Nonattainment	Nonattainment
Ozone – 1-Hour	Nonattainment	Nonattainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Nonattainment	Attainment
Carbon Monoxide	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified/Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Lead	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified
Sources: SMAQMD 2017		

ENVIRONMENTAL CONSEQUENCES

Operational Impacts

Due to funding availability, construction could begin as early as 2022, and could require approximately 25 months to complete, making the earliest year for operational emissions 2024. The Project would have a less than significant impact regarding criteria pollutants for which the Project region is in non-attainment under state ambient air quality standards.

The Project is included in page 81 of the Project list in MTP 2035. The Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan incorporates the transportation activity data from the MTP 2035. Additionally, the Project is consistent with the Connector JPA Design Guidelines and Functional Guidelines. Implementation of avoidance and minimization measures AQ-1 through AQ-6 would reduce all potential impacts to a less than significant level.

Since the Project is included in the MTP 2035, it has been demonstrated that the Project would not result in an increase of criteria pollutants to a level which would bring the area into non-attainment. CT-EMFAC was utilized to calculate emissions of pollutants for which the project area is in nonattainment. CT-EMFAC is a California-specific project-level analysis tool developed for Caltrans by the University of California, Davis, to model criteria pollutant and CO₂ emissions from on-road mobile sources. The model uses the latest version of the California Mobile Source

Emission Inventory and Emission Factors model to quantify running exhaust and running loss emissions using user-input traffic data, including peak-hour and off-peak-hour VMT data allocated into 5-mph speed bins. Running exhaust emissions are emitted from the vehicle tailpipe while the vehicle is traveling, while running loss emissions are evaporative TOG emissions that occur when hot fuel vapors escape from the fuel system or overwhelm the carbon canister while the vehicle is operating. CT-EMFAC will estimate emission factors and project-level emissions for the following pollutants:

- Criteria pollutants: Ozone precursors (ROG and NO_x), CO, sulfur oxides, PM₁₀, and PM_{2.5}
- Greenhouse gases: CO₂
- Mobile Source Air Toxics: Acrolein, Acetaldehyde, Benzene, 1,3-Butadiene, Diesel particulate matter (DPM), Formaldehyde

The required inputs to CT-EMFAC to calculate emission estimates included the following:

- Geographic area;
- Analysis year;
- Project Truck/Non-truck percentages;
- Road length;
- Volume of vehicles per hour;
- Average Idling Time in minutes per vehicle; and,
- VMT Distribution by Speed Bin

Table 9 gives estimated emissions of ozone precursors and PM₁₀ for existing, future Interim Year No-Build, future Interim Year 2-Lane Build Alternative, future Design Year No-Build, and future Design Year 4-Lane Build Alternative conditions for the entire project. The inputs and results used for CT-EMFAC can be found in Appendix C. Pollutant concentrations are anticipated to be less than significant because the amount of traffic on Kammerer Road would be less than 125,000 average daily traffic (ADT). The U.S. EPA considers projects with substantial amounts of diesel traffic (125,000 ADT total with 8% truck traffic) to be projects of air quality concern, where the dedicated localized “hot-spot” analysis is used to determine impacts. This Project is well below those numbers and localized pollutant concentrations are not anticipated to be significant. Due to these traffic volumes, no diesel particulate matter hot spot analysis is required for localized impacts. While the Project would result in an increase in traffic volumes within the network through the addition of lanes, the overall LOS would be improved.

Table 9. Estimated Emissions of Pollutants in Nonattainment

Criteria Pollutant or Precursor	Existing – Year 2017	No-Project – Year 2034	2 – Lane Facility – Year 2034	No-Project – Year 2044	4 – Lane Facility – Year 2044
NO _x (ozone precursor)	0.020 MT*	0.006 MT	0.007 MT	0.005 MT	0.007 MT
ROG (ozone precursor)	0.002 MT	0.002 MT	0.002 MT	0.002 MT	0.003 MT
PM ₁₀	0.002 MT	0.003 MT	0.004 MT	0.004 MT	0.005 MT
*MT – Metric Ton					

Table 10 summarizes the ADT along Kammerer Road for existing conditions, interim year conditions, and design year after Project build and **Table 11** details why the Project does not meet the definition of a Project of Air Quality Concern (POAQC).

Table 10. Average Daily Traffic Volume

Average Daily Traffic										
Kammerer Road Segment	Existing Conditions		Interim Year No Build Conditions		Interim Year + 2-Lane Facility		Design Year No Build Conditions		Design Year + 4-Lane Facility	
	Total	Trucks	Total	Trucks	Total	Trucks	Total	Trucks	Total	Trucks
SR-99 to Promenade Pkwy	10,600	318	34,870	1,046	38,550	1,542	48,350	1,451	51,600	2,064
Promenade Pkwy to Lent Ranch Pkwy	6,980	209	17,050	512	22,830	913	22,640	679	28,960	1,158
Lent Ranch Pkwy to Lotz Pkwy	6,980	209	17,680	530	23,760	950	23,610	708	30,400	1,216
Lotz Pkwy to Collector 1	6,980	209	13,450	404	20,660	826	17,030	511	25,580	1,023
Collector 1 to Big Horn Blvd	6,980	209	11,130	334	19,270	771	13,430	403	23,300	932
Big Horn Blvd to Collector 2	6,980	209	8,830	265	19,310	772	9,850	296	23,350	934
Collector 2 to Bruceville Rd	6,980	209	9,160	275	19,810	792	10,370	311	24,130	965
Bruceville Rd to Willard Pkwy	Does not exist		Does not exist		16,710	668	Does not exist		21,220	849
Willard Pkwy to Franklin Blvd	Does not exist		Does not exist		21,510	860	Does not exist		25,450	1,018
Franklin Blvd to Hood Franklin Rd	Does not exist		Does not exist		23,420	937	Does not exist		26,920	1,077
Hood Franklin Rd to I-5	7,870	236	9,170	275	27,680	1,107	9,880	296	31,520	1,261
Source: DKS 2018										

Table 11. Projects of Air Quality Concern Considerations

EPA Definition of POAQC	Proposed Project
(i) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;	The proposed project would replace an existing portion of Kammerer Road with a four-lane thoroughfare, construct a new four-lane expressway section to I-5, and implement railroad grade separation and interchange improvements as discussed below. Based on the average daily traffic (ADT) volumes and heavy truck percentages provided by DKS Associates in October 2018, construction of the proposed project would not result in increased daily truck trips under both existing and future conditions on affected roadways. The highest ADT volume that would occur under Future + Project conditions is 51,600 ADT. Therefore, no traffic volume increase exceeding the 125,000 vehicle criteria for a POAQC would occur. In addition, the highest truck average daily trips under Future + Project conditions is estimated to be 2,064 daily truck trips. Therefore, the total truck average daily trips would remain below the 10,000 vehicle criteria for POAQC.
(ii) Projects affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;	The proposed project does not affect intersections that are at level of service D, E, or F with a significant number of diesel vehicles.
(iii) New bus and rail terminals and transfer points than have a significant number of diesel vehicles congregating at a single location;	The project does not include new bus or rail terminals and transfer points.
(iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and	The project does not include expanded bus or rail terminals and transfer points.
(v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM ₁₀ or PM _{2.5} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.	The project is not in, nor will it affect, a location of violation or possible violation.
<i>Source: DKS 2018</i>	

Construction Impacts

Construction air quality impacts are generally attributable to dust generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture.

Adverse effects of construction activities include increased dust-fall and locally elevated levels of total suspended particulate. Dust-fall can be a nuisance to neighboring properties or previously completed developments surrounding or within the project area and may require frequent washing during the construction period. Further, asphalt-paving materials used during construction will present temporary, minor sources of hydrocarbons that are precursors of ozone. Cumulatively, construction activities that could increase dust-fall and elevated levels of suspended particles would consist of grubbing/land clearing, grading and excavation, drainage and utilities works, and paving activities.

The Project construction is anticipated to take 25 months and may consist of phased construction activities due to funding. The Project’s construction emissions were estimated using the Roadway Construction Emissions Model (RCEM) by the SMAQMD (SMAQMD 2014), which is the accepted model for all roadway projects throughout California. **Table 12** summarizes the SMAQMD thresholds of significance for construction emissions, and the Project’s estimated emissions using the SMAQMD’s Roadway Construction Emissions Model. There is no construction threshold of significance for ROG. According to SMAQMD’s emissions model technology, the Project would not exceed any local thresholds of significance related to construction emissions during construction of the 2-lane facility in the interim phase or of the 4-lane facility at full buildout.

Table 12. Maximum Daily Construction Emissions and Local Thresholds for the Project

Emissions	Project Maximum Daily Construction Emissions		SMAQMD Air Quality Significance Thresholds
	2-Lane facility (Interim Phase)	4-Lane facility (Full Build)	
NO _x	81.19 lbs/day	83.38 lbs/day	85 lbs/day
ROG	7.13 lbs/day	7.22 lbs/day	NONE
PM ₁₀	14.07 lbs/day 3.20 tons/year	14.22 lbs/day 3.22 tons/year	Zero (0). If all feasible BACT/BMPs are applied, then 80 pounds/day and 14.6 tons/year
PM _{2.5}	5.39 lbs/day 1.19 tons/year	5.45 lbs/day 1.20 tons/year	Zero (0). If all feasible BACT/BMPs are applied, then 82 pounds/day and 15 tons/year

*Notes: BACT – Best Available Control Technology
Source: SMAQMD 2016*

Construction CO₂ Emissions

Construction CO₂ emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications, and by implementing better traffic management during construction phases.

SMAQMD has a threshold of significance of 1,100 metric tons per year for the project's construction related GHG emissions. For linear construction projects such as construction of a new roadway, road widening, roadway overpass, levees, or pipelines, SMAQMD recommends the use of the most recent version of the RCEM to estimate the total metric tons of CO₂e. For construction of the 2-lane facility in the interim phase, the RCEM found CO₂e emissions will be 4,342 metric tons and 4,730 metric tons for the full 4-lane facility (see Appendix C). The Project's construction is anticipated to last for 25 months for each phase, approximately two years, which results in estimated annual CO₂e emissions to be at 2,171 metric tons per year for the 2-lane facility in the interim phase and 2,365 metric tons per year for the full 4-lane facility. Construction of either facility would exceed the SMAQMD threshold of significance for construction emissions of CO₂e. **Table 13** shows Project CO₂e emissions produced during construction of the proposed Project.

Table 13. Construction CO₂e Emissions

Project Phase	CO ₂ e (lbs/day)	
	2-Lane facility (Interim Phase)	4-Lane facility (Full Build)
Grubbing/Land Clearing	28,054	26,461
Grading/Excavation	20,467	22,800
Drainage/Utilities/Sub-Grade	10,787	7,944
Paving	3,579	12,731
Maximum (pounds/day)	28,054	26,461
Total (tons/construction project)	4,342	4,730
Total (tons/year)	2,171	2,365
Results based on Road Construction Emissions Model, Version 8.1.0. Full results are shown in Appendix C.		

According to the SMAQMD CEQA Guide (SMAQMD 2016), if the threshold is exceeded, then the Project may have a cumulatively considerable contribution to a significant cumulative environmental impact, and all feasible mitigation would be required. The Connector JPA PEIR found that operation of the entire Capital SouthEast Connector Project would contribute to an increase of greenhouse gas emissions above all published significance criteria. Therefore, no new significant and unavoidable impacts under greenhouse gas emissions are identified outside of what was previously identified in the Connector JPA PEIR.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. Implementation of avoidance, minimization and mitigation measures listed in the Greenhouse Gases Section, **CC-1** through **CC-4**, would reduce any impacts to a less than significant level.

Naturally Occurring Asbestos

Based on review of the map, A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos (California Department of Conservation

2000), ultramafic rock occurrence is not mapped in the area of the County where the Project is located.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, PEIR measures AQ-1, AQ-2, AQ-3, AQ-4, AQ-5, and AQ-6 have been incorporated into the Project to best address avoidance and minimization efforts for air quality impacts. With the implementation of the following measures Project impacts to air quality would be reduced to a less than significant level:

AQ-1: Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust, where feasible and applicable to the Project.

The implementing agency will require, as a standard or specification of their contract, the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust. Although the following measures are outlined in the SMAQMD's CEQA guidelines, they are required for the entirety of the construction area. The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

- Water all exposed surfaces two times daily. Exposed surfaces include (but are not limited to) soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- All roadway, driveway, sidewalk, and parking lot paving should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

Enhanced Control Measures – Disturbance Areas

- Water exposed soil with adequate frequency for continued moist soil. However, do not overwater to the extent that sediment flows off the site.
- Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 mph.
- Install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of construction areas.
- Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible. Water appropriately until vegetation is established.

Enhanced Control Measures – Unpaved Roads (Entrained Road Dust)

- Install wheel washers for all exiting trucks, or wash off all trucks and "equipment leaving the site.
- Treat site accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the District shall also be visible to ensure compliance.

Additional Control Measures – Off-Site Mitigation Fees Payable to the SMAQMD

- In the event that the SMAQMD basic and enhanced construction mitigation measures are not sufficient to reduce NO_x emissions below the SMAQMD's construction NO_x threshold, the remaining NO_x emissions in excess of the SMAQMD's threshold would be offset by the JPA through a fee paid to the SMAQMD who will fund cost-effective Projects that reduce NO_x, in the Project area, to the extent possible, and otherwise within the Sacramento air basin. The fee will be calculated using the SMAQMD's current rate of NO_x per ton at the time of construction in addition to SMAQMD administration fees. Currently, the SMAQMD's off-site mitigation fee is \$30,000 per ton of NO_x, in addition to a 5% administration fee.

AQ-2: Implement SMAQMD Basic Construction Emission Control Practices to Reduce NO_x

The implementing agency will require, as a standard or specification of their contract, that the construction contractor(s) implement basic control measures to reduce NO_x emissions from diesel-powered construction equipment. Although the following measures are outlined in SMAQMD's CEQA guidelines, they will be required by the SMAQMD for the entirety of the construction area. The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

- Minimize idling time either by shutting equipment off when not in use or "limiting the time of idling to 3 minutes (5 minutes required by 13 CCR 2449[d] [3], 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated. The Connector JPA will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

AQ-3: Implement SMAQMD Enhanced Construction Emission Control Practices to Reduce NO_x

The implementing agency will require, as a standard or specification of their contract, that the construction contractor(s) implement enhanced control measures to reduce NO_x emissions from diesel-powered construction equipment. The following measures are

outlined in SMAQMD's CEQA guidelines and are required for the entirety of the construction area. The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

- The project representative shall submit to the lead agency and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The project representative shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. This information shall be submitted at least 3 business days prior to the use of subject heavy-duty off-road equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.
- Provide a plan for approval by the SMAQMD demonstrating that the heavy-duty (50-horsepower or more) off-road vehicles to be used in the construction Project, including owned, leased, and subcontractor vehicles, will achieve a Project-wide fleet-average 20% NOx reduction and 45% PM exhaust reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, alternative fuels, engine-retrofit technology, after-treatment products, or other options as they become available.
- Ensure that emissions from all off-road diesel-powered equipment used on the Project site do not exceed 40% opacity for more than 3 minutes in any 1 hour. Any equipment found to exceed 40% opacity (or Ringelmann 2.03) will be repaired immediately. Non-compliant equipment will be documented and a summary provided periodically to the lead agency and air district. A visual survey of all in-operation equipment will be made at least periodically by the proponent agency(s), and a periodic summary of the visual survey results will be submitted throughout the duration of the proposed Project, except that the summary will not be required for any 30-day period in which no construction activity occurs. The summary will include the quantity and type of vehicles surveyed, as well as the dates of each survey. The air districts or other officials may conduct periodic site inspections to determine compliance. Nothing in this measure will supersede other air district or state rules or regulations.

The Connector JPA will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

AQ-4: Implement Additional Exposure Reduction Strategies to Further Minimize Potential Health Risks.

The implementing agency will implement strategies to reduce the potential for sensitive receptors along the Project corridor to be exposed to diesel particulate matter (DPM). Potential strategies include (but are not limited to) creating a buffer zone of at least 50 feet between the roadway and sensitive land uses (e.g., residences, parks, churches, and medical facilities), as well as planting additional vegetation along the Project corridor (A laboratory study indicates that all forms of vegetation are effective in removing PM₁₀, although the greatest removal rates are achieved with redwood and deodar cedar – [Sacramento Metropolitan Air Quality Management District 2010]). These strategies

should be focused in areas where sensitive receptors are directly adjacent to the roadway. Selection of these species should be maximized to help reduce PM₁₀ to the extent feasible.

- A landscape plan shall include a vegetation barrier consistent with the Sacramento Metropolitan Air Quality Management District's Landscaping Guidance for Improving Air Quality near Roadways. The landscape plan shall include individual plant locations, species, approved alternate species for substitutions, plant material size and plant material source. Landscape plans shall be approved by the implementing agency prior to site preparation and installation activities.

AQ-5: Conduct a Geological Investigation for Naturally Occurring Asbestos and Implement an Asbestos Dust Mitigation Plan if Naturally Occurring Asbestos Is Found in the Project Area.

The implementing agency will conduct a site-specific geological investigation for all construction areas with known potential to contain NOA. According to the California Geological Survey (CGS), this includes all portions of the construction area east of Folsom (California Geological Survey 2006). If NOA is identified in the project area, the implementing agency will submit an asbestos dust mitigation plan to the SMAQMD pursuant to the State of California's Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. This plan shall be prepared prior to ground breaking by the implementing agency.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to air quality. During analysis for this tiered Project, it was determined through use of CT-EMFAC and RCEM that operational and construction emissions from the Project would remain below significance thresholds but may contribute to air quality impacts of the region. With the implementation of mitigation measures listed above, impacts would be reduced to a less than significant level and no new significant and unavoidable impacts to air quality would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to air quality.

2.4 Biological Resources

REGULATORY SETTING

This section describes the Federal, State, and local plans, policies, and laws that are relevant to biological resources within the Project area. Applicable Federal permits and approvals that will be required before construction of the Project are provided in Chapter 5.

Federal Regulations

National Environmental Policy Act

NEPA provides an interdisciplinary framework for environmental planning by Federal agencies and contains action-forcing procedures to ensure that Federal agency decision makers take environmental factors into account. NEPA applies whenever a Federal agency proposes an action, grants a permit, or agrees to fund or otherwise authorize any other entity to undertake an action that could possibly affect environmental resources. Caltrans, under delegation from the FHWA, is the NEPA lead agency for this Project.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 (16 U.S.C. section 1531 et seq.) provides for the conservation of endangered and threatened species listed pursuant to Section 4 of the Act (16 U.S.C. section 1533) and the ecosystems upon which they depend. These species and resources have been identified by USFWS or National Marine Fisheries Service (NMFS).

Clean Water Act

The Clean Water Act (CWA) was enacted as an amendment to the Federal Water Pollutant Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the U.S. CWA serves as the primary Federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. CWA empowers the U.S. Environmental Protection Agency (U.S. EPA) to set national water quality standards and effluent limitations, and includes programs addressing both point-source and non-point-source pollution. Point-source pollution originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or construction site. Non-point-source pollution originates over a broader area and includes urban contaminants in storm water runoff and sediment loading from upstream areas. CWA operates on the principle that all discharges into the nation's waters are unlawful unless they are specifically authorized by a permit; permit review is CWA's primary regulatory tool. This Project will require a CWA Section 402 National Pollutant Discharge Elimination System (NPDES) Permit regulated by the EPA.

The United States Army Corps of Engineers (USACE) regulates discharges of dredged or fill material into waters of the U. S. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations).

The Regional Water Quality Control Board (RWQCB) has jurisdiction under Section 401 of the CWA and regulates any activity which may result in a discharge to surface waters. Typically, the

areas subject to jurisdiction of the RWQCB coincide with those of USACE (i.e., waters of the U.S. including any wetlands). The RWQCB also asserts authority over “waters of the State” under waste discharge requirements pursuant to the Porter-Cologne Water Quality Control Act.

Executive Order 13112: Prevention and Control of Invasive Species

Executive Order (E.O.) 13112 (signed February 3, 1999) directs all Federal agencies to prevent and control introductions of invasive species in a cost-effective and environmentally sound manner. The EO and directives from the FHWA require consideration of invasive species in NEPA analyses, including their identification and distribution, their potential impacts, and measures to prevent or eradicate them.

Executive Order 13186: Migratory Bird Treaty Act

E.O. 13186 (signed January 10, 2001) directs each Federal agency taking actions that could adversely affect migratory bird populations to work with USFWS to develop a Memorandum of Understanding that will promote the conservation of migratory bird populations. Protocols developed under the Memorandum of Understanding will include the following agency responsibilities:

- Avoid and minimize, to the maximum extent practicable, adverse impacts on migratory bird resources when conducting agency actions;
- Restore and enhance habitat of migratory birds, as practicable; and
- Prevent or abate the pollution or detrimental alteration of the environment for the benefit of migratory birds, as practicable.

The E.O. is designed to assist Federal agencies in their efforts to comply with the Migratory Bird Treaty Act (MBTA) (50 Code of Federal Regulations [CFR] 10 and 21) and does not constitute any legal authorization to take migratory birds. Take is defined under the MBTA as “the action of or attempt to pursue, hunt, shoot, capture, collect, or kill” (50 CFR 10.12) and includes intentional take (i.e., take that is the purpose of the activity in question) and unintentional take (i.e., take that results from, but is not the purpose of, the activity in question).

State Regulations

California Environmental Quality Act

CEQA is intended to provide a procedure to inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities and to work to reduce these negative environmental impacts. The Connector JPA is the CEQA lead agency for this Project.

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game (CFG) Code Section 2050 et seq.) requires the California Department of Fish and Wildlife (CDFW) to establish a list of endangered and threatened species (Section 2070) and to prohibit the incidental taking of any such listed species except as allowed by the Act (Sections 2080-2089). In addition, CESA prohibits take of candidate species (under consideration for listing).

CESA also requires the CDFW to comply with CEQA (Pub. Resources Code Section 21000 et seq.) when evaluating incidental take permit applications (CFG Code Section 2081(b) and

California Code Regulations, Title 14, section 783.0 et seq.), and the potential impacts the project or activity for which the application was submitted may have on the environment. CDFW's CEQA obligations include consultation with other public agencies which have jurisdiction over the project or activity [California Code Regulations, Title 14, Section 783.5(d)(3)]. CDFW cannot issue an incidental take permit if issuance would jeopardize the continued existence of the species [CFG Code Section 2081(c); California Code Regulations, Title 14, Section 783.4(b)].

Section 1602: Streambed Alteration Agreement (SAA)

Under CFG Code 1602, public agencies are required to notify CDFW before undertaking any project that will divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occurs during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resources. These modifications are formalized in a SAA that becomes part of the plans, specifications, and bid documents for the project.

Section 3503 and 3503.5: Bird and Raptors

CFG Code Section 3503 prohibits the destruction of bird nests and Section 3503.5 prohibits the killing of raptor species and destruction of raptor nests. Trees and shrubs are present in and adjacent to the study area and could contain nesting sites.

Section 3513: Migratory Birds

CFG Code Section 3513 prohibits the take or possession of any migratory non-game bird as designated in the MBTA or any part of such migratory non-game bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Local Regulations

Capital SouthEast Connector Project Program Environmental Impact Report

The Project is a component of the larger Capital SouthEast Connector. The Connector JPA PEIR was completed for the larger project. All biological resource avoidance, minimization, and mitigation measures from the final Connector JPA PEIR that pertain to this Project, will be adhered to.

South Sacramento Habitat Conservation Plan

The Project occurs along the boundary of the Urban Development Area (UDA) and Preserve Planning Unit 6 of the South Sacramento Habitat Conservation Plan (SSHCP). The SSHCP Plan Area is functionally divided into two components: inside and outside of the UDA. To assist in development of the SSHCP Conservation Strategy, the Plan Area was further divided into eight Preserve Planning Units that encompass areas where important SSHCP Covered Species resources are present, and where habitat preservation would be planned. The Plan Area excludes the northern portion of Sacramento County, the northern portions of the City of Rancho Cordova, the City of Sacramento, the City of Elk Grove, the City of Folsom, the sovereign lands of the Miwok Tribe, and the Sacramento County community of Rancho Murrieta. The Final SSHCP is was circulated in February 2018 and approved by the Connector JPA, Sacramento County, City of Rancho Cordova, and the City of Galt. Final plan documents are available at www.southsachcp.com. The SSHCP provides a regional approach to balancing development against conservation and protection of habitat, open space, and agricultural lands. It also provides

comprehensive compliance with federal and state endangered species laws, standardizes 28 Covered Species, and protects vernal pool, wetland, and stream habitats with mitigation/compensation measures for a streamlined regulatory process. To mitigate take of Covered Species, the SSHCP will protect and manage desired habitat within the Preserve System (Sacramento County et. al 2018).

The Connector JPA is a Plan Partner Agency of the SSHCP and the entire Project will be covered under the SSHCP.

Sacramento County General Plan

The County General Plan includes several policies that have been developed to protect sensitive biological resources. These policies were developed to meet the County's goals and objectives in protecting sensitive biological resources within the County.

The County General Plan addresses the need to provide a framework for conservation of open spaces while identifying areas that will likely be developed as the Sacramento urban area expands. The Open Space Element states that "maintaining intact habitat, productive soils, mineral resource availability as open space is essential to resource conservation, and includes both rural and urban open space, both of which provide protections for sensitive plant and wildlife species."

The Conservation Element of the County General Plan, establishes goals and objectives for the protection, enhancement, and restoration of sensitive biological resources in the County. Policies CO-58 through CO-149 of the Conservation Element, and their associated implementation measures, apply to sensitive biological resources and are intended for the protection of sensitive plant and wildlife species, sensitive wetland, aquatic, and terrestrial habitats including landmark, heritage, and urban trees.

Sacramento County Tree Preservation and Protection Code

Chapter 19.12 of the County Municipal Code, Tree Preservation and Protection, strives to promote the health, safety, and general welfare, to preserve and protect significant historical heritage values, to enhance the beauty of the Sacramento County, and to complement and strengthen zoning, subdivision and land use standards and regulations, while at the same time recognizing individual rights to develop private property by preserving all trees possible through its development review process. The County Municipal Code protects any living native oak tree (protected tree) having 6 inches or more in diameter measured 4.5 feet aboveground, or a multi-trunked native oak tree having an aggregate diameter of 10 inches or more measured at 4.5 feet aboveground.

No person shall trench, grade, or fill within the dripline of any protected tree or destroy, kill or remove any protected tree as defined, in the designated urban area of the unincorporated area of the County, on any property, public or private, without a tree permit, or unless authorized as a condition of a discretionary project approval by the Board of Supervisors, County Planning Commission, Zoning Board of Appeals, the Zoning Administrator or the Subdivision Review Committee. An application is required in order to cut down, destroy, or remove any protected tree. The application shall be submitted to the approving body not less than 10 days prior to the time desired to physically remove the tree.

Sacramento County Swainson's Hawk Ordinance

Chapter 16.130 of the County Municipal Code requires that all projects mitigate for impacts to Swainson's hawk foraging habitat. The Swainson's hawk ordinance provides several options for mitigation. The Swainson's Hawk Mitigation Program, amended by the Board of Supervisors December 2009, provides voluntary means for mitigation of impacts to foraging habitat.

City of Elk Grove General Plan

The City General Plan (as amended) recognizes that lands in and around the City provide habitat to many native plant and animal species as well as open space and agricultural uses. The Conservation and Air Quality Element provides policies and programs intended to reduce impacts to plants and animals. The General Plan Policy CAQ-9 recognizes the value of vernal pools and wetland, and establishes a no net loss policy for these resources. Policy CAQ-11 aims to provide habitat for sensitive plant and animal species, and Policy CAQ-10 specifically addresses the adoption of a habitat conservation plan for rare, threatened and endangered species. Policies CAQ-17 through CAQ-24 provide protections for natural drainage and stream corridors along with their associated vegetation and wildlife through preservation, buffers and design standards.

City of Elk Grove Tree Preservation and Protection Code

Chapter 19.12 of the City Municipal Code, Tree Preservation and Protection, strives to protect and preserve trees of local importance, including coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), oracle oak (*Quercus moreha*), California sycamore (*Platanus racemosa*), and black walnut (*Juglans hindsii*), with a single trunk 6 inches diameter at breast height (dbh) or greater or a multi-trunk with a combined dbh of 6 inches or greater. Chapter 19.12 requires mitigation for the removal of trees of local importance with dimensions described above; trees that have been selected for preservation; all portions of adjacent off-site native trees that have driplines that extend into the project area; and all off-site native trees that may be impacted by utility installation and/or improvements associated with the project. Current policies require that every inch lost will be mitigated by an inch planted or equivalent credit obtained from a tree mitigation bank.

City of Elk Grove Swainson's Hawk Code

Chapter 16.130 of the City Municipal Code, Swainson's Hawk Impact Mitigation Fees, requires mitigation for the loss of Swainson's hawk habitat at a 1:1 ratio. Mitigation can be achieved through the payment of a fee, which is used to fund the City's Swainson's hawk habitat restoration program. Other options for achieving mitigation through the code include the direct transfer to the City of a Swainson's hawk habitat conservation easement along with an easement monitoring endowment or the purchase of credits at a CDFW-approved conservation bank. The code requires that a site must be surveyed to determine whether it is suitable Swainson's hawk foraging habitat.

2.4.1 Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife migration corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as Critical Habitat under the Federal Endangered Species Act (FESA) are discussed in Section 2.4.5 of this document. Wetlands and other waters are also discussed in Section 2.4.2.

AFFECTED ENVIRONMENT

The information in this section is based on information provided in the Natural Environment Study (NES) (MBI 2016), the NES Revalidation (Dokken Engineering 2018), and the wetland delineation (PMC 2014) (reports bound separately).

Biological Study Area

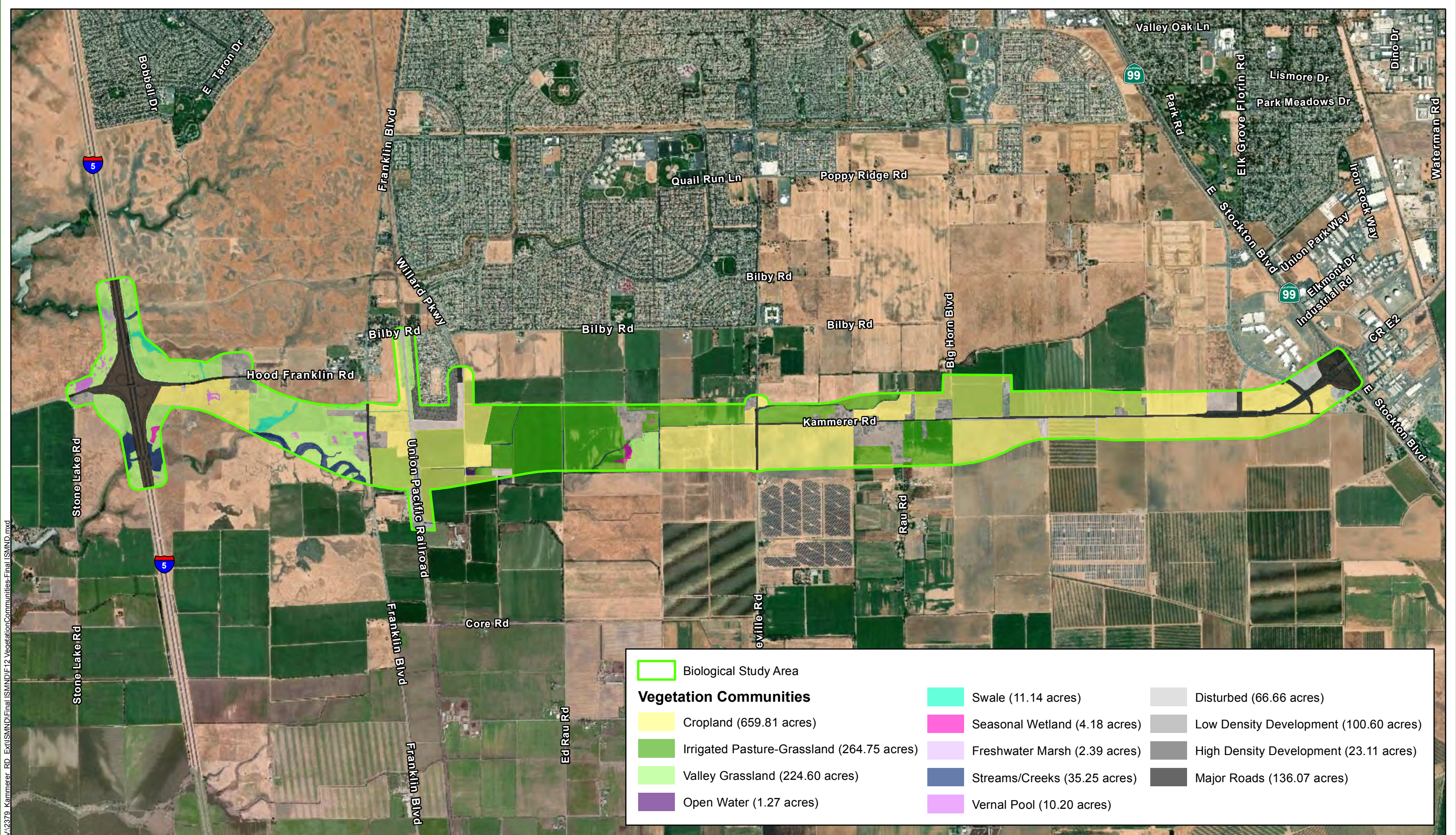
A Biological Study Area (BSA) was established with a 250-foot buffer around the Project area. In accordance with the Biological Opinion prepared by USFWS, a 250-foot buffer around the Project area was used to assess indirect project effects to any vernal pool complexes.

Vegetation Communities

Vegetative communities are assemblages of plant species that occur in the same area and are defined by species composition and relative abundance. Vegetation communities were identified using current literature and aerial imagery and verified during biological surveys. The BSA is a mix of urban and natural communities (**Figure 12**). Each community is described below and is based on descriptions obtained from the CDFW's A Guide to Wildlife Habitats of California (CDFW 2017a) and the SSHCP which was circulated in February 2018.

Valley Grassland

Valley grassland is found throughout the Project area and makes up the majority of the Project area west of Franklin Boulevard. The dominant species found in the valley grassland community include invasive species such as Italian ryegrass (*Lolium multiflorum*), ripgut brome (*Bromus diandrus*), Medusa head (*Taeniatherum caputmedusae*), yellow star-thistle (*Centaurea solstitialis*), and wild oat (*Avena fatua*). Additional species include Mediterranean barley (*Hordeum marinum*), foxtail barley (*Hordeum murinum*), Bermuda grass (*Cynodon dactylon*), and soft-chess brome (*Bromus hordeaceus*). Common forbs observed include mustard (*Brassica* spp.), filarees (*Erodium* spp.), vetch (*Vicia* sp.), field bindweed (*Convolvulus arvensis*), dove weed (*Croton setigerus*), Italian thistle (*Carduus pycnocephalus*), and dove's-foot geranium (*Geranium molle*).



	Biological Study Area		Swale (11.14 acres)		Disturbed (66.66 acres)
	Cropland (659.81 acres)		Seasonal Wetland (4.18 acres)		Low Density Development (100.60 acres)
	Irrigated Pasture-Grassland (264.75 acres)		Freshwater Marsh (2.39 acres)		High Density Development (23.11 acres)
	Valley Grassland (224.60 acres)		Streams/Creeks (35.25 acres)		Major Roads (136.07 acres)
	Open Water (1.27 acres)		Vernal Pool (10.20 acres)		

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Source: ESRI Maps Online; Dokken Engineering 12/3/2018; Created By: scotts

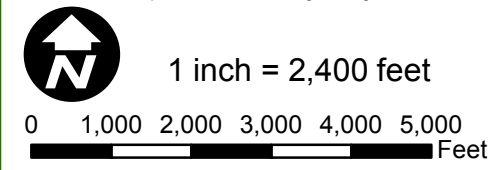


FIGURE 12
Vegetation Communities within the Biological Study Area

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Project
City of Elk Grove and Sacramento County, California

Valley grasslands are used by a variety of species for foraging. Characteristic reptiles that breed in valley grasslands include the western fence lizard (*Sceloporus occidentalis*) and common garter snake (*Thamnophis sirtalis*). Mammals typically found in this habitat include the black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and coyote (*Canis latrans*). Birds that could potentially nest in valley grasslands include horned lark (*Eremophila alpestris*) and western meadowlark (*Sturnella neglecta*). This habitat also provides important foraging habitat for turkey vulture (*Cathartes aura*) and a variety of raptors.

Cropland

Cropland includes all non-orchard and non-vineyard agricultural crops. Vegetation in irrigated row and field crops can include a variety of shapes, sizes, and growing patterns. Crop types vary in structure and can represent a wide range of heights, densities, and canopy covers. The majority of row crops are annual species, while others are perennials. Most annual crops are planted in spring and harvested in summer or fall. Crops may be planted in rotation resulting in multiple harvests per year. Crop rotation helps to conserve nutrients in the soil and maintain soil productivity.

Common irrigated row and field crops in the region include broccoli (*Brassica oleracea*), cabbage (*Brassica oleraceae*), radish (*Raphanus sativus*), onion (*Allium cepa*), tomato (*Lycopersicon esculentum*), butternut squash (*Cucurbita moschata*), soybean (*Glycine max*), kohlrabi (*Brassica oleracea*), okra (*Abelmoschus esculentus*), snow peas (*Pisum sativum var. macrocarpon*), and Swiss chard (*Beta vulgaris flavescens*). In addition to the cultivated species, weedy annuals may grow in the fields, including but not limited to shepherd's purse (*Capsella bursa-pastoris*) and mustard (*Brassica sp.*).

Irrigated Pasture-Grassland

Irrigated pasture-grassland is defined as agricultural cropland in which a mix of perennial grasses and legumes normally provide 100% canopy coverage including alfalfa fields. This vegetation community is the most common in the Project area. Average height of crops is about 1.5 feet (0.46 meters) and structure is typically homogenous with no layering. Plowing may occur annually; however, alfalfa often remains unplowed for three years or more. Most grass hayfields are composed of introduced grass and forb species; however, some "native" hayfields will include naturally occurring species and are generally managed less intensively. Both alfalfa and grass hayfields are regularly irrigated. This cover type may be characterized by a rotating mix of perennial rye (*Lolium perenne*), alfalfa, oats (*Avena spp.*), dallis grass (*Paspalum dilatatum*), annual bluegrass (*Poa annua*), medusahead grass (*Elymus caput-medusae*), and Kentucky fescue (*Festuca arundinacea*).

Irrigated hayfields can provide high-quality seasonal resources for blackbirds (*Agelaius phoeniceus*), doves, egrets (*Egretta spp.*), garter snakes (*Thamnophis spp.*), gophers (*Thomomys spp.*), gopher snakes (*Pituophis catenifer*), hawks (*Buteo spp.*), owls (*Stringiformes*), voles (*Arvicolinae spp.*), waterfowl, and other wildlife species.

Vineyard

Vineyards are typically composed of a single species (e.g., grape, raspberry, kiwifruit), which are planted on wood/wire trellises in rows. The understory may be bare due to herbicide application

or planted in domesticated herbaceous plants. Typical understory associates include Bermuda grass, soft chess, Italian ryegrass, Johnson grass (*Sorghum halepense*), mustard, and filaree.

Conversion to vineyard has resulted in the loss of naturally diverse habitats that once supported a variety of wildlife species. However, some species of birds and mammals have adapted to vineyard habitats. Deer and rabbits forage on vines, while squirrels and numerous bird species feed on fruits. In addition, vineyards may provide cover for wildlife during the hot summer months.

Freshwater Marsh

Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes such as common cattail. Emergent wetlands are flooded frequently enough so that the roots of the vegetation are in an anaerobic environment. On the upper margins of this habitat, saturated or periodically flooded soils support several moist soil plant species including Baltic rush (*Juncus balticus*), tall flatsedge, smartweed (*Persicaria* spp.), and, on more alkali sites, saltgrass (*Distichlis spicata*). Lower, wetter portions of freshwater emergent wetlands in the Project area are composed of cattails, bulrush, and floating primrose. In the Project area, several freshwater emergent wetlands exist west of Franklin Boulevard.

Freshwater marshes are among the most productive wildlife habitats in California. Many species rely on freshwater marshes for their entire life cycle. The rare giant garter snake uses these wetlands as its primary habitat. Slow-moving waters provide important resting and foraging habitats for migratory water birds such as the mallard (*Anas platyrhynchos*) and cinnamon teal (*Anas cyanoptera*). Wetlands also provide habitat for the American coot (*Fulica americana*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and black phoebe (*Sayornis nigricans*).

Seasonal Wetland

Seasonal wetlands are defined as ephemeral wetlands that pond during the rainy season and dry during the summer dry season. This habitat type is dominated by hydrophytic vegetation types of grasses, herbs, and forbs. The seasonal wetland habitat type occurs in the adjacent lands of the Stone Lakes NWR in the northwest quadrant of the BSA. Seasonal wetlands can provide habitat for vernal pool associates, and habitat for a wide variety of wildlife including song birds, waterfowl, reptiles, and other wildlife species.

Swale

The swale land cover type is defined as low meandering channels that tend to be saturated long enough to support vegetative associations. Swale features often represent the headwaters of streams, connect seasonal wetlands, and/or drain small watersheds into defined creeks. Swales can be supported by minor groundwater seepage. Swales contain rabbitsfoot grass (*Polypogon monspeliensis*), fireweed (*Epilobium pygmaeum*), fiddle dock (*Rumex pulcher*), and pricklyseed buttercup (*Ranunculus muricatus*). Swales that occur within and between vernal pool complexes are classified as vernal swales.

Streams/Creeks

A network of streams and creeks cover the Project area. These features drain from east to west and ultimately flow into Stone Lake, and includes the Shed C Channel. The vegetation supported by these features is dependent upon each feature's hydroperiod. Features characterized by a

short hydroperiod may support primarily upland species, while features with longer hydroperiods can support emergent vegetation such as cattails.

This community is typically simple in structure (i.e., herbaceous layer only) and is characterized by seasonally saturated soils and defined as the average wetted area within the intermittent and perennial linear features such as rivers, streams, creeks, and drainage. Species associated with seasonal wetlands in the Project area include Italian ryegrass, Mediterranean barley, sedges (*Carex* spp.), prostrate knotweed (*Polygonum arenastrum*), loosestrife (*Lythrum* spp.), narrow tarplant (*Holocarpha virgata*), mayweed (*Anthemis cotula*), and curly dock.

Vernal Pool

Vernal pools are characterized by seasonal inundation and their potential to support vernal pool species. A wide variety of herbaceous species are associated with this community type, including Italian ryegrass, Mediterranean barley, coyote thistle (*Eryngium* spp.), smooth goldfields (*Lasthenia glaberrima*), Fremont's goldfields (*Lasthenia fremontii*), vernal pool buttercup (*Ranunculus bonariensis* var. *trisepalus*), and woolly marbles (*Psilocarphus* spp.). Additional species that may be present include Sacramento mint (*Pogogyne zizyphoroides*), hyssop loosestrife (*Lythrum hyssopifolium*), toad rush (*Juncus bufonius*), popcorn flower (*Plagiobothrys* spp.), alkali weed, mayweed, and curly dock. Vernal pool communities have the potential to support special-status vernal pool invertebrates, such as fairy shrimp (*Branchinecta* spp.) and tadpole shrimp (*Lepidurus* spp.).

Open Water

Open water habitats are man-made depressions or dammed riverine channels containing standing water. Depth can vary from a few centimeters to several meters. Man-made agricultural ponds within the Project area are seasonally inundated. During the dry season, the bottoms of these ponds are vegetated with species such as curly dock, prostrate knotweed, spiny cocklebur (*Xanthium spinosum*), rough cocklebur (*Xanthium strumarium*), lamb's quarters (*Chenopodium album*), and a variety of annual grasses.

Non-Habitat Land Cover Types

High-Density Development

The high-density development land cover type includes urban and suburban residential neighborhoods, urban centers, industrial areas, airports, and wastewater treatment plants. An area of high-density development is within the City to the east of Franklin Boulevard.

Low-Density Development

The low-density development land cover type consists of relatively sparse residences and other structures, such as farm buildings, and small rural neighborhoods with large individual property sizes per house. Low-density development is found within the Project area in the form of rural residences along Kammerer Road and scattered throughout the agricultural areas.

Major Roads

The major roads land cover type includes linear features with paved surfaces and can vary from large freeways to smaller arterials found within urban settings.

Disturbed

The disturbed land cover type is defined as areas that have been subject to previous or ongoing disturbances such as along roadsides, trails, and parking lots. Scraped or graded land, gravel areas would be included in this land cover type. Disturbed land cover type is vegetated with diverse weedy flora. Vascular plant species associated with these areas typically include Johnson grass (*Sorghum halepense*), Canadian horseweed (*Conyza canadensis*), milk thistle (*Silybum marianum*), yellow-star thistle (*Centaurea solstitialis*), and field bindweed (*Convolvulus arvensis*).

Habitat Connectivity

The CDFW Biogeographic Information & Observation System (CDFW 2017b) was reviewed to determine if the BSA is located within an Essential Connectivity Area (ECA). According to the Essential Connectivity layer, the BSA does extend into the edge of the ECA located at the I-5 Hood Franklin Road Interchange.

ENVIRONMENTAL CONSEQUENCES

This section includes a discussion of impacts to non-aquatic natural communities. Aquatic habitat types are discussed in Section 2.4.2. Non-habitat land cover types (i.e. high-density development, low-density development, major roads, and disturbed areas) are not included in this section as they provide limited habitat value for biological resources.

Direct Impacts

The proposed Project would cause permanent and temporary impacts to vegetative communities in the Project area, as shown in **Table 14**. The valley grassland, irrigated pasture-grassland, cropland, and vineyard habitat types are not considered natural communities of special concern except in regard to habitat for special-status species. Permanent impacts to non-aquatic habitats include areas that will be permanently modified by implementation of the proposed Project. This includes all areas within the outer boundary of proposed roadway fill slopes, detention basins, and other Project features. Long term land use within permanently impacted areas would change from a vegetated community to the major roads or disturbed land cover types. Temporary impacts include all areas that would be temporarily disturbed to facilitate construction of the Project. This includes access roads, staging areas, and work areas. After construction, temporarily impacted areas would be allowed to return to pre-Project conditions.

Valley grassland, irrigated pasture-grassland, and cropland in the Project area provide suitable foraging habitat for a variety of wildlife species, including the state-threatened Swainson's hawk (*Buteo Swainsoni*). Swainson's hawk foraging habitat is protected under the SSHCP, County Swainson's Hawk Ordinance, and City Swainson's Hawk Code. Impacts to this habitat and other special-status species that may forage in vegetative communities in the Project area are discussed in Section 2.4.5, "Threatened and Endangered Species."

Table 14. Summary of Impacts to Non-Aquatic Habitats

Cover Type	Total Acres in the BSA	Avoided	Direct Impact (acres)
Valley grassland	224.60	169.71	36.76
Irrigated Pasture-Grassland	264.75	229.40	13.21
Cropland	659.81	524.65	46.69

Implementation of the proposed Project may result in the loss of trees or vegetation protected by the County or the City. Impacts to protected trees are discussed further in Section 2.4.3, “Plant Species.” The removal of trees and vegetation in the Project area may cause impacts to natural communities through the loss of canopy cover, erosion control, or other beneficial ecological contributions that trees and vegetation provide the environment.

Indirect Impacts

Indirect impacts to the vegetative communities in the Project area may occur through habitat fragmentation and increased urban encroachment into wildlife habitats. Much of the agricultural and urban land has already been exposed to disturbance from agricultural activities and development. Vegetative and natural communities in the Project area may experience indirect impacts by the proposed Project through changes in hydrology from the increase in impervious surfaces. Hydrologic flows may be altered as a result of the Project, which could impact adjacent properties. Indirect impacts to the wetlands and aquatic features in the Project area are addressed in more detail in Section 2.4.2, “Wetlands and Other Waters” and measures are presented which would minimize and mitigate for indirect impacts to aquatic features.

Protected Trees

The BSA contains large diameter trees meeting the City and County definition of a protected tree. In compliance within local regulations and the Connector JPA PEIR, measures **BIO-4**, **BIO-5**, and **BIO-6**, which provide avoidance and minimization requirements for tree species throughout the Project, as well as compensatory mitigation requirements for impacted trees, would be implemented in order to reduce impacts to less than significant level.

Migration Corridors

The CDFW Biogeographic Information & Observation System (CDFW 2017b) was reviewed to determine if the BSA is located within an Essential Connectivity Area (ECA). According to the Essential Connectivity layer, the BSA does extend into the edge of the ECA located at the I-5 Hood Franklin Road Interchange. Limited Project activities within the area of the interchange and Hood Franklin Road would not adversely affect the ECA; therefore, the Project is not likely to adversely affect migratory corridors.

South Sacramento Habitat Conservation Plan

The Connector JPA is a participant of the SSHCP and the Project occurs along the boundaries of the UDA and Preserve Planning Unit 6. The Final SSHCP was circulated in February 2018 and is available at www.southsachcp.com. Habitat mapping and project impacts have been developed to be consistent with the SSHCP. When permits become available, all Project impacts to covered species and habitat would be covered under the SSHCP and project mitigation will be obtained through the SSHCP. If the SSHCP is not fully permitted prior to construction of the Project, the implementing agency would provide all applicable avoidance, minimization and/or mitigation measures as stated in BIO-1 through BIO-40 in accordance with federal, state, local, and regulatory agency guidelines and permitting.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

At a minimum, the Connector JPA PEIR requires avoidance, minimization, and/or mitigation measures for natural communities, as explicitly stated in the Connector JPA PEIR measures BIO-1, BIO-7, BIO-8a, and BIO-8b, which have been incorporated into the following Project specific measures. No riparian woodland communities are found within the Project area, and therefore, Connector JPA PEIR measures BIO-4a and BIO-4b, have not been incorporated. Project specific measures in compliance with regional plans, policies, and ordinances have also been incorporated for compliance with these identified requirements. With the implementation of the following measures Project impacts to natural communities would be reduced to a less than significant level:

- BIO-1:** As part of project-level environmental review, implementing agencies will ensure that projects comply with the most recent general plans, policies, ordinances, and conservation plans (including any HCPs, NCCPs, and other local, regional, and state plans). Review of these documents and compliance with their requirements will be demonstrated in project-level environmental documentation. Implementing agencies will ensure that projects comply with all policies, ordinances, and plans that exist at the time of project-level review, regardless of whether they existed during the program-level analysis.
- BIO-2:** Before any work occurs in the Project area, the project biologist will conduct a mandatory environmental awareness training program for all construction personnel working on the Project. The training program will notify construction personnel of the sensitive biological resources occurring within the Project area, their legal status, and penalties for not complying with the conditions of any permits issued for the Project. The education program will emphasize the need to protect water quality, wetlands, and habitat for special-status species. As necessary, a biological monitor approved by the resource agencies will ensure that construction personnel adhere to the guidelines and restrictions of all approved environmental documents, permits, and other agreements.
- BIO-3:** The implementing agency will install orange construction barrier fencing to identify environmentally sensitive areas around sensitive natural communities, and where determined feasible, protected trees.

Before construction, a qualified biologist will work with the project engineer to identify the locations for the barrier fencing, and will place stakes around the sensitive resource sites to indicate these locations. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications:

The Contractor's attention is directed to the areas designated as "environmentally sensitive areas." These areas are protected, and no entry by the Contractor for any purpose will be allowed unless specifically authorized in writing by the implementing agency. The Contractor will take measures to ensure that Contractor's forces do not enter or disturb these areas, including giving written notice to employees and subcontractors.

Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with a maximum 10-foot spacing.

BIO-4: If impacts to protected trees cannot be avoided, then the implementing agency will compensate for impacts on protected trees. For portions of the Project in the City of Elk Grove, the following policies from the City Tree Ordinance will be implemented.

Mitigation may take the form of on-site or off-site planting or payment of in-lieu fees. Mitigation planting should be of an equivalent size and species of those being removed. Trees that are of a 1- or 15-gallon container or seedling-sized trees account for 1-inch DBH removed and trees planted that are of 24-, 36-, 60- or 72-inch containers account for 2-inches DBH removed.

If tree replacement or transplantation is chosen as the project mitigation strategy, a five-year mitigation and monitoring plan should be prepared. The plan should include maintenance, watering, and monitoring schedules, success criteria, and reporting requirements. Mitigation trees must be monitored by an ISA-Certified Arborist for five years after planting.

In-lieu of planting, fees may be paid into the Tree Preservation Fund at a rate established under a Resolution by the City Council. As per a conversation with the City of Elk Grove Planning Department, the current mitigation fee is \$200 per inch of DBH removed.

The exact amount of mitigation required will depend on the final design of the project.

BIO-5: If impacts on protected trees cannot be avoided, then the implementing agency will compensate for impacts on protected trees. For portions of the project in Sacramento County, the following policies from the Sacramento County General Plan (2011) regarding landmark and heritage tree protections will be implemented:

- CO-138 – *Protect and preserve non-oak native trees along riparian areas if used by Swainson's hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.*

- CO-139 – *Native trees other than oak, which cannot be protected through development, shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.*
- CO-140 – *For projects involving native oak woodlands, oak savannah or mixed riparian areas, ensure mitigation through either of the following methods:*
 - *An adopted habitat conservation plan.*
 - *Ensure not net loss of canopy area through a combination of the following: (1) preserving the main, central portions of consolidated and isolated groves constituting the existing canopy and (2) provide an area on-site to mitigate any canopy lost. Native oak mitigation area must be a contiguous area on-site which is equal to the size of canopy area lost and shall be adjacent to existing oak canopy to ensure opportunities for regeneration.*
 - *Removal of native oaks shall be compensated with native oak species with a minimum of a one to one dbh replacement.*
 - *A provision for a comparable on-site area for the propagation of oak trees may substitute for replacement tree planting requirements at the discretion of the County Tree Coordinator when removal of a mature oak tree is necessary.*
 - *If the project site is not capable of supporting all the required replacement trees, a sum equivalent to the replacement cost of the number of trees that cannot be accommodated may be paid to the County's Tree Preservation Fund or another appropriate tree preservation fund.*
 - *If on-site mitigation is not possible given site limitation, off-site mitigation may be considered. Such a mitigation area must meet all of the following criteria to preserve, enhance, and maintain a natural woodland habitat in perpetuity, preferably by transfer of title to an appropriate public entity. Protected woodland habitat could be used as a suitable site for replacement tree plantings required by ordinances or other mitigation.*
 - *Equal or greater in are to the total are that is included within a radius of 30 feet of the dripline of all trees to be removed;*
 - *Adjacent to protected stream corridor or other preserved natural area;*
 - *Supports a significant number of native broadleaf trees; and*
 - *Offers good potential for continued regeneration of an integrated woodland community.*
- CO-141 – *In 15 years the native oak canopy within on-site mitigation area shall be 50 percent canopy coverage for valley oak and 30 percent canopy coverage for blue oak and other native oaks.*

BIO-6: All exposed/ disturbed areas and access points left barren of vegetation as a result of construction activities will be restored using locally native grass seeds, locally native grass plugs, and/ or a mix of quick-growing sterile non-native grass with locally native grass seeds. Seeded areas will be covered with broadcast straw and/ or jute netting (monofilament erosion blankets are not permitted).

BIO-7: Should the Final SSHCP be permitted prior to construction of the project, the implementing agency will provide compensatory mitigation as required by the SSHCP mitigation ratios for non-aquatic natural communities including, but not limited to, valley grassland, irrigated pasture-grassland, and cropland.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to natural communities. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to natural communities would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to natural communities.

2.4.2 Wetlands and Other Waters

REGULATORY SETTING

Federal Regulations

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the CWA (33 U.S. Code [USC] 1344) is the primary law regulating wetlands and surface waters. The CWA regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that states that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the USACE with oversight by the U.S. EPA.

The USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with the EPA's Section 404(b)(1) Guidelines (EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest.

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the FHWA, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed Project includes all practicable measures to minimize harm.

State Regulations

At the state level, wetlands and waters are regulated primarily by the CDFW, the State Water Resources Control Board (SWRCB) and the RWQCB. Sections 1600-1607 of the California Fish and Game (CFG) Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a SAA will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a SAA obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCBs also issue water quality certifications in compliance with Section 401 of the CWA. Please see Section 2.9, Hydrology and Water Quality, for additional details.

Local Regulations

A component of the SSHCP is the Aquatic Resources Program (ARP). The ARP is a local jurisdiction based aquatic resources permit program that adds to the strength of the SSHCP's framework of protection of natural communities and native plant and wildlife species, including protection of aquatic resources. The ARP identifies, classifies, and ranks the aquatic resources located within the SSHCP Plan Area and describes a program to implement locally based permitting that relies on a systematic approach of aquatic resource avoidance, minimization, and compensatory mitigation.

AFFECTED ENVIRONMENT

The information in this section is based on information provided in the NES and BA (MBI 2016), the NES Revalidation (Dokken Engineering 2018), and the wetland delineation (PMC 2014) (reports bound separately).

The Project area is generally located within the Sacramento Drainage Canal Watershed with a small portion located within the South Stone Lake-Snodgrass watershed. Both watersheds are part of the Upper Mokelumne watershed. Precipitation that falls in the Project area sheet flows into ditches and swales which flow east to west through intermittent drainages (Shed C channel) into Stone Lake. Stone lake flows south into Snodgrass Slough which eventually connects to the Sacramento River.

Aquatic Resources

A delineation of wetlands and other Waters of the U.S. and State was conducted on April 16, May 15, May 21, June 13, and August 26, 2014. The delineation was conducted in accordance with the methodologies outlined in Part IV, Section D, of the USACE Wetland Delineation Manual (Corps Manual) (USACE 1987), the Regional Supplement to the USACE Wetland Delineation Manual Arid West Region Version 2.0 (Supplement) (USACE 2008a), and the USACE regulatory guidance letter regarding Ordinary High Water Mark Identification (USACE 2008b). For areas where the Corps Manual and the Supplement differ, the Supplement was followed.

Due to changes in the Project alignment, subsequent literature research and field surveys were completed on October 26, 2017. The delineation found conflicting results to previous survey efforts. The findings have been updated for the Project within the NES Revalidation Report (Dokken Engineering, 2018) and an updated Preliminary Jurisdictional Determination has been submitted to the USACE for approval.

Results of the updated jurisdictional delineation identified approximately 64.41 acres of aquatic resources within the Project area. The Project area contains approximately 28.32 acres of streams/creeks, 2.40 acres of freshwater marsh, 4.18 acres of seasonal wetland, 0.88 acres of seasonal impoundments, 11.14 acres of swale, 10.20 acres of vernal pools, and 7.30 acres of open water. **Figure 13** shows the aquatic features in the Project area.

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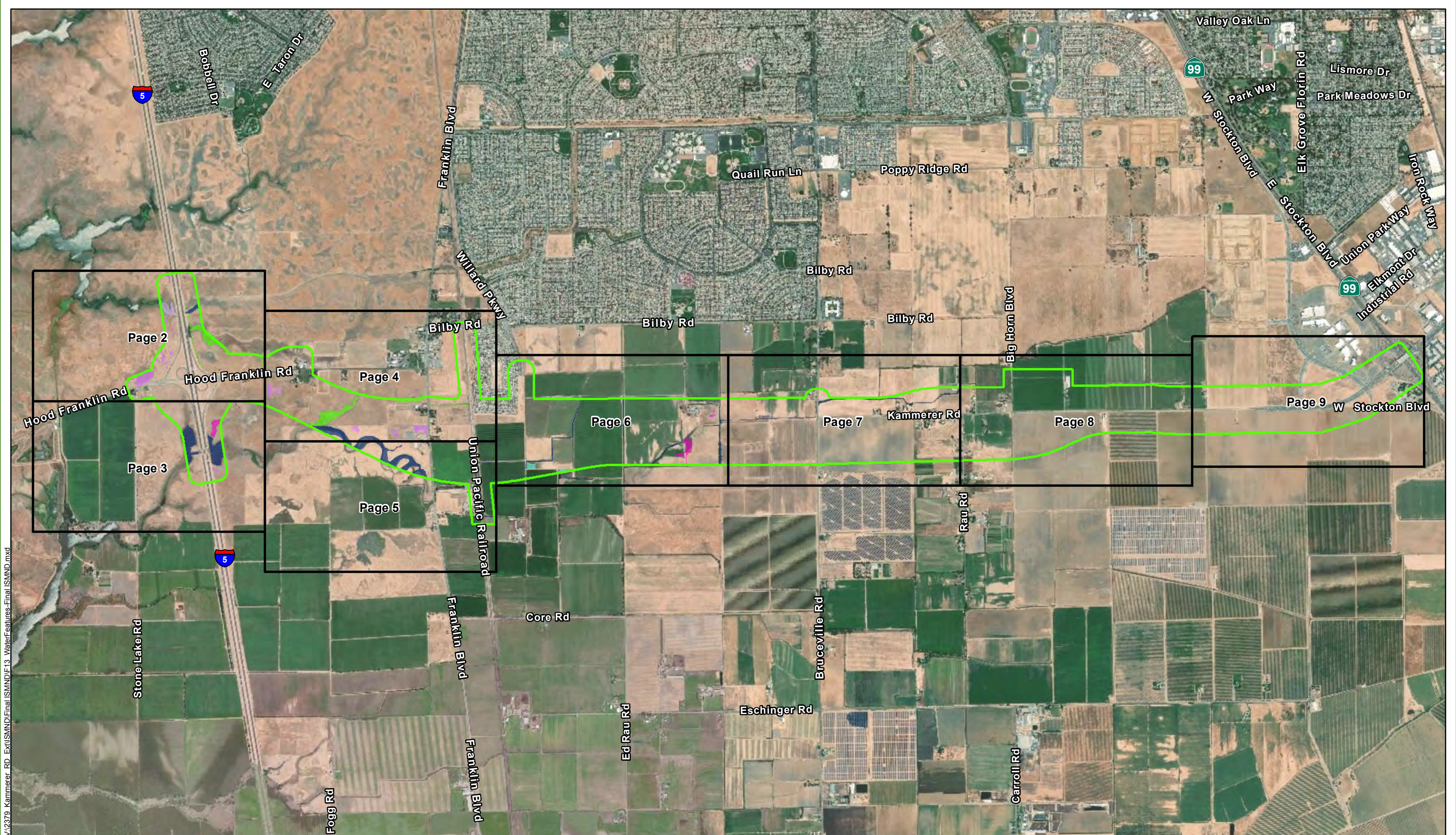
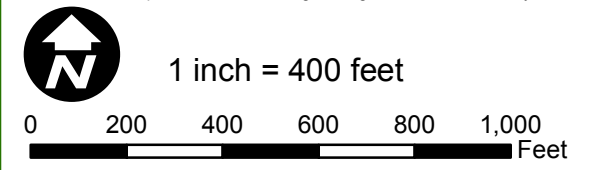
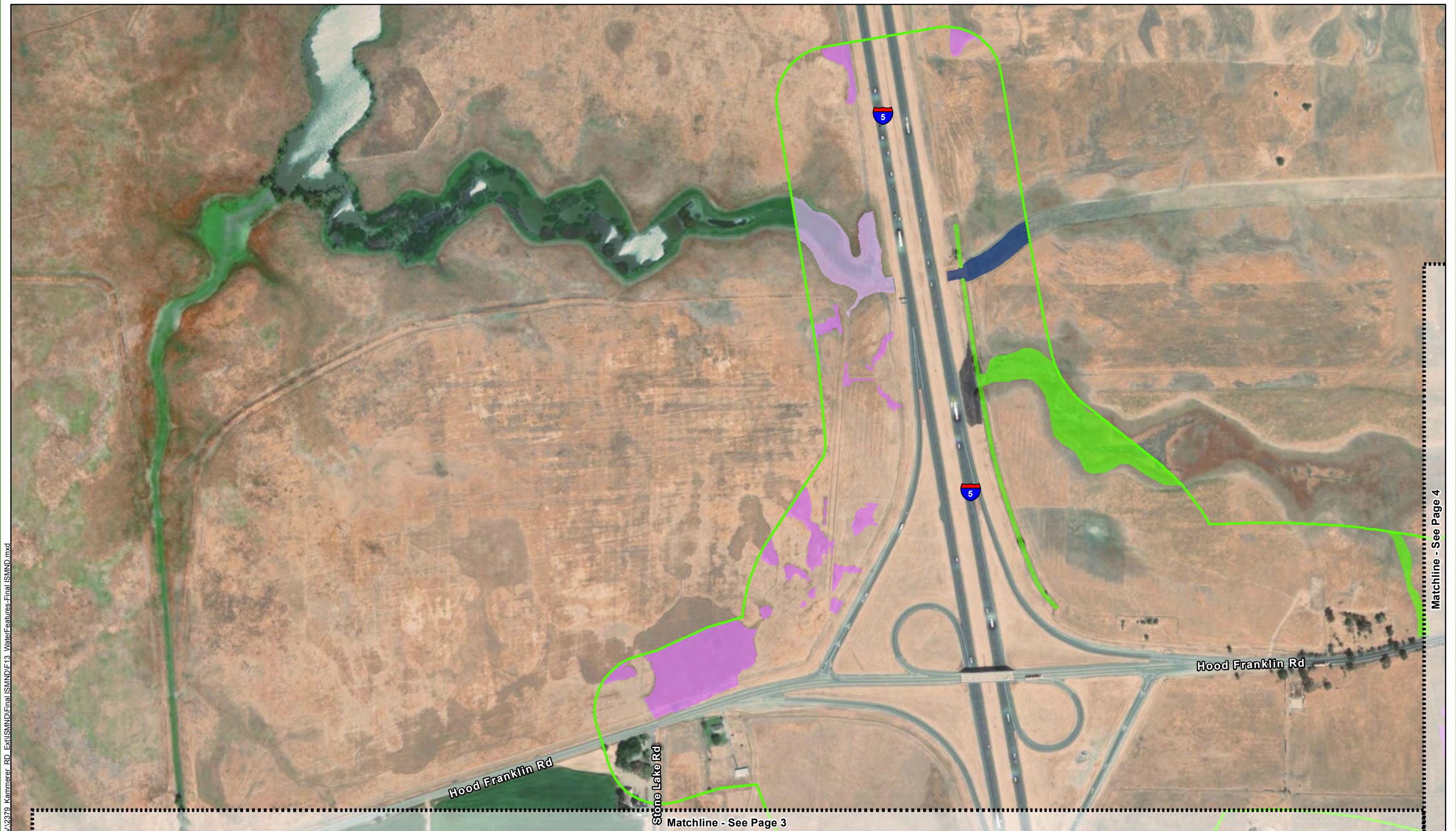


FIGURE 13
Wetland and Water Features
 1 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann



Biological Study Area	Swale (11.14 acres)	Freshwater Marsh (2.39 acres)
Wetland and Water Features	Open Water (0.88 acres)	Streams/Creeks (35.25 acres)
Open Water (0.37 acres)	Seasonal Wetland (4.18 acres)	Vernal Pool (10.20 acres)

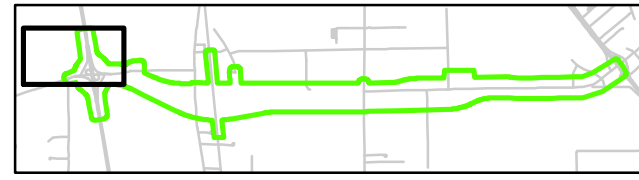


FIGURE 13
Wetland and Water Features
2 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

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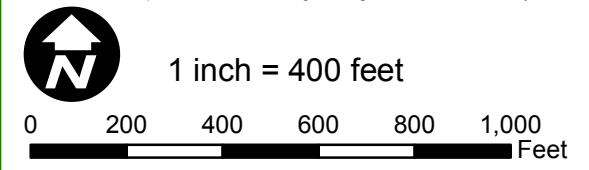
Hood Franklin Rd

Stone Lake Rd



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann



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	Open Water (0.37 acres)		Open Water (0.88 acres)		Streams/Creeks (35.25 acres)
	Seasonal Wetland (4.18 acres)		Vernal Pool (10.20 acres)		

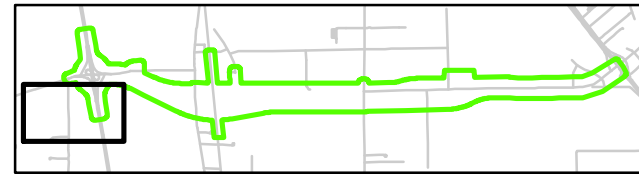
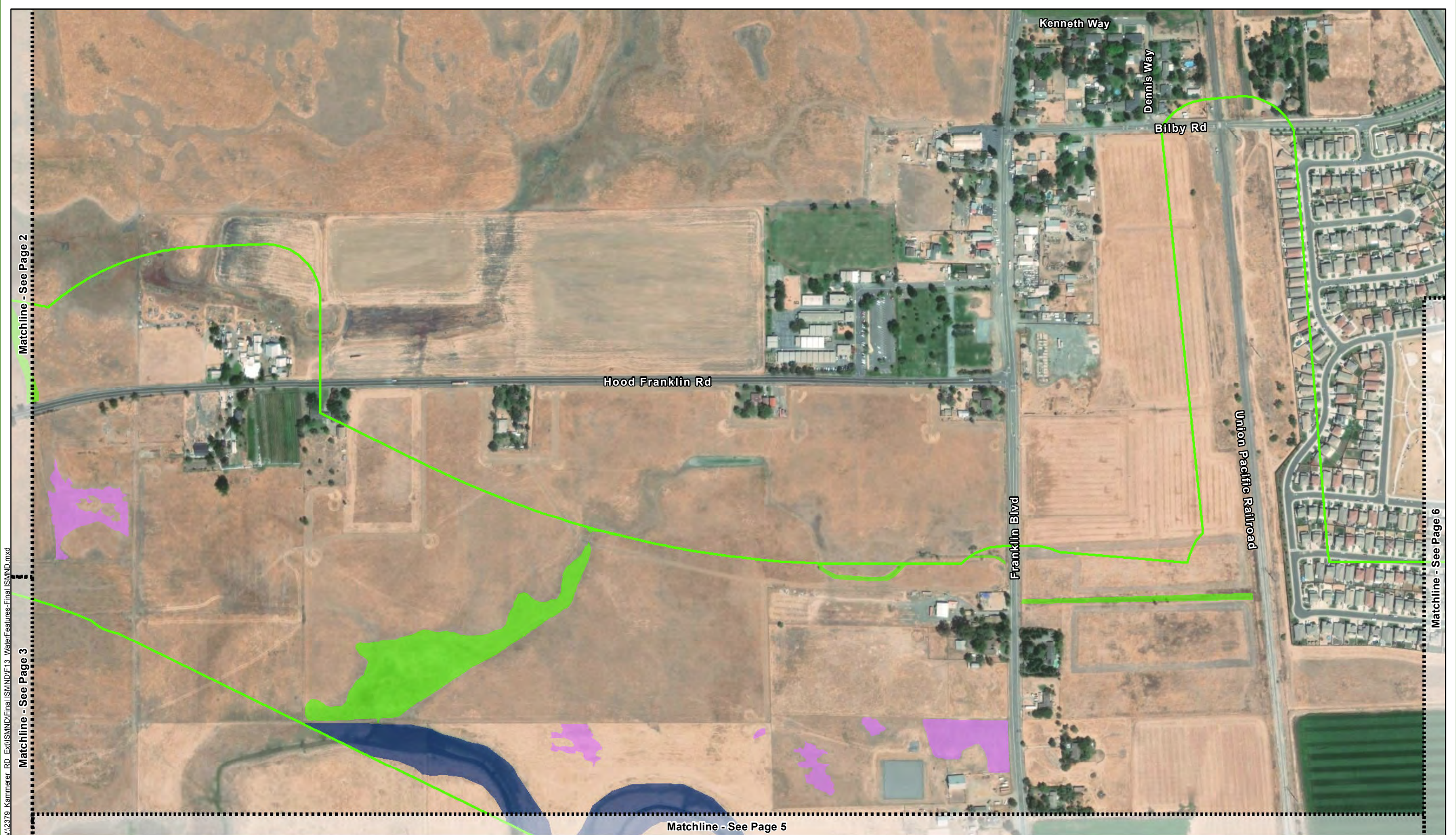


FIGURE 13
Wetland and Water Features
3 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

1 inch = 400 feet

Biological Study Area	Swale (11.14 acres)	Freshwater Marsh (2.39 acres)
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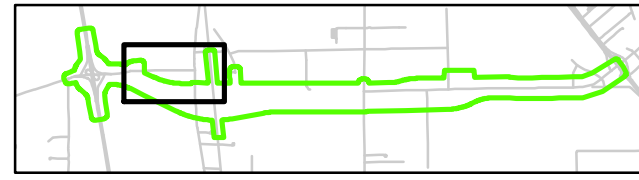
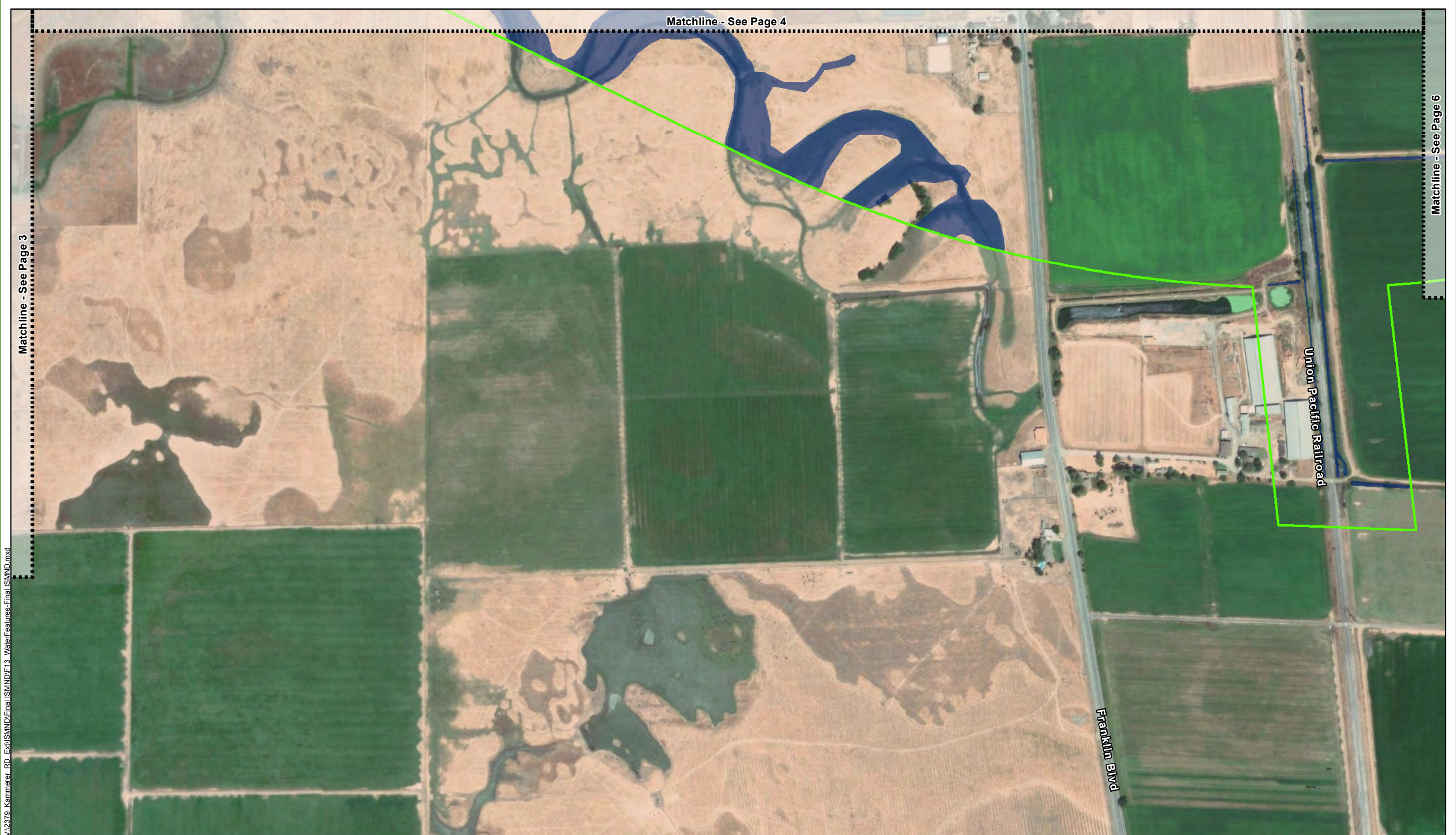


FIGURE 13
Wetland and Water Features
4 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California



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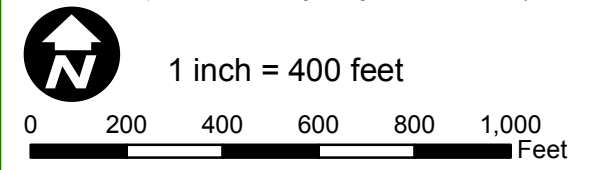
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Union Pacific Railroad

Franklin Blvd

Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann



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Wetland and Water Features	Open Water (0.88 acres)	Streams/Creeks (35.25 acres)
Open Water (0.37 acres)	Seasonal Wetland (4.18 acres)	Vernal Pool (10.20 acres)

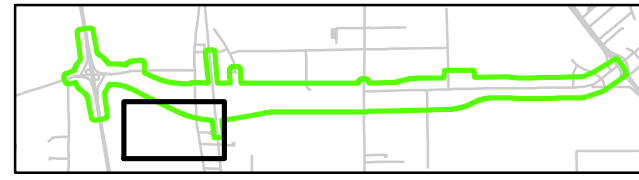
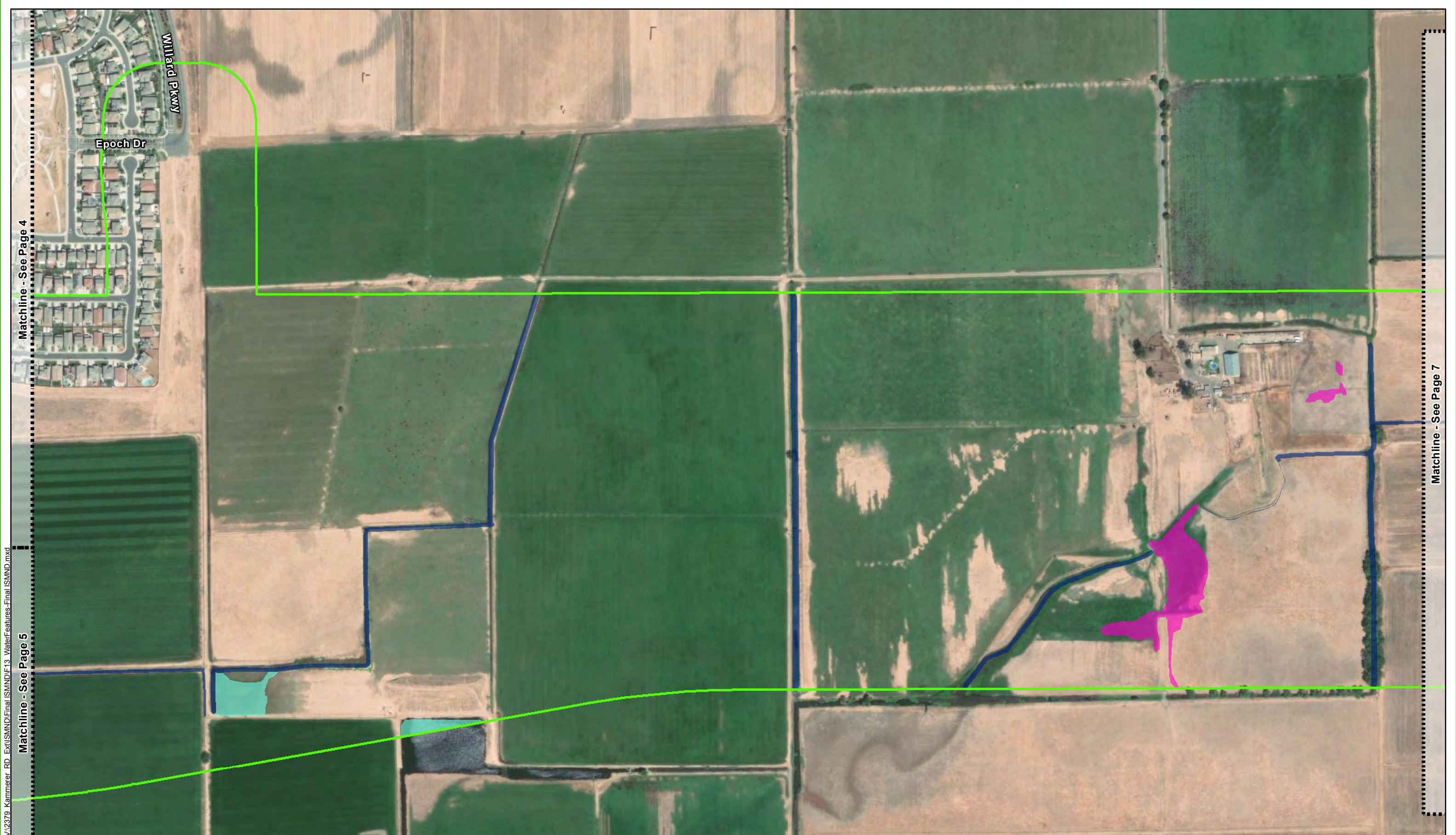


FIGURE 13
Wetland and Water Features
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

1 inch = 400 feet

Biological Study Area	Swale (11.14 acres)	Freshwater Marsh (2.39 acres)
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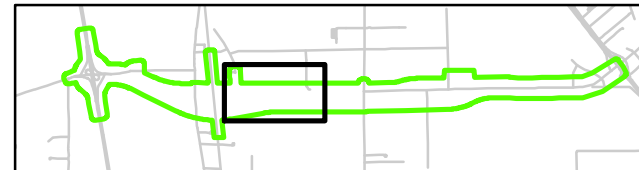


FIGURE 13
Wetland and Water Features
6 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

1 inch = 400 feet

Biological Study Area	Swale (11.14 acres)	Freshwater Marsh (2.39 acres)
Wetland and Water Features	Open Water (0.88 acres)	Streams/Creeks (35.25 acres)
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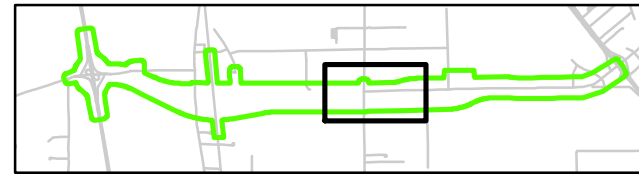


FIGURE 13
Wetland and Water Features
7 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

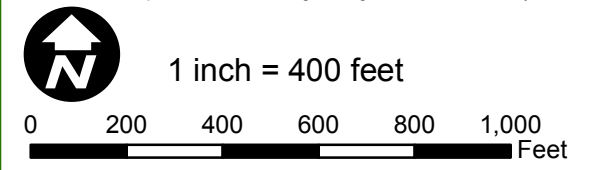


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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann



Biological Study Area	Swale (11.14 acres)	Freshwater Marsh (2.39 acres)
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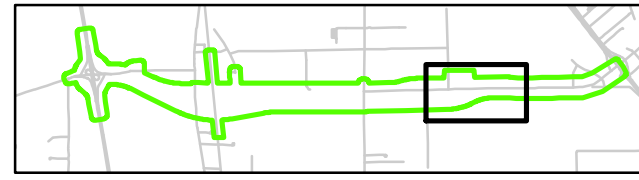


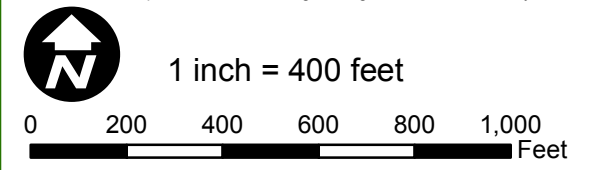
FIGURE 13
Wetland and Water Features
8 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann



Biological Study Area	Swale (11.14 acres)	Freshwater Marsh (2.39 acres)
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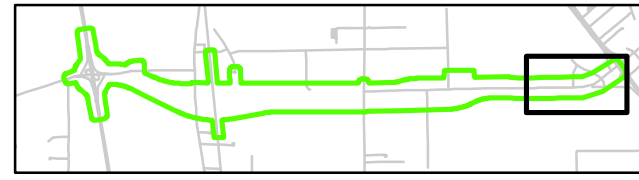
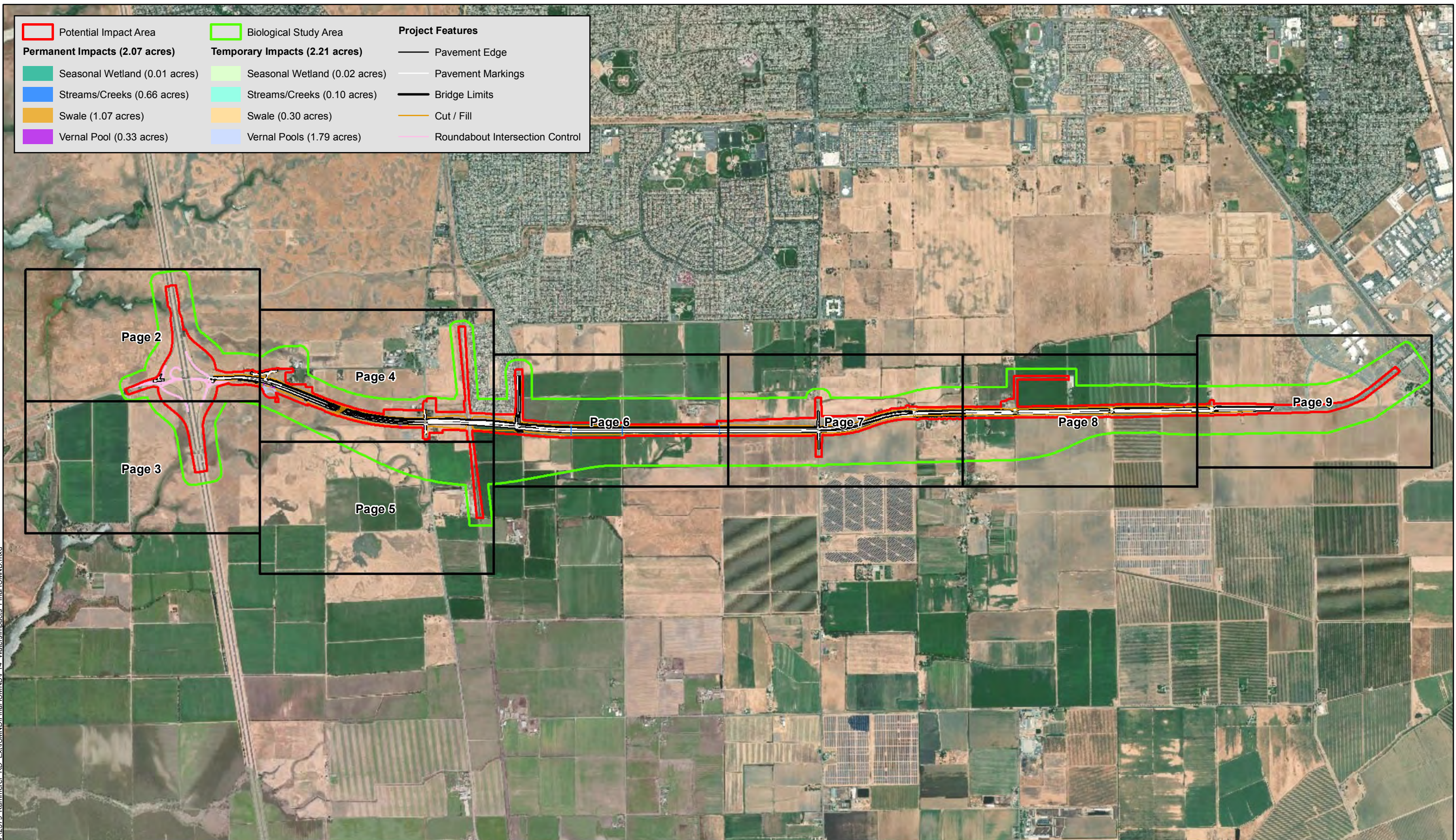


FIGURE 13
Wetland and Water Features
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

Potential Impact Area	Biological Study Area	Project Features
Permanent Impacts (2.07 acres)	Temporary Impacts (2.21 acres)	Pavement Edge
Seasonal Wetland (0.01 acres)	Seasonal Wetland (0.02 acres)	Pavement Markings
Streams/Creeks (0.66 acres)	Streams/Creeks (0.10 acres)	Bridge Limits
Swale (1.07 acres)	Swale (0.30 acres)	Cut / Fill
Vernal Pool (0.33 acres)	Vernal Pools (1.79 acres)	Roundabout Intersection Control



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

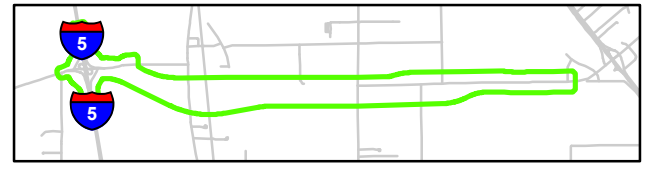
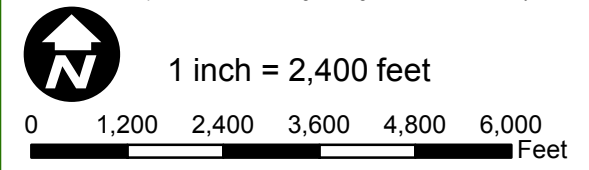


FIGURE 14
Project Impacts to Jurisdictional Features
1 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

Potential Impact Area	Biological Study Area	Project Features
Permanent Impacts (2.07 acres)	Temporary Impacts (2.21 acres)	Pavement Edge
Seasonal Wetland (0.01 acres)	Seasonal Wetland (0.02 acres)	Pavement Markings
Streams/Creeks (0.66 acres)	Streams/Creeks (0.10 acres)	Bridge Limits
Swale (1.07 acres)	Swale (0.30 acres)	Cut / Fill
Vernal Pool (0.33 acres)	Vernal Pools (1.79 acres)	Roundabout Intersection Control



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

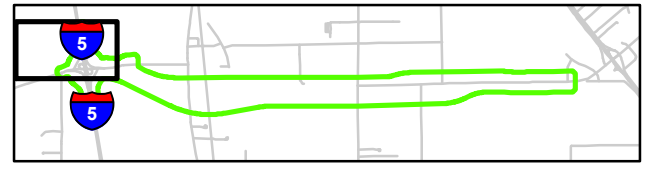
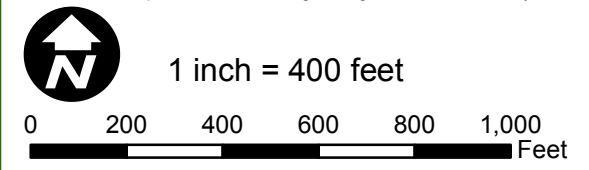


FIGURE 14
Project Impacts to Jurisdictional Features
2 of 9

Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

Potential Impact Area	Biological Study Area	Project Features
Permanent Impacts (2.07 acres)	Temporary Impacts (2.21 acres)	Pavement Edge
Seasonal Wetland (0.01 acres)	Seasonal Wetland (0.02 acres)	Pavement Markings
Streams/Creeks (0.66 acres)	Streams/Creeks (0.10 acres)	Bridge Limits
Swale (1.07 acres)	Swale (0.30 acres)	Cut / Fill
Vernal Pool (0.33 acres)	Vernal Pools (1.79 acres)	Roundabout Intersection Control



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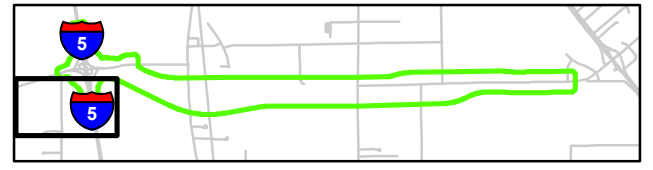
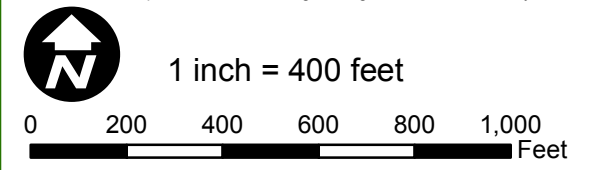
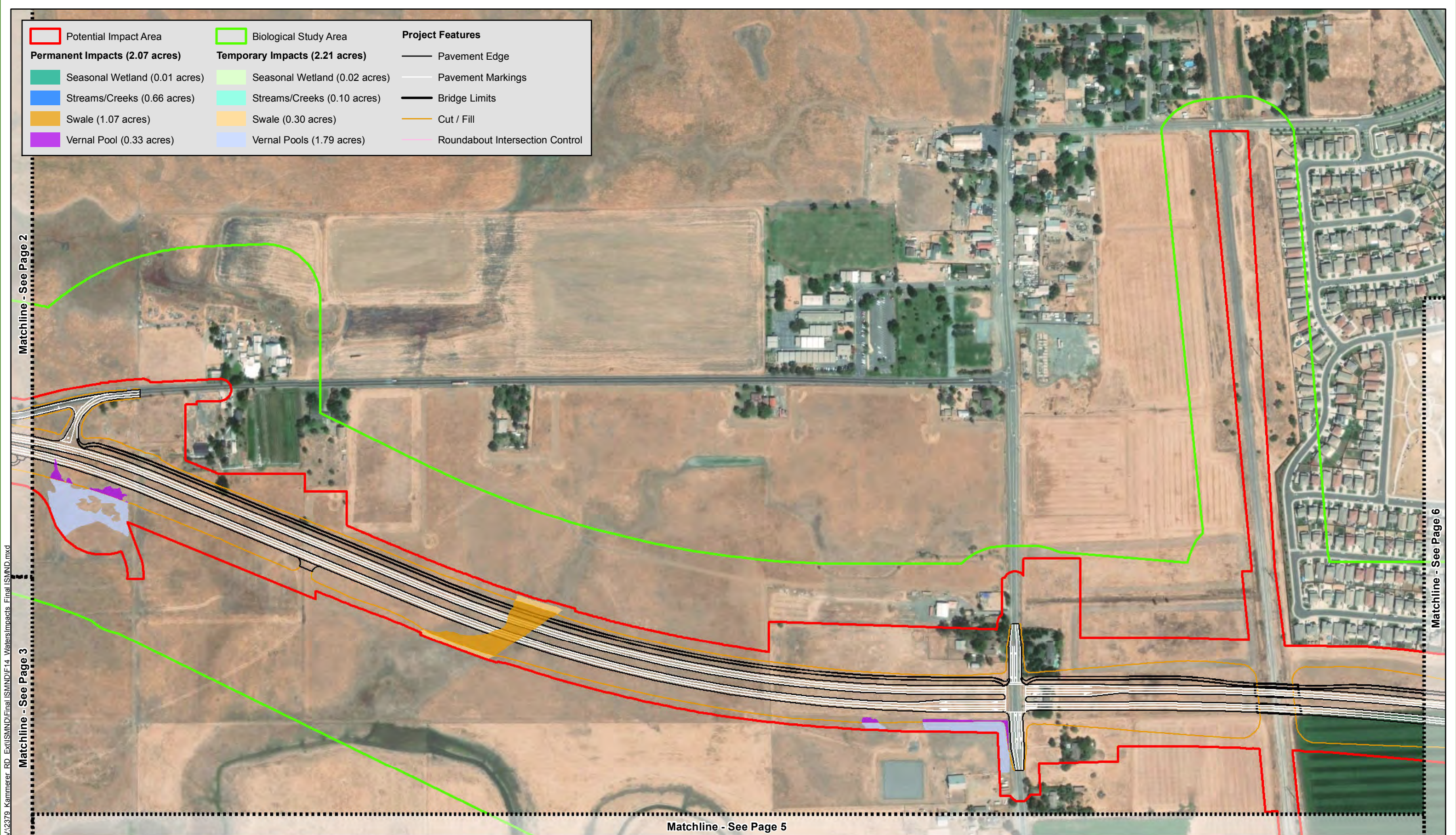


FIGURE 14
Project Impacts to Jurisdictional Features
3 of 9

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Project
City of Elk Grove and Sacramento County, California

Potential Impact Area		Biological Study Area		Project Features	
Permanent Impacts (2.07 acres)		Temporary Impacts (2.21 acres)		—	Pavement Edge
Seasonal Wetland (0.01 acres)	Streams/Creeks (0.66 acres)	Seasonal Wetland (0.02 acres)	Streams/Creeks (0.10 acres)	—	Pavement Markings
Swale (1.07 acres)	Vernal Pool (0.33 acres)	Swale (0.30 acres)	Vernal Pools (1.79 acres)	—	Bridge Limits
				—	Cut / Fill
				—	Roundabout Intersection Control



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

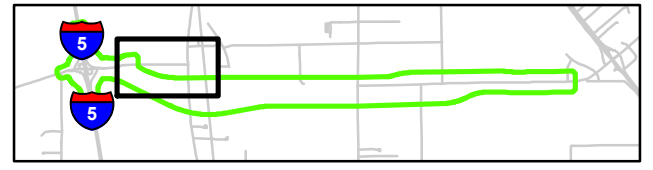
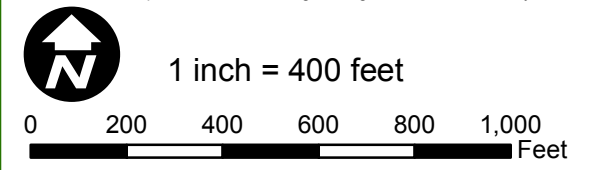


FIGURE 14
Project Impacts to Jurisdictional Features
4 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

Potential Impact Area	Biological Study Area	Project Features
Permanent Impacts (2.07 acres)	Temporary Impacts (2.21 acres)	Pavement Edge
Seasonal Wetland (0.01 acres)	Seasonal Wetland (0.02 acres)	Pavement Markings
Streams/Creeks (0.66 acres)	Streams/Creeks (0.10 acres)	Bridge Limits
Swale (1.07 acres)	Swale (0.30 acres)	Cut / Fill
Vernal Pool (0.33 acres)	Vernal Pools (1.79 acres)	Roundabout Intersection Control

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Matchline - See Page 4

Matchline - See Page 6



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

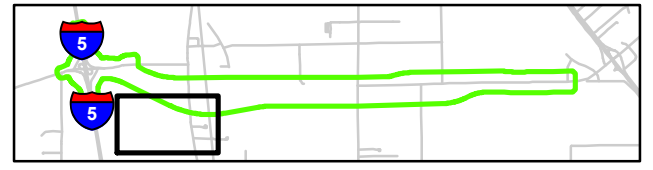
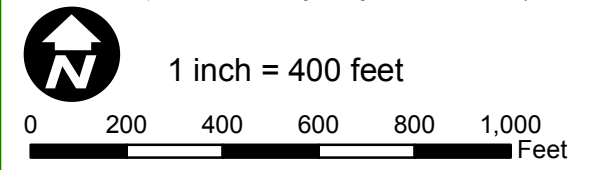
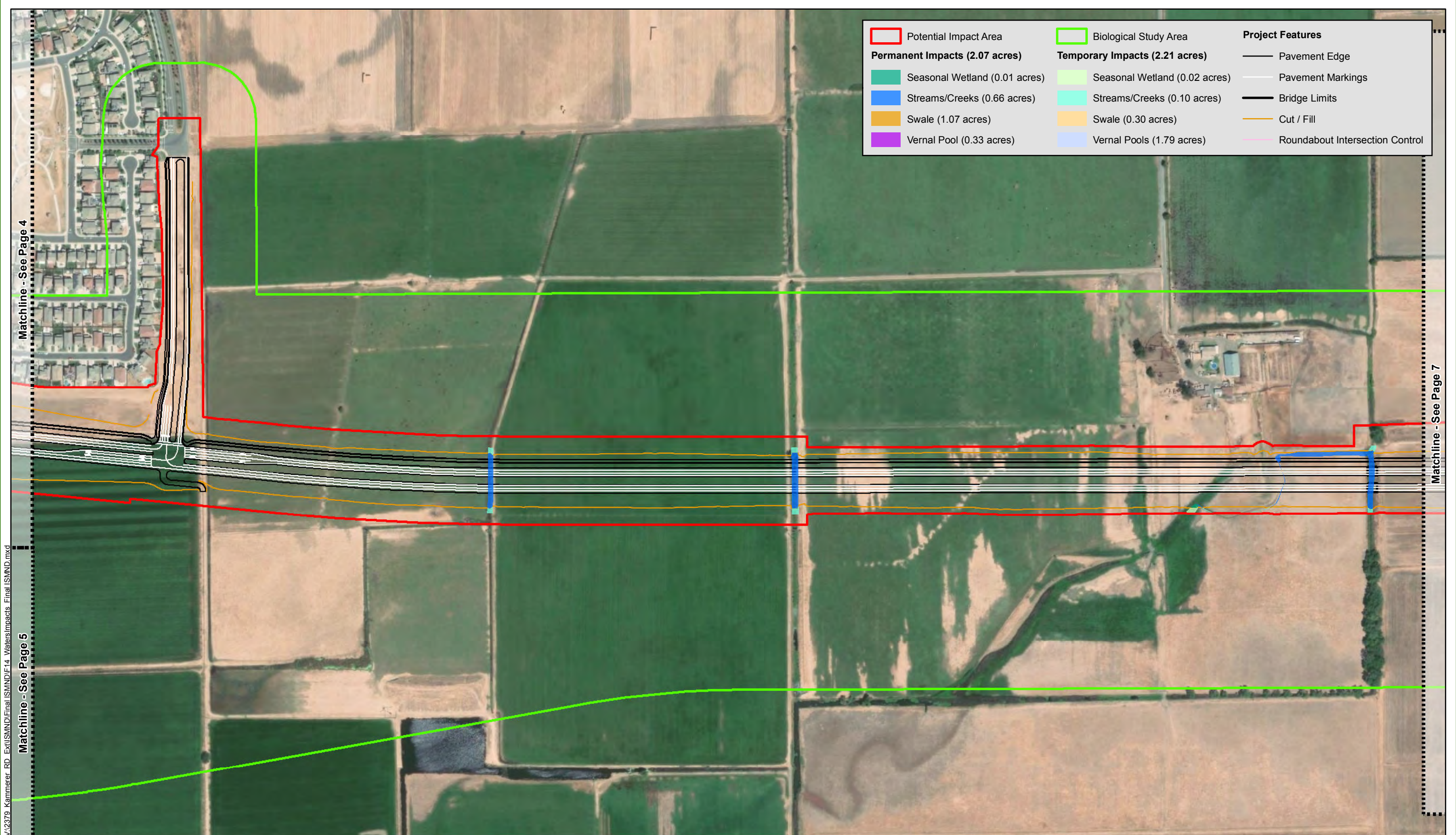


FIGURE 14
Project Impacts to Jurisdictional Features
5 of 9

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Project
City of Elk Grove and Sacramento County, California



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

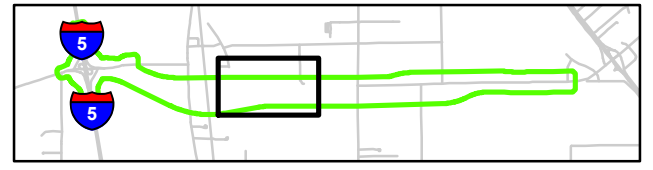
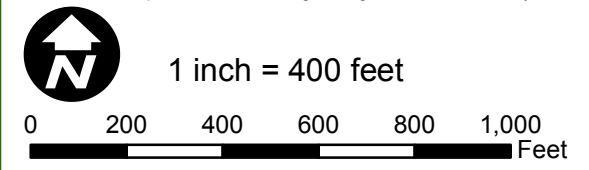
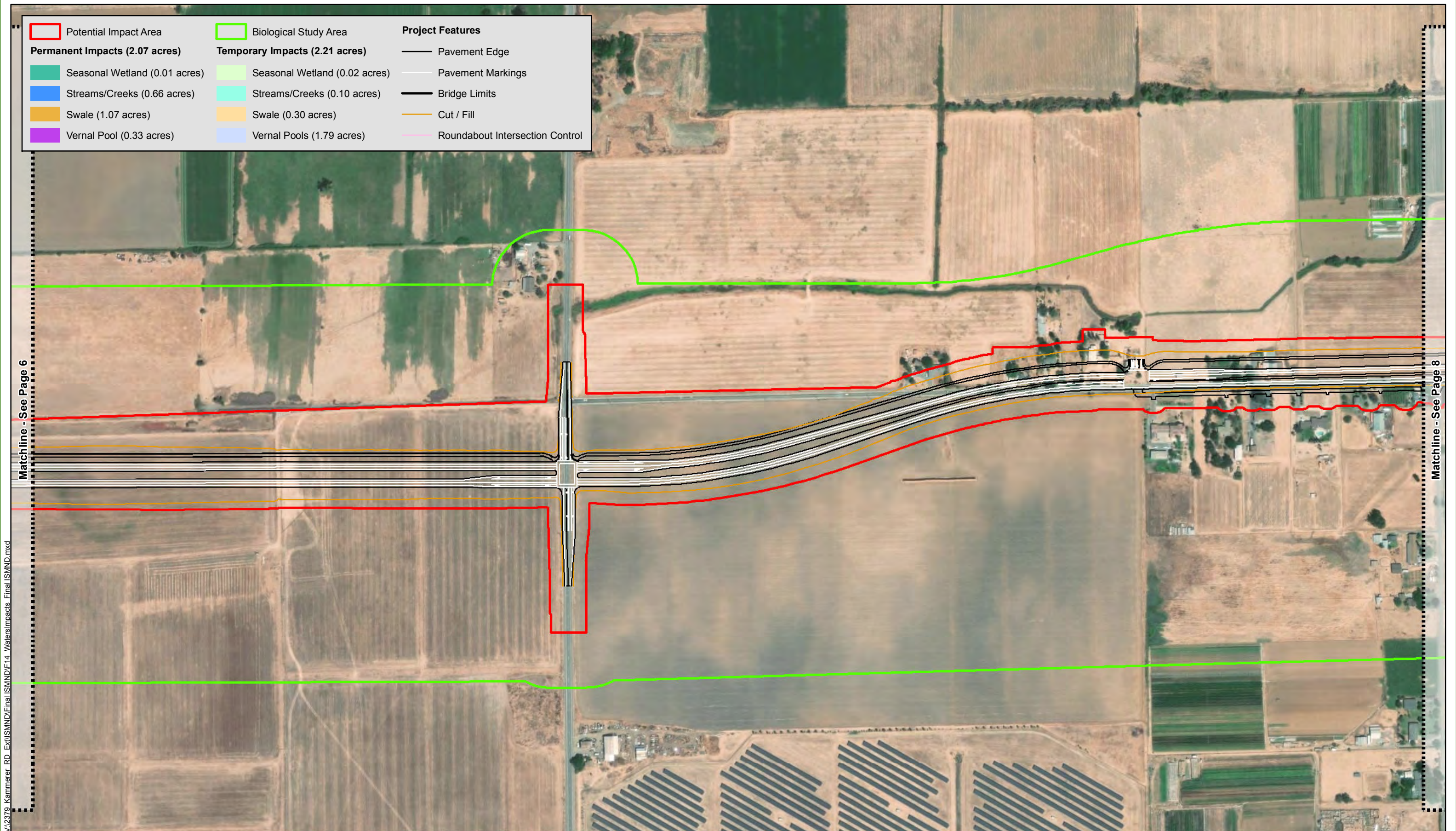


FIGURE 14
Project Impacts to Jurisdictional Features
6 of 9

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Project
City of Elk Grove and Sacramento County, California

Potential Impact Area		Biological Study Area		Project Features	
Permanent Impacts (2.07 acres)		Temporary Impacts (2.21 acres)		—	Pavement Edge
	Seasonal Wetland (0.01 acres)		Seasonal Wetland (0.02 acres)	—	Pavement Markings
	Streams/Creeks (0.66 acres)		Streams/Creeks (0.10 acres)	—	Bridge Limits
	Swale (1.07 acres)		Swale (0.30 acres)	—	Cut / Fill
	Vernal Pool (0.33 acres)		Vernal Pools (1.79 acres)	—	Roundabout Intersection Control



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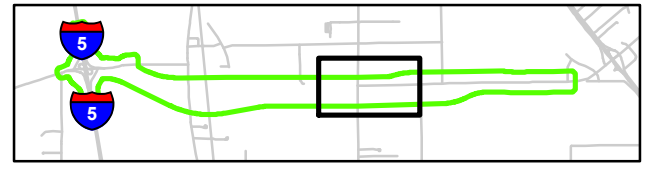
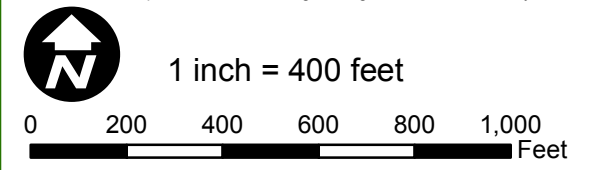
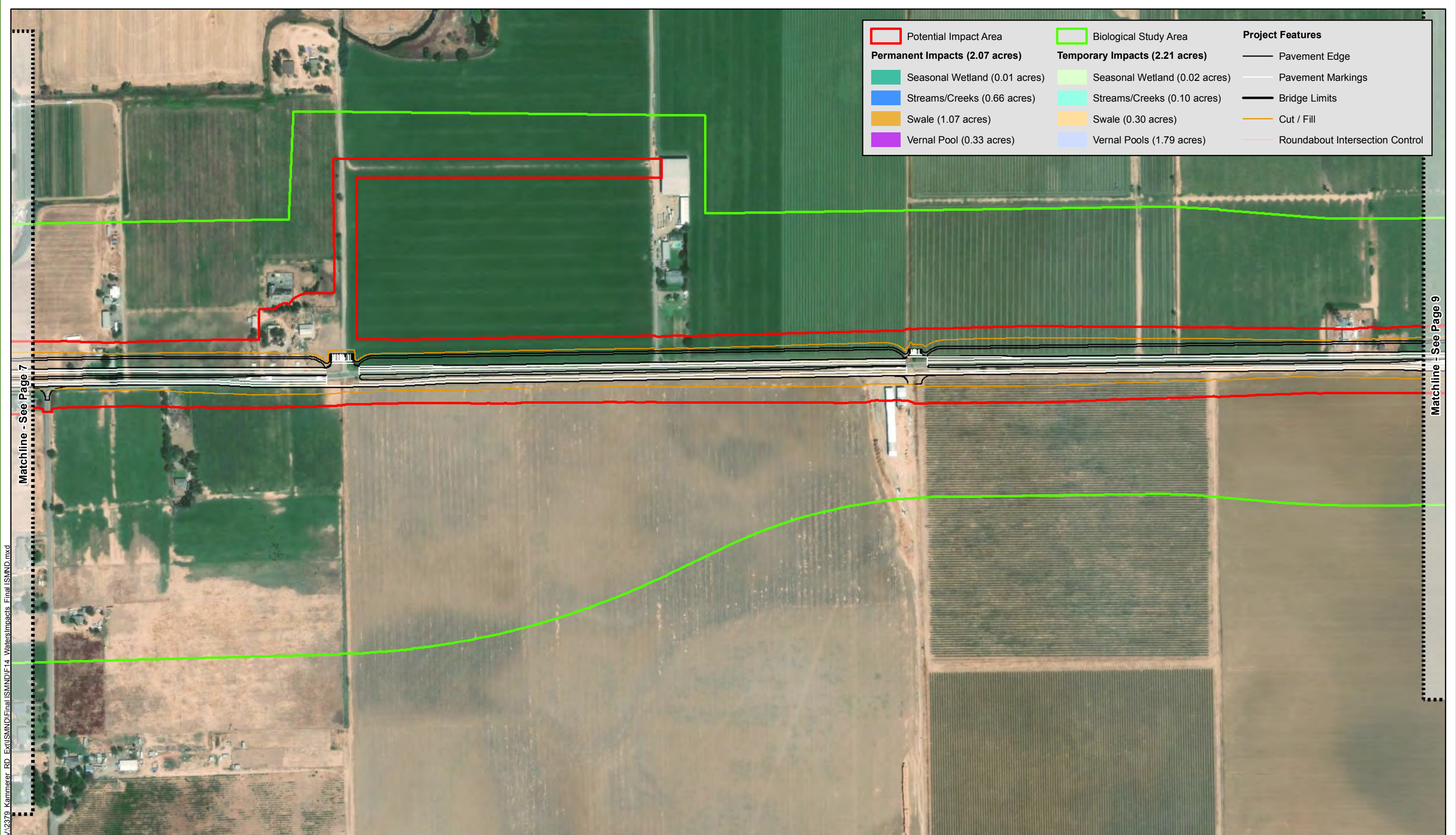


FIGURE 14
Project Impacts to Jurisdictional Features
7 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

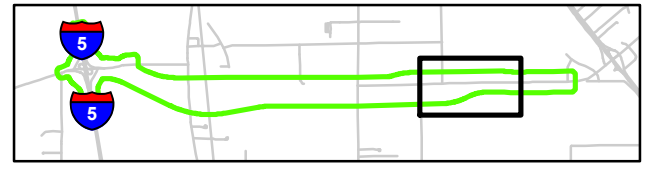
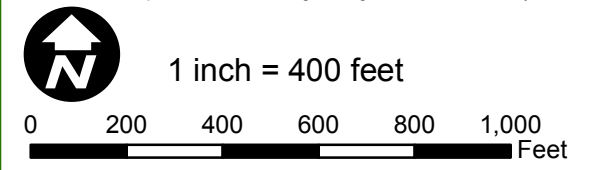
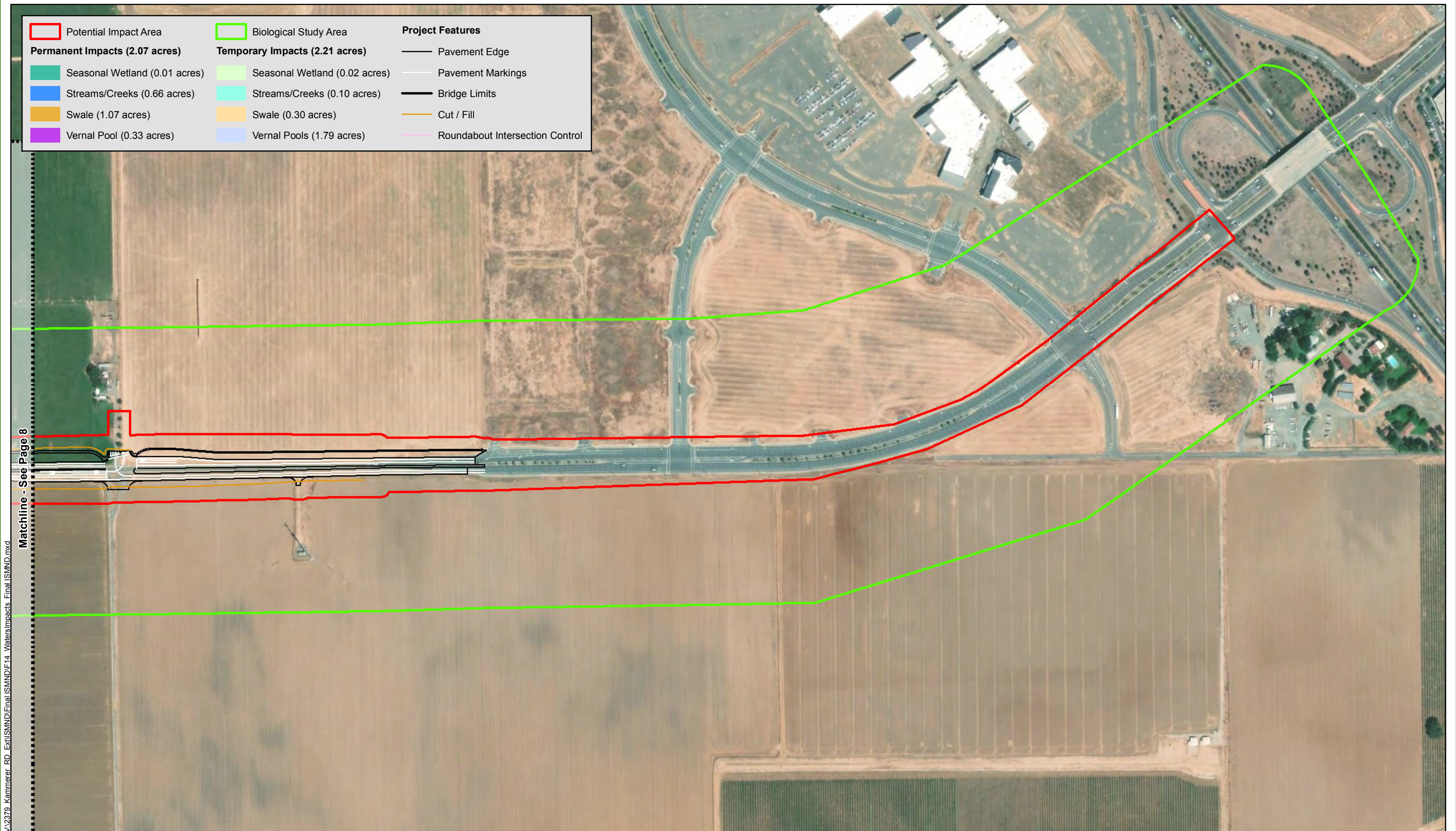


FIGURE 14
Project Impacts to Jurisdictional Features
8 of 9

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Project
City of Elk Grove and Sacramento County, California

Potential Impact Area	Biological Study Area	Project Features
Permanent Impacts (2.07 acres)	Temporary Impacts (2.21 acres)	Pavement Edge
Seasonal Wetland (0.01 acres)	Seasonal Wetland (0.02 acres)	Pavement Markings
Streams/Creeks (0.66 acres)	Streams/Creeks (0.10 acres)	Bridge Limits
Swale (1.07 acres)	Swale (0.30 acres)	Cut / Fill
Vernal Pool (0.33 acres)	Vernal Pools (1.79 acres)	Roundabout Intersection Control



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Source: ESRI Maps Online; Dokken Engineering 12/5/2018; Created By: briann

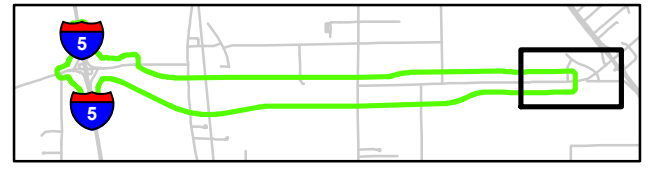
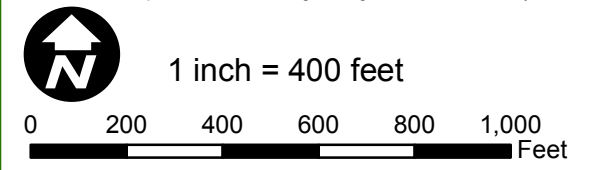


FIGURE 14
Project Impacts to Jurisdictional Features
9 of 9
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

All the aquatic features listed within the Project area are considered jurisdictional under CWA Section 404 and will require a permit through the USACE for permanent and temporary impacts due to Project implementation. Impacts to all aquatic features will also require a Water Quality Certification through the RWQCB under CWA Section 401. Aquatic features in the Project area are also subject to regulation by the CDFW under Fish and Game Code Sections 1600-1602 and impacts to these features will require approval by CDFW through a SAA.

Descriptions of aquatic communities and species that may be found in these features are in Section 2.4.1, “Natural Communities.”

ENVIRONMENTAL CONSEQUENCES

The proposed Project will result in permanent and temporary impacts to aquatic features in the Project area. These features are considered to be Waters of the U.S. and State. Permanent and temporary impacts to aquatic features resulting from the proposed Project are shown in **Figure 14** above and **Table 15**. Figure 14 and Table 15 provide impact calculations for permanent and temporary impacts for jurisdictional features specifically calculated for the permitting process with USACE, RWQCB, and CDFW. Impact calculations for SSHCP consistency are discussed in the SSHCP subsection below.

Impacts to aquatic resources would be limited to the minimum area required to construct the Project. Regulatory permits from USACE, RWQCB, and CDFW will be required for impacts to jurisdictional waters pursuant to Section 404 and 401 of the Clean Water Act and Section 1602 of the California Fish and Game Code.

Table 15. Impacts to Jurisdictional Waters

Jurisdictional Waters	Waters of the U.S.		Waters of the State	
	Permanent Impacts (Acres)	Temporary Impacts (Acres)	Permanent Impacts (Acres)	Temporary Impacts (Acres)
Freshwater Marsh	0	0	0	0
Seasonal Wetland	0.01	0.02	0.01	0.02
Seasonal Impoundment	0	0	0	0
Swale	1.07	0.30	1.07	0.30
Streams/Creeks	0.66	0.10	0.66	0.10
Vernal Pool	0.33	1.79	0.33	1.79
Open Water	0	0	0	0
TOTAL	2.07	2.12	2.07	2.12

Freshwater Marsh

Freshwater marsh is present within the BSA; however, the Project alignment does not intersect this habitat type and no impacts are anticipated.

Seasonal Wetland

Construction of the proposed Project would result in permanent and temporary impacts to seasonal wetlands as shown in **Table 15** and **Figure 14, page 6**. Temporary impacts include areas in addition to permanent impacts that would be temporarily disturbed to facilitate construction such as staging areas and access routes. Permanent impacts would be limited to approximately 0.01 acres and temporary impacts would be limited to approximately 0.02 acres of seasonal wetland adjacent to the historic course of the Shed C Channel.

Swale

The construction of the proposed Project would result in permanent and temporary impacts to swales, as shown in **Table 1** and **Figure 14, page 3**. Permanent impacts include areas that would be permanently modified by the construction of the proposed Project and generally includes areas within the limits of pavement, structures, or material fill for the Project. Temporary impacts include areas in addition to permanent impacts that would be temporarily disturbed to facilitate construction such as staging areas and access routes. Project effects to swales would be limited to 1.07 acres of permanent impacts and 0.30 acres of temporary impact to a swale that drains into the Shed C Channel.

Streams/Creeks

The construction of the proposed Project would result in permanent and temporary impacts to streams and creeks (which includes ditches), as shown in **Table 15** and **Figure 14, page 4 and 6**. Permanent impacts include areas that would be permanently modified by the construction of the proposed Project and generally includes areas within the limits of pavement, structures, or material fill for the Project. Temporary impacts include areas in addition to permanent impacts that would be temporarily disturbed during construction to facilitate construction such as staging areas and access routes. The Project would affect a segment of the Shed C Channel and two historic tributaries to the Shed C Channel that were previously diverted into irrigation canals. A total of 0.66 acres of streams and creeks would be permanently impacted and an additional 0.10 acres would be temporarily disturbed.

Vernal Pools

Permanent

The proposed Project would permanently impact 0.33 acres of vernal pools as shown in **Table 15** and **Figure 14, page 2 and 4**.

Temporary

The proposed Project would have approximately 1.79 acres of temporary impacts on vernal pools.

Mitigation measure **BIO-10** and/or **BIO-11** would provide compensatory mitigation requirements for impacts to vernal pool habitat (and special-status vernal pool species), and reduce all impacts to vernal pools to a less than significant level with mitigation incorporated.

Open Water

Open Water is present within the BSA; however, the Project alignment does not intersect this habitat type and no impacts are anticipated.

South Sacramento Habitat Conservation Plan

The proposed Project has also calculated water impacts to be consistent with the SSHCP. These impacts correlate to impacts listed in Table 15 above; however, impacts are discussed in the SSHCP in the terms of direct and indirect impacts. The SSHCP considers permanent and temporary impacts cause by the Project activities as “direct impacts.” In these terms, approximately 0.03 acres of direct impacts to seasonal wetlands, approximately 1.37 acres of direct impacts to swales, 0.76 acres of direct impacts to streams and creeks, and approximately 3.08 acres of direct impacts to vernal pools would occur due to the proposed Project.

Vernal Pool Indirect Impacts

The February 2018 circulated Final SSHCP states that modifications to the micro-watershed surrounding vernal pools indirectly affects their long-term hydrology. After reviewing vernal pools present within the BSA, it was determined that construction of the new roadway could modify the hydrology of vernal pools within the BSA located south of the Project alignment and east of I-5, resulting in approximately 0.99 acres of indirect impacts to vernal pool habitat.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

At a minimum, the Connector JPA PEIR requires avoidance, minimization, and/or mitigation measures for wetlands and waters, as explicitly stated in the Connector JPA PEIR measures BIO-5a and BIO-5b which have been incorporated into the following Project specific measures. Project specific measures in compliance with regional plans, policies, and ordinances have also been incorporated for compliance with these identified requirements. With the implementation of the following measures Project impacts to wetlands and waters would be reduced to a less than significant level:

BIO-8: Implementing agencies will avoid and minimize impacts on wetlands and other waters by implementing the following measures:

- Redesign or modify the project to avoid direct and indirect impacts on wetland habitats, including water quality run-off, if feasible.
- Protect wetland habitats that occur near the project site by installing ESA fencing at least 20 feet from the edge of the wetland where feasible. Depending on site-specific conditions and permit requirements, this buffer may be wider than 20 feet (e.g., 250 feet for seasonal wetlands and vernal pools that are considered special-status

shrimp habitat). The location of the fencing will be marked in the field with stakes and flagging and shown on construction drawings. Construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced ESA.

- Avoid installation activities in saturated or ponded wetlands during the wet season (spring and winter) to the maximum extent possible. Where such activities are unavoidable, protective practices, such as use of padding or vehicles with balloon tires, will be used.
- Where determined necessary by resource specialists, use geotextile cushions and other materials (e.g., timber pads, prefabricated equipment pads, or geotextile fabric) in saturated conditions to minimize damage to the substrate and vegetation.
- Stabilize exposed slopes and streambanks immediately on completion of installation activities. Other waters of the United States and waters of the state will be restored in a manner that encourages vegetation to reestablish to its pre-project condition and reduces the effects of erosion on the drainage system.
- In highly erodible stream systems, stabilize banks using a nonvegetative material that will bind the soil initially and break down within a few years. If the project engineers determine that more aggressive erosion control treatments are needed, use geotextile mats, excelsior blankets, or other soil stabilization products.
- During construction, remove trees, shrubs, debris, or soils that are inadvertently deposited below the ordinary high-water mark of drainages in a manner that minimizes disturbance of the drainage bed and bank.

These measures will be incorporated into contract specifications and implemented by the construction contractor. In addition, the implementing agency will ensure that the contractor incorporates all state and federal permit conditions into construction specifications.

BIO-9: Work will coincide to the driest time. If water is present at the time of construction, water will be diverted around the work area and work will resume after the site is dry. Flows will be diverted using gravity flow through temporary culverts/pipes or pumped around the work site with the use of hoses. When a temporary dam or other artificial obstruction is being constructed, maintained, or placed in operation, sufficient water will at all times be allowed to pass downstream. Any temporary dam or other artificial obstruction constructed will only be built from clean materials, such as sandbags, gravel bags, water dams, or clean/washed gravel that will cause little or no siltation.

BIO-10: If the SSHCP is not permitted when the project is ready to move into the construction phase, the implementing agency will compensate for the loss of wetland and waters to ensure there is no net loss of habitat functions and values. The compensation will be at a minimum 1:1 restoration ratio and a 1:1 preservation ratio with the mitigation being met by purchasing credits at a USACE-approved mitigation bank or other USACE-approved mitigation site. The implementing agency will prepare a comprehensive mitigation plan containing the following components: specifications for the conservation/preservation lands; the locations of the compensation lands, provisions for the management and maintenance of those lands in perpetuity by either the implementing agency or other entity, and the instruments by which long-term management and maintenance will be assured. As directed by Policy CO-60 in the Sacramento County General Plan (2011), for segments of the Connector in Sacramento

County, mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan.

Impacts to waters will be mitigated at an on or off site, agency approved location or a combination of both. Exact mitigation ratios and locations will be determined during the environmental permitting processes.

BIO-11: If the Final SSHCP is permitted prior to construction of the project, the implementing agency will provide compensatory mitigation for listed aquatic features including wetlands, vernal pools, and other compliance with the Final SSHCP mitigation ratios for wetlands and other waters.

BIO-12: All temporarily disturbed water features will be re-contoured to natural contours and vegetation will be allowed to return to pre-project conditions.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to wetlands and other waters. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to wetlands and other waters would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to wetlands and other waters.

2.4.3 Plant Species

REGULATORY SETTING

The USFWS and CDFW share regulatory responsibility for the protection of special-status plant species. Plants are considered to have special-status if they are at least one of the following: listed as endangered or threatened under FESA (16 USC, Section 1531, et seq. See also 50 CFR Part 402), or the CESA (CFG Code, Section 2050, et seq.), listed as rare under the California Native Plant Protection Act (Fish and Wildlife Code, Section 1900-1913) or by one or more special interest groups, such as the California Native Plant Society (CNPS). The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the FESA and/or the CESA. Additional information on threatened and endangered species can be found within Section 2.4.5.

AFFECTED ENVIRONMENT

The information in this section is based on information provided in the NES (MBI 2016) and the NES Revalidation (Dokken Engineering 2018) (reports bound separately).

Field Surveys

During literature searches for the Project area, several parcels were identified with the potential to contain CNPS-listed special-status plants (**Table 17**). Rare plant surveys were conducted for these parcels to assess the vegetative communities on-site, identify biological resources which may be impacted by the proposed Project, and evaluate the potential for special-status species to occur on-site. The rare plant surveys were conducted in accordance with the *General Rare Plant Guidelines* (USFWS 2002) and the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2009).

Table 16. Rare Plant Survey Dates and Associated Parcels

Date	• APNs Surveyed	
May 5, 2013	132-0262-007	
July 23, 2013	132-0262-007	132-0262-003
April 16, 2014	Public right-of-way along Kammerer Road and Bruceville Road	
April 17, 2014	132-0131-027 132-0131-028	132-0100-069 132-0100-057
May 15, 2014	132-0132-037	
May 21, 2014	132-0131-027 132-0131-028	132-0100-069 132-0100-057
June 11, 2014	132-0262-007 132-0262-003 132-0300-039	132-0151-021 132-0151-020
	Public right-of-way along Hood-Franklin Road and Franklin Boulevard	
August 26, 2014	132-0131-009	

Special-Status Plants

Seven special-status plant species were identified as having potential of occurring within the BSA in the 2016 NES including bristly sedge (*Carex comosa*), dwarf downingia (*Downingia pusilla*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), Heckard's pepper-grass (*Lepidium latipes* var. *heckardii*), Sanford's arrowhead (*Sagittaria sanfordii*), and saline clover (*Trifolium hydrophilum*). The original CNDDDB database search and USFWS IPaC Species List were updated on September 18, 2017 (see Appendix D). No new special status plant species were identified within the 9-quadrangle CNDDDB search area or by the USFWS IPaC Species List.

The seven special status plant species identified as having a potential of occurring within the Project area are found with vernal pools and other seasonal wetland habitats considered to be Jurisdictional Waters of the State. As stated in the 2016 NES, none of the species were identified during botanical surveys completed for the Project; but, all seven special status plant species are still considered to have potential of occurring within the BSA based on potentially suitable habitat and regional CNDDDB occurrences. The Project would result in both temporary and permanent impact to rare plant habitat. Avoidance and minimization measures **BIO-1**, **BIO-12** and **BIO-13**, which consist of protective measures for special-status plant species, would be implemented to minimize potential Project effects to rare plants. Measure **BIO-14** would be implemented to mitigate for loss of rare plant habitat.

Invasive Species

Based on the Cal-IPC Inventory Database, the following species were observed during biological surveys and are designated with a moderate to high invasive rating in the Great Valley and/or Sierra Nevada Provinces: Italian rye grass (*Festuca perennis*), ripgut brome (*Bromus diandrus*), yellow star thistle (*Centaurea solstitialis*), and Himalayan blackberry (*Rubus armeniacus*). These species are generally found in wetlands, ditches, annual grasslands, agricultural ponds, and along the roadside.

In addition, the County Agricultural Commission's Sacramento Weed Management Strategic Plan designates yellow star thistle and stinkwort a High Priority (Sacramento County Department of Agriculture 2010). Further, the California Department of Food and Agriculture (CDFA) designates yellow star thistle and Italian thistle a list C pest rating (CDFA 2017, CDFA 2010). Measures to prevent the spread of invasive plant species will be incorporated into the Project design. All landscaping designs for this Project will not contain invasive species in the plant selections or seed mixtures.

Table 17. Special-Status Plant Species Potential within the Project area

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	Fed: -- State: E CNPS: 1B.2	An annual herb inhabiting clay soils and shallow waters of marshes and swamps, lake margins, and vernal pools. Flowers April-August (33 - 7,792 feet).	HP	Low-Moderate Potential: The BSA does contain suitable shallow freshwater wetland and vernal pool habitat for the species. The nearest extant occurrence (1991) of the species is approximately 4 miles north from the BSA. There is no hydrological connectivity of this area to the Project area or other wetland areas within the BSA so although habitat is present, there is a low to moderate potential for the species to occur.
Bolander's water-hemlock	<i>Cicuta maculata var. bolanderi</i>	Fed: -- State: -- CNPS: 2B.1	A perennial herb inhabiting coastal marshes and swamps with fresh or brackish water. Blooms July-September (6 - 660 feet).	A	Presumed Absent: The BSA lacks suitable swamp habitat for the species; only emergent habitat exists. While just out of the blooming season, the species would have been identifiable during survey efforts.
Bristly sedge	<i>Carex comosa</i>	Fed: -- State: -- CNPS: 2B.1	A perennial herb inhabiting coastal prairies, marshes and swamps along lake margins, and valley foothill grasslands communities. Blooms May-September (0 - 2,050 feet).	HP	Low-Moderate Potential: The BSA does contain suitable freshwater wetlands and valley grasslands communities for the species, but no sign of the species was observed during the biological surveys. The nearest occurrence of the species is approximately 1 miles from the BSA within Stone Lakes NWR.
Delta mudwort	<i>Limosella australis</i>	Fed: -- State: -- CNPS: 1B.2	A perennial stoloniferous herb inhabiting low elevation muddy banks of riparian scrub, freshwater or brackish marshes and swamps, and intertidal flats. Flowers May-August (0 – 32 feet).	A	Presumed Absent: The BSA does not contain delta intertidal flats habitat for the species. The nearest extant occurrence is approximately 12 miles from the BSA.
Delta tule pea	<i>Lathyrus jepsonii var jepsonii</i>	Fed: -- State: -- CNPS: 1B.2	A perennial herb inhabiting freshwater and brackish marshes of coastal and estuarine communities. Flowers May - August (0 - 98 feet).	A	Presumed Absent: The BSA does not contain coastal marshes or estuarine communities. The nearest occurrence of the species is approximately 11 miles from the BSA.

Dwarf downingia	<i>Downingia pusilla</i>	Fed: -- State: -- CNPS: 2B.2	An annual herb inhabiting vernal pools and mesic valley and foothill grassland communities. Flowers March-May (3 - 1,460 feet).	HP	Low-Moderate Potential: The BSA does contain vernal pool and freshwater wetland habitat suitable for the species. The nearest occurrence of the species is within the BSA, but outside of the Project area, west of the I-5 Hood Franklin freeway interchange, within the Stone Lakes NWR.
Heckard's pepper-grass	<i>Lepidium latipes var. heckardii</i>	Fed: -- State: -- CNPS: 1B.2	An annual herb found in alkaline flats within valley or foothill grasslands. Flowers March-May (0 - 660 feet).	HP	Low-Moderate Potential: The BSA does contain suitable freshwater wetlands and valley grasslands communities for the species, but no sign of the species was observed during the biological surveys. The nearest occurrence of the species is approximately 1 miles from the BSA within Stone Lakes NWR.
Legenere	<i>Legenere limosa</i>	Fed: -- State: -- CNPS: 1B.1	An annual herb inhabiting wet areas, vernal pools, and ponds. Flowers May-June (0 - 2,887 feet).	HP	Low-Moderate Potential: The BSA does contain vernal pool and freshwater wetland habitat suitable for the species. The nearest occurrence of the species is within the BSA, but outside of the Project area, west of the I-5 Hood Franklin freeway interchange, within the Stone Lakes NWR.
Marsh skullcap	<i>Scutellaria galericulata</i>	Fed: -- State: -- CNPS: 2B.2	A perennial rhizomatous herb inhabiting wet sites and streambanks of lower montane coniferous forest, mesic meadows and seeps, and marsh and swamp communities. Flowers June-September (0 - 6,889 feet).	A	Presumed Absent: The BSA does not contain suitable mesic meadow or marsh/swamp communities. The nearest occurrence of the species is approximately 11 miles from the BSA.
Mason's lilaepsis	<i>Lilaeopsis masonii</i>	Fed: -- State: -- CNPS: 1B.2	A perennial rhizomatous herb found exclusively in the Sacramento-San Joaquin River Delta and San Francisco Bay. Found in low elevation freshwater and brackish marshes adjacent to surface water. Flowers June - August (0 - 100 feet).	A	Presumed Absent: The BSA does not contain suitable brackish Delta marshes for the species. The nearest occurrence of the species is approximately 12 miles from the BSA.

Northern California black walnut	<i>Juglans hindsii</i>	Fed: -- State: -- CNPS: 1B.1	-- -- 1B.1	A deciduous tree inhabiting along streams and slopes within riparian forest and riparian woodland communities. Flowers April-May (0 - 1,444 feet).	A	Presumed Absent: The BSA does contain suitable stream habitat for the species, but not the requisite river riparian habitat. A black walnut was observed; however, the individual was young and believed to be an escaped agricultural varietal. No mature black walnut individuals were observed. The nearest known sensitive population of the species is approximately 9 miles west of the BSA and this population is listed as extirpated.
Peruvian dodder	<i>Cuscuta obtusiflora</i> <i>var. glandulosa</i>	Fed: -- State: -- CNPS: 2B.2	-- -- 2B.2	An annual parasitic vine inhabiting freshwater marsh communities on herbs such as <i>Alternanthera</i> sp., <i>Dalea</i> sp., <i>Lythrum</i> sp., <i>Polygonum</i> sp., and <i>Xanthium</i> sp. Flowers July - October (49 - 1,640 feet).	A	Presumed Absent: The BSA does contain suitable shallow water marsh habitat for the species; however, none of the host species were observed. In addition, the biological survey during the blooming season didn't observe the species. There is a historic (1995) occurrence of the species approximately 5 miles from the BSA.
Sacramento Orcutt grass	<i>Orcuttia viscida</i>	Fed: E State: -- CNPS: 1B.2	E -- 1B.2	An annual herb inhabiting vernal pools. Flowers April-July (98 - 328 feet).	A	Presumed Absent: The BSA is outside the species lower elevation range. The nearest occurrence of the species is approximately 8 miles from the BSA.
Saline clover	<i>Trifolium hydrophilum</i>	Fed: -- State: -- CNPS: 1B.2	-- -- 1B.2	An annual herb inhabiting mesic, alkaline soils of salt marsh, marshes and swamps, vernal pools, and valley and foothill grasslands. Flowers April-June (0 - 1,000 feet).	HP	Low-Moderate Potential: The BSA does contain suitable freshwater wetlands, vernal pools, and valley grasslands communities for the species, but no sign of the species was observed during the biological surveys. The nearest occurrence of the species is approximately 0.25 miles from the BSA within NWR.
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	Fed: -- State: -- CNPS: 1B.2	-- -- 1B.2	A perennial rhizomatous herb inhabiting freshwater marshes, swamps, ponds and ditches. Flowers May-October (0 - 2,132 feet).	HP	Low-Moderate Potential: The BSA does contain suitable freshwater marsh habitat for the species; however, no sign of the species was observed during the October 12, 2016 surveys. The nearest recent occurrence of the species is approximately less than 1 mile from the BSA.

Side-flowering skullcap	<i>Scutellaria lateriflora</i>	Fed: State CNPS:	-- -- 2B.2	A perennial rhizomatous herb inhabiting mesic meadow and seeps and marsh and swamp communities. Known in California from only three occurrences in the Sacramento-San Joaquin Delta. Flowers July (0 - 1,640 feet).	A	Presumed Absent: The BSA does not contain suitable marsh and swamp communities. However, the BSA is outside of the known extant of the species range within the Sacramento-San Joaquin Delta, and the nearest occurrence is approximately 10 miles.
Slender Orcutt grass	<i>Orcuttia tenuis</i>	Fed: State CNPS:	T E 1B.1	An annual herb inhabiting vernal pools, often within gravelly soils. Flowers May-October (115 - 5,774 feet).	HP	Presumed Absent: The BSA does contain suitable vernal pool habitat for the species; however, the Project site is outside the elevational range of the species.
Succulent owl's clover	<i>Castilleja campestris</i> var. <i>succulenta</i>	Fed: State CNPS:	T E 1B.2	An annual hemiparasitic herb inhabiting vernal pool communities, often within acidic soils. Flowers April- May (150 - 2,640 feet).	HP	Presumed Absent: The BSA does contain suitable vernal pool habitat for the species. However, the species has not been recorded within the Sacramento region, and the BSA is below the low elevation range for the species. The nearest CNDDDB occurrence is approximately 12 miles from the BSA.
Suisun marsh aster	<i>Symphiotrichum lentum</i>	Fed: State CNPS:	-- -- 1B.2	A perennial rhizomatous herb inhabiting wetlands, freshwater marsh, and brackish-marsh communities. Flowers May-November (0 - 984 feet).	A	Presumed Absent: The BSA does not contain suitable marsh and swamp communities. The nearest know CNDDDB occurrence is approximately 9 miles from the Project BSA.
Watershield	<i>Brasenia schreberi</i>	Fed: State CNPS:	-- -- 2B.3	A perennial rhizomatous aquatic herb inhabiting ponds, slow streams and freshwater marsh and swamp communities. Flowers June-September (98 - 7,217 feet).	HP	Presumed Absent: The BSA does contain slow stream habitat suitable for the species. However, the BSA is below the species lower elevation range.
Woolly rose-mallow	<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	Fed: State: CNPS:	-- -- 1B.2	A perennial rhizomatous herb inhabiting freshwater wetlands, wet banks, and marsh communities. Often found in-between riprap on levees. Flowers June-September (0 - 394 feet).	A	Presumed Absent: The BSA does contain suitable freshwater wetland habitat for the species; however, the species is associated with the delta watershed, which is not present within the BSA. The nearest extant occurrence is approximately 2 miles from the BSA within the Stone Lakes NWR within the Delta watershed.

<p>Federal Designations (Fed): (FESA, USFWS) E: Federally listed, endangered T: Federally listed, threatened CT: Federal candidate, threatened PT: Federally proposed, threatened</p>	<p>State Designations (CA): (CESA, CDFW) E: State-listed, endangered T: State-listed, threatened CT: State-candidate, threatened CE: State-candidate, endangered</p>
<p>California Native Plant Society (CNPS) Designations: <i>*Note: according to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code. This interpretation is inconsistent with other definitions.</i> 1A: Plants presumed extinct in California. 1B: Plants rare and endangered in California and throughout their range. 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range. 3: Plants about which need more information; a review list. Plants 1, 2, and 3 extension meanings: _1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat) _2 Fairly endangered in California (20-80% occurrences threatened) _3 Not very endangered in California (<20% of occurrences threatened or no current threats known)</p>	
<p>Habitat Potential Absent [A] - No habitat present and no further work needed. Habitat Present [HP] - Habitat is, or may be present. The species may be present. Critical Habitat [CH] – Project is within designated Critical Habitat.</p>	
<p>Potential for Occurrence Criteria: Present: Species was observed on site during a site visit or focused survey. High: Habitat (including soils and elevation factors) for the species occurs on site and a known occurrence has been recorded within 5 miles of the site. Low-Moderate: Either low quality habitat (including soils and elevation factors) for the species occurs on site and a known occurrence exists within 5 miles of the site; or suitable habitat strongly associated with the species occurs on site, but no records were found within the database search. Presumed Absent: Focused surveys were conducted and the species was not found, or species was found within the database search but habitat (including soils and elevation factors) do not exist on site, or the known geographic range of the species does not include the survey area.</p>	
<p>Sources: CNPS 2017, CNDDDB 2017,</p>	

ENVIRONMENTAL CONSEQUENCES

Direct Impacts

Permanent impacts to non-listed plants in the Project area may occur through the direct loss of vegetation from the construction of the Project. Temporary impacts to non-listed plants in the Project area may result from equipment staging in temporary construction zones, erosion from soil disturbance, or other potential impacts associated with construction activities.

Only one state-listed species (Boggs lake hedge-hyssop) has the potential to occur within the BSA. No federal-listed plant species are expected to occur in the Project area. Although all seven CNPS-listed special-status plant species were identified with the potential to occur in the Project area, no specimen of any listed or non-listed species were discovered during any of the rare plant surveys. Therefore, the proposed Project is not expected to impact any special-status plants.

However, if special-status plants were to occur in the Project area, they would be located within the wetlands and vernal pools of the Project area. A summary of the impacts to the wetland and vernal pool features in the Project area are discussed in Section 2.4.2, "Wetlands and Other Waters." Potential impacts to these features have avoidance, minimization, and mitigation measures which will also provide protections to special-status plant species in those habitats, should they occur.

Indirect Impacts

The proposed Project may cause indirect impacts to plant species in the Project area as a result of habitat fragmentation or changes in hydrology. Hydrologic changes may indirectly affect water availability to certain areas and aquatic features in the Project area that provide habitat for potentially occurring special-status plants.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

At a minimum, the Connector JPA PEIR requires avoidance, minimization, and/or mitigation measures for special status plant species, as explicitly stated in the Connector JPA PEIR measures BIO-2a, BIO-2b, and BIO-3, which have been incorporated into the following Project specific measures. Project specific measures in compliance with regional plans, policies, and ordinances have also been incorporated for compliance with these identified requirements. With the implementation of the following measures Project impacts to special status plant species would be reduced to a less than significant level:

BIO-13: The implementing agency will avoid and minimize impacts to special status plant populations to the greatest extent practicable by implementing the following measures:

- Redesign or modify the project to avoid or minimize direct and indirect impacts on special-status plants.
- Avoid or minimize construction impacts on special-status plants near the project site by installing environmentally sensitive area fencing (orange construction barrier

fencing) around special-status plant populations at least 20 feet from the edge of the population. Wider buffer zone widths set by site-specific conditions and permit requirements, such as those for seasonal wetlands and vernal pools that are considered special-status shrimp habitat, will take precedence over this requirement. The location of the fencing will be marked in the field with stakes and flagging and shown on construction drawings. Construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.

BIO-14: Prior to construction, the project biologist will conduct pre-construction blooming clearance surveys in areas of direct impacts for the following sensitive plant species in their respective wetland habitats:

- Boggs Lake hedge-hyssop: Surveys must be conducted between the months of April and August.
- Bristly sedge: Surveys must be conducted between the months of July and September.
- Dwarf downingia: Surveys must be conducted between the months of March and May.
- Heckard's pepper-grass: Surveys must be conducted between the months of March and May.
- Legenere: Surveys must be conducted between the months of May and June.
- Saline clover: Surveys must be conducted between the months of April and June.
- Sanford's arrowhead: Surveys must be conducted between the months of May and October.

BIO-15: If Boggs Lake hedge hyssop, Bristly sedge, dwarf downingia, Heckard's pepper-grass, legenere, saline clover, and Sanford's arrowhead cannot be avoided, the implementing agency will compensate for the loss of plants and their habitat by contributing to the conservation and recovery of the affected species. For each special-status plant occurrence impacted, one occurrence of the same species of a similar or greater size will be preserved (to compensate for temporal habitat loss). For impacts on special-status plants, a mitigation and monitoring plan will be prepared that describes how the loss of special-status plant species will be compensated for. The mitigation and monitoring plan will be reviewed and approved by CDFW and USFWS. The plan shall contain, but is not limited to, the following performance standards:

- Habitat restoration or establishment, where appropriate and feasible, will be used in conjunction with translocating the affected population.
- As directed by Policy CO-60 in the Sacramento County General Plan (2011), for segments of the Connector in Sacramento County, mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan or areas specifically identified in the Final SSHCP, when permits are available.
- Habitat will be restored or newly established (on or off site) at a minimum ratio of 1:1 (1 acre restored for each acre impacted).
- The mitigation site will be monitored the first year after the mitigation is implemented and every 5 years thereafter, until the mitigation is considered to be successful. Mitigation will be considered successful if the translocated population is determined

to be stable and contains at least 60% of the number of plants present in the original occurrence. If the population falls below 60% of the original number of plants, then remediation measures will be initiated.

Because special-status species in the project area are state or federally listed or occur in wetlands, the Project will have to comply with state and federal laws and regulations governing these resources, and obtain the applicable take or fill permits. These permits may include specific requirements, including compensation measures and ratios, which will take precedence over the measures and ratios specified in the previous paragraph.

BIO-16: The project will implement the following measures into the project plans and specifications:

- Use certified, weed-free, imported erosion-control materials (or rice straw in upland areas).
- Coordinate with the applicable County Agricultural Commissioner and land management agencies to ensure that the appropriate best management practices (BMPs) are implemented.
- Educate construction supervisors and managers on weed identification and the importance of controlling and preventing the spread of noxious weeds.

BIO-17: Prior to arrival at the project site and prior to leaving the project site, the construction contractor must clean all construction equipment that may contain invasive plants and/or seeds to reduce the spreading of noxious weeds.

BIO-18: Should the Final SSHCP permits be available prior to construction of the project, the implementing agency will provide compensatory mitigation as required by the approved SSHCP mitigation ratios for special status plant species modeled habitat.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to special status plant species. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to special status plant species would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to special status plant species.

2.4.4 Animal Species

REGULATORY SETTING

Many state and federal laws regulate impacts to sensitive wildlife. The USFWS, the National Oceanic and Atmospheric Administration (NOAA) Fisheries and the CDFW are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated special-status wildlife and migratory birds. Wildlife is considered to have special-status if they are listed as endangered or threatened under FESA (16 USC, Section 1531, et seq. See also 50 CFR Part 402), CESA (CFG Code, Section 2050, et seq.), or are designated Fully Protected or a Species of Special Concern (SSC). Species listed or proposed for listing as threatened or endangered under FESA and/or CESA are discussed in Section 2.4.5.

Federal laws and regulations pertaining to wildlife include the following:

- FESA
- National Environmental Policy Act
- Executive Order 13186 (Migratory Bird Treaty Act [MBTA])
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- CESA
- CEQA
- CFG Code Sections 1600 – 1603 (SAA)
- CFG Code Section 4150 and 4152 (Nongame Mammals)
- CFG Code Sections 3503 and 3503.5 (Birds and Raptors)
- CFG Code Sections 3513 (Migratory Birds)
- Additional local regulations protecting wildlife are outlined in Section 2.4, “Biological Resources”.

AFFECTED ENVIRONMENT

The information in this section is based on information provided in the NES (MBI 2016) and the NES Revalidation (Dokken Engineering 2018) (reports bound separately).

Updated species lists were obtained from USFWS, CNDDDB, and NMFS on September 18, 2017 (see Appendix D). Since the approval of the 2016 NES, a new species occurrence of California black rail (*Laterallus jamaicensis coturniculus*) was recorded within the 9-Quad CNDDDB search area approximately 1 mile from the BSA within the Stone Lakes Wildlife Refuge.

California black rail is listed as Threatened under the California Endangered Species Act and is Fully Protected by Fish and Game Code Section 3511. California black rail is a rare yearlong resident of brackish, and fresh emergent wetlands in delta and coastal locations, and isolated population in the Sierra Foothills. The species occurs in tidal emergent wetlands dominated by pickleweed, in brackish marshes dominated by bulrushes with pickleweed and in freshwater wetlands dominated by bulrushes, cattails, and saltgrass and requires adequate vegetative cover for nesting. Eggs are laid March-July. The BSA does not contain large emergent wetlands with the type of dense vegetation required by the species. No suitable habitat for the species is present within the BSA and the species is presumed absent from the BSA. No other new animal species

were identified by the September 2017 CNDDDB, NMFS, or USFWS database searches. Revised Project impact discussions for species previously identified as having potential of occurring within the BSA are included below.

Field Surveys and Technical Reports

A list of special-status wildlife and habitats that have the potential to occur within the Project area or vicinity was prepared using information obtained from the USFWS (USFWS 2017a) Sacramento office's Species Lists, the USFWS Critical Habitat Portal (USFWS 2017b), the CDFW CNDDDB (CDFW 2017), and the CNPS Inventory of Rare and Endangered Plants of California (CNPS 2017).

Habitat and site assessments were conducted within the Project area on April 16, May 15, May 21, June 13, and August 26, 2014, to assess the vegetative communities on-site, identify biological resources which may be impacted by the proposed Project, and evaluate the potential for special-status species to occur on-site.

Protocol-level surveys were conducted for the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB) within a 100-foot buffer of the Project footprint on April 16, May 15, May 21, June 13, August 26, and October 28, 2014. Surveys were in accordance with the USFWS (1999a) Conservation Guidelines for the Valley Elderberry Longhorn Beetle. Therefore, all shrubs or clumps within the Project footprint and within a 100-foot buffer of the Project footprint were surveyed.

A giant garter snake habitat assessment was conducted on August 21, 2015, by giant garter snake specialist Eric Hansen. The assessment was conducted in the vicinity of the man-made channel east of Bruceville Road, north of Kammerer Road. The assessment was conducted by walking the channel to determine if giant garter snake habitat was present and looking at the surrounding areas, including aquatic habitat west of Bruceville Road, to determine habitat connectivity in the area. A Giant Garter Snake Habitat and Impact Assessment was prepared by Eric Hansen on November 10, 2015 (MBI 2015).

A list of special-status animals identified in the database searches and their habitat descriptions are in **Table 18**. The table describes the species listed, habitat required, and determination of whether the species may occur in the Project area.

Based on information from the database searches and site visits, 6 California SSC and 1 fully protected species have the potential to occur in the Project area. In addition, 4 threatened and/or endangered species were determined to have the potential to occur with the BSA. These species are discussed in Section 2.4.5. "Threatened and Endangered Species".

Table 18. Special-Status Wildlife Species with Potential to Occur in the Project Vicinity

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale	
Amphibian Species						
California red-legged frog	<i>Rana draytonii</i>	Fed: State: CDFW:	T -- SSC	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development and must have access to estivation habitat; estivation occurs late summer-early winter. Breeds from March-July January-July Occurs from elevations near sea level to 5,200 feet.	A	Presumed Absent: The BSA does not have suitable permanent deep water habitat for the species. The nearest presumed extant occurrence of the species is approximately 30 miles from the BSA.
California tiger salamander	<i>Ambystoma californiense</i>	Fed: State: CDFW:	T T SSC	Inhabits valley grasslands and the grassy understory of valley-foothill hardwood communities. Requires underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	A	Presumed Absent: The BSA does have suitable valley grassland habitat for the species. However, no recent or historical occurrences of the species are within the vicinity of the BSA. Additionally, the nearest presumed extant occurrence is approximately 13 miles from the BSA.
Foothill yellow-legged frog	<i>Rana boylei</i>	Fed: State: CDFW:	CT -- SSC	Inhabits shallow streams and riffles with rocky substrate and open, sunny banks in a variety of habitats including chaparral and woodland forests. Tadpoles require water for at least three or four months to complete development. Breeds March - May and occurs from elevations near sea level to 6,700 feet.	A	Presumed Absent: The BSA does not contain suitable chaparral or woodland stream habitats. Additionally, no recent or historical occurrences of the species are within the vicinity of the BSA. The nearest presumed extant occurrence is approximately 40 miles from the BSA.
Bird Species						
Burrowing owl	<i>Athene cunicularia</i>	Fed: State: CDFW:	-- -- SSC	Species inhabits arid, open areas with sparse vegetation cover such as deserts, abandoned agricultural areas, grasslands, and disturbed open habitats. Requires friable soils for burrow construction (Below 5,300 feet).	HP	High Potential: The BSA does contain potential suitable habitat for the species. The nearest recent (2010) occurrence is within the BSA. The species is considered to have a high potential of occurring within the

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
						BSA due to the presence of suitable habitat and recent local occurrences.
California black rail	<i>Laterallus jamaicensis coturniculus</i>	Fed: State: CDFW:	T -- FP	A rare yearlong California resident of brackish, and fresh emergent wetlands in delta and coastal locations, including the San Francisco Bay area, Sacramento-San Joaquin Delta, Morro Bay, the Salton Sea, and lower Colorado River; extirpated from San Diego County and the majority of coastal southern California. Occurs in tidal emergent wetlands dominated by pickleweed, in brackish marshes dominated by bulrushes with pickleweed and in freshwater wetlands dominated by bulrushes, cattails, and saltgrass. Species prefers high wetland areas, away from areas experiencing fluctuating water levels. Requires vegetation providing adequate overhead cover for nesting. Eggs are laid March-June.	A	Presumed Absent: The BSA does contain potential suitable freshwater wetland habitat for the species; however, these wetland areas are generally small and within moderately disturbed agricultural areas. The species is generally found within large tracks of emergent wetland areas and prefer none disturbed habitats. The nearest recent (2015) occurrence is approximately 1 miles from the BSA; however, this occurrence is within a large emergent wetland area of the Stone Lakes NWR, where none to low levels of disturbance occur. Due to the lack of specific habitat requirements and limited occurrence records, the species is presumed absent from the BSA.
Song sparrow ("Modesto" population)	<i>Melospiza melodia</i>	Fed: State: CDFW:	-- -- SSC	An endemic bird found exclusively in the north-central portion of the Central Valley, with highest densities in the Butte Sink and Sacramento-San Joaquin River Delta. The species is usually found in open brushy habitats, along the borders of ponds or streams, abandoned pastures, desert washes, thickets, or woodland edges. In addition, there is a strong affinity for emergent freshwater marshes dominated by tules and cattails, riparian willow thickets, and valley oak forests with a blackberry understory.	HP	Low-Moderate Potential: The BSA does contain potential suitable habitat for the species, including fresh emergent wetland areas along the agricultural drainage ditches. These habitats are moderately dense and are dominated by tules and cattails, which the species is known to inhabit for nesting and foraging. The nearest recent (2009) occurrence is approximately 1 mile from the BSA. The species is considered to have a low to

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
			Breeds from March through August. Nest found in base of shrubs or clumps of grass.		moderate potential to occur due to the presence of suitable habitat.
Swainson's hawk	<i>Buteo swainsoni</i>	Fed: -- State: T CDFW: --	Inhabits grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, alfalfa or grain fields that support a stable rodent prey base. Breeds March to late August.	HP	High Potential: The BSA does have potential suitable foraging habitat for the species. There are multiple (20+) recent occurrences within the area, with the nearest occurrence within the BSA just west of Bruceville Road. The species is considered to have a high potential to occur within the BSA.
Tricolored blackbird	<i>Agelaius tricolor</i>	Fed: -- State: T CDFW: SSC	Inhabits freshwater marsh, swamp and wetland communities, but may utilize agricultural or upland habitats that can support large colonies, often in the Central Valley area. Requires dense nesting habitat that is protected from predators, is within 3-5 miles from a suitable foraging area containing insect prey and is within 0.3 miles of open water. Suitable foraging includes wetland, pastureland, rangeland, at dairy farms, and some irrigated croplands (silage, alfalfa, etc.). Nests mid-March - early August, but may extend until October/November in the Sacramento Valley region.	HP	Low-Moderate Potential: The BSA does have suitable foraging and nesting habitat for the species. The nearest recent (2015) CNDDDB occurrence of the species is approximately 1 mile from the BSA. Due to the presence of suitable habitat and recent occurrences within the vicinity, the species is considered to have a low to moderate potential of occurring within the BSA.
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	Fed: T State: E CDFW: --	Species inhabits riparian forests, along broad, lower flood bottoms of larger river systems. Nests in large blocks of riparian jungles often mixed with cottonwoods. Nesting appears to be preferred in riparian forest habitats with a dense understory; requires water near nesting site. Breeds June- August.	A	Presumed Absent: The BSA does not have suitable dense riparian forest habitat for the species. The nearest CNDDDB occurrence is approximately 8 miles from the BSA. Due to the lack of suitable habitat within the BSA, the species is presumed absent.

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
White-tailed kite	<i>Elanus leucurus</i>	Fed: -- State: -- CDFW: FP	Inhabits rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Prefers open grasslands, meadows or marshes for foraging close to isolated, dense-topped trees for nesting and perching. Breeds February- October.	HP	Low-Moderate Potential: The BSA contains suitable open grassland foraging habitat and potential scattered nesting trees are present. The nearest occurrence (2017) is approximately 2 miles from the BSA. Due to the presence of suitable habitat and the recent close proximity occurrence the species is considered to have a low to moderate potential to occur within the BSA.
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	Fed: -- State: -- CDFW: SSC	Occurs primarily as a migrant and summer resident from April to early October. The species almost exclusively nests in marshes with dense tall emergent vegetation such as tules (<i>Scirpus</i> sp.) or cattails (<i>Typha</i> sp.), in open areas and edges over water at depths typically ranging from 1-4 feet deep. Frequently breeds within marshes, edges of lakes, reservoirs, or larger ponds. Breeds from April-July.	HP	Low-Moderate Potential: The BSA does contain suitable foraging habitat of emergent wetland areas with tules and cattails, but this vegetation is not as dense or in as large of patches as they typically prefer. The most recent occurrence is approximately 3 miles from eastern terminus of the BSA within the Consumes River Preserve (ebird.com 2017). Additionally, there are scattered occurrences to the south and west of the BSA, within the Stone Lakes NWR. Due to the presence of suitable habitat and the multiple occurrences surrounding the BSA, the species is considered to have a low to moderate potential to occur within the BSA.
Fish Species					
Central Valley Steelhead	<i>Oncorhynchus mykiss irideus</i>	Fed: T State: -- CDFW: --	Spawning occurs in small tributaries on coarse gravel beds in riffle areas. Central Valley steelhead are found in the Sacramento River system; the principal remaining wild populations spawn	A	Presumed Absent: The BSA does not contain suitable habitat for the species. The species does not populate the Shed C Channel or

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				annually in Deer and Mill Creeks in Tehama County, in the lower Yuba River, a small population in the lower Stanislaus River.		other streams or creeks within the BSA.
Delta smelt	<i>Hypomesus tanspacificus</i>	Fed: State: CDFW:	T -- --	Occurs within the Sacramento-San Joaquin Delta and seasonally within the Suisun Bay, Carquinez Strait and San Pablo Bay. Most often occurs in partially saline waters.	A	Presumed Absent: The BSA does not contain suitable saline waters for the species, and it was confirmed through CNDDDB that the BSA is outside the range of the species.
Longfin smelt	<i>Spirinchus thaleichthys</i>	Fed: State: CDFW:	C T SSC	Within California, occurs slightly upstream from Rio Vista (on the Sacramento River in the Delta) including the Cache Slough region and Medford Island (on the San Joaquin River in the Delta) through Suisun Bay and Suisun Marsh, the San Pablo Bay, the main San Francisco Bay, South San Francisco Bay, the Gulf of the Farallones, Humboldt Bay, Eel river estuary, and local coastal areas. Primarily an anadromous estuarine species that can tolerate salinities ranging from freshwater to nearly pure seawater. Prefers temperatures in the range of 16-18°C and salinities ranging from 15-30 ppt. Their spatial distribution within a bay or estuary is seasonally variable. Longfin smelt may also make daily migrations; remaining deep during the day and rising to the surface at night.	A	Presumed Absent: The BSA does not contain suitable saline waters for the species, and it was confirmed through CNDDDB that the BSA is outside the range of the species.

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	Fed: -- State: -- CDFW: SSC	Historically inhabited low moving rivers, sloughs, and alkaline lakes of the Central Valley; now restricted to the Delta, Suisun Bay and associated marshes. Species is adapted to fluctuating environments with tolerance to water salinities from 10-18 ppt., low oxygen levels (< 1.0 mg/L) and temperatures of 41-75°F. Spawns late February- early July, with a peak in March-April; requires flooded vegetation for spawning activity and protective cover for young.	A	Presumed Absent: The BSA does not contain suitable habitat for the species. The species is known to occur within the Sacramento River. The BSA does not contain any areas with connection to the Sacramento River.
Invertebrate Species					
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	Fed: T State: -- CDFW: --	Species requires elderberry shrubs as host plants. Typically occurs in moist valley oak woodlands associated with riparian corridors in the lower Sacramento River and upper San Joaquin River drainages. (Sea level-3,000ft)	A	Presumed Absent: A single elderberry shrub was identified within the BSA; no exit holes were observed. No suitable habitat other than the one elderberry shrub was observed within the BSA. No known metapopulations are within the Project vicinity, and the nearest recent extant occurrence is approximately 12.5 miles north of the BSA. Approved in November 2016, the United States Fish and Wildlife Service (USFWS) has published the <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (USFWS 2017). In accordance with the new Framework, the single elderberry shrub is not considered to be VELB habitat and VELB is presumed absent from the BSA.

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	Fed: T State: -- CDFW: --	In California, species inhabits portions of Tehama county, south through the Central Valley, and scattered locations in Riverside County and the Coast Ranges. Species is associated with smaller and shallower cool-water vernal pools approximately 6 inches deep and short periods of inundation. In the southernmost extremes of the range, the species occurs in large, deep cool-water pools. Inhabited pools have low to moderate levels of alkalinity and total dissolved solids. The shrimp are temperature sensitive, requiring pools below 50 F to hatch and dying within pools reaching 75 F. Young emerge during cold-weather winter storms.	HP	Low-Moderate Potential: The BSA does contain vernal pool habitat. The nearest occurrence of the species is a 1997 record in the Stone Lakes NWR easement, approximately 0.5 mile north of Hood Franklin Road, east of I-5. Due to the presence of suitable habitat and the close proximity of the occurrence, the species is considered to have a low to moderate potential of occurring within the BA. For the purposes of Section 7 consultation, presence was assumed and a Biological Opinion was issued in December 2016.
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	Fed: E State: -- CDFW: --	Inhabits vernal pools and swales containing clear to highly turbid waters such as pools located in grass bottomed swales of unplowed grasslands, old alluvial soils underlain by hardpan, and mud-bottomed pools with highly turbid water.	HP	Low-Moderate Potential: The BSA does contain vernal pool habitat. The nearest occurrence of the species is a 2003 record in the Stone Lakes NWR easement, approximately 0.5 mile north of Hood Franklin Road, east of I-5. Due to the presence of suitable habitat and the close proximity of the occurrence, the species is considered to have a low to moderate potential of occurring within the BSA. For the purposes of Section 7 consultation, presence was assumed and a Biological Opinion was issued in December 2016.

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Mammal Species					
American badger	<i>Taxidea taxus</i>	Fed: -- State: -- CDFW: SSC	Prefers treeless, dry, open stages of most shrub and herbaceous habitats with friable soils and a supply of rodent prey. Species also inhabits forest glades and meadows, marshes, brushy areas, hot deserts, and mountain meadows. Species maintains burrows within home ranges estimated between 338-1,700 acres, dependent on seasonal activity. Burrows are frequently re-used, but new burrows may be created nightly. Young are born in March and April within burrows dug in relatively dry, often sandy, soil, usually in areas with sparse overstory cover. Species is somewhat tolerant of human activity, but is sensitive to automobile mortality, trapping, and persistent poisons (up to 12,000 feet).	HP	Presumed Absent: The BSA does contain suitable grassland habitat for the species, however the BSA is dominated by agricultural activities where persistent poisoning has historically take place. The nearest presumed extant occurrence is approximately 11 miles from the BSA, and the home range for the species is estimated between 338-1,700 acres. Due to the location of the BSA within highly agricultural lands and the distant to the nearest extant occurrence, the species is presumed absent from the BSA.
Western red bat	<i>Lasiurus blossevillii</i>	Fed: -- State: -- CDFW: SSC	Species roosts primarily in trees (2-40ft) protected from above with open areas below for foraging and near edge habitats adjacent to streams, fields or urban areas.	HP	Low-Moderate Potential: The BSA does contain potentially suitable roosting habitat. The nearest occurrence (1999) of the species is approximately 13 miles from the BSA. Due to the presence of suitable habitat, and the distance to the nearest occurrence, the species is considered to have a low to moderate potential of occurring.
Reptile Species					
Giant garter snake	<i>Thamnophis gigas</i>	Fed: T State: T CDFW: --	Inhabits marsh, swamp, wetland (including agricultural wetlands), sloughs, ponds, rice fields, low gradient streams and irrigation/drainage canals adjacent to uplands. Species requires adequate water during the active season (April-November), emergent, herbaceous	HP	Low-Moderate Potential: The BSA does contain potentially suitable wetland and upland habitat. The nearest occurrence (2002) of the species is approximately 1.5 miles from the BSA, as well as multiple historic occurrences within the

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat and mammal burrows estivation. Requires grassy banks and openings in waterside vegetation for basking and higher elevation uplands for cover and refuge from flood waters during winter dormant season.		Stone Lakes NWR. Due to the presence of suitable habitat, along with recent and historic occurrences in the Project vicinity, the species is considered to have a low to moderate potential to occur. Section 7 consultation was conducted and a Biological Opinion was issued in December 2016, which concluded that the Project may affect, but not likely to adversely affect GGS.
Western pond turtle	<i>Emys marmorata</i>	Fed: -- State: -- CDFW: SSC		A fully aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat (sandy banks or grassy open field) for reproduction (sea level to 4,690 feet).	HP	Low-Moderate Potential: The BSA does contain suitable irrigation and stream habitat with aquatic vegetation for the species. The nearest occurrence (2003) of the species is approximately 1.5 miles from the BSA within the Stone Lakes NWR. Due to the presence of suitable habitat and the close proximity of the recent occurrence, the species is considered to have a low to moderate potential to occur within the BSA.

<p>Federal Designations (Fed): (FESA, USFWS) E: Federally listed, endangered T: Federally listed, threatened CT: Federal candidate, threatened PT: Federally proposed, threatened</p>	<p>State Designations (CA): (CESA, CDFW) E: State-listed, endangered T: State-listed, threatened CT: State-candidate, threatened CE: State-candidate, endangered</p>
<p>Other Designations CDFW_SSC: CDFW Species of Special Concern CDFW_FP: CDFW Fully Protected California Native Plant Society (CNPS) Designations: <i>*Note: according to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code. This interpretation is inconsistent with other definitions.</i> 1A: Plants presumed extinct in California. 1B: Plants rare and endangered in California and throughout their range. 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range. 3: Plants about which need more information; a review list. Plants 1, 2, and 3 extension meanings: _1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat) _2 Fairly endangered in California (20-80% occurrences threatened) _3 Not very endangered in California (<20% of occurrences threatened or no current threats known)</p>	
<p>Habitat Potential Absent [A] - No habitat present and no further work needed. Habitat Present [HP] - Habitat is, or may be present. The species may be present. Critical Habitat [CH] – Project is within designated Critical Habitat.</p>	
<p>Potential for Occurrence Criteria: Present: Species was observed on site during a site visit or focused survey. High: Habitat (including soils and elevation factors) for the species occurs on site and a known occurrence has been recorded within 5 miles of the site. Low-Moderate: Either low quality habitat (including soils and elevation factors) for the species occurs on site and a known occurrence exists within 5 miles of the site; or suitable habitat strongly associated with the species occurs on site, but no records were found within the database search. Presumed Absent: Focused surveys were conducted and the species was not found, or species was found within the database search but habitat (including soils and elevation factors) do not exist on site, or the known geographic range of the species does not include the survey area.</p>	
<p>Sources: Barry 1995, Bennett 2005, California Herps 2017, CDFG 1994, [CDFW 2017a, 2017b, 2017c,], CNDDDB 2017, England et al. 1997, Keiller 2011, Mayer 1988, Meese 2008, Miller et al. 1999, [NMFS 2005, 2017a 2017b], NRCS 2017, Shuford & Gardali 2008, Tesky 1994, [USFWS 1994, 1996, 2002, 2007a, 2007b, 2007c, 2005], Wang 2010, Zeiner 1988-1990</p>	

Special-Status Wildlife

The following species were not observed during survey efforts but were determined to have a high, moderate, or low potential to occur within the Project area. Any species listed in **Table 18** as Candidate, Threatened or Endangered by CESA or FESA with potential to occur within the Project area are discussed in Section 2.4.5, “Threatened and Endangered Species.”

Special-Status Bird Species

Burrowing Owl

The burrowing owl is not a state or federally listed species, but is a CDFW Species of Special Concern and is a Covered Species under the SSHCP, as specified in the February 2018 circulated Final SSHCP (Sacramento County et. al 2018). The BSA does contain potential suitable habitat for the species. The nearest recent (2010) occurrence is within the BSA. The species is considered to have a high potential of occurring within the BSA due to the presence of suitable habitat and recent local occurrences.

Song sparrow “Modesto population”

The song sparrow is not a state or federally listed species, but is a CDFW Species of Special Concern. The BSA does contain potential suitable habitat for the species, including fresh emergent wetland areas along the agricultural drainage ditches. These habitats are moderately dense and are dominated by tules and cattails, which the species is known to inhabit for nesting and foraging. The nearest recent (2009) occurrence is approximately 1 mile from the BSA. The species is considered to have a low to moderate potential to occur due to the presence of suitable habitat.

White-tailed kite

White-tailed kite is a fully protected species under CFG Code Section 3511 and is a Covered Species under the February 2018 circulated SSHCP (Sacramento County et. al 2018). The BSA contains suitable open grassland foraging habitat and potential scattered nesting trees are present. The nearest occurrence (2017) is approximately 2 miles from the BSA. Due to the presence of suitable habitat and the recent close proximity occurrence the species is considered to have a low to moderate potential to occur within the BSA.

Yellow-headed Blackbird

The yellow-headed blackbird is not a federal or state listed species, but is a CDFW Species of Special Concern. The BSA does contain suitable foraging habitat of emergent wetland area with tules and cattails, but this vegetation is not as dense or in as large of patches as they typically prefer. The most recent occurrence is approximately 3 miles from eastern terminus of the BSA within the Consumes River Preserve (ebird.com 2017). Additionally, there are scattered occurrences to the south and west of the BSA, within the Stone Lakes NWR. Due to the presence of suitable habitat and the multiple occurrences surrounding the BSA, the species is considered to have a low to moderate potential to occur within the BSA.

Special-Status Reptile Species

Western pond turtle

The western pond turtle is not a State or Federally listed species, but is a CDFW Species of Special Concern. The BSA does contain suitable irrigation and stream habitat with aquatic vegetation for the species. The nearest occurrence (2003) of the species is approximately 1.5

miles from the BSA within the Stone Lakes NWR. Due to the presence of suitable habitat and the close proximity of the recent occurrence, the species is considered to have a low to moderate potential to occur within the BSA.

Special-Status Mammal Species

Western red bat

The western red bat is not a federally listed species, but is listed as a CDFW Species of Special Concern. The BSA does contain potentially suitable roosting habitat (trees, buildings, etc.). The nearest occurrence (1999) of the species is approximately 13 miles from the BSA. Due to the presence of suitable habitat, and the distance to the nearest occurrence, the species is considered to have a low to moderate potential of occurring.

ENVIRONMENTAL CONSEQUENCES

Burrowing Owl

Although burrowing owl was not observed during the biological surveys, the species could occur within the BSA. Permanent and temporary impacts to burrowing owl nesting and foraging grassland habitat are anticipated for the proposed Project. Impacts to burrowing owl habitat are discussed in Section 2.4.1, and specific burrowing owl avoidance, minimization and mitigation measures are identified in the avoidance and minimization measures section below. In addition, the Project's proposed pre-construction nesting bird surveys and burrowing owl protocol level habitat assessment would avoid and minimize impacts to burrowing owl to a less than significant level. Participation as a covered project under the SSHCP, implementation of nesting bird avoidance and minimization measures, use of Standard BMPs, and mitigation for impacts to valley grassland foraging habitat will reduce project impacts to the species to less than significant levels.

Song sparrow "Modesto population"

Although the song sparrow was not observed during the biological surveys, the species does have the potential to occur within the BSA. Suitable fresh water wetland/marsh foraging habitat, portions of which may also provide low quality nesting habitat, would be permanently altered by the Project. All associated impacts to wetland habitats in Section 2.4.2 would correspond with all habitat impacts to the song sparrow "Modesto population". Considering the implementation of Project minimization and avoidance measures for wetland habitats and pre-construction nesting surveys, along with the use of Standard BMPs, and participation as a covered project under the February 2018 circulated SSHCP, the Project is not anticipated to have any impacts to individuals, or impacts to the viability of the song sparrow "Modesto population" population.

White-tailed Kite

Although the white-tailed kite was not observed during the biological surveys, the species does have the potential to occur within the BSA for foraging and potential nesting in scattered trees within the BSA. Although the Project would have permanent and temporary impacts to potentially suitable foraging habitat for the species, the Project will be mitigating for any impacts through ratios discussed in mitigation measures identified at the end of the biological resources section. The proposed Project is anticipated to require tree removal along the new roadway corridor; however, the Project's proposed pre-construction nesting bird surveys would avoid any take of white-tailed hawk nesting within the BSA. Implementation of pre-construction nesting surveys, participation as a covered project under the Final SSHCP, use of Standard BMPs, and mitigation

for impacts to valley grassland foraging habitat as discussed in Section 2.4.1, no impacts or take is anticipated for white-tailed hawk.

Yellow-headed blackbird

Although the yellow-headed blackbird was not observed during the biological surveys, the species does have the potential to occur within the BSA. Suitable fresh water wetland/marsh foraging habitat, portions of which may also provide low quality nesting habitat, would be permanently altered by the Project. All associated impacts to wetland habitats in Section 2.4.2 would correspond with all habitat impacts to the yellow-headed blackbird. Considering the implementation of Project minimization and avoidance measures for wetland habitats and pre-construction nesting surveys, along with the use of Standard BMPs, and participation as a covered project under the February 2018 circulated SSHCP, the Project is not anticipated to have any impacts to individuals, or impacts to the viability of the yellow-headed blackbird population.

Western Pond Turtle

Although no western pond turtle was observed during the biological surveys, the species does have the potential to use the suitable aquatic habitats within the Project area which includes streams/creeks above sea level, freshwater marsh, and open water along with the upland areas of valley grassland within a distance of 0.25 mile from suitable aquatic habitat. The proposed Project would result in permanent and temporary impacts to aquatic habitat as discussed in Section 2.4.2. The Project's avoidance, minimization, and mitigation measures would ensure the Project does not have impacts that could affect the viability of the western pond turtle population.

Western Red Bat

Although no western red bat were observed during the biological, potential roosting and foraging habitat does occur within the BSA. Habitat for bat species consists of foraging habitat, night-roosting cover, maternity roost sites, and winter hibernacula. Western red bats may forage in a variety of habitats within the BSA including: vernal pools, seasonal wetlands, freshwater marshes, and streams/creeks. However, the CDFW is most concerned about the loss of maternity roosting sites which could include trees within the BSA. Suitable night roosting sites may include tree bark, and snags, or human-made structures within the BSA.

If maternity roost sites are located within the Project area during construction activities, the proposed Project has the potential to directly impact special-status bat species. Bats are at their most vulnerable in buildings or other roost sites during the summer, when large numbers may be gathered together and young bats, unable to fly, may be present. Removal of maternity roost sites may cause direct mortality of bats.

While precise occurrence information for western red bat is lacking within the BSA, direct impact estimates for western red bats can be made on projected loss of land cover types that provide suitable habitat. Impacts to wetland and water features associated with potential foraging habitat for bats are discussed in Section 2.4.2. Potential impacts to structures are discussed in Section 2.13, "Population and Housing". Avoidance and minimization measures, **BIO-28, BIO-29, and BIO-30**, which provide tree trimming procedures to avoid impacts to roosting bats, would further minimize any impacts to potential roosting habitat within trees that are anticipated to be removed during construction of the proposed Project.

Considering the implementation of Project minimization and avoidance measures, and use of Standard BMPs, and participation as a covered project under the February 2018 circulated

SSHCP, the Project is not anticipated to have impacts to individuals and would not impact the viability of bat species populations within the BSA.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document, Chapter 5 “Biological Resources”. Therefore, no further discussion of cumulative impacts is within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES

At a minimum, the Connector JPA PEIR requires avoidance, minimization, and/or mitigation measures for special status wildlife, as explicitly stated in the Connector JPA PEIR measures BIO-6a and BIO-6b, which have been incorporated into the following Project specific measures. Project specific measures in compliance with regional plans, policies, and ordinances have also been incorporated for compliance with these identified requirements. With the implementation of the following measures Project impacts to special status wildlife would be reduced to a less than significant level:

BIO-19: The implementing agencies will implement a combination of the following mitigation measures to avoid and minimize significant impacts on special-status wildlife and their habitats:

- Redesign or modify the project to avoid direct and indirect impacts on special-status wildlife or their habitats, including interruption of migration corridors, if feasible.
- Protect special-status wildlife and their habitat near the project site by installing environmentally sensitive area fencing around habitat features, such as vernal pools, seasonal wetlands, burrows, and nest trees. The environmentally sensitive area fencing or staking will be installed at a minimum distance from the edge of the resource as determined through coordination with state and federal agency biologists (USFWS and CDFW). The location of the fencing will be marked in the field with stakes and flagging and shown in construction drawings. Construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.
- When feasible restrict construction-related activities near sensitive resources to the nonbreeding season or other periods of activity for special-status wildlife species that could occur in the project area. Typical timing restrictions include, but are not limited to:
 - Valley elderberry long horn beetle – February 15 to November 1 (time period where shrub transplanting can't occur).
 - Giant garter snake inactive period – October 1 to May 1
 - Swainson's hawk nesting season – generally February 1 to August 31
 - Burrowing owl nesting – generally February 1 to August 31
- As necessary, conduct biological construction monitoring of project areas where work occurs in proximity to sensitive wildlife or their habitat. The implementing

agency will hire a qualified wildlife biologist approved by USFWS and CDFW to monitor construction activities to ensure that no wildlife is harmed during construction and no wildlife habitat outside of the project area is unintentionally affected by project construction.

- BIO-20:** If all or portions of Mitigation Measure **BIO-19** are not feasible and site-specific construction activities would result in significant impacts on special-status wildlife species, compensation for the loss of habitat will be implemented to reduce the impact to a less-than-significant level. Impacted habitat will be mitigated off site at an agency approved mitigation bank. The minimum replacement ratios for wildlife habitat would be determined through consultation with local, state, and federal agencies. As directed by Policy CO-60 in the Sacramento County General Plan (2011), for segments of the Connector in Sacramento County, mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan.
- BIO-21:** Should SSHCP permits be available prior to construction of the project, the implementing agency will provide compensatory mitigation for impacted special status wildlife species and/or their habitats with the corresponding SSHCP mitigation ratios, as described in the approved SSHCP.
- BIO-22:** The contractor must not apply rodenticides or herbicides in the Project area during construction activities.
- BIO-23:** The contractor must dispose of all food-related trash in closed containers, and shall remove it from the Project area each day during the construction period. Construction personnel must not feed or otherwise attract wildlife to the Project area.
- BIO-24:** If any wildlife is encountered during the course of construction, said wildlife will be allowed to leave the construction area unharmed. In the unlikely event a worker inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped, the worker will immediately report the incident to the Project biologist.

Special Status Birds

- BIO-25:** Vegetation removal and earthwork should be timed outside of the nesting season (February 1st – August 31st). If vegetation removal is required during the nesting season, a pre-construction nesting bird survey must be conducted within 7 days prior to vegetation removal. Within 2 weeks of the nesting bird survey, all vegetation cleared by the biologist would be removed by the contractor.
- BIO-26:** If an active nest (excluding western burrowing owl) is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is deemed inactive by a qualified biologist. Restrictions shall include establishment of exclusion zones (no ingress of personnel or equipment) at a minimum radius of 500 feet around an active Swainson's hawk nest, 100 feet around an active raptor nest, and 50 feet around an active migratory bird nest. Activities permitted within exclusion zones and the size of the exclusion zone may be adjusted through consultation with the CDFW.

BIO-27: Trees containing active migratory bird and/or raptor (excluding Swainson's hawk) nests that must be removed as a result of Project implementation shall be removed during the nonbreeding season (September 1st – January 31st). Swainson's hawks are a state listed threatened species; therefore, impacts to active Swainson's hawk nest trees require regulatory authorization from the CDFW prior to removal.

BIO-28: If no burrowing owls are detected during the pre-construction surveys, no further mitigation is required. If active burrowing owls are detected, the implementing agency shall implement the avoidance, minimization, and mitigation methodologies outlined in CDFW's (2012) *Staff Report on Burrowing Owl Mitigation* prior to initiating Project-related activities that may impact burrowing owls.

Western Pond Turtle

Additional measures that will be implemented to avoid and minimize impacts to western pond turtle:

BIO-29: A preconstruction survey for western pond turtle shall be conducted within 24 hours of the onset of construction activities in or adjacent to suitable upland and/or aquatic habitat. The survey area shall include a 100-foot buffer of the area to be affected. If juvenile or adult turtles are found within the survey area, the individuals should be moved at least 500 feet downstream to suitable habitat. If a turtle nest is found within the survey area, construction activities should not take place within 100 feet of the nest until the turtles have hatched, or the eggs have been moved to an appropriate location.

Special-Status Bats

Additional measures that will be implemented to avoid and minimize impacts to bat species:

BIO-30: Prior to the removal of any oak trees or buildings, a bat survey shall be performed by a qualified biologist between March 1 and July 31. If bat roosts are identified, the implementing agency shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed prior to roosting season (typically May to September) and prior to the onset of construction activities. If maternity roosts are identified during the maternity roosting season (typically May to September) they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur onsite, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites that are permanently removed. If no bat roosts are detected, then no further action is required if the trees and buildings are removed prior to the next breeding season. If removal is delayed, then an additional survey shall be conducted 30 days prior to removal to ensure that a new colony has not established itself.

BIO-31: If a female or maternity colony of bats are found on the Project site, and the Project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist, in coordination with CDFW, shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after August 30 and before March 1).

BIO-32: If an active nursery roost is documented onsite and the Project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after August 30 and before March 1 to prevent the formation of maternity colonies. Nonbreeding bats shall be safely evicted, under the direction of a bat specialist.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to special status wildlife species. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to special status wildlife species would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to special status wildlife species.

2.4.5 Threatened and Endangered Species

REGULATORY SETTING

The primary federal law protecting threatened and endangered species is FESA: 16 USC Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the FHWA, are required to consult with the USFWS and the NOAA Fisheries to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated Critical Habitat. Critical Habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an Incidental Take statement. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the CESA, California Fish and Wildlife Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The CDFW is the agency responsible for implementing CESA. Section 2081 of the Fish and Wildlife Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Wildlife Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by CDFW. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Wildlife Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (and amendments), was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

AFFECTED ENVIRONMENT

The information in this section is based on information provided in the NES and BA (MBI 2016), and the NES Revalidation (Dokken Engineering 2018) (reports bound separately).

The previously presented **Table 18** is a compilation of special-status species queried from the CNPS, CNDDDB, NMFS, and USFWS database searches.

Based on the information obtained from the literature review, field surveys, and habitat assessments, 4 threatened or endangered animal species have the potential to occur in the vicinity of the Project area: giant garter snake, vernal pool fairy shrimp, vernal pool tadpole, and Swainson’s hawk. In addition, a Candidate Endangered Species, tricolored blackbird, has a low

to moderate potential to occur. A discussion on valley elderberry longhorn beetle (VELB) is included to clarify the changes that have occurred to the Project, and levels of protection in accordance with the USFWS 2017 Framework for Assessing Impacts to VELB.

Valley Elderberry Longhorn Beetle

A single elderberry shrub was identified within the BSA during field surveys conducted for the 2016 NES. The elderberry shrub is located within the existing I-5 Hood-Franklin interchange and is not located near any riparian habitat. Exit holes were not observed. As discussed in the 2016 NES, interchange improvements would require the removal of the elderberry shrub. The 2016 NES proposed to mitigate for the removal of this shrub at a 1:1 ratio by purchasing mitigation credits at a USFWS approved mitigation bank.

Interchange improvements specified in the updated Project description would still require the removal of the single elderberry shrub; however, since the NES was approved in November 2016, the United States Fish and Wildlife Service (USFWS) has published the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017d). Under Section 4.0 of the new Framework, in the absence of exit holes, potential non-riparian VELB habitat the Project area should be evaluated using the following two criteria:

1. Is there a riparian area, elderberry shrubs, or known VELB record within 800 meters of the proposed Project?
2. Was the site continuous with a historical riparian corridor?

A review of topographic maps, current and historical aerial images, and CNDDDB occurrence data indicates that the BSA is not located within or adjacent to any existing or historical riparian corridor or documented VELB occurrence (NETR, 2017; CNDDDB 2017). The nearest riparian corridors to the BSA are at North Stone Lake within the Stone Lake National Wildlife Refuge approximately 1.4 miles northwest of the BSA and the Cosumnes River Corridor approximately 2 miles southeast of the BSA. The nearest occurrences of VELB are located along the Cosumnes River approximately 5 miles southeast of the BSA. Based on the isolated nature of the elderberry shrub, lack of exit holes, distance to riparian habitats, distance to documented VELB occurrences, and lack of historic habitat connectivity, it is highly unlikely that the elderberry shrub is occupied by VELB or will become colonized by VELB in the future. The single elderberry shrub is not considered to be VELB habitat and VELB is presumed absent from the BSA. No avoidance and minimization measures are recommended, and compensatory mitigation is no longer required for removal of the elderberry shrub.

Giant Garter Snake

Giant garter snake is federally and state-listed as threatened and is a Covered Species under the February 2018 circulated SSHCP (Sacramento County et. al 2018, CNDDDB 2017). The giant garter snake inhabits marshes, sloughs, ponds, small lakes, low gradient streams, other waterways, agricultural wetlands, such as irrigation and drainage canals and rice fields, and the adjacent uplands (USFWS 2017e). Essential habitat components consist of:

- adequate water during the snake's active period (i.e., early spring through mid-fall) to provide a prey base and cover;
- emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat;

- upland habitat for basking, cover, and retreat sites; and,
- higher elevation uplands for cover and refuge from floodwaters.

The proposed Project area is located within the Cosumnes-Mokelumne Watershed, identified as a "Recovery Unit" in the *Recovery Plan for the Giant Garter Snake* (USFWS 2017e). An intermittent drainage (the Shed C Channel) in the southwestern portion of the proposed Project area provides potential habitat for the snake; however, the drainage does not provide water throughout the snake's active season. Also, the last verified observation of snakes downstream occurred in 1976, and they were not detected during surveys conducted in 1987 (CNDDDB 2017). The Project's habitat assessment for giant garter snake determined that this species is not likely to be present in the Project area.

Though the likelihood for GGS to occur within the Project area was determined to be "not likely," the February 2018 circulated SSHCP states the follow: "All drainage canals (stream/creek) south of Elk Grove, which have a past documented occurrence of giant garter snake and link to Stone Lakes NWR; the perennial segments of these canals are suitable habitat."

With the planned implementation of the February 2018 circulated SSHCP, the implementing agency will provide the necessary avoidance, minimization, and mitigation measures to be in compliance with the SSHCP, and the Biological Opinion (BO) issued by USFWS on December 16, 2016 for the Project, which concluded that the Project may affect, but not likely to adversely affect GGS.

Vernal Pool Crustaceans

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp is a federal-listed threatened species. This species occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, and alkaline grassland valley floor pools. The vernal pool fairy shrimp is found in disjunct, fragmented habitats distributed across the Central Valley from Shasta County to Tulare County and across the central and southern Coast Ranges from northern Solano County to Ventura County (USFWS 2005). The BSA does contain suitable vernal pool habitat for the species. The nearest occurrence of the species is a 1997 record in the Stone Lakes NWR easement, approximately 0.5 mile north of Hood Franklin Road, east of I-5. Due to the presence of suitable habitat and the close proximity of the occurrence, the species is considered to have a low to moderate potential of occurring within the BSA. For the purposes of Section 7, the species was presumed present and consultation with USFWS was completed on December 16, 2016 for the Project.

Vernal Pool Tadpole Shrimp

Vernal pool tadpole shrimp is a federal-listed endangered species. This species inhabits a variety of vernal pools or other seasonally ponded habitats and emerges soon after these habitats become inundated, typically after the first several storm events of the fall/winter season. The shrimp feeds on microscopic organisms and detritus, reaches maturity, and lays eggs for the next wet season. Vernal pool tadpole shrimp are found in the Central Valley from Shasta County to northern Tulare County, and in the central Coast Range from Solano County to Alameda County (USFWS 2005). The BSA does contain vernal pool habitat. The nearest occurrence of the species is a 2003 record in the Stone Lakes NWR easement, approximately 0.5 mile north of Hood Franklin Road, east of I-5. Due to the presence of suitable habitat and the close proximity of the

occurrence, the species is considered to have a low to moderate potential of occurring within the BSA. For the purposes of Section 7, the species was presumed present and consultation with USFWS was completed on December 16, 2016 for the Project.

Swainson's Hawk

Swainson's hawk is state-listed as threatened and is a Covered Species under the February 2018 circulated SSHCP (Sacramento County et. al 2018). The preferred breeding habitat of this raptor consists of large trees, which serve as nesting sites, proximate to extensive areas of grassland and/or open fields, which serve as foraging habitat. Swainson's hawks begin to arrive in the Central Valley from South America in March to breed and raise their young. They typically nest in large, mature trees such as valley oak, cottonwood, willow, and native black walnut. Swainson's hawks forage in open grasslands, agricultural fields, and pastures, with alfalfa, row crops, grain fields, and irrigated pastures as preferred foraging habitats.

The BSA does have potential suitable foraging and nesting habitat for the species. The various trees throughout the Project area provide suitable nesting habitat for this species. The irrigated row and field crops, irrigated hayfields, and valley grassland within and adjacent to the Project area represent suitable foraging habitat for Swainson's hawks. Swainson's hawk or their nests were not observed within the BSA during focused wildlife surveys. The species is considered to have a high potential of occurring within the BSA due to the presence of suitable habitat and multiple (20+) recent occurrences in close proximity to the BSA (0-3 miles). Once approved, Swainson's hawk will be a covered species under the SSHCP.

Tricolored Blackbird

The tricolored blackbird is not a federally listed species but is listed as a CDFW threatened Species, and is a Covered Species under the February 2018 circulated SSHCP (Sacramento County et. al 2018, CNDDDB 2017). Projects are expected to consider candidate species as if they are listed (as endangered in this case). The BSA does have suitable foraging and nesting habitat for the species. The nearest recent (2015) CNDDDB occurrence of the species is approximately 1 mile from the BSA. Due to the presence of suitable habitat and recent occurrences within the vicinity, the species is considered to have a low to moderate potential of occurring within the BSA.

ENVIRONMENTAL CONSEQUENCES

Giant Garter Snake

Although the GGS was not observed during the biological surveys, the species does have the potential to occur within the BSA. The proposed Project area is located within the Consumes-Mokelumne Watershed, identified as a "Recovery Unit" in the *Recovery Plan for the Giant Garter Snake* (USFWS 2017e). In accordance with the avoidance and minimization measures stated within the Biological Opinion (BO) issued by USFWS on December 16, 2016, the USFWS concurred with the Caltrans determination that the Project may affect but is not likely to adversely affect GGS. The measures as stated within the BO will be incorporated into the Project.

According to the February 2018 circulated SSHCP, potentially suitable habitat is present in the Project area, which includes streams/creeks, freshwater marsh, seasonal wetland, and open water along with the upland areas of valley grassland within a distance of 0.25 mile from aquatic habitat. **Table 19** presents acreages of permanent and temporary impacts to potentially suitable upland and aquatic habitat for giant garter snakes. Temporary impacts to giant garter snake

habitat may result from construction activities and equipment staging in the temporary construction zone (TCZ).

Table 19. Impacts to Giant Garter Snake Habitat

Habitat	Impact Type	Habitat Impacts (acres)
Upland Habitat	Permanent	31.50
	Temporary	7.14
Aquatic Habitat	Permanent	0.41
	Temporary	0.36

Vernal Pool Crustaceans

The vernal pool fairy shrimp and vernal pool tadpole shrimp have been grouped together for the purpose of this impact analysis. There are 23 vernal pools in the Project area, totaling 10.22 acres. Due to documented occurrences of these species in the vicinity, presence of this species is inferred.

Although no crustaceans were identified during the biological surveys, the species does have the potential to occur within the BSA. There are approximately 10.22 acres of vernal pools within the BSA. Permanent direct impacts would occur due to direct removal of vernal pool habitat. No temporary impacts are anticipated; however, indirect impacts to vernal pool crustaceans occurs when disturbance activities occur within 250 feet of occupied vernal pool crustacean habitat. Changes to hydrology due to the increase in impervious surfaces may have indirect impacts to the habitat quality in the vernal pools. **Table 20** provides a summary of impacts to vernal pool habitat.

In accordance with the avoidance and minimization measures as stated within the BO issued by USFWS on December 16, 2016, the USFWS concurred that the Project and its cumulative effects is not likely to jeopardize the continued existence of the species. However, the Project may affect, and is likely to adversely affect, these species. Mitigation measures as stated within the BO, will be incorporated into the Project.

Table 20. Summary of Impacts to Vernal Pool Habitat

Impact Type	Habitat Impacts (acres)
Direct	3.08
Indirect	0.99

Swainson's Hawk

Direct impacts to Swainson's hawk could occur as a result of Project construction. The Project is anticipated to permanently remove approximately 96.65 acres of Swainson's hawk foraging habitat. According to the February 2018 circulated SSHCP, Swainson's hawk use multiple types of foraging habitat that occur throughout the BSA (valley grassland, irrigated pasture-grassland, and cropland). **Figure 15** and **Table 21** displays the detailed impact acreages for each of the Swainson's hawk foraging habitats. In addition to impacts to foraging habitat, the Project anticipates the removal of multiple potential nesting trees. However, no trees with current or historic nesting Swainson's hawk nesting sites were observed during the surveys and only a limited amount of large diameter trees could be potentially suitable for Swainson's hawk nesting within the Project area. Temporary impacts to foraging habitat may be caused by construction activities and equipment staging in the Project area. Indirect impacts to Swainson's hawks may be caused by habitat degradation and increased human presence.

Table 21. Impacts to Swainson's Hawk Foraging Habitat

Project Impacts	Valley grassland (acres)	Cropland (acres)	Irrigated Pasture-Grassland (acres)	TOTAL (acres)
Project Impacts	36.67	50.67	13.21	100.64

The Project's proposed pre-construction nesting surveys would ensure no Swainson's hawk nesting trees would be removed during construction; therefore, no impacts to nesting Swainson's hawk are anticipated. With the implementation of project minimization and avoidance measures, use of Standard BMPs, participation as a covered project under the February 2018 circulated SSHCP, and proposed compensatory mitigation for Swainson's hawk foraging habitat, the Project would not result in take of Swainson's hawk. With the avoidance of take, the Project does not anticipate that a CDFW Section 2081 Incidental Take Permit for Swainson's hawk will be necessary.

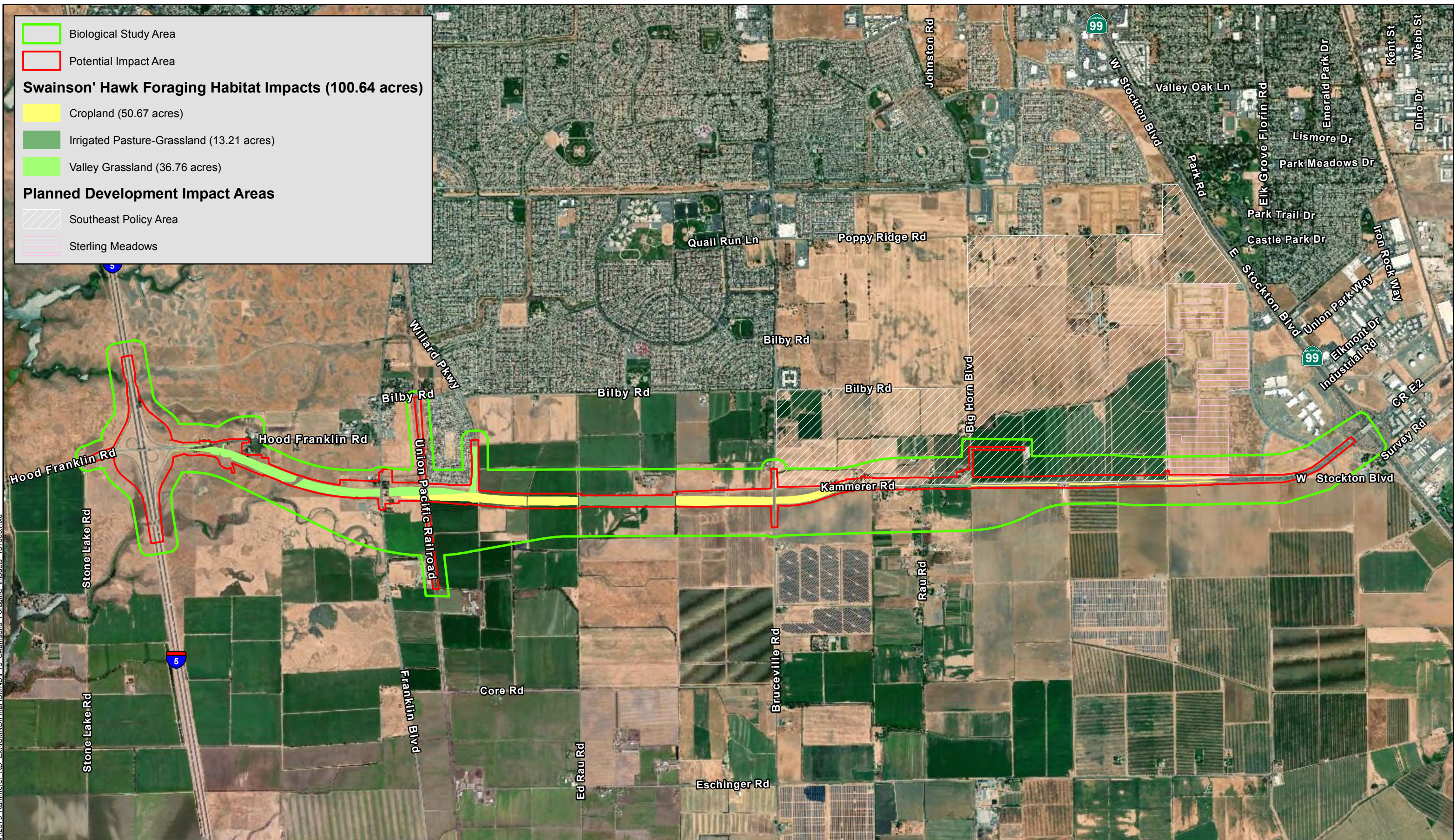
Tricolored Blackbird

Although the tricolored blackbird was not observed during the biological surveys, the species does have the potential to occur within the BSA. Suitable fresh water wetland/marsh foraging habitat, portions of which may also provide low quality nesting habitat, would be permanently altered by the Project. All associated impacts to wetland habitats in Section 2.4.2 would correspond with all habitat impacts to the tricolored blackbird. Considering the implementation of project minimization and avoidance measures for wetland habitats and pre-construction nesting surveys, along with the use of Standard BMPs, and participation as a covered project under the February 2018 circulated SSHCP, the Project is not anticipated to take any tricolored blackbirds or active nests. No further avoidance, minimization and/or mitigation measures are proposed, and a CDFW Section 2081 Incidental Take Permit is not anticipated.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document, Chapter 5, "Biological Resources". Therefore, no further discussion of cumulative impacts is within this IS/MND.

Biological Study Area
 Potential Impact Area
Swainson' Hawk Foraging Habitat Impacts (100.64 acres)
 Cropland (50.67 acres)
 Irrigated Pasture-Grassland (13.21 acres)
 Valley Grassland (36.76 acres)
Planned Development Impact Areas
 Southeast Policy Area
 Sterling Meadows



V:\2379_Kammerer_RD_Ext\ISMND\Final\ISMND\F15_Swainsons_Foraging_Impacts_181009.mxd
 Source: ESRI Maps Online; Dokken Engineering 10/10/2018; Created By: briannm

FIGURE 15

Impacts to Swainson's Hawk Foraging Habitat

Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

1 inch = 2,400 feet
 0 1,000 2,000 3,000 4,000 5,000 Feet

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

At a minimum, the Connector JPA PEIR requires avoidance, minimization, and/or mitigation measures for threatened and endangered wildlife, as explicitly stated in the Connector JPA PEIR measures BIO-6a and BIO-6b, which have been incorporated into measures BIO-18 and BIO-19. Project specific measures in compliance with regional plans, policies, and ordinances have also been incorporated for compliance with these identified requirements. With the implementation of the following measures Project impacts to special status wildlife would be reduced to a less than significant level:

BIO-33: Should the Final SSHCP be approved prior to construction of the project, the implementing agency will provide compensatory mitigation for impacted threatened and endangered wildlife species and/or their habitats with the corresponding SSHCP mitigation ratios, as determined by the approved Final SSHCP.

Vernal Pool Crustaceans

The proposed avoidance, minimization, and mitigation strategy is in accordance with the USFWS Corps of Engineers Vernal Pool Programmatic Consultation (USFWS 1996), and USFWS BO issued for the proposed Project on December 16, 2016. Measures that will be implemented to mitigate for vernal pool crustaceans:

BIO-34: Protective silt fencing will be installed between the adjacent vernal pool habitats and the construction area limits to prevent accidental disturbance during construction and to protect water quality in the aquatic habitats during construction.

BIO-35: For every acre of vernal pool habitat directly or indirectly affected, two tadpole shrimp and fairy shrimp habitat preservation credits will be dedicated within a Service-approved conservation bank with a service area covering the proposed Project.

BIO-36: For every acre of vernal pool habitat directly affected, one vernal pool habitat creation credit will be dedicated within a Service-approved conservation bank with a service area covering the proposed Project.

Giant Garter Snake

The proposed mitigation strategy is in accordance with the USFWS BO issued for the proposed Project on December 16, 2016. The following measures will be implemented to avoid and minimize impacts to giant garter snake:

BIO-37: Construction operations, stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to the designated construction staging areas and all operations will be confined to the minimal area necessary.

BIO-38: Standard staging area practices for sediment-tracking reduction will be implemented where necessary and may include vehicle washing and street sweeping.

BIO-39: A Worker Environmental Awareness Program (WEAP) will be implemented to educate construction workers about the presence of sensitive habitat near the Project area and to instruct them on proper avoidance measures.

BIO-40: Twenty-four hours prior to the commencement of construction activities, the Project area shall be surveyed for giant garter snakes by a qualified biologist. The biologist will provide the US Fish and Wildlife Service with a written report that adequately documents these monitoring efforts within 24 hours of commencement of construction activities. The Project area shall be re-inspected by the monitoring biologist whenever a lapse in construction activity of two weeks or greater has occurred.

BIO-41: Project-related vehicles will observe a 20 mile per hour speed limit within construction areas, except on existing paved roads where they will adhere to the posted speed limits.

Swainson's Hawk

The following measures would be implemented to avoid and minimize impacts to Swainson's hawk:

BIO-42: Should work occur within the Swainson's hawk nesting season (February 1st – August 31st), the Project biologist must conduct a pre-construction nesting survey consistent with survey methods recommended by the Swainson's Hawk Technical Advisory Committee within ¼ mile of the Project and two weeks prior to construction clearing and grubbing activities. Should a nesting Swainson's hawk pair be found within ¼ mile of the Project, the Project biologist will coordinate with the wildlife agencies for appropriate buffers. The contractor will not work within the ¼ mile nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the Project biologist and in coordination with wildlife agencies) in the buffer area until the Project biologist determines the young have fledged.

BIO-43: If an active nest (excluding western burrowing owl) is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is deemed inactive by a qualified biologist. Restrictions shall include establishment of exclusion zones (no ingress of personnel or equipment) at a minimum radius of 500 feet around an active Swainson's hawk nest, 100 feet around an active raptor nest, and 50 feet around an active migratory bird nest. Activities permitted within exclusion zones and the size may be adjusted through consultation with the California Department of Fish and Wildlife and/or the City of Elk Grove.

BIO-44: Valley grasslands in the Project area are considered Swainson's hawk foraging habitat and are protected under Chapter 16.130 of the City Municipal Code, Swainson's Hawk Impact Mitigation Fees. The following compensatory mitigation measure is required to offset impacts to Swainson's hawk foraging habitat should the Final SSHCP not be implemented prior to the start of construction for the Project:

The implementing agency shall mitigate for the permanent loss of Swainson's hawk foraging habitat at a 1:1 ratio. Mitigation can be accomplished through participation in the City of Elk Grove Swainson's Hawk Impact Mitigation Fees Ordinance or other method acceptable to the California Department of Fish and Wildlife.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to threatened and endangered species. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to threatened and endangered species would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to threatened and endangered wildlife species.

2.5 Cultural Resources

REGULATORY SETTING

CEQA established statutory requirements for the significance of historical resources in Public Resources Code (PRC) Section 21084.1. The CEQA Guidelines (Section 10564.5[c]) also require consideration of potential project impacts to "unique" archaeological sites that do not qualify as historical resources. The statutory requirements for unique archaeological sites that do not qualify as historical resources are established in PRC Section 21083.2. These two PRC sections operate independently to ensure that significant potential effects on historical and archaeological resources are considered as part of a project's environmental analysis. Historical resources, as defined in Section 15064.5 as defined in CEQA regulations, include 1) cultural resources listed in or eligible for listing in the California Register of Historical Resources (California Register); 2) cultural resources included in a local register of historical resources; 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in one of several historic themes important to California history and development.

Under CEQA, a project may have a significant effect on the environment if the project could result in a substantial adverse change in the significance of a historical resource, meaning the physical demolition, destruction, relocation, or alteration of the resource would be materially impaired. This would include any action that would demolish or adversely alter the physical characteristics of an historical resource that convey its historic significance and qualify it for inclusion in the California Register or in a local register or survey that meets the requirements of PRC Section 5020.1(l) and 5024.1(g). PRC Section 5024 also requires state agencies to identify and protect state-owned resources that meet National Register of Historic Place (National Register) listing criteria. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocation, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

CEQA and CEQA Guidelines also recommend provisions be made for the accidental discovery of archaeological sites, historical resources, or Native American human remains during construction (PRC Section 21083.2(i) CCR Section 15064.5[d and f]).

AFFECTED ENVIRONMENT

In December 2016, the SHPO concurred with the completed finding of the Historic Property Survey Report (HPSR), Archaeological Survey Report (ASR), and the Historical Resources Evaluation Report (HRER) for the Project. Due to changes in the Project design, a Supplemental HPSR and Supplemental ASR were completed (Dokken Engineering 2018). This section presents the results of these documents.

Area of Potential Effects

In order to determine whether the Project would impact any cultural resources eligible for or currently listed on the National Register or the California Register, an Area of Potential Effects (APE) was first determined for the Project. The horizontal extent of the APE was established as the area of direct and indirect effects which encompasses the 980-acre Archaeological APE and the 1000-acre Architectural APE. Both the Archaeological APE and the Architectural APE include

the 385-acre Project footprint as well as areas that were investigated for alternatives that were eliminated from consideration. The Archaeological APE includes the areas that will be directly impacted by the Project. Direct impacts include staging and access, demolition, clearing, installation of temporary detours, grading, excavation, and installation of roadway pavement sections and bridge structure(s). Ground-disturbing components of the Project consist of the roadway, overhead, underpass, drainage, culverts and channel improvements, street lighting and signal improvements, utility relocation, potential new utilities, abutments and footing piles. In areas where sliver takes (narrow strips of acquisition) are required for right-of-way or where temporary construction easements are required to reconstruct drainage and conform driveways, only the areas impacted are included in the APE, not the entire parcel. The Architectural APE includes the Archaeological APE as well as areas that may be indirectly impacted by the Project (**Figure 16**).

The vertical APE includes a maximum 6-foot excavation depth to accommodate roadway grading and ditches; 15-foot excavation depth for drainage and street lighting; 30-foot excavation depth for bridge abutments; and up to 100 feet deep for piles to support the UPRR overcrossing.

Research and Fieldwork




Once an APE was established, a search of archaeological site records and reports on file at the North Central Information Center (NCIC) was conducted within the APE and a quarter-mile radius. The search also included review of the following: Inventory of Historic Resources (SHPO 1976), California Points of Historical Interest (SHPO 1992 and updates), California Historical Landmarks (SHPO 1996), and the Directory of Properties in the Historic Property Data File (SHPO 2012). The directory includes the listings of the National Register, National Historic Landmarks, California Register, California Historical Landmarks, and California Points of Historical Interest. The NCIC records search identified one previously recorded Native American cultural resource and one documented occurrence of an isolated historic-era artifact within the APE. The archaeological site record for the Native American cultural resource noted that components of the resource had been removed in the late 1940s/early 1950s. Four built environment resources (environment comprised of a human-made object) were noted within the quarter-mile radius; however, these resources would not be directly or indirectly impacted by the Project and are not discussed further.

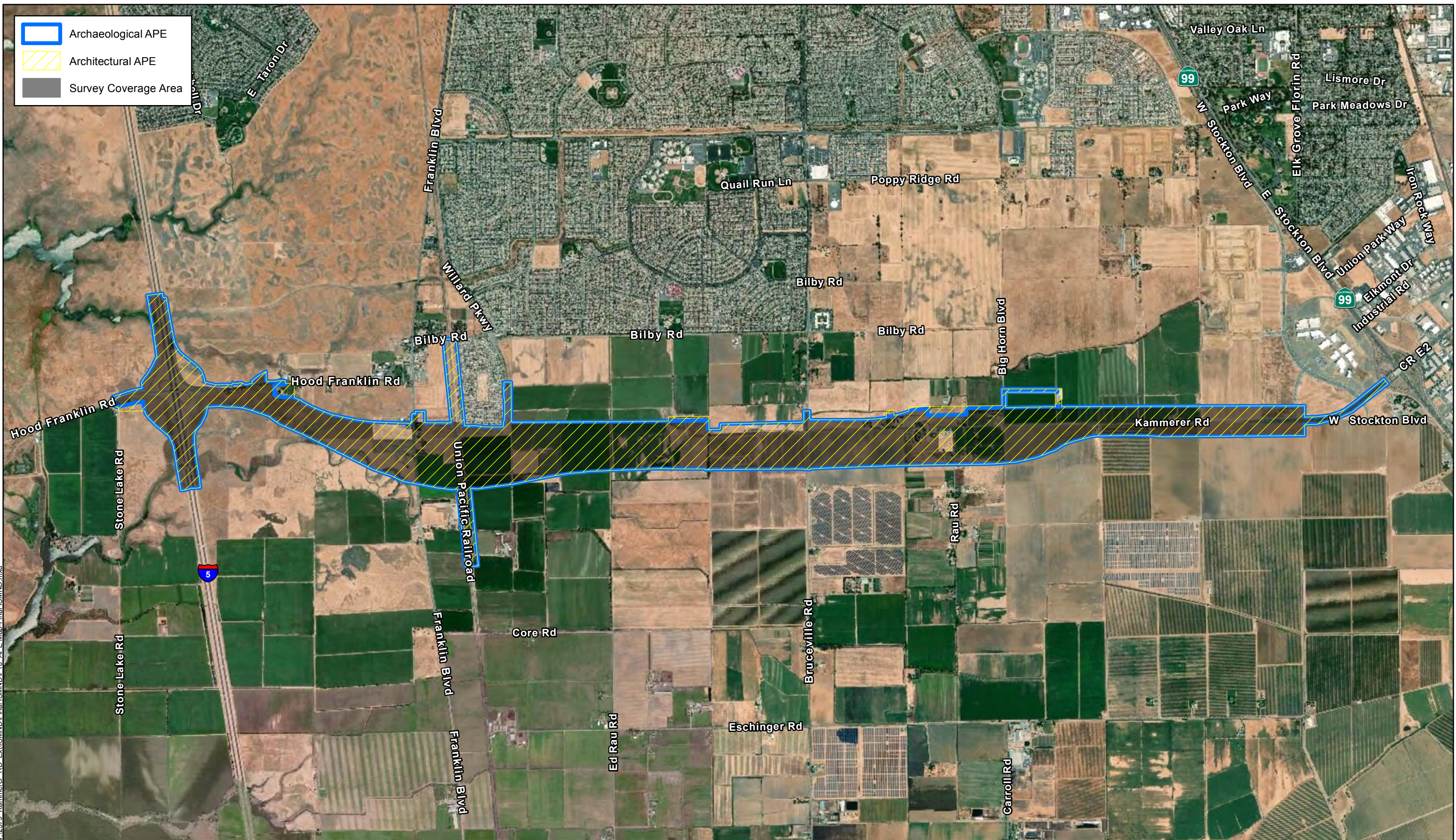
In 2016, focused property research was conducted at the County Assessor's Office to determine the property characteristics of each property within the APE. The Assessor's Office maintains files with information regarding the built environment features within a property including built date, structural information, building layout, type and date of alterations, and ownership history. This information is used to develop a historic context of a property and evaluate resources for the National Register and California Register.

The Native American Heritage Commission (NAHC) was also contacted and requested to conduct a search of the Sacred Lands File for any Native American cultural resources which may be present within the APE. No Native American cultural resources were identified by the Sacred Lands File search. A list of Native American Tribal Governments who may have knowledge regarding resources within the APE was also requested from the NAHC. Project notification letters were sent in 2013 to all Native American Tribal Governments on the list provided by the NAHC. No additional information beyond what was identified by the NCIC was received during this outreach.

All previously recorded resources identified by the NCIC and all built environment features 45 years or older within the APE were field reviewed between 2013 and 2014, 2016, and 2017.

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-  Archaeological APE
-  Architectural APE
-  Survey Coverage Area



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Source: ESRI Maps Online; Dokken Engineering 10/9/2018; Created By: adellas

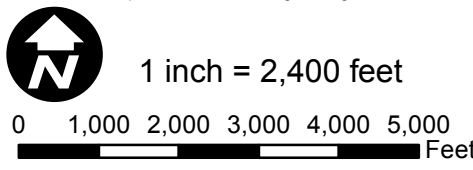


FIGURE 16
Area of Potential Effects

Joint Powers Authority Capital SouthEast Connector
A1/A2 Kammerer Road Extension Project
City of Elk Grove and Sacramento County, California

Fourteen previously undocumented built environment properties and the one previously recorded Native American cultural resource identified by the NCIC required evaluation for inclusion in the National Register and California Register.

Evaluated Resources

All 14 built environment resources were determined not eligible for inclusion in the National Register or California Register, either individually or as contributors to a historic district, due to a lack of integrity or association with a historic context. As such, none of these resources are considered historical resources for the purposes of CEQA. The SHPO concurred with these determinations on December 8, 2016.

The mapped location of the previously recorded Native American cultural resource identified by the NCIC was visually inspected in 2016 to identify the presence of any artifacts, features, or other indicators that a surface or subsurface component of the resource was still present. One possible feature and two possible artifacts were noted; however, restricted property access prevented additional identification efforts which would have definitively determined the presence and extent of the resource. As restricted property access is expected until right-of-way is acquired, this resource is being assumed eligible for listing in the National Register and California Register, for the purposes of this Project only; therefore, this resource is considered a historical resource under CEQA, for the purposes of this Project only.

ENVIRONMENTAL CONSEQUENCES

Due to the restricted property access, a phased approach is needed to complete cultural resource identification efforts, evaluation of potential historic properties/historical resources, assess the potential for substantial adverse changes, and potential mitigation of substantial adverse changes. The phased approach would be initiated upon acquiring access to properties required to construct the Project. Stipulations and procedures detailing the necessary actions of the phased approach are detailed in the *Programmatic Agreement Between the California Department of Transportation and the State Historic Preservation Officer Regarding the Capital SouthEast Connector A1/A2 Kammerer Road Project* (Kammerer Programmatic Agreement). The SHPO, Caltrans, City, County, Connector JPA, and the Wilton Rancheria will consult on the stipulations outlined in the Kammerer Programmatic Agreement to ensure that all potential project impacts to the Native American cultural resource identified in the APE shall be mitigated to a less than significant level, should the additional identification and evaluation efforts detailed in the Kammerer Programmatic Agreement confirm the resource is eligible for listing on the National Register and/or California Register. Although the Kammerer Programmatic Agreement specifically discusses compliance with Section 106 of the National Historic Preservation Act, the stipulations therein will also ensure that any previously unidentified resources will be treated appropriately in accordance with CEQA. Additionally, should the NAHC identify a Most Likely Descendant other than the Wilton Rancheria, the responsible agency will initiate consultation with the designated MLD.

Additionally, a Memorandum of Understanding for the treatment of Native American human remains, should any be discovered as a result of earthmoving activities, is being prepared. Caltrans, the City, the County, the Connector JPA, and the Wilton Rancheria will consult on the stipulations outlined in the Memorandum of Understanding, to ensure that impacts to the Native American human remains, should any be identified in the APE shall be mitigated to a less than significant level. Should the Native American Heritage Commission identify a Most Likely

Descendant other than the Wilton Rancheria, the responsible agency will initiate consultation with the designated MLD.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Due to access restrictions, a phased approach is needed to complete cultural resource identification efforts, evaluation of potential historic properties, assess the potential for substantial adverse changes, and potential mitigation of substantial adverse changes for the project in accordance with CEQA. The phased approach would be initiated upon acquiring access to the parcels required to construct the Project. Stipulations and procedures detailing the necessary actions of the phased approach are detailed in the Kammerer Programmatic Agreement which will be executed between the SHPO and Caltrans.

Implementation of the following cultural resource measures would reduce these impacts to a less-than significant level.

- CR-1:** The Kammerer Programmatic Agreement shall be executed between the SHPO and Caltrans and shall detail the remaining actions needed to complete cultural resource identification efforts, evaluation of potential historic properties, assess the potential for substantial adverse changes, and potential mitigation of substantial adverse changes for the project. All stipulations of the Kammerer Programmatic Agreement shall be implemented by the responsible agency as applicable prior to construction, during construction, and post construction activities. Although the Kammerer Programmatic Agreement specifically discusses compliance with Section 106 of the National Historic Preservation Act, the stipulations therein will also ensure that any previously unidentified resources will be treated appropriately in accordance with CEQA.
- CR-2:** Should cultural resources be identified during construction, the actions outlined in the Kammerer Programmatic Agreement regarding cultural resource discovery during construction shall be implemented.
- CR-3:** Should human remains be discovered during implementation of the project, they will be treated in accordance with the requirements of Section 7050.5(b) of the California Health and Safety Code. If, pursuant to Section 7050(c) of the California Health and Safety Code, the county coroner/medical examiner determines that the human remains are or may be of Native American origin, then the discovery shall be treated in accordance with the provisions of Section 5097.98(a)-(d) of the California Public Resources Code.
- CR-4:** If Native American human remains are discovered and the Wilton Rancheria is identified as a Most Likely Descendant by the Native American Heritage Commission, the *Memorandum of Understanding between the Capital SouthEast Connector Joint Powers Authority, the City of Elk Grove, the Sacramento County, the California Department of Transportation, and the Wilton Rancheria Regarding the Treatment and Disposition of Native American Human Remains Encountered during the Capital SouthEast Connector A1/A2 Kammerer Road Project* (Kammerer MOU) will become effective. The Kammerer

MOU identifies the appropriate human remains treatment, recovery methodology, documentation, disposition, and information dissemination. Should the Native American Heritage Commission identify a Most Likely Descendant other than the Wilton Rancheria, the responsible agency will initiate consultation with the designated MLD.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to cultural resources. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to cultural resources would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to cultural resources.

2.5.1 Paleontological Resources

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. Paleontological resources are nonrenewable, extinct, and fossilized remains of plants and animals.

REGULATORY SETTING

Federal Regulations

A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects.

16 USC 431-433: [The “Antiquities Act”] prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered “objects of antiquity” by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.

16 USC 461-467: [The National Registry of Natural Landmarks] establishes the National Natural Landmarks (NNL) program. Under this program property owners agree to protect biological and geological resources such as paleontological features. Federal agencies and their agents must consider the existence and location of designated NNLs, and of areas found to meet the criteria for national significance, in assessing the effects of their activities on the environment under NEPA.

16 USC 470aaa: [The Paleontological Resources Preservation Act] prohibits the excavation, removal, or damage of any paleontological resources located on federal land under the jurisdiction of the Secretaries of the Interior or Agriculture without first obtaining an appropriate permit. The statute establishes criminal and civil penalties for fossil theft and vandalism on federal lands.

23 USC 1.9(a): Requires that the use of federal-aid funds must be in conformity with federal and state law.

23 USC 305: Authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 USC 431-433 above and state law.

State Regulations

Under California law, paleontological resources are protected by CEQA. Paleontological resources are classified as non-renewable scientific resources and are protected by State statute (e.g., Public Resources Code Section 5097.5 (a), Removal or Destruction; Prohibition), and Appendix G of CEQA Guidelines.

According to the State CEQA Guidelines, a project is considered to have a significant impact on paleontological resources if it will:

- Directly result in the destruction of a unique paleontological resource; or
- Indirectly result in the destruction of a unique paleontological resource.

Local Regulations

City of Elk Grove General Plan

The Historic Resources Element of the City's General Plan includes the following policy actions that are applicable to the proposed Project:

Policy HR-6-Action 1: In areas identified in the Background Report as having a significant potential for containing archaeological or paleontological artifacts, require completion of a detailed on-site study as part of the environmental review process. Implement all recommended mitigation measures.

Policy HR-6-Action 2: Impose the following conditions on all discretionary projects in areas which do not have a significant potential for containing archaeological or paleontological resources:

The Planning Division shall be notified immediately if any prehistoric, archaeological, or paleontologic artifact is uncovered during construction. All construction must stop and an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to evaluate the finds and recommend appropriate action.

Sacramento County Conservation Element

The following County General Plan Conservation Element policies are applicable to the proposed Project.

- Policy CO-161: As a condition of approval for discretionary projects, require appropriate mitigation to reduce potential impacts where development could adversely affect paleontological resources.
- Policy CO-162: Projects located within areas known to be sensitive for paleontological resources, should be monitored to ensure proper treatment of resources and to ensure crews follow proper reporting, safeguards and procedures.
- Policy CO-163: Require that a certified geologist or paleo resources consultant determine appropriate protection measures when resources are discovered during the course of development and land altering activities.

AFFECTED ENVIRONMENT

No paleontological field studies were completed in support of the proposed Project. However, a literature review was performed to determine previously identified paleontological resources in the County and the City.

According to the Sacramento General Plan (2011), a search of the University of California Museum of Paleontology (UCMP) collections database identified five localities in Sacramento County where paleontological resources have been identified. These fossil remains were encountered during excavation activities in Sacramento County within Pleistocene aged formations, and all were within the Riverbank formation.

The City General Plan (as amended) states that a GeoRef database covering the years 1785 to present and a road reconnaissance-level field survey of the City were conducted to identify potential outcrops of fossiliferous geological formations. Neither the database search nor field survey identified officially reported fossils in the City; however, there have been information finds, including a 1959 discovery of a Pleistocene bone bed within the Riverbank Formation along the west side of Deer Creek. A geologist from California State University, Sacramento, reportedly examined the fossils found by a local farmer; however, the find was never published (City of Elk Grove 2003).

A review of the Geologic Map of the Sacramento Quadrangle prepared by the California Geological Survey (2001) shows the Project APE is within the Riverbank Formation. While a locality search did not identify any occurrences of paleontological resources within the Project's APE, literature research revealed that a fossilized mammoth was found in the City, within the Rancho Verde residential housing development, in 2006. The Rancho Verde housing development is directly adjacent to the Project APE. Due to the proximity of the Project to the known paleontological site, and the Project APE being identified within the Riverbank formation, the Project would have a moderate potential for paleontological resources to occur.

ENVIRONMENTAL CONSEQUENCES

Based on the background research presented above, the surface of the entire APE is considered sensitive for paleontological resources to an unknown depth.

The following project components, in **Table 22**, involve ground disturbance and have the potential to affect paleontological resources for the duration of the depth of disturbance:

Table 22. Potential Effects to Paleontological Resources

Component	Max. Depth	Description	Location
Roadway	6 ft.	Excavation to maintain grade with existing Kammerer Road	Throughout the APE at elevations higher than existing grade
Overhead	6 ft.	Roadway improvements including roadside ditch excavation	Franklin/Willard
Drainage, Culverts, and Channel Improvements	10 ft.	Channel improvements including box culvert	Along channel located west of Bruceville
Street Lighting and Signal Improvements	15 ft.	Installation of lighting and signal foundations	Throughout the APE (lights required every 160-180 feet on both sides; signals at intersections)
Utility Relocation	40 ft.	Gas transmission line relocation and/or electrical transmission tower foundation	SMUD poles at east side of Project will need to be relocated; relocation unknown; gas line to be relocated just east of Franklin at UPRR crossing
Abutments and Footing Piles	100 ft.	Conservative estimate of structure footing depth at UPRR grade separation	East of Franklin at UPRR crossing

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measure GEO-3 has been incorporated into the following Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to paleontological resources would be reduced to a less than significant level:

PAL-1: The implementing agency shall retain a qualified paleontologist to develop an acceptable monitoring and fossil remains treatment plan or Paleontological Management Treatment Plan (PMTP) for construction-related activities that could disturb potential unique paleontological resources within the Project area. This plan shall be implemented and enforced by the implementing agency during the full phase of construction, and will include:

- Paleontological late discovery plan;
- Specifications for paleontological spot-check monitoring; and,
- Guidelines for recordation, evaluation, recovery, and treatment of resources as required by state and local governmental guidelines.

PAL-2: Due to the continual potential for discovery of subsurface fossil deposits random spot-check monitoring will be conducted by a qualified paleontologist. Frequency of spot-

check monitoring will be determined through research and record search within the PMTP.

PAL-3: Prior to the start of construction, all construction personnel would receive a paleontological sensitivity training, detailing the types of paleontological resources that may be encountered and procedures to follow if a find should occur.

PAL-4: If paleontological resources (i.e., fossils) are discovered during ground-disturbing activities, the implementing agency will immediately be notified, and will ensure that their contractors shall stop work in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and develop appropriate treatment measures. Treatment measures will be made in consultation with the implementing agency and would be included in the PMTP.

PAL-5: Grading plan notes will state that there is a potential for paleontological resources to be discovered during ground disturbance, and procedures to follow if a find should occur.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to less than significant impacts after mitigation to paleontological resources. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to paleontological resources would occur.

The Project would have a **less than significant impact with mitigation incorporated** relating to paleontological resources.

2.6 Geology and Soils

REGULATORY SETTING

The Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features” is a key federal law for geologic and topographic features. Topographic and geologic features are also protected under CEQA.

AFFECTED ENVIRONMENT

This section discusses geology, soils, and seismic concerns as they relate to public safety and Project design. Earthquakes are prime considerations in the design and retrofit of structures.

Geology and Topography

The Project area is situated within two geomorphic provinces: the Great Valley Geomorphic Province to the west and the Sierra Nevada Geomorphic Province to the east. The Great Valley of California, also called the Central Valley, is a nearly flat alluvial plain extending from the Tehachapi Mountains in the south to the Klamath Mountains in the north, and from the Sierra Nevada in the east to the Coast Ranges in the west. The valley is about 450 miles long and averages about 50 miles wide. Elevations of the alluvial plain are generally just a few hundred feet above MSL, with extremes ranging from several feet below MSL to approximately 1,000 feet above MSL. The Sierra Nevada is a strongly asymmetric mountain range with a long gentle western slope and a high, steep eastern escarpment. The range averages 50 to 80 miles wide, and it runs west to north through eastern California for more than 400 miles from the Mojave Desert to the south and the Cascade Range and Modoc Plateau to the north (California Department of Conservation 1966).

The proposed Project area is located in the southwestern portion of the Sacramento Valley and is associated with the Elk Grove, Bruceville, Florin, and Galt, California USGS 7.5-minute quadrangles. The BSA topography is relatively flat with only a slight decrease in elevation from approximately 45 feet above MSL in the west to approximately 5 feet MSL in the east.

The geology of the area consists of Quaternary alluvium. The soil in the Project area primarily consist of San Joaquin silt loam (leveled, 0 to 1 percent slopes, and 0 to 3 percent slopes), San Joaquin-Galt complex (leveled, 0 to 1 percent slopes, and 0 to 3 percent slopes), and Galt clay (leveled, 0 to 1 percent slopes, and 0 to 3 percent slopes) (NRCS 2017). The San Joaquin and Galt soils are comprised of moderately well drained alluvium derived from granite.

Seismicity

Seismic hazards are earthquake fault ground rupture and ground shaking (primary hazards), and liquefaction and earthquake-induced slope failure (secondary hazards). Compared to other areas of the state (e.g., the San Francisco Bay region), the Project area is not located in a highly seismically-active region. However, with respect to ground shaking, earthquakes have occurred in the vicinity of the Project area and can be expected to occur again. The nearest fault system is the Midland Fault Zone, a Quaternary fault zone located approximately 15 miles southwest of the western terminus of the Project.

The Project area is predominately flat, with approximately 45 feet above mean sea MSL in the west to approximately 5 feet MSL in the east. The alignment is underlain by thick Quaternary alluvial deposits that originated from millennia of erosion of geologic materials from the west slopes of the Sierra Nevada. Although the mountainous areas to the west are seismically active, the Central Valley is considered to be relatively seismically stable.

California's Alquist-Priolo Earthquake Fault Zoning Act (PRC 2621 et seq.) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. This Act prohibits the location of most structure types intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, providing legal weight to terms such as *active*, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. Faults identified in an Alquist-Priolo earthquake fault zone are typically active faults. The Alquist-Priolo Earthquake Fault Zoning Act defines an active fault as one in which surface displacement has occurred during the Holocene Epoch (approximately the last 11,000 years), while an early Quaternary fault is one which surface displacement has occurred within the Quaternary Period (approximately the last 1.6 million years). A pre-Quaternary fault is defined as one which has had surface displacement prior to the Quaternary Period. The Project area is not identified as located in a defined Alquist-Priolo earthquake fault zone (Hart and Bryant 1997), and the Uniform Building Code (UBC) recognizes no seismic sources in the Sacramento region.

Landslides

Within the limits of the Project area, the risk of naturally occurring large landslides varies depending on slope, underlying geology, surface soil strength, and soil moisture. Significant excavation, grading, or fill work during construction might introduce landslide hazards along the Project alignment. Because the Project alignment is flat and no significant excavation is currently planned, the potential for direct impact from landslides is considered low.

Soils

Due to the large size of the Project area, characterization of soils has been inferred using major land resource area (MLRA) information. A MLRA is a geographically associated land resource unit (LRU). A LRU is a geographic area, usually several thousand acres in size, characterized by a particular pattern of soil, climate, water resources, and land use. A unit can be a continuous area or several separate nearby areas. A LRU is the basic unit from which a MLRA is determined. It is also the basic unit for state land resource maps. It is coextensive with state general soil map units; however, some general soil map units are subdivided into LRUs because of significant geographic differences in climate, water resources, and land use (NRCS 2006). The Project area is located within MLRA 17. Descriptions of soil texture and erosion, runoff, and expansion hazards are described for the surface horizon of the soils only.

Within the Project area, soils are alluvial and nearly level, occurring on low terraces, fans, floodplains, and basins. Soil textures are generally clayey to loamy sand. Soils in the Project area are predominately deep San Joaquin silt loam and Galt clay. Erosion hazard is slight to none, runoff is very slow, and soil expansiveness is low to high, depending on geographic location and texture.

Expansive Soils

Expansive soils shrink and swell with wetting and drying. The shrink-swell capacity of expansive soils can result in differential movement beneath foundations/pavements. Based on the County soil survey data, the Project alignment is predominantly underlain by San Joaquin silt loam (NRCS 2016). In addition, the depth to water is shallow and significant shrink-swelling would not be expected. Based on this information, the likelihood of expansive soils at the site is low (NRCS 2017).

ENVIRONMENTAL CONSEQUENCES

Seismicity

Ground rupture is caused when an earthquake event along a fault creates a rupture at the surface. The Project area is located in a region with low potential for ground shaking. No known active faults exist in the Project vicinity. The nearest fault is approximately 15 miles southwest of the Project area and is an inactive Quaternary fault. The proposed Project will need to be designed and constructed to withstand moderate to strong earthquake shaking, as specified in Caltrans Standards and 2007 CBC for Seismic Zone 3. Therefore, the risk of rupture of a known earthquake fault rupture and the risk of strong seismic ground shaking is less than significant.

Liquefaction

Based on the low existing ground shaking hazard from seismic-related events, sediment characteristics of the soils, and depth to groundwater, the liquefaction hazard to construction workers and users of Project facilities is expected to be low. Mitigation Measures **GEO-1** and **GEO-2**, which include implementing the recommendations of the geotechnical investigation to conduct site-specific geotechnical investigations, would reduce this impact to a less than significant level.

Landslides

Soil units within the Project area are considered stable and not prone to lateral spreading, subsidence, liquefaction, or collapse. The Project area is not located on or near any large slopes susceptible to landslides. Vegetation will be removed from the banks of South Yuba River within the Project area, potentially destabilizing the soil; however, construction and post-construction BMPs and Mitigation Measures **GEO-1** and **GEO-2** will ensure that long-term Project impacts to unstable soils will be less than significant with mitigation incorporated.

Expansive Soils and Erosion

The shrink-swell capacity of expansive soils can result in differential movement beneath foundations/pavements. Although the likelihood of expansive soils in the Project area is low, if present beneath planned Project components, they could compromise the structural integrity of proposed new facilities (including roadways and associated features); this is considered a significant impact. As described above, Mitigation Measures **GEO-1** and **GEO-2**, which include implementing the recommendation of the geotechnical investigation to conduct site-specific geotechnical investigations, would reduce this impact to a less than significant level with mitigation incorporated.

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. This is considered a significant impact. However, the Connector JPA or local jurisdictions will require grading and construction contractors to comply with the applicable County or City (Municipal Code Chapter 16.44) grading requirements as a contract specification, which would reduce any adverse effects associated with erosion and sedimentation to a less than significant level. Mitigation Measure **HYD-1** in the Section 2.9 “Hydrology and Water Quality” would further reduce the impact to less than significant.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measures GEO-1 and GEO-2 has been incorporated into the following Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to geology and soils would be reduced to a less than significant level:

- GEO-1:** Prior to construction, the implementing agency will ensure that the project is designed and constructed in compliance with the latest California Building Standards Code, Caltrans seismic design criteria, and County and City General Plans seismic standards to ensure that all project components can withstand moderate to strong earthquake-shaking.
- GEO-2:** Prior to construction, the implementing agency will prepare project-specific geotechnical investigations to guide the design of earthworks and foundations for proposed structures. Based on the subsurface conditions expressed through geotechnical investigation, the implementing agency, in conjunction with soil scientists or engineers, will ensure that specific project elements are designed to accommodate the effects of liquefaction of expansive soils. For roadways and bridges, subsurface borings at regular intervals along proposed roadways and in the vicinity of proposed bridges are recommended as part of the geotechnical evaluations. If the site specific geotechnical investigations find that liquefiable soils, soils susceptible to seismically induced settlement, or expansive soils are present at any location where project activities would occur, corrective actions will be taken. These actions may include, depending on the extent and depth of susceptible soils and findings of the geotechnical evaluations, removal and replacement of soils; on site densification; grouting; and design of special foundations or other similar measures. All of these measures reduce pore water pressure during ground shaking by making the soil denser or improving its drainage capacity. The implementing agency will ensure that their contractors implement one or more of these measures in consultation with a qualified engineer prior to beginning and during construction. The implementing agency will ensure, as a contract specification, that their contractors implement the recommendations of site specific geotechnical reports pertaining to site clearing and preparation, organic removal, engineered fill placement, trench backfilling, foundation design, soundwall systems, exterior flatwork,

pavement design, and site drainage to minimize any adverse effects associated with runoff, erosion, and sedimentation.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to less than significant impacts after mitigation to geology and soil resources. During analysis for the Project, it was found that no new significant and unavoidable impacts to geology and soil resources would occur.

The Project would have a **less than significant impact with mitigation incorporated** relating to geology and soils.

2.7 Greenhouse Gas Emissions

REGULATORY SETTING

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO₂), CH₄, nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), hydrofluorocarbons HFC-23 (fluoroform) and HFC-134a (1, 1, 1, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: "Greenhouse Gas Mitigation" and "Adaptation." "Greenhouse Gas Mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.

Federal Regulations

Although climate change and GHG reduction are a concern at the federal level, currently no regulations or legislation have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the U.S. EPA nor the FHWA has issued explicit guidance or methods to conduct project-level GHG analysis.¹ FHWA supports the approach that climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

¹ To date, no national standards have been established regarding mobile source GHGs, nor has U.S. EPA established any ambient standards, criteria or thresholds for GHGs resulting from mobile sources.

The four strategies outlined by FHWA to lessen climate change impacts correlate with efforts that the state is undertaking to deal with transportation and climate change; these strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the “National Clean Car Program” and E.O. 13514 - Federal Leadership in Environmental, Energy and Economic Performance.

E.O. 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

The U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions. U.S. EPA in conjunction with National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010.²

The U.S. EPA and the NHTSA are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama’s 2010 request to jointly establish greenhouse gas emissions and fuel

² <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO₂ emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy duty vehicles.

State Regulations

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and proactive approach to dealing with GHG emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

E.O. S-3-05 (June 1, 2005): The goal of this E.O. is to reduce California's GHG emissions to 1) year 2000 levels by 2010, 2) year 1990 levels by 2020, and 3) 80 percent below the year 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

AB 32, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in E.O. S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

E.O. S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal EPA) and state agencies with regard to climate change.

E.O. S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this E.O., the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Senate Bill (SB) 97 Chapter 185, 2007, Greenhouse Gas Emissions: This bill required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

SB 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the CARB to set regional emissions reduction targets from passenger vehicles. The metropolitan planning organization for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

SB 391 Chapter 585, 2009 California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Sacramento Metropolitan Air Quality Management District (SMAQMD)

The SMAQMD's *Guide to Air Quality Assessment in Sacramento County* establishes analysis expectations with regard to GHG emissions in CEQA documents (Sacramento Metropolitan Air Quality Management District 2015). The district recommends that an analysis of potential impacts of project-generated GHG emissions should include a description of GHGs, summary of existing regulations, and discussion of GHG emissions sources in the Project area. The guidelines further state that the analysis quantifies the mass emissions associated with Project construction and operation.

The district set a threshold of significance for GHG for operational impacts of transportation associated with land development projects; however, no thresholds of significance have been set for road widening or transportation improvement projects by SMAQMD.

SMAQMD requires that CEQA documents make a conclusion about the significance of project-related GHG emissions and identify feasible mitigation measures to reduce those emissions.

Sacramento County Climate Action Plan (CAP)

The County's CAP presents a framework for reducing GHG emissions and managing water and other resources to best prepare for a changing climate.

This CAP describes actions that the County has already taken or could take in the future to reduce GHG emissions and adapt to a changing climate, while being more resource efficient, saving energy and money, and creating jobs. In addition, most of the actions provide important co-benefits such as improved air and water quality and public health.

Actions are in five sectors, including transportation and land use, energy, water, waste management and recycling, and agriculture and open space, with corresponding goals for each sector. The actions and goals for the transportation and land use sector are as follows:

- Increase the average fuel efficiency of County-owned vehicles powered by gasoline and diesel and encourage increased fuel efficiency in community vehicles
- Increase use of alternative and lower carbon fuels in the County vehicle fleet and facilitate their use in the community
- Reduce total vehicle miles traveled (VMT) per capita in the community and the region

While the County has no control over the availability of fuel efficient cars and alternative fuels to the community, or the choices the County residents and cities in the region make about transportation, reducing VMT is another way to reduce emissions.

The County influences emissions from transportation in several ways. As the land use planning authority for the unincorporated county, the County determines land use patterns, which in turn affect transportation patterns and therefore associated GHG emissions. The County also plans and oversees roads and pedestrian and bicycle facilities in the unincorporated portion of the county. The road, trail, and bicycle systems influence people's mode of travel as well as traffic flow (flowing traffic generates less emissions than does stop-and-go traffic).

Existing and potential actions that reduce GHG emissions are described below related to the County's goals which apply to the entire community for actions that reduce VMT.

- Provide Incentives for Increased Density and Mixed Land Use Developments
- Require and Promote Transit Oriented Development
- Integrate Intelligent Transportation Systems (ITS) Technology
- Study/Develop Pricing Policies and Structures to Discourage Car Travel
- Convenient County Service Locations
- Require Secure Bike Storage Facilities for Non-County Buildings and Parking Lots
- Adopt "Complete Streets" Policy to Accommodate All Modes
- Transit Oriented Development in County Infill Corridors
- Implement Bicycle and Pedestrian Master Plans
- Participation "Safe Routes to School" (SR2S) Program Participation

The CAP states that the County will evaluate and implement feasible and cost-effective actions above to reduce GHG emissions.

City of Elk Grove CAP

On March 27, 2013, the City Council of Elk Grove adopted the Elk Grove CAP. The CAP identifies sources of GHG emissions from sources within Elk Grove's boundary and reduces emissions through energy use, transportation, land use, water use, and solid waste strategies. The City's primary motivation for preparing the CAP is to enable new development projects consistent with the CAP and General Plan to tier from the CAP's environmental review process and minimize subsequent project-level analysis. To provide this benefit to new development, implementation of the CAP on a project-by-project basis should achieve a 15 percent reduction below 2005 GHG emissions by 2020. This approach is consistent with the guidance provided by the Sacramento Air Quality Management District, CEQA, and the Global Warming Solutions Act of 2006 (AB 32).

Elk Grove General Plan: Conservation and Air Quality Element

The City General Plan (as amended) Conservation and Air Quality Element developed conservation policies related to the conservation of land, water, and air resources. In this element, the City policies CAQ-26, CAQ-27, CAQ-28, CAQ-29, CAQ-30, CAQ-31, CAQ-32, and CAQ-33 provide efforts to minimize air pollutant emissions, promote energy conservation, ensure public transit is variable and attractive alternative, minimize single-occupant vehicle use, mitigation measures for new development projects that may cause substantial air quality impacts, and reduce emissions levels to those required by the state and federal regulations.

ENVIRONMENTAL CONSEQUENCES

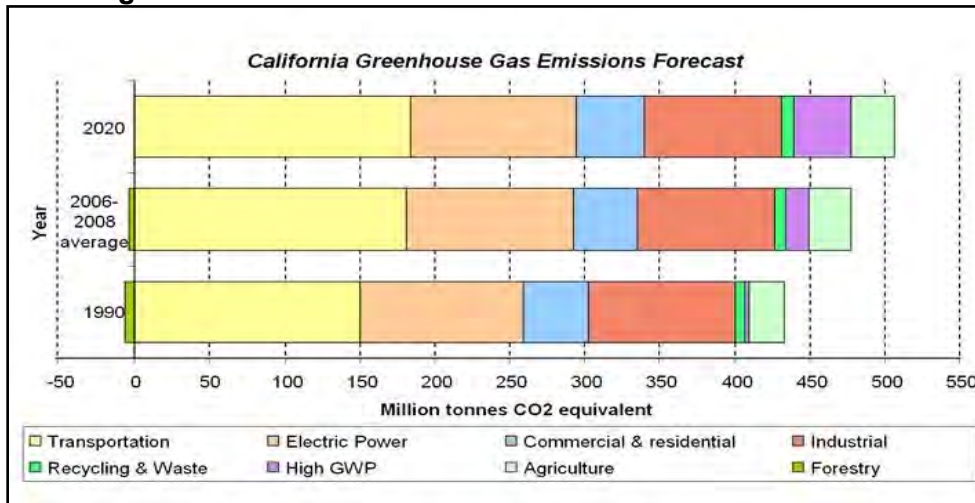
An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG.³ In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather

³ This approach is supported by the AEP: Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 includes the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, the CARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in 2020 if none of the foreseeable measures included in the Scoping Plan were implemented (**Figure 17**). The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Figure 17. California Greenhouse Gas Emissions Forecast

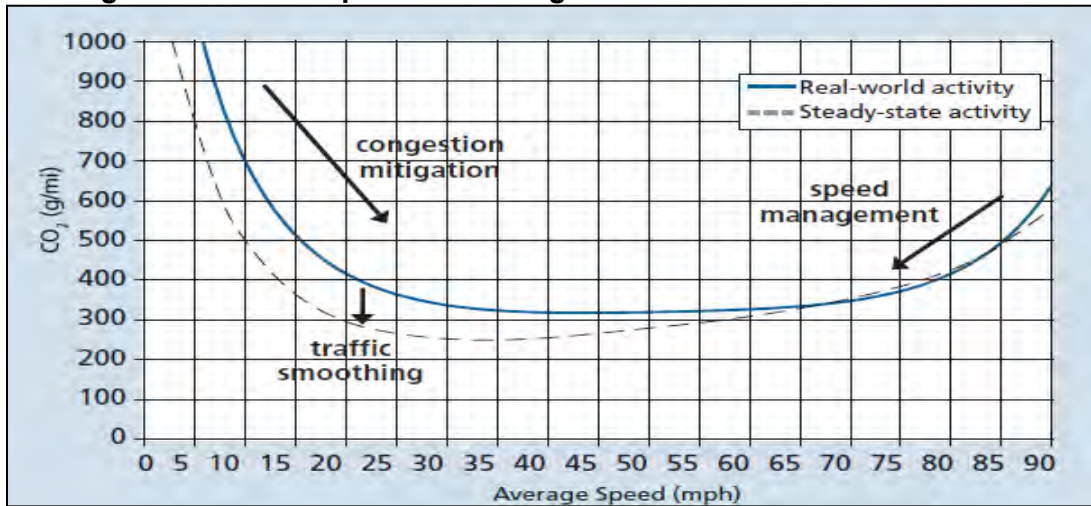


Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

Caltrans and its parent agency, the Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006³.

One of the main strategies in Caltrans’ Climate Action Program (Caltrans 2006) to reduce GHG emissions is to make California’s transportation system more efficient. The highest levels of CO₂ from mobile sources such as automobiles occur at stop-and-go speeds (0-25 miles per hour) and at speeds over 55 miles per hour; the most severe emissions occur from 0-25 miles per hour (**Figure 18**). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors GHG emissions, particularly CO₂, may be reduced.

SB 375 provides for a new planning process that coordinates land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction Goals established in AB 32. SB 375 requires the development of a SCS as part of the MTP, which identifies policies and strategies to reduce greenhouse gas emissions from passenger vehicles to targets set by the CARB. Currently, the most up-to-date CARB reduction targets applicable to the proposed Project can be found in the 2016 MTP/SCS.

Figure 18. Traffic Operation Strategies and On-Road CO₂ Emissions⁴

The design concept and scope of the proposed Project is consistent with the project description in the 2016 MTP/SCS and the SACOG 2014 Air Quality Conformity Analysis (SACOG 2016a). The proposed Project is consistent with the goals of the 2016 MTP/SCS, including:

- reduction in the amount of heavy congestion per capita;
- progress toward a “state-of-good-repair” for the existing roadway and transit system with increased investment in maintenance and rehabilitation;
- greater levels of investment in a truly multi-modal system, including complete streets, and bicycle and pedestrian facilities.

The proposed Project would:

- Improve Traffic Operations and Accommodate Transportation demand. Planning for projected traffic demand (due to planned growth/approved development) will avoid traffic delay and facilitate mobility for current and planned land uses.
- Aid Economic Vitality. Reconstructing Kammerer Road as a four-lane thoroughfare will improve accessibility to existing and planned job centers and commercial areas.
- Enhance Mobility Options within the Project Corridor. Planning an all-weather, multimodal corridor in advance of substantial planned development provides opportunity to control access and design for optimum safety standards for vehicular, transit, bicycles and pedestrian movements while improving emergency vehicle access.
- Support Planned Growth. Implementing adopted transportation plans supports sustainable planned growth and development patterns and principles from the SACOG’s MTP/SCS 2035 and the City’s and the County’s planned high-growth area.

Therefore, the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

⁴ Traffic Congestion and Greenhouse Gases: Matthew Barth and Kanok Boriboonsomsin (TR News 268 May-June 2010) <<http://onlinepubs.trb.org/onlinepubs/trnews/trnews268.pdf>>

The PEIR stated that the Project would have cumulative significant impacts to greenhouse gases because impacts under CEQA for greenhouse gases are typically evaluated as cumulative for transportation projects, as an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. The PEIR found cumulative significant impacts as “all design options would generate a net increase in GHG emissions relative to the no-project Alternative. These emissions exceed all published significance criteria (Table 4-7 in Chapter 4). (...) The possibility therefore exists that the design options will contribute to global GHG emissions and global climate change.”

Table 4-7 from Chapter 4 of the PEIR can be seen below:

Table 4-7. Adopted Greenhouse Gas Thresholds		
Agency	Threshold	Application
BAAQMD	1,100 (metric tons/year)	Development projects (operational emissions)
	Compliance with GHG reduction strategy	
	4.6 metric tons/service population/year	
SCAQMD	25,000 (metric tons/year)	Stationary source projects (operational emissions)
	10,000 (metric tons/year)	
SJVAPCD	Compliance with GHG reduction strategy	Development and stationary source projects (operational emissions)
	Implementation of best performance standards	
	29% reduction in GHG emissions relative to business-as-usual conditions ^a	
Sacramento County (Draft)	4.56 metric tons per capita ^b	Transportation projects
Sources: Bay Area Air Quality Management District 2010; South Coast Air Quality Management District 2008; San Joaquin Valley Air Pollution Control District 2009; Sacramento County 2010d.		
^a Defined as emissions that would occur if no GHG mitigation measures were implemented.		
^b This threshold is based on a per capita approach. Consequently, it difficult to apply this threshold to the proposed project—there is not a means of identifying the population served by the project, particularly since the project is intended to provide a transportation link across the Sacramento and into El Dorado counties.		

As shown, these thresholds do not apply to transportation projects and should only be applied as thresholds of significance to development projects. All of the listed Adopted Greenhouse Gas Thresholds in Table 4-7 for the BAAQMD, SCAQMD, or SJVAPCD are not applicable. Further, the Threshold of Significance as drafted by Sacramento County is not applicable to the project as the population service by the project is not easily defined, as stated in Footnote B of the table. Neither at the time of preparation of the PEIR, nor currently, are there established thresholds of significance for CO₂ emissions set by the BAAQMD, SCAQMD, or SJVAPCD for road widening or transportation improvement Projects. In discussion with SMAQMD on October 22, 2015, it was determined that greenhouse gas thresholds adopted for development project and stationary source projects are not applicable to transportation enhancement projects and no thresholds of significance have been established.

Regardless, the PEIR did identify a significant and unavoidable increase in GHG emissions and found the project may obstruct implementation of AB 32 and SB 375; however, the A1/A2 Kammerer Road segment of the Project did not identify any new or additional GHG impacts.

Greenhouse Gas Emissions Modeling

The Project utilized CT-EMFAC to calculate greenhouse gas emissions. CT-EMFAC is a California-specific project-level analysis tool developed for Caltrans by the University of California, Davis, to model criteria pollutant and CO₂ emissions from on-road mobile sources. The model uses the latest version of the California Mobile Source Emission Inventory and Emission Factors model, EMFAC2007, to quantify running exhaust and running loss emissions using user-input traffic data, including peak-hour and off-peak-hour VMT data allocated into 5-mph speed bins. Running exhaust emissions are emitted from the vehicle tailpipe while the vehicle is traveling, while running loss emissions are evaporative TOG emissions that occur when hot fuel vapors escape from the fuel system or overwhelm the carbon canister while the vehicle is operating. CT-EMFAC will estimate emission factors and project-level emissions for the following pollutants:

- Criteria pollutants: Ozone precursors (ROG and NOX), CO, sulfur oxides, PM₁₀, and PM_{2.5}
- Greenhouse gases: CO₂
- Mobile Source Air Toxics: Acrolein, Acetaldehyde, Benzene, 1,3-Butadiene, Diesel particulate matter (DPM), Formaldehyde

The required inputs to CT-EMFAC to calculate emission estimates included the following:

- Geographic area;
- Analysis year;
- Project Truck/Non-truck percentages;
- Road length;
- Volume of vehicles per hour;
- Average Idling Time in minutes per vehicle; and,
- VMT Distribution by Speed Bin

The truck/non-truck percentages, vehicles per hour, and VMT distribution by speed bin are all contained within the Traffic Report, and input into CT-EMFAC. For each analysis year, the relevant user input information is entered and then run through the model to calculate emissions for the various pollutants.

Construction Emissions

Construction CO₂ emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications, and by implementing better traffic management during construction phases.

SMAQMD has a threshold of significance of 1,100 metric tons per year for the project's construction related GHG emissions. For linear construction projects such as construction of a new roadway, road widening, roadway overpass, levees, or pipelines, SMAQMD recommends the use of the most recent version of the RCEM to estimate the total Metric tons of CO₂. For construction of the 2-lane facility in the interim phase the RCEM found CO₂ emissions will be

4,342 metric tons and 4,730 metric tons for the full 4-lane facility (see Appendix C). The Project's construction is anticipated to last for 25 months for each phase, approximately two years, which results in estimated annual CO₂ emissions to be at 2,171 metric tons per year for the 2-lane facility in the interim phase and 2,365 metric tons per year for the full 4-lane facility. Construction of either facility would exceed the SMAQMD threshold of significance for construction emissions of CO₂. **Table 23** shows GHG emissions produced during construction of the proposed Project.

Table 23. Construction CO₂e Emissions

Project Phase	CO ₂ e (lbs/day)	
	2-Lane facility (Interim Phase)	4-Lane facility (Full Build)
Grubbing/Land Clearing	28,054	26,461
Grading/Excavation	20,467	22,800
Drainage/Utilities/Sub-Grade	10,787	7,944
Paving	3,579	12,731
Maximum (pounds/day)	28,054	26,461
Total (tons/construction project)	4,342	4,730
Total (tons/year)	2,171	2,365
Results based on Road Construction Emissions Model, Version 8.1.0. Full results are shown in Appendix C.		

According to the SMAQMD CEQA Guide (SMAQMD 2016), if the threshold is exceeded, then the Project may have a cumulatively considerable contribution to a significant cumulative environmental impact, and all feasible mitigation would be required. The Connector JPA PEIR found that operation of the entire Capital SouthEast Connector Project would contribute to an increase of greenhouse gas emissions above all published significance criteria. No new significant and unavoidable impacts under greenhouse gas emissions are identified outside of what was previously identified in the Connector JPA PEIR.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. Implementation of avoidance, minimization and mitigation measures **CC-1** through **CC-4** would reduce any impacts to a less than significant level.

Operational Emissions

Operational emissions from transportation projects (including GHG emissions) are not attributed to individual roadways themselves, but rather to past and future development projects that indirectly create the demand for the roadway.

Caltrans emission factors model (CT-EMFAC) was utilized to calculate greenhouse gas operational emissions. **Table 24** gives projected CO₂ emissions for existing, interim year, and design year Project conditions during peak hour. Peak hour CO₂ emissions in the design year with the Full Build 4-lane facility are expected to be approximately 237% higher than existing

conditions. This increase in CO₂ emissions can be attributed to the projected increases in traffic volume.

Table 24. Existing and 2035 CO₂ Emissions (metric tons/hour) for A1/A2 Project

Existing (2018)	2-Lane Facility (2034)		4-Lane Facility (2044)	
No Project	No Project	Project	No Project	Project
10.3	19.2	22.4	24.7	34.7
	No Project to Project Difference	+3.2	No Project to Project Difference	+10.0
	Existing to Project Difference	+12.1	Existing to Project Difference	+24.4
*Based on CT-EMFAC Version 6.0.0.29548 and Transportation Impact Analysis (DKS 2018). CT-EMFAC results can be found under Appendix C -				

The project is included in the SACOG MTIP 2017/2020 which aims for efficient transportation circulation. The Project is projected to have higher traffic volume, but higher average speeds and lower average delay per vehicle through the project area. In other words, implementing the project will result in a substantial increase in travel speeds and decrease in delay.

It should be noted that while these emission numbers are useful for comparing Project and no-Project alternatives, they do not necessarily accurately reflect what the true CO₂ emissions will be because CO₂ emissions are dependent on other factors that are not part of the model, such as the fuel mix (EMFAC model emission rates are only for direct engine-out CO₂ emissions, not full fuel cycle; fuel cycle emission rates can vary dramatically depending on the amount of additives like ethanol and the source of the fuel components), rate of acceleration, and the aerodynamics and efficiency of the vehicles. The relative magnitudes however, as used for the comparison above, can be assumed to be reasonably accurate.

As previously discussed, the Connector JPA PEIR identified a significant and unavoidable increase in GHG emissions and found the project may obstruct implementation of AB 32 and SB 375; therefore, all feasible mitigation is required in accordance with the SMAQMD. Implementation of avoidance, minimization and mitigation measures below would reduce any impacts related to the generation of greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment to less than significant with mitigation incorporated.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measures AQ-7 and AQ-8 has been incorporated into the following Project specific avoidance,

minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to greenhouse gas emissions would be reduced to a less than significant level:

- CC-1:** The Project would incorporate the use of energy-efficient lighting, such as LED traffic signals. LED bulbs cost \$60 to \$70 each, but last five to six years, compared to the one-year average lifespan of the incandescent bulbs previously used. The LED bulbs themselves consume 10 percent of the electricity of traditional lights, which will also help reduce the Project's CO₂ emissions.
- CC-2:** According to the Department's Standard Specification Section 14-9.02, the contractor must comply with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including air pollution control rules, regulations, ordinances, and statutes provided in Govt Code § 11017 (Pub Cont Code § 10231).
- CC-3:** Conduct a Carbon Sequestration Feasibility Study and Cost Benefit Analysis for Tree Planting as Greenhouse Gas Mitigation to Mitigate Greenhouse Gas Emissions to Net Zero.

The implementing agency, in consultation with the SMAQMD, will conduct a carbon sequestration feasibility study and cost benefit analysis for the project, during PS&E. The objective of the study and analysis is to identify optimal species and numbers of trees to mitigate GHG emissions to the maximum extent feasible, and down to net zero, if practicable. A preliminary feasibility study for carbon offsets from tree planting in northern California was conducted for the Connector (ICF International 2011). This analysis indicated that the theoretical carbon offset potential ranges from 0.4 metric ton of carbon per acre per year (C/ac/year) to 2.0 metric tons C/ac/yr. Of the tree types broadly found in this region, the Douglas fir and hemlock Sitka spruce offer the largest sequestration potential. If future carbon sequestration studies conclude tree planting is appropriate mitigation from both cost and GHG reduction standpoints, the Connector JPA will adopt and implement a sequestration plan committing the Connector JPA to the planting and maintenance of selected evergreen species, such as Douglas fir and hemlock/Sitka spruce for off site plantings and hardwood maple or soft maple for on site plantings, to sequester project generated GHG emissions to the maximum extent feasible, and down to net zero, if practicable. The sequestration plan would identify the location (both on site and off site) and timing of plantings, funding mechanisms, maintenance plans, and other key aspects of the offset potential, including water resources, costs, future climate change impacts, and forest management practices and monitoring needs.

- CC-4:** The implementing agency will implement through construction contract terms and specifications that the contractor adheres to the mitigation measure and implements, all applicable SMAQMD best management practices for reducing construction-related GHG emissions. Documentation will be provided to the implementing agency on a weekly basis. The contract provisions and specifications will authorize the implementing agency to sanction contractors for non-compliance. The implementing agency will consult with SMAQMD prior to construction about the most current recommended construction best management practices and will adopt those practices. Practices include the following:

- Improve fuel efficiency from construction equipment:

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 3 minutes (a 5-minute limit is required by the state airborne toxics control measure—13 CCR 2449[d][3], 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
 - Maintain all construction equipment in proper working condition according to manufacturer’s specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.
 - Train equipment operators in proper use of equipment, including limiting idling time, minimizing warm-up time, performing routine maintenance, and optimizing equipment use.
 - Avoid using equipment that is larger than the job requires.
 - Use equipment with new technologies (e.g., repowered engines, electric drivetrains).
- Perform on-site material hauling with trucks equipped with on-road engines (if the air districts or ARB determine them to emit less than the off-road engines).
 - Use alternative fuels for generators at construction sites, rather than gasoline or diesel (e.g., propane or solar), or use electrical power.
 - Use an ARB-approved low-carbon fuel for construction equipment. (NOx emissions from the use of low-carbon fuel must be reviewed and increases mitigated.)
 - Encourage and provide carpools, shuttle vans, and transit passes for construction worker commutes.
 - Reduce electricity use in the construction office by using compact fluorescent bulbs, powering off computers every day, and using the most efficient heating and cooling units available.
 - Recycle or salvage non-hazardous construction and demolition debris (goal of at least 75% by weight) to avoid landfill disposal."
 - Use locally sourced or recycled materials for construction materials (goal of at least 20% based on costs for building materials, and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products utilized should be certified through a sustainable forestry program.
 - Minimize the amount of concrete for paved surfaces or utilize a low carbon concrete option.
 - Produce concrete on-site if determined to be less emissive than transporting ready mix.
 - Use Smartway certified trucks for deliveries and equipment transport.
 - Develop a plan to efficiently use water for adequate dust control.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to greenhouse gas emissions. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to greenhouse gas emissions would occur.

The Project would have a **less than significant impact with mitigation incorporated** relating to greenhouse gas emissions.

2.8 Hazards and Hazardous Materials

REGULATORY SETTING

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

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

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Information gathered and activities performed for this Initial Site Assessment (ISA) were consistent with those required to address the Caltrans ISA Checklist for Hazardous Waste. The completed ISA Checklist, pursuant to Caltrans' Guidelines, is included in Appendix E.

AFFECTED ENVIRONMENT

This section presents results of the ISA prepared for the Project conducted in November 2015 (Kleinfelder 2015b). The ISA provides a comprehensive search and assessment of hazardous waste and materials within the Project Study Area, including a thorough records review, visual survey, and evaluation of findings. The purpose of the ISA is to evaluate the properties in the Project vicinity for the presence of Recognized Environmental Conditions (RECs) and/or Activity and Use Limitations (AULs), which are:

REC: "the presence or the likely presence of any hazardous substances or petroleum hydrocarbons on the (Subject Property) that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum hydrocarbons into structures or into the ground, groundwater, or surface water of the subject property."

AUL: "an explicit recognition by a federal, tribal, state, or local agency that residual levels of hazardous substances or petroleum hydrocarbons may be present on the property, and that unrestricted use of the property may not be acceptable."

The Project Study Area is defined as Kammerer Road and includes the existing Kammerer Road from SR-99 to Bruceville Road, and the properties included within the planned roadway alignment from Bruceville Road to the I-5 Hood Franklin Road Interchange. The study area envelopes potential parcels requiring acquisition, and utility facilities along Kammerer Road and along the planned alignment.

Database Search and Other Records Review

Federal, state and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or hazardous waste, or are the known location of a release of hazardous substances to soil and/or groundwater. These databases are available for

review and/or purchase at regulatory agencies, or the information may be obtained through a commercial database service. A commercial database service, Environmental Data Resources (EDR), performed a review of the SWRCB online GeoTracker™ Database to review the regulatory agency lists for references of properties within the Project area, and for listings within the American Society of Testing and Materials Guidelines 1-mile radius of the Project area. The EDR listings, as available, include the type of hazardous material, the quantity, and regulatory agency involved. Each listing was reviewed to assess whether these properties would likely pose a hazardous waste impact to the Project area based on the following, or a combination thereof:

- The listed property was located at a distance where the facility would be an unlikely hazardous waste impact to the Project area.
- The listed property was located in a down-gradient or cross-gradient direction from the Project area at a distance that would be unlikely to pose a hazardous waste impact concern beneath the Project area.
- The listed property was identified in low-hazardous risk databases (i.e., underground storage tank [UST], Facility and Manifest Data (HAZNET), Small Quantity Generator [SQG] databases) not on or immediately adjoining the Project area and were not listed in other databases and/or was not listed as having any associated violations. The listing of a facility on these databases is not indicative of an unauthorized release.
- The listing of the facility suggested a short-term release had occurred (i.e., from incidental traffic accidents, or chemicals from illegal drug labs found at residences) with an associated hazardous materials cleanup.
- The quantity of the substances released was not considered to cause a significant hazardous waste impact to the Project area.
- The listing indicates that the reported release affected soil was not on or immediately adjoining the Project area.

Based on these criteria, these listings were not evaluated further and are not discussed in this IS.

The remaining listings were reviewed to assess whether properties within close proximity to the Project area may have had significant environmental releases or incidents, which may have resulted in a hazardous waste impact to the Project. Listings, if any, which indicate a significant release had occurred and/or which remain as an open case with the designated regulatory agency, were further assessed by requesting a file review with the appropriate regulatory agency. Further evaluation was made as to whether the listed release may represent a hazardous waste impact to the proposed Project.

Based on the review of the EDR database report, two properties are located within the Project Study Area:

- “Carmo Dairy” (10775 Franklin Boulevard) – The Project area passes through this property, which adjoins to the east of Franklin Boulevard. This property is listed in the California Water Resources Control Board Waste Discharge System database as an active facility that discharges agricultural waste. In addition, the facility is listed in the Enforcement Action Listing database as a privately-owned agricultural business that

consists of dairy farming and animal feeding. It was issued notices of violation for failure to submit 2011 and 2012 annual reports. The listings for this facility are not indicative of a release and therefore, do not suggest a hazardous waste impact to the Project area.

- “Verizon Wireless” and “AT&T Mobility-Franklin” (3307 Hood Franklin Road) – This property is located within the study area on the north side of Hood Franklin Road. Verizon Wireless facility is listed in the HAZNET database, which includes information extracted from copies of hazardous waste manifests received each year by the State of California Department of Toxic Substances Control (DTSC), and the County Master Hazardous Materials Facility List database. The AT&T Mobility-Franklin facility is listed in the FINDS database. Detailed information is not provided in the listings for these facilities. However, based on information obtained from the Sacramento County Environmental Management Department, a cellular phone tower occupies this location. Due to the Project being a transportation facility, the cellular tower and equipment at the site is not considered a likely hazardous waste impact for the Project.

Based on the review of the remaining listings and information reviewed on GeoTracker™, there are no listings in the EDR report that are considered to represent a hazardous waste concern to the site.

Sites not plotted by EDR due to poor or inadequate address information are referred to as orphan sites. There are numerous unmapped sites in the EDR report. The orphan summary/unmapped sites reports were reviewed to assess the potential for properties located outside the site improvement areas that might pose a hazardous waste impact to the proposed Project.

These orphan sites appear to be on other database listings already discussed, or fall under one or more, or the above listed criteria and do not represent a hazardous waste impact to the Project.

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) can occur in serpentine. The most common forms of naturally occurring asbestos minerals are chrysotile, actinolite, and tremolite. A review of the “General Location Guide for Ultramafic Rocks in California – Areas likely to Contain Naturally Occurring Asbestos” (California Geological Survey Open-File Report 2000-19, 2000) indicated that naturally occurring asbestos was not mapped on, or near, the vicinity of the Project.

Site Reconnaissance

Visual reconnaissance visits were conducted in August and September 2014 and again in September 2017 to assess and photograph present conditions within the Project area, and to look for evidence of RECs. These observations were intended to identify the presence, or likely presence, of hazardous substances or petroleum products in the study area, or adjacent properties, under conditions that could significantly affect the feasibility or cost of the proposed Project.

ENVIRONMENTAL CONSEQUENCES

The scope of an ISA is limited to anecdotal and visual evidence of potential RECs and does not include verification of RECs based on environmental testing. The roadway and the surrounding area within the Project limits were observed for indications of materials that may be considered

hazardous. Based on a regulatory records search, file reviews, aerial photography review, topographic map review, and a visual site survey, the following is a list of observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products:

- Properties located within the Project area maintain above ground storage tanks (ASTs) containing both gasoline and diesel fuel. Due to access limitations to structures on private properties, other ASTs or chemical storage may be present within the Project area.
- Minor surficial oil staining was observed on the property located at 10632 Franklin Road (adjoins west of Franklin Boulevard). The staining was observed adjacent to a mobile AST north of the residence. The staining is considered *de minimis* and is not considered a hazardous waste impact to the Project.
- Five unlabeled 55-gallon plastic drums were observed in the vicinity of farm equipment on the property location at 10632 Franklin Road. No staining was observed in the vicinity of the drums.
- Numerous pole-mounted transformers were observed within the study area. No evidence of leakage or staining was observed on the transformers or on the ground beneath them.
- Elevated concentrations of lead and other metals are sometimes associated with older roadways (I-5 and Kammerer Road). Yellow traffic markings were observed on I-5 on-and off-ramps, and on Kammerer Road, Franklin Boulevard, and Bruceville Road. These yellow traffic markings may potentially contain hazardous levels of lead chromate.
- The Project passes through a UPRR right-of-way east of Franklin Boulevard. The potential exists for herbicides, petroleum hydrocarbons, and metals to be present in shallow soil in the vicinity of the tracks. Pipeline markers were observed within the UPRR right-of-way. Based on the review of information for the Project area, Pacific Gas and Electric Company (PG&E) and Sacramento Municipal Utilities District (SMUD) operate natural gas pipelines along the railroad.

No other potentially hazardous materials were observed within the study area.

Naturally Occurring Asbestos

Mitigation practices can reduce the risk of exposure to NOA-containing dust. If NOA is confirmed to be on-site, Mitigation Measures outlined in the Section 2.3 Air Quality previously mentioned in Section 2.3, will be implemented. If NOA is not present, Mitigation Measures outlined in the Section 2.3 Air Quality will not be implemented. Implementation of avoidance, minimization and Mitigation Measures provided at the end of this section would reduce potential hazardous waste impacts to a less than significant level.

Hazardous Waste Transport, Use, Disposal, and Accident

Operation of most roadways, including Kammerer Road, typically includes the transportation of hazardous materials and wastes. Permanent use (transportation) of hazardous materials and hazardous wastes would be governed by regulations that prescribe the proper handling, transportation, use, and disposal of such materials. Additionally, construction of the Project would temporarily increase the use of large construction equipment, storage, and disposal of hazardous materials, petroleum products, and hazardous wastes commonly used at construction sites (e.g., diesel fuel, lubricants, paints and solvents, lead-based paint). Temporary use of hazardous materials and hazardous wastes would be governed by regulations that prescribe the proper

handling, transportation, use, and disposal of these materials. Impacts related to the routine transport, use, or disposal of hazardous materials would be less than significant.

Access into structures (residences, associated out buildings, storage sheds, and barns) on developed parcels was not provided at the time of the field reconnaissance visits. It is possible that chemicals (e.g., petroleum products, pesticides, herbicides, etc.) are used/stored within these structures. Other ASTs and containers may be located between, or within, structures that were not visible due to access restrictions. Spills, leaks, or stains may be present in the vicinity of ASTs, containers, or equipment between, or within structures that were not visible due to access restrictions. The implementation of Mitigation Measures outlined at the end of this section would further reduce the risk of creating a significant hazard to the public or environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials to a level of less than significant with mitigation incorporated.

Schools

The proposed Project is anticipated to pass adjacent to the Franklin Elementary School along Hood-Franklin Road within the City. Construction activities within the vicinity of the school along the roadway corridor would have the potential for the release of hazardous emissions due to the use of construction equipment. Mitigation Measures provided in Section 2.3 Air Quality would be implemented to reduce any impacts to a level of less than significant with mitigation incorporated.

Airports

The Project area is not located within an airport land use plan or within 2 miles of a public or private airport. The closest airport is the Franklin Field approximately 5 miles south of the Project area. The Project would have no impacts related to safety hazards or hazardous materials for people residing or working within the Project area related to proximity to a public or private airport.

Emergency Plans

The proposed Project area is covered by several emergency plans including the County Evacuation Plan, the County Emergency Operations Plan, and the County Multi-Hazard Mitigation Plan. The proposed Project would provide a critical missing link in the transportation infrastructure network that serves the City and the County area. The proposed Project would not impede or conflict with the objectives or policies of the identified emergency response plans and evacuation plans and would be expected to improve emergency access in the area, provide an east-west evacuation route higher than the 100-year flood elevation, and enhance circulation.

During construction, temporary lane closures and detours may be necessary; however, the City and County will require the contractor to coordinate with the fire and police departments prior to lane closures and detours to ensure emergency services access to and through the proposed Project area.

Wildland Fires

The proposed Project area is bordered by primarily agricultural land uses. This includes irrigated crops, orchards, and pasture land. There are also grasslands and trees/shrubs present in the area. The proposed Project area contains several residential and agricultural structures.

The proposed Project would include a roadway and intersection on- and off- ramps, the operation of which would not result in additional fire risk. However, temporary construction activities involving the use of combustion engines could result in increased risk of fire in the area.

The Project area is not located in a wildlands area, or an area of wildlands where residences are intermixed with wildlands. According to the California Department of Forestry and Fire Protection, the Project area is located in a Local Responsibility Area, which has been defined as a Non-Very High Fire Hazard Severity Zone. The Project would have no impact related to risk or exposure to loss, injury, or death involving wildland fires.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following avoidance, minimization and/or mitigation measures are based on the research, site reconnaissance and records search performed as part of the ISA (Kleinfelder 2015b). With the implementation of the following measures Project impacts to hazards and hazardous materials would be reduced to a less than significant level.

HAZ-1: Prior to construction, a visual survey of those areas not accessed at the time of the field reconnaissance visits should be performed. If spills, leaks, or stains from equipment, ASTs, or other containers are observed, soil sampling should be performed to assess the presence of hazardous materials that may pose a potential hazardous waste to the proposed roadway alignment areas.

HAZ-2: The potential exists for herbicides, petroleum hydrocarbons and metals to be present in shallow soil in the vicinity of the UPRR right-of-way. The Project proposes to construct a bridge over the railroad. Prior to construction, soil samples should be collected within the UPRR right-of-way and analyzed for chlorinated herbicides, petroleum hydrocarbons, and metals using US EPA Methods 8151, 8260B, and 6010/7471A, respectively.

HAZ-3: PG&E and SMUD should be contacted to assess the locations of their pipelines prior to construction of the proposed bridge over the UPRR tracks.

HAZ-4: The potential exists for persistent pesticides to be present in soil as a result of historical agricultural use of the area. Additionally, the potential exists for buried asbestos-containing cementitious pipe (“transite”), which was commonly used for water transportation as part of historical agricultural practices, to be present within the Project area. To assess the presence of persistent pesticides and/or asbestos in soil, sampling and analysis is recommended. Soil samples should be analyzed for OCPs using US EPA Method 8081. Additionally, if signs of transite piping are observed during construction activity, sampling and analysis should be conducted at that time.

HAZ-5: Elevated concentrations of lead (from use of leaded gasoline) and other metals are sometimes associated with older roadways. Based on a review of historical sources, a roadway at the location of Kammerer Road was present from SR-99 west to Bruceville Road since at least 1937. Roads were also present at the locations of Franklin Road

and Bruceville Road as early as 1894. In addition, I-5 was present since the mid- to late-1970s. Sampling for ADL in unpaved areas along the existing roadways where soil will be disturbed as part of the proposed Project improvement areas is recommended.

- HAZ-6:** Comply with Caltrans' Standard Special Provision 14-11.12 "Removal of Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue" regarding yellow striping and pavement marking materials to avoid impacts from the removal of pavement striping during construction.
- HAZ-7:** Although not anticipated, should impacted soil (as evidenced by staining and/or odors) be encountered during construction activities, it is recommended that the Caltrans Unknown Hazard Procedures be implemented during construction activities. The resident engineer overseeing construction should have available field monitoring equipment (e.g., PID) to facilitate timely detection of potentially hazardous conditions in the field.
- HAZ-8:** Groundwater is anticipated to be encountered at depths greater than 50 feet bgs. Should groundwater be encountered during construction/excavation activities and dewatering become necessary, regulatory compliance and permitting consistent with the CVRWQCB and NPDES requirements should be adhered to, and groundwater sampling should be conducted.
- HAZ-9:** Should domestic or agricultural water wells be affected by the proposed roadway alignment, they should be abandoned or relocated in accordance with local and state guidelines/regulations.
- HAZ-10:** Many of the observed pole-mounted transformers are unlikely to be impacted by the Project. Should transformer removal be required, the utility company be contacted prior to handling or removing of electrical transformers. Should wooden utility poles require removal, it is recommended that additional sampling and analysis be conducted to assess the presence of creosote (often associated with the preservation of wooden utility poles) and resultant waste managed appropriately.
- HAZ-11:** Should the Project require the demolition of building structures, a survey and sampling for ACMs and LBP should be performed of these building structures after property acquisition and prior to demolition. The surveys should be performed in conformance with the US EPA NESHAPs 40 CFR and Sacramento Metropolitan Air Quality Management District guidelines.
- HAZ-12:** A Phase II PSI is required so that special handling, treatment, or disposal provisions associated with hazardous wastes can be included in construction documents.
- HAZ-13:** Prior to the issuance of demolition permits for existing onsite structures, asbestos material sampling shall be conducted to determine if materials are present. Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and

approval by the appropriate regulatory agency (the Sacramento Metropolitan Air Pollution Management District).

HAZ-14: Prior to the issuance of demolition permits for existing onsite structures, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor. in accordance with local, state, and federal regulations.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to less than significant impacts after mitigation to hazards and hazardous materials. During analysis for the Project, it was found that no new significant and unavoidable impacts under hazards and hazardous materials would occur.

The Project would have a **less than significant impact with mitigation incorporated** relating to hazards and hazardous materials.

2.9 Hydrology and Water Quality

REGULATORY SETTING

Federal Regulations

Section 401 of the CWA requires water quality certification from the SWRCB or from a RWQCB when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the USACE to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the NPDES permit for the discharge of any pollutant into waters of the United States. The U.S. EPA has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate stormwater discharges from all Department activities on its highways and facilities. Caltrans construction projects that entail 1 acre or more of land disturbance are regulated under the Statewide General Permit, Order No. 2012-0006-DWQ, and projects having less than 1 acre of land disturbance, within Caltrans' right-of-way, follow the provisions and conditions of Caltrans' MS4 Permit. All construction projects over 1 acre require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Department activities less than 1 acre require a Water Pollution Control Program (WPCP). Both the SWPPP and the WPCP, includes project specific information related to construction and the implementation of proposed best management practices to be deployed at the project site.

State Regulations

Under CWA Section 303(d) and California's Porter-Cologne Water Quality Control Act of 1969, the State of California is required to establish beneficial uses of state waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes the total maximum daily load (TMDL) process to assist in guiding the application of state water quality standards, requiring the states to identify streams whose water quality is "impaired" (affected by the presence of pollutants or contaminants) and to establish the TMDL, or the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects. CWA Section 303(d) also requires the state to identify water bodies that do not meet water quality standards and thus exhibit impaired beneficial uses. As such, every two years the SWRCB releases a list of impaired waters and proposes a completion date for a TMDL to address the identified impairment. Projects that discharge to impaired waters are required to comply with requirements of approved TMDLs, as regulated in the program area by the Central Valley Regional Water Quality Control Board (Central Valley RWQCB) through issuance of Water Discharge Requirements (WDRs) and NPDES permit amendments.

In accordance with Caltrans' Stormwater Management Plan and Caltrans' Standard Specifications, a SWPPP is necessary for projects having a land disturbance greater than 1 acre. The SWRCB issued a NPDES Statewide Stormwater Permit to Caltrans in 1999 (Order No. 99-06-DWQ) (CAS000003) to regulate all discharges from Caltrans Municipal Separate Storm Sewer Systems (MS4s), maintenance facilities, and construction activities. In 2012, Caltrans' permit was re-issued and became effective on July 1, 2013 (Order No. 2012-0011- DWQ) (CAS000003). The

permit regulates stormwater discharges from Caltrans right-of-way during and after construction, as well as from existing facilities and operations (SWRCB 2013). The permit requires Caltrans to implement a year-round program in all parts of the state to effectively control stormwater and non-stormwater discharge, through implementation of permanent and temporary construction BMPs and other measures.

Section 1602 of the CFG Code is referred to as SAA. Under Section 1602, any person, state, local government agency, or public utility must notify the CDFW before the start of any activity that may impact a river, stream, or lake under three circumstances: (1) may substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in California. There are three types of standard SAAs: standard agreement, standard long-term agreement, and master agreement. Standard agreements are appropriate for activities expected to take place within a five-year time frame; standard long-term agreements are necessary for activities expected to continue past a five-year time frame; and master agreements are similar to programmatic agreements used for activities expected to continue past a five-year time frame.

Local Regulations

The Central Valley RWQCB Basin Plan covers all the drainage basin areas for the Sacramento and San Joaquin River Basins and the Tulare Lake Basin. This plan describes the beneficial uses to be protected in these bodies of water, water quality objectives to protect those uses, and implementation measures to make sure those objectives are achieved. The proposed Project is located within the Sacramento River basin, which covers approximately 27,200 square miles from the California-Oregon border to the Bay-Delta (Central Valley RWQCB 2016). The Basin Plan identifies control actions implemented by the Central Valley RWQCB to achieve water quality objectives including the following:

- Identifying potential water quality problems.
- Confirming and characterizing water quality problems through assessments for source, frequency, duration, extent, fate, and severity.
- Remedying water quality problems through imposing or enforcing appropriate measures.
- Monitoring problem areas to assess effectiveness of the remedial measures.

The City, along with the County and the cities of Citrus Heights, Folsom, Galt, Rancho Cordova, and Sacramento, operate under the NPDES to discharge urban runoff from MS4s in their municipal jurisdictions (NPDES Permit No. CAS082597). The permit requires that the City prepare a Storm Water Quality Improvement Plan, and impose water quality and watershed protection measures for all development projects. The intent of the WDRs in the NPDES permit is to attain water quality standards and protection of beneficial uses consistent with the Basin Plan. The NPDES permit prohibits discharges from causing violations of applicable water quality standards or resulting in conditions that create a nuisance or water quality impairment in receiving waters.

The County's General Plan was adopted by the County Board of Supervisors in December 1993 and updated in November 2011. The County's General Plan policies and implementation measures apply to development within the Elk Grove Planning Area that is outside of the City limits. The Conservation Element and Safety Element include policies and implementation

measures relevant to the surface and groundwater resources as well as water quality protection within Elk Grove. Applicable policies are listed below:

- *Policy CO-24* - Comply with the Sacramento Areawide NPDES Municipal Stormwater Permit or subsequent permits, issued by the Central Valley RWQCB to the County, and the Cities of Sacramento, Elk Grove, Citrus Heights, Folsom, Rancho Cordova, and Galt (collectively known as the Sacramento Stormwater Quality Partnership).
- *Policy CO-109* - Channel modifications should not prevent minimum water flows necessary to protect and enhance fish habitats, native riparian vegetation, water quality, or groundwater recharge.
- *SA-11* - The County shall implement the improvement of natural drainage channels and certain floodplains for urbanized or urbanizing portions of the County to reduce local flooding. Such improvements shall comply with the General Plan policies contained in the Conservation Element, Urban Streams, and Channel Modification Section.

The City's General Plan (as amended) was adopted by the City Council in November 2003. The General Plan contains policies and implementation measures that apply to development within City limits. The Conservation and Air Quality Element and Safety Element include policies and implementation measures relevant to the surface and groundwater resources as well as water quality protection within the City. Applicable policies are listed below:

- *Policy CAQ-13* - Implement the City's NPDES Permit through the review and approval of development projects and other activities regulated by the permit.
- *Policy CAQ-14* - The City shall seek to minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and use on-site infiltration of runoff in areas with appropriate soils where infiltration of storm water would not pose a potential threat to groundwater quality.
- *Policy CAQ-18* - Post-development peak stormwater run-off discharge rates and velocities shall be designed to prevent or reduce down-stream erosion, and to protect stream habitat.
- *Policy CAQ-20* - Fill may not be placed in any 100-year floodplain as delineated by currently effective FEMA Flood Insurance Rate Maps or subsequent comprehensive drainage plans unless specifically approved by the City. No fill shall be permitted in wetland areas unless approved by the City and appropriate state and federal agencies.
- *Policy SA-13* - The City shall require that all new projects not result in new or increased flooding impacts on adjoining parcels on upstream and downstream areas.

AFFECTED ENVIRONMENT

The City and the proposed Project are located within the South American subbasin of the Sacramento River watershed. Surface water resources in the City are part of the Morrison Creek Stream Group, including Elder, Elk Grove, Morrison, Strawberry, Whitehouse, and Laguna Creeks, as well as tributaries to Laguna Creek. None of the major creeks in Elk Grove are located within the vicinity of the proposed Project. The majority of the City is outside of the Federal

Emergency Management Agency (FEMA)-designated 100-year and 500-year flood zones (City of Elk Grove 2003).

The proposed Project is located within the boundaries of the Elk Grove Planning Area, which is located within the Great Valley geomorphic province. This geomorphic province is described as a relatively flat alluvial plain. Elevations in the Project study area range from approximately 7 to 45 feet above MSL with slopes ranging from 0 to 3 percent. The Shed C Channel is the only stream in the vicinity of the proposed Project. This channel is primarily used for stormwater runoff conveyance and as an agricultural ditch. The proposed Project is located within the Shed C watershed, within the larger Sacramento River watershed. According to the California Department of Water Resources (CDWR), the Elk Grove Planning Area is underlain by the Sacramento Valley aquifer system. Groundwater in the vicinity of Elk Grove is a sodium calcium bicarbonate or calcium sodium bicarbonate (CDWR 2014).

The average precipitation for the City ranges between 15 and 20 inches annually. The County averages approximately 20 inches of precipitation annually. Very little snowfall occurs in the Sacramento Valley and it is a rare occurrence. The City is located at the southern end of the Sacramento Valley bioregion and the northern end of the Bay/Delta bioregion. Temperatures in Elk Grove have reached as low as 18 degrees Fahrenheit to as high as 115 degrees Fahrenheit. Generally, the warmest month of the year is July and the coolest month of the year is December, with the most precipitation occurring in January.

Surface Water Hydrology

No rivers exist within the vicinity of the proposed Project. The Shed C Channel begins at the western boundary of the future Sterling Meadows project adjacent to and east of the City's SEPA and conveys runoff to the southwest for approximately 12,600 feet until it reaches Bruceville Road. From Bruceville Road, the channel exits the City and continues west for approximately 22,000 feet where it crosses under I-5 and enters the Stone Lakes NWR. The Shed C Channel has been highly altered from its natural form, as it has been straightened in many areas and has several 90-degree bends along its alignment where natural-sweeping curves once existed. Vegetation has been removed from many reaches of the channel, which now has uniform steep side slopes.

Surface Water Quality

The Shed C Channel is the only stream feature in the vicinity of the proposed Project and is essentially a human-made agricultural ditch. Beneficial uses for the Shed C Channel are not specifically identified in the Basin Plan or the City's Storm Drainage Master Plan (SDMP) (City of Elk Grove 2011). However, the Shed C Channel discharges to the Sacramento River for which the SWRCB does identify beneficial uses. The Basin Plan states that surface waters within the Sacramento River watershed that do not have designated beneficial uses are given the designation of Municipal and Domestic Supply in accordance with the provisions of State Water Board Resolution No. 88-63. Downstream from the proposed Project, the Basin Plan identifies a network of surface waters leading up to the Bay Delta, but does not define specific segments; therefore, beneficial uses of receiving waters downstream of the proposed Project are included under the "Other Lakes and Reservoirs in the Sacramento River Basin 5A" (Central Valley RWQCB 2016). Existing beneficial uses for Other Lakes and Reservoirs in the Sacramento River Basin 5A include the following:

- Municipal and Domestic Supply (MUN)
- Irrigation and Stock Watering (AGR)
- Process (PROC)
- Power (POW)
- Contact Recreation (REC-1)
- Other Non-Contact Recreation (REC-2)
- Warm Freshwater Habitat (WARM)
- Cold Freshwater Habitat (COLD)
- Cold Freshwater Habitat – Spawning (SPWN)
- Wildlife Habitat (WILD)

The Basin Plan and City SDMP designate water quality objectives for inland surface waters. The Shed C Channel is not specifically identified as a surface water feature for which the SWRCB specifically designates water quality objectives; however, the Shed C Channel discharges to the Sacramento River for which the SWRCB does identify water quality objectives.

The current CWA Section 303(d) list approved by the U.S. EPA is the 2006 303(d) list. Although the Shed C Channel is not listed as an impaired waterbody on the CDWR 303(d) list, receiving waters downstream from the proposed Project including the Delta are included on the 303(d) list as impaired to some degree. The central, eastern, northern, northwestern, southern, and western portions and export area of the Delta waterways are listed as impaired water bodies with pollutant concentrations and stressors above the established TMDLs including chlorpyrifos, DDT, diazinon, electrical conductivity, exotic species, group A pesticides, mercury, and unknown toxicity (CDWR 2010).

In addition, based on the highway stormwater runoff data collected by the FHWA Storm Water Research and Monitoring Program, pollutants that are expected to be found in runoff from roadways include conventional constituents (biochemical oxygen demand [BOD], calcium carbonate [CaCO₃], chemical oxygen demand [COD], total dissolved solids [TDS], total organic carbon [TOC], total suspended solids [TSS] and total volatile suspended solids [TVSS], etc.), hydrocarbons, metals, microbial agents, nutrients, volatile and semi-volatile organics, pesticides, and herbicides. Pollutants are usually deposited on the roadway as a result of fuel combustion processes, lubrication system losses, tire and brake wear, transportation load losses, paint from infrastructure, and atmospheric fallout.

Groundwater

Elk Grove and the proposed Project are underlain by the Sacramento Valley aquifer system. The Sacramento Valley aquifer system consists of sand and gravel with considerable amounts of silt and clay. The deeper aquifer in the Elk Grove Planning Area ranges from approximately 200 feet thick in eastern Sacramento County to over 2,000 feet thick in parts of western Sacramento County (City of Elk Grove 2003). Streams, subsurface inflows from adjacent areas, percolation of rainfall, and applied water provide recharge to the aquifer system in Elk Grove. Groundwater in the vicinity of Elk Grove is a sodium calcium bicarbonate or calcium sodium bicarbonate (CDWR 2014). Shallow areas in the aquifer system in the planning area are sometimes contaminated by septic tanks, feed lots, and dairies, resulting in nitrate concentrations higher than 5 milligrams per liter (City of Elk Grove 2003). Agricultural activities within the planning area can cause groundwater to become excessively saline.

Groundwater Quality

The Basin Plan designates groundwater quality objectives for the Sacramento River Basin, applicable to all groundwaters of the Sacramento River Basin, including Elk Grove and the proposed Project study area. The Basin Plan's objectives are based on the designated beneficial uses identified for a waterbody, and were developed to ensure that the water bodies can continue to support these uses. Groundwater quality objectives exist in the proposed Project study area for bacteria, chemical constituents, radioactivity, tastes and odors, and toxicity. Groundwater objectives within the proposed Project study area as identified in the Basin Plan are summarized in **Table 25**.

Table 25. Groundwater Quality Objectives

Component/Constituent	Objective
Fecal Coliform (Bacteria)	The most probable number of coliform organisms over any seven-day period shall be less than 2.2/100 milliliters in ground waters used for domestic or municipal supply
Chemical Constituents	Groundwaters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
Radionuclides	At a minimum, groundwaters designated for use as domestic or municipal supply shall not contain concentrations of radionuclides in excess of the maximum contaminant levels specified in Table 4 of the CCR Title 22 Section 64443.
Tastes and Odors	Groundwaters shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
Toxicity	Groundwaters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial use(s).

The Sacramento County Water Agency (SCWA) and the Elk Grove Water District pump groundwater for municipal uses to provide the domestic water supply in Elk Grove. Beneficial uses of groundwater in the City include domestic, municipal, agricultural, and industrial uses.

Flooding

According to the FEMA Official National Flood Hazard Layer for the Project area (FEMA 2012), most of the Project area is located in Zone X, which is an area of minimal flood hazard; however, the western portion of the Project area from I-5 to approximately 1000 feet west Franklin Boulevard, is within a 1 percent annual chance Flood Hazard Area. This means that the Project area is within a FEMA-mapped 100-year flood hazard area. Additionally, the Shed C channel has not been mapped to provide a 100-year flood analysis from Hood Franklin Road to Bruceville Road. Planned improvements to the channel would help prevent flood waters from Shed C, and the proposed Project would be constructed above all 100-year flood waters, as an east to west evacuation route for residents within the Project vicinity. It should be noted that drainage control infrastructure to assist with removal of potential flooding issues such as ditches and detention basins will be constructed below the 100 year flood plain.

ENVIRONMENTAL CONSEQUENCES

Construction-related earth-disturbing activities of the road and other various improvement projects included in the proposed Project would introduce the potential for increased erosion and sedimentation, with subsequent effects on water quality and storm drain capacity. During site

grading, trenching, and other construction activities, areas of bare soil would be exposed to erosive forces during rainfall events. Bare soils are much more likely to erode than vegetated areas because bare areas lack dispersion, infiltration, and retention properties that covering vegetation provides. Aside from actions to minimize erosion, the extent of the impacts would be dependent on soil erosion potential, type of construction practice, extent of disturbed area, timing of precipitation events, and topography and proximity to drainage channels. In addition, construction equipment and activities would have the potential to leak hazardous materials, such as oil and gasoline, and potentially affect surface water or groundwater quality. Improper use or accidental spills of fuels, oils, and other construction-related hazardous materials, such as pipe sealant, solvents, and paints, could also pose a threat to the water quality of local water bodies. These potential leaks or spills, if not contained, would be considered a potentially significant impact on groundwater and surface water quality. Without precautions to contain or capture sediments or accidental hazardous spills, construction activities could produce substantial pollutants in stormwater runoff and result in a significant impact on the existing surface water quality. Implementation of the below measures would ensure that this impact is reduced to a less than significant level.

Project activities such as road widening would create new impervious surfaces. The Project would result in an increase of approximately 91.08 acres of paved surface area, which would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff and which would contribute to an increase in the volume of stormwater runoff from the roadway. In addition, the increase in impervious surfaces, along with the increase in surface water runoff, could increase the nonpoint source discharge of pollutants such as sediment, pesticides, oil and grease, nutrients, metals, bacteria, and trash. Contributions of these contaminants to stormwater and other runoff could degrade the quality of receiving waters. During the dry season, vehicle use and other urban activities release contaminants onto impervious surfaces, where they can accumulate until the first storm event. During this initial storm event, or first flush, the concentrated pollutants are transported via runoff to stormwater drainage systems. Without controls, contaminated runoff waters could flow into the stormwater drainage systems that discharge into rivers, agricultural ditches, sloughs, and channels and ultimately could degrade the water quality of any of these water bodies.

The SEPA Drainage Study (West Yost Associates 2014) prepared for the City's SEPA development project, recommends a multifunctional drainage corridor that will create and enhance the natural stream and habitat values, and include a low-flow channel that is stable and self-sustaining, with design based on natural processes for the Shed C Channel north of existing Kammerer Road. This recommendation is based upon the Elk Grove Storm Drainage Master Plan (SDMP, City of Elk Grove 2011), and results of the drainage study. As development of SEPA occurs, Shed C will be required to provide flood protection and mitigation, and the subsequent SEPA Drainage Study was completed. The proposed low-flow channel will meander within a larger floodplain corridor that will provide flood storage and conveyance as well as an opportunity for the creation of wetlands habitat. The proposed drainage concept for this portion of the Shed C Channel also includes detention basins at major inflow points to the drainage corridor, which will provide flood storage and flow duration control to mitigate for potential flood flow increases and hydromodification effects due to the proposed urban development in the watershed.

BMPs would be implemented for the Project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. The proposed Project will include construction and post-construction BMPs such as stabilized construction entrances and exits, temporary concrete washouts, and sand bag barriers to control increased erosion and

sedimentation during construction; and treatment BMPs including detention basins, swales, and other on-site measures to remove pollutants from runoff water. Specific BMPs to be used during construction would be identified as project design advances and finalized within the approved Project SWPPP. The following sections discuss potential impacts to water quality resulting from construction and operation of the proposed Project.

Implementation of the measures below would reduce the impact to less than significant by establishing standards for post-construction runoff/drainage control and management. This would include LID techniques designed to clean first flush runoff and reduce the volume of runoff from the facilities.

Surface Water Quality

The Shed C Channel has not been identified under CWA Section 303(d) as impaired, but the receiving waters for the Shed C Channel, the Bay-Delta, are 303(d) listed for a variety of contaminants. These constituents originate from a variety of sources, but generally include agricultural activities, such as irrigation runoff, and urban nonpoint sources of runoff from landscaping, rooftops, trash, and illicit dumping. Under the CWA listing, these water bodies have no remaining assimilative capacity or ability to accommodate additional quantities of these contaminants, irrespective of concentration. Projects are required to comply with requirements of approved TMDLs by the Central Valley RWQCB through issuance of WDRs and NPDES permit amendments. Implementation of the below measures would reduce the impact to less than significant by requiring compliance with contaminant control requirements.

Groundwater Quality

The proposed Project would include activities, such as road widening, that would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of groundwater recharge, clay soils tend to have lower percolation potentials, and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff. The amount of new pavement and the extent to which it affects infiltration depends on the site-specific soil type. Projects located in urban areas would have less of an impact than projects converting open lands and spaces. The proposed Project is located in primarily rural areas, with a small portion located within an urban area. The Project is located along an existing roadway where many of the surfaces are already paved or impervious. The Project would increase this impervious area through new facilities. Implementation of the below measures would reduce the impact to less than significant by requiring the design and installation of infiltration systems.

Depending on the location, trenching and excavation associated with the Project may reach depths that can expose the water table and create a direct path to the groundwater basin for contaminants to enter the groundwater system. Primary construction-related contaminants that could thereby reach groundwater would include oil and grease, and construction-related hazardous materials and dewatering effluent. Absent controls, dewatering operations may temporarily impact existing beneficial uses of municipal and domestic supply, freshwater replenishment, and groundwater recharge in surface waters. Similarly, impacts on surface waters include discharge of pollutants, and groundwater may be removed for construction purposes. Implementation of the below measures would reduce the impact to less than significant by

requiring that future contractors meet all regulatory requirements for avoidance of surface water impacts.

Stormwater Quality Control Measures

The design features to address water quality impacts are a condition of the Central Valley Region Phase I MS4 NPDES Permit, and other regulatory agency requirements. With proper implementation of BMPs, short-term construction-related water quality impacts and permanent water quality impacts would be avoided or minimized.

The Project footprint traverses the City, County, and State rights-of-way. The Central Valley Region Phase I MS4 NPDES permit covers the City and incorporated areas of the County within its urban area boundary. The Project will be consistent with the requirements of the Central Valley Region Phase I MS4 NPDES, and with the implementation of the below measures, impacts related to alterations of existing drainage patterns, runoff, and water quality would be reduced to a level of less than significant with mitigation incorporated. Caltrans' MS4 will also be applicable in the State's right-of-way. According to Caltrans' MS4 Permit, non-Caltrans Projects within State right-of-way shall be subject to the same post-construction treatment control requirements as Caltrans projects. All stormwater appurtenances, within the State's right-of-way, will require review and approval by Caltrans' functional unit staff prior to project termination and closure.

Flooding

A portion of the proposed Project would be within a FEMA-mapped 1 percent Annual Chance Flood Hazard Area. However, the Project is not growth inducing and would not place housing within a 100-year flood hazard area as mapped on the Federal Official National Flood Hazard Layer or expose people or structures to a significant risk of loss, injury or death involving flooding. The Project would have no impact related to housing within a 100-year hazard area or risk of loss, injury, or death involving flooding.

The proposed Project is anticipated to place structures within the 100-year floodplain in the proposed alignment and interchange from I-5 to approximately 1000 feet west of Franklin Boulevard. The Project would implement the measures below to avoid restriction of potential flood flows within the 100-year Floodplain. With the implementation of the below measures, potential impacts related to placement of structures within a 100-year floodplain would be reduced to a level of less than significant with mitigation incorporated.

The Project area is not located near any lake susceptible to seiche fluctuations and is located approximately 70 miles from the coast, outside the reach of tsunamis. The Project area is not located on any steep slopes that would put downslope properties at risk of mudflows if destabilized. The Project is anticipated to have no impact on exposing people or structures to inundation by seiche, tsunami, or mudflow.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measures HYD-1 through HYD-7 has been incorporated into the following Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to hydrology and water quality would be reduced to a less than significant level:

HYD-1: The implementing agency will implement the following actions either directly or through contract specifications:

1. During the design of individual projects, in consultation with the applicable regulatory agencies, develop specific design and construction standards for stream crossings, including, but not limited to, maintaining open surface (bridged versus closed culvert) crossings, infrastructure setbacks, erosion control measures, sediment controlling excavation/fill practices, and other BMPs as described in item 3 below.
2. The implementing agency will obtain the required permits from the appropriate agencies for impacts to waters.
3. During and after construction activities, monitor and ensure compliance with water quality objectives outlined in the Central Valley RWQCB Basin Plan.
4. Minimize sediment transport caused by construction by following BMPs undertaken as part of National Pollutant Discharge Elimination System (NPDES) Permit and Storm Water Pollution Prevention Plan (SWPPP) requirements that will be included in construction permits. The BMPs will be designed so that, when employed in concert, they will meet the requirement of the NPDES permit and avoid the transport of sediment from the project site. BMPs may include, but are not limited to, measures such as the following:
 - a. providing permeable surfaces where feasible and where this would not result in erosion or the release of sediment;
 - b. retaining and treating stormwater on site using catch basins and filtering wet basins;
 - c. minimizing the contact of construction materials, equipment, and maintenance supplies with stormwater;
 - d. reducing erosion through soil stabilization, watering for dust control, installing perimeter silt fences, placing rice straw bales, and installing sediment basins; and
 - e. maintaining water quality by using infiltration systems, detention systems, retention systems, constructed wetland systems, filtration systems, biofiltration/bioretention systems, grass buffer strips, ponding areas, organic mulch layers, planting soil beds, sand beds, and vegetated systems such as swales and grass filter strips that are designed to convey and treat either fallow flow (swales) or sheet flow (filter strips) runoff.
5. Develop and implement a procedure for spill prevention and control to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during all construction activities. If a spill should occur during construction that causes a release of a hazardous material, including oil and radioactive materials,

the proper agencies will be notified, and an Emergency Release Follow-up Notice Reporting Form will be submitted no more than 30 days following the release.

6. Use methods such as habitat restoration, reconstruction of [habitat] on site, and habitat replacement off site to minimize surface water quality impacts.
7. Comply with conditions included in permits issued under Sections 404 and 401 of the federal CWA.
8. Comply with the requirements of a state Streambed Alteration Agreement for work along the banks of various surface water bodies.
9. Where feasible, avoid significant development of facilities in areas that may have substantial erosion risk, including areas with erosive soils or steep slopes.

HYD-2: The implementing agency will require the following actions as part of construction contract specifications. Before discharging any dewatered effluent to surface water the contractor will determine whether the volume of water from the dewatering operation is covered under the NPDES Construction General Permit. If it is deemed that the volume is greater than the Construction General Permit allows, the contractor will obtain coverage under an NPDES Low Threat Discharge and Dewatering Permit from the Central Valley RWQCB. The NPDES Low Threat Discharge and Dewatering Permit will require the water from the dewatering operation to be treated prior to discharge to any local water way.

HYD-3: Final design will include, and the implementing agency will implement, either directly or through contract specifications, source and treatment control measures contained in Central Valley Region Phase I MS4 NPDES Permit. General site housekeeping and design control measures incorporated into the project design can include, but are not limited to, conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control measures may include use of vegetated swales and buffers, detention basins, wet ponds, or constructed wetlands, infiltration basins, and other measures. LID approaches will be incorporated into site design and stormwater management to maintain the site's predevelopment runoff rates and volumes. Examples of such measures include, but are not limited to, sidewalk storage, vegetated swales, landscaped buffers and strips, tree preservation, permeable pavers, and impervious surface reduction and disconnection. The Connector JPA or local agency will select and implement specific LID measures and techniques depending on project size and stormwater treatment needs.

HYD-4: The implementing agency will conduct drainage studies for later projects on a site-specific basis. The results of the studies will be integrated into the design of the later project's drainage systems. The studies will address county and City drainage study requirements that typically include the following topics:

- A calculation of predevelopment runoff conditions and post-development runoff scenarios using appropriate engineering methods. This analysis will evaluate potential changes to runoff through specific design criteria and account for increased surface runoff.
- An assessment of existing drainage facilities within the project area and an inventory of necessary upgrades, replacements, redesigns, or rehabilitation, including the sizing of onsite stormwater detention features and pump stations.

- A description of the proposed maintenance program for the onsite drainage system.
- Standards for drainage systems to be installed on a project-/parcel-specific basis.
- Design measures to ensure structures will not impact 100-year floodplain areas.

Drainage systems for the individual project will be designed in accordance with the findings of the studies, the requirements of the applicable local flood control agencies, and flood control design criteria established under applicable local ordinances. As a performance standard, the systems will provide for no net increase in peak stormwater discharge relative to current conditions to ensure that 100-year flooding and its potential impacts are maintained at or below current levels and that people and structures are not exposed to additional flood risk.

HYD-5: The implementing agency will include infiltration systems, where feasible. Infiltration devices will be installed to replace the natural recharge rate of the soil to be paved over, reduce stormwater peak discharges and volumes to downstream catchments, and improve the quality of stormwater discharged to water bodies. Examples of infiltration devices include, but are not limited to, infiltration basins, pervious concrete, retention trenches, and bioretention measures. As discussed in **BIO-10**, LID techniques will be implemented to increase soil infiltration. Much of the proposed project is located within areas with Hydrologic Soil Group (HSG) D soils where certain infiltration devices do not work well. In these cases, other measures such as detention basins or vegetative barriers that will help retain waters.

HYD-6: Potential impacts of flooding that could result from the proposed Project would be alleviated through the FEMA Letter of Map Revision (LOMR) approval process, as well as the requirements of the Central Valley Flood Protection Board, when applicable. The design of the project will proceed in accordance with the best available mapping from DWR, FEMA, and USACE. The project design will comply with the requirements of the applicable local flood control agencies, and flood control design criteria established under applicable local ordinances. If unavoidable construction would occur within a 100-year floodplain, the implementing agency will prepare a letter of map amendments and submit to FEMA before construction of the project. The LOMR will include revised local base flood elevations for projects constructed within flood-prone areas. If the LOMR is approved, the design will reflect its provisions.

HYD-7: During the design of individual projects, the implementing agency will consult with the applicable flood control agencies to ensure that the flooding risks of pre-project conditions will not increase as a result of construction of the individual projects. If a project has the potential to impede or redirect flows from a levee or dam failure, such that there would be less than a 1% chance that flooding would extend to areas not previously mapped as inundation areas, the project will be redesigned to the maximum extent practicable so that the project would not expand the area subject to pre-project inundation conditions. This may be achieved through incorporation of culverts or bridges into the project design.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to less than significant impacts after mitigation to hydrology and water quality. During analysis for the Project, it was found that no new significant and unavoidable impacts under hydrology and water quality would occur.

The Project would have a **less than significant impact with mitigation incorporated** relating to hydrology and water quality.

2.10 Land Use and Planning

REGULATORY SETTING

The Farmland Protection Policy Act (7 United States Code 4201-4209) and its regulations require coordinating with the NRCS if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and farmland of statewide or local importance.

CEQA requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

Appendix G of CEQA Guidelines identifies environmental issues to be considered when determining whether a project could have significant impacts on the environment. The project would have a significant impact on land use or agriculture if it would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;
- Conflict with any applicable HCP or NCCP;

AFFECTED ENVIRONMENT

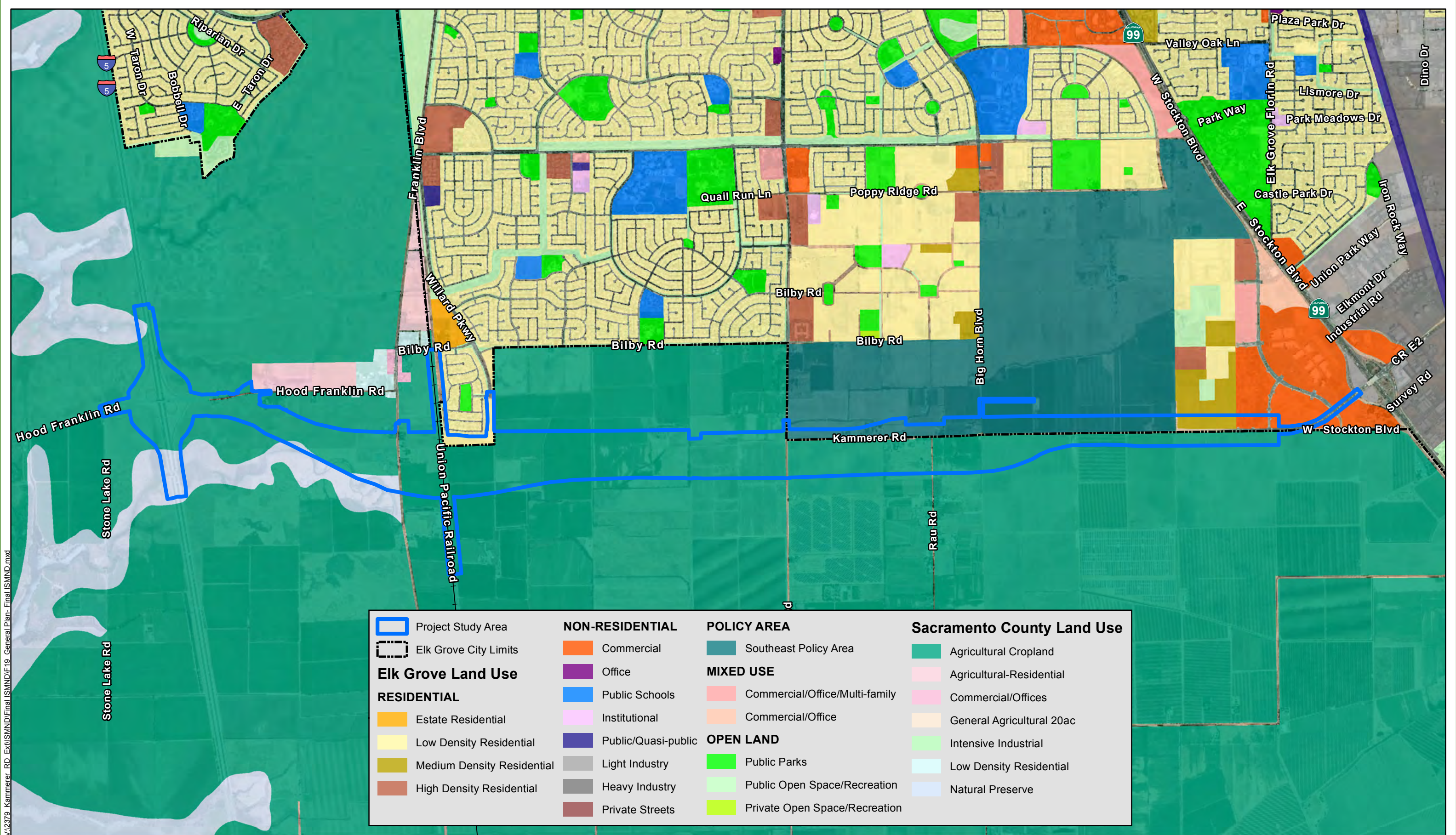
Information about land uses, including applicable plans and geographic information system (GIS) data, was collected from the City and the County. Land use data were generalized into major categories to allow information shared between the City and County to be presented consistently. In addition to collecting data, existing land use conditions were reviewed via a site visit and the use of aerial photography.

The Project is located along Kammerer Road along the City's southwestern boundary with the County. The study area for this Project is defined as a 5.75-mile road widening and extension project with the purpose to improve regional traffic operations and safety, reduce existing and projected congestion, accommodate travel demand through design year 2044, and provide a vital component of the east-west gap closure from I-5 to SR-99.

Existing Land Use

Figure 19 shows the existing land use in the Project vicinity. The proposed Project includes Kammerer Road between SR-99 and its existing terminus at Bruceville Road and the proposed extension of Kammerer Road to the I-5/Hood Franklin Road Interchange. Existing land uses in the Project vicinity include agricultural, residential, nature preserve, and commercial. Within one-half mile of the Project area, the surrounding area is rural and composed of agricultural, residential, and undeveloped/vacant parcels of land.

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Source: ESRI Maps Online; Dokken Engineering 10/9/2018; Created By: adellas

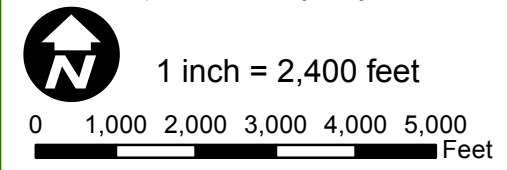


FIGURE 19
Sacramento County and City of Elk Grove General Plan Land Use

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Land outside of the City limits within the unincorporated portions of the County are designated as agricultural cropland aside from small portions of land near the I-5/Hood Franklin Road interchange which are designated as agricultural, residential and commercial/office. Outside of one-half mile of the Project area are residential developments and various community facilities, including churches, schools, and parks.

Figure 20 and Figure 21 show the existing zoning in the Project vicinity. The County (**Figure 20**) has zoned land in the Project vicinity outside of City limits as agricultural, agricultural-residential, residential, general commercial, and recreation reserve uses. Stone Lakes NWR is located west of the I-5/Hood Franklin Road Interchange. Stone Lakes NWR is owned and managed by the US Fish and Wildlife Service (USFWS), County, and several other State agencies. The City's zoning diagram (**Figure 21**) designates areas north and east of the Project area as agricultural, residential, office, special planning area, and industrial.

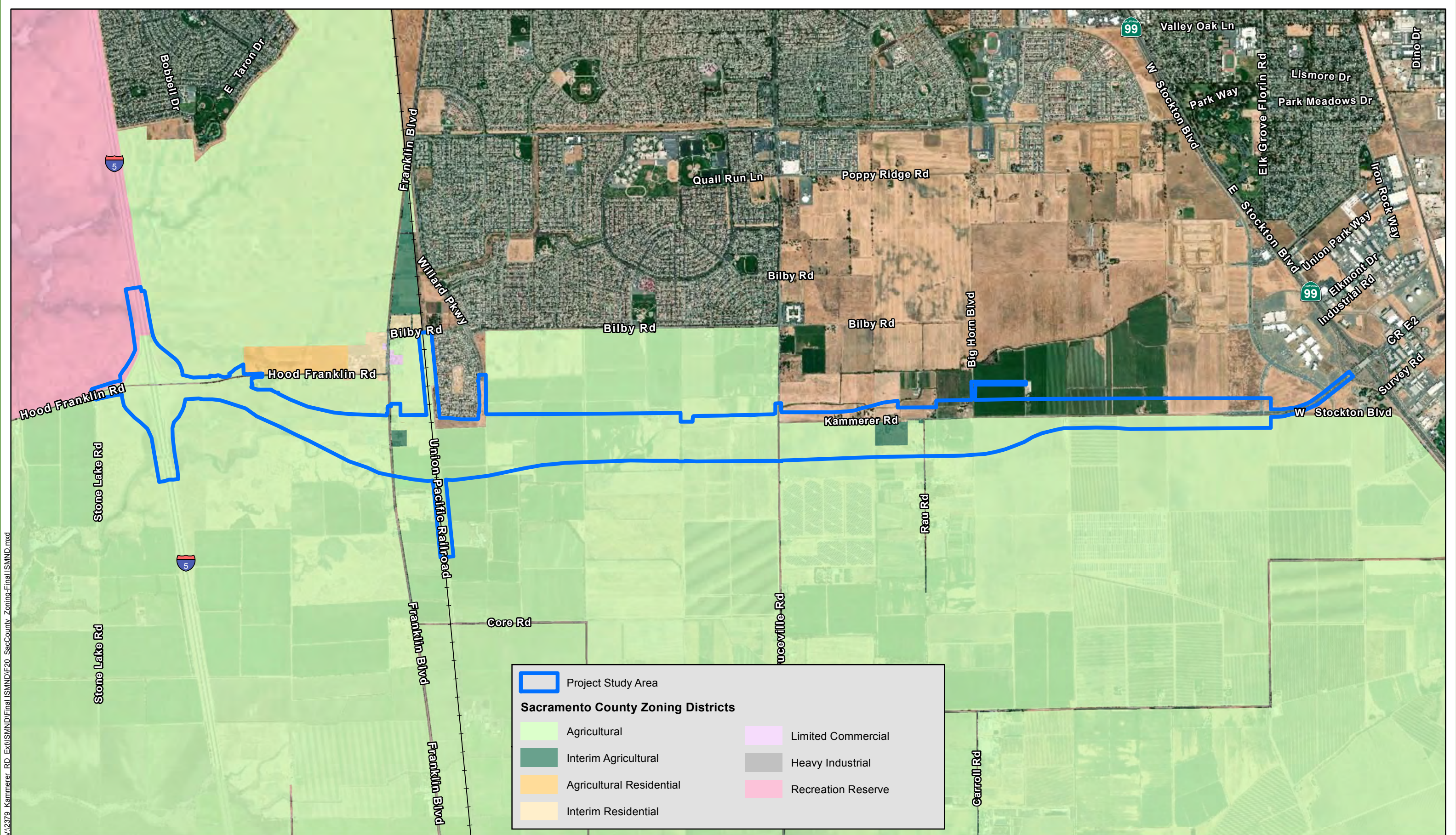
Future Land Use

Figure 22 displays and **Table 26** describes the planned development in the proposed Project vicinity. A portion of the proposed Project area is located within the unincorporated County. However, the County Urban Service Boundary (USB) indicates the ultimate boundary of the urban area within unincorporated portions of the County. The USB is the intended boundary of permanent urban growth. The County Urban Policy Area (UPA) defines the area within the USB which is expected to receive urban levels of public infrastructure and services within the planning period. The current planning period for the County UPA is projected to 2035. The County USB currently extends up to the proposed Project area from SR-99 along existing Kammerer Road and ends just east of Franklin Boulevard. The County Urban Policy Area includes portions of the USB and near the proposed Project area portions of the UPA occur up to the existing Kammerer Road alignment and in a portion just east of Bruceville Road. The County will not provide urban services beyond this area. Therefore, any land development anticipated in the unincorporated County near the proposed Project area would be limited by the extent of the UPA and the USB. The majority of future developments and land use changes would occur near the proposed Project area within the City limits.

Urban development within the City limits is anticipated north of existing Kammerer Road in the SEPA, the Sterling Meadows project, Laguna Ridge Specific Plan, and the Lent Ranch Marketplace Special Planning Area (SPA), as designated in the City's General Plan (as amended). The SEPA plan was approved by Elk Grove City Council in July 2014. SEPA covers an area of approximately 1,200 acres in the City and will include office, commercial, light industrial/flex, village center, mixed-use residential, mixed-use village core, residential/neighborhood, estate residential, low-density residential, medium-density residential, high-density residential, public/semi-public, school, and parks/open space land uses (City of Elk Grove 2014) (**Figure 22**). The Sterling Meadows project is located along the north side of Kammerer Road just east of SEPA. Approximately 984 single-family residential units, 200 multi-family residential units, and 18.5 acres of parks uses are planned for development in the approved project (City of Elk Grove 2008) (**Figure 22**).

Table 26. Planned Development in the Project Vicinity

Name	Jurisdiction	Proposed Uses	Status
SEPA	City of Elk Grove	431 acres of mixed-residential densities, 41 acres of village center mixed use, 294 acres of office and commercial uses, 108 acres of light industrial/flex space, 28 acres for schools, 61 acres for parks/open space, 32 acres for trails, 93 acres for drainage facilities, and 112 acres for major right-of-way (City of Elk Grove 2014a). The community would include approximately 4,790 dwellings for a population of approximately 17,010 and would provide employment in the office and commercial areas for approximately 23,410 employees.	Approved.
Lent Ranch Marketplace SPA	City of Elk Grove	The Lent Ranch Marketplace SPA covers approximately 295 acres. It is planned to include a 106-acre regional mall, 112 acres of community commercial, 31 acres of office and entertainment, 31 acres of visitor commercial, and 15 acres of multi-family residential land uses.	Approved
Sterling Meadows	City of Elk Grove	200-acre site including 984 single-family residential units, 200 multi-family residential units, and 18.5 acres of parks.	Approved
Laguna Ridge Specific Plan	City of Elk Grove	The Laguna Ridge Specific Plan proposes 5,887 single family homes and 1,800 multi-family or medium density units, and approximately 265 acres of commercial, office and civic uses. Development projects within the Specific Plan area, currently approved include the Treasure Homes Extension, McGeary Ranch, Tuscan Ridge West and South, and Arbor Ranch.	Approved, In Construction
Souza Dairy	City of Elk Grove	Souza Dairy Project includes a Large Lot Subdivision to create a total of 45 large area lots, along with a small lot subdivision which will create 1,162 lots, consisting of 1,094 residential lots at varying densities.	Approved
Elk Grove Promenade Project	City Elk Grove	The project as referred to as <i>The Outlet Collection at Elk Grove</i> , involves construction of approximately 775,000 sq. feet of commercial uses.	Approved, Partially Constructed
Wilton Rancheria	City of Elk Grove	The project consists 36 acres just north of the approved outlet mall site at the northwest portion of the intersection of Grant Line Road and SR-99, for a proposed 608,756 square foot hospitality and entertainment facility, including a 12-story 302 room hotel, pool, spa, 47,634 square foot convention center, six restaurants and bars, and a 110,260 square foot gaming floor.	City Approved MOU, Ratified for gaming compact by AB 1606.



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Source: ESRI Maps Online; Dokken Engineering 10/9/2018; Created By: adellas

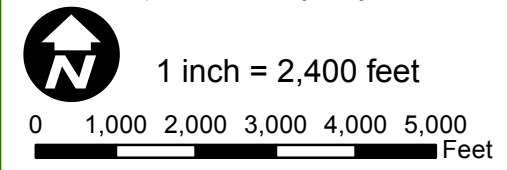
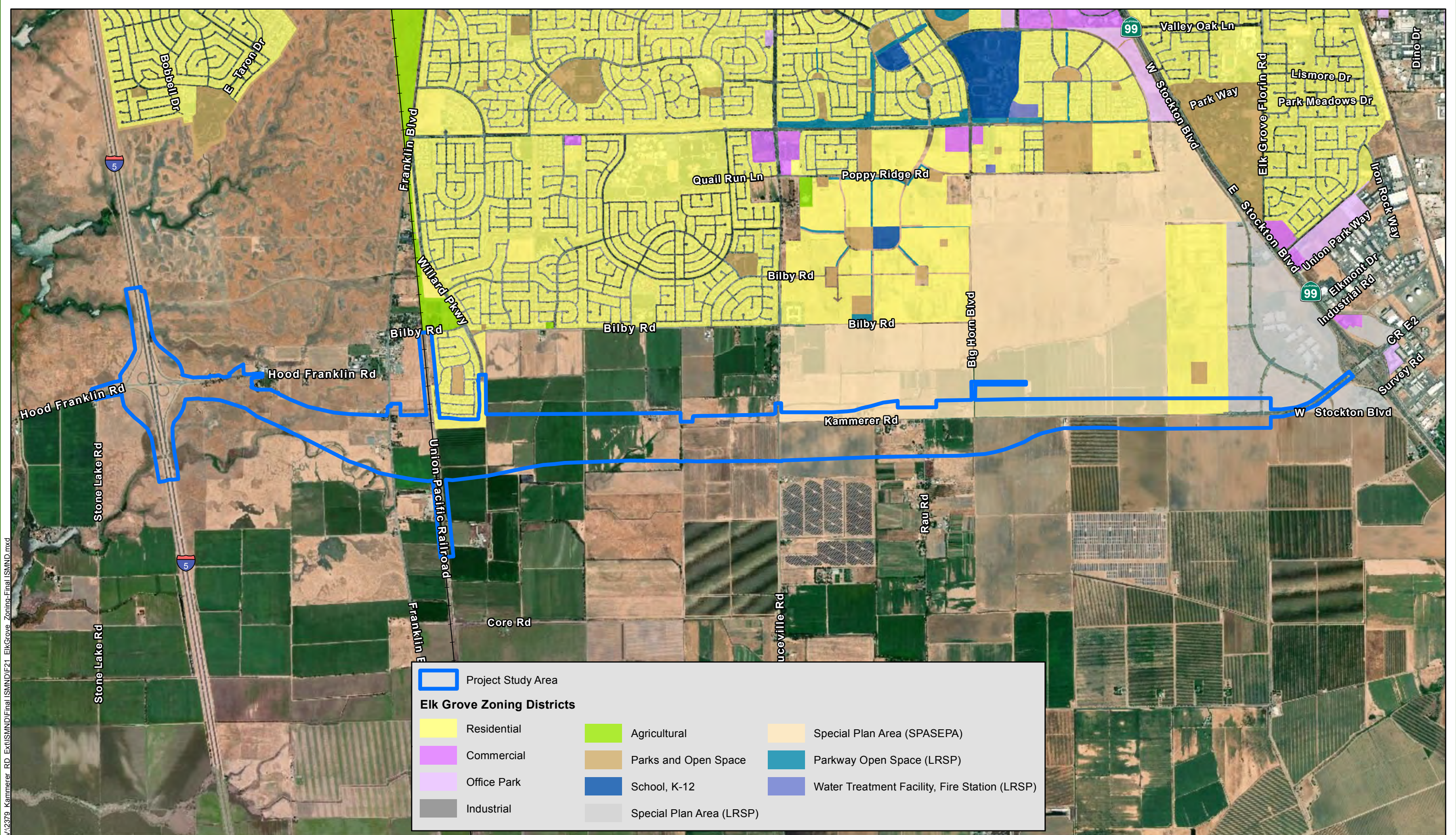














FIGURE 20
Existing Zoning in Sacramento County


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 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Maps Online; Dokken Engineering 10/9/2018; Created By: adallas

	Project Study Area
Elk Grove Zoning Districts	
	Residential
	Commercial
	Office Park
	Industrial
	Agricultural
	Parks and Open Space
	School, K-12
	Special Plan Area (LRSP)
	Special Plan Area (SPASEPA)
	Parkway Open Space (LRSP)
	Water Treatment Facility, Fire Station (LRSP)

 1 inch = 2,400 feet

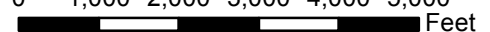















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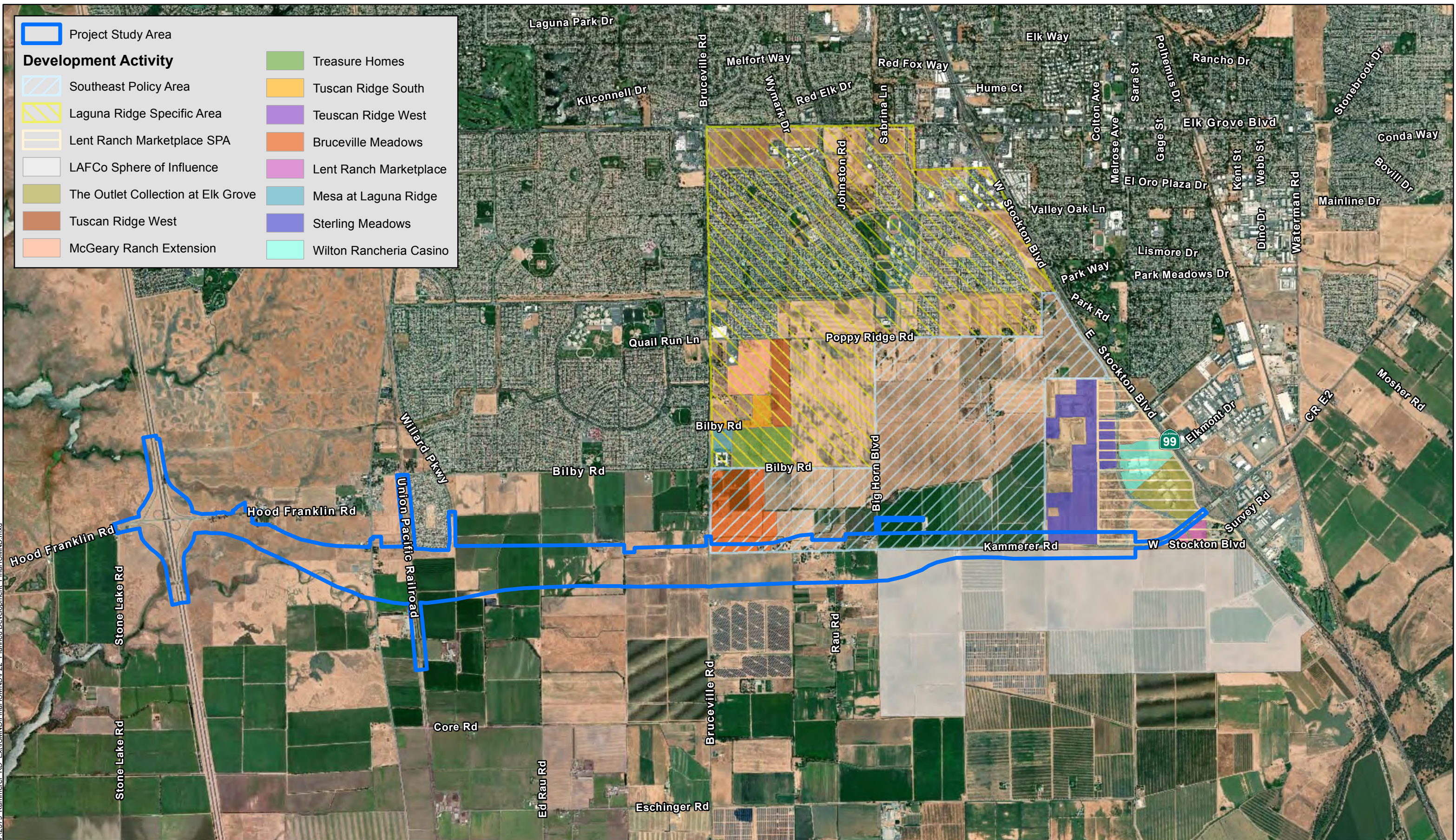
FIGURE 21
Existing Zoning in the City of Elk Grove

Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

Project Study Area

Development Activity

	Project Study Area		Treasure Homes
	Southeast Policy Area		Tuscan Ridge South
	Laguna Ridge Specific Area		Teuscan Ridge West
	Lent Ranch Marketplace SPA		Bruceville Meadows
	LAFCo Sphere of Influence		Lent Ranch Marketplace
	The Outlet Collection at Elk Grove		Mesa at Laguna Ridge
	Tuscan Ridge West		Sterling Meadows
	McGeary Ranch Extension		Wilton Rancheria Casino



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Source: ESRI Maps Online; Dokken Engineering 10/10/2018; Created By: brianm

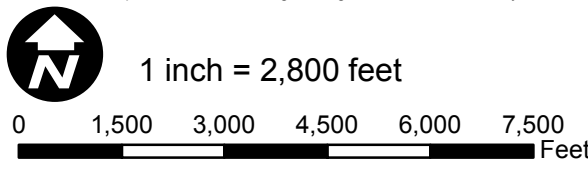


FIGURE 22
Planned Development in the Project Vicinity
 Joint Powers Authority Capital SouthEast Connector
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Planned development in the Lent Ranch Marketplace SPA, approved by City Council in 2001, includes regional mall, community commercial, office and entertainment, visitor commercial, and multi-family residential land uses. The Lent Ranch Marketplace SPA will include the proposed Outlet Mall Collection at Elk Grove project, which will include commercial uses (City of Elk Grove 2001). In addition to the above mentioned planned development, the Kammerer Road/Hwy 99 Sphere of Influence Amendment (SOIA) application has been approved by the Sacramento Local Agency Formation Commission; however, there are no land use designations with the SOIA. Land use designations for the SOIA would be determined through future planning processes, as well as any environmental impacts (**Figure 22**).

Sacramento Area Council of Governments Preferred Blueprint Scenario

SACOG adopted its Preferred Blueprint Scenario (Blueprint) in December 2004. The Blueprint process is a regional vision to accommodate the projected growth and long-term needs of the region through the year 2050. By 2050, the region's population is projected to grow from its current population of approximately 2.0 million to over 3.8 million and the number of jobs is projected to double to nearly 1.9 million. The Blueprint proposes a concentrated, compact development pattern in the region with a balance of employment, residential, shopping, and recreational uses linked to transportation system improvements.

The Blueprint itself is advisory and does not establish actual land use restrictions for the County and the City. However, although only advisory, the Blueprint provides policy guidance in the Sacramento region for long-term regional land use and transportation planning. A number of jurisdictions are either adopting the Blueprint concepts or are considering and encouraging projects consistent with the Blueprint. The current County and City General Plans are consistent with the Blueprint. The Blueprint is the top-tier planning document that helps drive more detailed transportation planning documents, such as the following.

SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy

The MTP/SCS for 2012 through 2036 was adopted on February 18, 2016, based on the Preferred Blueprint Scenario. The MTP/SCS is a 20-year plan for transportation improvements in the six-county greater Sacramento region, based on projections for growth in population, housing, and jobs. SACOG is the metropolitan planning organization responsible for developing the MTP/SCS every four years, as State and federally required, in coordination with the 22 cities and six counties in the greater Sacramento region. Under memoranda of understanding, the long-range transportation plans in El Dorado and Placer Counties are also incorporated into the MTP/SCS. Regardless of City- or County-designated transportation projects, local improvements must be included in the regional MTP/SCS to receive State and federal funding. The current 2016 MTP/SCS proposes using \$35.2 billion in transportation funds to operate, maintain, and expand the region's transportation system. Expenditures include: \$12.6 billion for maintenance and rehabilitation; \$5.8 billion for road capital and operations projects; \$1.5 billion for system management and operations; \$7.1 billion for transit operations; \$3.5 billion for transit capital; \$2.8 billion for bicycle/pedestrian improvements and Americans with Disabilities Act retrofits; and \$1.7 billion for programs, planning, and enhancements.

The proposed Project is identified in the MTP/SCS as a connector road investment, specifically as part of the Capitol SouthEast Connector. The proposed Project would provide a link for residential areas and employment centers along the corridor between SR-99 and I-5, improve east-west circulation in the City and the County, and improve traffic operations and safety within

the proposed Project area. Funding is anticipated for the proposed Project in the current MTP/SCS.

SACOG Metropolitan Transportation Improvement Program

As the designated metropolitan planning organization for the region, SACOG prepares and maintains a federal MTIP. The program includes a listing of all transportation-related projects requiring federal funding or other approval by the federal transportation agencies. The MTIP also lists nonfederal, regionally significant projects for information and air quality modeling purposes. Proposed projects included in the MTIP are consistent with SACOG's MTP/SCS and are part of the area's overall strategy for providing mobility, congestion relief, and reduction of transportation-related air pollution in support of efforts to attain federal air quality standards for the region. The MTIP is intended to implement the goals and objectives of the MTP/SCS.

SACOG adopted the Final 2017-20 MTIP, Amendment #1 to the 2016 MTP/SCS, and Air Quality Conformity Analysis on September 15, 2016. The documents received federal approval on December 16, 2016. Now the 2017-20 MTIP is the current programming document, replacing the old 2015-18 mTIP and amendments (SACOG 2018).

Sacramento County General Plan

The current County General Plan was adopted on November 9, 2011, and reflects amendments through April 2017. The County General Plan is a policy document designed to give long-range guidance to those making decisions that affect growth and development within the unincorporated county. Section 65300 of the California Planning and Zoning Law requires each county and City jurisdiction to adopt a comprehensive, long-term general plan for its development containing seven principal elements: land use, circulation, housing, conservation, open space, noise, and safety. The County General Plan Transportation Plan diagram was amended on May 28, 2017 to reflect Kammerer Road as a Capital Southeast Connector roadway Expressway Segment between the I-5/Hood Franklin interchange and Bruceville Road and as a Thoroughfare Segment from Bruceville Road and US 99/Grantline/Kammerer interchange. The Land Use Element of the County General Plan sets out goals, policies, and implementation measures to ensure that the County's land resources are utilized in the most efficient, equitable, and productive manner possible to provide a high quality of life for both current and future residents.

City of Elk Grove General Plan

The City's General Plan (as amended) was adopted in 2003. The City's General Plan is a policy document designed to give long-range guidance to those making decisions affecting the character of Elk Grove. The City is currently in the process of updating its General Plan and estimates its completion in spring 2019. The City's General Plan establishes several "Land Use Policy Areas", which have been designated to reflect existing and pending major project approvals, or to reflect the need for more detailed land use planning at a future date. Additionally, the City's Draft General Plan update has revised Circulation Policy CI-12 to state the City's support of the JPA's planned roadway improvements in Mobility Policy MOB-7-6:

"Support efforts to develop the Capital SouthEast Connector, providing a regional roadway connection from Interstate 5 and State Route 99 to US 50. The City will work with the Capital SouthEast Connector Joint Powers Authority in implementing the planned roadway improvements." (MOB-7-6.)

Stone Lakes National Wildlife Refuge Comprehensive Conservation Plan

The Stone Lakes NWR plan was prepared by USFWS (2007a) to guide management of fish, wildlife, plants, other natural resources, and visitor use on the refuge through the year 2022. The Comprehensive Conservation Plan (CCP) is planned to be updated every 15 years.

South Sacramento Habitat Conservation Plan

The Final SSHCP was adopted by Sacramento County in September 2018 and is available at www.southsachcp.com. The Final SSHCP area encompasses 345,000 acres in southern Sacramento County. The Connector JPA is a participant of the SSHCP and a portion of the Project occurs along the boundaries of the UDA and Preserve Planning Unit 6. The intent of the SSHCP is to provide a regional approach to balancing development against conservation and protection of habitat, open space, and agricultural lands in the plan area.

The SSHCP would be implemented through an agreement between State/federal resource agencies (anticipated to be the USFWS, CDFW, the USACE, and the State Water Board) and the plan participants (currently identified as Sacramento County, City of Rancho Cordova, and the Capital Southeast Connector JPA). The SSHCP would protect 30 species of plants and wildlife, including 10 that are listed as threatened or endangered under the ESA or CESA. The SSHCP also protects vernal pool, wetland, and stream habitats that are subject to the federal CWA and California's Porter-Cologne Water Quality Control Act. The SSHCP also seeks a programmatic SAA under Fish and Game Code Sections 1600, et seq.

ENVIRONMENTAL CONSEQUENCES

Dividing and Established Community

The Project would not divide or bisect any communities. The Project would widen and extend Kammerer Road from SR-99 to I-5, and the majority of the study area is not associated with any residential development, has limited population, and does not have businesses that provide services to area residents. Those in the residential development north of the proposed alignment at Willard Parkway would not be impacted with loss of access.

The Project would include a new multiuse pathway that would provide benefits for non-motorized uses and that would be beneficial to area residents because there are currently no non-motorized connections and there are small shoulders on Kammerer Road.

The Project would accommodate planned growth in the area. The Project would result in a less than significant impact to established communities.

Consistency with Applicable Land Use Plans, Policies, Regulations

Consistency with State, Regional, and Local Plans and Programs

Applicable plans, goals, and policies were reviewed for consistency with the Project, and are described in more detail below.

Consistency with the SACOG Preferred Blueprint Scenario

SACOG's Preferred Blueprint Scenario provides a generalized priority list of transportation improvement projects that would support the land uses and smart growth planning concepts outlined in the preferred scenario. The proposed Project is not included in this list. However, the list is intended to be informational and does not reflect a policy recommendation or decision by the board. The SACOG MTP/SCS, described below, is SACOG's approved transportation improvement project list for the region. Regardless, the proposed Project would be consistent with the overall objectives of the Preferred Blueprint Scenario by improving east-west circulation and safety in south County.

Consistency with the SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy

The proposed Project is identified in the 2016 MTP/SCS as a road investment; Kammerer Road is identified as ultimately planned as a four-lane road from I-5 to Bruceville Road and a six-lane road from Bruceville Road to SR-99. The proposed Project would be consistent with the MTP/SCS by providing a link for residential areas and employment centers along the corridor between I-5 and SR-99, improve east-west circulation in the City and south County, and improve traffic operations and safety in the proposed Project area.

Consistency with the SACOG Metropolitan Transportation Improvement Program

The Project is identified in the 2017/2020 MTIP with a project description for the roadway extension portion of the proposed Project (SAC24094), a project description for the widening of the roadway portion of the proposed Project (SAC24114), and the segment A2 2-lane road reconstruction (SAC25087), respectively.

- SAC24094: In Elk Grove, Kammerer Rd. from existing Kammerer Road, from Bruceville Rd. to Big Horn Boulevard: Reconstruct road at 2 lanes with shoulders, and Kammerer Rd., from Bruceville Rd. to Interstate 5/Hood Franklin interchange (signalization and turn lanes at the ramps), construct a grade separation at the UPRR tracks, Class 2 bike lanes, and signalized intersections at major road crossings. Environmental phase (CEQA and NEPA) covers full project scope, to be built in phases: Kammerer Road: In Elk Grove, from Lent Ranch Parkway to I-5/Hood Franklin Interchange: Widen and extend from 2 to 4 lanes (see MTP/SCS project SAC24114).
- SAC24114: In Elk Grove, from approximately 6000' west of SR-99 to Bruceville Road: Widen from 2 to 4 lanes. This Project is included in the Environmental Studies (NEPA and CEQA) for SAC24094, Kammerer Road Extension.
- SAC25087: In Elk Grove, from Big Horn Blvd. intersection to the Lotz Pkwy. Intersection: Reconstruct Kammerer Rd. as two lane divided facility with shoulders. Include enhancements to three intersections. (Part of CSE Connector A2).

Consistency with the Sacramento County General Plan

The proposed Project would be consistent with the County General Plan Policies CI-1, CI-7, CI-9, and CI-34 as it includes extending, widening, and improving Kammerer Road to provide a more complete street and provide safe and efficient bicycle and pedestrian access to the surrounding area. It is identified on the County's General Plan Transportation Plan map, and would maintain

an acceptable LOS on all intersections, roadway segments, freeway ramps, and freeway mainline segments under existing and cumulative conditions, with mitigation implemented at the intersection of Kammerer and Bruceville Roads.

Consistency with the City of Elk Grove General Plan

The proposed Project is consistent with City General Plan Policies CI-2, CI-3, CI-13, CI-14, and CI-21 as the City is a responsible agency for the proposed Project, coordinating with the County and Caltrans. The Project includes Class II bicycle lanes and pedestrian-friendly designs as an incentive to encourage alternative modes of transportation, and the Project would maintain a LOS D or better rating on all roadway and intersections at the proposed Project area, with the exception of Kammerer Road from SR-99 to Promenade Parkway and the intersection of Kammerer Road and Bruceville Road, for which mitigation is available to reduce impacts.

Consistency with Habitat Conservation Plans or Natural Community Conservation Plans

Consistency with the Stone Lakes National Wildlife Refuge Comprehensive Conservation Plan

The proposed Project is located east of the Stone Lakes NWR, and a relatively small portion of the proposed Project is located within the Stone Lakes NWR approved boundary as identified in the CCP. The proposed Project would require approximately 0.06-0.26 acre of land under cooperative agreements. This land is not part of the Stone Lakes NWR Core Area or under fee title ownership.

Consistency with the South Sacramento Habitat Conservation Plan

When implemented, all Project impacts to plant and wildlife species and their associated habitats will be covered under the SSHCP and would have to be mitigated. Therefore, in anticipation of the SSHCP's implementation, the Project has been designed to be consistent with the SSHCP's vision and goals. Should the Final SSHCP be approved prior to construction, the Project will comply with the appropriate compensatory mitigation. In its current form, the SSHCP only requires mitigation for permanent and indirect impacts. Compensatory mitigation for permanent and indirect impacts and mitigation measures discussed throughout Section 2.4 "Biological Resources" are consistent with the Connector JPA PEIR and the SSHCP should it be finalized prior to Project construction. **Figure 23** displays the Project area along the boundaries of the UDA and Preserve Planning Unit 6.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

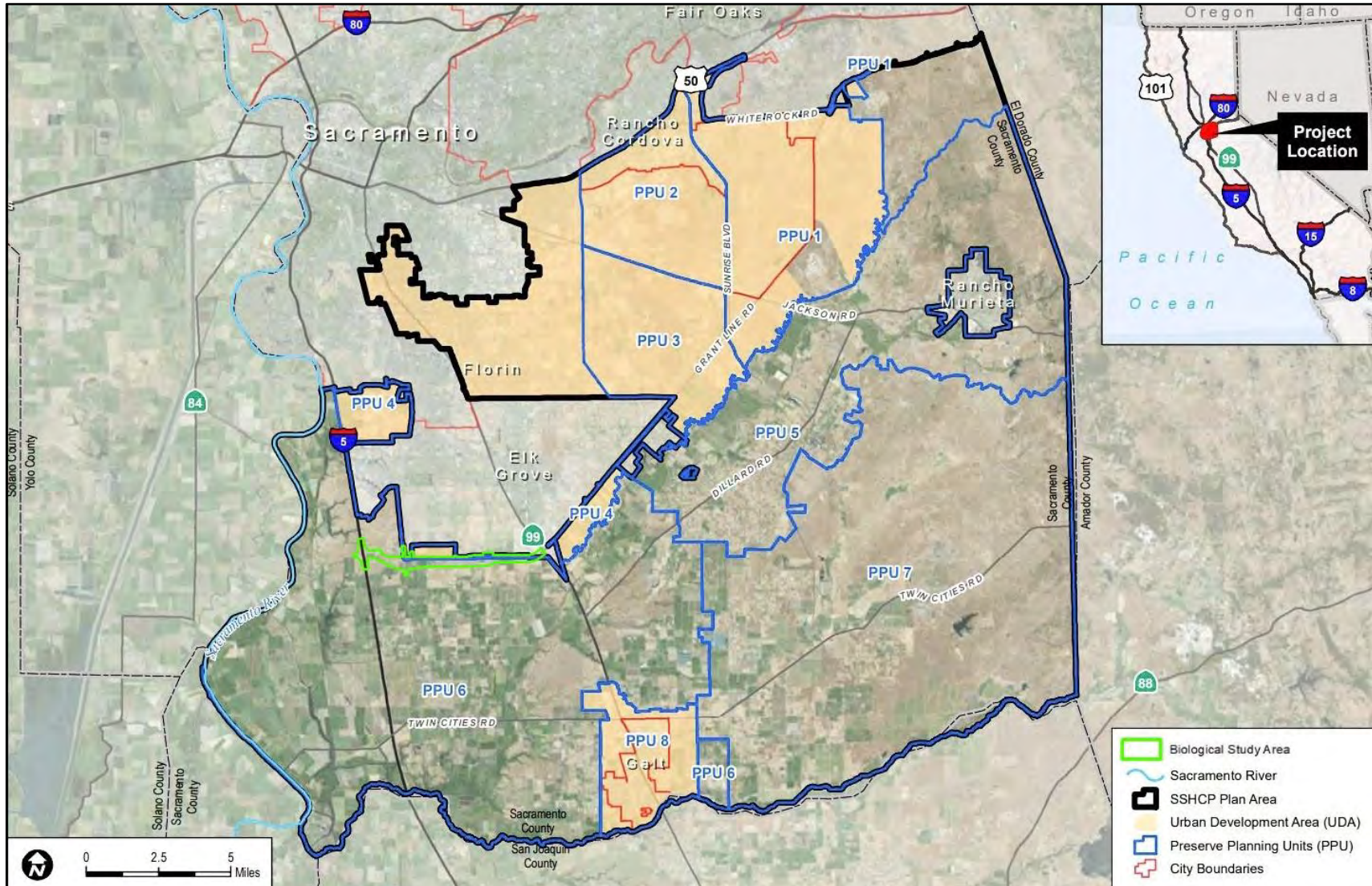
The Project will not physically divide an established community, will not conflict with applicable land use plans and policies, and will not conflict with any HCP or NCCP. No impacts to land use are anticipated; therefore, no avoidance, minimization and/or mitigation for land use and planning components are proposed.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to land use and planning. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to land use and planning would occur.

The Project would have a **less than significant impact** relating to land use and planning.

Figure 23. Project Area within SSHCP



Source: southsachcp.com 2018

2.11 Mineral Resources

REGULATORY SETTING

The Surface Mining Control and Reclamation Act of 1977 (SMCRA), Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt State policy for the reclamation of mined lands and the conservation of mineral resources. These policies are prepared in accordance with the Administrative Procedures Act, (Government Code) and are found in California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1.

The SMCRA Public Resources Code Sections 2710-2796 provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. SMCRA also encourages the production, conservation, and protection of the State's mineral resources. The State Mining and Geology Board is also granted authority and obligations under the following statutes:

Public Resources Code Section 2207 provides annual reporting requirements for all mines in the State.

Public Resources Code Section 2208: Site Inspections Conducted by the Department of Conservation.

Public Resources Code Section 10295.5 (a)-(e) and 20676 (a)-(c): Purchase and Use of Mined Materials by State and Local Agencies.

Water Code Section 13397 et seq.: Liability Limitations for Remediation/Reclamation of Abandoned Mines.

AFFECTED ENVIRONMENT

According to the County General Plan, which relies upon the State Division of Mines and Geology report, *Mineral Land Classification: Portland Cement Concrete-Grade Aggregate and Kaolin Clay Resources in Sacramento County, California* (1999), minerals found within the County include: bermentite, braunite, chromite, cinnabar, garnet, gypsum, hausmannite, hydromagnesite, inesite, magnesite, psilomelane, pyrobrsite, and rhodochrosite. Small deposits of gold, clay, and lead are also known to exist within the County; however, commercial extraction of these minerals is difficult or impossible. Currently, sand and gravel deposits constitute the only commercially significant extractive mineral resource in the region.

ENVIRONMENTAL CONSEQUENCES

According to the County General Plan, Open Space Element, and the Mineral Land Classification Maps prepared by the Department of Conservation Division of Mines and Geology (1999), the Project is within a Mineral Resource Zone 1 and 3 (MRZ-1 and MRZ-3). MRZ-1 are areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. MRZ-3 are areas containing mineral deposits, the significance of which cannot be evaluated from available data. Therefore, the Project would not cause the loss of availability of known mineral resources that would be of value or result in the loss of availability of a locally important mineral resource recovery site delineated in the Sacramento General plan, specific plan, or other land use plan.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The Project would not result in the loss of availability of a known mineral resource that would be of value to the region or residents of the state, and would not result in the loss of a locally-important mineral resource recovery site listed on a local general plan, specific plan or other land use plan. No impacts to mineral resources would occur from the Project; therefore, no avoidance, minimization and/or mitigation measures will be necessary for impacts to mineral resources.

Findings

The Project would have **no impact** related to mineral resources.

2.12 Noise

REGULATORY SETTING

California Environmental Quality Act

If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible.

For projects with Federal funding, the significance of CEQA noise impacts is addressed only in the environmental document (as opposed to a Caltrans-format Noise Study Report). Caltrans has designated the Connector JPA as the CEQA lead agency. Thus, CEQA noise impacts for this project will be assessed under local noise metrics and methods (Sacramento County and City of Elk Grove significance thresholds) instead of Caltrans.

Vibratory Regulatory Setting

There are currently no Federal Highway Administration (FHWA) or State standards for vibration impacts. The City and County have also not adopted construction vibration thresholds. This document will use recommendation from Caltrans to assess damage potential to nearby structures from ground vibration induced by construction equipment. **Table 27** below provides guidelines for vibration damage potential threshold criteria.

Table 27. Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans Transportation- and Construction-Induced Vibration Guidance Manual, June 2004

In addition to Caltrans recommendation for potential damage from vibratory impacts, Caltrans also recommends the criteria to evaluate the potential for human annoyance. **Table 28** below provides guidelines for vibration annoyance criteria:

Table 28. Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Severe	2.0	0.4

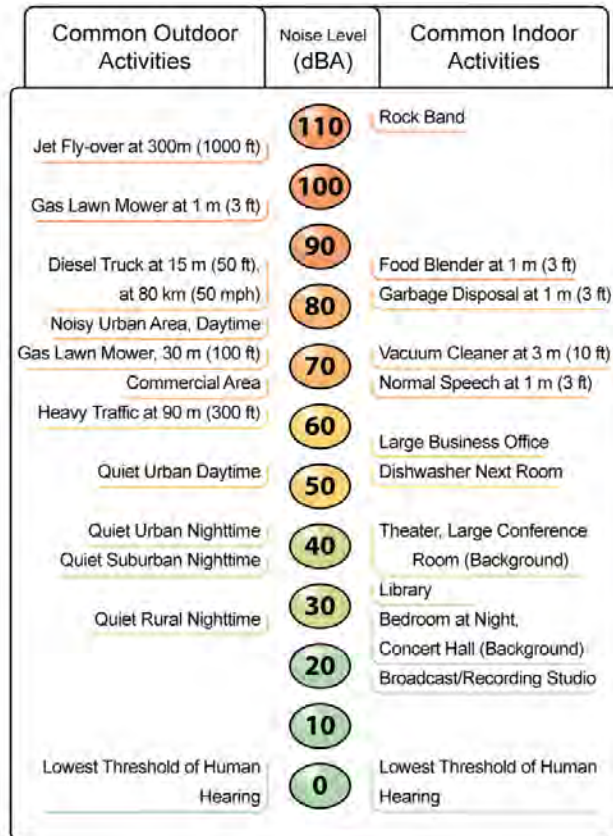
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans Transportation- and Construction-Induced Vibration Guidance Manual, June 2004

Local Regulations and Standards

The County and the City have established noise-level performance standards for projects affected by non-transportation sources and transportation sources. Noise is generally characterized as an equivalent continuous sound level (L_{eq}) averaged over time, day-night average sound level (L_{dn}), or CNEL (Community Noise Equivalent Level). Noise levels for common outdoor and indoor activities in decibels are listed below in **Figure 24**.

Figure 24. Common Outdoor and Indoor Activity Noise Levels



Sacramento County Noise Element

As described in Measure NO-9 of the County General Plan (2011), if projected post-project traffic noise levels at existing uses exceed the noise standards of **Table 29** below, then feasible methods of reducing noise to levels shall be analyzed.

**Table 29. Noise Standards for New Uses Affected by Traffic and Railroad Noise
Sacramento County Noise Element.**

New Land Use	Sensitive Outdoor Area – Ldn ¹	Sensitive ¹ Interior Area - Ldn	Notes
		Ldn/CNEL, dB	
All Residential	65	45	5
Transient Lodging	65	45	3, 5
Hospitals, Nursing Homes	65	45	3, 4, 5
Theaters, Auditoriums	---	35	3
Churches, Meeting Halls,	65	40	3
Schools, Libraries, etc.	65	40	3
Office Buildings	65	45	3
Commercial Buildings	--	50	3
Playgrounds, Parks, etc.	70	--	
Industry	65	50	3

Notes:

1. Sensitive areas are defined in acoustic terminology section.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. If this use is affected by railroad noise, a maximum (Lmax) noise level standard of 70 dB shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

Source: Sacramento County General Plan (Amended November 9, 2011)

Additionally, if pre-project traffic noise levels already exceed the noise standards, then the project should be analyzed if it results in what is considered a significant increase. A significant increase is defined as follows:

Pre-Project Noise Environment (L _{dn})	Significant Increase
Less than 60 dB	5+dB
60-65 dB	3+dB
Greater than 65 dB	1.5+dB

Sacramento County Noise Ordinance

With regards to construction noise impacts, noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property are exempt from the Noise Ordinance under Chapter 6.68.090, provided said activities do not take place between the hours of eight p.m. and six a.m. on weekdays and Friday commencing at eight p.m. through and including seven a.m. on Saturday; Saturdays commencing at eight p.m. through and including seven a.m. on the next following Sunday and on each Sunday after the hour of eight p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction

project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after eight p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

City of Elk Grove Noise Element

For transportation noise sources, the Noise Element establishes a land use compatibility standard of 60 dB L_{dn} within Outdoor Activity Areas of residential land uses. The intent of this standard is to provide an acceptable noise environment for outdoor activities. In addition, an interior noise level standard of 45 dB L_{dn} is applied to all residential uses and 40 dB L_{eq} is applied to interior spaces of churches. The intent of this standard is to provide a suitable environment for indoor communication and sleep.

Where it is not possible (reasonable or feasible) to reduce noise in outdoor activity areas to 60 dB L_{dn} or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB L_{dn} may be allowed provided that available exterior noise level reduction measures have been implemented, and interior noise levels are in compliance with the 45 dB L_{dn} standard, as shown in **Table 30**.

Table 30. Maximum Allowable Noise Exposure for Transportation Noise Sources

Land Use	Outdoor Activity Areas ¹ L _{dn} /CNEL, dB	Interior Spaces	
		L _{dn} /CNEL,	L _{eq} , dB ²
Residential	60 ³	45	-
Residential subject to noise from railroad tracks, aircraft over-flights	60 ³	40 ⁵	-
Transient Lodging	60 ⁴	45	-
Hospitals, Nursing Homes	60 ³	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls	60 ³	-	40
Office Buildings	-	-	45
Schools, Libraries, Museums	-	-	45
Playgrounds, Neighborhood Parks	70	-	-

1. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.
 2. As determined for a typical worst-case hour during periods of use.
 3. Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best -available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
 4. In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.
 5. The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.

Source: Elk Grove General Plan Noise Element. Adopted 11/19/03 | Amended January 5, 2005.
 Table NO-C

Furthermore, under City of Elk Grove General Plan Noise Element Policy NO-6, the following criteria shall be used as a test of significance for roadway improvement projects which are not directly tied to a development project:

- Where existing traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +5 dB Ldn increase in noise levels due to roadway improvement projects will be considered significant; and
- Where existing traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +3 dB Ldn increase in noise levels due to roadway improvement projects will be considered significant.
- Where existing traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +1.5 dB Ldn increase in noise levels due to roadway improvement projects will be considered significant.

City of Elk Grove Noise Ordinance

With regards to construction noise impacts, noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, are exempt from the Noise Ordinance under Chapter 6.32.100, provided that said activities only occur between the hours of 7:00 a.m. and 7:00 p.m. when located adjacent to residential uses. Noise associated with these activities not located adjacent residential uses may occur between the hours of 6:00 a.m. and 8:00 p.m. However, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;

Chapter 6.32.080 of the City of Elk Grove Noise Ordinance establishes exterior noise standards in Elk Grove based on land use:

- A. The following noise standards, unless otherwise specifically indicated in the Noise Ordinance, shall apply to all properties within a designated noise area.

Noise Area	City Zoning Districts	Time Period	Exterior Noise
I	Agricultural; Residential	7:00 a.m. – 10 p.m.	55 Dba
		10:00 p.m. – 7:00 a.m.	45 Dba

- B. It is unlawful for any person at any location within the City to create any noise which causes the noise levels on an affected property, when measured in the designated noise area, to exceed for the duration of time set forth following the specified exterior noise standards in any one (1) hour by:

Cumulative Duration of the Intrusive Sound	Allowance Decibels
1. Cumulative period of 30 minutes per hour	0
2. Cumulative period of 15 minutes per hour	+5
3. Cumulative period of 5 minutes per hour	+10
4. Cumulative period of 1 minute per hour	+15
5. Level not to be exceeded for any time per hour	+20

- C. Each of the noise limits specified in subsection (B) of this section shall be reduced by five (5) dBA for impulsive or simple tone noises, or for noises consisting of speech or music.
- D. Boundary between Different Noise Areas. If the measurement location is on a boundary between two (2) different designated noise areas, the lower noise level limit applicable to the two (2) areas shall apply.
- E. If the ambient noise level exceeds that permitted by any of the first four (4) noise-limit categories specified in subsection (B) of this section, the allowable noise limit shall be increased in five (5) dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth (5th) noise level category, the maximum ambient noise level shall be the noise limit for that category. [Ord. 9-2011 §3, eff. 6-24-2011]

AFFECTED ENVIRONMENT

The noise environment near the proposed Project is dominated by traffic sources along Kammerer Road, while noise sources throughout the farmland areas between Bruceville Road and the Hood Franklin Road I-5 Interchange would be dominated by rural residential sources and farming equipment. Additionally, the high-density residential area east of Franklin Boulevard is typically inundated by train noise from the UPRR tracks running north to south along the residential neighborhood. Kammerer Road has become a major thoroughfare for commuters and local residents. Traffic and the UPRR tracks would remain the dominant noise source at the Project site.

A noise analysis was completed in November 2018 to estimate noise level changes from implementation of the Project. A field investigation was conducted and aerial photographs were reviewed to determine land uses and identify sensitive noise receptors. Within City, residential neighborhoods (zoned Residential Development – 5, and Agricultural Residential – 10) are located north of Kammerer Road throughout the Project area. Within the County, agricultural areas (zoned General Agriculture – 20 acre) are located south of Kammerer Road throughout the project area.

Long-Term Noise Measurements

Long-term noise level measurements were conducted at eleven (11) locations for minimum periods of 24 consecutive hours at each location on October 2 and 16, 2013. The purpose of the long-term measurements was to determine existing loudest hour noise levels at sensitive receivers within the Project study area and characterize the noise setting to develop the project noise model. The detailed 24-hour monitoring results are shown graphically on the field data sheets contained in Appendix F and summarized below in **Table 31**. Existing noise levels at each receptor location were quantified by extrapolating the long-term noise measurement data collected at the nearest representative long-term noise monitoring site. **Figure 25** shows the locations of the noise measurements.

Table 31. Summary of Long-Term Measurements

Site	Address	Measured Peak Hour Noise Level – Leq (dB)	Measured Day/Night Noise Level – Ldn (dB)
LT-1	West of I-5/Hood Franklin Road	68	67
LT-2	3206 Hood Franklin Road	67	66
LT-3	3460 Hood Franklin Road	61	61

Site	Address	Measured Peak Hour Noise Level – Leq (dB)	Measured Day/Night Noise Level – Ldn (dB)
LT-4	10609 Franklin Boulevard	57	58
LT-5	10775 Franklin Boulevard	66	57
LT-6	0 Bilby Road	70	65
LT-7	0 Bruceville Road	52	47
LT-8	8051 Kammerer Road	68	68
LT-9	10650 Rau Road	52	51
LT-10	8499 Kammerer Road	61	60
LT-11	8663 Kammerer Road	64	63

Short-Term Noise Measurements

Short-term monitoring was conducted at three (3) locations in January 2018 and at two (2) additional locations in July 2018 using Larson David Model 824 Type 1 sound level meters. Measurements were taken for a duration of 15-minutes at each site. The short-term measurements locations are identified in **Figure 25**. Noise measurement field monitoring forms are located in Appendix F.

During the short-term measurements, field staff attended each meter. During the measurement period (15 minutes in duration), dominate noise sources were also identified and logged. The calibration of the meter was checked before and after the measurement using a Larson-Davis Model CAL250 calibrator. For short-term measurements ST-1 through ST-3, wind speeds typically ranged from 2 to 3 mph. Temperatures ranged from 51 to 58°F, with relative humidity typically 72 to 92 percent. Concurrent traffic volumes were recorded by staff. These traffic counts were conducted to calibrate the TNM 2.5 model. Traffic speeds were recorded by driving on the roadways immediately after a noise measurement. The traffic counts were tabulated according to three vehicles types, including automobiles, medium trucks (2-axle with 6-wheels but not including pick-up trucks) and heavy trucks (3 or more axles). For short-term measurements ST-4 and ST-5, wind speeds ranged from 8 to 11 mph. Temperatures ranged from 100 to 102°F, with relative humidity typically 19 to 20 percent. No traffic counts were taken during the July 2018 noise measurements as there is no existing roadway where the proposed Kammerer alignment would be constructed.

Table 32 summarizes the results of the short-term noise monitoring conducted in the project area. Short-term noise measurements ST-1 through ST-3 were used to calibrate the noise model. Noise measurements ST-4 and ST-5 were taken to represent the existing ambient noise level for residences along Tusk Way that would be subject to traffic noise generated by the future Kammerer alignment.

Table 32. Summary of Short-Term Measurements

Site	Address	Measured Peak Hour Noise Level – Leq (dB)
ST-1	North of 10592 Franklin Boulevard	64.9
ST-2	7809 Kammerer Road	67.0
ST-3	Kammerer Road between Lotz and Lent Parkway	63.0
ST-4	4800 Tusk Way	47.0
ST-5	4877 Tusk Way	51.1

Noise Model Calibration

Noise measurements for the calibration were conducted with simultaneous traffic counts at three (3) locations in January 2018. As a general rule, the noise model is considered to be calibrated if the field measured noise levels versus the modeled noise levels (using field collected traffic data) agree within 3 dB of each other. If differences are more than 3 dB, refinement of the noise model is performed until there is agreement between the two values. If after thorough reevaluation calibration still cannot be achieved due to complex topography or other unusual circumstances, then a calibration constant is added such that the measured versus modeled values agree before any predictions can be made with the model.

Table 33 shows the representative modeled receiver locations, measured ambient noise level, the modeled noise levels using traffic counts and measured vehicle speeds during noise monitoring. The traffic volumes that were used in the calibration process are located in Appendix F. TNM 2.5 was used to compare measured traffic noise levels to modeled noise levels at field measurement locations. The predicted sound levels are within 3 dB of the measured sound levels and considered to be in reasonable agreement with the measured sound levels. Therefore, no calibration of the model was made.

Table 33. Model Calibration

Site	Measured Noise Level – Leq (dB)	Predicted Noise Level – Leq (dB)	Measured minus Predicted (Db)
ST-1	64.9	63.5	1.4
ST-2	67.0	66.5	0.5
ST-3	63.0	60.1	2.9

Modelled Exterior Noise Results













Noise was modeled using the Traffic Noise Model, Version 2.5, developed by the FHWA. Existing and forecasted noise levels are modelled using average daily traffic volumes from the project Transportation Impact Analysis by DKS Associates (DKS 2018). Noise levels were projected using traffic volumes for existing year 2017, interim year 2034, and forecasted future year 2044.

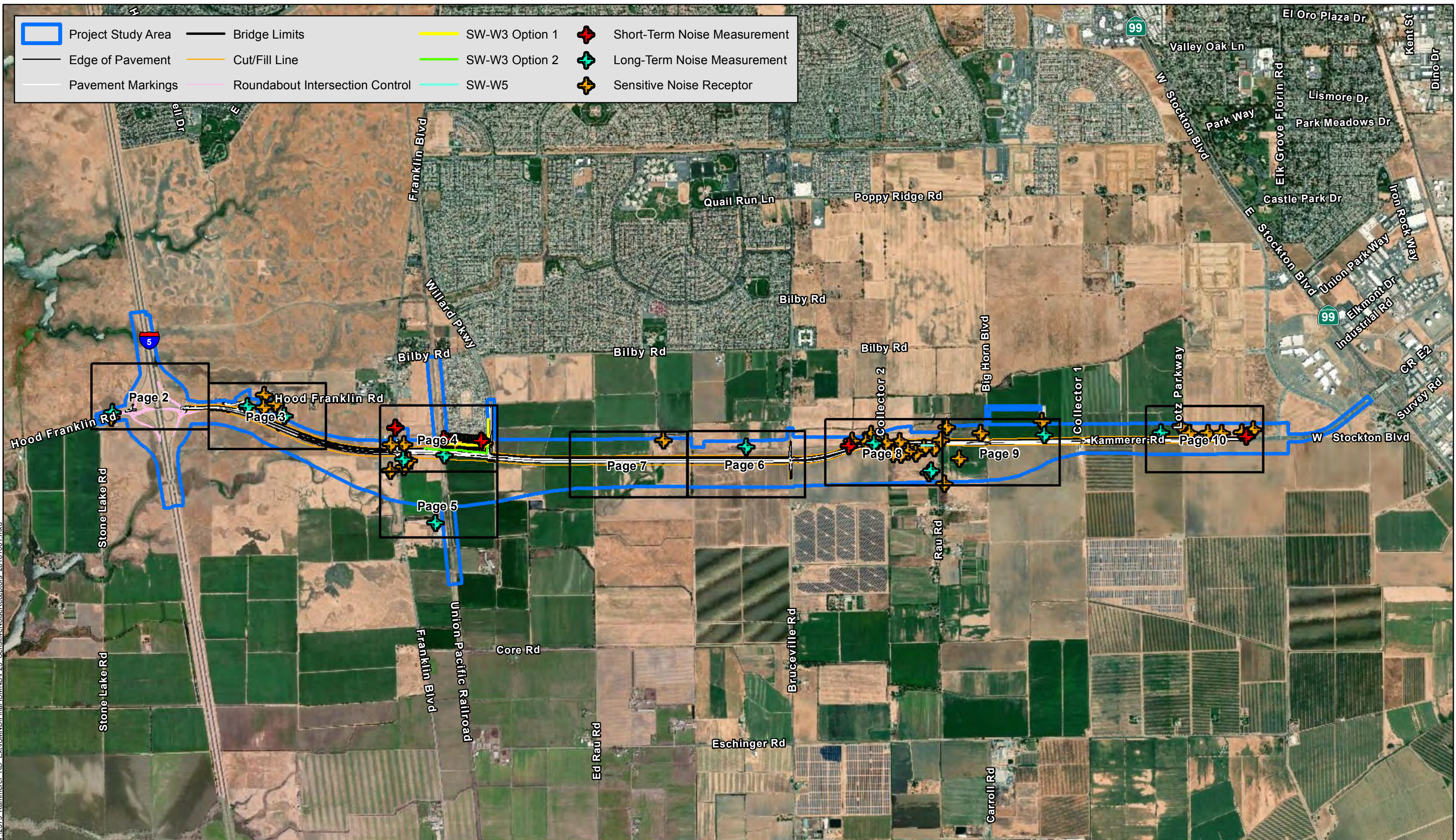
Receptors were included in this assessment if they were located within 500 feet of either the I-5/Hood Franklin Kammerer Road interchange right-of-way or within 500 feet of the proposed Kammerer Road alignment. **Figure 25** shows the receiver locations analyzed. The results of the traffic noise modeling are shown in **Table 34** and compared with the City and County traffic noise thresholds. Shaded cells indicate identified significant impacts. Empty cells identify receptor locations where rubberized asphalt will not be included on the Kammerer overcrossing between Franklin Boulevard and Willard Parkway (receptors R-7 through R-9 and R-32 through R-50).

Modelled Interior Noise Results

In accordance with the Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol (Caltrans, September 2013), it is assumed that standard residential design (with windows closed) will provide approximately 25 dBA of exterior-to-interior noise attenuation. **Table 35** shows the estimated interior noise at each noise receiver location with the assumed 25 dBA exterior-to-interior noise attenuation and the results are compared with the City and County interior noise thresholds. Shaded cells indicate identified significant impacts. Empty cells identify receptor locations where rubberized asphalt will not be required on the Kammerer overcrossing between Franklin Boulevard and Willard Parkway (receptors R-7 through R-9 and R-32 through R-50).

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|--|---|---|--|
|  Project Study Area |  Bridge Limits |  SW-W3 Option 1 |  Short-Term Noise Measurement |
|  Edge of Pavement |  Cut/Fill Line |  SW-W3 Option 2 |  Long-Term Noise Measurement |
|  Pavement Markings |  Roundabout Intersection Control |  SW-W5 |  Sensitive Noise Receptor |



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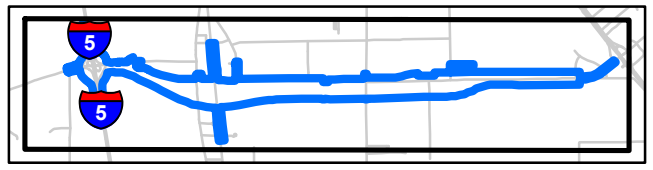
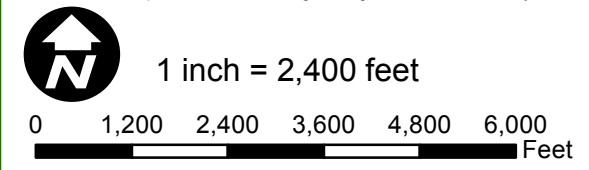












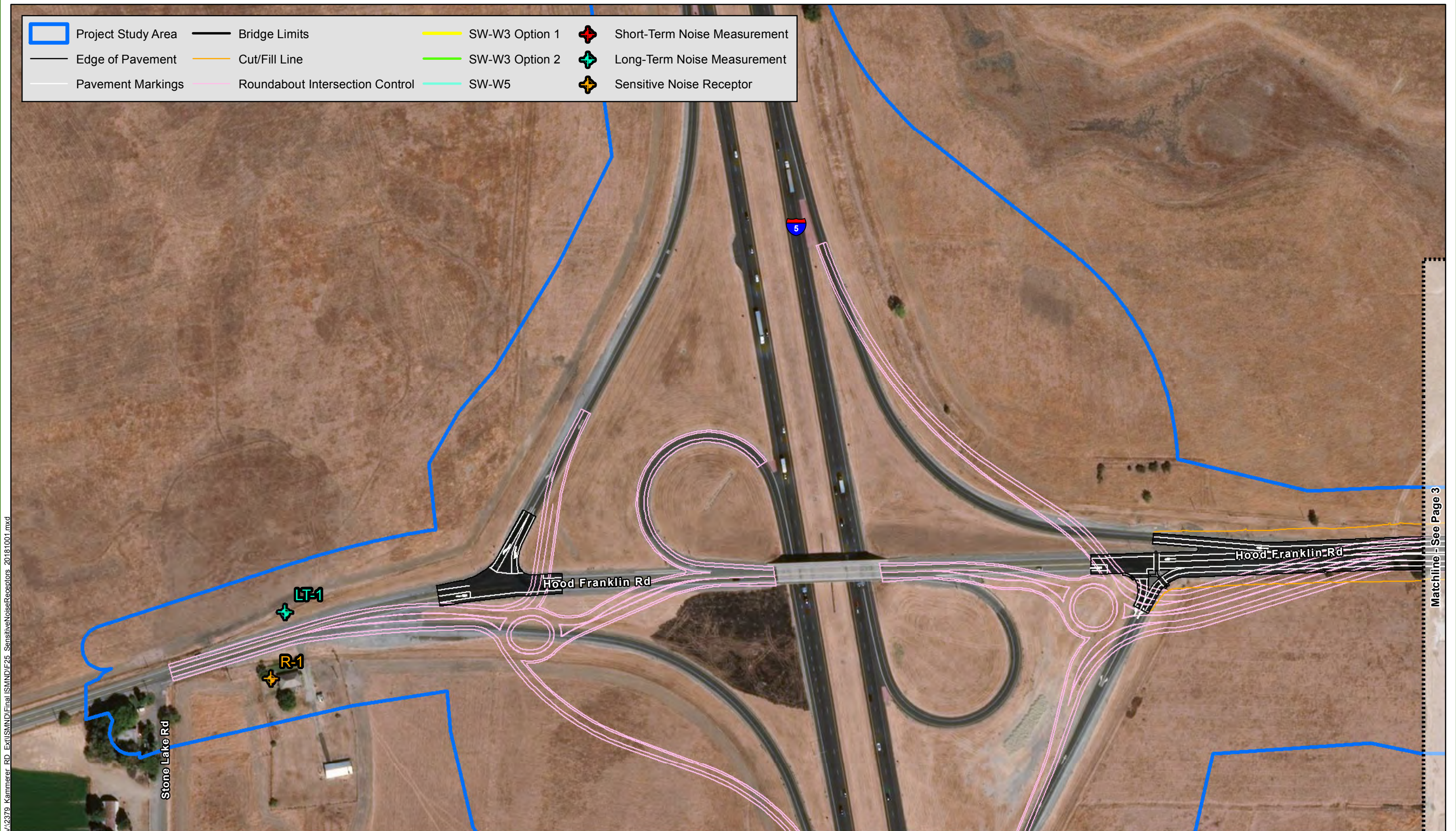


FIGURE 25
Sensitive Noise Receptor Locations
Page 1 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

- | | | | |
|--|---|---|--|
|  Project Study Area |  Bridge Limits |  SW-W3 Option 1 |  Short-Term Noise Measurement |
|  Edge of Pavement |  Cut/Fill Line |  SW-W3 Option 2 |  Long-Term Noise Measurement |
|  Pavement Markings |  Roundabout Intersection Control |  SW-W5 |  Sensitive Noise Receptor |



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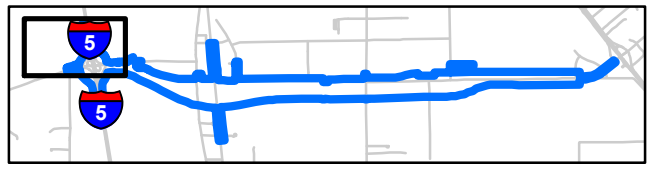
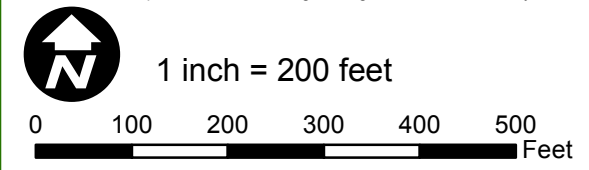


FIGURE 25
Sensitive Noise Receptor Locations
 Page 2 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

- | | | | |
|--------------------|---------------------------------|----------------|------------------------------|
| Project Study Area | Bridge Limits | SW-W3 Option 1 | Short-Term Noise Measurement |
| Edge of Pavement | Cut/Fill Line | SW-W3 Option 2 | Long-Term Noise Measurement |
| Pavement Markings | Roundabout Intersection Control | SW-W5 | Sensitive Noise Receptor |

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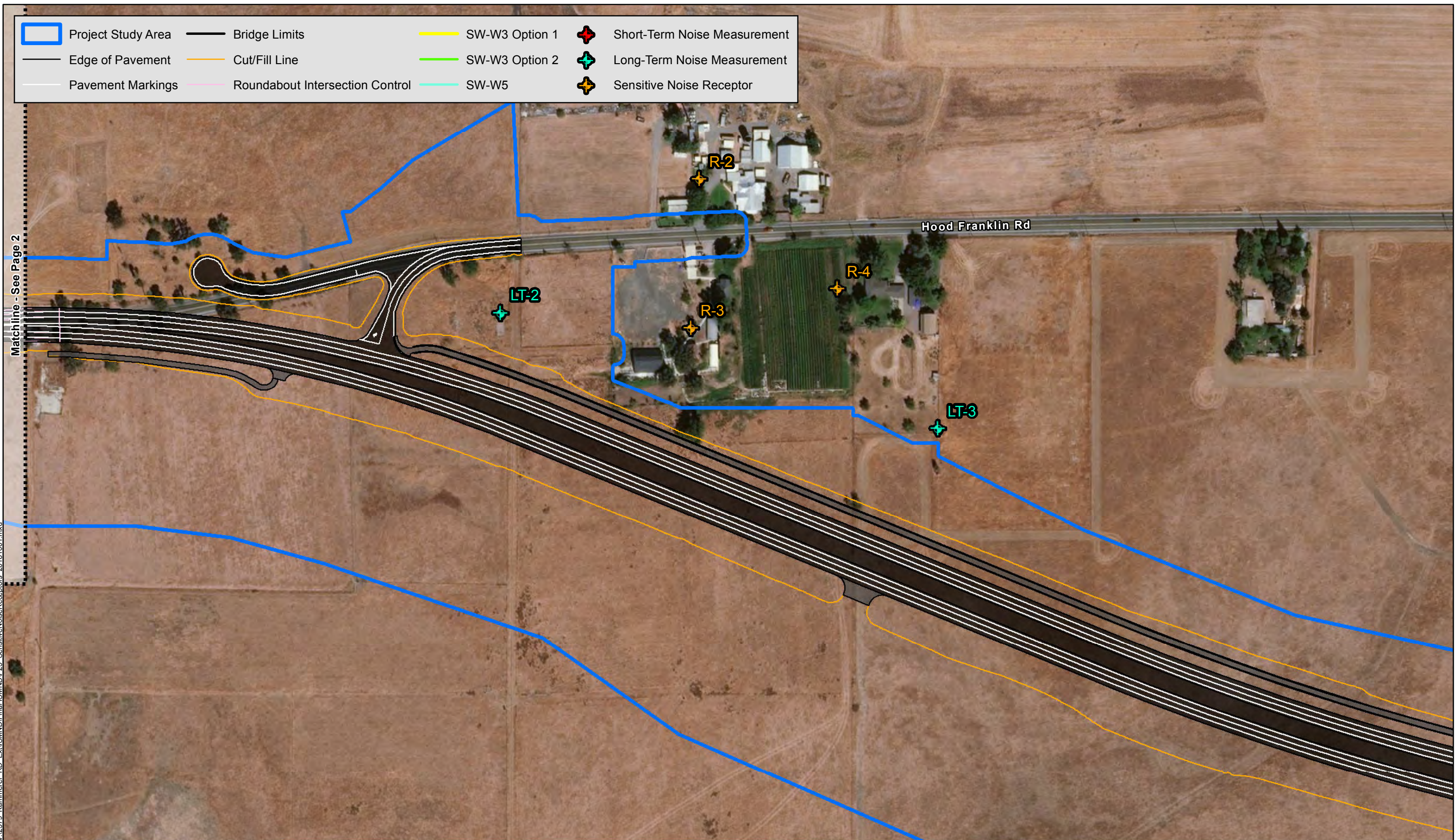
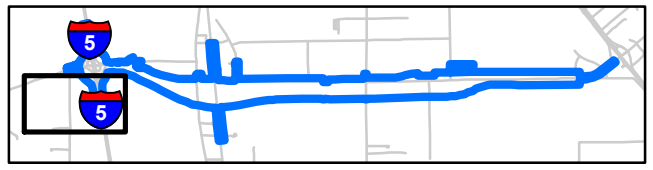
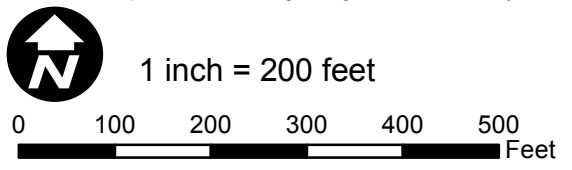












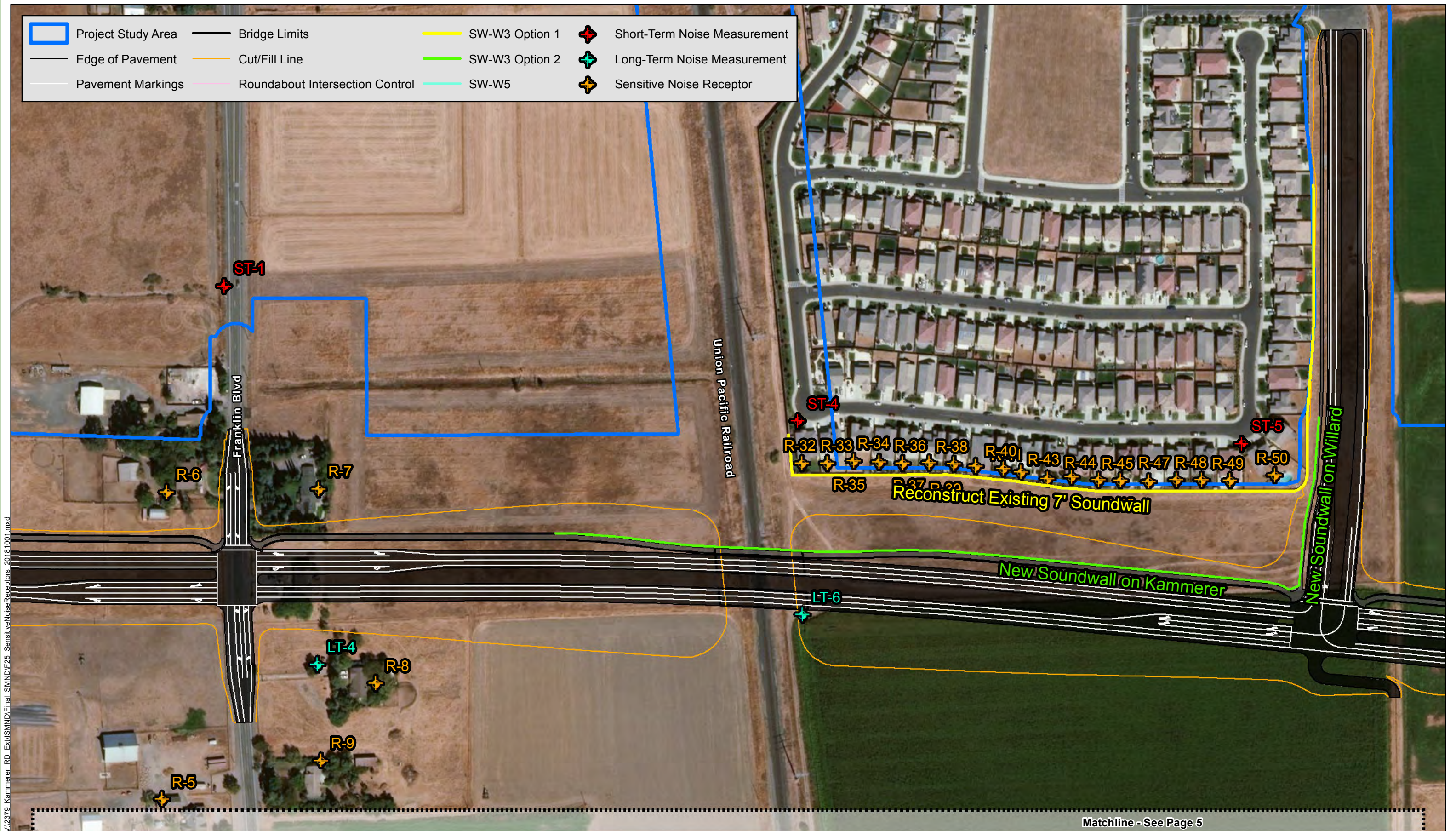


FIGURE 25
Sensitive Noise Receptor Locations
 Page 3 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

- | | | | |
|--|---|--|--|
|  Project Study Area |  Bridge Limits |  SW-W3 Option 1 |  Short-Term Noise Measurement |
|  Edge of Pavement |  Cut/Fill Line |  SW-W3 Option 2 |  Long-Term Noise Measurement |
|  Pavement Markings |  Roundabout Intersection Control |  SW-W5 |  Sensitive Noise Receptor |



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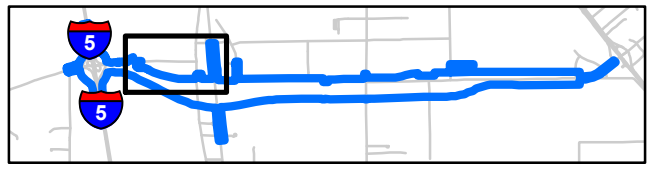
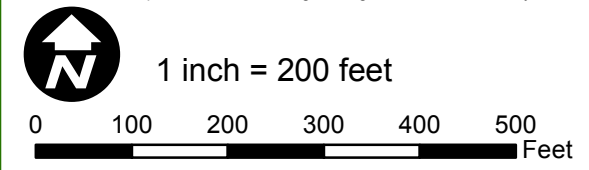














FIGURE 25
Sensitive Noise Receptor Locations
 Page 4 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

-  Project Study Area
-  Bridge Limits
-  SW-W3 Option 1
-  Short-Term Noise Measurement
-  Edge of Pavement
-  Cut/Fill Line
-  SW-W3 Option 2
-  Long-Term Noise Measurement
-  Pavement Markings
-  Roundabout Intersection Control
-  SW-W5
-  Sensitive Noise Receptor



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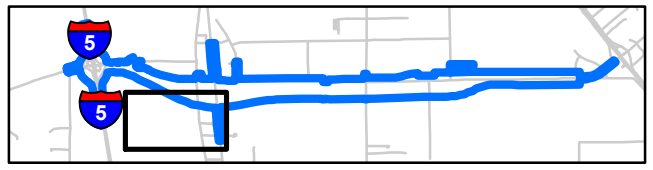
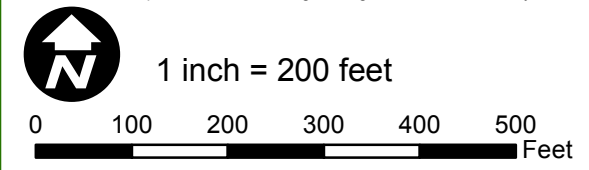














FIGURE 25
Sensitive Noise Receptor Locations
 Page 5 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

- | | | | |
|--|---|--|--|
|  Project Study Area |  Bridge Limits |  SW-W3 Option 1 |  Short-Term Noise Measurement |
|  Edge of Pavement |  Cut/Fill Line |  SW-W3 Option 2 |  Long-Term Noise Measurement |
|  Pavement Markings |  Roundabout Intersection Control |  SW-W5 |  Sensitive Noise Receptor |



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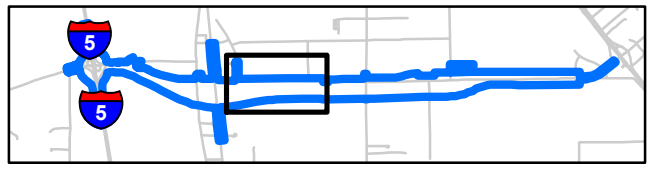
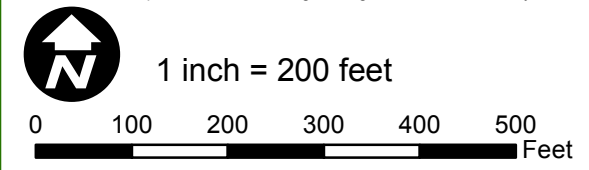














FIGURE 25
Sensitive Noise Receptor Locations
 Page 6 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

- | | | | |
|--|---|--|--|
|  Project Study Area |  Bridge Limits |  SW-W3 Option 1 |  Short-Term Noise Measurement |
|  Edge of Pavement |  Cut/Fill Line |  SW-W3 Option 2 |  Long-Term Noise Measurement |
|  Pavement Markings |  Roundabout Intersection Control |  SW-W5 |  Sensitive Noise Receptor |



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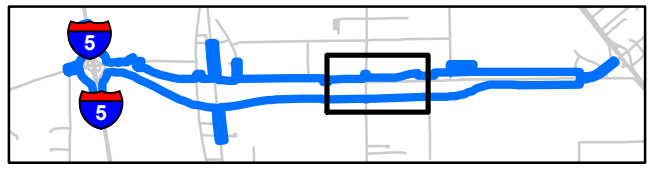
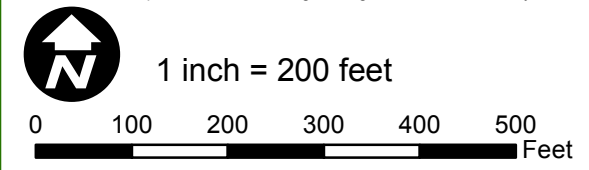
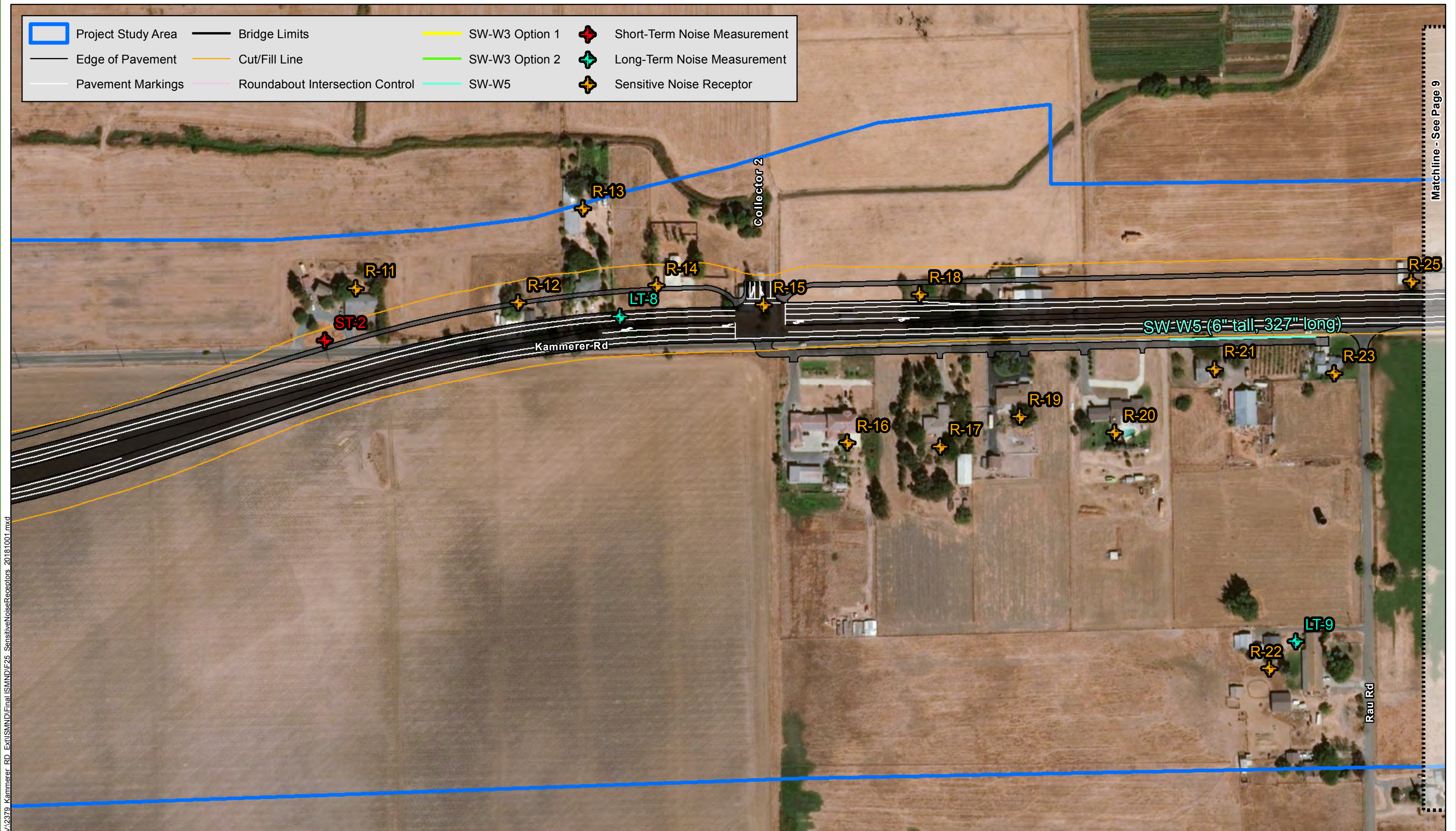
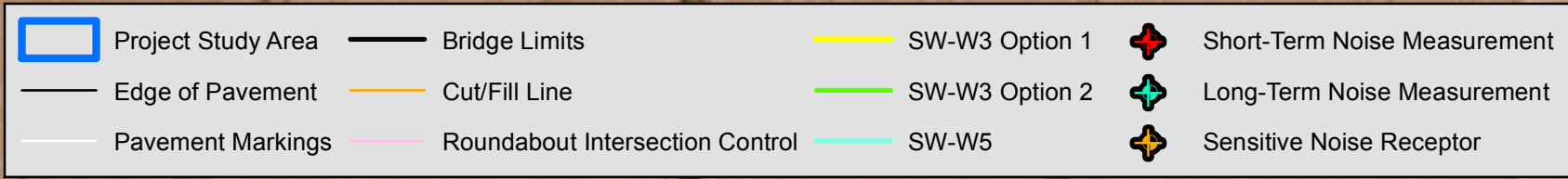


FIGURE 25
Sensitive Noise Receptor Locations
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California



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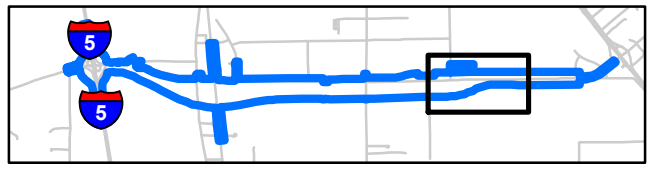
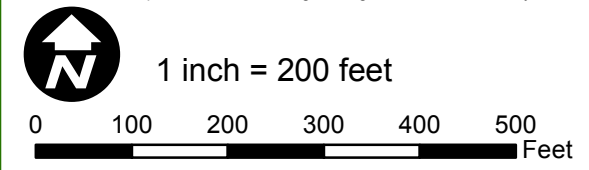












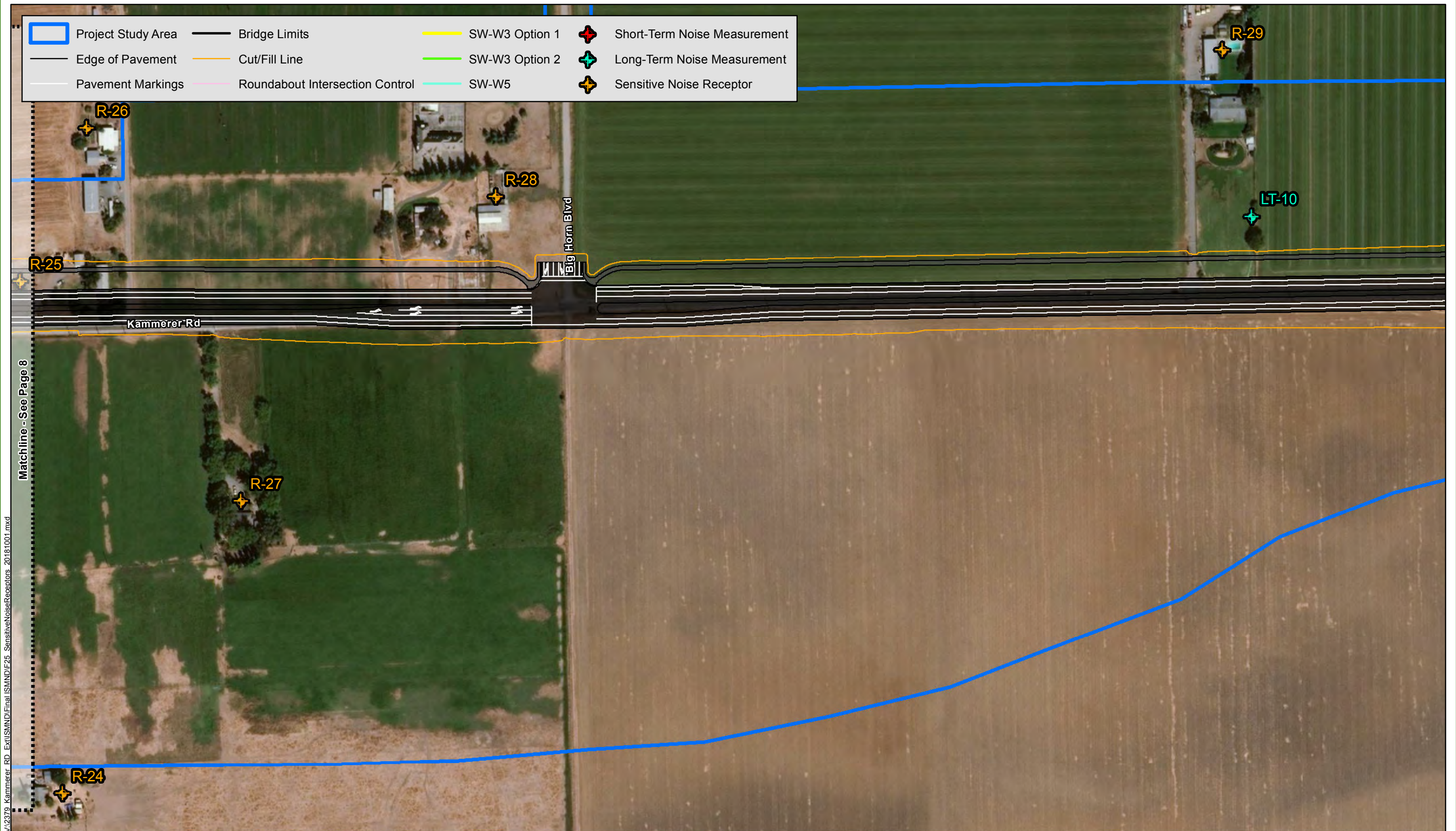


FIGURE 25
Sensitive Noise Receptor Locations
 Page 8 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

	Project Study Area		Bridge Limits		SW-W3 Option 1		Short-Term Noise Measurement
	Edge of Pavement		Cut/Fill Line		SW-W3 Option 2		Long-Term Noise Measurement
	Pavement Markings		Roundabout Intersection Control		SW-W5		Sensitive Noise Receptor



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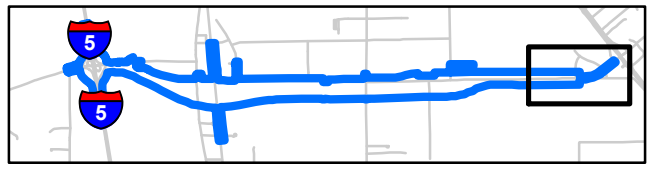
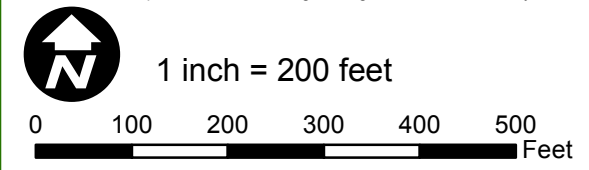
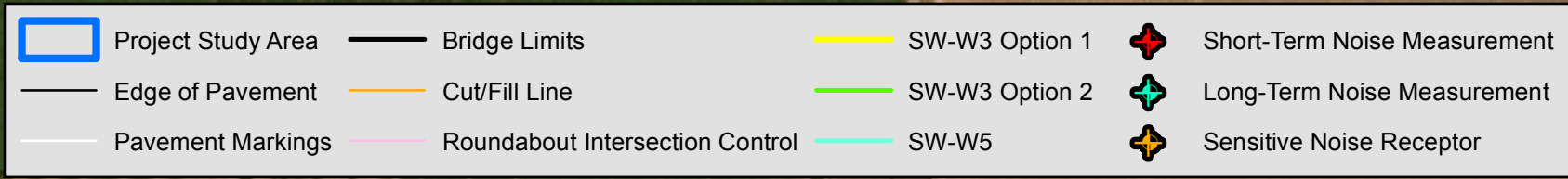


FIGURE 25
Sensitive Noise Receptor Locations
 Page 9 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California



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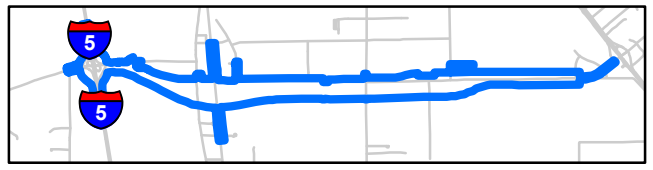
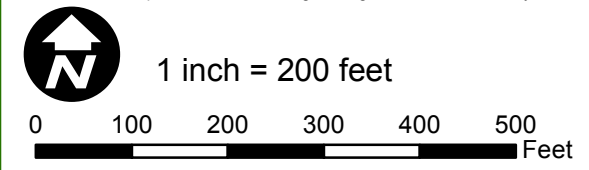


FIGURE 25
Sensitive Noise Receptor Locations
 Page 10 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

Table 34. Residential Noise Receptor Locations and Exterior Noise Results

Receptor # and Location	Existing Modeled (2017) Noise Level (dBA Ldn)	Predicted Noise Level for No-Build (2034 dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn) and Rubberized Asphalt	Predicted Noise Level for No-Build (2044 dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn) and Rubberized Asphalt
Sacramento County – Exterior Noise Threshold 65 dBa Ldn							
R-1 Stone Lake Rd & Hood Franklin Rd	62	62	63	60	63	64	61
R-2 3307 Hood Franklin Rd	67	69	66	63	69	68	65
R-3 3206 Hood Franklin Rd	63	65	63	60	65	65	62
R-4 3460 Hood Franklin Rd	62	65	61	58	65	64	61
R-5 10632 Franklin Blvd	60	63	60	57	63	62	59
R-6 10592 Franklin Blvd	55	58	65	62	58	66	63
R-7 10587 Franklin Blvd	48	51	59	-	51	59	-
R-8 10609 Franklin Blvd	50	53	63	-	53	64	-
R-9 10629 Franklin Blvd	60	63	61	-	63	62	-
R-10 South of Bilby Rd	34	37	54	51	38	57	54
R-16 8088 Kammerer Rd	56	59	62	59	63	66	63
R-17 8098 Kammerer Rd	55	59	61	58	62	65	62

Receptor # and Location	Existing Modeled (2017) Noise Level (dBA Ldn)	Predicted Noise Level for No-Build (2034 dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn) and Rubberized Asphalt	Predicted Noise Level for No-Build (2044 dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn) and Rubberized Asphalt
R-19 8140 Kammerer Road	51	54	57	54	57	60	57
R-20 8158 Kammerer Road	56	59	62	59	63	65	62
R-21 8170 Kammerer Road	64	67	69	66	69	72	69
R-22 10650 Rau Rd	46	49	52	49	51	55	52
R-23 8198 Kammerer Rd	52	55	58	55	58	60	57
R-24 10675 Rau Rd	43	47	50	47	48	52	49
R-27 8250 Kammerer Rd	50	53	56	53	55	60	57
City of Elk Grove – Exterior Noise Threshold 60 dBA Ldn							
R-11 7809 Kammerer Rd	60	64	Will be removed		67	Will be removed	
R-12 7909 Kammerer Rd	63	66	Will be removed		69	Will be removed	
R-13 8051 Kammerer Rd	58	62	Will be removed		65	Will be removed	
R-14 8011 Kammerer Rd	61	64	Will be removed		67	Will be removed	
R-15 8011 Kammerer Rd	61	64	Will be removed		68	Will be removed	
R-18 8109 Kammerer Rd	66	69	Will be removed		71	Will be removed	

Receptor # and Location	Existing Modeled (2017) Noise Level (dBA Ldn)	Predicted Noise Level for No-Build (2034 dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn) and Rubberized Asphalt	Predicted Noise Level for No-Build (2044 dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn) and Rubberized Asphalt
R-25 8215 Kammerer Rd	65	68	Will be removed		70	Will be removed	
R-26 8215 Kammerer Rd	51	54	60	57	57	64	61
R-28 8279 Kammerer Rd	48	52	58	55	56	61	58
R-29 8499 Kammerer Rd	47	52	55	52	54	58	55
R-30 Kammerer Rd	52	57	60	57	61	63	60
R-31 Promenade PW	60	66	53	50	68	58	55
R-32 4800 Tusk Way	42	45	64	-	45	64	-
R-33 4804 Tusk Way	43	46	64	-	46	64	-
R-34 4808 Tusk Way	43	46	64	-	46	64	-
R-35 4812 Tusk Way	43	46	64	-	46	64	-
R-36 4816 Tusk Way	43	46	64	-	46	64	-
R-37 4820 Tusk Way	43	46	64	-	46	64	-
R-38 4824 Tusk Way	42	46	64	-	46	64	-
R-39 4828 Tusk Way	42	45	64	-	45	64	-
R-40 4836 Tusk Way	42	45	64	-	45	64	-
R-41 4836 Tusk Way	42	45	64	-	45	64	-
R-42 4836 Tusk Way	42	45	60	-	45	61	-
R-43 4848 Tusk Way	42	45	62	-	45	63	-

Receptor # and Location	Existing Modeled (2017) Noise Level (dBA Ldn)	Predicted Noise Level for No-Build (2034 dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn) and Rubberized Asphalt	Predicted Noise Level for No-Build (2044 dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn) and Rubberized Asphalt
R-44 4848 Tusk Way	42	45	62	-	45	63	-
R-45 4856 Tusk Way	41	45	62	-	45	62	-
R-46 4860 Tusk Way	41	44	61	-	44	62	-
R-47 4860 Tusk Way	41	44	61	-	44	63	-
R-48 4860 Tusk Way	41	44	62	-	44	63	-
R-49 4868 Tusk Way	41	44	61	-	44	63	-
R-50 4868 Tusk Way	40	44	62	-	44	64	-
R-51 8250-8260 Kammerer Rd	59	60	61	58	62	64	61
R-52 8250-8260 Kammerer Rd	59	60	62	59	62	61	58
R-53 8250-8260 Kammerer Rd	60	60	55	52	61	58	55
R-54 8250-8260 Kammerer Rd	60	60	61	58	62	61	58

Notes

1. Shaded cells indicate identified significant impacts under CEQA.
2. R-26 is a warehouse and not considered a sensitive receptor.
3. Rubberized asphalt will not be required on the Kammerer overcrossing between Franklin Blvd and Willard.

Table 35. Residential Noise Receptor Locations and Interior Noise Results

Receptor # and Location	Existing (2017) Noise Level (dBA Ldn)	Predicted Noise Level for No-Build (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn) and Rubberized Asphalt	Predicted Noise Level for No-Build (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn) and Rubberized Asphalt
Sacramento County – Interior Noise Threshold 45 dBA Ldn							
R-1 Stone Lake Rd & Hood Franklin Rd	37	37	38	35	38	39	36
R-2 3307 Hood Franklin Rd	42	44	41	38	44	43	40
R-3 3206 Hood Franklin Rd	38	40	38	35	40	40	37
R-4 3460 Hood Franklin Rd	37	40	36	33	40	39	36
R-5 10632 Franklin Blvd	35	38	35	32	38	37	34
R-6 10592 Franklin Blvd	30	33	40	37	33	41	38
R-7 10587 Franklin Blvd	23	26	34	-	26	34	-
R-8 10609 Franklin Blvd	26	29	38	-	29	40	-
R-9 10629 Franklin Blvd	35	38	36	-	38	37	-
R-10 South of Bilby Rd	9	12	29	26	13	32	29
R-16 8088 Kammerer Rd	31	34	37	34	38	41	38
R-17 8098 Kammerer Rd	30	34	36	33	37	40	37

Receptor # and Location	Existing (2017) Noise Level (dBA Ldn)	Predicted Noise Level for No-Build (2034 dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn) and Rubberized Asphalt	Predicted Noise Level for No-Build (2044 dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn) and Rubberized Asphalt
R-19 8140 Kammerer Road	26	29	32	29	32	35	32
R-20 8158 Kammerer Road	31	34	37	34	38	40	37
R-21 8170 Kammerer Road	39	42	44	41	44	47	44
R-22 10650 Rau Rd	21	24	27	24	26	30	27
R-23 8198 Kammerer Rd	27	30	33	30	33	35	32
R-24 10675 Rau Rd	18	22	25	22	23	27	24
R-27 8250 Kammerer Rd	25	28	31	28	30	35	32
City of Elk Grove – Interior Noise Threshold 45 dBA Ldn							
R-11 7809 Kammerer Rd	35	39	Removed		42	Will be removed	
R-12 7909 Kammerer Rd	38	41	Removed		44	Will be removed	
R-13 8051 Kammerer Rd	33	37	Removed		40	Will be removed	
R-14 8011 Kammerer Rd	36	39	Removed		42	Will be removed	
R-15 8011 Kammerer Rd	36	39	Removed		43	Will be removed	

Receptor # and Location	Existing (2017) Noise Level (dBA Ldn)	Predicted Noise Level for No-Build (2034 dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) and Rubberized Asphalt (dBA Ldn)	Predicted Noise Level for No-Build (2044 dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) and Rubberized Asphalt (dBA Ldn)
R-18 8109 Kammerer Rd	41	44	Removed		46	Will be removed	
R-25 8215 Kammerer Rd	40	43	Removed		45	Will be removed	
R-26 8215 Kammerer Rd	26	29	35	32	32	39	36
R-28 8279 Kammerer Rd	23	27	33	30	31	36	33
R-29 8499 Kammerer Rd	22	27	30	27	29	33	30
R-30 Kammerer Rd	27	32	35	32	36	38	35
R-31 Promenade PW	35	41	28	25	43	33	30
R-32 4800 Tusk Way	17	20	39	-	20	39	-
R-33 4804 Tusk Way	18	21	39	-	21	39	-
R-34 4808 Tusk Way	18	21	39	-	21	39	-
R-35 4812 Tusk Way	18	21	39	-	21	39	-
R-36 4816 Tusk Way	18	21	39	-	21	39	-
R-37 4820 Tusk Way	18	21	39	-	21	39	-
R-38 4824 Tusk Way	17	21	39	-	21	39	-
R-39 4828 Tusk Way	17	20	39	-	20	39	-
R-40 4836 Tusk Way	17	20	39	-	20	39	-

Receptor # and Location	Existing (2017) Noise Level (dBA Ldn)	Predicted Noise Level for No-Build (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn)	Predicted Noise Level with 2-Lane Project (2034) (dBA Ldn) and Rubberized Asphalt	Predicted Noise Level for No-Build (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn)	Predicted Noise Level with 4-Lane Project (2044) (dBA Ldn) and Rubberized Asphalt
R-41 4836 Tusk Way	17	20	39	-	20	39	-
R-42 4836 Tusk Way	17	20	35	-	20	36	-
R-43 4848 Tusk Way	17	20	37	-	20	38	-
R-44 4848 Tusk Way	17	20	37	-	20	38	-
R-45 4856 Tusk Way	16	20	37	-	20	37	-
R-46 4860 Tusk Way	16	19	36	-	19	37	-
R-47 4860 Tusk Way	16	19	36	-	19	38	-
R-48 4860 Tusk Way	16	19	37	-	19	38	-
R-49 4868 Tusk Way	16	19	36	-	19	38	-
R-50 4868 Tusk Way	15	19	37	-	19	39	-
R-51 8250-8260 Kammerer Rd	34	35	36	33	37	39	36
R-52 8250-8260 Kammerer Rd	34	35	37	34	37	36	33
R-53 8250-8260 Kammerer Rd	35	35	30	27	36	33	30
R-54 8250-8260 Kammerer Rd	35	35	36	33	37	36	33

Notes

1. Shaded cells indicate identified significant impacts under CEQA.
2. R-26 is a warehouse and not considered a sensitive receptor.
3. Rubberized asphalt will not be required on the Kammerer overcrossing between Franklin Blvd and Willard.

ENVIRONMENTAL CONSEQUENCES

CEQA Thresholds of Significance

Traffic Noise Threshold: The proposed Project would result in a significant impact if sensitive receptors are exposed to future exterior noise levels that exceed 65 Dba Ldn in Sacramento County (See **Table 29**), future exterior noise levels that exceed 60 Dba Ldn in Elk Grove (See **Table 30**), or future interior noise levels that exceed 45 dBA Ldn as a result of traffic noise generated by the proposed Project.

Substantial Noise Increase Threshold: The Project would result in a significant impact if sensitive receptors are exposed to a traffic noise increase of 1.5 Db or more in an ambient noise environment greater than 65 dBA day-night average sound level (Ldn); or increase noise of 3 dB more in an ambient noise environment between 60 and 56 dBA Ldn; or increased noise of 5 dB or more in an ambient environment of less than 60 dBA (Ldn) (See Sacramento County General Plan Policy NO-9 and City of Elk Grove General Plan Policy NO-6).

Construction Noise: The proposed Project would result in a significant noise impact if temporary or periodic increases in noise level from construction activity would occur between 8:00 p.m. and 6:00 a.m. Monday through Friday and between 7:00 p.m. and 8:00 a.m. on Saturday and Sunday. If construction activities occur outside of the allowed construction hours, construction noise levels that exceed exterior noise standards established by the City and County respective noise ordinances would result in a significant impact.

Vibration: The proposed Project would result in a significant vibration impact if the vibration levels exceed 0.5 peak particle velocity (PPV) at sensitive receptors (See **Table 27 and 28**).

Air Traffic Noise: The proposed Project would result in a significant impact if sensitive receptors within 2 miles of a public or private airstrip were exposed to excessive air traffic noise.

Traffic Noise Operational Impacts

As shown in **Table 35**, noise levels at receptor R-2 currently exceed the Sacramento County's exterior noise threshold, and receptors R-11, R-12, R-14, R-15, R-18, R-25, and R-31 currently exceed the City of Elk Grove exterior noise thresholds for transportation sources. However, receptors R-11, R-12, R-13, R-14, R-15, R-18, and R-25 would be removed in the future (before a two-lane phase is constructed) and therefore were not analyzed in the 2034 or 2044 Project scenarios.

Noise levels from existing conditions to Project conditions are expected to increase due to the proposed improvements which introduces traffic noise to impacted receptors and results in increased noise levels. The new Kammerer alignment would introduce new traffic noise sources adjacent to or nearby analyzed noise receptors. A proposed grade separation between Franklin Boulevard and Willard Parkway over the UPRR tracks would introduce new traffic noise elevated over residences represented by R-32 through R-50 approximately 175 feet north of the grade separation. However, in future conditions without the Project, noise levels are still expected to increase due to the increases in traffic volumes from existing to no Project conditions.

2-Lane Interim (2034)

The interim year traffic noise modeling results from the 2-lane facility range from 50 to 70 dBA L_{dn} , as shown in **Table 35**. The traffic noise modeling results for the interim year without the Project range from 37 to 69 dBA L_{dn} . Under the 2-lane facility in 2034, receptors R-2, R-5, and R-21 would experience noise levels exceeding the Sacramento County's exterior noise threshold, while receptors R-26, R-32 through R-52, and R-54 would experience noise levels exceeding the City of Elk Grove's exterior noise threshold.

In the 2-lane 2034 Interim Phase, implementation of rubberized asphalt, as described in mitigation measure **NOI-1**, would reduce noise levels below the CEQA thresholds of significance except at receptors R-21 and R-32 through R-50. During the interim phase, soundwalls would be required for R-21 and R-32 through R-50. For R-21, a 6-foot wall needs to be constructed in 2034, and would remain effective through 2044 with the 4-lane ultimate Project. For R-32 through R-50, reconstruction of the existing 7-foot wall to a 12-foot wall, OR construction of a new 10-foot wall on the Kammerer Road overcrossing that transitions into a 14-foot wall along Willard Parkway (approximately 408 feet), would be sufficient to mitigate noise impacts from the 2-lane 2034 Interim Phase, and be sufficient through the 4-lane ultimate phase. Implementation of soundwalls would be refined during final design alongside input from homeowners, who are identified as sensitive noise receptors, and as described in **NOI-2**. Implementation of **NOI-1** and **NOI-2** would reduce all remaining significant noise impacts as a result of operation of the 2-lane facility to a less than significant level. The Connector JPA PEIR included noise as one of the corridor's significant impacts. If the involvement with directly affected homeowners results in the walls not being built, the project would not have any new significant impacts. The noise reductions provided by the proposed soundwalls (Figure 25 above) are shown in **Table 36** and **Table 37**.

4-Lane Ultimate (2044)

The design year traffic noise modeling results from the Project range from 52 to 72 dBA L_{dn} , as shown in **Table 35**. The traffic noise modeling results for the design year without the Project range from 44 to 71 dBA L_{dn} . Under the 4-lane facility in 2044, receptors R-2, R-3, R-6, R-16, R-17, R-19, R-20, and R-21 would experience noise levels exceeding the Sacramento County's exterior noise threshold, while receptors R-28, R-29, R-31, R-32 through R-52, and R-54 would experience noise levels exceeding the City of Elk Grove's exterior noise threshold.

In the 4-lane 2044 Ultimate Project, implementation of rubberized asphalt, as described in mitigation measure **NOI-1**, would reduce noise levels below the CEQA thresholds of significance except at receptors R-21 and R-32 through R-50. During the interim phase, soundwalls would be required for R-21 and R-32 through R-50. For R-21, a 6-foot wall needs to be constructed in 2034, and would remain effective through 2044 with the 4-lane Ultimate Project. For R-32 through R-50, reconstruction of the existing 7-foot wall to a 12-foot wall, OR construction of a new 10-foot wall on the Kammerer Road overcrossing that transitions into a 14-foot wall along Willard Parkway (approximately 408 feet), would be sufficient to mitigate noise impacts from the 2-lane 2034 Interim Phase, and be sufficient through the 4-lane ultimate phase. Implementation of soundwalls would be refined during final design alongside input from homeowners, who are identified as sensitive noise receptors, and as described in **NOI-2**. Implementation of **NOI-1** and **NOI-2** would reduce all remaining significant noise impacts as a result of operation of the 4-lane facility to a less than significant level. The Connector JPA PEIR included noise as one of the corridor's significant impacts. If the involvement with directly affected homeowners results in the walls not being built, the project would not have any new significant impacts.

Table 36. Soundwall SW-W3 v1 Noise Reduction for R-32 through R-50

Receptor	12' soundwall SW-W3 v1		10' soundwall along Kammerer and 14' soundwall along Willard SW-W3 v2		Applicable Threshold (dBa Ldn)		Impact with Soundwall?
	Exterior Noise Levels (dBa Ldn)	Interior Noise Levels (dBa Ldn)	Exterior Noise Levels (dBa Ldn)	Interior Noise Levels (dBa Ldn)	Exterior Noise Threshold (dBa Ldn)	Interior Noise Threshold (dBa Ldn)	
2-Lane 2034							
R-32	58	33	55	30	60	45	No
R-33	58	33	56	31	60	45	No
R-34	59	34	56	31	60	45	No
R-35	58	33	56	31	60	45	No
R-36	58	33	56	31	60	45	No
R-37	58	33	56	31	60	45	No
R-38	58	33	56	31	60	45	No
R-39	57	32	56	31	60	45	No
R-40	57	32	56	31	60	45	No
R-41	57	32	56	31	60	45	No
R-42	56	31	55	30	60	45	No
R-43	57	32	56	31	60	45	No
R-44	57	32	57	32	60	45	No
R-45	57	32	57	32	60	45	No
R-46	57	32	56	31	60	45	No
R-47	57	32	57	32	60	45	No
R-48	58	33	57	32	60	45	No
R-49	57	32	57	32	60	45	No
R-50	58	33	58	33	60	45	No
2-Lane 2044							
R-32	58	33	56	31	60	45	No
R-33	59	34	56	31	60	45	No
R-34	60	35	56	31	60	45	No
R-35	59	34	56	31	60	45	No
R-36	58	33	56	31	60	45	No
R-37	59	34	57	32	60	45	No
R-38	58	33	57	32	60	45	No
R-39	58	33	57	32	60	45	No

Receptor	12' soundwall SW-W3 v1		10' soundwall along Kammerer and 14' soundwall along Willard SW-W3 v2		Applicable Threshold (dBa Ldn)		Impact with Soundwall?
	Exterior Noise Levels (dBa Ldn)	Interior Noise Levels (dBa Ldn)	Exterior Noise Levels (dBa Ldn)	Interior Noise Levels (dBa Ldn)	Exterior Noise Threshold (dBa Ldn)	Interior Noise Threshold (dBa Ldn)	
R-40	58	33	57	32	60	45	No
R-41	58	33	57	32	60	45	No
R-42	56	31	56	31	60	45	No
R-43	57	32	57	32	60	45	No
R-44	57	32	57	32	60	45	No
R-45	58	33	57	32	60	45	No
R-46	57	32	57	32	60	45	No
R-47	58	33	57	32	60	45	No
R-48	58	33	58	33	60	45	No
R-49	58	33	57	32	60	45	No
R-50	58	33	58	33	60	45	No
4-Lane 2044							
R-32	58	33	56	31	60	45	No
R-33	58	33	56	31	60	45	No
R-34	59	34	57	32	60	45	No
R-35	58	33	57	32	60	45	No
R-36	58	33	57	32	60	45	No
R-37	59	34	57	32	60	45	No
R-38	58	33	57	32	60	45	No
R-39	58	33	57	32	60	45	No
R-40	58	33	57	32	60	45	No
R-41	58	33	58	33	60	45	No
R-42	57	32	57	32	60	45	No
R-43	58	33	58	33	60	45	No
R-44	58	33	58	33	60	45	No
R-45	59	34	58	33	60	45	No
R-46	58	33	58	33	60	45	No
R-47	59	34	58	33	60	45	No
R-48	60	35	59	34	60	45	No
R-49	60	35	59	34	60	45	No
R-50	59	34	60	35	60	45	No

Table 37. Soundwall SW-W5 Noise Reduction for R-21

Receptor	With Rubberized Asphalt and 6-foot soundwall SW-W5 (dBa Ldn)		Applicable Threshold (dBa Ldn)		Impact with Soundwall and Rubberized Asphalt?
	Exterior Noise Levels (dBa Ldn)	Interior Noise Levels (dBa Ldn)	Exterior Noise Threshold (dBa Ldn)	Interior Noise Threshold (dBa Ldn)	
2-lane 2034					
R-21	61	36	65	45	No
2-lane 2044					
R-21	62	37	65	45	No
4-lane 2044					
R-21	63	38	65	45	No

The noise reductions provided by the proposed soundwalls (Figure 25 above) are shown in **Table 36** and **Table 37**. Soundwalls that are required in 2034 are in the same location and the same height as those required in 2044. As a result, the ultimate soundwalls will be constructed even if the Project is implemented in phases with a 2-lane phase initially constructed.

Receptors R-51 through R-54 represent the undeveloped Sterling Meadows housing development. The Sterling Meadows Final EIR (City of Elk Grove 2008) found, while mitigation is available, the implementation of the Sterling Meadows project, along with approved and planned urban development in the region, would increase traffic volumes within and adjacent to the Sterling Meadows project to a cumulatively significant level, in excess of the City of Elk Grove noise standards. As it is not possible to mitigate noise exposure for every residence potentially impacted by cumulative roadway traffic, the Sterling Meadows project will construct a 6-foot solid masonry wall along B Drive, a 7-foot high solid masonry wall along Lotz Parkway, and an 8-foot high solid masonry wall along Kammerer Road. Due to the cumulative significant noise impacts from the Sterling Meadows project, the analysis for the Project found no new traffic noise impacts not previously analyzed by the Sterling Meadows Final EIR. Therefore, traffic noise impacts to receptors R-51 and R-54, as a result of the proposed Project would be less than significant. No additional mitigation or soundwalls are proposed for R-51 through R-54.

Interior Noise Impacts

As shown in **Table 36**, noise levels do not currently exceed Sacramento County or City of Elk Grove's interior noise threshold of 45 Dba Ldn. Interior noise levels would not exceed interior noise thresholds in either the interim or design year with the Project except at R-21, which would exceed the Sacramento County interior noise threshold by 2 db under the 4-lane configuration in 2044. With implementation of measures **NOI-1** and **NOI-2**, interior noise levels at R-21 would be reduced to a less than significant level. If the home owner involvement results in the walls not being built, the project would not have any new significant noise impacts.

Permanent Substantial Increase of Traffic Noise

Predicted future noise levels are provided in Appendix F. The Predicted Existing and Future Noise Results Table in Appendix F shows the increase in noise level from Future without the Project to Project conditions in the Interim Year (2034) and Design Year (2044). The proposed project would result in traffic noise level increases up to 23 dBA. At the majority of noise receptors analyzed, operation of the proposed Project would result in a substantial increase in noise under policies of the City and County Noise Elements. Substantial noise increases would be mitigated to the greatest extent practicable by implementation of mitigation measures **NOI-1**, **NOI-2**, **NOI-3**, and **NOI-4** but not to a less than significant level. These findings are consistent with the findings previously identified in the Connector JPA PEIR along segments of the Project, and substandard traffic noise increases were found to be significant and unavoidable. Since no additional traffic noise increases are anticipated to occur beyond that previously identified in the Connector JPA PEIR, impacts as a result of the Project are considered less than significant.

Construction Noise Impacts (Temporary)

During construction of the Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. **Table 38** summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 95 dB at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

Table 38. Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Pile Driver	95
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration 1995

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with the County and City allowable hours of construction. To minimize the construction-generated noise, mitigation measure **NOI-3** would be followed to minimize construction related noise

The proposed Project may include nightwork not necessarily limited to activities that necessitate full or partial closure of Kammerer Road or adjacent streets as follows: Falsework erection, adjustment, or removal; k-rail placement, adjustment or removal; installation of overhead signs; installation of lighting; construction of the new roadway where it connects to the existing road; installation, maintenance, or removal of temporary or permanent striping; roadway excavation or rock excavation on or adjacent to Kammerer Road; or construction of metal beam guardrail. These activities are anticipated to occur over, but are not restricted to, 60 individual nights spread over the duration of the construction Project.

As discussed above, under the City and County Noise Ordinance, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after eight p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

All other construction activity would be conducted in accordance with the County and City allowable hours of construction, as described in mitigation measure **NOI-3**. Therefore, temporary construction noise impacts are less than significant with mitigation incorporated.

Vibratory Impacts

Construction of the proposed project could potentially increase groundborne vibration or noise in the project area. **Table 39** provides an estimate of vibration levels associated with construction activities for each piece of equipment. These are based on a wide range of soil conditions.

During construction, the equipment with the greatest potential for vibration impacts would be generated by sonic pile drivers, which would occur along the Project between Franklin Boulevard and Willard Parkway, and vibratory rollers, which would compact soil over the cut and fill areas (see **Figure 26**, Vibratory Impacts). Based on the information shown in **Table 35**, sonic pile drivers could cause vibration levels up to 0.734 PPV 25 feet away, while vibratory rollers could cause continuous vibration levels up to 0.210 PPV 25 feet away during construction. As shown in **Figure 26**, no sensitive receptors occur within the vicinity of pile driving activity that would be subject to damaging levels of vibration. None of the buildings within 25 feet of where vibration from vibratory rollers would occur are considered extremely fragile, fragile, or historic buildings. The majority of buildings in the project vicinity that would be impacted by vibratory rollers are older residential. Therefore, no buildings would be exposed to potentially damaging construction vibration levels.

Table 39. Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 ft (in/sec)
Pile Driver (impact)	1.518
Pile Drive (sonic)	0.734
Vibratory Roller	0.210
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003

Source: Federal Transit Administration, 2006. See also:

http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm

In terms of human annoyance, vibration levels as a result of construction activity, specifically pile driving, would exceed the “Strongly perceptible” level but would fall well short of the severe level. Pile driving during construction would be subject to mitigation measure **NOI-3**, which provides time restrictions specifically for pile-driving. Pile driving is limited between the hours of 8 a.m. to

5 p.m. in residential areas, and within 3,000 feet of an occupied residence on Sundays, legal holidays, and between 8 p.m. and 6 a.m. on other days.










Vibratory rollers would exceed the “Strongly perceptible” level for human annoyance but would fall well short of the severe level. Furthermore, vibratory rollers are mobile and individual receptors would not be subject to perceptible vibration for extended periods. Construction impacts would be temporary and would be limited to daytime hours between 6 a.m. to 8 p.m. (see **NOI-3**). Adherence to standard construction Best Management Practices would ensure construction vibration impacts are less than significant with mitigation incorporated.

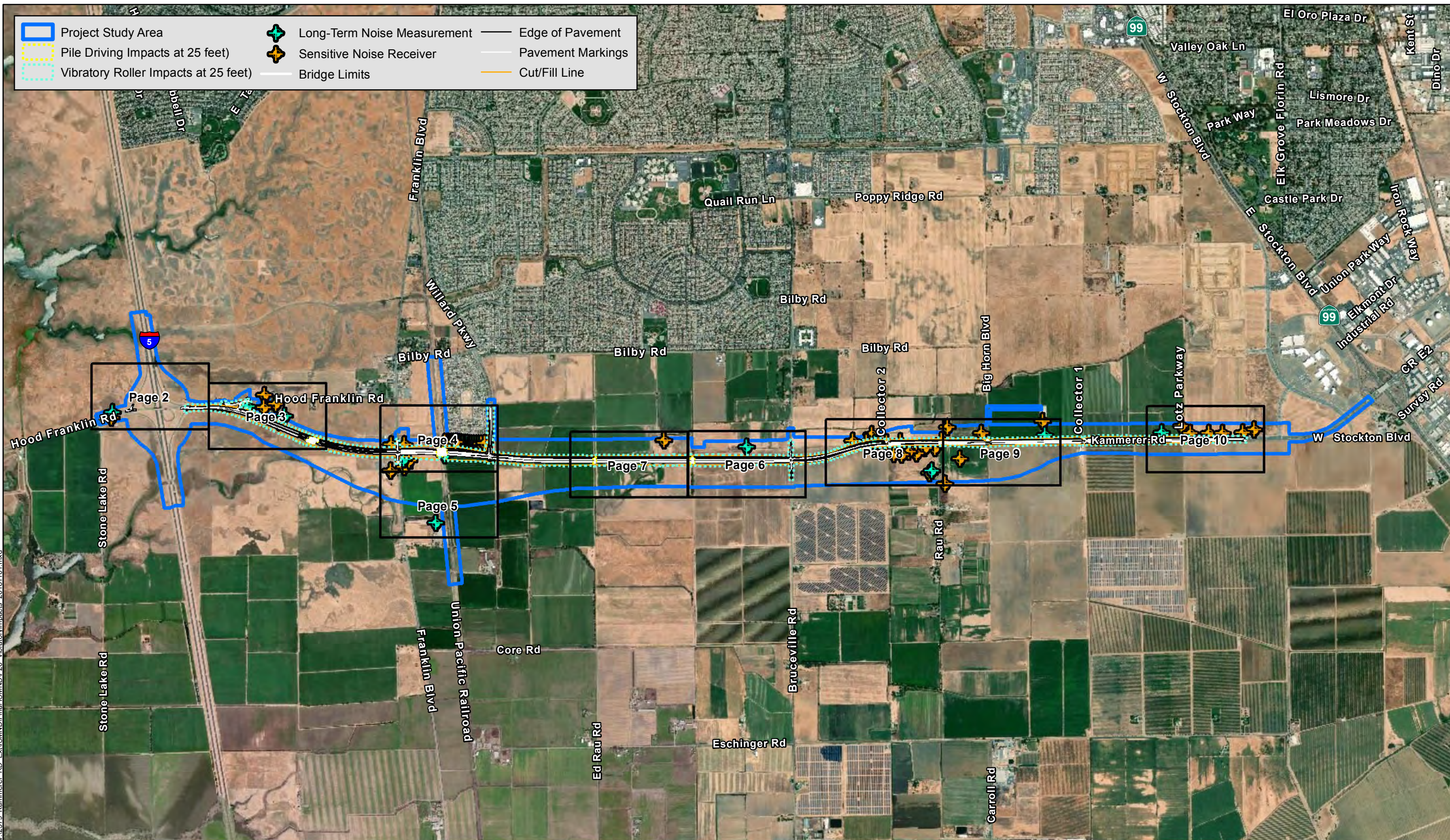
Air Traffic Noise

The Project area is not located within an airport land use plan or within 2 miles of a public or private airport. The closest airport is the Franklin Field approximately 5 miles south of the Project area. The proposed project would result in no impact to sensitive receptors from public or public use airports or private airstrips.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is within this IS/MND.

-  Project Study Area
-  Long-Term Noise Measurement
-  Edge of Pavement
-  Pile Driving Impacts at 25 feet)
-  Sensitive Noise Receiver
-  Pavement Markings
-  Vibratory Roller Impacts at 25 feet)
-  Bridge Limits
-  Cut/Fill Line



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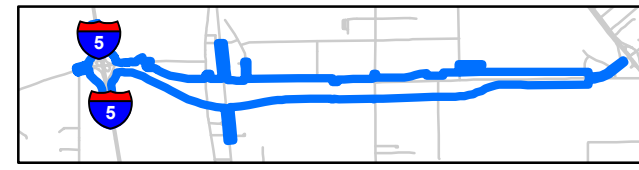
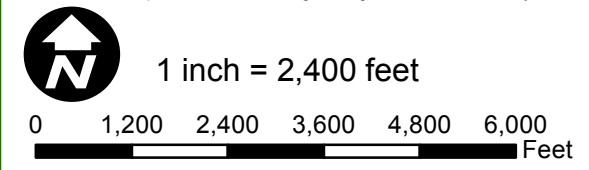









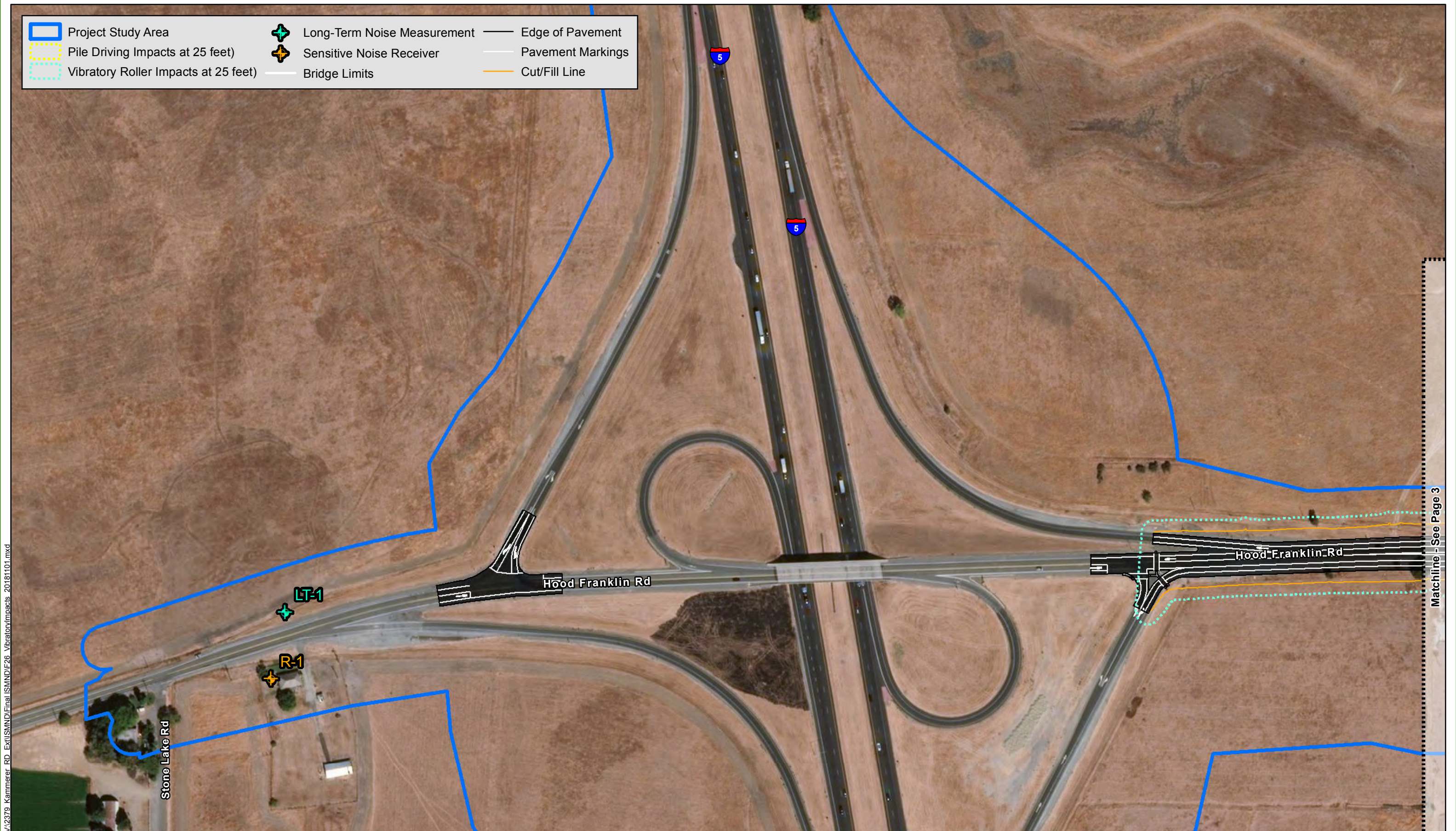


FIGURE 26
Vibratory Impacts
Page 1 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

- | | | |
|--|---|---|
|  Project Study Area |  Long-Term Noise Measurement |  Edge of Pavement |
|  Pile Driving Impacts at 25 feet) |  Sensitive Noise Receiver |  Pavement Markings |
|  Vibratory Roller Impacts at 25 feet) |  Bridge Limits |  Cut/Fill Line |



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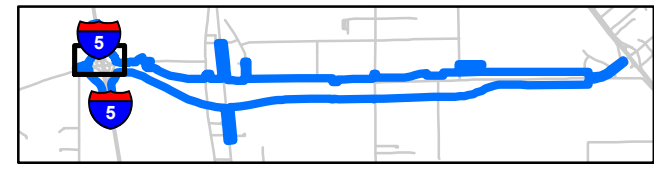
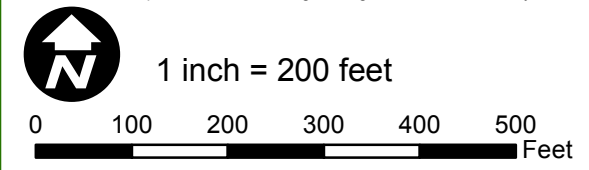











FIGURE 26
Vibratory Impacts
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

Matchline - See Page 3

-  Project Study Area
-  Pile Driving Impacts at 25 feet)
-  Vibratory Roller Impacts at 25 feet)
-  Long-Term Noise Measurement
-  Sensitive Noise Receiver
-  Bridge Limits
-  Edge of Pavement
-  Pavement Markings
-  Cut/Fill Line

Match line - See Page 2

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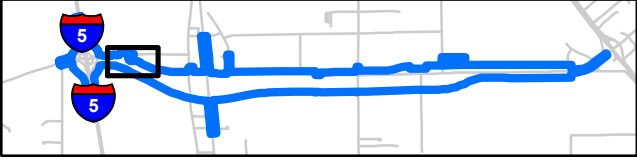
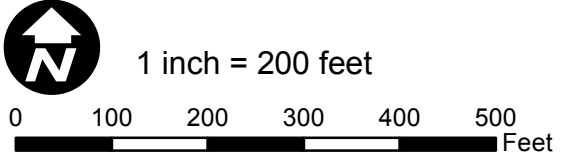
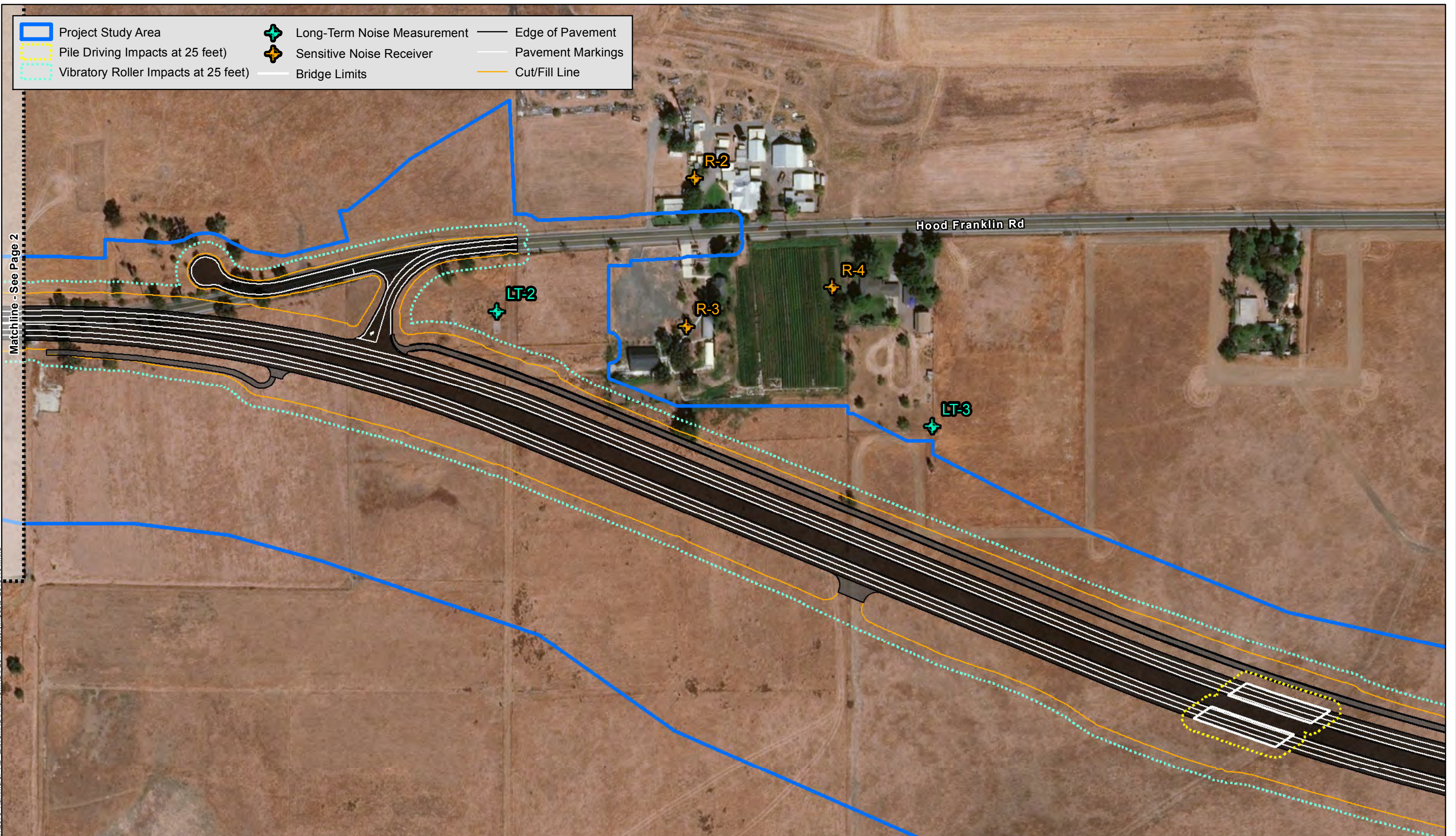








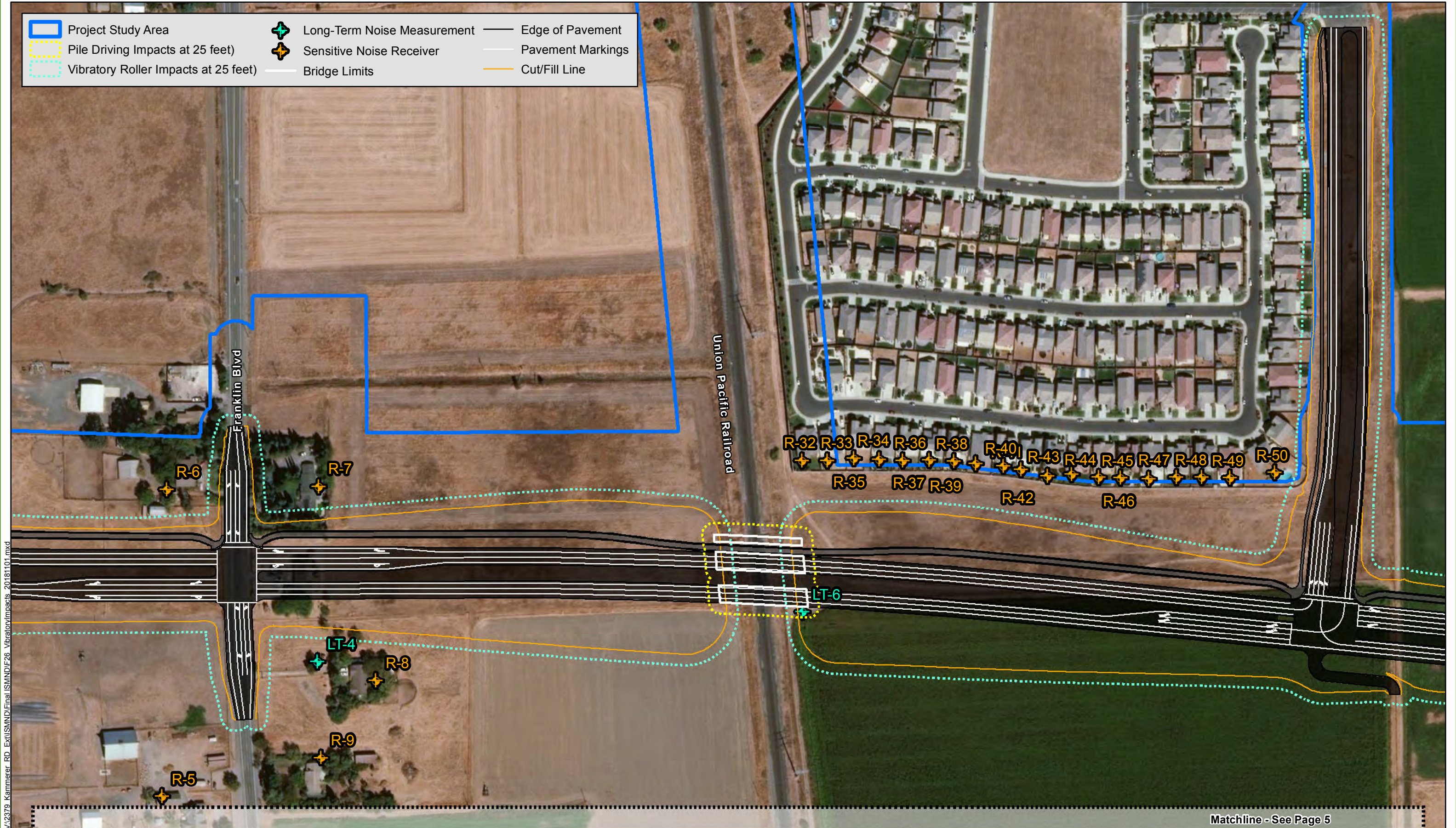


FIGURE 26
Vibratory Impacts
 Page 3 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

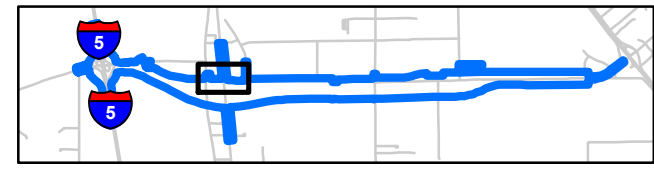
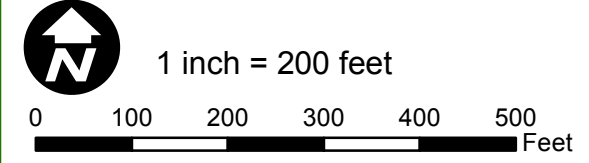


-  Project Study Area
-  Pile Driving Impacts at 25 feet)
-  Vibratory Roller Impacts at 25 feet)
-  Long-Term Noise Measurement
-  Sensitive Noise Receiver
-  Bridge Limits
-  Edge of Pavement
-  Pavement Markings
-  Cut/Fill Line












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Matchline - See Page 5

FIGURE 26
Vibratory Impacts
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

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|---|--------------------------------------|---|-----------------------------|---|-------------------|
|  | Project Study Area |  | Long-Term Noise Measurement |  | Edge of Pavement |
|  | Pile Driving Impacts at 25 feet) |  | Sensitive Noise Receiver |  | Pavement Markings |
|  | Vibratory Roller Impacts at 25 feet) |  | Bridge Limits |  | Cut/Fill Line |



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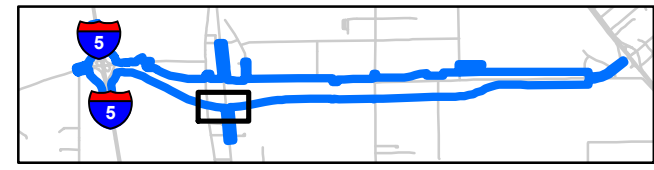
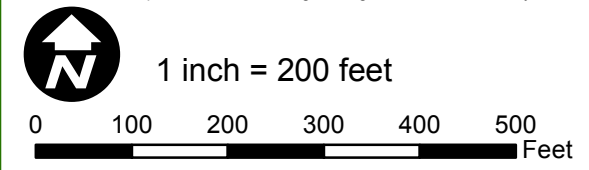
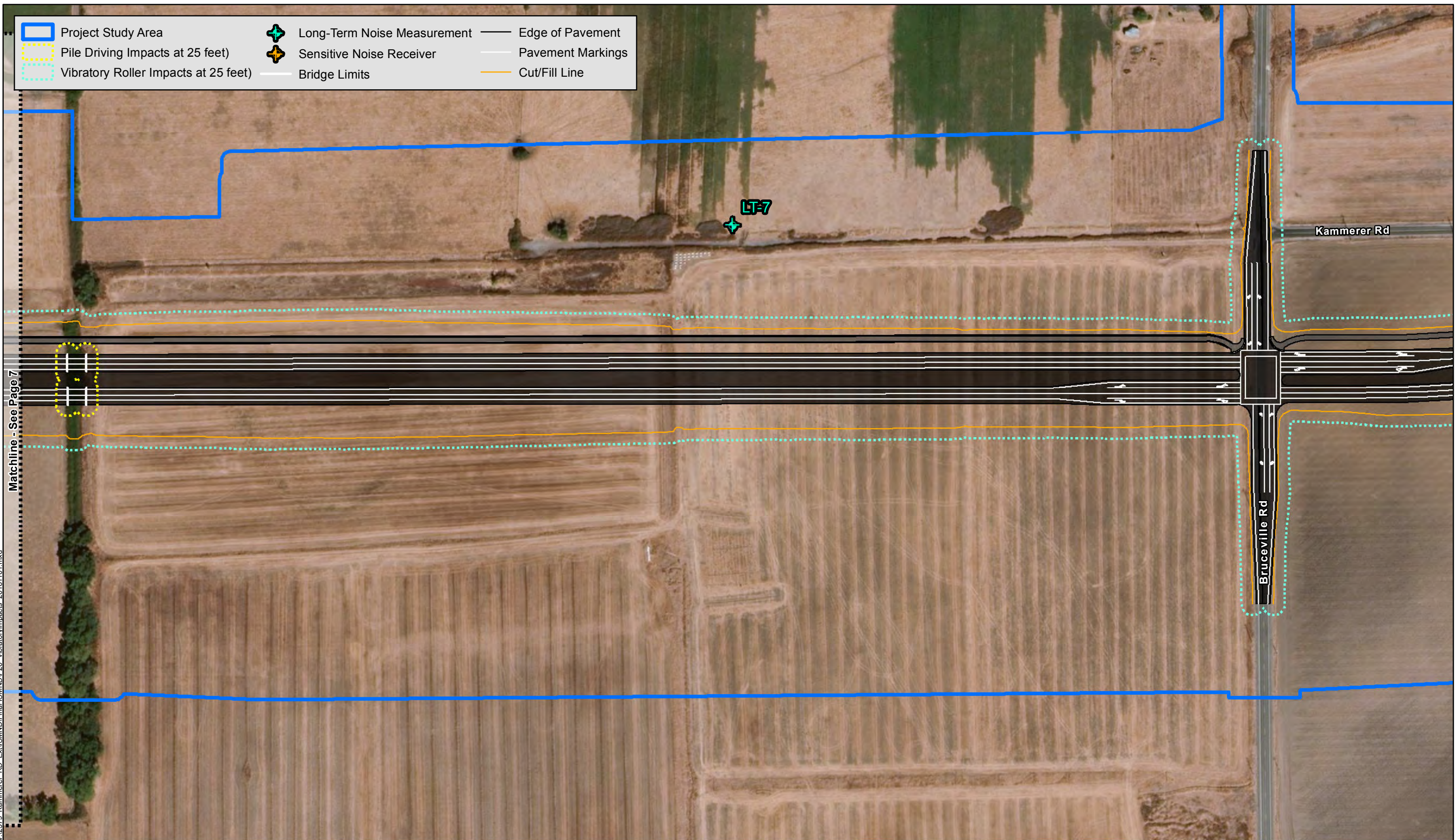


FIGURE 26
Vibratory Impacts
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- Project Study Area
- Pile Driving Impacts at 25 feet)
- Vibratory Roller Impacts at 25 feet)
- + Long-Term Noise Measurement
- + Sensitive Noise Receiver
- Edge of Pavement
- Pavement Markings
- Cut/Fill Line
- Bridge Limits



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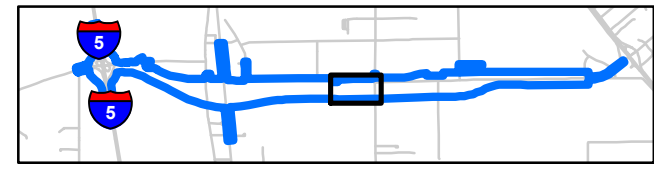
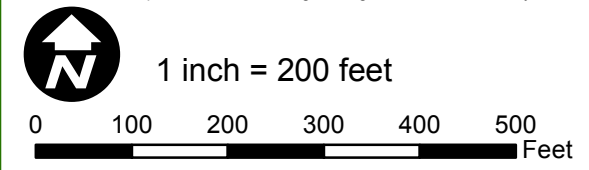









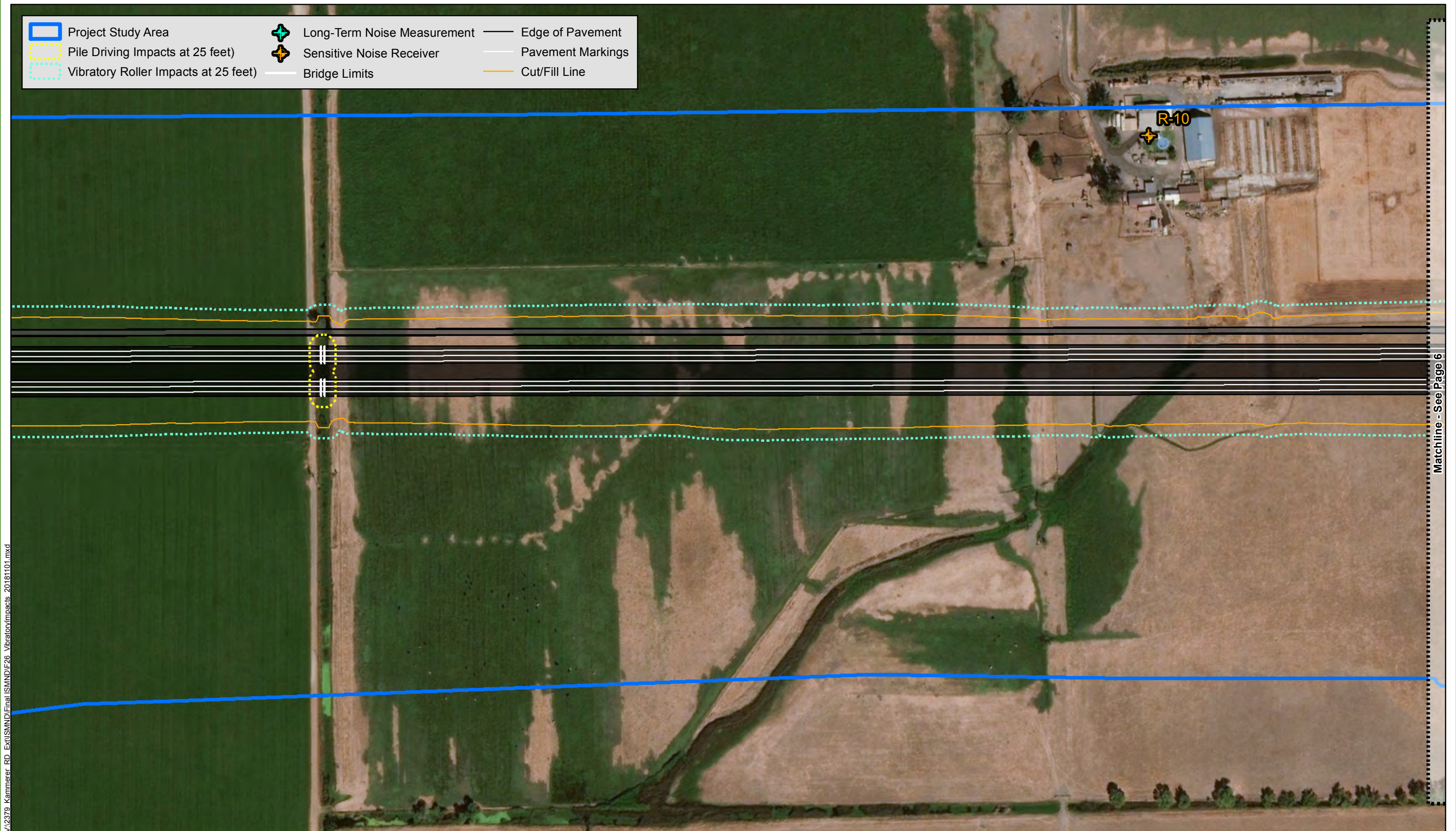


FIGURE 26
Vibratory Impacts
Page 6 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

-  Project Study Area
-  Pile Driving Impacts at 25 feet)
-  Vibratory Roller Impacts at 25 feet)
-  Long-Term Noise Measurement
-  Sensitive Noise Receiver
-  Bridge Limits
-  Edge of Pavement
-  Pavement Markings
-  Cut/Fill Line



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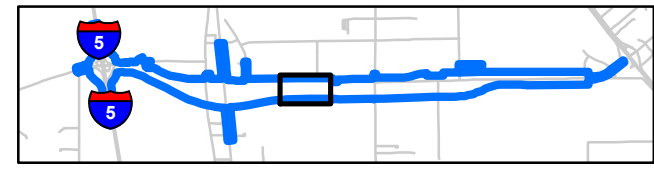
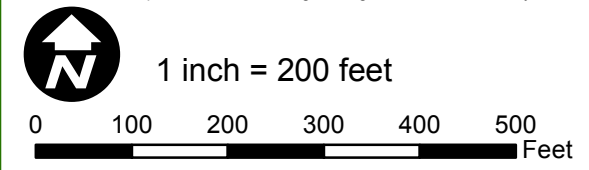
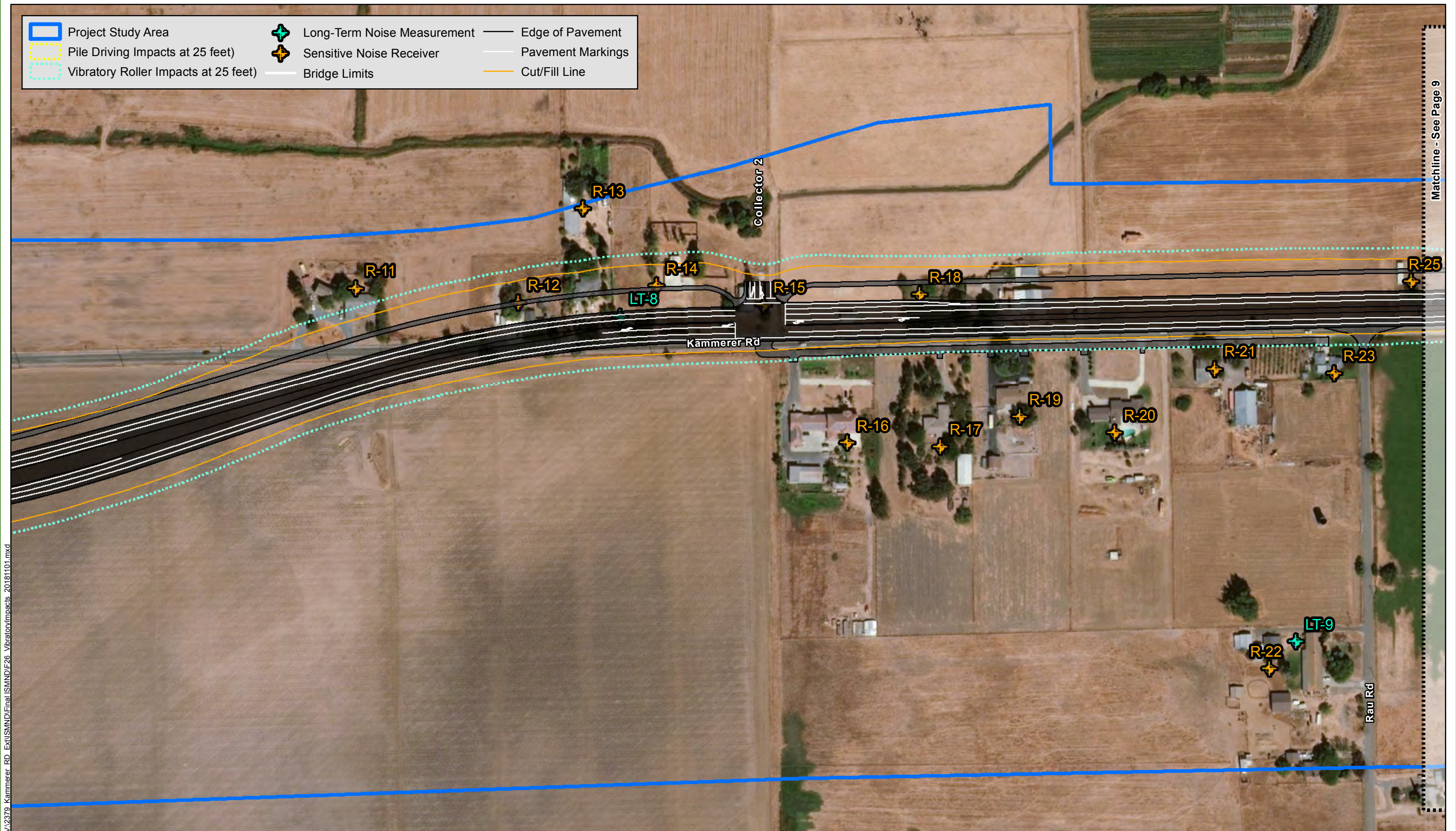


FIGURE 26
Vibratory Impacts
 Page 7 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

- Project Study Area
- Pile Driving Impacts at 25 feet)
- Vibratory Roller Impacts at 25 feet)
- + Long-Term Noise Measurement
- + Sensitive Noise Receiver
- Edge of Pavement
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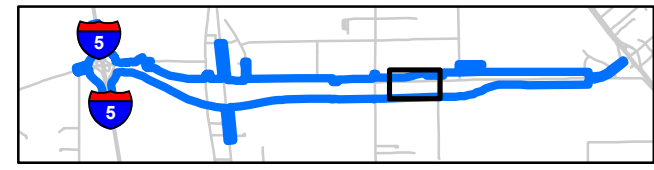
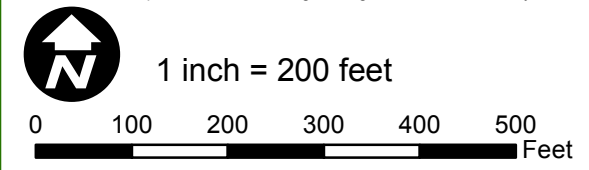
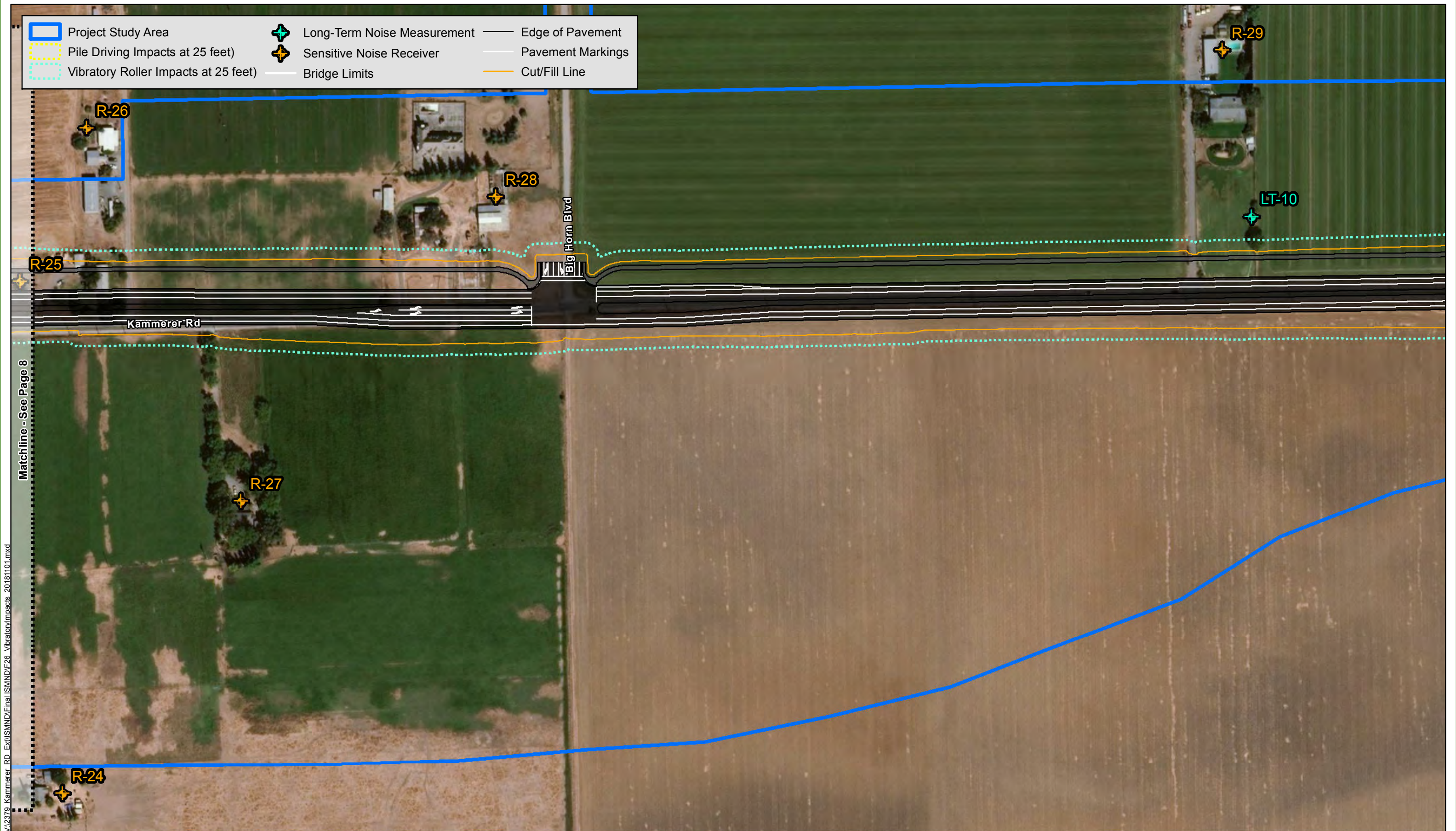


FIGURE 26
Vibratory Impacts
 Page 8 of 10
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

- Project Study Area
- Pile Driving Impacts at 25 feet)
- Vibratory Roller Impacts at 25 feet)
- + Long-Term Noise Measurement
- + Sensitive Noise Receiver
- Edge of Pavement
- Pavement Markings
- Bridge Limits
- Cut/Fill Line



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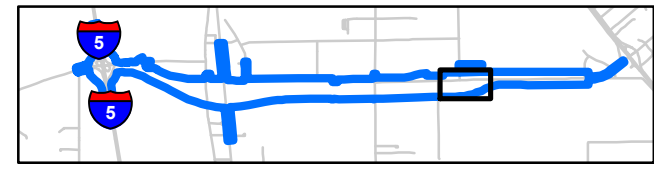
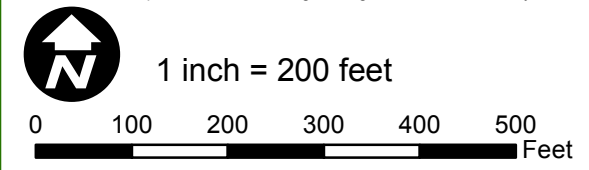


FIGURE 26
Vibratory Impacts
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 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Project
 City of Elk Grove and Sacramento County, California

- Project Study Area
- Pile Driving Impacts at 25 feet)
- Vibratory Roller Impacts at 25 feet)
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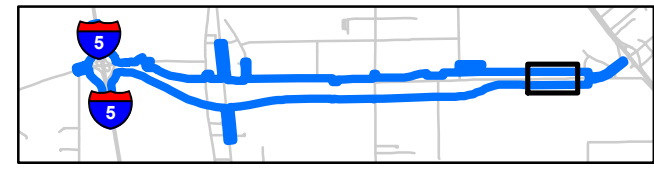
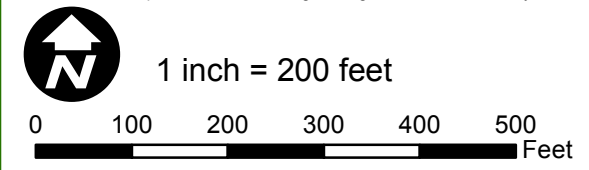


FIGURE 26
Vibratory Impacts
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 Joint Powers Authority Capital SouthEast Connector
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 City of Elk Grove and Sacramento County, California

AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES

As a tiered project in compliance with the Connector JPA PEIR, PEIR measures **NOI-1** and **NOI-2** have been incorporated into the following Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to noise would be reduced to a less than significant level:

NOI-1: Rubberized and/or open grade asphalt will be used on roadways where noise impacts are anticipated to occur (approximate locations of rubberized asphalt will be determined once project design has developed sufficiently to identify site-specific impacts).

NOI-2: The implementing agency will incorporate feasible measures to reduce traffic noise. Where CEQA significant impacts are identified, soundwalls will be constructed upon coordination with directly affected homeowners during final design of the project. Where soundwalls are constructed on private right-of-way, 100% of directly affected owners must agree to the wall. Where soundwalls are constructed on public right-of-way, a majority of directly affected owners must agree to the wall (one vote per household). Public input is not required if the soundwall is constructed on the overpass.

NOI-3: The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the following mitigation measures that will be implemented to reduce the effects of construction noise and vibration. Additional measures may be developed once project design has developed sufficiently to identify site-specific impacts.

- Comply with all local sound control and noise level rules, regulations, and ordinances of the pertinent City, county, or both.
- Limit the hours of noise-generating construction and related activity such as deliveries and staging activities to between 6 a.m. and 8 p.m. on Monday through Friday and between 7 a.m. and 8 p.m. on weekends, or as required by local noise ordinances in effect for site-specific projects.
- Require that equipment and trucks used for project construction use noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) as necessary to limit noise to compliance levels.
- Locate stationary noise sources such as generators or pumps as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors will be adequately muffled or an acoustic barrier will be installed to reduce their noise levels to comply with applicable local requirements.
- Designate a complaint coordinator at the implementing agency to be responsible for responding to noise complaints received during the construction phase. The name and phone number of the complaint coordinator will be conspicuously posted at construction areas and on all advanced notifications. This person will be responsible for taking steps required to resolve complaints, including periodic noise monitoring and changes to construction activities, if necessary to meet the required mitigation.
- Mitigate noise generated from any rock-crushing or screening operations performed within 3,000 feet of any occupied residence by strategic placement of material stockpiles between the operation and the affected dwelling or by other means such as temporary noise barriers approved by the local jurisdiction.

- Require contractors to implement appropriate additional noise mitigation measures including (but not limited to) shutting off equipment (including trucks transporting aggregate or other construction materials) so that idling time does not exceed 3 minutes, and notifying adjacent residents by mail not less than 1 week in advance of construction work.
- Prohibit pile-driving or blasting operations within 3,000 feet of an occupied residence on Sundays, legal holidays, and between 9 p.m. and 6 a.m. on other days, or as governed by local noise ordinances at site-specific locations.
- Use sonic or vibratory pile drivers instead of impact pile drivers (sonic pile drivers are only effective in some soils). If sonic or vibratory pile drivers are not feasible, install acoustical enclosures as necessary to ensure that pile-driving noise does not exceed applicable local noise standards at the closest sensitive receptor.
- Limit pile driving in residential areas to between 8 a.m. and 5 p.m.
- Use engine and pneumatic exhaust controls on pile drivers as necessary to ensure that exhaust noise from pile driver engines is minimized to the extent feasible.
- Where feasible, pre-drill pile holes to reduce potential noise and vibration impacts.

NOI-4: During project design, the implementing agency will incorporate feasible measures to reduce traffic noise related to the project such that traffic noise from new roadways does not exceed applicable land use compatibility standards at adjacent uses, and such that traffic noise increases along existing roadways does not exceed Sacramento County significance thresholds for traffic noise increases. Potential measures that can be implemented include (but are not limited to) setbacks, site design, construction of noise barrier walls between the roadway and noise sensitive uses and installation of low noise pavement such as open-grade asphalt or rubberized asphalt. Emphasis will be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would expose noise-sensitive land uses to significant and unavoidable noise impacts. During analysis of the noise-sensitive land uses for this tiered Project, it was found that no new significant and unavoidable impacts under noise impacts would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to noise.

2.13 Population and Housing

REGULATORY SETTING

CEQA requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

Appendix G of the State CEQA Guidelines identifies environmental issues to be considered when determining whether a project could have significant impacts on the environment. The proposed Project would have a significant impact on population and housing if it would:

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

AFFECTED ENVIRONMENT

Parcels in the vicinity of the Project area are undeveloped, agricultural, low-density residential, or vacant and include a sparse distribution of residential structures within the rural areas within the unincorporated County south of the Project. Planned development within the Project area includes low- and medium and high-density residential areas. Additionally, a mix of residential densities and commercial development is planned for the parcels northeast of Kammerer Road, such as Wilton Rancheria and The Outlet Collection at Elk Grove (see **Figure 22**). In addition, single- and multi-family residences are planned within the Sterling Meadows, and Bruceville Meadows projects north of the Kammerer Road corridor (City of Elk Grove 2008 [see **Figure 22**]).

SEPA is a planned area in the City for development of mixed residential densities and commercial and office land use, located north of existing Kammerer Road. The SEPA plan was approved by the Elk Grove City Council in July 2014. SEPA is approximately 1,200 acres and specified in the City General Plan as a planned community which will include residential, office, and commercial uses. Development plans for SEPA include approximately 431 acres of mixed-residential densities, 41 acres of village center mixed use, 294 acres of office and commercial uses, 108 acres of light industrial/flex space, 28 acres for schools, 61 acres for parks/open space, 32 acres for trails, 93 acres for drainage facilities, and 112 acres for major right-of-way and drainage. This planned community has the estimated potential of approximately 17,010 residents, 23,410 employees, and the development of approximately 4,790 dwellings.

The Sterling Meadows project is located along the north side of Kammerer Road, east of SEPA adjacent to West Stockton Boulevard. Approximately 984 single-family residential units, 200 multi-family residential units, and 18.5 acres of parks uses are planned for development in the approved project.

The City's current General Plan projects the population of the City to be 183,070 in the year 2035 while SACOG projects the population of the City to be 192,889 by 2035, based on 2008

projections. The County General Plan projects the population of unincorporated areas of the County to reach 795,545, and the entire County to reach 1,695,498 by the year 2025. The California Department of Finance projects that the population of the County will reach 1,823,985 by the year 2035 (California Department of Finance 2016). According to the City General Plan, the majority of housing development needed to meet the housing needs of the growing population is the construction of detached single-family residences.

ENVIRONMENTAL CONSEQUENCES

Development

Urban development is anticipated north of existing Kammerer Road. Planned development in the vicinity of the Project site includes SEPA, Sterling Meadows, and the Lent Ranch Marketplace Special Planning Area (SPA) north of existing Kammerer Road in the City.

A final EIR was prepared for SEPA in June 2014; in July 2014, the SEPA plan was approved by Elk Grove City Council. SEPA covers an area of approximately 1,200 acres in the City and will include office, commercial, light industrial/flex, village center, mixed-use residential, mixed-use village core, residential/neighborhood, estate residential, low density residential, medium density residential, high density residential, public/semi-public, school, and parks/open space land uses (City of Elk Grove 2003). Within SEPA, approximately 4,790 dwelling units will be constructed for an estimated population of approximately 17,010 residents (City of Elk Grove 2014).

A final EIR was prepared for the Sterling Meadows project in April 2008 and the Sterling Meadows project was approved by the City on May 28, 2008. The Sterling Meadows project includes approximately 200 acres of residential and recreational uses. Specifically, the Sterling Meadows project would create single-family, multi-family, park sites, fire station, landscape corridor/paseos, drainage detention, and road right-of-way land uses (City of Elk Grove 2008).

The Lent Ranch Marketplace SPA between Lent Ranch Parkway and SR-99 covers an area of approximately 295 acres and will include regional mall, community commercial, office and entertainment, visitor commercial, and multi-family residential land uses. The Lent Ranch Marketplace SPA will include the proposed Outlet Mall Collection at Elk Grove Project, which would include commercial uses (City of Elk Grove 2001).

The proposed Project would improve accessibility to existing, approved, and future planned development in all directions from the Project site. Office, commercial, and light industrial/flex space uses planned in SEPA will be located along Kammerer Road; therefore, widening Kammerer Road from two lanes to four lanes between Lent Ranch Parkway and Bruceville Road will improve access to these planned employment centers. If Kammerer Road were not widened to four lanes, efficiency in traffic circulation and operations would be reduced.

The extension of Kammerer Road from Bruceville Road to the I-5/Hood Franklin Road Interchange would create a new roadway through the corridor between I-5 and SR-99 that currently does not exist, which could provide incentive for development to commence at a faster rate. However, the gap between I-5 and Bruceville Road has been identified by the City as a critical missing link in the infrastructure network that serves the City and south Sacramento County. Because Kammerer Road terminates to the east with a SR-99 interchange and extension to Grant Line Road, it is a major thoroughfare for east–west travel in the south Sacramento county area and serves as an east-west evacuation route. This gap in the grid system results in

inadequate mobility for longer-distance trips and the need for circuitous travel routes which increases travel time, vehicle hours traveled, and VMT. The proposed Project would improve accessibility through the corridor between I-5 and SR-99 for existing and future conditions.

Population Growth

Projected population growth and planned residential and employment opportunity expansion in the City raises the need for adjusted traffic capacity to efficiently maintain circulation throughout the City and surrounding region. Because the proposed Project would occur in an area planned and anticipated for development through the year 2035, as identified in the City General Plan, the proposed Project would increase accessibility from residential areas to employment centers and would better support the projected growth in the area. In addition to the proposed Project, local land use plans included in the City General Plan, planned supporting infrastructure in the surrounding area such as water and sewer facilities, and demands for a range of housing options from high-density residential to rural residential are also likely to influence the overall amount, timing, and distribution of growth in and around the proposed Project site.

The proposed Project, itself, is not anticipated to substantially influence the overall amount or type of regional growth, as it is already necessary under existing conditions to provide a missing link in the infrastructure that serves the City and south Sacramento County, and provide an evacuation route above the 100-year floodplain. The Connector Final PEIR identified inducement of substantial population growth as a significant and unavoidable impact of the entire Capital SouthEast Connector Project. (PEIR, page 13-6.) Thus, the growth-inducing effects of the Project have already been acknowledged, analyzed, and mitigated to the extent possible. Connector PEIR mitigation measures POP-1, -2, and -3 have been incorporated into the A1/A2 Kammerer Road Project to mitigate growth inducing impacts. Additionally, as stated in the PEIR (page 13-9 and 13-10), the JPA's Planning and Functional Guidelines only allow limited access to the Connector. Specifically, while the A1/A2 Kammerer Road Project IS/MND describes 11 signalized intersections along the proposed Project. No new access points, other than those previously approved and evaluated in the PEIR (Table 16-13), are contemplated by the proposed Project.

The proposed Project would assist in relieving future traffic congestion in this portion of the City and provide a thoroughfare through the corridor between I-5 and SR-99. The proposed Project would not serve as the sole solution to future traffic congestion expected to result from growth but is conducive to achieving the City's goal of maintaining a balanced and efficient transportation system, which could be compromised by increased traffic volumes.

Relocations

A Draft Relocation Impact Report was prepared for the Project dated March 3, 2016 and revised in 2018. The report indicates there would be no significant impact to owners, tenants, businesses, or persons in possession of real property to be acquired for the proposed Project. Those residences where relocation is necessary would likely qualify for relocation assistance benefits or entitlements under the Uniform Relocation Assistance and Real Property Act of 1970 (as amended) and will be compensated for either full and/or partial property/parcel acquisitions.

The proposed Project is anticipated to require the relocation of 3 residential single-family properties. There are sufficient resources and locations to accommodate relocation of all affected individuals. There are not anticipated to be any elderly, disabled, or minority persons among the displaced residents. The Project does not anticipate any agricultural-related displacements.

Project design has identified some access concerns when the Project bisects agricultural lands and may provide at-grade crossings for farm equipment. If access cannot feasibly be provided, the remainder may be considered an uneconomic remnant. These remaining portions would be purchased by the Project's implementing agency.

The proposed Project would also require the partial acquisition of 1 non-residential utility parcel with the relocation of an active AT&T cell tower within the remainder of the parcel (APN# 132-0320-002). No employees will be impacted by the relocation of the cell tower or building.

Table 40 lists the properties and the locations of the properties anticipated to be removed for implementation of the proposed Project.

Table 40. Proposed Project Property Impacts

Parcel	Parcel Size (Acre)	Structure Type
132-0300-019	14.78	Single-family Residence
132-0300-020	29.54	Single-family Residence
132-0132-033	1.86	Single-family Residence
132-0320-002	0.22	Non-residential Cell Tower

Relocation Assistance Advisory Services

The Project's implementing agency would provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the implementing agency's acquisition of real property for public use in accordance to state and federal guidelines as outlined in the Caltrans Relocation Assistance Program. The implementing agency would assist residential displacees in obtaining comparable decent, safe, and sanitary replacement housing by providing current and continuing information on sales prices and rental rates of available housing. Nonresidential displacees would receive information on comparable properties for lease or purchase.

Residential replacement dwellings would be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, displacees would be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex, or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance would also include supplying information concerning federal- and state-assisted housing programs, and any other known services being offered by public and private agencies in the area.

No relocation payment received would be considered as income for the purpose of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law (except for any federal law providing low-income housing assistance).

Persons who are eligible for relocation payments and who are legally occupying the property required for the Project would not be asked to move without being given at least 90 days' advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments would not be required to move unless at least one comparable "decent, safe, and sanitary" replacement

residence, open to all persons regardless of race, color, religion, sex, or national origin, is available or has been made available to them by the state.

Any person, business, farm, or nonprofit organization, which has been refused a relocation payment by the City, or believes that the payments are inadequate, may appeal. No legal assistance is required; however, the displacee may choose to obtain legal counsel at his/her expense. Information about the appeal procedure is available from City's Relocation Advisors.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measures POP-1 through POP-3 has been incorporated into the following Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to population and housing would be reduced to a less than significant level:

POP-1: The implementing agency, in developing the final design of the project, will ensure that such design is consistent with the planning principles set forth in the Joint Powers Agreement that established the Connector JPA, including:

- a. Improve access to, and connections between, residential and employment areas within and outside of the Connector Project corridor;
- b. Acknowledge that the Connector Project is in the Metropolitan Transportation Plan and further support the transportation and land use principles in the general plans of the local jurisdictions and the Metropolitan Transportation Plan;
- c. Relieve demand on (i) local streets and roads, and (ii) regional freeway facilities (US-50, SR-99, and I-5);
- d. Strategically apply access control and capacity characteristics to preserve and enhance regional functionality while discouraging growth in areas not designated for growth as determined by the local jurisdiction's general plan;
- e. Enhance regional mobility and preserving the livability of communities;
- f. Provide efficient and safe facilities for automobile, transit, bicycle, and pedestrian options for multi-modal travel;
- g. Minimize direct and indirect physical impacts on the natural and built environments;
- h. Preserve open space to reinforce and support approved land use plans; and
- i. Permit phased implementation with respect to (i) funding, (ii) location, and (iii) design characteristics.

POP-2: The implementing agency in the final design of the project will consider the Functional Guidelines referenced in the Connector JPA's Joint Powers Agreement, as they may be amended and adopted by the Connector JPA, as summarized below:

- **Capacity and Cross Section:** The Connector roadway should be designed and constructed to serve the demand projected in the MTP and adopted local plans.
- **Access Characteristics:** To maximize the efficiency of the roadway, access to the Connector should be allowed only at a limited number of access points; principally,

existing primary facilities and new facilities included in the MTP. Access should be limited to the greatest extent possible to retain efficiency, reduce congestion, and enhance mobility. New access to the Connector from areas not designated for growth in the general plans should not be permitted.

- **Profile:** The Connector profile, where feasible, practicable, and consistent with acceptable design standards, should emulate the profiles of existing roadways to the greatest extent possible. The design of the Connector corridor should recognize impacts to sensitive habitats, including elevation adjustments to allow for passage of wildlife.
- **Design Aesthetics, Materials, and Maintenance:** To minimize the impact on the livability of communities, the Connector should be designed with due consideration to aesthetics for users and adjacent property owners (residents, employers, and employees).
- **Transit Services:** Transit service in the corridor (coverage and frequency) should be maximized to the extent feasible. The design of the Connector Project should accommodate appropriate transit facilities.
- **NonMotorized Facilities:** The Connector should provide flexible and efficient modes of use, including automobile, transit, bicycle, and pedestrian.
- **Open Space Preservation:** Concurrently with the environmental review and design process, the sponsors will develop an open space preservation plan, and associated phasing and funding plan for the corridor consistent with the Sacramento Transportation Authority Measure A expenditure plan.
- **Other Facilities:** In order to meet the goals of the MTP and the Connector, complementary projects may be phased in over time as conditions necessitate.
- **Phasing and Interim Use:** The Connector should be implemented in a phased manner. The design of temporary sections (if any), should provide for widening in accordance with the MTP and local adopted plans at minimal cost and impact.
- **Funding Coordination:** Investments in the Connector should be coordinated and balanced with other transportation investments.

POP-3: Before proceeding with final design, the implementing agency will develop and implement a relocation plan consistent with California Code of Regulations, Title 25, Section 6038 to ensure that eligible residential, commercial, and industrial uses are compensated for moving and residential/business replacement costs. Eligibility of specific residences or businesses for compensation will be determined after evaluation of the impact on the specific use(s) to be relocated, but would include both full and partial property/parcel acquisitions.

The implementing agency will use applicable relocation assistance programs (including those administered by local, state and federal governments) to compensate owners and tenants for the relocation costs of residential, commercial, and industrial uses displaced by the project components.

Findings

The Connector JPA PEIR found that the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to population and housing. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to population and housing would occur.

The Project would have **less than significant impact with mitigation incorporated** relating to population and housing.

2.14 Public Services

REGULATORY SETTING

Federal Regulations

The CWA was enacted as an amendment to the Federal Water Pollutant Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the U.S. CWA serves as the primary Federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. CWA empowers the U.S. EPA to set national water quality standards and effluent limitations, and includes programs addressing both point-source and non-point-source pollution. Point-source pollution originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or construction site. Non-point-source pollution originates over a broader area and includes urban contaminants in storm water runoff and sediment loading from upstream areas. CWA operates on the principle that all discharges into the nation's waters are unlawful unless they are specifically authorized by a permit; permit review is CWA's primary regulatory tool. This Project will require a CWA Section 402 NPDES Permit regulated by the EPA.

State Regulations

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), the State of California is required to establish beneficial uses of state waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes the TMDL process to assist in guiding the application of state water quality standards, requiring the states to identify streams whose water quality is "impaired" (affected by the presence of pollutants or contaminants) and to establish the TMDL, or the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects.

Under General Construction Permit (Order 2009-0009-DWQ), linear construction projects are required to prepare a Notice of Intent and a SWPPP and implement and maintain BMPs to avoid adverse effects on receiving waters quality as a result of construction activities.

AFFECTED ENVIRONMENT

Fire Protection

Sacramento County

The Sacramento Metropolitan Fire District provides fire protection services and medical services the unincorporated portions of southern Sacramento County. The district has 42 fire stations with approximately 673 paid personnel on staff. Station 51 is the nearest Sacramento Metropolitan Fire District station to the Project area. Station 51 is location at 8210 Meadowhaven Drive, Sacramento, California 95828.

Elk Grove

The Consumes Fire Department serves the City and the City of Galt. The Consumes Fire Department headquarters and the William Perry Schulze Fire Training Center are located in Elk Grove, and the department also has 8 other station houses within the City and City of Galt. The

Fire Department responds to nearly 16,000 requests for emergency service annually, and provides services for fire, technical rescue, and advanced life support emergency medical services, including ambulance transportation for an area covering more than 157 square miles and a population in excess of 185,000. Two Consumes Fire Department stations are in close proximity to the Project.

- Headquarters - 10573 E. Stockton Boulevard, Elk Grove, California 95624
- Fire Station 72 - 10035 Atkins Drive, Elk Grove, California 95757

Police Protection

Sacramento County within the study area is serviced by County sheriff's department, which is responsible for providing police protection within the unincorporated areas of the County.

The City of Elk Grove Police Department services the Project area, and it is located at 8400 Laguna Palms Way located approximately 6 miles from the Project area.

Public Schools

Franklin Elementary School located at 4011 Hood Franklin Road is within the Project study area. Additionally, Carroll Elementary School, located at 10325 Stathos Drive is approximately 0.7 miles from the Project study area.

Water Supply, Stormwater and Sewage Systems

The County Water Agency provides water supply services for properties within the Project area. Within the urbanized areas of the Project area, stormwater is collected in municipal systems and conveyed to the rivers, in accordance with state water quality regulations. Within the Project area, the Sacramento Stormwater Quality Partnership covers the County, including the City.

ENVIRONMENTAL CONSEQUENCES

The proposed Project would improve accessibility to the County and the City by alleviating current commuter traffic as well as serve future planned development areas to the north of Kammerer Road. By implementing the Project, service and potential emergency response times would be improved with improved accessibility within the area, and provide an east-west evacuation route that is higher than the 100-year flood elevation. Widening Kammerer Road is not anticipated to result in un-planned population increase; as the Project accommodates existing and planned growth. The Project would not create an un-planned increase in demand for fire or police services, schools, or recreation facilities.

The proposed Project would not result in a substantial impact associated with the provision of public services or physically alter governmental facilities. Response times are not anticipated to be affected during construction. Minor traffic control, as described in measure PS-1, would further minimize effects. Utility relocations may be required and would occur in consultation with the owners or operators of the affected utilities.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measure HAZ-3 has been incorporated into Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the **TRF-1** within Section 2.16 “Transportation/Traffic,” Project impacts to public services would be reduced to a less than significant level:

Findings

The Connector JPA PEIR found that the entire Capital SouthEast Connector Project would contribute to less than significant impacts after mitigation to public services. During analysis of the potential impacts to public services for the Project, no new significant and unavoidable impacts that cannot be reduced to below a significant level were identified.

The Project would have **less than significant impacts with mitigation incorporated** relating to public services.

2.15 Recreation

REGULATORY SETTING

The Public Park Preservation Act of 1971 (PRC 5400 to 5409) states that no City, county, public district, public utility, or agency of the state (including any division, department, or agency of the state government) shall acquire property in use as a public park to use for another purpose, unless the acquiring party provides sufficient compensation or land, or both, to allow replacement of the park land and associated facilities. The acquiring entity must provide one of the following:

- The cost of acquiring substitute park land of comparable characteristics and of substantially equal size located in an area which would allow for use of the substitute park land and facilities by generally the same persons who used the existing park land and facilities, and the cost of acquiring substitute facilities of the same type and number, plus the cost of development of such substitute park land, including the placing of such substitute facilities thereon.
- Substitute park land of comparable characteristics and of substantially equal size located in an area which would allow for use of the substitute park land by generally the same persons who used the existing park land, and the cost of acquiring substitute facilities of the same type and number, plus the cost of development of such substitute park land, including the placing of such substitute facilities thereon.
- Any combination of substitute park land and compensation in an amount sufficient to provide substitute park land of comparable characteristics and of substantially equal size located in an area which would allow for use of the substitute park land and facilities by generally the same persons who used the existing park land and facilities, and to provide substitute facilities of the same type and number, plus the cost of development of such substitute park land, including the placing of such substitute facilities thereon.
- In addition, the operating entity of the purchased park land must acquire substitute park land and facilities.

There are some exceptions to the provisions of the act. The provisions do not apply to acquisition of public park land for the construction or maintenance of underground utility services. If it is not feasible to place utility services or facilities underground, the provisions do not apply to public utilities providing services to the public park. If a public utility acquires the property as a waterway, and it is determined by majority vote of the legislative body of the park that the waterway would preserve or enhance the recreational or aesthetic values of the park, the provisions of the act do not apply. In addition, if less than 10% of the park land, but no more than 1 acre, is acquired, the operating entity may use funds to improve the remaining portion of park land and facilities with the approval of the legislative body by majority vote.

Appendix G of the State CEQA Guidelines identifies environmental issues to be considered when determining whether a project could have significant impacts on the environment. The project would have a significant impact on recreation if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, or
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

AFFECTED ENVIRONMENT

Consumes Community Services District manages the majority of recreational areas in the Project vicinity. Park facilities include community, regional, state, and school parks, parkways, and recreational facilities. Community parks are generally small in area and are developed for a variety of uses, gatherings and events that support the community. Parks provide active recreation areas, such as playgrounds, sports fields, sports courts, and picnic areas. Recreation facilities tend to include children/youth, senior, performing arts, and aquatic centers.

In response to the growing pressures of urban sprawl and recognition of the importance of the Stone Lakes Basin for wildlife and flood protection, the Stone Lakes NWR was created. In 1992, the USFWS completed a Land Protection Plan and a Final Environmental Impact Statement that defined the 18,000-acre approved boundary of the Stone Lakes NWR. Currently, the Stone Lakes NWR holds an easement in place approximately 750 feet north of the Project area along Hood Franklin Road, from Franklin Road west to I-5. Currently, this easement does not provide recreational uses.

In addition to Stone Lakes NWR, the Great California Delta Trail is within the Project vicinity to the west of the I-5/Hood Franklin interchange. The Great Delta Trail System was authorized in 2006 legislation in response to the growing demand for public access to the Delta's natural resources, recognition of the importance of natural and rural places, and to acknowledge the value of outdoor recreation to healthy lives and communities.

ENVIRONMENTAL CONSEQUENCES

The Project would not traverse any recreational areas within the City, County, or the Consumes Community Services District.

The Project would help to accommodate planned growth in the region. However, the Project itself would not directly result in an increase in population that would substantially increase the use of parks or recreation facilities or lead to their degradation. Any planned development projects would be required to undergo environmental review and mitigate any potential impacts, if and when, they are constructed. Therefore, impacts to existing parks and recreation facilities resulting from the proposed Project are considered less than significant, and no mitigation is required.

Of the 18,000-acre approved Stone Lakes NWR, approximately 17,641 acres are designated within the *Refuge Project Area*, while the remaining 359 acres are situated within the *Refuge Project Boundary*. Within the Refuge Project Boundary, the USFWS may make considerations to work with private and public agencies on establishing easements, leases, transfers or acquisitions. The Project is anticipated to consult with USFWS regarding potential easement, lease, or acquisition of a portion within the Refuge Project Boundary in the vicinity of the I-5/Hood Franklin Road interchange, when determined if necessary at the time of final design. No protected lands within the Refuge Project Area would be impacted by the Project; therefore, no impacts to recreational lands within the Stone Lakes NWR would occur.

Increased demand of the trail system could occur as the City of Elk Grove develops, and the Project may provide access connections from the City to west of the I-5/Hood Franklin Interchange. However, no direct impacts to the Great California Delta Trail are anticipated as the trail system is outside of the Project area. Small traffic decreases to the Twin Cities area would occur (approximately 200 ADT decrease) due to the parallel capacity of Kammerer Road.

Additionally, a small traffic increase (less than 250 ADT increase) is anticipated to Hood Franklin Road and SR-160 along the delta, west of the I-5/Hood Franklin Interchange. Due to the low volume of these facilities, the changes due to the proposed Project would not result in a significant increase in travelers using the delta area roadways or the Great California Delta Trail.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The proposed Project would help to accommodate planned growth by providing road capacity to meet projected needs and reduce projected congestion on Kammerer Road. The proposed Project would not directly result in an increase in population that would justify the need for additional recreational facilities. The implementation of the proposed Project would not result in direct impacts on local parks, and thus no mitigation is necessary for the Project in relation to recreation facilities.

Findings

The Connector JPA PEIR found that the entire Capital SouthEast Connector Project would contribute to less than significant impacts to recreation services. During analysis of the potential impacts to recreation services for the Project, no new significant and unavoidable impacts would occur.

The Project would have **less than significant impacts** relating to recreation.

2.16 Transportation/Traffic

In November 2013, a Transportation Impact Analysis (TIA) was prepared and approved for the Project (DKS 2013). At that time, multiple alternatives were analyzed including a North and a South Overhead alignment. Since the 2013 TIA approval, the Project has been modified and includes a slightly modified alignment than previously analyzed. A revised TIA (DKS 2018) addressing the changes in project description and examining new transportation results for intersection and segments was prepared. The following section summarizes the updated TIA. The TIA study area covers jurisdictions within the County and City.

To be consistent with the methodology used for other projects along the Connector, the travel demand forecasting was based on the version of SACOG's Sacramento Activity-Based Travel Simulation Model (SACSIM) that was used for the 2016 MTP/SCS. The model was refined in the vicinity of the Project.

For the Project analysis, the development assumptions for 2044 started with the SACOG's 2036 development forecasts from the 2016 MTP/SCS. However, the location of residential development within the City was refined to reflect detailed development information, including approved specific plans, tentative maps and zoning. SACOG's 2036 employment forecasts in the City was modified to include a modest increase in employment growth through 2036, focused on several subareas of the City with recent development proposals, including those in Lent Ranch, the SEPA, and Laguna Ridge. Full buildout of residential development was assumed. Employment growth between the existing model and 2036 was straight-line extrapolated to a 20-year horizon of 2044, resulting in a total of 61,097 jobs. This is approximately 8,000 jobs more than SACOG's Year 2036 projections, but approximately 40,000 jobs less than buildout.

REGULATORY SETTING

California Department of Transportation

Caltrans policies are applicable to the proposed Kammerer Road improvements under consideration and are summarized in Caltrans' Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). These guidelines identify circumstances under which Caltrans believes that a traffic impact study would be required, information that Caltrans believes should be included in the study, analysis scenarios, and guidance on acceptable analysis methodologies.

In addition to these policies, Caltrans prepares a Transportation Concept Report (TCR) for each of its facilities in the area. A TCR is a long-term planning document that each Caltrans district prepares for every state highway or portion thereof in its jurisdiction. This document usually represents the first step in Caltrans' long-range corridor planning process. The purpose of a TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period. These are indicated in the "route concept." In addition to the 20-year route concept level, the TCR includes an "ultimate concept," which is the goal for the route beyond the 20-year planning horizon. Ultimate concepts must be used cautiously; however, because unforeseen changes in land use and other variables make forecasting beyond 20 years difficult.

According to the July 2017 TCR, I-5 has a minimum concept LOS E north of the Hood Franklin Road interchange and a minimum concept LOS D south of the Hood Franklin Road interchange. SR-99 has a minimum concept LOS E in the study area. Consistent with typical practice in

Caltrans District 3, the ramp terminal intersections were analyzed with LOS D as the minimum threshold for acceptable operations.

Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for 2035

The MTP/SCS (SACOG 2016b) is a long-range planning document for identifying and programming roadway improvements throughout the Sacramento region. SACOG is required by federal law to update the MTP at least every four years. California SB 375 requires a SCS to be added to regional transportation plans across the state.

Significance criteria for impacts on the transportation system are based upon the applicable standards of each jurisdiction.

Sacramento County General Plan

The County has a LOS E policy within the Urban Service Boundary and has a LOS D policy outside the Urban Service Boundary. Kammerer Road is inside the Urban Service Boundary east of the railroad tracks located between Franklin Boulevard and Willard Parkway and outside the Urban Service Boundary west of the railroad tracks.

A project is considered to have a significant effect if it would:

- Result in a roadway operating at an acceptable LOS (LOS D for rural areas and LOS E for urban areas) to deteriorate to an unacceptable LOS; or
- Increase the volume to capacity (V/C) ratio by more than 0.05 on a roadway that is operating at an unacceptable LOS without the project.

City of Elk Grove General Plan

The City General Plan (as amended) has applicable goals and policies relating to traffic and transportation.

A project is considered to have a significant effect if it would:

- Degrade operation at an intersection or roadway segment from LOS A through LOS D to LOS E or LOS F;
- Increase the V/C ratio by more than 0.05 or more at roadway segments that operate or will operate in future conditions at unacceptable LOS without the project;
- Increase delay by more than five seconds at study intersections that are, or will be operating at unacceptable LOS with the project;
- Result in an appreciable number of pedestrians or bicyclists along routes where no designated bicycle facilities or pedestrian walkways exist;
- Substantially increase hazards cause by a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses;
- Create a demand for public transit services substantially above that which is provided, or planned to be provided, by the local transit provides r disrupt or interfere with existing or planned public transit services or facilities; or
- Result in inadequate parking capacity.

AFFECTED ENVIRONMENT

Existing Transportation System

The existing roadways and highways within and near the Project area include Kammerer Road (and intersecting roadways), Promenade Parkway, Bruceville Road, Willard Parkway, Big Horn Boulevard, Franklin Boulevard, Hood Franklin Road, I-5, and SR-99. The majority of the Project area does not provide pedestrian or bicycle facilities, and no bus stops exist within the Project area. The closest facilities to the Project area that include sidewalks and bike lanes are along Kammerer Road from SR-99 to approximately 400 feet east of Promenade Parkway. A sidewalk is present along the north side of Kammerer Road for an additional 2,000 feet, ending just west of Lent Ranch Parkway at the eastern border of the Project area.

Roadways

Kammerer Road: Kammerer Road is an east-west facility that transverses the southern portion of the City. The roadway extends along the southern border of the City with the County. To the west, it terminates at a T-intersection at Bruceville Road with stop control on the westbound approach. To the east, the roadway becomes Grant Line Road at the freeway interchange with SR-99. The segment of Kammerer Road proposed for widening currently has one travel lane in each direction.

Hood Franklin Road: Hood Franklin Road is an east-west roadway in the County serving rural areas between Franklin Boulevard to the east and River Road to the west. Hood Franklin Road is two lanes wide and has stop-controlled intersections at Franklin Boulevard and at the northbound and southbound I-5 off-ramps.

Franklin Boulevard: Franklin Boulevard is a local north-south roadway in the western part of the Project area. To the south, it extends to West Walnut Grove Road. To the north, it extends through the City and the City of Sacramento as a four- to six-lane major arterial.

Willard Parkway: Willard Parkway is a north-south facility in the western part of the Project area. Willard Parkway is four lanes wide from Whitelock Parkway to its current terminus south of Bilby Road. From its current terminus, Willard Parkway would extend south approximately a quarter mile to a 90-degree intersection with the proposed Project.

Bruceville Road: Bruceville Road is a north-south facility the middle of the Project area. To the north, Bruceville Road extends to Valley High Drive in the City of Sacramento. To the south, it extends to Desmond Road. North of Whitelock Parkway, Bruceville Road is a four- to six-lane major arterial. To the south of Whitelock Parkway, Bruceville Road is two lanes wide.

Big Horn Boulevard: Big Horn Boulevard terminates at Whitelock Parkway. The roadway is planned for extension between Whitelock Parkway and Kammerer Road as a four-lane arterial.

Promenade Parkway: Promenade Parkway terminates at Kammerer Road. To the north, the roadway continues approximately 1 mile, becoming West Stockton Boulevard and running along the west side of SR-99.

Transit

Transit service is provided in the City by e-Tran. Routes are coordinated with Sacramento Regional Transit District buses and light rail and South County Transit/Link to areas outside the City. Main transfer points are at the Cosumnes River College, Meadowview Light Rail Station, and Laguna Town Hall. Services are funded with Transportation Development Act and Federal Transit Administration funds. E-Tran operates a system of bus routes, including three bus routes north of the Project area along Whitelock Parkway.

Pedestrian and Bicycle Facilities

Currently, pedestrian and bicycle facilities in the Project Study Area are limited, and include sidewalks and bike lanes along Kammerer Road from SR-99 to approximately 400 feet east of Promenade Parkway. A sidewalk is present along the north side of Kammerer Road for an additional 2,000 feet, ending just west of Lent Ranch Parkway at the eastern border of the Project area. For the proposed Project, both the thoroughfare and the expressway will include a Class I bidirectional, multiuse pathway along the northern extent of the roadway. The thoroughfare will also include Class II bike lanes within the roadway shoulders in both directions from SR-99 to Bruceville Road. The Project does not propose Class II bike lanes within the expressway segment from Bruceville Road to the I-5/Hood Franklin interchange pursuant the JPA Design Guidelines for safety on this type of roadway segment. Consequently, the Project will be inconsistent with the City of Elk Grove's Bicycle, Pedestrian, and Trails Master Plan (2014), which identifies Class II bike lanes from Bruceville to I-5/Hood Franklin interchange.

Traffic and Transportation Analysis

The Capital SouthEast Connector is a 34-mile limited-access roadway planned to connect I-5 south of Elk Grove with US-50 in El Dorado County. The Project is the portion of the Connector between I-5 and SR-99 along the Hood Franklin Road and Kammerer Road in the City and unincorporated Sacramento County. The Project runs west to east along its proposed route and closes the major corridor gap of I-5 to SR-99. This traffic analysis builds on analyses included in several related studies in the general Project area. The following is a list of the studies that are specifically referenced throughout this section:

- Capital SouthEast Connector JPA PEIR
- Capital SouthEast Connector Project Design Guidelines, Version 4.0
- 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)
- Transportation Impact Analysis (DKS 2018)

Analysis of transportation facility operations is based on the concept of LOS. The LOS of a facility is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity.

Intersection Analysis

Intersection operations analysis for the Project was conducted in accordance with Highway Capacity Manual (HCM) Procedures (HCM 2010). This methodology is applied to signalized, two-way stop controlled, and all-way stop controlled intersections.

Traffic counts were collected in April 2016, January 2017, and March 2017, for the AM peak period (7:00-9:00 AM) and PM peak period (4:00-6:00 PM). Caltrans conducted additional traffic counts on all on and off-ramps at the I-5 / Hood Franklin Road interchange between Monday, March 13, 2017 and Thursday, March 16, 2017. The HCM 2010 methodology computes average vehicle delay at the subject intersections. The delay is converted to LOS based on the criteria as shown in **Table 41**.

Table 41. Intersection Level of Service Criteria

Level of Service (LOS)	Total Delay Per Vehicle (seconds)	
	Signalized	Unsignalized
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Caltrans Freeway Facilities Analysis

Freeway mainline operations analysis was conducted for weekday AM and PM peak hours for segments on I-5 north and south of the Hood Franklin Road interchange, and for segments on SR-99 north and south of the Grant Line Road interchange.

Caltrans Performance Measurement System (PeMS) data was downloaded for the I-5 and SR-99 mainlines for October 2016. This was chosen as a recent “representative” month, because school was in session, there were no holidays, the weather was dry, and the detectors were operating correctly (i.e. 100% observed). Volume and speed data was averaged for all Tuesdays, Wednesdays, and Thursdays in the study month for vehicle detector stations (VDS):

- 317187: I-5 NB just north of Hood Franklin Road
- 317191: I-5 SB just north of Hood Franklin Road
- 317862: SR-99 NB just north of Grant Line Road
- 317861: SR-99 SB just north of Grant Line Road

Ramp volume data was obtained from intersection counts at the ramp terminals. The heavy vehicle percentage was obtained from Caltrans' 2015 Annual Average Daily Truck Traffic on the California State Highway System. The analysis uses 24 percent heavy vehicles on I-5 and 15 percent on SR-99.

In accordance with the 2010 Highway Capacity Manual, the determination of freeway operating conditions is based on density (passenger cars per mile per lane). Hourly traffic volumes are converted to peak 15-minute passenger car equivalents using the PHF and percentage of heavy vehicles. This volume is then converted to a theoretical density utilizing the lowest 15-minute average speed. This conversion assumes that the observed highest flow rate is the demand rate during the 15-minute period of lowest speed. Freeway basic segment and merge/diverge segment LOS criteria are shown in **Table 42**.

Table 42. Freeway Ramp Level of Service Criteria

Level of Service (LOS)	Passenger cars/mile/lane	
	Merge/Diverge Density	Density
A	≤ 10	≤ 11
B	$> 10 - 20$	$> 11 - 18$
C	$> 20 - 28$	$> 18 - 26$
D	$> 28 - 35$	$> 26 - 35$
E	> 35	$> 35 - 45$
F	≤ 10	≤ 11

Thresholds of Significance

The City of Elk Grove and Sacramento County have established a similar LOS D policy for the rural area of the Project; however, the JPA's standards require LOS C or better for its facilities. Because this analysis focuses on the Project alignment in its role as part of the entire Capital SouthEast Connector, LOS C is used as the operational threshold in this evaluation. LOS C analysis is not used in considerations for I-5 ramp intersections, as Caltrans freeway facilities will be subject to Caltrans LOS practices and standards.

Project Area Locations

Figure 27 shows the traffic analysis intersections respectively, analyzed in the Project's Traffic Impact Analysis. The traffic study examined and includes the following locations in the Project area.

Intersections

1. Hood Franklin Road/Southbound I-5 Ramp
2. Hood Franklin Road/Northbound I-5 Ramp
3. Kammerer Road/Bruceville Road
4. Kammerer Road/Promenade Parkway
5. Kammerer Road/Southbound SR-99 Ramp
6. Grant Line Road/Northbound SR-99 Ramp
7. Grant Line Road/East Stockton Blvd – Survey Road
8. Whitelock Parkway/West Stockton Boulevard
9. Bilby Road/Bruceville Road
10. Bilby Road/Franklin Boulevard
11. Kammerer Road/Future Lotz Parkway
12. Kammerer Road/Future Collector 1
13. Kammerer Road/Future Big Horn Boulevard
14. Kammerer Road/Future Collector 2
15. Kammerer Road/Willard Parkway
16. Kammerer Road/Franklin Boulevard
17. Kammerer Road/Hood Franklin Road
18. Kammerer Road/Lent Ranch Parkway

Freeway Ramps

- I-5 – Northbound
 - Hood Franklin Road Exit
 - Eastbound Hood Franklin Road Loop Entrance
 - Westbound Hood Franklin Road Slip Entrance
- SR 99 – Northbound
 - Kammerer Road/Grant Line Road Exit
 - Eastbound Kammerer Road Loop Entrance
 - Westbound Grant Line Road Slip Entrance
- I-5 – Southbound
 - Hood Franklin Road Exit
 - Westbound Hood Franklin Road Loop Entrance
 - Eastbound Hood Franklin Road Slip Entrance
- SR 99 – Southbound
 - Kammerer Road/Grant Line Road Exit
 - Westbound Grant Line Road Loop Entrance
 - Eastbound Kammerer Road Slip Entrance

Existing Roadway Operation Conditions

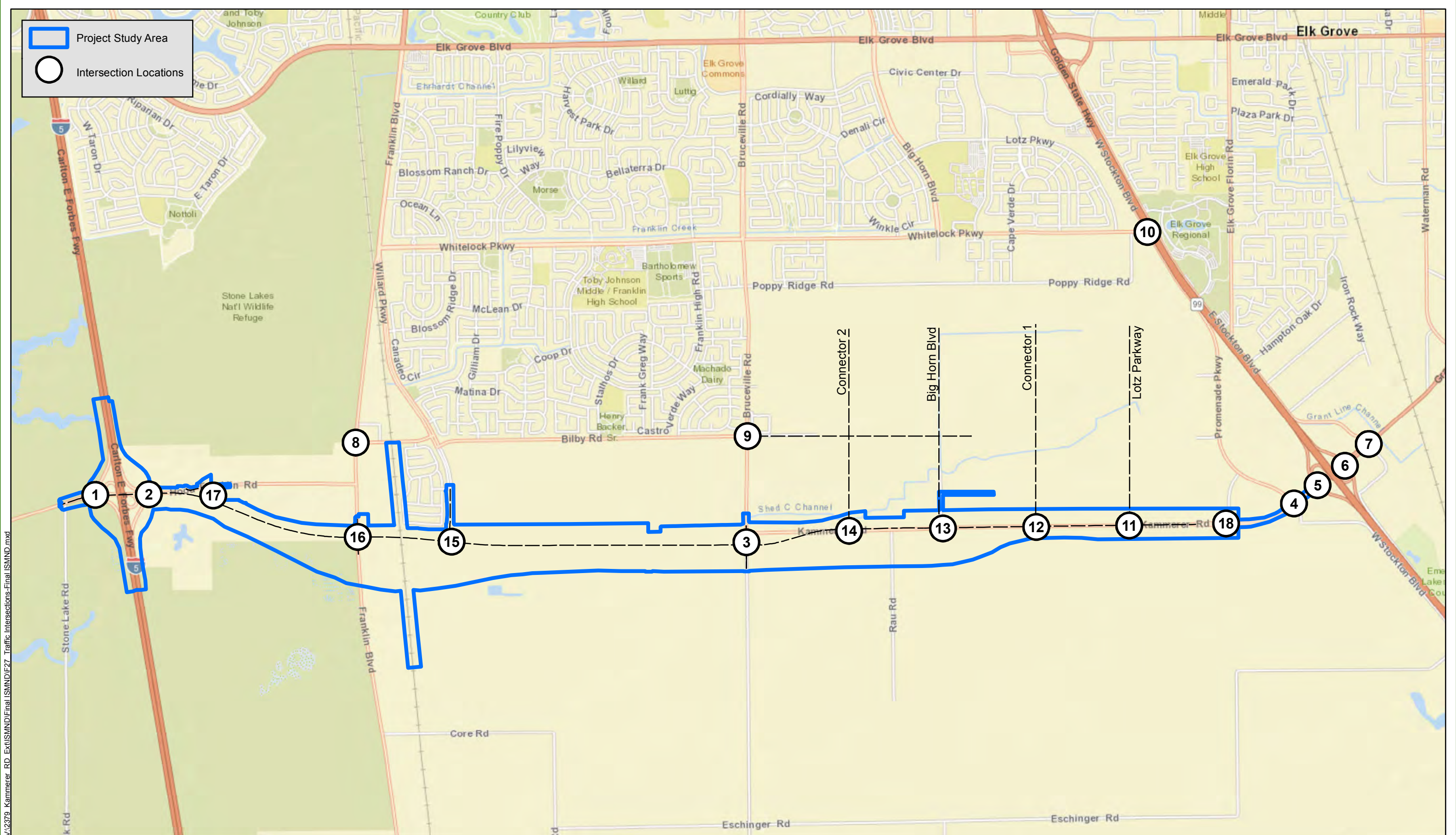
Existing Operating Conditions – Intersections

Table 43 summarizes AM and PM peak hour operating conditions at the study area intersections. During both AM and PM peak hours, all intersections meet the LOS C standard with the exception of the intersection of Bilby Road and Franklin Boulevard, which is all-way stop-controlled and operates at LOS E during the AM peak hour. Existing AM and PM peak hour traffic volumes and lane geometry at the study area intersections are illustrated in **Figure 28**.

Existing Operating Conditions – Caltrans Freeway

Level of service analyses were conducted for freeway basic, merge, and diverge segments. Existing freeway segment LOS is shown in **Table 44** and **Table 45**. All of the freeway segments meet the applicable LOS standard. Existing AM and PM freeway and ramp volumes are illustrated in **Figure 29**.

Project Study Area
 Intersection Locations



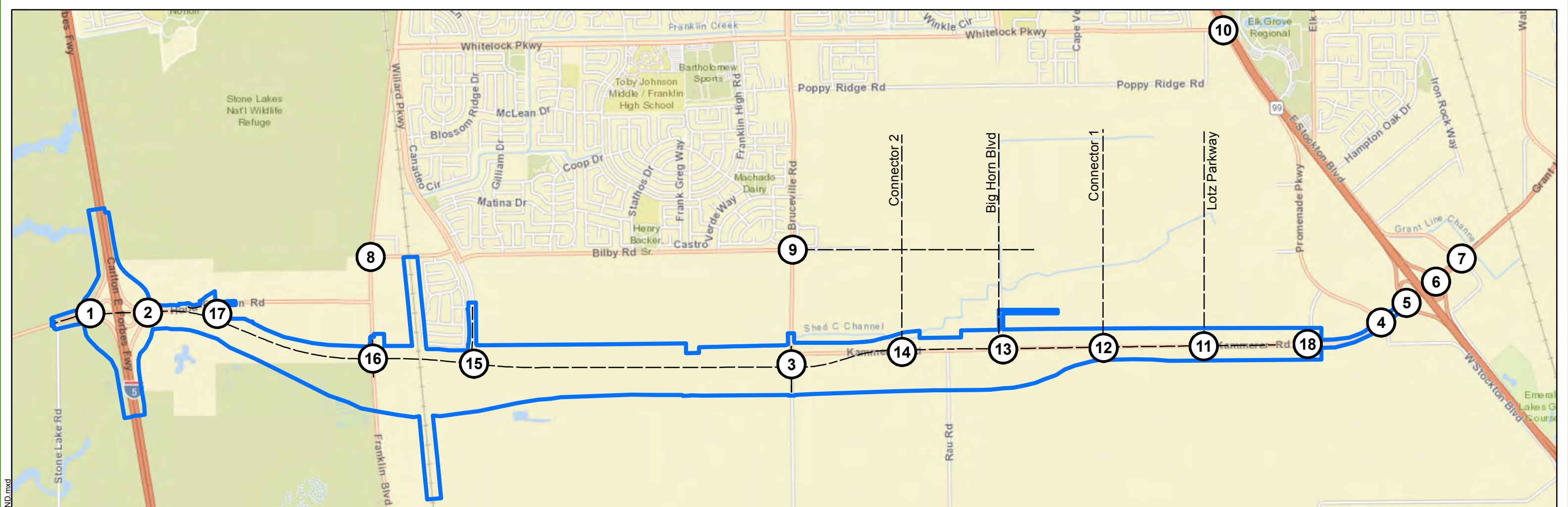
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Source: ESRI Maps Online; Dokken Engineering 10/9/2018; Created By: adellas

1 inch = 2,400 feet
 0 1,000 2,000 3,000 4,000 5,000 Feet

FIGURE 27
Traffic Analysis Intersections

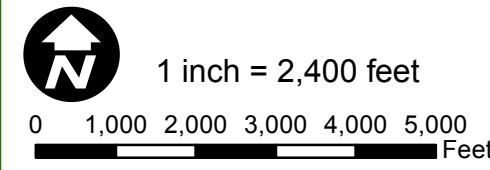
Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



<p>1. SB I-5 Ramp @ Hood Franklin Rd.</p>	<p>2. NB I-5 Ramp @ Hood Franklin Rd.</p>	<p>3. Bruceville Rd. @ Kammerer Rd.</p>	<p>4. Promenade Pkwy. @ Kammerer Rd.</p>	<p>5. SB SR-99 Ramp @ Kammerer Rd.</p>	<p>6. NB SR-99 Ramp @ Grant Line Rd.</p>	<p>7. East Stockton Blvd./ Survey Rd. @ Grant Line Rd.</p>	<p>8. Franklin Blvd. @ Bilby Rd.</p>	<p>9. Bruceville Rd. @ Bilby Rd.</p>
<p>10. W Stockton Blvd. @ Whitlock Pkwy.</p>	<p>11. Lotz Pkwy. @ Kammerer Rd.</p> <p>DOES NOT EXIST IN SCENARIO</p>	<p>12. Collector 1 @ Kammerer Rd.</p> <p>DOES NOT EXIST IN SCENARIO</p>	<p>13. Big Horn Blvd. @ Kammerer Rd.</p> <p>DOES NOT EXIST IN SCENARIO</p>	<p>14. Collector 2 @ Kammerer Rd.</p> <p>DOES NOT EXIST IN SCENARIO</p>	<p>15. Willard Pkwy. @ Kammerer Rd.</p> <p>DOES NOT EXIST IN SCENARIO</p>	<p>16. Franklin Blvd. @ Kammerer Rd.</p> <p>DOES NOT EXIST IN SCENARIO</p>	<p>17. Hood Franklin Rd. @ Bilby Rd.</p> <p>DOES NOT EXIST IN SCENARIO</p>	<p>18. Lent Ranch Pkwy. @ Kammerer Rd.</p>

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Source: ESRI Maps Online; Dokken Engineering 10/18/2018; Created By: adellas



Project Study Area
 AM(PM) - Peak Hour Traffic Volumes
 Intersection Locations

 - Volume Turn Movement
Left-Thru-Right

FIGURE 28
Existing No Project
Peak Hour Intersection Volumes
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

Figure 29. Existing No Project Freeway Volumes

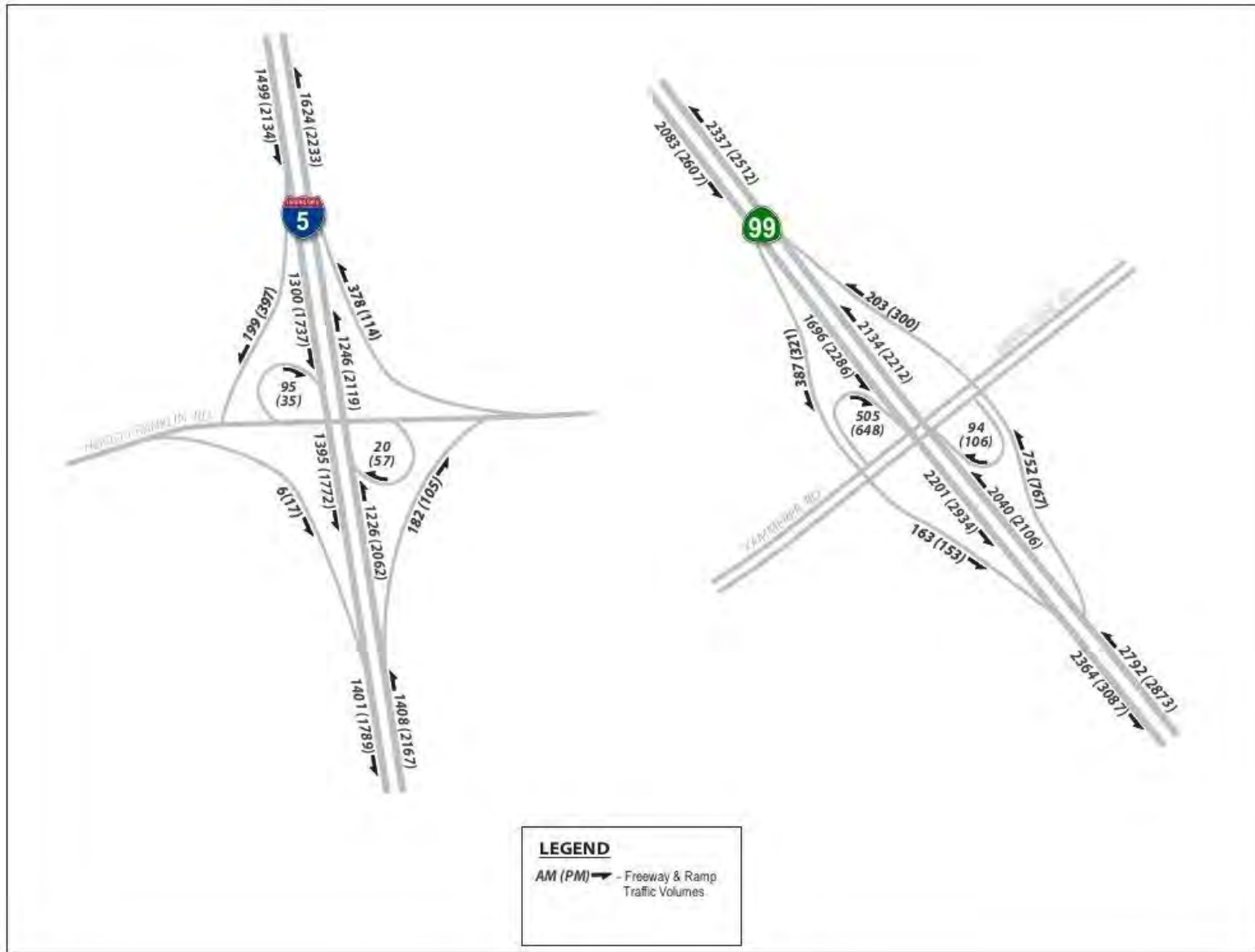


Table 43					
Existing Peak Hour Intersection Level of Service					
Intersection		Jurisdiction	Existing Conditions		
			Control	Int LOS	Delay
A.M. Peak Hour					
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	12.5
			-	-	-
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.9
			-	-	-
3	Bruceville Rd & Kammerer Rd	Elk Grove	SSSC	C	19.1
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	B	15.0
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	A	6.8
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	A	8.6
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	C	26.9
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	E	35.3
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	A	9.8
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	AWSC	B	12.2
11	Lotz Parkway & Kammerer Rd	Elk Grove	Cumulative Intersection Only		
12	Collector 1 & Kammerer Rd	Elk Grove	Cumulative Intersection Only		
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Cumulative Intersection Only		
14	Collector 2 & Kammerer Rd	Elk Grove	Cumulative Intersection Only		
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only		
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only		
17	Hood Franklin Rd & Kammerer Rd	County Rural	Project Intersection Only		
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	3.7
P.M. Peak Hour					
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	12.2
			-	-	-
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	11.8
			-	-	-
3	Bruceville Rd & Kammerer Rd	Elk Grove	SSSC	C	16.5
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	B	13.3
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	A	6.4
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	A	9.2
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	C	30.4
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	B	12.1
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	A	8.4
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	AWSC	C	24.1
11	Lotz Parkway & Kammerer Rd	Elk Grove	Cumulative Intersection Only		
12	Collector 1 & Kammerer Rd	Elk Grove	Cumulative Intersection Only		
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Cumulative Intersection Only		
14	Collector 2 & Kammerer Rd	Elk Grove	Cumulative Intersection Only		
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only		
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only		
17	Hood Franklin Rd & Kammerer Rd	County Rural	Project Intersection Only		
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	4.2
Note: Bold intersections do not meet LOS policy					
SSSC = Side Street Stop Control, AWSC = All Way Stop Control					

Table 44. Existing No Project I-5 Freeway Mainline Peak Hour LOS

Existing No Project I-5 Freeway Mainline Peak Hour LOS							
Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmpl)	LOS	Vol	Density (pcpmpl)	LOS
Existing - No Build							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	1408	11.4	B	2167	17.0	B
OFF - To Hood Franklin Rd	Diverge	182	17.6	B	105	24.6	C
ON - Loop from EB Hood Franklin Rd	Merge	20	14.8	B	57	22.4	C
ON- Slip from WB Hood Franklin Rd	Merge	378	18.3	B	114	22.7	C
ML - N/O Hood Franklin Rd	Basic	1624	13.2	B	2233	17.6	B
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1499	14.4	B	2134	16.6	B
OFF - To Hood Franklin Rd	Diverge	199	21.4	C	397	20.2	C
ON - Loop from WB Hood Franklin Rd	Merge	95	18.0	B	35	18.3	B
ON- Slip from EB Hood Franklin Rd	Merge	6	18.7	B	17	19.2	B
ML - S/O Hood Franklin Rd	Basic	1401	13.4	B	1789	13.8	B

Table 45. Existing No Project SR-99 Freeway Mainline Peak Hour LOS

Existing No Project SR-99 Freeway Mainline Peak Hour LOS							
Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmpl)	LOS	Vol	Density (pcpmpl)	LOS
Existing - No Build							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	2792	22.5	C	2873	23.1	C
OFF - To Grant Line Rd	Diverge	752	17.4	B	767	17.9	B
ML - Loop from Kammerer Rd (Add Lane)	Basic	2134	11.3	B	2212	11.6	B
ON- Slip from WB Grant Line Rd	Merge	203	14.5	B	300	15.6	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	2337	18.5	C	2512	19.8	C
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2083	16.5	B	2607	20.4	C
OFF - To Kammerer Rd	Diverge	387	10.6	B	648	15.1	B
ML - Loop from Grant Line Rd (Add Lane)	Basic	2201	11.6	B	2934	15.2	B
ON- Slip from EB Kammerer Rd	Merge	505	14.3	B	153	18	B
ML - Kammerer Rd to Dillard Rd	Basic	2364	18.8	C	3087	24.9	C

ENVIRONMENTAL CONSEQUENCES

Traffic Analysis Scenarios

Potential transportation and traffic impacts associated with the implementation of the Project, where analyzed for the following scenarios:

- Existing Plus Full Build (4-Lane) Analysis
- Existing Plus Interim (2-Lane) Analysis
- Cumulative No Project Analysis
- Cumulative Plus Full Build Analysis
- Opening Year Plus Ten Years (2034) Plus Interim Project

Caltrans Freeway Facilities

Improvements to the interchange of I-5 and Hood Franklin Road will be determined through a separate study process following Caltrans procedures. This document provides traffic analysis for both the signal control option and roundabout control options of the Full Build Project. For either control option, the proposed interchange would maintain the Type L-9 configuration, with the following modifications:

- The northbound and southbound off-ramps would be modified. The improvements differ, depending on whether the signal control option or yield control option is selected.
- There will be two westbound lanes on Hood Franklin (Kammerer) Road as it approaches the I-5 northbound on-ramp from east of I-5. The rightmost westbound lane is a drop lane, which will provide a free turn onto the northbound slip on-ramp.
- There will be two eastbound lanes on Hood Franklin (Kammerer) Road east of the I-5 northbound off-ramp. The rightmost eastbound lane is an add lane, which originates from the northbound I-5 off-ramp free turn.
- The existing structure on Hood Franklin Road over I-5 would not be widened and would have one traffic lane in each direction.

Additionally, the signal control option would make the following modifications:

- Signalization of the two off-ramps at their intersection with Hood Franklin Road.
- Providing a separate right turn lane and a separate left turn lane on the northbound I-5 offramp. The northbound right turn would be a free movement onto Kammerer Road.

The roundabout control option would make the following modifications:

- Realignment of the diamond off-ramps from both northbound and southbound I-5 is required to meet roundabout geometry.
- Providing a separate right turn lane and a separate shared through/left turn lane on the southbound I-5 off-ramp. Thus, the northwest quadrant of the roundabout will have two lanes.
- Provide bypass lanes at the northbound I-5 roundabout for the northbound right turn and westbound right turn.
- Remove the northbound loop on-ramp.
- Installation of ramp metering on all I-5 on-ramps and provision of a HOV Preferential Lane.

Existing Plus Full Build (4-Lane) Analysis

Analysis of the Existing Plus Full Build Project is based upon model forecasted traffic volumes and the proposed improvements associated with the proposed reconstruction and extension of Kammerer Road as a four-lane facility. The model used was the SACOG travel demand model with enhanced detail in the City of Elk Grove.

The construction of the Full Build Project would not cause any significant impacts under existing conditions. The Full Build Project would decrease traffic volumes on Whitelock Parkway, Elk Grove Boulevard and Laguna Boulevard. Therefore, it is concluded that the Kammerer Road improvements would benefit overall traffic operations in the study area.

Existing Plus Full Build Operating Conditions - Intersections

Table 46 summarizes AM and PM peak hour operating conditions at the study area intersections with the Full Build Project. During both the AM and PM peak hours, all intersections meet the LOS C JPA standard. Existing Plus Full Build Alternative AM and PM peak hour traffic volumes and lane geometry at study area intersections are illustrated in **Figure 30**.

Intersection-related improvements are included with the proposed extension and widening of Kammerer Road. Under existing conditions, new traffic signals with turn lanes would be installed at three intersections with the Full Build Alternative:

- Kammerer Road with Franklin Blvd
- Kammerer Road with Willard Parkway
- Kammerer Road with Bruceville Road

New traffic signals or roundabouts would be installed at two intersections with the Full Build Alternative:

- Hood Franklin Road with the I-5 Southbound Off-Ramp
- Hood Franklin Road with the I-5 Northbound Off-Ramp

New traffic signals would be warranted for all five intersections under the Existing Plus Full Build Project.

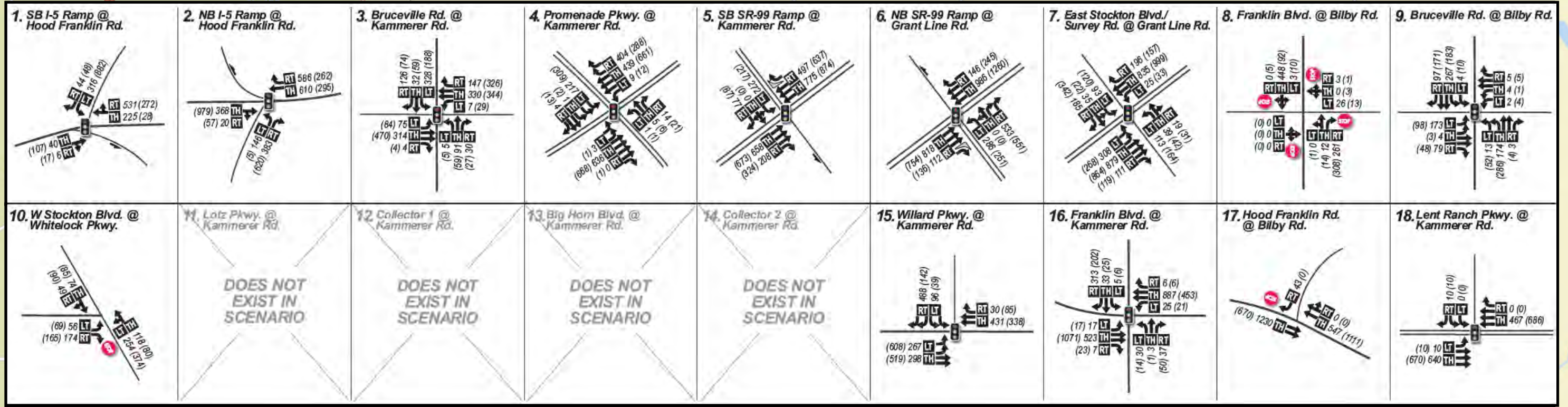
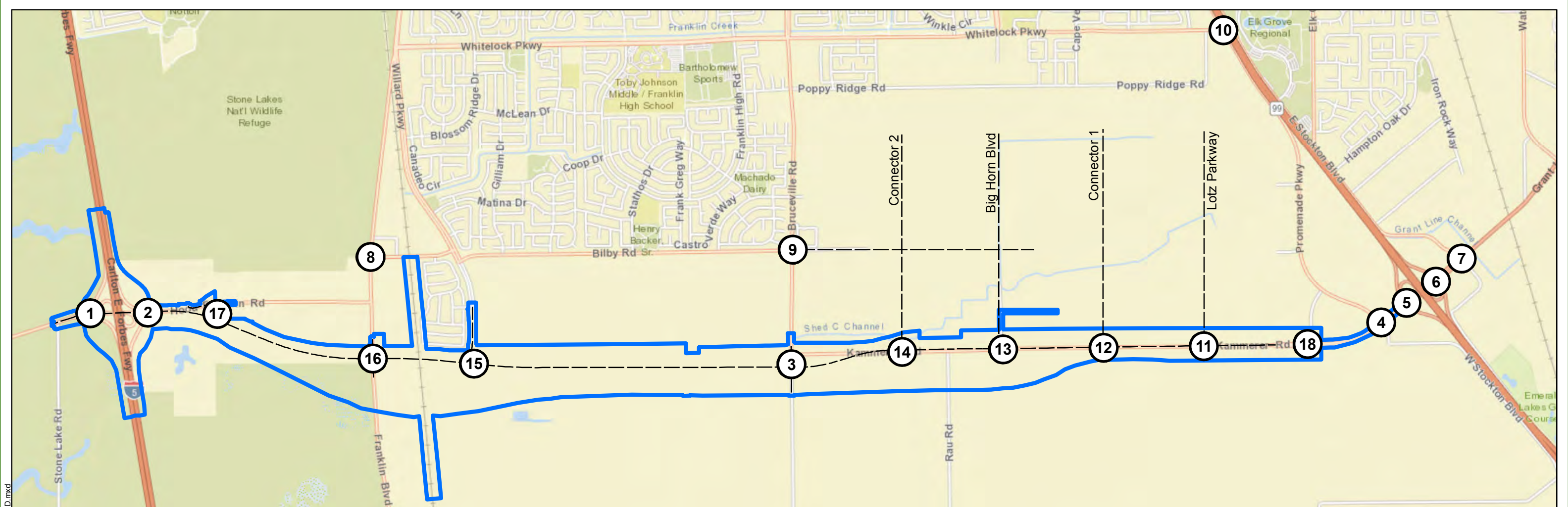
Existing Plus Full Build Operating Conditions – Caltrans Freeway Facilities

Table 47 and **Table 48** summarize AM and PM peak hour operating conditions at the study area freeway mainline segments. All of the freeway segments meet the applicable LOS standard. Existing Plus Full Build Alternative AM and PM peak hour freeway segment volumes are illustrated in **Figure 31**.

Table 46

Existing and Existing Plus Full Build Peak Hour Intersection Level of Service

Intersection	Jurisdiction	Existing Conditions			Existing Plus Full Build Conditions			
		Control	Int LOS	Delay	Control	Int LOS	Delay	
A.M. Peak Hour								
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	12.5	Signal	A	9.6
			-	-	-	Roundabout	A	5.3
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.9	Signal	A	8.7
			-	-	-	Roundabout	A	4.4
3	Bruceville Rd & Kammerer Rd	Elk Grove	SSSC	C	19.1	Signal	B	16.2
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	B	15.0	Signal	B	14.5
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	A	6.8	Signal	A	7
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	A	8.6	Signal	A	9.3
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	C	26.9	Signal	C	28.1
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	E	35.3	AWSC	B	13.7
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	A	9.8	Signal	A	9.8
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	AWSC	B	12.2	AWSC	B	11.9
11	Lotz Parkway & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
12	Collector 1 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
14	Collector 2 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	11.4
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	15.8
17	Hood Franklin Rd & Kammerer Rd	County Rur.	Project Intersection Only			SSSC	C	15.2
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	3.7	Signal	A	3.3
P.M. Peak Hour								
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	12.2	Signal	B	13.7
			-	-	-	Roundabout	B	11.9
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	11.8	Signal	A	6.7
			-	-	-	Roundabout	B	10.3
3	Bruceville Rd & Kammerer Rd	Elk Grove	SSSC	C	16.5	Signal	B	14.6
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	B	13.3	Signal	B	15
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	A	6.4	Signal	A	6.7
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	A	9.2	Signal	B	10
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	C	30.4	Signal	C	32.3
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	B	12.1	AWSC	A	8.6
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	A	8.4	Signal	A	7.7
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	AWSC	C	24.1	AWSC	C	19.8
11	Lotz Parkway & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
12	Collector 1 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
14	Collector 2 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	A	9.1
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	13.1
17	Hood Franklin Rd & Kammerer Rd	County Rur.	Project Intersection Only			SSSC	A	0.0
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	4.2	Signal	A	3.3
Note: Bold intersections do not meet LOS policy, Shaded intersections show project impacts SSSC = Side Street Stop Control, AWSC = All Way Stop Control								



V:\2379_Kammerer_RD_Ext\ISMND\Final\ISMND\F30_Existing_Full_Buid_Peak_Traffic_Intersections_Final_ISMND.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2018; Created By: briann

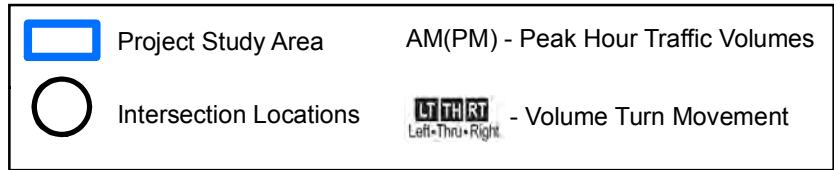
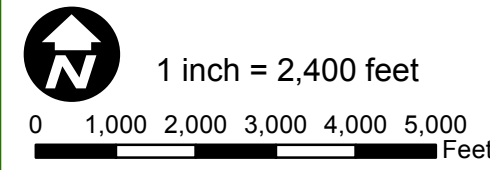


FIGURE 30
Existing Plus Full Build
Peak Hour Intersection Volumes
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

Table 47

Existing Plus Full Build I-5 Freeway Mainline Peak Hour LOS

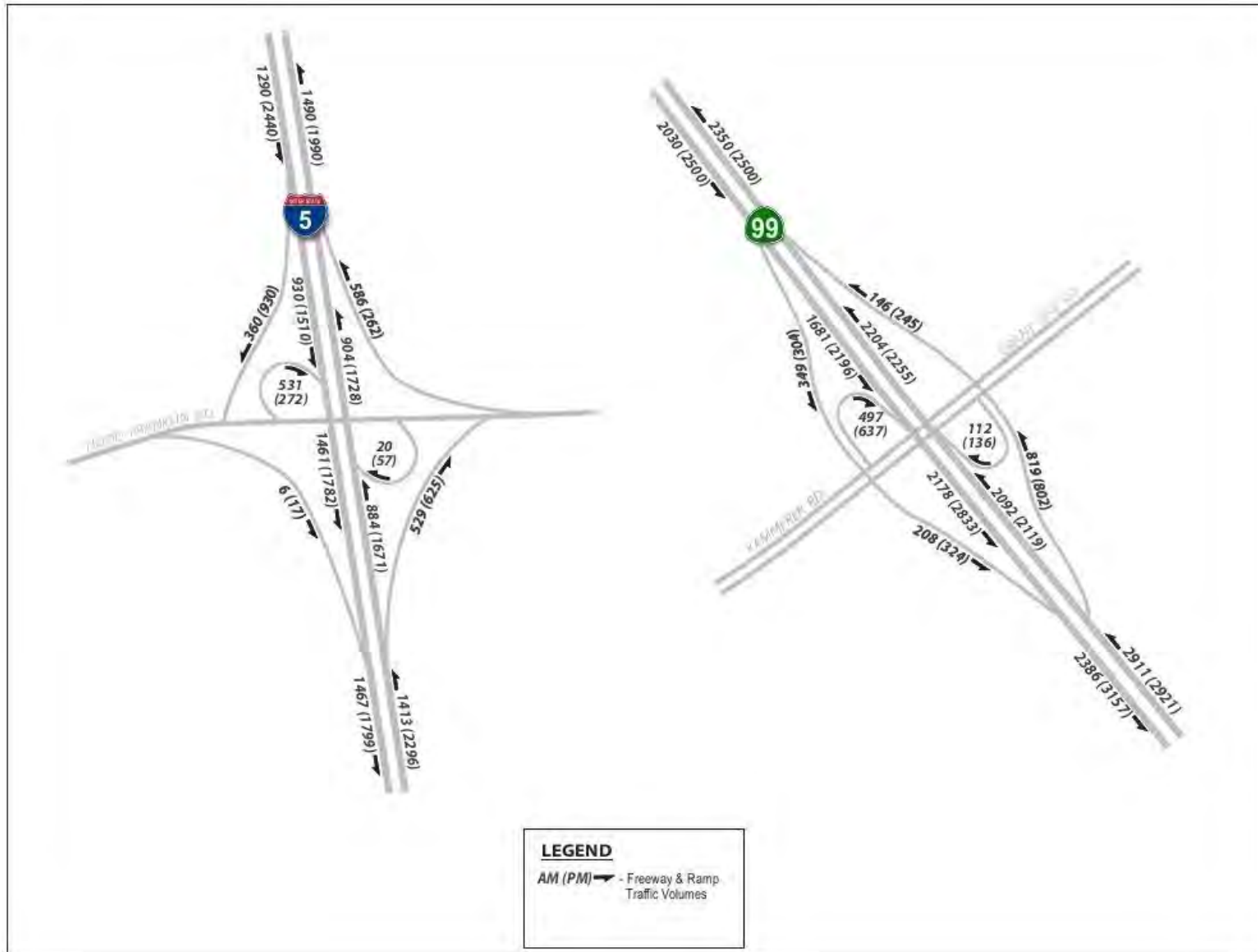
Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcmppl)	LOS	Vol	Density (pcmppl)	LOS
Existing - No Build							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	1408	11.4	B	2167	17.0	B
OFF - To Hood Franklin Rd	Diverge	182	17.6	B	105	24.6	C
ON - Loop from EB Hood Franklin Rd	Merge	20	14.8	B	57	22.4	C
ON- Slip from WB Hood Franklin Rd	Merge	378	18.3	B	114	22.7	C
ML - N/O Hood Franklin Rd	Basic	1624	13.2	B	2233	17.6	B
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1499	14.4	B	2134	16.6	B
OFF - To Hood Franklin Rd	Diverge	199	21.4	C	397	20.2	C
ON - Loop from WB Hood Franklin Rd	Merge	95	18.0	B	35	18.3	B
ON- Slip from EB Hood Franklin Rd	Merge	6	18.7	B	17	19.2	B
ML - S/O Hood Franklin Rd	Basic	1401	13.4	B	1789	13.8	B
Existing - Full Build							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	1413	11.5	B	2296	18.2	C
OFF - To Hood Franklin Rd	Diverge	529	17.7	B	625	25.9	C
ON - Loop from EB Hood Franklin Rd	Merge	20	11.5	B	57	18.6	B
ON- Slip from WB Hood Franklin Rd	Merge	586	15.9	B	262	20.2	C
ML - N/O Hood Franklin Rd	Basic	1490	12.1	B	1990	15.5	B
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1290	12.3	B	2440	19.3	C
OFF - To Hood Franklin Rd	Diverge	360	18.8	B	930	27.1	C
ON - Loop from WB Hood Franklin Rd	Merge	531	17.0	B	272	18.1	B
ON- Slip from EB Hood Franklin Rd	Merge	6	19.4	B	17	19.2	B
ML - S/O Hood Franklin Rd	Basic	1467	14.0	B	1779	13.9	B

Table 48

Existing Plus Full Build SR-99 Freeway Mainline Peak Hour LOS

Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmpl)	LOS	Vol	Density (pcpmpl)	LOS
Existing - No Build							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	2792	22.5	C	2873	23.1	C
OFF - To Grant Line Rd	Diverge	752	17.4	B	767	17.9	B
ML - Loop from Kammerer Rd (Add Lane)	Basic	2134	11.3	B	2212	11.6	B
ON- Slip from WB Grant Line Rd	Merge	203	14.5	B	300	15.6	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	2337	18.5	C	2512	19.8	C
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2083	16.5	B	2607	20.4	C
OFF - To Kammerer Rd	Diverge	387	10.6	B	648	15.1	B
ML - Loop from Grant Line Rd (Add Lane)	Basic	2201	11.6	B	2934	15.2	B
ON- Slip from EB Kammerer Rd	Merge	505	14.3	B	153	18	B
ML - Kammerer Rd to Dillard Rd	Basic	2364	18.8	C	3087	24.9	C
Existing - Full Build							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	2911	23.7	C	2921	23.5	C
OFF - To Grant Line Rd	Diverge	819	18.5	B	802	18.3	B
ML - Loop from Kammerer Rd (Add Lane)	Basic	2204	11.6	B	2255	11.8	B
ON- Slip from WB Grant Line Rd	Merge	146	14.2	B	245	15.2	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	2350	18.6	C	2500	19.7	C
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2030	16.1	B	2500	19.5	C
OFF - To Kammerer Rd	Diverge	349	10.1	B	304	14.1	C
ML - Loop from Grant Line Rd (Add Lane)	Basic	2178	11.5	B	2833	14.6	B
ON- Slip from EB Kammerer Rd	Merge	208	14.6	B	324	18.6	B
ML - Kammerer Rd to Dillard Rd	Basic	2386	18.9	C	3157	25.6	C

Figure 31. Existing Plus Full Build Freeway Volumes



Existing Plus Interim Project Analysis

Analysis of the Existing Plus Interim Project is based upon model forecasted traffic volumes and the proposed improvements associated with the proposed reconstruction and extension of Kammerer Road. The model used was the SACOG travel demand model with enhanced detail in the City of Elk Grove.

The construction of the Interim Project would not cause any significant impacts under existing conditions. The Interim Project would decrease traffic volumes on Whitelock Parkway, Elk Grove Boulevard and Laguna Boulevard. Therefore, it is concluded that the Kammerer Road improvements would benefit overall traffic operations in the study area.

Existing Plus Interim Project Operating Conditions – Intersections

Table 49 summarizes AM and PM peak hour operating conditions at the study area intersections with the Interim Project Alternative. During both the AM and PM peak hours, all intersections meet the LOS C JPA standard.

Intersection-related improvements are included with the proposed extension and widening of Kammerer Road. Under existing conditions, new traffic signals with turn lanes would be installed at three intersections with the Interim Project Alternative:

- Kammerer Road with Franklin Blvd
- Kammerer Road with Willard Parkway
- Kammerer Road with Bruceville Road

New traffic signals or roundabouts would be installed at two intersections with the Interim Project Alternative:

- Hood Franklin Road with the I-5 Southbound Off-Ramp
- Hood Franklin Road with the I-5 Northbound Off-Ramp

New traffic signals would be warranted for all five intersections under the Existing Plus Interim Project Alternative.

Existing Plus Interim Project Alternative AM and PM peak hour traffic volumes and lane geometry at study area intersections are illustrated in **Figure 32**.

Existing Plus Interim Project Operating Conditions – Caltrans Freeway Facilities

Table 50 and **Table 51** summarize AM and PM peak hour operating conditions at the study area freeway ramps and freeway mainline segments. All of the freeway segments meet the applicable LOS standard. Existing Plus Interim Project Alternative AM and PM peak hour freeway segment are illustrated in **Figure 33**.

Table 49

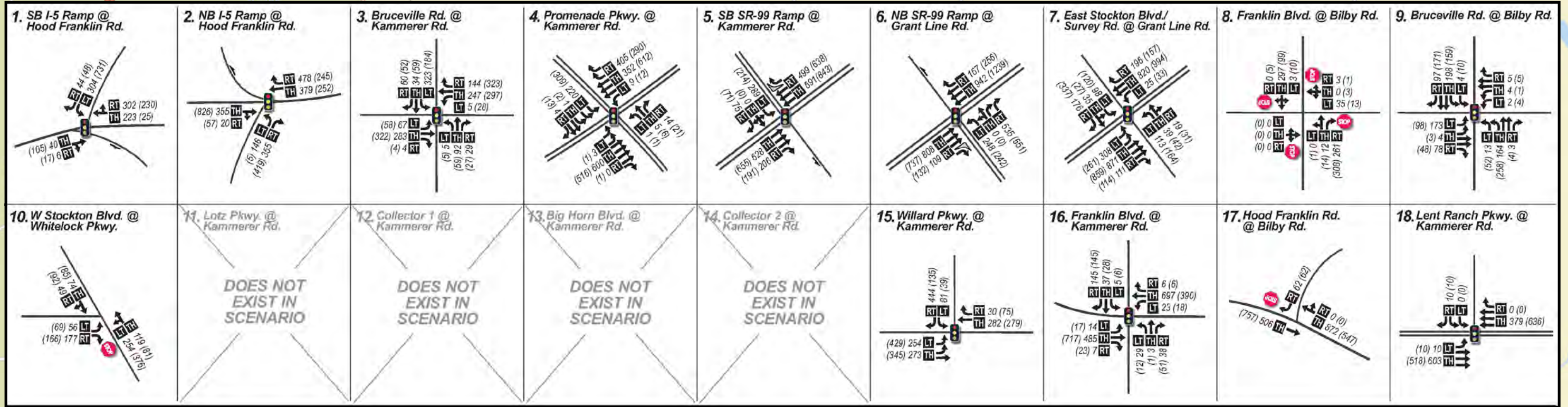
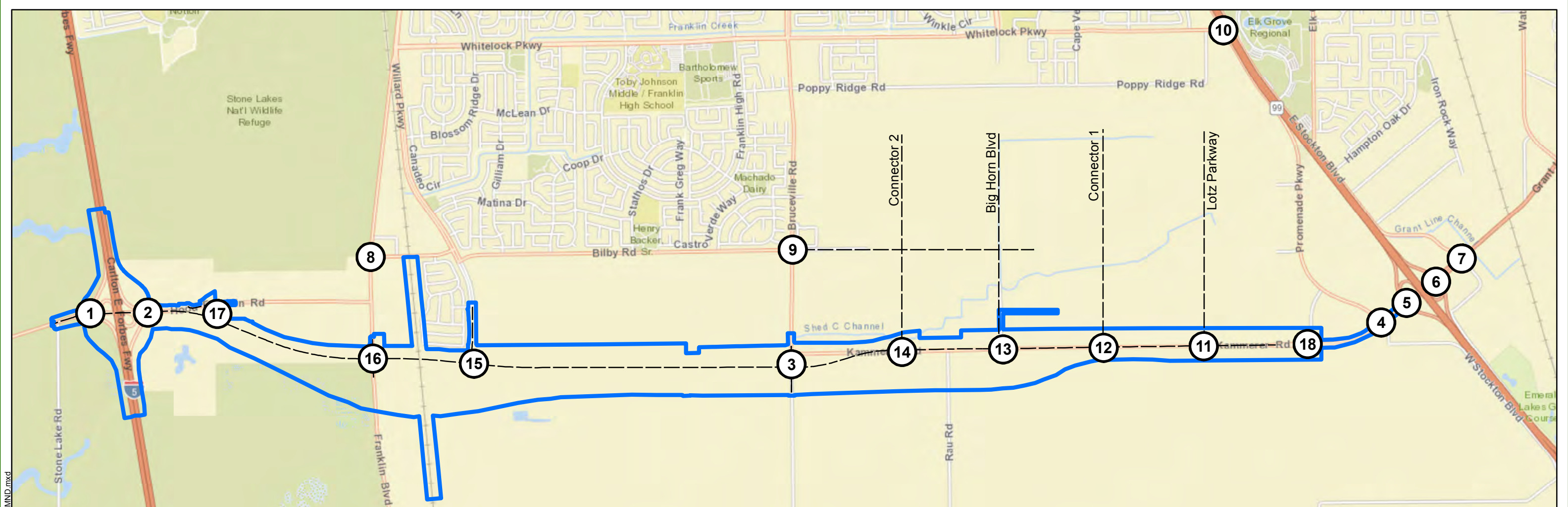
Existing and Existing Plus Interim Project Peak Hour Intersection Level of Service

Intersection	Jurisdiction	Existing Conditions			Existing Plus Interim Project Conditions			
		Control	Int LOS	Delay	Control	Int LOS	Delay	
A.M. Peak Hour								
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	12.5	Signal	A	9.6
			-	-	-	Roundabout	A	5.2
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.9	Signal	A	8.4
			-	-	-	Roundabout	A	3.2
3	Bruceville Rd & Kammerer Rd	Elk Grove	SSSC	C	19.1	Signal	C	20.2
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	B	15.0	Signal	B	12.6
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	A	6.8	Signal	A	7
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	A	8.6	Signal	A	9.1
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	C	26.9	Signal	C	28.1
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	E	35.3	AWSC	A	9.6
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	A	9.8	Signal	A	9.2
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	AWSC	B	12.2	AWSC	B	11.7
11	Lotz Parkway & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
12	Collector 1 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
14	Collector 2 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	17.8
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	14.1
17	Hood Franklin Rd & Kammerer Rd	County Rur.	Project Intersection Only			SSSC	C	19.5
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	3.7	Signal	A	3.4
P.M. Peak Hour								
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	12.2	Signal	A	10.0
			-	-	-	Roundabout	A	8.9
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	11.8	Signal	A	5.9
			-	-	-	Roundabout	A	7.4
3	Bruceville Rd & Kammerer Rd	Elk Grove	SSSC	C	16.5	Signal	B	17.9
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	B	13.3	Signal	B	16.2
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	A	6.4	Signal	A	6.5
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	A	9.2	Signal	A	9.8
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	C	30.4	Signal	C	32.0
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	B	12.1	AWSC	A	8.6
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	A	8.4	Signal	A	7.7
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	AWSC	C	24.1	AWSC	C	15.1
11	Lotz Parkway & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
12	Collector 1 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
14	Collector 2 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	10.1
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	12.9
17	Hood Franklin Rd & Kammerer Rd	County Rur.	Project Intersection Only			SSSC	B	13.2
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	4.2	Signal	A	3.6

Note: Bold intersections do not meet LOS policy, Shaded intersections show project impacts

SSSC = Side Street Stop Control, AWSC = All Way Stop Control

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V:\2379_Kammerer_RD_EXIS\ISMND\FXX_Existing_Interim_Build_PeakTraffic_Intersections-Final_ISMND.mxd

Source: ESRI Maps Online; Dokken Engineering 10/18/2018; Created By: adellas

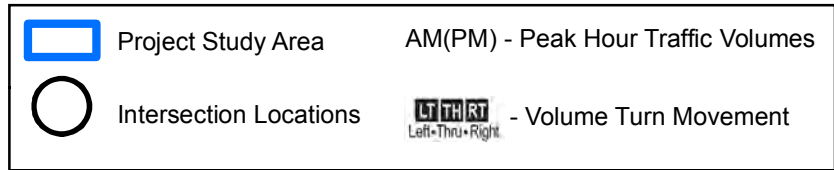
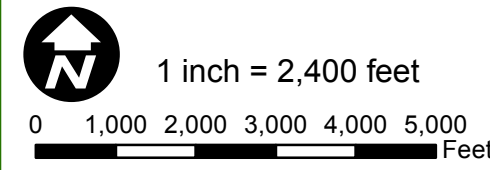


FIGURE 32
Existing Plus Interim Project
Peak Hour Intersection Volumes
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

Table 50

Existing Plus Interim Project I-5 Freeway Mainline Peak Hour LOS

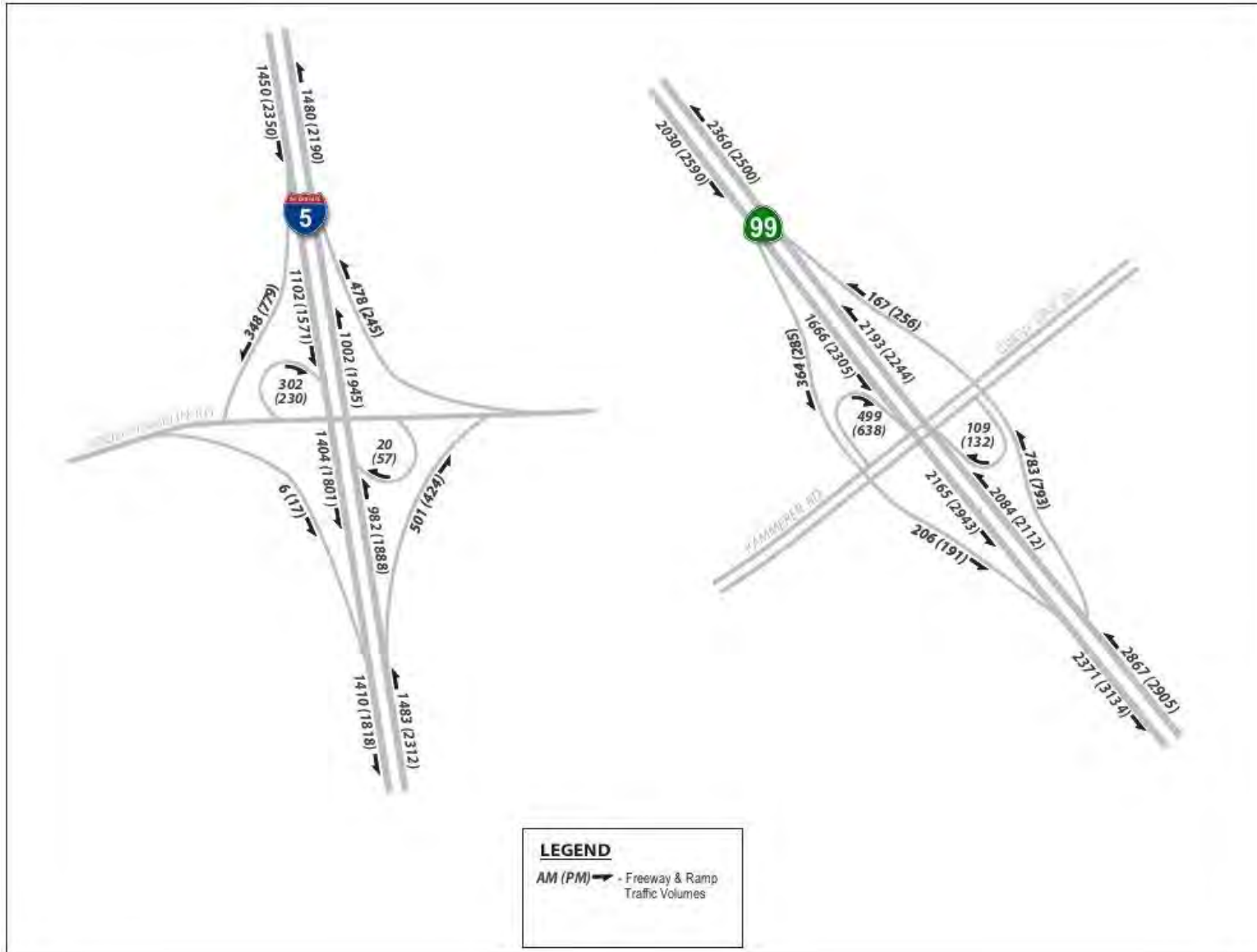
Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmp)	LOS	Vol	Density (pcpmp)	LOS
Existing - No Build							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	1408	11.4	B	2167	17.0	B
OFF - To Hood Franklin Rd	Diverge	182	17.6	B	105	24.6	C
ON - Loop from EB Hood Franklin Rd	Merge	20	14.8	B	57	22.4	C
ON- Slip from WB Hood Franklin Rd	Merge	378	18.3	B	114	22.7	C
ML - N/O Hood Franklin Rd	Basic	1624	13.2	B	2233	17.6	B
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1499	14.4	B	2134	16.6	B
OFF - To Hood Franklin Rd	Diverge	199	21.4	C	397	20.2	C
ON - Loop from WB Hood Franklin Rd	Merge	95	18.0	B	35	18.3	B
ON- Slip from EB Hood Franklin Rd	Merge	6	18.7	B	17	19.2	B
ML - S/O Hood Franklin Rd	Basic	1401	13.4	B	1789	13.8	B
Existing - Interim Project							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	1413	11.5	B	2296	18.2	C
OFF - To Hood Franklin Rd	Diverge	529	17.7	B	625	25.9	C
ON - Loop from EB Hood Franklin Rd	Merge	20	11.5	B	57	18.6	B
ON- Slip from WB Hood Franklin Rd	Merge	586	15.9	B	262	20.2	C
ML - N/O Hood Franklin Rd	Basic	1490	12.1	B	1990	15.5	B
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1290	12.3	B	2440	19.3	C
OFF - To Hood Franklin Rd	Diverge	360	18.8	B	930	27.1	C
ON - Loop from WB Hood Franklin Rd	Merge	531	17.0	B	272	18.1	B
ON- Slip from EB Hood Franklin Rd	Merge	6	19.4	B	17	19.2	B
ML - S/O Hood Franklin Rd	Basic	1467	14.0	B	1779	13.9	B

Table 51

Existing Plus Interim Project SR-99 Freeway Mainline Peak Hour LOS

Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmpl)	LOS	Vol	Density (pcpmpl)	LOS
Existing - No Build							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	2792	22.5	C	2873	23.1	C
OFF - To Grant Line Rd	Diverge	752	17.4	B	767	17.9	B
ML - Loop from Kammerer Rd (Add Lane)	Basic	2134	11.3	B	2212	11.6	B
ON- Slip from WB Grant Line Rd	Merge	203	14.5	B	300	15.6	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	2337	18.5	C	2512	19.8	C
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2083	16.5	B	2607	20.4	C
OFF - To Kammerer Rd	Diverge	387	10.6	B	648	15.1	B
ML - Loop from Grant Line Rd (Add Lane)	Basic	2201	11.6	B	2934	15.2	B
ON- Slip from EB Kammerer Rd	Merge	505	14.3	B	153	18	B
ML - Kammerer Rd to Dillard Rd	Basic	2364	18.8	C	3087	24.9	C
Existing - Interim Project							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	2867	23.3	C	2905	23.4	C
OFF - To Grant Line Rd	Diverge	783	18.1	B	793	18.2	B
ML - Loop from Kammerer Rd (Add Lane)	Basic	2193	11.6	B	2244	11.7	B
ON- Slip from WB Grant Line Rd	Merge	167	14.3	B	256	15.2	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	2360	18.7	C	2500	19.7	C
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2030	16.1	B	2590	20.2	C
OFF - To Kammerer Rd	Diverge	364	10.1	B	285	14.1	B
ML - Loop from Grant Line Rd (Add Lane)	Basic	2165	11.4	B	2943	15.2	B
ON- Slip from EB Kammerer Rd	Merge	206	14.5	B	191	18.1	B
ML - Kammerer Rd to Dillard Rd	Basic	2371	18.8	B	3134	25.4	C

Figure 33. Existing Plus Interim Project Freeway Volumes



Design Year (2044) No Project Analysis

Analysis of cumulative conditions is based upon SACOG's latest 2036 MTP/SCS development forecasts. In the City of Elk Grove, modifications were made to reflect an assumed Year 2044 land use. Full buildout of residential development was assumed. Employment growth between the existing model and 2036 was straight-line extrapolated to a 20-year horizon of 2044, resulting in a total of 61,097 jobs. This is approximately 8,000 jobs more than SACOG's Year 2036 projections, but approximately 40,000 jobs less than buildout.

With significant growth assumed in the Southeast Policy Area (approximately 4,700 homes and 8,600 jobs), and consistent with the 2036 MTP/SCS, it was assumed that Kammerer Road would be widened to four lanes between Lent Ranch Parkway and Bruceville Road. However, the extension of Kammerer Road to I-5 was not assumed under cumulative conditions without the proposed project.

Four new roadways in the Southeast Policy Area would intersect with Kammerer Road. These intersections with new roadway connections are:

- Kammerer Rd & Lotz Parkway
- Kammerer Rd & Collector 1
- Kammerer Rd & Big Horn Blvd
- Kammerer Rd & Collector 2

Design Year No Project Operating Conditions - Intersections

Table 52 summarizes AM and PM peak hour operating conditions at the study area intersections. During both the AM and PM peak hours, all intersections meet the LOS D City of Elk Grove standard with the exception of the following intersections:

- Grant Line Road and East Stockton Boulevard/Survey Road (LOS F, PM peak hour)
- Bilby Road and Franklin Boulevard (LOS F, AM peak hour)

Design Year No Project AM and PM peak hour traffic volumes and lane geometry at the study area intersections are illustrated in **Figure 34**.

Design Year No Project Operating Conditions – Caltrans Freeway Facilities

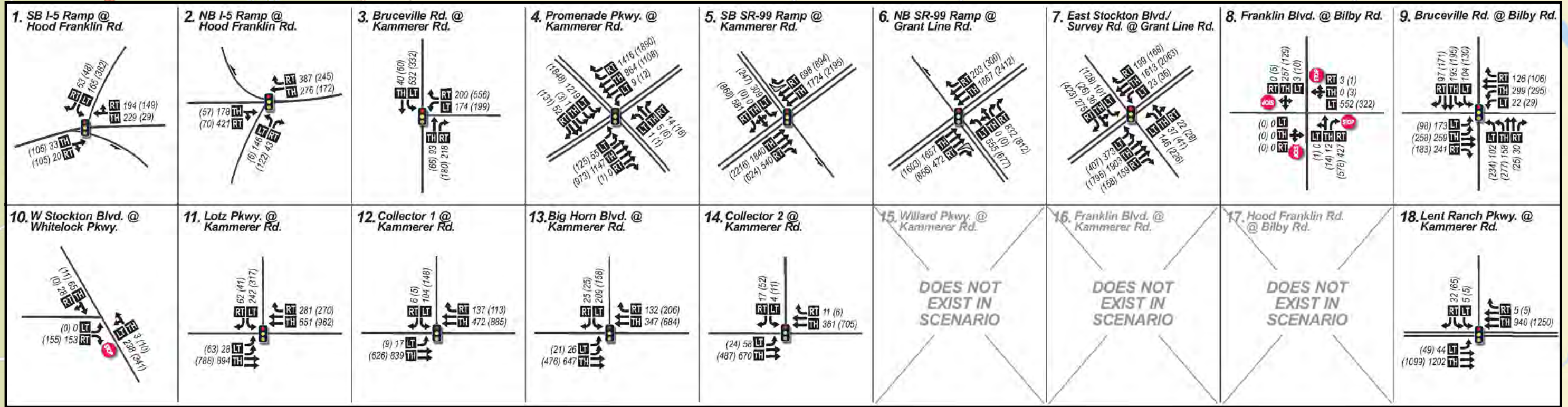
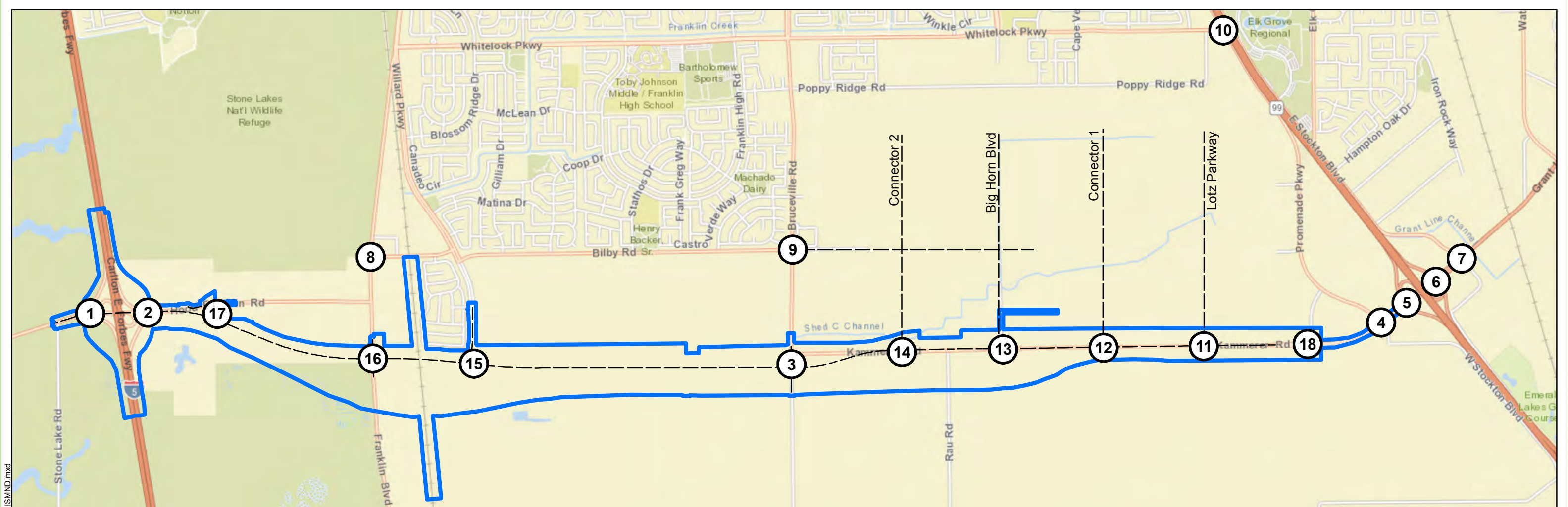
Table 53 and **Table 54** summarize Cumulative No Project AM and PM peak hour operating conditions on Caltrans Ramps and Freeways. All of the freeway segments meet the applicable LOS standard. **Figure 35** illustrates Cumulative No Project freeway peak hour volumes.

Table 52					
Design Year No Project Peak Hour Intersection Level of Service					
Intersection	Jurisdiction	Cumulative Conditions			
		Control	Int LOS	Delay	
A.M. Peak Hour					
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	11.8
			Roundabout	B	15.7
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	14.5
			Roundabout	A	8.4
3	Bruceville Rd & Kammerer Rd	Elk Grove	Signal	C	24.5
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	C	25.1
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	B	12.9
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	B	17.6
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	D	42.5
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	F	52.5
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	B	17.9
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	Existing Intersection Only		
11	Lotz Parkway & Kammerer Rd	Elk Grove	Signal	A	8.0
12	Collector 1 & Kammerer Rd	Elk Grove	Signal	A	6.4
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Signal	A	8.2
14	Collector 2 & Kammerer Rd	Elk Grove	Signal	A	5.5
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only		
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only		
17	Hood Franklin Rd & Kammerer Rd	County Rural	Project Intersection Only		
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	3.8
P.M. Peak Hour					
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.1
			Roundabout	C	15.7
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.4
			Roundabout	B	10.1
3	Bruceville Rd & Kammerer Rd	Elk Grove	Signal	D	46.5
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	D	39.1
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	C	23.5
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	C	32.1
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	F	162.0
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	D	28.8
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	B	19.7
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	Existing Intersection Only		
11	Lotz Parkway & Kammerer Rd	Elk Grove	Signal	A	9.6
12	Collector 1 & Kammerer Rd	Elk Grove	Signal	A	7.4
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Signal	A	8.0
14	Collector 2 & Kammerer Rd	Elk Grove	Signal	A	6.4
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only		
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only		
17	Hood Franklin Rd & Kammerer Rd	County Rural	Project Intersection Only		
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	4.6

Note: Bold intersections do not meet LOS policy.

SSSC = Side Street Stop Control, AWSC = All Way Stop Control

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Source: ESRI Maps Online; Dokken Engineering 11/29/2018; Created By: adellas

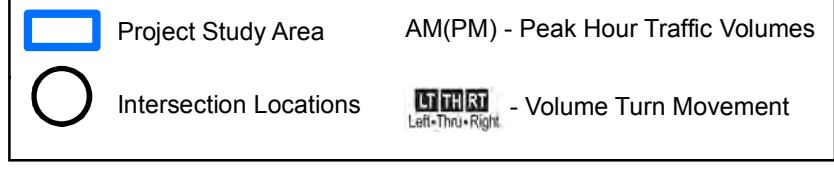
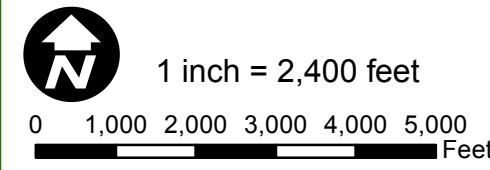


FIGURE 34
Design Year No Project
Peak Hour Intersection Volumes
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

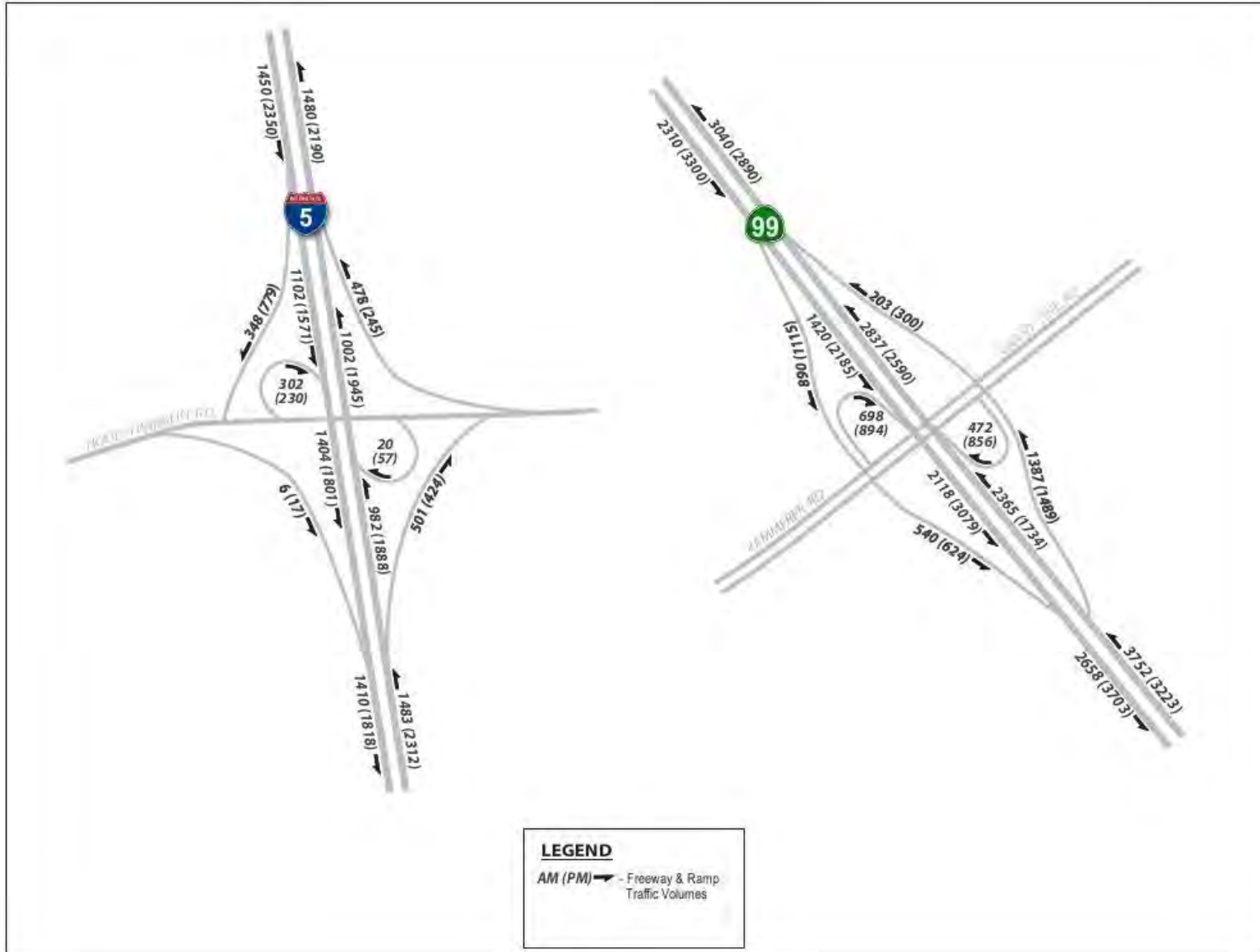
Table 53. Design Year No Project I-5 Freeway Mainline Peak Hour LOS

Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmpl)	LOS	Vol	Density (pcpmpl)	LOS
Cumulative - No Build							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	2545	22.6	C	2463	20.7	C
OFF - To Hood Franklin Rd	Diverge	189	29.5	D	128	27.6	C
ON - Loop from EB Hood Franklin Rd	Merge	57	26	C	70	25.1	C
ON- Slip from WB Hood Franklin Rd	Merge	387	29.4	D	245	26.5	C
ML - N/O Hood Franklin Rd	Basic	2800	25.4	C	2650	22.5	C
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1780	15.5	B	3090	27	D
OFF - To Hood Franklin Rd	Diverge	228	21.5	C	430	33.6	D
ON - Loop from WB Hood Franklin Rd	Merge	194	19.3	B	149	27.7	C
ON- Slip from EB Hood Franklin Rd	Merge	20	19.7	B	30	28.7	D
ML - S/O Hood Franklin Rd	Basic	1766	15.4	B	2839	24.2	C

Table 54. Design Year No Project SR-99 Freeway Mainline Peak Hour LOS

Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmpl)	LOS	Vol	Density (pcpmpl)	LOS
Cumulative - No Build							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	3752	34.1	D	3223	26.7	D
OFF - To Grant Line Rd	Diverge	1387	26.5	C	1489	21.2	C
ML - Loop from Kammerer Rd (Add Lane)	Merge	2837	15	B	2590	12.8	B
ON- Slip from WB Grant Line Rd	Merge	203	17.9	B	300	17.3	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	3040	25	C	2890	23.2	C
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2310	18.3	C	3300	27.2	D
OFF - To Kammerer Rd	Diverge	890	11.6	B	1115	21.6	C
ML - Loop from Grant Line Rd (Add Lane)	Merge	2118	11.2	B	3079	15.9	B
ON- Slip from EB Kammerer Rd	Merge	698	17	B	894	22.3	C
ML - Kammerer Rd to Dillard Rd	Basic	2658	21.3	C	3703	32.2	D

Figure 35. Design Year No Project Freeway Volumes



Design Year (2044) Plus Full Build Analysis

Analysis of Cumulative Plus Full Build Project conditions is based upon model forecasted traffic volumes and the proposed improvements associated with the proposed reconstruction and extension of Kammerer Road.

Project benefits include traffic volume reductions on parallel roadways in the City of Elk Grove, as shown in **Table 55**. Traffic operations on high volume arterial roads such as Elk Grove Boulevard and Laguna Boulevard decrease, improving overall circulation and operations under Cumulative Plus Full Build conditions.

Table 55. Daily Volume Decreases on Parallel Roadways (Cumulative Full Build)

Roadway	No Project ADT	Full Build ADT	Change
Laguna Boulevard			
West of SR-99	76,800	76,030	-770
East of Bruceville Road	15,440	14,230	-1,210
East of I-5	32,760	28,350	-4,410
Elk Grove Boulevard			
West of SR-99	60,470	58,900	-1,570
East of Bruceville Road	39,540	37,330	-2,210
East of I-5	28,960	24,080	-4,880
Whitelock Parkway			
West of Bruceville Road	17,270	11,980	-5,290

Design Year Plus Full Build Operating Conditions – Intersections

Table 56 summarizes AM and PM peak hour operating conditions at the study area intersections with the Full Build Alternative. During both the AM and PM peak hours, all intersections meet the LOS C JPA standard, except for Grant Line Road and East Stockton Boulevard/Survey Road (LOS F, AM). However, this intersection is already expected to operate at an unacceptable LOS without the project, assuming no geometric improvements are made. The projected level of service deficiency is primarily driven by development along East Stockton Boulevard. The City's General Plan assumes this development and provides that Kammerer Road can be widened up to a total of 8 lanes. If an 8-lane facility were provided, the intersection of Grant Line Road and East Stockton Boulevard/Survey Road would operate within the Connector's LOS C policy. Therefore, the impact is mitigated through construction of the City's General Plan

Design Year Plus Full Build AM and PM peak hour traffic volumes and lane geometry at study area intersections are illustrated in **Figure 36**.

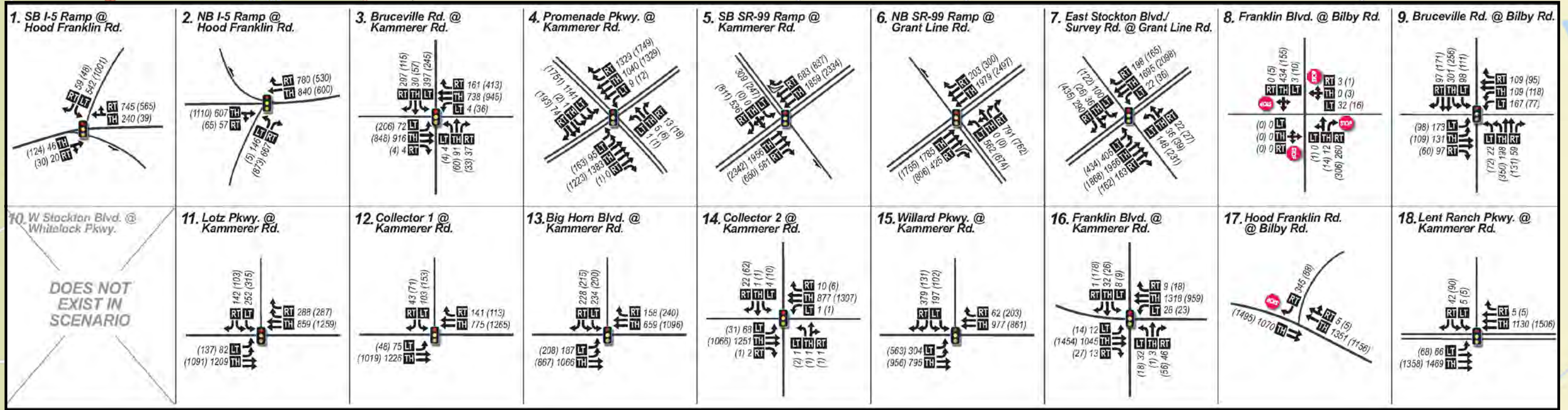
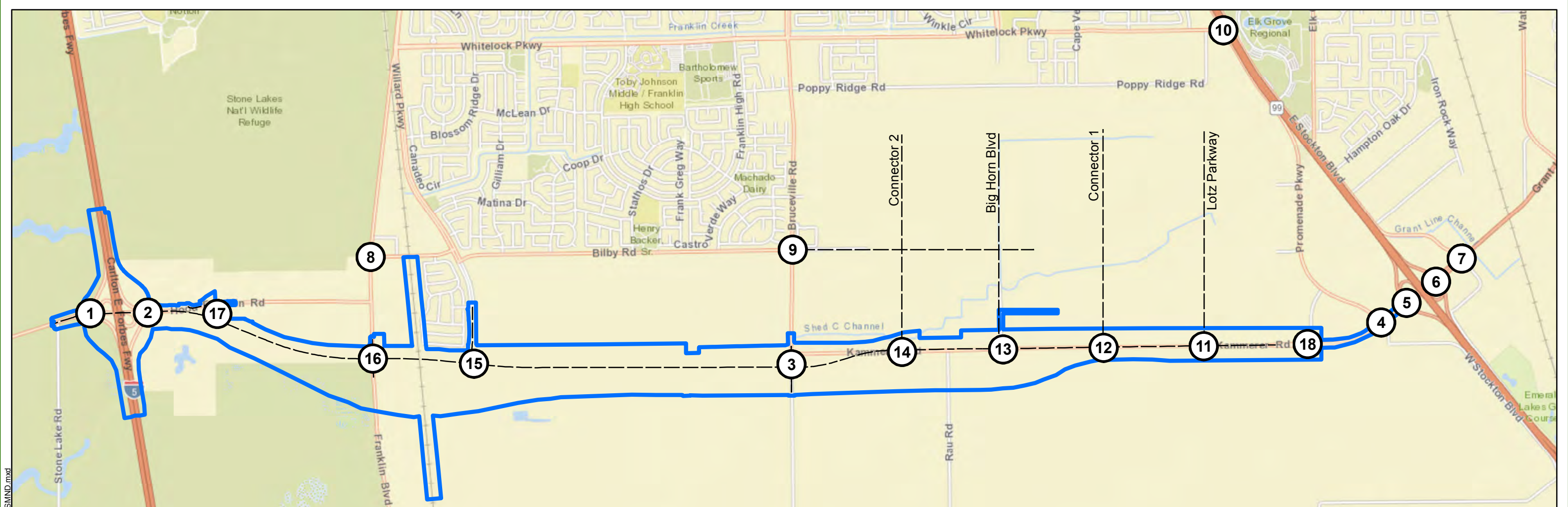
Table 56

Design Year and Design Year Plus Full Build Peak Hour Intersection Level of Service

Intersection	Jurisdiction	Cumulative Conditions			Cumulative Plus Full Build Conditions			
		Control	Int LOS	Delay	Control	Int LOS	Delay	
A.M. Peak Hour								
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	11.8	Signal	B	11.2
			Roundabout	B	15.7	Roundabout	A	7.8
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	14.5	Signal	A	9.9
			Roundabout	A	8.4	Roundabout	A	7.9
3	Bruceville Rd & Kammerer Rd	Elk Grove	Signal	C	24.5	Signal	C	29.9
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	C	25.1	Signal	C	26.2
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	B	12.9	Signal	B	12.7
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	B	17.6	Signal	B	18.1
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	D	42.5	Signal	D	50.0
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	F	52.5	AWSC	B	11.6
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	B	17.9	Signal	B	17.7
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	Existing Intersection Only			Existing Intersection Only		
11	Lotz Parkway & Kammerer Rd	Elk Grove	Signal	A	8.0	Signal	A	9.4
12	Collector 1 & Kammerer Rd	Elk Grove	Signal	A	6.4	Signal	A	7.5
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Signal	A	8.2	Signal	B	11.3
14	Collector 2 & Kammerer Rd	Elk Grove	Signal	A	5.5	Signal	B	11.0
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	16.1
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	10.7
17	Hood Franklin Rd & Kammerer Rd	County Rur.	Project Intersection Only			SSSC	F	92.5
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	3.8	Signal	A	4.2
P.M. Peak Hour								
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.1	Signal	B	16.7
			Roundabout	C	15.7	Roundabout	C	16.6
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.4	Signal	A	6.2
			Roundabout	B	10.1	Roundabout	B	14.6
3	Bruceville Rd & Kammerer Rd	Elk Grove	Signal	D	46.5	Signal	C	28.8
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	D	39.1	Signal	D	42.5
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	C	23.5	Signal	C	24.3
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	C	32.1	Signal	C	22.7
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	F	162.0	Signal	F	173.4
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	D	28.8	AWSC	A	8.8
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	B	19.7	Signal	B	17.4
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	Existing Intersection Only			Existing Intersection Only		
11	Lotz Parkway & Kammerer Rd	Elk Grove	Signal	A	9.6	Signal	B	11.4
12	Collector 1 & Kammerer Rd	Elk Grove	Signal	A	7.4	Signal	A	9.5
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Signal	A	8.0	Signal	B	13.6
14	Collector 2 & Kammerer Rd	Elk Grove	Signal	A	6.4	Signal	B	11.2
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	13.2
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	17.9
17	Hood Franklin Rd & Kammerer Rd	County Rur.	Project Intersection Only			SSSC	C	15.9
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	4.6	Signal	A	5.5

Note: Bold intersections do not meet LOS policy, Shaded intersections show project impacts

SSSC = Side Street Stop Control, AWSC = All Way Stop Control



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 Source: ESRI Maps Online; Dokken Engineering 11/29/2018; Created By: adellas

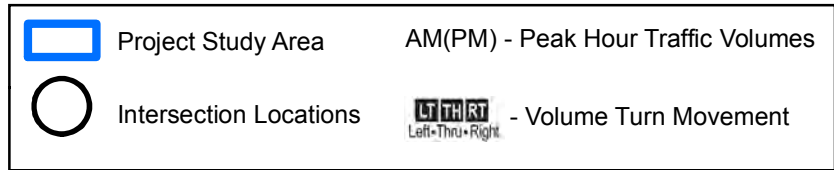
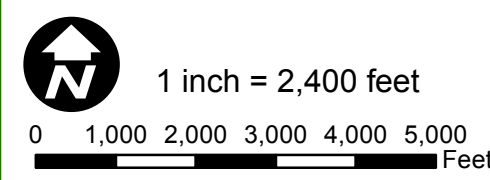


FIGURE 36
Design Year Plus Full Build
Peak Hour Intersection Volumes
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

Intersection-related improvements are included with the proposed extension and reconstruction of Kammerer Road. Under Design Year Plus Full Build conditions, new traffic signals with turn lanes would be installed at three intersections:

- Kammerer Road with Franklin Blvd
- Kammerer Road with Willard Parkway

Kammerer Road with Bruceville Road New traffic signals or roundabouts would be installed at two intersections with the Design Year Plus Full Build:

- Hood Franklin Road with the I-5 Southbound Off-Ramp
- Hood Franklin Road with the I-5 Northbound Off-Ramp

New traffic signals would be warranted for all five intersections under Cumulative Plus Full Build conditions.

Design Year Plus Full Build Operating Condition – Caltrans Freeway Facilities

Table 57 and **Table 58** summarize AM and PM peak hour operating conditions at the study area freeway ramps and freeway mainline segments. All of the freeway segments meet the applicable LOS standard. Cumulative Plus Full Build AM and PM peak hour freeway segment volumes are illustrated in **Figure 37**.

Opening Year Plus Ten Years (2034) Analysis

Analysis of Opening Year Plus Ten Years (Year 2034) conditions is provided in this section for both the No Project and Interim Project scenarios. The Interim Project assumes construction of a new two-lane roadway between Interstate 5 and Bruceville Road, and no roadway widening east of Bruceville Road. The purpose of evaluating this scenario is to establish that Phase 1 improvements (i.e. a two-lane roadway) have at least a ten-year design life.

A set of ten year growth forecasts were made for Year 2034, which assumes a project opening year of 2024. Volumes were estimated through straight-line interpolation between the Existing Plus Project and Cumulative Plus Project scenarios. Forecasts were made for both the interim project and full build. It should be noted that this forecasting methodology assumes growth is spread across all traffic analysis zones (TAZ's) in the City, in proportion to their growth potential. In reality, growth will likely not be spread so evenly. Still, this is a reasonable method of assessing what roadway operations might look like ten years after opening. This supplemental information may be useful in gauging the likely life of a two-lane facility.

Opening Year Plus Ten Years Analysis Summary

All newly-constructed and modified intersections would operate at LOS C or better in Year 2034. The intersection of Grant Line Road and E. Stockton Boulevard/Survey Road, which is located outside of the project limits, would operate at LOS E both without and with the project. Project benefits include traffic volume reductions on parallel roadways in the City of Elk Grove, as shown in **Table 59**. Traffic operations on high volume arterial roads such as Elk Grove Boulevard and Laguna Boulevard decrease, improving overall circulation and operations under Opening Year Plus Ten Years conditions.

Table 57

Design Year Plus Full Build I-5 Freeway Mainline Peak Hour LOS

Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcmppl)	LOS	Vol	Density (pcmppl)	LOS
Cumulative - No Build							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	2545	22.6	C	2463	20.7	C
OFF - To Hood Franklin Rd	Diverge	189	29.5	D	128	27.6	C
ON - Loop from EB Hood Franklin Rd	Merge	57	26	C	70	25.1	C
ON- Slip from WB Hood Franklin Rd	Merge	387	29.4	D	245	26.5	C
ML - N/O Hood Franklin Rd	Basic	2800	25.4	C	2650	22.5	C
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1780	15.5	B	3090	27	D
OFF - To Hood Franklin Rd	Diverge	228	21.5	C	430	33.6	D
ON - Loop from WB Hood Franklin Rd	Merge	194	19.3	B	149	27.7	C
ON- Slip from EB Hood Franklin Rd	Merge	20	19.7	B	30	28.7	D
ML - S/O Hood Franklin Rd	Basic	1766	15.4	B	2839	24.2	C
Cumulative - Full Build							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	2746	24.8	C	2763	23.7	C
OFF - To Hood Franklin Rd	Diverge	813	31.7	D	878	30.6	D
ON - Loop from EB Hood Franklin Rd	Merge	57	21.8	C	65	20.6	C
ON- Slip from WB Hood Franklin Rd	Merge	780	27.8	C	530	24.3	C
ML - N/O Hood Franklin Rd	Basic	2770	25.1	C	2480	20.9	C
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1720	15.0	B	3490	32.3	D
OFF - To Hood Franklin Rd	Diverge	601	20.9	C	1049	37.6	E
ON - Loop from WB Hood Franklin Rd	Merge	745	19.0	B	565	26.9	D
ON- Slip from EB Hood Franklin Rd	Merge	20	20.8	C	30	30.3	D
ML - S/O Hood Franklin Rd	Basic	1884	16.4	B	3036	26.4	D

Table 58

Design Year Plus Full Build SR-99 Freeway Mainline Peak Hour LOS

Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmpl)	LOS	Vol	Density (pcpmpl)	LOS
Cumulative - No Build							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	3752	34.1	D	3223	26.7	D
OFF - To Grant Line Rd	Diverge	1387	26.5	C	1489	21.2	C
ML - Loop from Kammerer Rd (Add Lane)	Merge	2837	15	B	2590	12.8	B
ON- Slip from WB Grant Line Rd	Merge	203	17.9	B	300	17.3	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	3040	25	C	2890	23.2	C
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2310	18.3	C	3300	27.2	D
OFF - To Kammerer Rd	Diverge	890	11.6	B	1115	21.6	C
ML - Loop from Grant Line Rd (Add Lane)	Merge	2118	11.2	B	3079	15.9	B
ON- Slip from EB Kammerer Rd	Merge	698	17	B	894	22.3	C
ML - Kammerer Rd to Dillard Rd	Basic	2658	21.3	C	3703	32.2	D
Cumulative - Full Build							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	3765	34.3	D	3227	26.7	D
OFF - To Grant Line Rd	Diverge	1353	26.6	C	1436	21.2	C
ML - Loop from Kammerer Rd (Add Lane)	Merge	425	15	B	806	13.5	B
ON- Slip from WB Grant Line Rd	Merge	203	17.9	C	300	17.3	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	3040	25	C	2890	23.2	C
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2260	17.9	B	3280	27	D
OFF - To Kammerer Rd	Diverge	845	12.3	B	1058	21.4	C
ML - Loop from Grant Line Rd (Add Lane)	Merge	683	11.1	B	837	15.8	B
ON- Slip from EB Kammerer Rd	Merge	581	17.2	B	650	22.4	C
ML - Kammerer Rd to Dillard Rd	Basic	2679	21.5	C	3709	32.3	D

Figure 37. Cumulative Plus Full Build Freeway Volumes

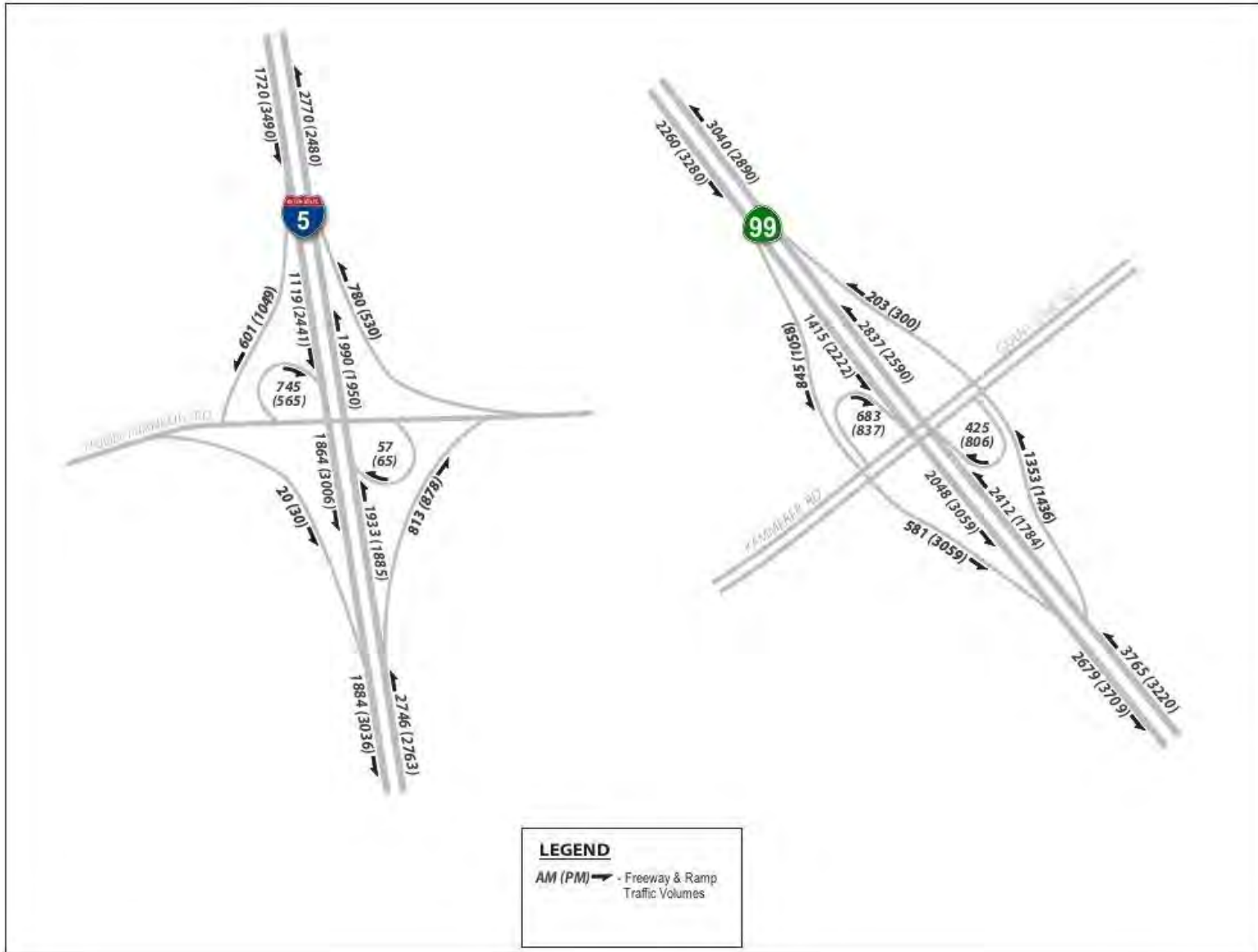


Table 59. Daily Volume Decreases on Parallel Roadways (Interim Project)

Roadway	No Project ADT	Interim Project ADT	Change
Laguna Boulevard			
West of SR-99	65,520	65,160	-360
East of Bruceville Road	9,930	9,430	-500
East of I-5	31,190	28,710	-2,480
Elk Grove Boulevard			
West of SR-99	56,590	55,720	-870
East of Bruceville Road	38,630	37,220	-1,410
East of I-5	27,840	24,530	-3,310
Whitelock Parkway			
West of Bruceville Road	14,860	11,160	-3,700

Opening Year Plus Ten Years No Project and Interim Project Operating Conditions – Intersections

Opening Year Plus Ten Years No Project AM and PM peak hour traffic volumes and lane geometry at study area intersections are illustrated in **Figure 38**. Likewise, AM and PM peak hour traffic volumes and lane geometries for Opening Year Plus Ten Years Plus Interim Project are illustrated in **Figure 39**. It should be noted that in the Interim Project Alternative, Kammerer Road is assumed to remain as a two-lane facility between Lent Ranch Parkway and Bruceville Road. The extension from Bruceville Road to I-5 would also be a two-lane facility.

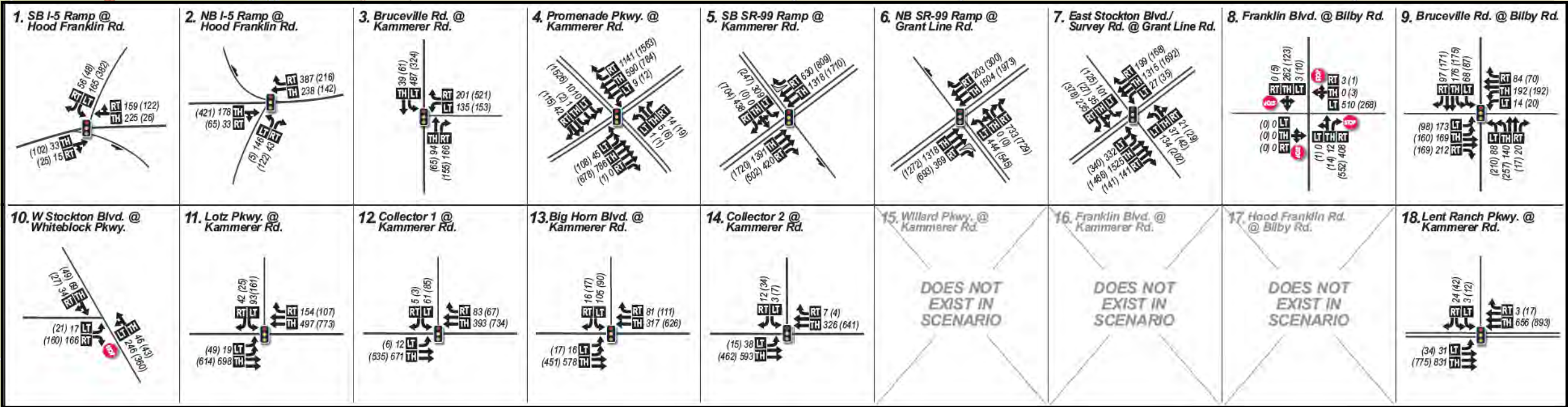
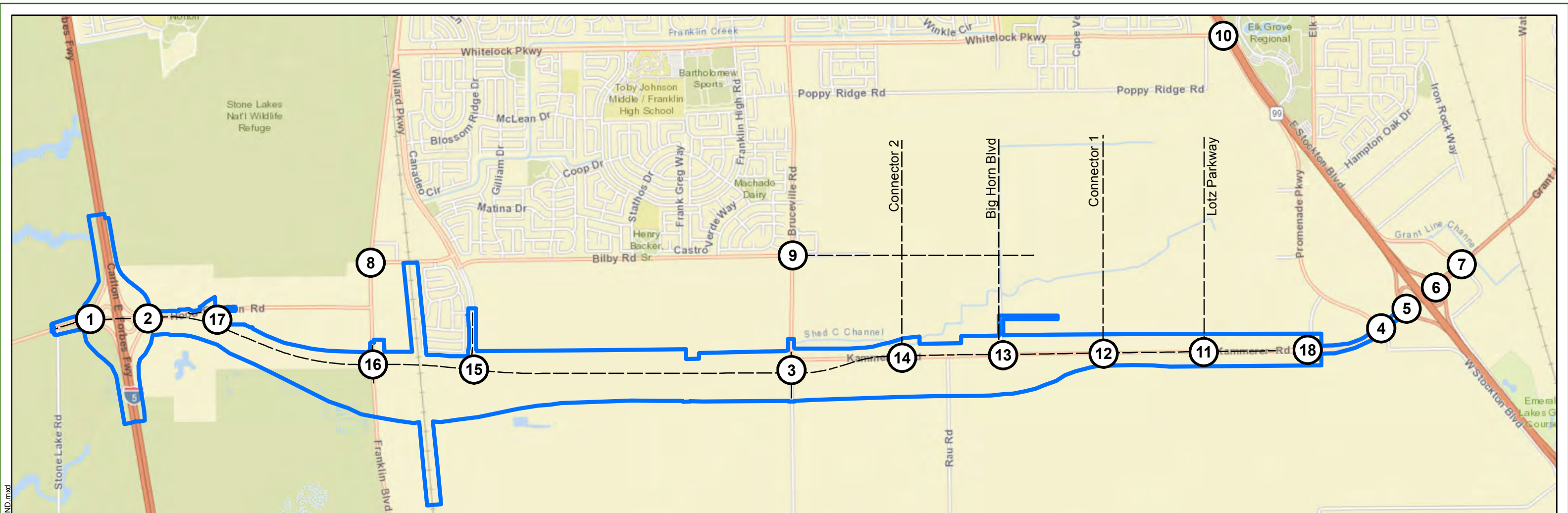
Table 60 summarizes AM and PM peak hour operating conditions at the study area intersections for Opening Year Plus Ten Years No Project and Opening Year Plus Ten Years Interim Project. In the Opening Year Plus Ten Years No Project scenario, three intersections would not operate acceptably:

- Kammerer Road and Bruceville Road (LOS F, AM and PM peak hours)
- Grant Line Road and East Stockton Boulevard/Survey Road (LOS E in the PM peak hour)
- Franklin Road and Bilby Road (LOS E, AM peak hour)

In the Opening Year Plus Ten Years Plus Interim Project scenario, one intersection would not operate acceptably:

- Grant Line Road and East Stockton Boulevard/Survey Road (LOS E in the PM peak hour)

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Source: ESRI Maps Online; Dokken Engineering 11/29/2018; Created By: adellas

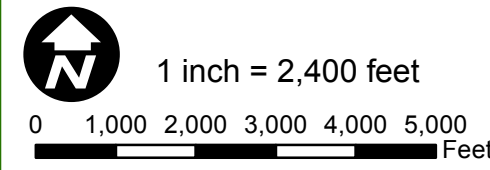
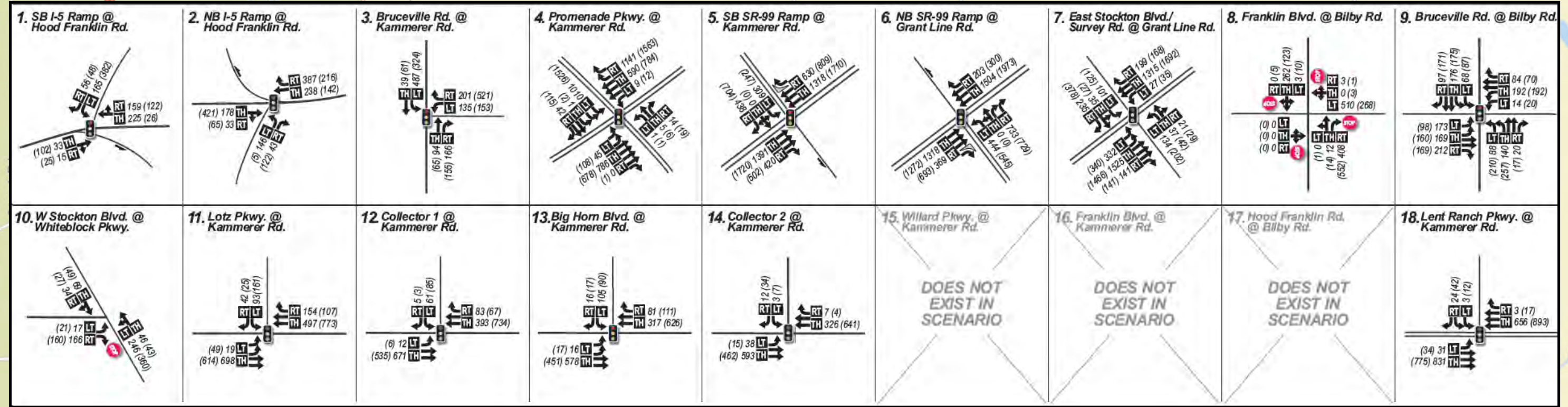
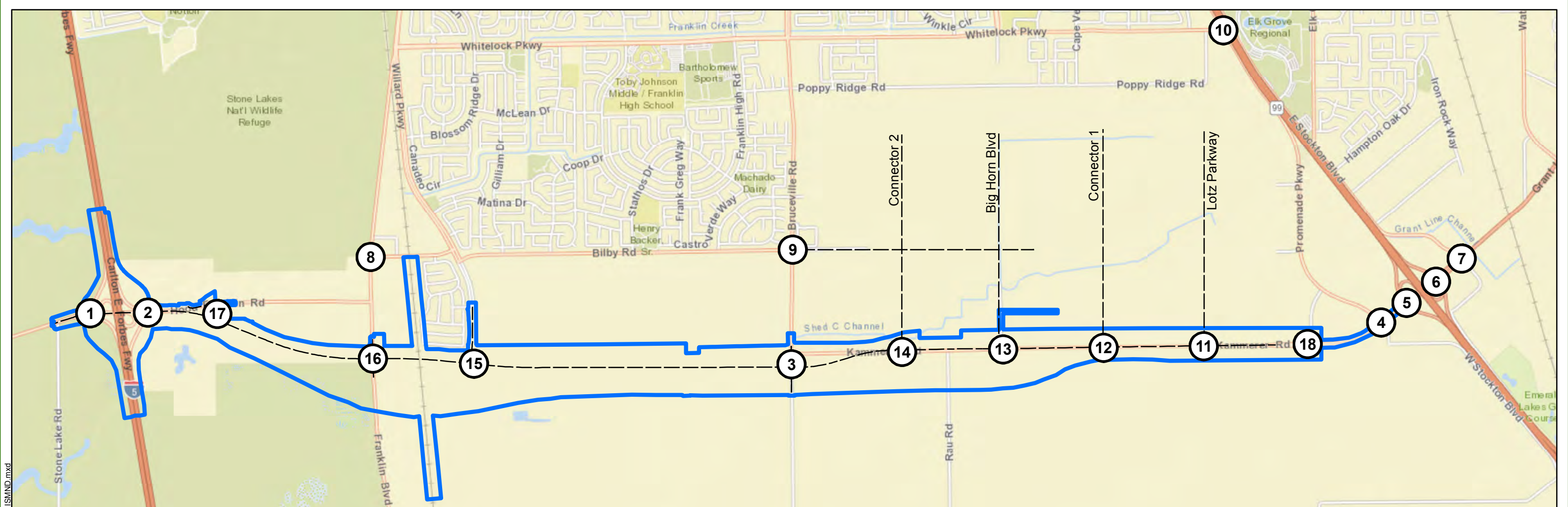


FIGURE 38
Year 2034 No Project
Peak Hour Intersection Volumes
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California



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Source: ESRI Maps Online; Dokken Engineering 11/29/2018; Created By: adellas

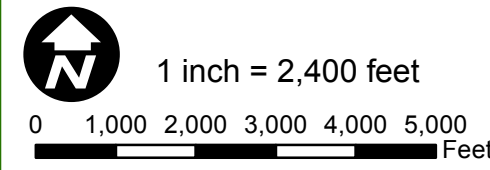


FIGURE 38
Year 2034 Plus Interim Project
Peak Hour Intersection Volumes
 Joint Powers Authority Capital SouthEast Connector
 A1/A2 Kammerer Road Extension Project
 City of Elk Grove and Sacramento County, California

Table 60

Ten Year (2034) Projected Intersection LOS for Interim Project

Intersection	Jurisdiction	2034 No Project Conditions			2034 Plus Interim Project Conditions			
		Control	Int LOS	Delay	Control	Int LOS	Delay	
A.M. Peak Hour								
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	11.8	Signal	A	9.9
			-	-	-	Roundabout	A	5.3
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.8	Signal	A	8.5
			-	-	-	Roundabout	A	4.4
3	Bruceville Rd & Kammerer Rd	Elk Grove	SSSC	F	308.1	Signal	C	25.1
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	B	15.7	Signal	B	15.2
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	B	10.3	Signal	B	10.1
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	B	14.1	Signal	B	14.3
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	C	34.0	Signal	C	34.9
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	E	40.8	AWSC	A	10.0
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	B	15.1	Signal	B	11.0
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	AWSC	A	10.0	AWSC	A	10.0
11	Lotz Parkway & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
12	Collector 1 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
14	Collector 2 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	15.7
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	12.2
17	Hood Franklin Rd & Kammerer Rd	Elk Grove	Project Intersection Only			Unsignalized	-	-
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	3.6	Signal	A	3.6
P.M. Peak Hour								
1	SB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.0	Signal	B	11.2
			-	-	-	Roundabout	B	11.9
2	NB I-5 Ramp & Hood Franklin Rd	Caltrans	SSSC	B	13.0	Signal	A	5.5
			-	-	-	Roundabout	A	9.1
3	Bruceville Rd & Kammerer Rd	Elk Grove	SSSC	F	177.8	Signal	C	23.9
4	Promenade Pkwy & Kammerer Rd	Elk Grove	Signal	C	20.8	Signal	C	21.5
5	SB SR-99 Ramp & Kammerer Rd	Caltrans	Signal	B	14.5	Signal	B	14.4
6	NB SR-99 Ramp & Grant Line Rd	Caltrans	Signal	B	15.6	Signal	B	16
7	East Stockton Blvd/ Survey Rd & Grant Line Rd	Elk Grove	Signal	E	71.9	Signal	E	79.0
8	Franklin Blvd & Bilby Rd	Elk Grove	AWSC	C	21.3	AWSC	A	9
9	Bruceville Rd & Bilby Rd	Elk Grove	Signal	C	20.7	Signal	B	10.4
10	West Stockton Blvd & Whitelock Pkwy	Elk Grove	AWSC	B	12.1	AWSC	B	11.8
11	Lotz Parkway & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
12	Collector 1 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
13	Big Horn Blvd & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
14	Collector 2 & Kammerer Rd	Elk Grove	Cumulative Intersection Only			Cumulative Intersection Only		
15	Willard Pkwy & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	A	9.9
16	Franklin Blvd & Kammerer Rd	Elk Grove	Project Intersection Only			Signal	B	11.5
17	Hood Franklin Rd & Kammerer Rd	Elk Grove	Project Intersection Only			Unsignalized	-	-
18	Lent Ranch Pkwy & Kammerer Rd	Elk Grove	Signal	A	4.3	Signal	A	4.3
Note: Bold intersections do not meet LOS policy.								
SSSC = Side Street Stop Control, AWSC = All Way Stop Control								

This intersection would not meet the City's LOS D policy or the Connector JPA's LOS C policy, with or without the project. The poor operations are primarily driven by growth along E. Stockton Boulevard. The City's General Plan assumes this development and provides that Kammerer Road can be widened up to a total of 8 lanes. If an 8-lane facility were provided, the intersection of Grant Line Road and East Stockton Boulevard/Survey Road would operate within the Connector's LOS C policy. The Project is not required to implement any mitigations under this scenario, as it is not required by CEQA.

Opening Year Plus Ten Years Operating Conditions – Caltrans Freeway Facilities

Table 61 and **Table 62** summarize AM and PM peak hour operating conditions at the study area freeway ramps and freeway mainline segments. All of the freeway segments meet the applicable LOS standard. Opening Year Plus Ten Years Plus Interim Project AM and PM peak hour freeway segment volumes are illustrated in **Figure 40**.

Intelligent Transportation System (ITS) Considerations

The Capital SouthEast Connector is well suited to host a variety of ITS technologies because of its location and importance to regional and local traffic in the Sacramento Region. Proactive inclusion of ITS technologies as an initial phase management tool will enhance the Project's effectiveness in accommodating traffic. This enhanced effectiveness will improve the Region's ability to respond to traffic incidents and provide a reliable parallel capacity/alternate route to US-50 and SR-99. In particular, traffic monitoring and traveler information technologies may be valuable tools to consider for this Project. Including them during the preliminary development stages provides ample opportunity to analyze and plan for their associated infrastructure.

ITS technologies that could be considered include traffic monitoring stations, Closed Circuit Television cameras, changeable message signs, ramp metering, lane use signs, and transit signal priority to enhance traffic management and provide drivers with useful real-time traffic information to make informed decisions. One or more of these technologies could prolong the life of the initial phases at grade signalized intersection configuration by maximizing the efficiency of the intersections through coordinated and intelligent traffic signal operation.

The integration of the Project into the member jurisdictions' transportation systems should also consider expansion and application of their respective ITS planning and overall implementation strategies. The comprehensive implementation of ITS technologies will produce the most benefit to the corridor, including maximizing the useful life of interim traffic control strategies.

The City developed an ITS master plan in 2004 and has completed the ITS phase IV in June 2018. There are several remaining phases of the City's ITS master plan that have not been constructed; however, the City will use the SACOG regional ITS when it is implemented. At the time of this report, SACOG is planning the release of a comprehensive, region-wide ITS Architecture and Master Plan Update. This Project is understood to be the result of needs expressed by the various SACOG partner agencies, including the City, for an update of aging ITS Master Plans and the regional plan with which they are associated. This regional effort will update and replace many of the regional partners' individual ITS Master Plans, the Regional ITS Master Plan (2005) and the ITS Architecture (2005). Once complete the Regional ITS Architecture and Regional ITS Master Plan will serve as the basis for long term investments and planning for operations and ITS investments.

Table 61

Year 2034 Plus Interim Project I-5 Freeway Mainline Peak Hour LOS

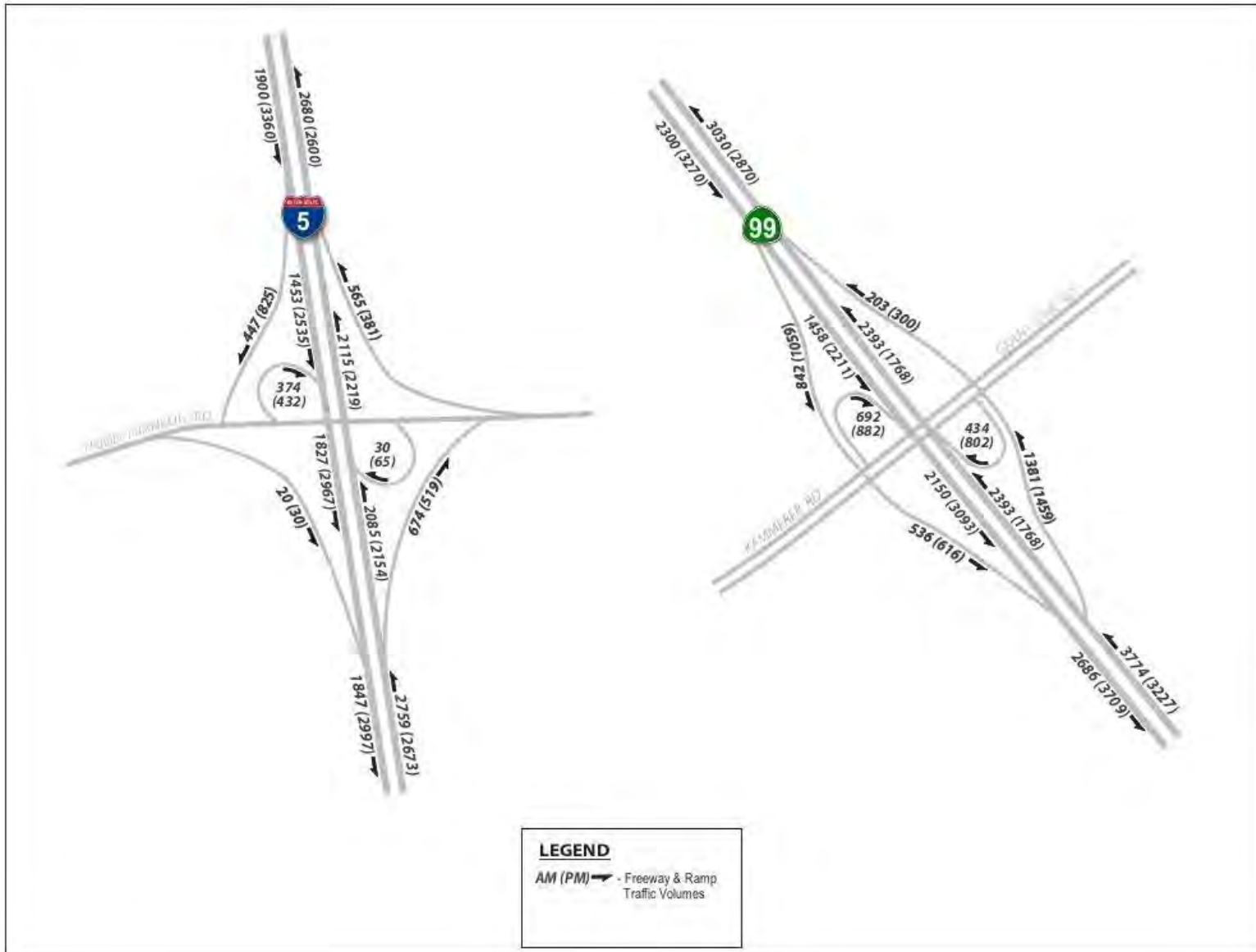
Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmpl)	LOS	Vol	Density (pcpmpl)	LOS
Cumulative - No Build							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	2545	22.6	C	2463	20.7	C
OFF - To Hood Franklin Rd	Diverge	189	29.5	D	128	27.6	C
ON - Loop from EB Hood Franklin Rd	Merge	57	26	C	70	25.1	C
ON- Slip from WB Hood Franklin Rd	Merge	387	29.4	D	245	26.5	C
ML - N/O Hood Franklin Rd	Basic	2800	25.4	C	2650	22.5	C
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1780	15.5	B	3090	27	D
OFF - To Hood Franklin Rd	Diverge	228	21.5	C	430	33.6	D
ON - Loop from WB Hood Franklin Rd	Merge	194	19.3	B	149	27.7	C
ON- Slip from EB Hood Franklin Rd	Merge	20	19.7	B	30	28.7	D
ML - S/O Hood Franklin Rd	Basic	1766	15.4	B	2839	24.2	C
Cumulative - Interim Project							
I-5 Northbound							
ML - S/O Hood Franklin Rd	Basic	2746	24.8	C	2763	23.7	C
OFF - To Hood Franklin Rd	Diverge	813	31.7	D	878	30.6	D
ON - Loop from EB Hood Franklin Rd	Merge	57	21.8	C	65	20.6	C
ON- Slip from WB Hood Franklin Rd	Merge	780	27.8	C	530	24.3	C
ML - N/O Hood Franklin Rd	Basic	2770	25.1	C	2480	20.9	C
I-5 Southbound							
ML - N/O Hood Franklin Rd	Basic	1720	15.0	B	3490	32.3	D
OFF - To Hood Franklin Rd	Diverge	601	20.9	C	1049	37.6	E
ON - Loop from WB Hood Franklin Rd	Merge	745	19.0	B	565	26.9	D
ON- Slip from EB Hood Franklin Rd	Merge	20	20.8	C	30	30.3	D
ML - S/O Hood Franklin Rd	Basic	1884	16.4	B	3036	26.4	D

Table 62

Year 2034 Plus Interim Project SR-99 Freeway Mainline Peak Hour LOS

Segment	Type	AM Peak Hour			PM Peak Hour		
		Vol	Density (pcpmpl)	LOS	Vol	Density (pcpmpl)	LOS
Cumulative - No Build							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	3752	34.1	D	3223	26.7	D
OFF - To Grant Line Rd	Diverge	1387	26.5	C	1489	21.2	C
ML - Loop from Kammerer Rd (Add Lane)	Merge	2837	15	B	2590	12.8	B
ON- Slip from WB Grant Line Rd	Merge	203	17.9	B	300	17.3	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	3040	25	C	2890	23.2	C
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2310	18.3	C	3300	27.2	D
OFF - To Kammerer Rd	Diverge	890	11.6	B	1115	21.6	C
ML - Loop from Grant Line Rd (Add Lane)	Merge	2118	11.2	B	3079	15.9	B
ON- Slip from EB Kammerer Rd	Merge	698	17	B	894	22.3	C
ML - Kammerer Rd to Dillard Rd	Basic	2658	21.3	C	3703	32.2	D
Cumulative - Interim Project							
SR-99 Northbound							
ML - Dillard Rd to Grant Line Rd	Basic	3774	34.4	D	3227	26.7	D
OFF - To Grant Line Rd	Diverge	1381	26.7	C	1459	21.2	C
ML - Loop from Kammerer Rd (Add Lane)	Merge	434	14.9	B	802	13.4	B
ON- Slip from WB Grant Line Rd	Merge	203	18.1	C	300	17.2	B
ML - Grant Line Rd to Elk Grove Blvd	Basic	3030	24.9	D	2870	23	D
SR-99 Southbound							
ML - Elk Grove Blvd to Kammerer Road	Basic	2300	18.2	D	3270	26.8	D
OFF - To Kammerer Rd	Diverge	842	12.7	D	1059	21.3	C
ML - Loop from Grant Line Rd (Add Lane)	Merge	692	11.3	B	882	16	B
ON- Slip from EB Kammerer Rd	Merge	536	17.1	C	616	22.3	C
ML - Kammerer Rd to Dillard Rd	Basic	2686	21.6	D	3709	30.4	D

Figure 40. Opening Year Plus Ten Years Plus Interim Project Freeway Volumes



This regional plan will assist SACOG in delivering its MTP and selection of projects in future funding cycles.

In an effort to support this level of interface with regional and adjacent jurisdictions, and to provide flexibility for long-term Connector-wide infrastructure, it is recommended that the Project include at least one 144-strand, single-mode fiber optic trunk line with dedicated ITS-related infrastructure (conduits, pull boxes, etc.) to support the long-term vision of Connector-wide and local advanced traffic management.

Implementation of the Project provides an opportunity for the Connector Project to realize immediate benefits by integrating and collaborating with the County and the City's traffic monitoring and traveler information systems, as well as Caltrans District 3. These initial investments could include the installation of dynamic message signs at strategic locations outside of the Connector limits to support the identification of alternate routes under specific conditions (e.g., incidents and special events), information sharing between jurisdictions (including Caltrans), as well as simply a communications medium over which a variety of information can be shared. The trunk line will become the pilot for how the rest of the system is developed, so it is a critical element to consider at this stage of the program.

The Project meets the goals of the Connector JPA PEIR. The goals of the Connector JPA PEIR include improving mobility, access, and connections between residential and nonresidential land uses, which have been compromised by increasing congestion, and to assist in preservation of open space and threatened habitats. The Project is intended to link employment centers and residential areas in the corridor and contribute to the remedy for current and future deficiencies in transportation capacity, safety for pedestrians and non-motorized vehicle users, and land use compatibility.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measure HAZ-3 has been incorporated into the following Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to transportation/traffic would be reduced to a less than significant level:

TRF-1: The implementing agency, as applicable, will require that the contractor(s) prepare a traffic management plan (TMP) during the final stage of project design to ensure there is no interference with emergency vehicles/services or response/evacuation plans. The plan will list procedures, specific emergency response, and evacuation measures to be followed during emergencies. The contractor will prepare this manual, subject to review and approval by the implementing agency, and distribute the approved plan to contract workers involved in the proposed project before construction and during operation of the project. Implementation of the approved plan will be a requirement of the construction contract. The implementing agency will provide project maps to emergency personnel (e.g., fire protection agencies, police and sheriff departments, California Highway Patrol) that describe construction activities as well as access roads to ensure proper emergency response to all parts of the proposed project.

Standards found in Caltrans' TMP guidelines (2009) outline the basic requirements for such plans. The Connector JPA or local agencies will require the following measures to be implemented as part of project construction.

- The contractor will be required to prepare and implement a TMP that identifies the locations of temporary detours and signage to facilitate local traffic/truck patterns and through-traffic requirements.
- The contractor will provide emergency service providers (i.e., law enforcement, fire protection, and ambulance services) adequate notice of any street closures during the construction phases of the proposed project.
- Construction activities will be coordinated to avoid blocking or limiting auto, truck, bike, and pedestrian access to homes and businesses to the extent possible. Residents will be notified in advance about potential access or parking effects before construction activities begin. Facilities such as traffic lights, turn pockets, or common driveway access will be provided continued access. Alternative methods of providing access could also be provided, such as relocation of existing access driveways and sidewalks, provision of frontage roads, construction of joint parking areas and pedestrian access from parking areas.
- A comprehensive marketing campaign throughout the larger market area will be provided to ensure that customers know that businesses are operating during construction, and how to reach them. This would include signage posted well outside the impacted area, on routes leading into the construction area.
- Any interchange, ramp, or road closures required during construction will, to the extent possible, be limited to nighttime hours to reduce effects on businesses within or adjacent to the project limits.
- Construction activities will be coordinated to avoid blocking or limiting access to businesses in or adjacent to the project area during business hours. Businesses will be notified in advance concerning construction activities before construction begins near businesses.
- The TMP will be prepared to address short-term disruptions in existing circulation patterns during construction. For example, the TMP will identify the locations of temporary detours or temporary roads to facilitate local traffic circulation and through-traffic requirements.
-

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to transportation/traffic. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to transportation/traffic would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to transportation/traffic.

2.17 Tribal Cultural Resources

REGULATORY SETTING

CEQA established statutory requirements for establishing the significance of “tribal cultural resources” in PRC Section § 21080.3.1 and Chapter 532 Statutes of 2014. As defined by PRC § 21074, a tribal cultural resource (TCR) is either of the following:

1. Sites, features, places cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either included in the state register of historical resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant based on the criteria for listing in the state register. Lead agencies must consider the significance of a resource to a California Native American tribe in making this determination.

Effective July 1, 2015, CEQA was revised to include early consultation with California Native American tribes and consideration of TCRs. These changes were enacted through Assembly Bill 52 (AB 52). By including TCRs early in the CEQA process, AB 52 intends to ensure that California Native American tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to TCRs. CEQA now establishes that a “project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment” (PRC § 21084.2). To help determine whether a project may have such an adverse effect, the PRC requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. The consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project (PRC § 21080.3.1). Consultation must consist of the lead agency providing formal notification, in writing, to the tribes that have requested notification of proposed projects within their traditionally and culturally affiliated area. AB 52 stipulates that the Native American Heritage Commission (NAHC) shall assist the lead agency in identifying the California Native American tribes that are traditionally and culturally affiliated within the project area. If the tribe wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. Once the lead agency receives the tribe’s request to consult, the lead agency must then begin the consultation process within 30 days.

If a lead agency determines that a project may cause a substantial adverse change to TCRs, the lead agency must consider measures to mitigate that impact. Consultation concludes when either:

- 1) The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a TCR, or
- 2) A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC § 21080.3.2).

Under existing law, environmental documents must not include information about the locations of an archaeological site or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records act. TCRs are also exempt from disclosure.

AFFECTED ENVIRONMENT

As previously stated in Section 2.5, an APE was delineated to encompass all Project features, staging areas, and other areas of potential ground disturbance during construction. In order to determine whether a TCR would be impacted by the Project, a Sacred Lands File search was requested from the NAHC; a records search of archaeological sites and reports on file at the NCIC was requested; archaeological field surveys were conducted; and initial Project notification letters were sent to the UAIC, Wilton Rancheria, Lone Band of Miwok Indians, and Buena Vista Rancheria, all of which are California Native American Tribal Governments which have requested to be notified of projects in this area. The Wilton Rancheria responded to the AB 52 notification letter within the 30-day time frame, and therefore are considered active participants in the AB 52 consultation process.

The Sacred Lands File search did not identify any Native American cultural resources within the APE; however, the NCIC records search did identify a previously recorded Native American cultural resource within the Project area. An archaeological site record documenting the resource indicates that components of the cultural resource were removed during the late 1940s/early 1950s. The mapped location of the previously recorded Native American cultural resource identified by the NCIC was visually inspected in 2016 to identify the presence of any artifacts, features, or other indicators that a surface or subsurface component of resource was still present. One possible feature and two possible artifacts were noted; however, lack of property access prevented additional identification efforts, consisting of subsurface investigations, which would have definitively determined the presence and extent of the resource.

Due to the restricted property access, assessment of whether components of the cultural resource remain within the Project's APE is not possible at this time. As a result, this cultural resource is being assumed eligible for listing on the National Register and the California Register, for the purposes of this Project only; therefore, this resource is considered a TCR under CEQA, for the purposes of this Project only.

ENVIRONMENTAL CONSEQUENCES

Due to the restricted property access, a phased approach is needed to complete cultural resource identification and evaluation efforts of the assumed eligible TCR. The phased approach would be initiated upon acquiring access to properties required to construct the Project. Stipulations and procedures detailing the necessary actions of the phased approach are detailed in the *Programmatic Agreement Between the California Department of Transportation and the State Historic Preservation Officer Regarding the Capital SouthEast Connector A1/A2 Kammerer Road Project* (Kammerer Programmatic Agreement). The SHPO, Caltrans, City, County, Connector JPA and the Wilton Rancheria will consult on the stipulations outlined in the Kammerer Programmatic Agreement to ensure that all potential Project impacts to the Native American cultural resources identified in the APE shall be mitigated to a less than significant level, should the additional identification and evaluation efforts detailed in the Kammerer Programmatic Agreement confirm the resource is an eligible TCR.

The Kammerer Programmatic Agreement also states that should further assessment of this resource confirm it is eligible for the NRHP/CRHR, and thus a TCR, mitigation would consist of protection in place where possible and data recovery through excavation where construction impacts cannot be avoided.

Additionally, a Memorandum of Understanding for the treatment of Native American human remains, should any be discovered as a result of earthmoving activities, was also prepared. Caltrans, the City, the County, the Connector JPA, and the Wilton Rancheria will consult on the stipulations outlined in the Memorandum of Understanding, to ensure that impacts to the Native American human remains, should any be identified in the APE, shall be mitigated to a less than significant level.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Avoidance, minimization and/or mitigation measures **CR-1** and **CR-4** presented in Section 2.5 “Cultural Resources” would reduce the impact to TCRs to a less than significant impact. No additional avoidance, minimization and/or mitigation measures are proposed.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to significant and unavoidable impacts to cultural resources. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to cultural resources or TCRs would occur.

The Project would have a **less than significant impact with mitigation incorporated** relating to TCRs.

2.18 Utilities and Service Systems

REGULATORY SETTING

According to Appendix G of the State CEQA Guidelines, the following are indicators of potential significant impacts on utilities and service systems:

- Exceed wastewater treatment requirements of the applicable RWQCB;
- 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;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Not have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements;
- Result in a determination by a wastewater treatment provider that there is not adequate capacity to serve a project's projected demand;
- Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Not comply with federal, state, and local statutes and regulations related to solid waste.

Significant impacts to public services would occur if the project would:

- Not have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements; or
- Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.

AFFECTED ENVIRONMENT

Utilities

Utilities to the Project area are provided by several entities including the SMUD, PG&E, AT&T, Consolidated Communications (SureWest), MCI (Verizon), Sprint, Sacramento Area Sewer District, SCWA, and Sacramento County Public Works Agency Waste Management and Recycling Department. Within and outside of City limits for the Project area, SMUD provides electrical and gas services; PG&E provides natural gas; AT&T, SureWest, Verizon, and Sprint provide telecommunications services; water services, public wastewater conveyance, treatment, and disposal are provided through the Sacramento Area Sewer District; the Sacramento County Water Agency provides drinking water within each agency's district; and the Sacramento County Public Works Agency Waste Management and Recycling Department provides waste management collection services.

SMUD operates and maintains one electrical substation south of Bruceville Road, near the Project area, and two new distribution substation sites are planned to provide reliable electrical service for planned development in the area: one located to the east side of Franklin Boulevard north of the Project area, and the other located within the SEPA planned development area. SMUD also has a large electrical transmission line running along the east side of the UPRR tracks.

Solid Waste

For purposes of this analysis, solid waste from Project-related construction activities is assumed to be disposed of locally. The County has nine active solid waste facilities, including three transfer stations and two landfills.

Emergency Services

Fire protection, rescue, and emergency medical services in the City and areas of south Sacramento County, including the Project area, are provided by the Cosumnes Community Services District (CCSD) Fire Department, which is a separate agency from the City. The CCSD Fire Department services an area of more than 157 square miles and includes the Cities of Elk Grove and Galt. The County Sheriff's Department provides police protection services to the Project location outside Elk Grove City limits and the Elk Grove Police Department provides police protection services to the Project area within the City limits.

The Safety Elements of the County and City General Plans include goals, policies, and implementation measures/actions to identify potential hazards and address disaster planning and public protection. Other emergency planning documents applicable to the Project area include the Sacramento County Evacuation Plan and the Sacramento County Emergency Operations Plan.

Several hospitals in the City provide emergency services, including surgery and urgent care. The nearest hospital is the Dignity Health Methodist Hospital of Sacramento, approximately 2 miles north of the Project area. Less than 3 miles north of the Project area several more full-service hospitals, including the Sutter Elk Grove Surgery Center and MDSTAT Urgent Care facility.

Water Supply

In the County, there are at least 28 public and private water purveyors that are coordinated by the SCWA. Within the Project area, it is anticipated that SCWA will be the main provider of water supply services.

Stormwater and Sewage Systems

Within urbanized area of the region, stormwater is collected in municipal systems and conveyed to the rivers, in accordance with state water quality regulations. As part of the Sacramento Stormwater Quality Partnership (SSQP), the City and the County have the overarching goal of protecting the Sacramento community's water quality and reducing pollutants in stormwater discharges.

Within the Project area, secondary and advanced sewage disposal and treatment is the responsibility of the Sacramento Regional County Sanitation District (SRCSD). The SRCSD covers most of the County residents. The SRCSD is responsible for operating the wastewater treatment plant located in Freeport. The County-wide facility is capable of processing up to 300 million gallons of sewage daily. The plant is designed as a secondary treatment plant at this time. In addition to running this plant, the SRCSD is responsible for maintaining large interceptors conveying wastewater from collection points within the cities and urbanized portions of the county and constructing new interceptors as necessary. Portions of the Project area are not served by the district and are un-sewered. Residences in these areas use onsite septic systems.

ENVIRONMENTAL CONSEQUENCES

Underground and overhead public utilities that conflict with the proposed roadway improvements would be relocated either before or during Project construction. The proposed Project is anticipated to include public utilities along the Project corridor. Avoidance and Minimization Measure **UTIL-1** would be implemented to avoid and minimize impacts to utility customers and/or companies.

The proposed Project railroad overhead crossing would construct Kammerer Road over the UPRR. SMUD operates two 230kV transmission lines and associated fiber optic facilities along the UPRR which cross through the Project area. Construction of the overhead would require installation of at least two new structures in order to raise the transmission lines to be in appropriate phase-to-ground clearance levels.

The proposed Project would require relatively small amounts of electricity to power streetlights and traffic signals. There is no anticipated compromise to SMUD's existing and future customers because the Project is not expected to substantially drain power supplies. The proposed Project would require additional electrical conduits along the roadway alignments to power traffic signals and lights in the Project area. These facilities may be able to tie into existing meters and infrastructure and will not require a new substation or upsized energy facilities.

As a roadway project, the proposed Project would not generate any wastewater requiring conveyance, treatment, or disposal. Therefore, the Project would have no potential to exceed applicable wastewater treatment requirements, exceed the capacity of existing treatment facilities, or require new or expanded treatment facilities. The Project would result in the relocation of some underground utilities, including sewer lines. Potential impacts associated with the relocation of utilities are assumed as part of the Project and are addressed in this document. Potential impacts include disturbance of biological and/or cultural resources, temporary air emissions, soil erosion and water quality degradation, handling of hazardous materials, temporary construction noise, and temporary construction traffic. Therefore, this impact would be less than significant. No additional mitigation is required.

The Project area is located adjacent to the Hood service area which lies within SCWA Zone 41 service area. It is anticipated that the SCWA will be the water provider for the Project. The Hood service area is supplied by groundwater wells and consists of one pressure zone. According to the SCWA's 2010 Zone 41 Urban Water Management Plan (SCWA 2011), Zone 41 is projected to have adequate surplus water supply through year 2035 to serve the proposed Project under normal, single-dry, and multiple-dry year conditions. Therefore, there would be sufficient water supplies available to serve the Project and no new or expanded entitlements would be required. Furthermore, due to the relatively low water demand of the Project, no new or expanded water treatment facilities would be required. This impact would be less than significant. To further avoid and minimize impacts related to water supply necessary for the Project, Avoidance and Minimization Measure **UTIL-3** would be implemented.

The proposed Project would include construction of new and expanded stormwater drainage facilities for collection and conveyance of stormwater runoff from the roadway surface. Since the Project would tie into the existing section of Kammerer Road, the current roadside stormwater system can be extended to the new roadway. The Project will comply with the current NPDES MS4 Permit issued in 2008 to the SSQP. Stormwater runoff in the County is governed by the the County's NPDES - CAS082597 (as ammended November 2016) and allows for the discharge of

stormwater runoff through the Municipal Separate Storm Sewer Systems. The Project would also fall under the Elk Grove SDMP. Additional stormwater runoff discharges from this Project are not expected to compromise current drainage facilities or system capacity. The Project's potential effects to water quality are discussed in more detail in Section 2.9, "Hydrology and Water Quality".

Construction of the proposed Project would generate a substantial volume of solid waste requiring disposal at regional landfills. In accordance with the California Green Building Code and local regulations, the Project would be required to divert a minimum of 50 percent of construction and demolition debris for recycling. Compliance with this requirement would substantially reduce waste volumes requiring disposal at regional landfills. Once operational, the proposed Project would not generate any solid waste. This impact would be less than significant. To further avoid and minimize impacts related to solid waste, Avoidance and Minimization Measure **UTIL-4** would be implemented.

The implementing agency would coordinate with all utility providers in the Project area. The implementing agency and its contractors will coordinate with utility companies to conduct potential utility relocations.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As a tiered project in compliance with the Connector JPA PEIR, applicable language from PEIR measures PS-1, PS-2, and PS-3 has been incorporated into the following Project specific avoidance, minimization, and/or mitigation measures. With the implementation of the following measures Project impacts to utilities and service systems would be reduced to a less than significant level:

UTL-1: To minimize interruptions of service to utility customers, a series of coordination letters shall be sent to all impacted utility companies to identify utilities within the proposed Project. Letters will indicate where utility relocations are to be performed and the required time to relocate them. Design plans will be sent to involved utility owners during the project development phase.

UTL-2: The implementing agency will ensure that the project design will employ LID techniques and features to maintain the site's predevelopment runoff rates and volumes to the extent feasible. The objective of the LID design is to mimic the site's predevelopment hydrology by including project features and techniques that infiltrate, filter, store, evaporate, and detain stormwater runoff close to the source. LID design features and techniques can incorporate (but are not limited to) minimizing impermeable surfaces where practical; inclusion of bioretention facilities or *rain gardens*; preserving natural drainages, vegetation, and buffer zones; inclusion of grass swales and channels to direct storm drainage; construction of cisterns to collect water for later use in irrigation; inclusion of vegetated filter strips; and use of permeable pavements.

UTL-3: The implementing agency will ensure that the design of the project will include a landscaping and irrigation plan that is based on the use of drought-resistant landscaping materials. This includes the use of suitable drought-resistant native plants, where feasible, and nonnative plants that are suitable to the site, such as grasses. Suitable plants are those matched to the climate, soils, and the Sacramento region. No invasive, nonnative plants (as inventoried by the California Invasive Plant Council) or noxious weeds (as listed by the California Department of Food and Agriculture) will be used in the landscaping plan. The irrigation system design will rely on recycled water or non-potable water (including water from LID cisterns) whenever available, consistent with quality and health standards. The irrigation system design will include the use of *smart* irrigation controllers to minimize the amount of supplemental water required to maintain the landscaping.

UTL-4: The implementing agency will require that the contractor will employ one of the following options for recycling construction and demolition debris:

1. If there is room at the construction site for multiple sorting bins, construction and demolition debris will be sorted and dropped off at recycling facilities. Currently, the following facilities accept sorted construction and demolition waste:

- Kiefer Landfill
- Crete Crush, LLC, which accepts brick, gravel, sand, asphalt, concrete, and soil
- Elder Creek Recovery & Transfer Station BFI
- EBI Aggregates, which accepts concrete and asphalt
- Vulcan Materials, which accepts concrete and asphalt
- Sims Metal Management
- Granite Construction Company, which accepts only clean, separated concrete and asphalt
- Bell Marine Company, Inc., which accepts concrete and asphalt
- L and D Landfill Company
- Sacramento Recycling & Transfer Station
- Sacramento Habitat for Humanity, which accepts tax deductible donations of clean wood and various building materials
- Second Cycle, Inc.

2. If the construction site is crowded, or mixed recycling is preferable for another reason, the Sacramento Regional Solid Waste Authority provides a list of certified construction and demolition debris sorting facilities.

- Allied Waste/Elder Creek Transfer and Recovery
- L and D Landfill Company
- Waste Management/K&M Recycle America
- Florin-Perkins Public Disposal

If a waste type produced by project construction is a type not accepted by regional landfills, the project engineer(s) will ensure that the waste is disposed of in accordance with all federal, state, and local statutes and regulations related to solid waste.

Findings

The Connector JPA PEIR found that construction and operation of the entire Capital SouthEast Connector Project would contribute to less than significant impacts after mitigation to utilities and service systems. During analysis for this tiered Project, it was found that no new significant and unavoidable impacts to utilities and service systems would occur.

The Project would have **less than significant impacts with mitigation incorporated** relating to utilities and service systems.

2.19 Mandatory Findings of Significance

REGULATORY SETTING

The CEQA Checklist includes the following questions under Mandatory Findings of Significance:

1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory;
2. 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);
3. Does the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

ENVIRONMENTAL CONSEQUENCES

As discussed in Section 2.4, "Biological Resources," the Project would have a less than significant impact with mitigation implemented. Avoidance measures, pre-construction surveys, and ESA fencing would be implemented for special-status species, and mitigation for impacts to special-status species habitat will be purchased, as well as impacted native trees will be replanted. With these measures, cumulatively considerable impacts are not anticipated.

As discussed in Section 2.8 "Hazards and Hazardous Resources," and Section 2.3 "Air Quality," the Project would have a less than significant impact with mitigation incorporated. Avoidance measures and a Dust Mitigation Plan would be implemented in the case of confirmation of asbestos during geotechnical surveys.

Further, cultural studies concluded that the Project would implement the Kammerer Programmatic Agreement and a Memorandum of Understanding to avoid any potential impacts to historical resources or unique archaeological sites. Standard measures for inadvertent discovery would also avoid potential impacts.

The Project would not have adverse effects on human beings, either directly or indirectly. Impacts to aesthetics, air quality, geology and soils, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation and transportation/traffic are all anticipated to be less than significant or less than significant with mitigation incorporated. The Project did not identify any new significant and unavoidable impacts under greenhouse gas emissions outside of what was previously identified in the Connector JPA PEIR.

Cumulative Impacts

All cumulative impacts have been addressed previously in the Connector JPA PEIR document. Therefore, no further discussion of cumulative impacts is included within this IS/MND.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Development of the proposed Project would comply with all local, state, and federal laws governing general welfare and environmental protection. The project will not substantially reduce habitat for fish or wildlife, cause wildlife populations to decrease, threaten plant and animal communities, restrict plant and animals range, or eliminate important examples of California's history or prehistory. During construction, the project has the potential for significant impacts to biological and cultural resources. With the implementation of mitigation measures BIO-1 through BIO-42, CR-1 through CR-4, PAL-1 through PAL-5, HAZ-1 through HAZ-12, and HYD-1 through HYD-7 these potential project impacts will be reduced to a less than significant level. The project would have impacts of less than significant with mitigation incorporated related to biologic and cultural resources.

The Project would have potentially significant individually limited, but not cumulatively considerable environmental effects. As a tiered Project under the Connector JPA PEIR, these individually limited environmental effects have been cumulatively addressed through the Connector JPA PEIR document. Potential significant impacts to agriculture and forest resources, air quality, geology and soils, greenhouse gas emission, hazards and hazardous materials, noise, population and housing, public services, transportation/traffic, and utilities and service systems have all been reduced to a less than significant level with mitigation incorporated. No additional avoidance, minimization, and/or mitigation measures are necessary other than those identified within the representative sections throughout the document. The Project would have a **less than significant impact with mitigation incorporated** regarding cumulatively considerable impacts.

Findings

The Project would have a **less than significant impact with mitigation incorporated** for potential impacts to biological and cultural resources regarding Project mandatory findings. Additionally, the Project would have a **less than significant impact** for individually limited but cumulatively considerable environmental effects, and effects to human beings regarding Project mandatory findings.

3.0 COMMENTS AND COORDINATION

This chapter summarizes the Connector JPA's efforts to identify, address and resolve Project-related issues through early and continuing coordination.

SCOPING PROCESS

The approved Capital SouthEast Connector Project Volume 2 of the Final PEIR document (2012) provided basis for determining potential environmental constraints within the Capital SouthEast Connector – A1/A2 Kammerer Road Project area. The Connector JPA provided a Findings of Fact and Statement of Overriding Considerations (March 2012) for all significant and unavoidable impacts related to the 34-mile connector project. For the A1/A2 Segment, no new significant and unavoidable impacts would occur other than those stated within the Final PEIR and Statement of Overriding Considerations.

CONSULTATION AND COORDINATION WITH AGENCIES

Coordination with the following agencies was initiated for the Project:

- U.S. Fish and Wildlife Service (USFWS)
- California Department of Fish and Wildlife (CDFW)
- Native American Heritage Commission (NAHC)
- U.S. Army Corps of Engineers (USACE)
- Friends of Stone Lakes National Wildlife Refuge
- Friends of the Swainson's Hawk
- Sierra Club, Mother Lode Chapter and Sacramento Group
- United Auburn Indian Community of Auburn Rancheria
- Wilton Rancheria

PUBLIC PARTICIPATION

The public comment period for the Project (February 28, 2018 to April 2, 2018) provided the opportunity for public comment and participation. The comment period was properly advertised in the local newspaper and the IS/Proposed MND was available at public facilities during the public circulation period. Additionally, a public information meeting was provided where local agency representatives provided an informal question and answer presentation of the Project. **Table 62** displays coordination that has occurred with stakeholders through the environmental approval process.

Table 63. Discussions with Stakeholders

Stakeholder	Coordination
Local Public	- Public Circulation of Draft IS/MND (February 28, 2018 – April 2, 2018) - Public Information Meeting (March 6, 2018)
California Department of Transportation	Comments and coordination with Caltrans environmental, transportation and traffic, and engineering staff through PDT meetings, and review of draft and final environmental document.
City of Elk Grove	Comments and coordination with City legal and engineering staff through review of draft and final environmental document.
Sacramento County	Comments and coordination with County staff through review of draft and final environmental document.

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4.0 LIST OF PREPARERS

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Brian Marks, Environmental Planner/Archaeologist. PhD Archaeology; 20 years of archaeology and cultural resources experience. Contribution: Cultural Resources.

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Ken Chen, Environmental Planner. B.S., Community and Regional Development; 4 years environmental planning experience. Contribution: Noise Study Revalidation and Air Quality Revalidation.

Zach Liptak, Associate Environmental Planner. B.S., Environmental Studies; 9 years environmental planning experience. Contribution: Noise and Air Quality Studies QA/QC.

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Appendix A: CEQA Checklist

CEQA Environmental Checklist

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed Project. In many cases, background studies performed in connection with the Project indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Project Impact Adequately Addressed in Previous Document	Less Than Significant with Mitigation	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 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"/>	<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"/>	<input type="checkbox"/>

II. AGRICULTURE AND FOREST RESOURCES: 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) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Project Impact Adequately Addressed in Previous Document	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon 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 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 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"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <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"/> | <input type="checkbox"/> |

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 U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <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, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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"/> | <input type="checkbox"/> |

V. CULTURAL RESOURCES: Would the Project:

- | | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | <input type="checkbox"/> | <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 §15064.5? | <input type="checkbox"/> | <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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code § 21074? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

	Potentially Significant Impact	Project Impact Adequately Addressed in Previous Document	Less Than Significant with Mitigation	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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<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"/>	<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"/>	<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"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
VII. GREENHOUSE GAS EMISSIONS: Would the Project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VIII. 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 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 accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 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 type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Project Impact Adequately Addressed in Previous Document	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>

IX. 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"/>	<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 which 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"/>	<input 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 erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

X. 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"/>	<input 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 the 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"/>	<input 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"/>	<input type="checkbox"/>

XI. 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 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 type="checkbox"/>	<input checked="" type="checkbox"/>

XII. NOISE: Would the Project result in:

	Potentially Significant Impact	Project Impact Adequately Addressed in Previous Document	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<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 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"/>	<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 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 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 type="checkbox"/>	<input checked="" type="checkbox"/>

XIII. 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"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	<input type="checkbox"/>

XIV. PUBLIC SERVICES:

a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

XV. RECREATION:

a) Would the Project 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

XVI. TRANSPORTATION/TRAFFIC: Would the Project:

	Potentially Significant Impact	Project Impact Adequately Addressed in Previous Document	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<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 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 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"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVII. TRIBAL CULTURAL RESOURCES: Would the Project

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

XVII. 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 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"/>	<input 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"/>	<input type="checkbox"/>

	Potentially Significant Impact	Project Impact Adequately Addressed in Previous Document	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the Project have environmental effects which 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"/>	<input type="checkbox"/>

Appendix B:
Farmland Conversion Impact Rating

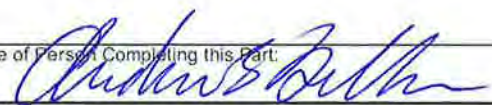
**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request 7/11/18	4. Sheet 1 of 1
1. Name of Project A1/A2 Kammerer Road Project		5. Federal Agency Involved Department of Transportation	
2. Type of Project Road Extension		6. County and State Sacramento County, CA	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 7/11/18	2. Person Completing Form Ken Oster
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form.)		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	4. Acres Irrigated 85979 Average Farm Size 183
5. Major Crop(s) wine grapes, pasture, cattle	6. Farmable Land in Government Jurisdiction Acres: 105721 % 16.6	7. Amount of Farmland As Defined in FPPA Acres: 312220 % 49.1	
8. Name Of Land Evaluation System Used CA Revised Storie Index	9. Name of Local Site Assessment System None	10. Date Land Evaluation Returned by NRCS 8/16/18	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment <u>Build Alternative</u>			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	123.77			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	12.66			
C. Total Acres In Corridor	136.43			
PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	1.5			
B. Total Acres Statewide And Local Important Farmland	131.2			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.12			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	51.95			
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)	28			
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))	Maximum Points			
1. Area in Nonurban Use	15	15		
2. Perimeter in Nonurban Use	10	10		
3. Percent Of Corridor Being Farmed	20	18		
4. Protection Provided By State And Local Government	20	20		
5. Size of Present Farm Unit Compared To Average	10	9		
6. Creation Of Nonfarmable Farmland	25	2		
7. Availability Of Farm Support Services	5	5		
8. On-Farm Investments	20	12		
9. Effects Of Conversion On Farm Support Services	25	0		
10. Compatibility With Existing Agricultural Use	10	2		
TOTAL CORRIDOR ASSESSMENT POINTS	160	93	0	0
PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)	100	28	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	93	0	0
TOTAL POINTS (Total of above 2 lines)	260	93	0	0

1. Corridor Selected: Build Alternative	2. Total Acres of Farmlands to be Converted by Project: 136.43	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
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5. Reason For Selection:

Signature of Person Completing this Part:  DATE **8/16/18**

NOTE: Complete a form for each segment with more than one Alternate Corridor

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)

As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points


(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

**Appendix C:
Roadway Construction Emissions Model and
CT-EMFAC Emissions Calculations**

Road Construction Emissions Model Data Entry Worksheet		Version 8.1.0	
<p>Note: Required data input sections have a yellow background. Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background. The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types. Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.</p>		<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>	
			
Input Type			
Project Name	Capital SouthEast Connector - Kammerer 2-Lane Facility		
Construction Start Year	2018	Enter a Year between 2014 and 2025 (inclusive)	
Project Type	1	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction	
Project Construction Time	25.00	months	
Working Days per Month	22.00	days (assume 22 if unknown)	
Predominant Soil/Site Type: Enter 1, 2, or 3 <small>(for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)</small>	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the lone formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)	
Project Length	5.75	miles	
Total Project Area	330.00	acres	
Maximum Area Disturbed/Day	1.00	acre	
Water Trucks Used?	1	1. Yes 2. No	
Material Hauling Quantity Input			
Material Type	Phase	Haul Truck Capacity (yd ³) (assume 20 if unknown)	Export Volume (yd ³ /day)
Soil	Grubbing/Land Clearing	20.00	4840.00
	Grading/Excavation	20.00	2121.21
	Drainage/Utilities/Sub-Grade	20.00	539.00
	Paving	20.00	0.28
Asphalt	Grubbing/Land Clearing	20.00	0.28
	Grading/Excavation	20.00	0.28
	Drainage/Utilities/Sub-Grade	20.00	0.28
	Paving	20.00	0.28
Mitigation Options			
On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/ceqa/mitigation.shtml). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard	
Off-road Equipment Emissions Mitigation			

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Capital SouthEast Connector - Kammerer 2-Lane Facility														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	2.43	15.61	37.86	12.27	2.27	10.00	3.26	1.18	2.08	0.27	27,783.48	0.50	0.87	28,054.08
Grading/Excavation	7.13	51.51	81.19	14.07	4.07	10.00	5.39	3.31	2.08	0.20	20,270.53	2.38	0.46	20,466.93
Drainage/Utilities/Sub-Grade	5.80	45.23	57.39	12.94	2.94	10.00	4.69	2.61	2.08	0.11	10,695.50	1.65	0.17	10,787.00
Paving	2.07	20.04	18.70	1.17	1.17	0.00	1.03	1.03	0.00	0.04	3,546.98	0.76	0.04	3,578.52
Maximum (pounds/day)	7.13	51.51	81.19	14.07	4.07	10.00	5.39	3.31	2.08	0.27	27,783.48	2.38	0.87	28,054.08
Total (tons/construction project)	1.51	11.36	16.59	3.20	0.86	2.34	1.19	0.70	0.49	0.04	4,301.22	0.48	0.10	4,341.81


Notes:
 Project Start Year -> 2018
 Project Length (months) -> 25
 Total Project Area (acres) -> 330
 Maximum Area Disturbed/Day (acres) -> 1
 Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	4840	0	7,260	0	720	40
Grading/Excavation	2,121	0	3,210	0	1,200	40
Drainage/Utilities/Sub-Grade	539	0	810	0	1,120	40
Paving	0	0	0	30	960	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.
 Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.
 CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Capital SouthEast Connector - Kammerer 2-Lane Facility														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.07	0.43	1.04	0.34	0.06	0.28	0.09	0.03	0.06	0.01	764.05	0.01	0.02	699.89
Grading/Excavation	0.88	6.37	10.05	1.74	0.50	1.24	0.67	0.41	0.26	0.02	2,508.48	0.29	0.06	2,297.73
Drainage/Utilities/Sub-Grade	0.48	3.73	4.73	1.07	0.24	0.83	0.39	0.22	0.17	0.01	882.38	0.14	0.01	807.34
Paving	0.09	0.83	0.77	0.05	0.05	0.00	0.04	0.04	0.00	0.00	146.31	0.03	0.00	133.91
Maximum (tons/phase)	0.88	6.37	10.05	1.74	0.50	1.24	0.67	0.41	0.26	0.02	2,508.48	0.29	0.06	2,297.73
Total (tons/construction project)	1.51	11.36	16.59	3.20	0.86	2.34	1.19	0.70	0.49	0.04	4,301.22	0.48	0.10	3,938.87

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.
 Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.
 CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.
 The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model Data Entry Worksheet		Version 8.1.0		
<p>Note: Required data input sections have a yellow background. Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background. The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types. Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.</p>		<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
				
Input Type				
Project Name	Capital SouthEast Connector - Kammerer 4-Lane Facility			
Construction Start Year	2018	Enter a Year between 2014 and 2025 (inclusive)		
Project Type	1	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction		
Project Construction Time	25.00	months		
Working Days per Month	22.00	days (assume 22 if unknown)		
Predominant Soil/Site Type: Enter 1, 2, or 3 <small>(for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)</small>	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the lone formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)		
Project Length	5.75	miles		
Total Project Area	330.00	acres		
Maximum Area Disturbed/Day	1.00	acre		
Water Trucks Used?	1	1. Yes 2. No		
Material Hauling Quantity Input				
Material Type	Phase	Haul Truck Capacity (yd ³) (assume 20 if unknown)	Import Volume (yd ³ /day)	Export Volume (yd ³ /day)
Soil	Grubbing/Land Clearing	20.00		4540.00
	Grading/Excavation	20.00	2580.00	
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving	20.00	1760.00	
Mitigation Options				
On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/ceqa/mitigation.shtml). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard		
Off-road Equipment Emissions Mitigation				

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Capital SouthEast Connector - Kammerer 4-Lane Facility													Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust				
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)								
Grubbing/Land Clearing	2.36	15.26	36.37	12.17	2.17	10.00	3.22	1.14	2.08	0.25	26,205.81	0.50	0.81	26,460.87								
Grading/Excavation	7.22	52.03	83.38	14.22	4.22	10.00	5.45	3.37	2.08	0.22	22,581.28	2.38	0.54	22,800.45								
Drainage/Utilities/Sub-Grade	5.68	44.59	54.76	12.76	2.76	10.00	4.62	2.54	2.08	0.08	7,879.76	1.64	0.08	7,943.51								
Paving	2.45	22.13	27.17	1.77	1.77	0.00	1.26	1.26	0.00	0.12	12,610.51	0.78	0.34	12,731.35								
Maximum (pounds/day)	7.22	52.03	83.38	14.22	4.22	10.00	5.45	3.37	2.08	0.25	26,205.81	2.38	0.81	26,460.87								
Total (tons/construction project)	1.53	11.45	16.96	3.22	0.88	2.34	1.20	0.71	0.49	0.05	4,685.36	0.48	0.11	4,729.74								

Notes:
 Project Start Year -> 2018
 Project Length (months) -> 25
 Total Project Area (acres) -> 330
 Maximum Area Disturbed/Day (acres) -> 1
 Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	4540	0	6,810	0	720	40
Grading/Excavation	2,580	0	3,870	0	1,200	40
Drainage/Utilities/Sub-Grade	0	0	0	0	1,120	40
Paving	0	1760	0	2,640	960	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.
 Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.
 CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Capital SouthEast Connector - Kammerer 4-Lane Facility													Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust				
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	PM10 (tons/phase)	PM10 (tons/phase)	PM10 (tons/phase)	PM2.5 (tons/phase)	PM2.5 (tons/phase)	PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)								
Grubbing/Land Clearing	0.06	0.42	1.00	0.33	0.06	0.28	0.09	0.03	0.06	0.01	720.66	0.01	0.02	660.14								
Grading/Excavation	0.89	6.44	10.32	1.76	0.52	1.24	0.67	0.42	0.26	0.03	2,794.43	0.29	0.07	2,559.70								
Drainage/Utilities/Sub-Grade	0.47	3.68	4.52	1.05	0.23	0.83	0.38	0.21	0.17	0.01	650.08	0.14	0.01	594.52								
Paving	0.10	0.91	1.12	0.07	0.07	0.00	0.05	0.05	0.00	0.01	520.18	0.03	0.01	476.43								
Maximum (tons/phase)	0.89	6.44	10.32	1.76	0.52	1.24	0.67	0.42	0.26	0.03	2,794.43	0.29	0.07	2,559.70								
Total (tons/construction project)	1.53	11.45	16.96	3.22	0.88	2.34	1.20	0.71	0.49	0.05	4,685.36	0.48	0.11	4,290.79								

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.
 Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.
 CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.
 The CO2e emissions are reported as metric tons per phase.

File Name: Sacramento (SV) - 2017 - Annual.EC
 CT-EMFAC Version: 6.0.0.29548
 Run Date: 10/29/2018 2:52:20 PM
 Area: Sacramento (SV)
 Analysis Year: 2017
 Season: Annual

=====

Vehicle Category	VMT Fraction	Diesel VMT Fraction
	Across Category	Within Category
Truck 1	0.030	0.507
Truck 2	0.190	0.915
Non-Truck	0.780	0.010

=====

Road Length: 5.75 miles
 Volume: 3,490 vehicles per hour
 Number of Hours: 1 hours
 Avg. Idling Time: 0 minutes per vehicle
 Tot. Idling Time: 0.00 hours

VMT Distribution by Speed (mph):

5	0.00%
10	0.00%
15	0.00%
20	0.00%
25	0.00%
30	0.00%
35	0.00%
40	0.00%
45	0.00%
50	0.00%
55	100.00%
60	0.00%
65	0.00%
70	0.00%
75	0.00%

=====

=====

File Name: Sacramento (SV) - 2034 No Build - Annual.EC
 CT-EMFAC Version: 6.0.0.29548
 Run Date: 10/29/2018 3:18:31 PM
 Area: Sacramento (SV)
 Analysis Year: 2034
 Season: Annual

=====

Vehicle Category	VMT Fraction	Diesel VMT Fraction
	Across Category	Within Category
Truck 1	0.030	0.642
Truck 2	0.190	0.959
Non-Truck	0.780	0.013

=====

Road Length: 5.75 miles
 Volume: 8,525 vehicles per hour
 Number of Hours: 1 hours
 Avg. Idling Time: 0 minutes per vehicle
 Tot. Idling Time: 0.00 hours

VMT Distribution by Speed (mph):

5	0.00%
10	0.00%
15	0.00%
20	0.00%
25	0.00%
30	0.00%
35	0.00%
40	0.00%
45	0.00%
50	0.00%
55	100.00%
60	0.00%
65	0.00%
70	0.00%
75	0.00%

=====

=====

File Name: Sacramento (SV) - 2034 2 Lane - Annual.EC
 CT-EMFAC Version: 6.0.0.29548
 Run Date: 10/29/2018 3:29:01 PM
 Area: Sacramento (SV)
 Analysis Year: 2034
 Season: Annual

=====

Vehicle Category	VMT Fraction	Diesel VMT Fraction
	Across Category	Within Category
Truck 1	0.040	0.642
Truck 2	0.190	0.959
Non-Truck	0.770	0.013

=====

Road Length: 5.75 miles
 Volume: 9,885 vehicles per hour
 Number of Hours: 1 hours
 Avg. Idling Time: 0 minutes per vehicle
 Tot. Idling Time: 0.00 hours

VMT Distribution by Speed (mph):

5	0.00%
10	0.00%
15	0.00%
20	0.00%
25	0.00%
30	0.00%
35	0.00%
40	0.00%
45	0.00%
50	0.00%
55	100.00%
60	0.00%
65	0.00%
70	0.00%
75	0.00%

=====

File Name: Sacramento (SV) - 2044 No Build - Annual.EC
 CT-EMFAC Version: 6.0.0.29548
 Run Date: 10/29/2018 2:55:27 PM
 Area: Sacramento (SV)
 Analysis Year: 2044
 Season: Annual

=====

Vehicle Category	VMT Fraction	Diesel VMT Fraction
	Across Category	Within Category
Truck 1	0.030	0.664
Truck 2	0.190	0.961
Non-Truck	0.780	0.013

=====

Road Length: 5.75 miles
 Volume: 11,320 vehicles per hour
 Number of Hours: 1 hours
 Avg. Idling Time: 0 minutes per vehicle
 Tot. Idling Time: 0.00 hours

VMT Distribution by Speed (mph):

5	0.00%
10	0.00%
15	0.00%
20	0.00%
25	0.00%
30	0.00%
35	0.00%
40	0.00%
45	0.00%
50	0.00%
55	100.00%
60	0.00%
65	0.00%
70	0.00%
75	0.00%

=====

=====

File Name: Sacramento (SV) - 2044 2 Lane - Annual.EC
 CT-EMFAC Version: 6.0.0.29548
 Run Date: 10/29/2018 3:15:26 PM
 Area: Sacramento (SV)
 Analysis Year: 2044
 Season: Annual

=====

Vehicle Category	VMT Fraction	Diesel VMT Fraction
	Across Category	Within Category
Truck 1	0.040	0.664
Truck 2	0.190	0.961
Non-Truck	0.770	0.013

=====

Road Length: 5.75 miles
 Volume: 12,335 vehicles per hour
 Number of Hours: 1 hours
 Avg. Idling Time: 0 minutes per vehicle
 Tot. Idling Time: 0.00 hours

VMT Distribution by Speed (mph):

5	0.00%
10	0.00%
15	0.00%
20	0.00%
25	0.00%
30	0.00%
35	0.00%
40	0.00%
45	0.00%
50	0.00%
55	100.00%
60	0.00%
65	0.00%
70	0.00%
75	0.00%

=====

=====

File Name: Sacramento (SV) - 2044 4 Lane - Annual.EC
 CT-EMFAC Version: 6.0.0.29548
 Run Date: 10/29/2018 3:13:46 PM
 Area: Sacramento (SV)
 Analysis Year: 2044
 Season: Annual

=====

Vehicle Category	VMT Fraction	Diesel VMT Fraction
	Across Category	Within Category
Truck 1	0.040	0.664
Truck 2	0.190	0.961
Non-Truck	0.770	0.013

=====

Road Length: 5.75 miles
 Volume: 15,760 vehicles per hour
 Number of Hours: 1 hours
 Avg. Idling Time: 0 minutes per vehicle
 Tot. Idling Time: 0.00 hours

VMT Distribution by Speed (mph):

5	0.00%
10	0.00%
15	0.00%
20	0.00%
25	0.00%
30	0.00%
35	0.00%
40	0.00%
45	0.00%
50	0.00%
55	100.00%
60	0.00%
65	0.00%
70	0.00%
75	0.00%

=====

=====

**Appendix D:
CNDDDB, USFWS, CNPS, and NMFS Special
Status Species Results**



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad (Lodi North (3812123) OR Galt (3812133) OR Elk Grove (3812143) OR Florin (3812144) OR Clarksburg (3812145) OR Courtland (3812135) OR Thornton (3812124) OR Isleton (3812125) OR Bruceville (3812134))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
black-crowned night heron <i>Nycticorax nycticorax</i>	ABNGA11010	None	None	G5	S4	
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	PDSCR0R060	None	Endangered	G2	S2	1B.2
Bolander's water-hemlock <i>Cicuta maculata var. bolanderi</i>	PDAPI0M051	None	None	G5T4	S2	2B.1
bristly sedge <i>Carex comosa</i>	PMCYP032Y0	None	None	G5	S2	2B.1
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
California black rail <i>Laterallus jamaicensis coturniculus</i>	ABNME03041	None	Threatened	G3G4T1	S1	FP
California linderiella <i>Linderiella occidentalis</i>	ICBRA06010	None	None	G2G3	S2S3	
California tiger salamander <i>Ambystoma californiense</i>	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Coastal and Valley Freshwater Marsh <i>Coastal and Valley Freshwater Marsh</i>	CTT52410CA	None	None	G3	S2.1	
Cooper's hawk <i>Accipiter cooperii</i>	ABNKC12040	None	None	G5	S4	WL
Delta mudwort <i>Limosella australis</i>	PDSCR10030	None	None	G4G5	S2	2B.1
Delta smelt <i>Hypomesus transpacificus</i>	AFCHB01040	Threatened	Endangered	G1	S1	
Delta tule pea <i>Lathyrus jepsonii var. jepsonii</i>	PDFAB250D2	None	None	G5T2	S2	1B.2
double-crested cormorant <i>Phalacrocorax auritus</i>	ABNFD01020	None	None	G5	S4	WL
dwarf downingia <i>Downingia pusilla</i>	PDCAM060C0	None	None	GU	S2	2B.2
ferruginous hawk <i>Buteo regalis</i>	ABNKC19120	None	None	G4	S3S4	WL
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Candidate Threatened	G3	S3	SSC
giant gartersnake <i>Thamnophis gigas</i>	ARADB36150	Threatened	Threatened	G2	S2	



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
great blue heron <i>Ardea herodias</i>	ABNGA04010	None	None	G5	S4	
great egret <i>Ardea alba</i>	ABNGA04040	None	None	G5	S4	
Great Valley Mixed Riparian Forest <i>Great Valley Mixed Riparian Forest</i>	CTT61420CA	None	None	G2	S2.2	
Great Valley Valley Oak Riparian Forest <i>Great Valley Valley Oak Riparian Forest</i>	CTT61430CA	None	None	G1	S1.1	
Heckard's pepper-grass <i>Lepidium latipes var. heckardii</i>	PDBRA1M0K1	None	None	G4T1	S1	1B.2
legenere <i>Legenere limosa</i>	PDCAM0C010	None	None	G2	S2	1B.1
longfin smelt <i>Spirinchus thaleichthys</i>	AFCHB03010	Candidate	Threatened	G5	S1	SSC
marsh skullcap <i>Scutellaria galericulata</i>	PDLAM1U0J0	None	None	G5	S2	2B.2
Mason's lilaepsis <i>Lilaepsis masonii</i>	PDAP119030	None	Rare	G2	S2	1B.1
merlin <i>Falco columbarius</i>	ABNKD06030	None	None	G5	S3S4	WL
midvalley fairy shrim <i>Branchinecta mesovallensis</i>	ICBRA03150	None	None	G2	S2S3	
Northern California black walnut <i>Juglans hindsii</i>	PDJUG02040	None	None	G1	S1	1B.1
Northern Hardpan Vernal Pool <i>Northern Hardpan Vernal Pool</i>	CTT44110CA	None	None	G3	S3.1	
Peruvian dodder <i>Cuscuta obtusiflora var. glandulosa</i>	PDCUS01111	None	None	G5T4T5	SH	2B.2
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	IICOL5V010	None	None	G2?	S2?	
riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	AMAEB01021	Endangered	Endangered	G5T1	S1	
Sacramento anthicid beetle <i>Anthicus sacramento</i>	IICOL49010	None	None	G1	S1	
Sacramento Orcutt grass <i>Orcuttia viscida</i>	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	AFCJB34020	None	None	GNR	S3	SSC
saline clover <i>Trifolium hydrophilum</i>	PDFAB400R5	None	None	G2	S2	1B.2
Sanford's arrowhead <i>Sagittaria sanfordii</i>	PMALI040Q0	None	None	G3	S3	1B.2



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
side-flowering skullcap <i>Scutellaria lateriflora</i>	PDLAM1U0Q0	None	None	G5	S2	2B.2
slender Orcutt grass <i>Orcuttia tenuis</i>	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
song sparrow ("Modesto" population) <i>Melospiza melodia</i>	ABPBXA3010	None	None	G5	S3?	SSC
steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i>	AFCHA0209K	Threatened	None	G5T2Q	S2	
Suisun Marsh aster <i>Symphotrichum lentum</i>	PDASTE8470	None	None	G2	S2	1B.2
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T2	S2	
Valley Oak Woodland <i>Valley Oak Woodland</i>	CTT71130CA	None	None	G3	S2.1	
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp <i>Lepidurus packardi</i>	ICBRA10010	Endangered	None	G4	S3S4	
watershield <i>Brasenia schreberi</i>	PDCAB01010	None	None	G5	S3	2B.3
western pond turtle <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
western red bat <i>Lasiurus blossevillii</i>	AMACC05060	None	None	G5	S3	SSC
western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
white-tailed kite <i>Elanus leucurus</i>	ABNKC06010	None	None	G5	S3S4	FP
woolly rose-mallow <i>Hibiscus lasiocarpus var. occidentalis</i>	PDMAL0HOR3	None	None	G5T3	S3	1B.2
yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 58

Plant List

19 matches found. [Click on scientific name for details](#)

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B, 3], Found in Quads 3812145, 3812144, 3812143, 3812135, 3812134, 3812133, 3812125 3812124 and 3812123;

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	2B.1	S2	G5
Cicuta maculata var. bolanderi	Bolander's water-hemlock	Apiaceae	perennial herb	Jul-Sep	2B.1	S2	G5T4
Cuscuta obtusiflora var. glandulosa	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	2B.2	SH	G5T4T5
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	1B.2	S3	G5T3
Juglans hindsii	Northern California black walnut	Juglandaceae	perennial deciduous tree	Apr-May	1B.1	S1	G1
Lathyrus jepsonii var. jepsonii	Delta tulle pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	1B.2	S2	G5T2
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Lepidium latipes var. heckardii	Heckard's pepper-grass	Brassicaceae	annual herb	Mar-May	1B.2	S1	G4T1
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	1B.1	S2	G2
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	1B.1	S2	G2
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	1B.1	S1	G1
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Scutellaria galericulata	marsh skullcap	Lamiaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S2	G5
Scutellaria lateriflora	side-flowering skullcap	Lamiaceae	perennial rhizomatous herb	Jul-Sep	2B.2	S2	G5
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	1B.2	S2	G2
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2

Suggested Citation

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 14 November 2017].

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[The Jepson Flora Project](#)
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Questions and Comments

rareplants@cnps.org

Andrew Dellas

From: Andrew Dellas
Sent: Tuesday, November 14, 2017 5:15 PM
To: nmfswcrca.specieslist@noaa.gov
Cc: Andrew Dellas
Subject: California Department of Transportation (District 3) - Capital SouthEast Connector A1/A2 Kammerer Road Extension Project

Quad Name **Florin**
Quad Number **38121-D4**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Bruceville**

Quad Number **38121-C4**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) - **X**

SRWR Chinook Salmon ESU (E) - **X**

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) - **X**

Eulachon (T) -

sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat - **X**

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH - **X**
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -
MMPA Pinnipeds -

Dokken Engineering, 110 Blue Ravine Road, Suite 200; Folsom, CA 95630

For: California Department of Transportation – District 3

Capital SouthEast Connector Joint Powers Authority

Andrew Dellas – Dokken Engineering: adellas@dokkenengineering.com; 916-858-0642

Andrew Dellas, M.S.

Environmental Planner/Biologist

DOKKEN ENGINEERING

110 Blue Ravine Road, Suite 200, Folsom, CA 95630

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United States Department of the Interior



FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:

September 18, 2017

Consultation Code: 08ESMF00-2017-SLI-3288

Event Code: 08ESMF00-2017-E-09049

Project Name: Kammerer Road Extension

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

San Francisco Bay-Delta Fish And Wildlife

650 Capitol Mall

Suite 8-300

Sacramento, CA 95814

(916) 930-5603

Project Summary

Consultation Code: 08ESMF00-2017-SLI-3288

Event Code: 08ESMF00-2017-E-09049

Project Name: Kammerer Road Extension

Project Type: TRANSPORTATION

Project Description: Segment A1/A2 of the Capitol SouthEast Connector. Widen Kammerer Rd. to an expressway and extend the road to the I-5/Hood Franklin Rd. Interchange.

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/38.375482171716484N121.47376277904826W>



Counties: Sacramento, CA

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Birds

NAME	STATUS
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final designated critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA DPS) There is final designated critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
<p>Delta Smelt <i>Hypomesus transpacificus</i></p> <p>There is final designated critical habitat for this species. Your location overlaps the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/321</p>	Threatened
<p>Steelhead <i>Oncorhynchus</i> (=Salmo) <i>mykiss</i></p> <p>Population: Northern California DPS</p> <p>There is final designated critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/1007</p>	Threatened

Insects

NAME	STATUS
<p>Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i></p> <p>There is final designated critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/7850</p> <p>Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf</p>	Threatened

Crustaceans

NAME	STATUS
<p>Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i></p> <p>There is final designated critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/498</p>	Threatened
<p>Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i></p> <p>There is final designated critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/2246</p>	Endangered

Flowering Plants

NAME	STATUS
<p>Fleshy Owl's-clover <i>Castilleja campestris ssp. succulenta</i></p> <p>There is final designated critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/8095</p>	Threatened

Critical habitats

There are no critical habitats within your project area under this office's jurisdiction.

Appendix E: ISA Checklist



Initial Site Assessment (ISA) Checklist

Project Information

District 3 County Sacramento Route Kammerer Road Kilometer Post (Post Mile) _____

Description The project is located in the City of Elk Grove and the County of Sacramento. The existing Kammerer Road extends west from State Route 99 (SR-99) and terminates at Bruceville Road. It is six lanes from SR-99 to just west of Lent Ranch Parkway, where it tapers down to two lanes for the remainder of its length. The Project will connect SR-99 to the improved Interstate (I-5)/Hood Franklin Road interchange in an east-west alignment. The proposed Project would construct approximately three miles of new roadway between Bruceville Road and the I-5/Hood Franklin Interchange. This new section of Kammerer Road would be an expressway, a surface arterial designed for higher travel speeds, with controlled access. Kammerer Road would be widened for approximately 2.5 miles to create a thoroughfare, a main surface arterial road with limited access, between Bruceville Road to the west and SR-99 to the east. The limits of this section are from Bruceville Road to just west of the Kammerer Road/Lent Ranch Parkway intersection, where the widened road would conform to an existing, short six-lane section that intersects with SR-99.

The purpose of the proposed Project is to:

- Provide a missing connection to I-5;
- Provide greater mobility for residential areas and employment centers along the corridor between SR-99 and I-5;
- Improve east-west circulation in the City of Elk Grove and south Sacramento County; and
- Improve traffic operations and safety within the Project area.

The Project is needed to provide a critical missing link in the transportation infrastructure network that serves the City of Elk Grove and south Sacramento County area by improving route continuity, reducing travel time and delay, reducing existing and projected traffic congestion in the Project corridor and other adjacent transportation corridors, and improving traffic safety and operations along the Project corridor.

Detailed descriptions for the current proposed North Alignment Build Alternative, and considered South Alignment Build and No-Build Alternatives is presented in the ISA Report dated July 29, 2015.

Is the project on the HW Study Minimal-Risk Projects List (HW1)? No

Project Manager _____ phone # _____

Project Engineer _____ phone # _____

Initial Site Assessment (ISA) Checklist

(continued)

Project Screening

Attach the project location map to this checklist to show location of all known and/or potential HW sites identified.

1. Project Features: New R/W? Excavation? Railroad Involvement?
Structure demolition/modification? Subsurface utility relocation?

2. Project Setting: Kammerer Road from SR-99 on the east to I-5/Hood Franklin Road Interchange.
Rural or Urban Rural
Current land uses _____
Adjacent land uses Rural Residential; Agricultural/Cattle Grazing
(industrial, light industry, commercial, agricultural, residential, etc.)

3. Check federal, State, and local environmental and health regulatory agency records as necessary, to see if any known hazardous waste site is in or near the project area. If a known site is identified, show its location on the attached map and attach additional sheets, as needed, to provide pertinent information for the proposed project. No off-Site properties were found to represent a hazardous waste concern to the proposed Project improvement areas.

4. Conduct Field Inspection. Date August 6 and 27, 2014; September 5, 2014
Use the attached map to locate potential or known HW sites. No off-site facilities were found to represent a hazardous waste impact to the proposed Project improvement areas.

STORAGE STRUCTURES / PIPELINES:

Underground tanks Not identified Surface tanks ASTs in the vicinity of structures on affected parcels

Sumps Not observed Ponds: Not observed

Drums Five unlabeled 55-gallon plastic drums near structures on an affected parcel

Basins Not observed; Meandering streams located within Environmental Study Limits, but outside the proposed alignment areas.

Transformers Numerous pole-mounted transformers observed throughout the Project Area.

Landfill Not observed within the Project improvement areas

CONTAMINATION: (spills, leaks, illegal dumping, etc.)

Surface staining Surficial staining at one location; not considered a concern

Oil sheen Not observed

Odors No odors noted Vegetation damage Not observed

Other N/A

Initial Site Assessment (ISA) Checklist (continued)

HAZARDOUS MATERIALS: (asbestos, lead, etc.)

Buildings _____	Rural residential structures, associated out buildings, sheds, barns located within Environmental Study Limit _____	Spray-on fireproofing _____	Unknown _____
Pipe wrap _____	Not observed _____	Friable tile _____	Unknown _____
Acoustical plaster _____	Unknown _____	Serpentine _____	Unknown _____
Paint _____	Yellow traffic marking _____	Other _____	See No. 6 below _____

5. Additional record search, as necessary, of subsequent land uses that could have resulted in a hazardous waste site. Use the attached map to show the location of potential hazardous waste sites.

None identified.

6. Other comments and/or observations:

- The potential exists for persistent pesticides to be present in soil as a result of historical agricultural use of the area. Additionally, the potential exists for buried asbestos-containing cementitious pipe (“transite”), which was commonly used for water transportation as part of historical agricultural practices, to be present within the Project area.
- Access into structures (residences, associated out buildings, storage sheds, and barns) on developed parcels was not provided at the time of the field reconnaissance visits. It is possible that chemicals (i.e., petroleum products, pesticides, herbicides, etc.) are used/stored within these structures. Other ASTs and containers may be located between, or within structures, that were not visible due to access restrictions. Spills, leaks, or stains may be present in the vicinity of ASTs, containers, or equipment between, or within structures that were not visible due to access restrictions.
- A Union Pacific Railroad (UPRR) track crosses the Project Area. The potential exists for herbicides, petroleum hydrocarbons and metals to be present in shallow soil in the vicinity of the tracks.
- Pacific Gas & Electric Company (PG&E) and Sacramento Municipal Utility District (SMUD) appear to operate natural gas pipelines within, or adjacent to a UPRR right-of-way that traverse parallel to the tracks. Pipeline markers were observed within the UPRR right-of-way at the time of the Site reconnaissance.

Initial Site Assessment (ISA) Checklist

(continued)

- Elevated concentrations of lead (from use of leaded gasoline) and other metals are sometimes associated with older roadways. Based on a review of historical sources, a roadway at the location of Kammerer Road was present from SR-99 west to Bruceville Road since at least 1937. Roads were also present at the locations of Franklin Road and Bruceville Road as early as 1894. In addition, I-5 was present since the mid- to late-1970s. Aerially-deposited lead (ADL) in unpaved areas along the existing roadways may be present.
- Yellow traffic markings (thermoplastic and paint) were observed on the I-5 on- and off-ramps, and Kammerer Road, Bruceville Road, and Franklin Boulevard. These yellow traffic markings may potentially contain hazardous levels of lead chromate.
- Domestic and agricultural water wells, septic systems (septic tanks and leaching fields) are present within the Project Area.
- Multiple pole-mounted transformers were observed within the Project Area. The transformers appeared to be in good condition, with no visible leaks and no visible soil staining. Many of these transformers are unlikely to be impacted by the Project.
- Structures are present on parcels that will be affected by the proposed Project. Based on the age of the structures, asbestos-containing materials (ACMs) and lead-based paint (LBP) may be present.

ISA Determination

1. Does the project have potential hazardous waste involvement? **Yes.** If there is known or potential hazardous waste involvement, is additional ISA work needed before task orders can be prepared for the Investigation? **Yes** If "YES," explain; then give an estimate of additional time required:

Persistent pesticides may be present beneath the proposed Project improvement areas. Sampling and analysis should be conducted for this project. Additionally, the potential exists for buried asbestos-containing cementitious pipe ("transite"), commonly used for water transportation as part of historical agricultural practices, to be present within the Project area. If signs of transite piping are observed during construction activity, sampling and analysis should be conducted.

Prior to construction, a visual survey of those areas not accessed at the time of the field reconnaissance visits should be performed. If spills, leaks, or stains from equipment, ASTs, or other containers are observed, soil sampling should be performed to assess for the presence of hazardous materials that may pose a potential hazardous waste to the proposed roadway alignment areas.

Initial Site Assessment (ISA) Checklist

(continued)

The potential exists for herbicides, petroleum hydrocarbons and metals to be present in shallow soil in the vicinity of the UPRR right-of-way. The North and South Alignment Build Alternatives propose to construct either a bridge over the railroad, or underpass beneath the railroad. Prior to construction, soil samples should be collected within the UPRR right-of-way and analyzed for chlorinated herbicides, petroleum hydrocarbons, and metals using United States Environmental Protection Agency (US EPA) Methods 8151, 8260B, and 6010/7471A, respectively.

PG&E and SMUD should be contacted to assess the locations of their pipelines prior to construction of the bridge or underpass across the railroad tracks associated with the North and South Alignments.

Elevated concentrations of lead (from use of leaded gasoline) are sometimes associated with older roadways. Caltrans policy requires a lead investigation for this project.

Yellow traffic markings (thermoplastic and paint) located on I-5 on- and off-ramps, Kammerer Road, Brucevill Road, and Franklin Boulevard may potentially contain hazardous levels of lead chromate. Yellow traffic markings removed separately from pavement should be sampled for lead chromate prior to construction, consistent with Caltrans' Standard Special Provision 14-001.

Should domestic and agricultural water wells, or septic systems be affected by the proposed roadway alignment, they should be abandoned or relocated in accordance with local and state guidelines/regulations.

Many of the observed pole-mounted transformers are unlikely to be impacted by the Project. Should transformer removal be required, the utility company should be contacted prior to handling or removing of electrical transformers. Should wooden utility poles require removal, it is recommended that additional sampling and analysis be conducted to assess the presence of creosote (often associated with the preservation of wooden utility poles) and resultant waste managed appropriately.

Should the Project require the demolition of building structures, a survey and sampling for ACMs and LBP should be performed of these building structures after property acquisition and prior to demolition. The surveys should be performed in conformance with the US EPA NESHAPs 40 CFR and Sacramento Metropolitan Air Quality Management District guidelines.

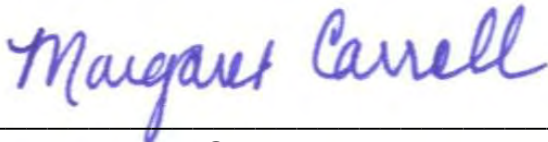
Initial Site Assessment (ISA) Checklist

(continued)

It is recommended that hazardous waste testing be performed prior to completion of the PA&ED phase of the project, so that special handling, treatment, or disposal provisions associated with hazardous wastes can be included in construction documents. If signs of potential impact (odors, discolored soil, etc.) are observed during construction activity (from possible vehicle accident/leaks or other), sampling and analysis should be conducted. It is recommended that Caltrans' Unknown Hazard Procedures be implemented prior to work in these areas. Should groundwater be encountered during construction activities and dewatering become necessary, regulatory compliance consistent with the Central Valley Regional Water Quality Control Board and National Pollutant Discharge Elimination System requirements should be followed.

A brief memo should be prepared to transmit the ISA conclusions to the Project Manager and Project Engineer.

ISA Conducted by:



Date: July 29, 2015

Margaret R. Carroll
Project Professional

Reviewed by:



Date: July 29, 2015

Lizanne Simmons
California Professional Geologist No. 7431

Appendix F
Predicted Noise Results, Noise Measurement
Field Data, and Traffic Noise Model Inputs

Appendix F-1. Predicted Existing and Future Noise Levels for 2-Lane Facility in 2017 and 2034

Receptor I.D.	Land Use	Jurisdiction	Exterior Traffic Noise Threshold	Interior Noise Threshold	Address	Capital SouthEast Connector Segment Kammerer Future Day-Night Noise Levels -Ldn, dBA											
						Exterior Noise Levels				Interior Noise Levels				Change in Noise Level			
						Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2034 Noise Level without Project Ldn, dBA	Design Year 2034 Noise Level with 2-Lane Facility Ldn, dBA	Design Year 2034 Noise Level with Mitigated 2-Lane Facility Ldn, dBA	Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2034 Noise Level without Project Ldn, dBA	Design Year 2034 Noise Level with 2-Lane Facility Ldn, dBA	Design Year 2034 Noise Level with Mitigated 2-Lane Facility Ldn, dBA	Existing to Design year No Project Noise Increase	Existing to Design year with Project Noise Increase	Design Year No Project to Project increase	Design Year with Project to Mitigated Project reduction
R1	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	Stone Lake Rd & Hood Franklin Rd	62	62	63	60	37	37	38	35	0	1	1	-3
R2	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	3307 Hood Franklin Rd	67	69	66	63	42	44	41	38	2	-1	-3	-3
R3	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	3206 Hood Franklin Rd	63	65	63	60	38	40	38	35	2	0	-2	-3
R4	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	3460 Hood Franklin Rd	62	65	61	58	37	40	36	33	3	-1	-4	-3
R5	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10632 Franklin Blvd	60	63	60	57	35	38	35	32	3	0	-3	-3
R6	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10592 Franklin Blvd	55	58	65	62	30	33	40	37	3	10	7	-3
R7	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10587 Franklin Blvd	48	51	59	59 ¹	23	26	34	34 ¹	3	11	8	0 ¹
R8	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10609 Franklin Blvd	51	54	63	63 ¹	26	29	38	38 ¹	3	12	9	0 ¹
R9	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10629 Franklin Blvd	60	63	61	61 ¹	35	38	36	36 ¹	3	1	-2	0 ¹
R10	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	South of Bilby Rd	34	37	54	51	9	12	29	26	3	20	17	-3
R11	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	7809 Kammerer Rd	60	64	-	-	35	39	-	-	4	-	-	-
R12	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	7909 Kammerer Rd	63	66	-	-	38	41	-	-	3	-	-	-
R13	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8051 Kammerer Rd	58	62	-	-	33	37	-	-	4	-	-	-
R14	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8011 Kammerer Rd	61	64	-	-	36	39	-	-	3	-	-	-
R15	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8011 Kammerer Rd	61	64	-	-	36	39	-	-	3	-	-	-
R16	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8088 Kammerer Rd	56	59	62	59	31	34	37	34	3	6	3	-3
R17	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8098 Kammerer Rd	55	59	61	58	30	34	36	33	4	6	2	-3
R18	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8109 Kammerer Rd	66	69	-	-	41	44	-	-	3	-	-	-
R19	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8140 Kammerer Road	51	54	57	54	26	29	32	29	3	6	3	-3
R20	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8158 Kammerer Road	56	59	62	59	31	34	37	34	3	6	3	-3
R21	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8170 Kammerer Road	64	67	69	61 ²	39	42	44	36 ²	3	5	2	-8
R22	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10650 Rau Rd	46	49	52	49	21	24	27	24	3	6	3	-3
R23	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8198 Kammerer Rd	52	55	58	55	27	30	33	30	3	6	3	-3
R24	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10675 Rau Rd	43	47	50	47	18	22	25	22	4	7	3	-3
R25	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8215 Kammerer Rd	65	68	-	-	40	43	-	-	3	-	-	-
R26	Warehouse of SFR	City of Elk Grove	-	-	8215 Kammerer Rd	51	54	60	57	26	29	35	32	3	9	6	-3
R27	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8250 Kammerer Rd	50	53	56	53	25	28	31	28	3	6	3	-3
R28	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8279 Kammerer Rd	48	52	58	55	23	27	33	30	4	10	6	-3
R29	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8499 Kammerer Rd	47	52	55	52	22	27	30	27	5	8	3	-3
R30	Abandoned home	City of Elk Grove	-	-	Kammerer Rd	52	57	60	57	27	32	35	32	5	8	3	-3
R31	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	Promenade Parkway	60	66	53	50	35	41	28	25	6	-7	-13	-3
R51	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	59	60	61	58	-	35	36	33	1	2	1	-3
R52	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	59	60	62	59	-	35	37	34	1	3	2	-3
R53	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	60	60	55	52	-	35	30	27	0	-5	-5	-3
R54	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	60	60	61	58	-	35	36	33	0	1	1	-3

¹= These receivers are adjacent to the proposed Kammerer railroad overcrossing, which will incorporate Rubberized Asphalt, ²= Results with Soundwall SW-W5 and Rubberized Asphalt

Appendix F-1. Predicted Existing and Future Noise Levels for 2-Lane Facility in 2017 and 2034

Receptor I.D.	Land Use	Jurisdiction	Exterior Traffic Noise Threshold	Interior Noise Threshold	Address	Capital SouthEast Connector Segment Kammerer Future Day-Night Noise Levels -Ldn, dBA														
						Exterior Noise Levels					Interior Noise Levels					Change in Noise Level				
						Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2034 Noise Level without Project Ldn, dBA	Design Year 2034 Noise Level with Project Ldn, dBA	Design Year 2034 Noise Level with SW-W3 v1 Ldn, dBA	Design Year 2034 Noise Level with SW-W3 v2 Ldn, dBA	Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2034 Noise Level without Project Ldn, dBA	Design Year 2034 Noise Level with Project Ldn, dBA	Design Year 2034 Noise Level with SW-W3 v1 Ldn, dBA	Design Year 2034 Noise Level with SW-W3 v2 Ldn, dBA	Existing to Design year No Project Noise Increase	Existing to Design year with Project Noise Increase	Design Year No Project to Project increase	Design Year with Project to Project + SW-W3 V1 reduction	Design Year with Project to Project + SW-W3 V2 reduction
R32	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4800 Tusk Way	42	45	64	58	55	17	20	39	33	30	3	22	19	-6	-9
R33	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4804 Tusk Way	43	46	64	58	56	18	21	39	33	31	3	21	18	-6	-8
R34	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4808 Tusk Way	43	46	64	59	56	18	21	39	34	31	3	21	18	-5	-8
R35	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4812 Tusk Way	43	46	64	58	56	18	21	39	33	31	3	21	18	-6	-8
R36	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4816 Tusk Way	43	46	64	58	56	18	21	39	33	31	3	21	18	-6	-8
R37	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4820 Tusk Way	43	46	64	58	56	18	21	39	33	31	3	21	18	-6	-8
R38	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4824 Tusk Way	42	46	64	58	56	17	21	39	33	31	4	22	18	-6	-8
R39	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4828 Tusk Way	42	45	64	57	56	17	20	39	32	31	3	22	19	-7	-8
R40	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4836 Tusk Way	42	45	64	57	56	17	20	39	32	31	3	22	19	-7	-8
R41	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4836 Tusk Way	42	45	64	57	56	17	20	39	32	31	3	22	19	-7	-8
R42	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4836 Tusk Way	42	45	60	56	55	17	20	35	31	30	3	18	15	-4	-5
R43	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4848 Tusk Way	42	45	62	57	56	17	20	37	32	31	3	20	17	-5	-6
R44	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4848 Tusk Way	42	45	62	57	57	17	20	37	32	32	3	20	17	-5	-5
R45	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4856 Tusk Way	41	45	62	57	57	16	20	37	32	32	4	21	17	-5	-5
R46	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4860 Tusk Way	41	44	61	57	56	16	19	36	32	31	3	20	17	-4	-5
R47	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4860 Tusk Way	41	44	61	57	57	16	19	36	32	32	3	20	17	-4	-4
R48	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4860 Tusk Way	41	44	62	58	57	16	19	37	33	32	3	21	18	-4	-5
R49	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4868 Tusk Way	41	44	61	57	57	16	19	36	32	32	3	20	17	-4	-4
R50	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4868 Tusk Way	40	44	62	58	58	15	19	37	33	33	4	22	18	-4	-4

Appendix F-2. Predicted Existing and Future Noise Levels for 2-Lane Facility in 2017 and 2044

Receptor I.D.	Land Use	Jurisdiction	Exterior Traffic Noise Threshold	Interior Noise Threshold	Address	Capital SouthEast Connector Segment Kammerer Future Day-Night Noise Levels -Ldn, dBA											
						Exterior Noise Levels				Interior Noise Levels				Change in Noise Level			
						Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2034 Noise Level without Project Ldn, dBA	Design Year 2034 Noise Level with 2-Lane Facility Ldn, dBA	Design Year 2034 Noise Level with Mitigated 2-Lane Facility Ldn, dBA	Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2034 Noise Level without Project Ldn, dBA	Design Year 2034 Noise Level with 2-Lane Facility Ldn, dBA	Design Year 2034 Noise Level with Mitigated 2-Lane Facility Ldn, dBA	Existing to Design year No Project Noise Increase	Existing to Design year with Project Noise Increase	Design Year No Project to Project increase	Design Year with Project to Mitigated Project reduction
R1	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	Stone Lake Rd & Hood Franklin Rd	62	63	64	61	37	38	39	36	1	2	1	-3
R2	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	3307 Hood Franklin Rd	67	69	67	64	42	44	42	39	2	0	-2	-3
R3	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	3206 Hood Franklin Rd	63	65	64	61	38	40	39	36	2	1	-1	-3
R4	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	3460 Hood Franklin Rd	62	65	62	59	37	40	37	34	3	0	-3	-3
R5	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10632 Franklin Blvd	60	63	60	57	35	38	35	32	3	0	-3	-3
R6	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10592 Franklin Blvd	55	58	65	62	30	33	40	37	3	10	7	-3
R7	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10587 Franklin Blvd	48	51	60	60 ¹	23	26	35	35 ¹	3	12	9	0 ¹
R8	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10609 Franklin Blvd	51	54	64	64 ¹	26	29	39	39 ¹	3	13	10	0 ¹
R9	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10629 Franklin Blvd	60	63	61	61 ¹	35	38	36	36 ¹	3	1	-2	0 ¹
R10	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	South of Bilby Rd	34	38	55	52	9	13	30	27	4	21	17	-3
R11	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	7809 Kammerer Rd	60	67	-	-	35	42	-	-	7	-	-	-
R12	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	7909 Kammerer Rd	63	69	-	-	38	44	-	-	6	-	-	-
R13	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8051 Kammerer Rd	58	65	-	-	33	40	-	-	7	-	-	-
R14	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8011 Kammerer Rd	61	67	-	-	36	42	-	-	6	-	-	-
R15	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8011 Kammerer Rd	61	68	-	-	36	43	-	-	7	-	-	-
R16	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8088 Kammerer Rd	56	63	63	60	31	38	38	35	7	7	0	-3
R17	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8098 Kammerer Rd	55	62	62	59	30	37	37	34	7	7	0	-3
R18	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8109 Kammerer Rd	66	71	-	-	41	46	-	-	5	-	-	-
R19	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8140 Kammerer Road	51	57	57	54	26	32	32	29	6	6	0	-3
R20	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8158 Kammerer Road	56	63	63	60	31	38	38	35	7	7	0	-3
R21	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8170 Kammerer Road	64	69	70	62 ²	39	44	45	37 ²	5	6	1	-8
R22	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10650 Rau Rd	46	51	53	50	21	26	28	25	5	7	2	-3
R23	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8198 Kammerer Rd	52	58	59	56	27	33	34	31	6	7	1	-3
R24	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10675 Rau Rd	43	48	50	47	18	23	25	22	5	7	2	-3
R25	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8215 Kammerer Rd	65	70	-	-	40	45	-	-	5	-	-	-
R26	Warehouse of SFR	City of Elk Grove	-	-	8215 Kammerer Rd	51	57	61	58	26	32	36	33	6	10	4	-3
R27	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8250 Kammerer Rd	50	55	57	54	25	30	32	29	5	7	2	-3
R28	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8279 Kammerer Rd	48	56	58	55	23	31	33	30	8	10	2	-3
R29	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8499 Kammerer Rd	47	54	55	52	22	29	30	27	7	8	1	-3
R30	Abandoned home	City of Elk Grove	-	-	Kammerer Rd	52	61	60	57	27	36	35	32	9	8	-1	-3
R31	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	Promenade Parkway	60	68	54	51	35	43	29	26	8	-6	-14	-3
R51	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	59	62	62	59	-	37	37	34	3	3	0	-3
R52	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	59	62	63	60	-	37	38	35	3	4	1	-3
R53	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	60	61	56	53	-	36	31	28	1	-4	-5	-3
R54	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	60	62	62	59	-	37	37	34	2	2	0	-3

¹= These receivers are adjacent to the proposed Kammerer railroad overcrossing, which will incorporate Rubberized Asphalt, ²= Results with Soundwall SW-W5 and Rubberized Asphalt

Appendix F-2. Predicted Existing and Future Noise Levels for 2-Lane Facility in 2017 and 2044

Receptor I.D.	Land Use	Jurisdiction	Exterior Traffic Noise Threshold	Interior Noise Threshold	Address	Capital SouthEast Connector Segment Kammerer Future Day-Night Noise Levels -Ldn, dBA														
						Exterior Noise Levels					Interior Noise Levels					Change in Noise Level				
						Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2044 Noise Level without Project Ldn, dBA	Design Year 2044 Noise Level with Project Ldn, dBA	Design Year 2044 Noise Level with SW-W3 v1 Ldn, dBA	Design Year 2044 Noise Level with SW-W3 v2 Ldn, dBA	Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2044 Noise Level without Project Ldn, dBA	Design Year 2044 Noise Level with Project Ldn, dBA	Design Year 2044 Noise Level with SW-W3 v1 Ldn, dBA	Design Year 2044 Noise Level with SW-W3 v2 Ldn, dBA	Existing to Design year No Project Noise Increase	Existing to Design year with Project Noise Increase	Design Year No Project to Project increase	Design Year with Project to Project + SW-W3 V1 reduction	Design Year with Project to Project + SW-W3 V2 reduction
R32	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4800 Tusk Way	42	45	65	58	56	17	20	40	33	31	3	23	20	-7	-9
R33	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4804 Tusk Way	43	46	65	59	56	18	21	40	34	31	3	22	19	-6	-9
R34	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4808 Tusk Way	43	46	65	60	56	18	21	40	35	31	3	22	19	-5	-9
R35	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4812 Tusk Way	43	46	65	59	56	18	21	40	34	31	3	22	19	-6	-9
R36	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4816 Tusk Way	43	46	65	58	56	18	21	40	33	31	3	22	19	-7	-9
R37	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4820 Tusk Way	43	46	65	59	57	18	21	40	34	32	3	22	19	-6	-8
R38	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4824 Tusk Way	42	46	64	58	57	17	21	39	33	32	4	22	18	-6	-7
R39	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4828 Tusk Way	42	45	64	58	57	17	20	39	33	32	3	22	19	-6	-7
R40	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4836 Tusk Way	42	45	64	58	57	17	20	39	33	32	3	22	19	-6	-7
R41	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4836 Tusk Way	42	45	64	58	57	17	20	39	33	32	3	22	19	-6	-7
R42	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4836 Tusk Way	42	45	61	56	56	17	20	36	31	31	3	19	16	-5	-5
R43	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4848 Tusk Way	42	45	63	57	57	17	20	38	32	32	3	21	18	-6	-6
R44	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4848 Tusk Way	42	45	62	57	57	17	20	37	32	32	3	20	17	-5	-5
R45	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4856 Tusk Way	41	45	62	58	57	16	20	37	33	32	4	21	17	-4	-5
R46	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4860 Tusk Way	41	44	62	57	57	16	19	37	32	32	3	21	18	-5	-5
R47	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4860 Tusk Way	41	44	62	58	57	16	19	37	33	32	3	21	18	-4	-5
R48	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4860 Tusk Way	41	44	62	58	58	16	19	37	33	33	3	21	18	-4	-4
R49	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4868 Tusk Way	41	44	62	58	57	16	19	37	33	32	3	21	18	-4	-5
R50	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4868 Tusk Way	40	44	62	58	58	15	19	37	33	33	4	22	18	-4	-4

Appendix F-3. Predicted Existing and Future Noise Levels for 4-Lane Facility in 2017 and 2044

Receptor I.D.	Land Use	Jurisdiction	Exterior Traffic Noise Threshold	Interior Noise Threshold	Address	Capital SouthEast Connector Segment Kammerer Future Day-Night Noise Levels -Ldn, dBA											
						Exterior Noise Levels				Interior Noise Levels				Change in Noise Level			
						Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2044 Noise Level without Project Ldn, dBA	Design Year 2044 Noise Level with 4-Lane Facility Ldn, dBA	Design Year 2044 Noise Level with Mitigated 4-Lane Facility Ldn, dBA	Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2044 Noise Level without Project Ldn, dBA	Design Year 2044 Noise Level with 4-Lane Facility Ldn, dBA	Design Year 2044 Noise Level with Mitigated 4-Lane Facility Ldn, dBA	Existing to Design year No Project Noise Increase	Existing to Design year with Project Noise Increase	Design Year No Project increase	Design Year with Project reduction
R1	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	Stone Lake Rd & Hood Franklin Rd	62	63	64	61	37	38	39	36	1	2	1	-3
R2	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	3307 Hood Franklin Rd	67	69	68	65	42	44	43	40	2	1	-1	-3
R3	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	3206 Hood Franklin Rd	63	65	65	62	38	40	40	37	2	2	0	-3
R4	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	3460 Hood Franklin Rd	62	65	64	61	37	40	39	36	3	2	-1	-3
R5	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10632 Franklin Blvd	60	63	61	58	35	38	36	33	3	1	-2	-3
R6	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10592 Franklin Blvd	55	58	66	63	30	33	41	38	3	11	8	-3
R7	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10587 Franklin Blvd	48	51	59	56 ¹	23	26	34	34 ¹	3	11	8	0 ¹
R8	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10609 Franklin Blvd	51	54	65	65 ¹	26	29	40	40 ¹	3	14	11	0 ¹
R9	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10629 Franklin Blvd	60	63	62	62 ¹	35	38	37	37 ¹	3	2	-1	0 ¹
R10	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	South of Bilby Rd	34	38	57	54	9	13	32	29	4	23	19	-3
R11	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	7809 Kammerer Rd	60	67	-	-	35	42	-	-	7	-	-	-
R12	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	7909 Kammerer Rd	63	69	-	-	38	44	-	-	6	-	-	-
R13	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8051 Kammerer Rd	58	65	-	-	33	40	-	-	7	-	-	-
R14	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8011 Kammerer Rd	61	67	-	-	36	42	-	-	6	-	-	-
R15	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8011 Kammerer Rd	61	68	-	-	36	43	-	-	7	-	-	-
R16	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8088 Kammerer Rd	56	63	66	63	31	38	41	38	7	10	3	-3
R17	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8098 Kammerer Rd	55	62	65	62	30	37	40	37	7	10	3	-3
R18	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8109 Kammerer Rd	66	71	-	-	41	46	-	-	5	-	-	-
R19	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8140 Kammerer Road	51	57	60	57	26	32	35	32	6	9	3	-3
R20	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8158 Kammerer Road	56	63	65	62	31	38	40	37	7	9	2	-3
R21	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8170 Kammerer Road	64	69	72	63 ²	39	44	47	38 ²	5	8	3	-9
R22	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10650 Rau Rd	46	51	55	52	21	26	30	27	5	9	4	-3
R23	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8198 Kammerer Rd	52	58	60	57	27	33	35	32	6	8	2	-3
R24	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	10675 Rau Rd	43	48	52	49	18	23	27	24	5	9	4	-3
R25	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8215 Kammerer Rd	65	70	-	-	40	45	-	-	5	-	-	-
R26	Warehouse of SFR	City of Elk Grove	-	-	8215 Kammerer Rd	51	57	57	54	26	32	32	29	6	6	0	-3
R27	SFR	Sacramento County	65 dBA Ldn	45 dBA Ldn	8250 Kammerer Rd	50	55	60	57	25	30	35	32	5	10	5	-3
R28	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8279 Kammerer Rd	48	56	56	53	23	31	31	28	8	8	0	-3
R29	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8499 Kammerer Rd	47	54	54	51	22	29	29	26	7	7	0	-3
R30	Abandoned home	City of Elk Grove	-	-	Kammerer Rd	52	61	61	58	27	36	36	33	9	9	0	-3
R31	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	Promenade Parkway	60	68	68	65	35	43	43	40	8	8	0	-3
R51	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	59	62	64	61	-	37	39	36	3	5	2	-3
R52	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	59	62	61	58	-	37	36	33	3	2	-1	-3
R53	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	60	61	58	55	-	36	33	30	1	-2	-3	-3
R54	MFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	8250-8260 Kammerer Rd	60	62	61	58	-	37	36	33	2	1	-1	-3

¹= These receivers are adjacent to the proposed Kammerer railroad overcrossing, which will incorporate Rubberized Asphalt, ²= Results with Soundwall SW-W5 and Rubberized Asphalt

Appendix F-3. Predicted Existing and Future Noise Levels for 4-Lane Facility in 2017 and 2044

Receptor I.D.	Land Use	Jurisdiction	Exterior Traffic Noise Threshold	Interior Noise Threshold	Address	Capital SouthEast Connector Segment Kammerer Future Day-Night Noise Levels -Ldn, dBA														
						Exterior Noise Levels					Interior Noise Levels					Change in Noise Level				
						Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2044 Noise Level without Project Ldn, dBA	Design Year 2044 Noise Level with Project Ldn, dBA	Design Year 2044 Noise Level with SW-W3 v1 Ldn, dBA	Design Year 2044 Noise Level with SW-W3 v2 Ldn, dBA	Modeled Existing Year 2017 Noise Level Ldn, dBA	Design Year 2044 Noise Level without Project Ldn, dBA	Design Year 2044 Noise Level with Project Ldn, dBA	Design Year 2044 Noise Level with SW-W3 v1 Ldn, dBA	Design Year 2044 Noise Level with SW-W3 v2 Ldn, dBA	Existing to Design year No Project Noise Increase	Existing to Design year with Project Noise Increase	Design Year No Project to Project increase	Design Year with Project to Project + SW-W3 V1 reduction	Design Year with Project to Project + SW-W3 V2 reduction
R32	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4800 Tusk Way	42	45	64	58	56	17	20	39	33	31	3	22	19	-6	-8
R33	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4804 Tusk Way	43	46	64	58	56	18	21	39	33	31	3	21	18	-6	-8
R34	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4808 Tusk Way	43	46	64	59	57	18	21	39	34	32	3	21	18	-5	-7
R35	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4812 Tusk Way	43	46	64	58	57	18	21	39	33	32	3	21	18	-6	-7
R36	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4816 Tusk Way	43	46	64	58	57	18	21	39	33	32	3	21	18	-6	-7
R37	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4820 Tusk Way	43	46	64	59	57	18	21	39	34	32	3	21	18	-5	-7
R38	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4824 Tusk Way	42	46	64	58	57	17	21	39	33	32	4	22	18	-6	-7
R39	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4828 Tusk Way	42	45	64	58	57	17	20	39	33	32	3	22	19	-6	-7
R40	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4836 Tusk Way	42	45	64	58	57	17	20	39	33	32	3	22	19	-6	-7
R41	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4836 Tusk Way	42	45	64	58	58	17	20	39	33	33	3	22	19	-6	-6
R42	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4836 Tusk Way	42	45	61	57	57	17	20	36	32	32	3	19	16	-4	-4
R43	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4848 Tusk Way	42	45	63	58	58	17	20	38	33	33	3	21	18	-5	-5
R44	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4848 Tusk Way	42	45	63	58	58	17	20	38	33	33	3	21	18	-5	-5
R45	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4856 Tusk Way	41	45	62	59	58	16	20	37	34	33	4	21	17	-3	-4
R46	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4860 Tusk Way	41	44	62	58	58	16	19	37	33	33	3	21	18	-4	-4
R47	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4860 Tusk Way	41	44	63	59	58	16	19	38	34	33	3	22	19	-4	-5
R48	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4860 Tusk Way	41	44	63	60	59	16	19	38	35	34	3	22	19	-3	-4
R49	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4868 Tusk Way	41	44	63	60	59	16	19	38	35	34	3	22	19	-3	-4
R50	SFR	City of Elk Grove	60 dBA Ldn	45 dBA Ldn	4868 Tusk Way	40	44	64	59	60	15	19	39	34	35	4	24	20	-5	-4

Table F-4. Existing Calibration Traffic Volumes Used in TNM

	Segment	Number of Lanes	Total Peak Hour Traffic	Auto #	MT #	HT #	Bus #	Moto #	Speed (A/MT/HT/Moto)
Franklin	NB S of Hood Franklin	1	9	6	3	0	0	0	55/55/0/0/0
Franklin	SB S of Hood Franklin	1	66	63	3	0	0	0	55/55/0/0/0
Kammerer	WB E of Bruceville	1	126	6	0	0	0	0	55/55/0/0/0
Kammerer	EB E of Bruceville	1	105	0	0	0	0	0	55/0/0/0/0
Kammerer	WB W of Lent Ranch Parkway	2	126	114	9	0	3	0	55/55/0/55/0
Kammerer	EB W of Lent Ranch Parkway	2	126	123	0	0	0	3	55/0/0/0/55

Source: Dokken Engineering, 2018
A = Auto, MT = medium truck, HT = heavy truck

Table F-5. Existing Average Daily Traffic Volumes Used in TNM

	Segment	Number of Lanes	Total AM Peak Hour Traffic	Auto %	MT %	HT %	Speed (A/MT/HT)
Hood Franklin	WB W of Franklin	1	5,440	78	19	3	55/55/55
Hood Franklin	EB W of Franklin	1	2,040	78	19	3	55/55/55
Hood Franklin	WB I-5 NB Ramp to SB Ramp	1	3,120	78	19	3	55/55/55
Hood Franklin	EB I-5 NB Ramp to SB Ramp	1	1,880	78	19	3	55/55/55
Hood Franklin	WB W of I-5 SB Ramp	1	2,610	78	19	3	55/55/55
Hood Franklin	EB W of I-5 SB Ramp	1	390	78	19	3	55/55/55
Franklin	NB N of Hood Franklin	1	3,670	78	19	3	55/55/55
Franklin	SB N of Hood Franklin	1	6,990	78	19	3	55/55/55
Franklin	NB S of Hood Franklin	1	3,670	78	19	3	55/55/55
Franklin	SB S of Hood Franklin	1	6,990	78	19	3	55/55/55
Bruceville	NB N of Kammerer	1	2,610	78	19	3	55/55/55
Bruceville	SB N of Kammerer	1	4,170	78	19	3	55/55/55
Bruceville	NB S of Kammerer	1	1,660	78	19	3	55/55/55
Bruceville	SB S of Kammerer	1	900	78	19	3	55/55/55
Kammerer	WB Bruceville to Col 2	1	3,490	78	19	3	55/55/55
Kammerer	EB Bruceville to Col 2	1	3,490	78	19	3	55/55/55
Kammerer	WB Col 2 to Big Horn	1	3,490	78	19	3	55/55/55
Kammerer	EB Col 2 to Big Horn	1	3,490	78	19	3	55/55/55
Kammerer	WB Big Horn to Col 1	1	3,490	78	19	3	55/55/55
Kammerer	EB Big Horn to Col 1	1	3,490	78	19	3	55/55/55
Kammerer	WB Col 1 to Lotz	1	3,490	78	19	3	55/55/55
Kammerer	EB Col 1 to Lotz	1	3,490	78	19	3	55/55/55
Kammerer	WB Lotz to Lent	1	3,490	78	19	3	55/55/55
Kammerer	EB Lotz to Lent	1	3,490	78	19	3	55/55/55
Kammerer	EB Lent to Lotz	2	3,490	78	19	3	55/55/55
Kammerer	WB E of Lent	2	3,490	78	19	3	55/55/55
I-5	NB S of Off-ramp	2	14,080	76	6	18	75/70/65
I-5	NB Off-ramp to Bridge	2	12,260	76	6	18	75/70/65
I-5	Bridge to On-ramp	2	12,460	76	6	18	75/70/65
I-5	NB N of On-ramp	2	16,240	76	6	18	75/70/65
I-5	SB N of Off-ramp	2	14,990	76	6	18	75/70/65
I-5	SB Off-ramp to Bridge	2	13,000	76	6	18	75/70/65
I-5	SB Bridge to On-ramp	2	13,980	76	6	18	75/70/65
I-5	SB S of On-ramp	2	14,010	76	6	18	75/70/65
I-5	NB On-ramp	1	3,780	76	6	18	75/70/65
I-5	NB Loop On-ramp	1	200	76	6	18	75/70/65
I-5	NB Off-ramp	1	1,820	76	6	18	75/70/65
I-5	SB On-ramp	1	60	76	6	18	75/70/65
I-5	SB Loop On-ramp	1	900	76	6	18	75/70/65
I-5	SB Off-ramp	1	1,990	76	6	18	75/70/65

Source: DKS Associates, 2018
A = Auto, MT = medium truck, HT = heavy truck

Table F-6. Design Year 2034 No Build Average Daily Hour Traffic Volumes Used in TNM

	Segment	Number of Lanes	Average Daily Traffic	Auto %	MT %	HT %	Speed (A/MT/HT)
Hood Franklin	WB W of Franklin	1	6,630	78	19	3	55/55/55
Hood Franklin	EB W of Franklin	1	2,210	78	19	3	55/55/55
Hood Franklin	WB I-5 NB Ramp to SB Ramp	1	3,840	78	19	3	55/55/55
Hood Franklin	EB I-5 NB Ramp to SB Ramp	1	1,980	78	19	3	55/55/55
Hood Franklin	WB W of I-5 SB Ramp	1	2,810	78	19	3	55/55/55
Hood Franklin	EB W of I-5 SB Ramp	1	480	78	19	3	55/55/55
Franklin	NB N of Hood Franklin	1	4,390	78	19	3	55/55/55
Franklin	SB N of Hood Franklin	1	8,090	78	19	3	55/55/55
Franklin	NB S of Hood Franklin	1	4,390	78	19	3	55/55/55
Franklin	SB S of Hood Franklin	1	8,090	78	19	3	55/55/55
Bruceville	NB N of Kammerer	1	2,950	78	19	3	55/55/55
Bruceville	SB N of Kammerer	1	5,260	78	19	3	55/55/55
Bruceville	NB S of Kammerer	1	2,600	78	19	3	55/55/55
Bruceville	SB S of Kammerer	1	1,740	78	19	3	55/55/55
Kammerer	WB Bruceville to Col 2	1	4,580	78	19	3	55/55/55
Kammerer	EB Bruceville to Col 2	1	4,580	78	19	3	55/55/55
Kammerer	WB Col 2 to Big Horn	1	4,415	78	19	3	55/55/55
Kammerer	EB Col 2 to Big Horn	1	4,415	78	19	3	55/55/55
Kammerer	WB Big Horn to Col 1	1	5,565	78	19	3	55/55/55
Kammerer	EB Big Horn to Col 1	1	5,565	78	19	3	55/55/55
Kammerer	WB Col 1 to Lotz	1	6,725	78	19	3	55/55/55
Kammerer	EB Col 1 to Lotz	1	6,725	78	19	3	55/55/55
Kammerer	WB Lotz to Lent	1	8,840	78	19	3	55/55/55
Kammerer	EB Lotz to Lent	1	8,840	78	19	3	55/55/55
Kammerer	EB E of Lent	2	8,525	78	19	3	55/55/55
Kammerer	WB E of Lent	2	8,525	78	19	3	55/55/55
I-5	NB S of Off-ramp	2	21,490	76	6	18	75/70/65
I-5	NB Off-ramp to Bridge	2	19,600	76	6	18	75/70/65
I-5	NB Bridge to On-ramp	2	19,930	76	6	18	75/70/65
I-5	NB N of On-ramp	2	23,800	76	6	18	75/70/65
I-5	SB N of Off-ramp	2	16,800	76	6	18	75/70/65
I-5	SB Off-ramp to Bridge	2	14,590	76	6	18	75/70/65
I-5	SB Bridge to On-ramp	2	16,180	76	6	18	75/70/65
I-5	SB S of On-ramp	2	16,330	76	6	18	75/70/65
I-5	NB On-ramp	1	3,870	76	6	18	75/70/65
I-5	NB Loop On-ramp	1	330	76	6	18	75/70/65
I-5	NB Off-ramp	1	1,890	76	6	18	75/70/65
I-5	SB On-ramp	2	150	76	6	18	75/70/65
I-5	SB Loop On-ramp	2	1,590	76	6	18	75/70/65
I-5	SB Off-ramp	2	2,210	76	6	18	75/70/65

Source: DKS Associates, 2018
A = Auto, MT = medium truck, HT = heavy truck

Table F-7. Design Year 2034 2-Lane Build Average Daily Hour Traffic Volumes Used in TNM

	Segment	Number of Lanes	Average Daily Traffic	Auto %	MT %	HT %	Speed (A/MT/HT)
Hood Franklin	WB W of Franklin	1	2230	77	19	4	55/55/55
Hood Franklin	EB W of Franklin	1	30	77	19	4	55/55/55
Hood Franklin	WB I-5 NB Ramp to SB Ramp	1	5,820	77	19	4	55/55/55
Hood Franklin	EB I-5 NB Ramp to SB Ramp	1	3,780	77	19	4	55/55/55
Hood Franklin	WB W of I-5 SB Ramp	1	2,830	77	19	4	55/55/55
Hood Franklin	EB W of I-5 SB Ramp	1	570	77	19	4	55/55/55
Franklin	NB N of Kammerer	1	220	77	19	4	55/55/55
Franklin	SB N of Kammerer	1	1,070	77	19	4	55/55/55
Franklin	NB S of Kammerer	1	1,120	77	19	4	55/55/55
Franklin	SB S of Kammerer	1	1,170	77	19	4	55/55/55
Willard	NB N of Kammerer	1	3,240	77	19	4	55/55/55
Willard	SB N of Kammerer	2	3,640	77	19	4	55/55/55
Bruceville	NB N of Kammerer	1	2,960	77	19	4	55/55/55
Bruceville	SB N of Kammerer	1	5,070	77	19	4	55/55/55
Bruceville	NB S of Kammerer	1	1,290	77	19	4	55/55/55
Bruceville	SB S of Kammerer	1	390	77	19	4	55/55/55
Kammerer	WB I5 to Franklin	1	8,890	77	19	4	55/55/55
Kammerer	EB I5 to Franklin	1	8,890	77	19	4	55/55/55
Kammerer	WB Franklin to Willard	1	8,520	77	19	4	55/55/55
Kammerer	EB Franklin to Willard	1	8,520	77	19	4	55/55/55
Kammerer	WB Willard to Bruceville	1	6,730	77	19	4	55/55/55
Kammerer	EB Willard to Bruceville	1	6,730	77	19	4	55/55/55
Kammerer	WB Bruceville to Col 2	1	8,250	77	19	4	55/55/55
Kammerer	EB Bruceville to Col 2	1	8,250	77	19	4	55/55/55
Kammerer	WB Col 2 to Big Horn	1	8,010	77	19	4	55/55/55
Kammerer	EB Col 2 to Big Horn	1	8,010	77	19	4	55/55/55
Kammerer	WB Big Horn to Col 1	1	7,870	77	19	4	55/55/55
Kammerer	EB Big Horn to Col 1	1	7,870	77	19	4	55/55/55
Kammerer	WB Col 1 to Lotz	1	8,475	77	19	4	55/55/55
Kammerer	EB Col 1 to Lotz	1	8,475	77	19	4	55/55/55
Kammerer	WB Lotz to Lent	1	9,885	77	19	4	55/55/55
Kammerer	EB Lotz to Lent	1	9,885	77	19	4	55/55/55
I-5	NB S of Off-ramp	2	23,120	76	6	18	75/70/65
I-5	NB Off-ramp to Bridge	2	16,970	76	6	18	75/70/65
I-5	NB Bridge to On-ramp	2	17,230	76	6	18	75/70/65
I-5	NB N of On-ramp	2	22,600	76	6	18	75/70/65
I-5	SB N of Off-ramp	2	17,400	76	6	18	75/70/65
I-5	SB Off-ramp to Bridge	2	13,250	76	6	18	75/70/65
I-5	SB Bridge to On-ramp	2	16,750	76	6	18	75/70/65
I-5	SB S of On-ramp	2	16,900	76	6	18	75/70/65

I-5	NB On-ramp	1	5,370	76	6	18	75/70/65
I-5	NB Loop On-ramp	1	260	76	6	18	75/70/65
I-5	NB Off-ramp	1	6,150	76	6	18	75/70/65
I-5	SB On-ramp	2	150	76	6	18	75/70/65
I-5	SB Loop On-ramp	2	3,500	76	6	18	75/70/65
I-5	SB Off-ramp	2	4,150	76	6	18	75/70/65

Source: DKS Associates, 2018

A = Auto, MT = medium truck, HT = heavy truck

Table F-8. Design Year 2044 No Build Average Daily Hour Traffic Volumes Used in TNM

	Segment	Number of Lanes	Total AM Peak Hour Traffic	Auto %	MT %	HT %	Speed (A/MT/HT)
Hood Franklin	WB W of Franklin	1	6,630	78	19	3	55/55/55
Hood Franklin	EB W of Franklin	1	2,210	78	19	3	55/55/55
Hood Franklin	WB I-5 NB Ramp to SB Ramp	1	4,220	78	19	3	55/55/55
Hood Franklin	EB I-5 NB Ramp to SB Ramp	1	1,980	78	19	3	55/55/55
Hood Franklin	WB W of I-5 SB Ramp	1	2,920	78	19	3	55/55/55
Hood Franklin	EB W of I-5 SB Ramp	1	530	78	19	3	55/55/55
Franklin	NB N of Hood Franklin	1	4,390	78	19	3	55/55/55
Franklin	SB N of Hood Franklin	1	8,090	78	19	3	55/55/55
Franklin	NB S of Hood Franklin	1	4,390	78	19	3	55/55/55
Franklin	SB S of Hood Franklin	1	8,090	78	19	3	55/55/55
Bruceville	NB N of Kammerer	1	2,930	78	19	3	55/55/55
Bruceville	SB N of Kammerer	1	5,720	78	19	3	55/55/55
Bruceville	NB S of Kammerer	1	3,110	78	19	3	55/55/55
Bruceville	SB S of Kammerer	1	2,140	78	19	3	55/55/55
Kammerer	WB Bruceville to Col 2	2	5,185	78	19	3	55/55/55
Kammerer	EB Bruceville to Col 2	2	5,185	78	19	3	55/55/55
Kammerer	WB Col 2 to Big Horn	2	4,925	78	19	3	55/55/55
Kammerer	EB Col 2 to Big Horn	2	4,925	78	19	3	55/55/55
Kammerer	WB Big Horn to Col 1	2	6,715	78	19	3	55/55/55
Kammerer	EB Big Horn to Col 1	2	6,715	78	19	3	55/55/55
Kammerer	WB Col 1 to Lotz	2	8,515	78	19	3	55/55/55
Kammerer	EB Col 1 to Lotz	2	8,515	78	19	3	55/55/55
Kammerer	WB Lotz to Lent	2	11,805	78	19	3	55/55/55
Kammerer	EB Lotz to Lent	2	11,805	78	19	3	55/55/55
Kammerer	EB E of Lent	2	11,320	78	19	3	55/55/55
Kammerer	WB E of Lent	2	11,320	78	19	3	55/55/55
I-5	NB S of Off-ramp	2	25,450	76	6	18	75/70/65
I-5	NB Off-ramp to Bridge	2	23,560	76	6	18	75/70/65
I-5	NB Bridge to On-ramp	2	24,130	76	6	18	75/70/65
I-5	NB N of On-ramp	2	28,000	76	6	18	75/70/65
I-5	SB N of Off-ramp	2	17,800	76	6	18	75/70/65
I-5	SB Off-ramp to Bridge	2	15,520	76	6	18	75/70/65
I-5	SB Bridge to On-ramp	2	17,460	76	6	18	75/70/65
I-5	SB S of On-ramp	2	17,660	76	6	18	75/70/65
I-5	NB On-ramp	1	3,870	76	6	18	75/70/65
I-5	NB Loop On-ramp	1	570	76	6	18	75/70/65
I-5	NB Off-ramp	1	1,890	76	6	18	75/70/65
I-5	SB On-ramp	2	200	76	6	18	75/70/65
I-5	SB Loop On-ramp	2	1,940	76	6	18	75/70/65
I-5	SB Off-ramp	2	2,280	76	6	18	75/70/65

Source: DKS Associates, 2018
A = Auto, MT = medium truck, HT = heavy truck

Table F-9. Design Year 2044 2-Lane Build Average Daily Hour Traffic Volumes Used in TNM

	Segment	Number of Lanes	Average Daily Traffic	Auto %	MT %	HT %	Speed (A/MT/HT)
Hood Franklin	WB W of Franklin	1	3,120	77	19	4	55/55/55
Hood Franklin	EB W of Franklin	1	50	77	19	4	55/55/55
Hood Franklin	WB I-5 NB Ramp to SB Ramp	1	6,100	77	19	4	55/55/55
Hood Franklin	EB I-5 NB Ramp to SB Ramp	1	4,330	77	19	4	55/55/55
Hood Franklin	WB W of I-5 SB Ramp	1	2,930	77	19	4	55/55/55
Hood Franklin	EB W of I-5 SB Ramp	1	630	77	19	4	55/55/55
Franklin	NB N of Kammerer	1	220	77	19	4	55/55/55
Franklin	SB N of Kammerer	1	640	77	19	4	55/55/55
Franklin	NB S of Kammerer	1	1,350	77	19	4	55/55/55
Franklin	SB S of Kammerer	1	1,450	77	19	4	55/55/55
Willard	NB N of Kammerer	1	3,470	77	19	4	55/55/55
Willard	SB N of Kammerer	2	2,750	77	19	4	55/55/55
Bruceville	NB N of Kammerer	1	2,870	77	19	4	55/55/55
Bruceville	SB N of Kammerer	1	5,540	77	19	4	55/55/55
Bruceville	NB S of Kammerer	1	1,310	77	19	4	55/55/55
Bruceville	SB S of Kammerer	1	380	77	19	4	55/55/55
Kammerer	WB I5 to Franklin	1	10,010	77	19	4	55/55/55
Kammerer	EB I5 to Franklin	1	10,010	77	19	4	55/55/55
Kammerer	WB Franklin to Willard	1	9,855	77	19	4	55/55/55
Kammerer	EB Franklin to Willard	1	9,855	77	19	4	55/55/55
Kammerer	WB Willard to Bruceville	1	8,410	77	19	4	55/55/55
Kammerer	EB Willard to Bruceville	1	8,410	77	19	4	55/55/55
Kammerer	WB Bruceville to Col 2	1	9,735	77	19	4	55/55/55
Kammerer	EB Bruceville to Col 2	1	9,735	77	19	4	55/55/55
Kammerer	WB Col 2 to Big Horn	1	9,355	77	19	4	55/55/55
Kammerer	EB Col 2 to Big Horn	1	9,355	77	19	4	55/55/55
Kammerer	WB Big Horn to Col 1	1	9,145	77	19	4	55/55/55
Kammerer	EB Big Horn to Col 1	1	9,145	77	19	4	55/55/55
Kammerer	WB Col 1 to Lotz	1	10,140	77	19	4	55/55/55
Kammerer	EB Col 1 to Lotz	1	10,140	77	19	4	55/55/55
Kammerer	WB Lotz to Lent	1	12,335	77	19	4	55/55/55
Kammerer	EB Lotz to Lent	1	12,335	77	19	4	55/55/55
I-5	NB S of Off-ramp	2	27,590	76	6	18	75/70/65
I-5	NB Off-ramp to Bridge	2	20,850	76	6	18	75/70/65
I-5	NB Bridge to On-ramp	2	21,150	76	6	18	75/70/65
I-5	NB N of On-ramp	2	26,800	76	6	18	75/70/65
I-5	SB N of Off-ramp	2	19,000	76	6	18	75/70/65
I-5	SB Off-ramp to Bridge	2	14,530	76	6	18	75/70/65
I-5	SB Bridge to On-ramp	2	18,270	76	6	18	75/70/65
I-5	SB S of On-ramp	2	18,470	76	6	18	75/70/65

I-5	NB On-ramp	1	5,650	76	6	18	75/70/65
I-5	NB Loop On-ramp	1	300	76	6	18	75/70/65
I-5	NB Off-ramp	1	6,740	76	6	18	75/70/65
I-5	SB On-ramp	2	200	76	6	18	75/70/65
I-5	SB Loop On-ramp	2	3,740	76	6	18	75/70/65
I-5	SB Off-ramp	2	4,470	76	6	18	75/70/65

Source: DKS Associates, 2018

A = Auto, MT = medium truck, HT = heavy truck

Table F-10. Design Year 2044 4-Lane Build Average Daily Hour Traffic Volumes Used in TNM

	Segment	Number of Lanes	Average Daily Traffic	Auto %	MT %	HT %	Speed (A/MT/HT)
Hood Franklin	WB W of Franklin	1	3,450	77	19	4	55/55/55
Hood Franklin	EB W of Franklin	1	50	77	19	4	55/55/55
Hood Franklin	WB I-5 NB Ramp to SB Ramp	1	9,860	77	19	4	55/55/55
Hood Franklin	EB I-5 NB Ramp to SB Ramp	1	5,880	77	19	4	55/55/55
Hood Franklin	WB W of I-5 SB Ramp	1	2,990	77	19	4	55/55/55
Hood Franklin	EB W of I-5 SB Ramp	1	660	77	19	4	55/55/55
Franklin	NB N of Kammerer	1	240	77	19	4	55/55/55
Franklin	SB N of Kammerer	1	410	77	19	4	55/55/55
Franklin	NB S of Kammerer	1	810	77	19	4	55/55/55
Franklin	SB S of Kammerer	1	730	77	19	4	55/55/55
Willard	NB N of Kammerer	1	3,660	77	19	4	55/55/55
Willard	SB N of Kammerer	2	5,760	77	19	4	55/55/55
Bruceville	NB N of Kammerer	1	3,240	77	19	4	55/55/55
Bruceville	SB N of Kammerer	1	7,240	77	19	4	55/55/55
Bruceville	NB S of Kammerer	1	1,320	77	19	4	55/55/55
Bruceville	SB S of Kammerer	1	380	77	19	4	55/55/55
Kammerer	WB I5 to Franklin	2	15,760	77	19	4	55/55/55
Kammerer	EB I5 to Franklin	2	15,760	77	19	4	55/55/55
Kammerer	WB Franklin to Willard	2	12,725	77	19	4	55/55/55
Kammerer	EB Franklin to Willard	2	12,725	77	19	4	55/55/55
Kammerer	WB Willard to Bruceville	2	10,610	77	19	4	55/55/55
Kammerer	EB Willard to Bruceville	2	10,610	77	19	4	55/55/55
Kammerer	WB Bruceville to Col 2	2	12,065	77	19	4	55/55/55
Kammerer	EB Bruceville to Col 2	2	12,065	77	19	4	55/55/55
Kammerer	WB Col 2 to Big Horn	2	11,675	77	19	4	55/55/55
Kammerer	EB Col 2 to Big Horn	2	11,675	77	19	4	55/55/55
Kammerer	WB Big Horn to Col 1	2	11,650	77	19	4	55/55/55
Kammerer	EB Big Horn to Col 1	2	11,650	77	19	4	55/55/55
Kammerer	WB Col 1 to Lotz	2	12,790	77	19	4	55/55/55
Kammerer	EB Col 1 to Lotz	2	12,790	77	19	4	55/55/55
Kammerer	WB Lotz to Lent	2	15,200	77	19	4	55/55/55
Kammerer	EB Lotz to Lent	2	15,200	77	19	4	55/55/55
I-5	NB S of Off-ramp	2	27,460	76	6	18	75/70/65
I-5	NB Off-ramp to Bridge	2	19,330	76	6	18	75/70/65
I-5	NB Bridge to On-ramp	2	19,900	76	6	18	75/70/65
I-5	NB N of On-ramp	2	27,770	76	6	18	75/70/65
I-5	SB N of Off-ramp	2	17,200	76	6	18	75/70/65
I-5	SB Off-ramp to Bridge	2	11,190	76	6	18	75/70/65
I-5	SB Bridge to On-ramp	2	18,640	76	6	18	75/70/65
I-5	SB S of On-ramp	2	18,840	76	6	18	75/70/65

I-5	NB On-ramp	1	7,800	76	6	18	75/70/65
I-5	NB Loop On-ramp	1	570	76	6	18	75/70/65
I-5	NB Off-ramp	1	8,130	76	6	18	75/70/65
I-5	SB On-ramp	2	200	76	6	18	75/70/65
I-5	SB Loop On-ramp	2	7,450	76	6	18	75/70/65
I-5	SB Off-ramp	2	6,010	76	6	18	75/70/65

Source: DKS Associates, 2018

A = Auto, MT = medium truck, HT = heavy truck

Appendix F-II : Long - Term Traffic Noise Measurement Field Data Sheet

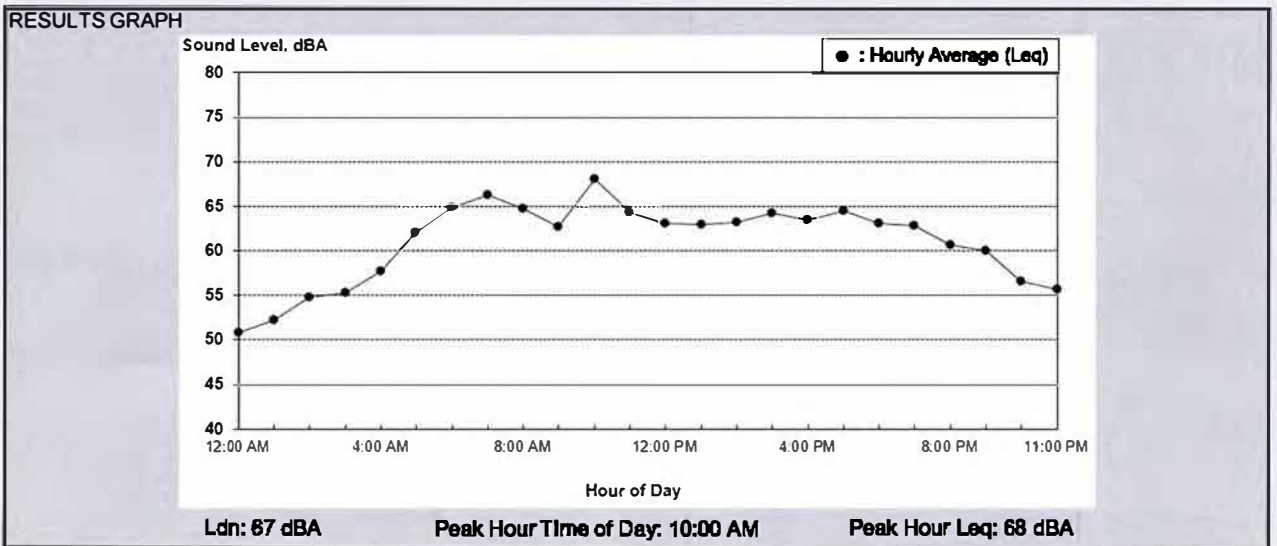
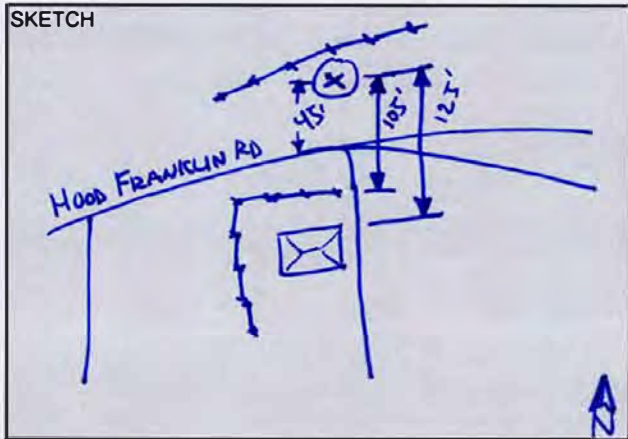
L.T. SITE # LT-1	SITE DESCRIPTION WEST OF I-5 / HOOD FRANKLIN RD	LAT/LON 38°22'30.66"N 121°28'51.96"W
PROJECT Kammerer Road Extension Project	START DATE/TIME 10/15/13 15:00	
BAC JOB # 2013-059	BAC STAFF PAUL B / JON L	END DATE/TIME 10/17/13 8:00

BAC METER # 4	SLM MODEL Larson Davis Model 820	SLM S/N 1126
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114 dB / 8.96
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 80°	WIND SPEED / DIR 7 mph NW	SKY / R.H. Clear
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
I-5 & Hood Franklin Rd

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	55	MED. TRK	1	MED. TRK	1	
HVY TRK	55	HVY TRK	1	HVY TRK	1	



Appendix F-12 : Long - Term Traffic Noise Measurement Field Data Sheet

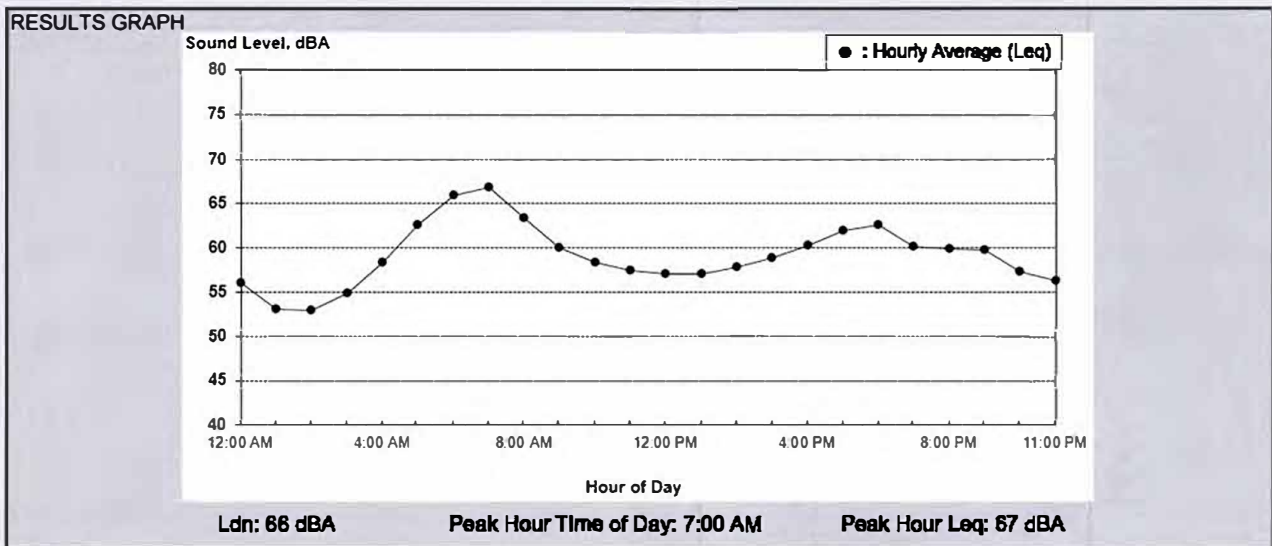
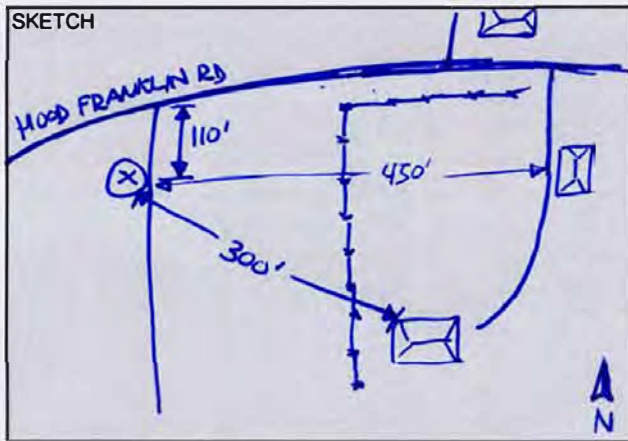
L.T. SITE # LT-2	SITE DESCRIPTION 3206 HOOD FRANKLIN ROAD	LAT/LON N 38°22'32.47" W 121°28'5.98"
PROJECT Kammerer Road Extension Project		START DATE/TIME 10/01/13 13:00
BAC JOB # 2013-059	BAC STAFF PAUL B / JON L	END DATE/TIME 10/03/13 14:00

BAC METER # 1	SLM MODEL Larson Davis Model 820	SLM S/N 1514
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114 dB 9.68
WEIGHTING (circle one) Flat (A)	B C B	RESPONSE (circle one) Fast (Slow) Impulsive
		MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 72°	WIND SPEED / DIR 5 MPH S	SKY / R.H. CLOUDY
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
Hood Franklin Rd, main noise source, No obstructions

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	1	MED. TRK	1	MED. TRK	1	
HVY TRK		HVY TRK		HVY TRK		



Appendix F-13 : Long - Term Traffic Noise Measurement Field Data Sheet

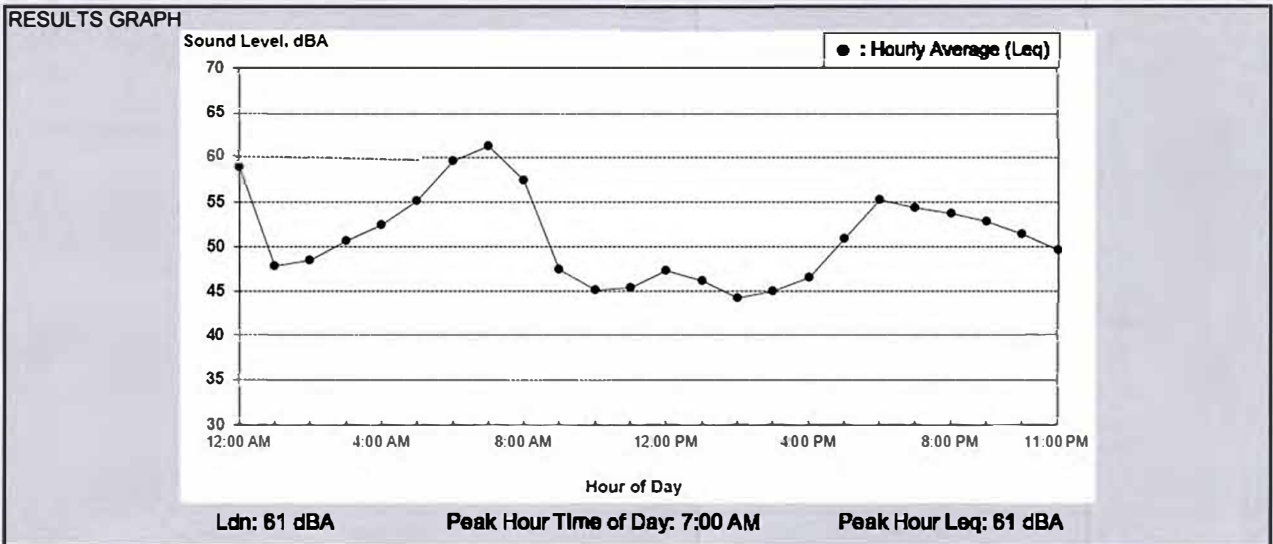
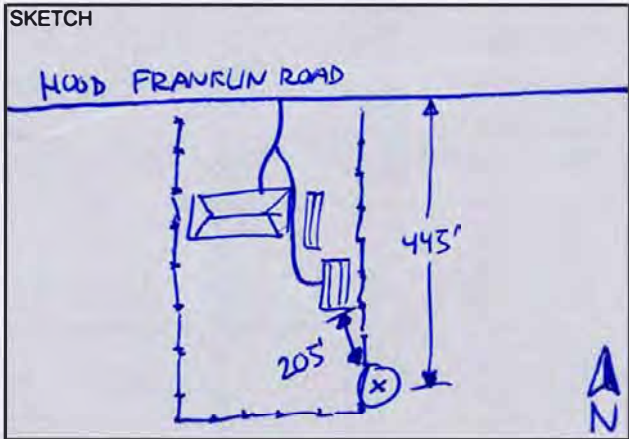
L.T. SITE # LT-3	SITE DESCRIPTION 3460 HOOD FRANKLIN ROAD	LAT/LON N 38°22'29.53" W 121°27'53.93"
PROJECT Kammerer Road Extension Project	START DATE/TIME 10/15/13 14:00	
BAC JOB # 2013-059	BAC STAFF PAUL B / JON L	END DATE/TIME 10/17/13 9:00

BAC METER # 1	SLM MODEL Larson Davis Model 820	SLM S/N 1514
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114 dB / 9.72
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 78°	WIND SPEED / DIR 7 MPH NW	SKY / R.H. CLEAR
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
Hood Franklin Road. Residence w/t roadway.

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	1	MED. TRK	1	MED. TRK	1	
HVY TRK		HVY TRK		HVY TRK		



Appendix F-14 : Long - Term Traffic Noise Measurement Field Data Sheet

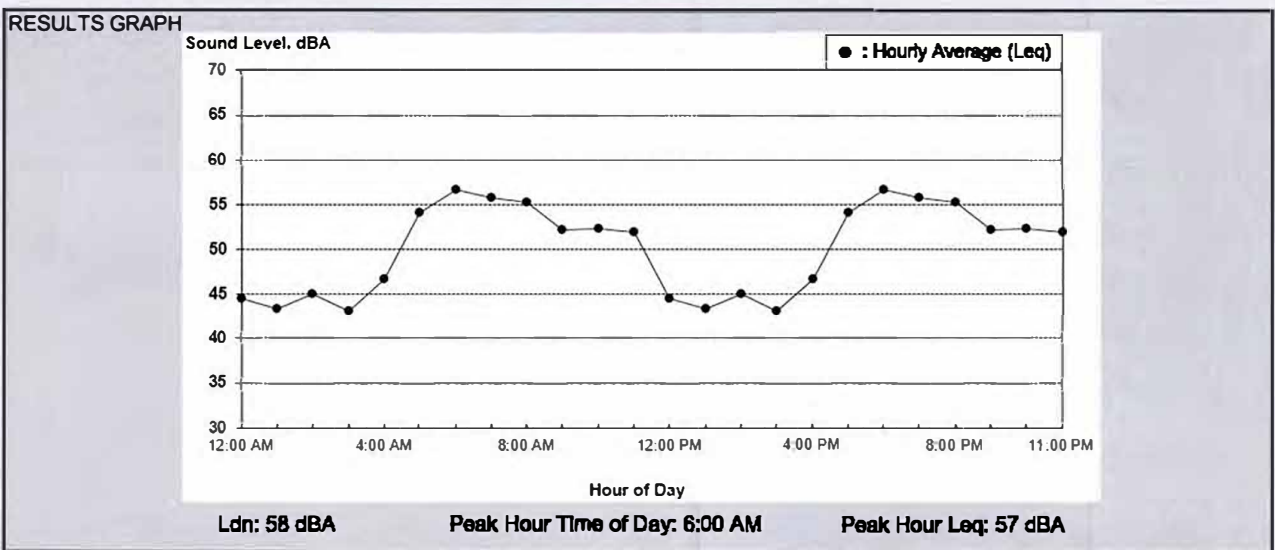
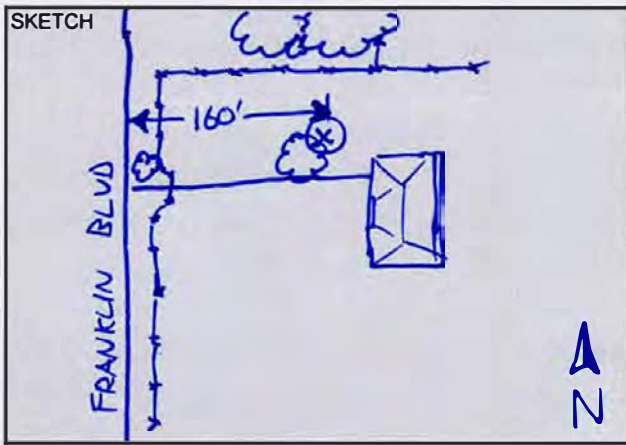
L.T. SITE # LT-4	SITE DESCRIPTION 10609 FRANKLIN BLVD	LAT/LON 38°22'17.76" / 121°27'13.89"
PROJECT Kammerer Road Extension Project	START DATE/TIME 10/01/13 11:00	
BAC JOB # 2013-059	BAC STAFF PAUL B / JON L	END DATE/TIME 10/03/13 15:00

BAC METER # 4	SLM MODEL Larson Davis Model 820	SLM S/N 1126
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114.6B / 8.86
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 65°	WIND SPEED / DIR CALM	SKY / R.H. PARTLY CLOUDY
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
Main Source: Franklin Blvd.

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	1	MED. TRK	1	MED. TRK	1	
HVY TRK		HVY TRK		HVY TRK		



Appendix F-15 : Long - Term Traffic Noise Measurement Field Data Sheet

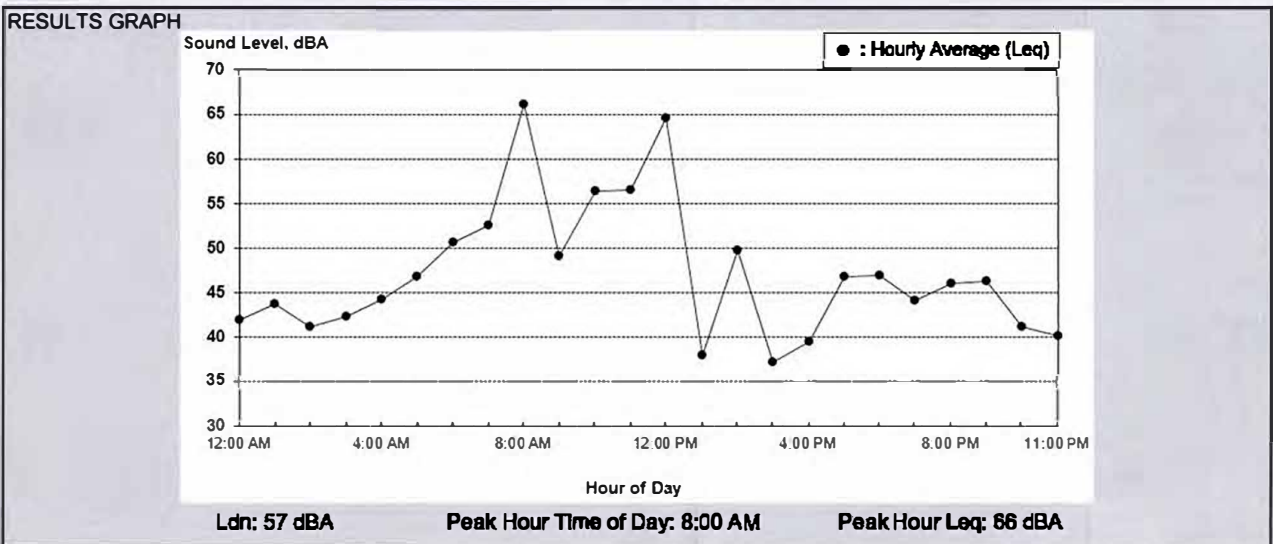
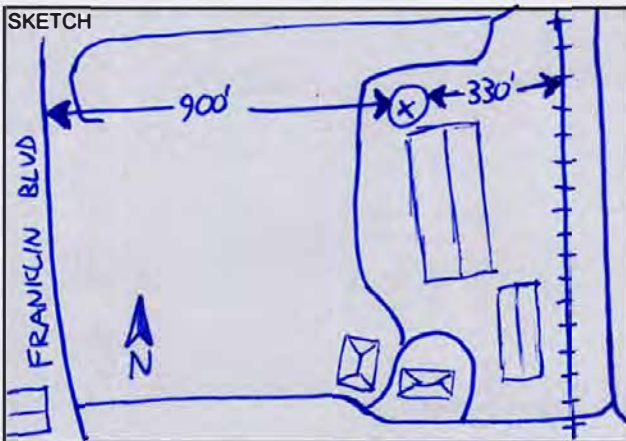
L.T. SITE # LT-5	SITE DESCRIPTION 10775 FRANKLIN BLVD	LAT/LON 38°22'0.89" / 121°27'3.21"
PROJECT Kammerer Road Extension Project		START DATE/TIME 10/15/13 14:00
BAC JOB # 2013-059	BAC STAFF PAUL B / JON L	END DATE/TIME 10/17/13 9:00

BAC METER # 2	SLM MODEL Larson Davis Model 820		SLM S/N 1516
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114 dB / 9.44	
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'	

TEMP (F) 76°	WIND SPEED / DIR 7 MPH NW	SKY / R.H. CLEAR
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
Long shed obstructing view from R/R.

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	1	MED. TRK	1	MED. TRK	1	
HVY TRK	1	HVY TRK	1	HVY TRK	1	



Appendix F-16: Long - Term Traffic Noise Measurement Field Data Sheet

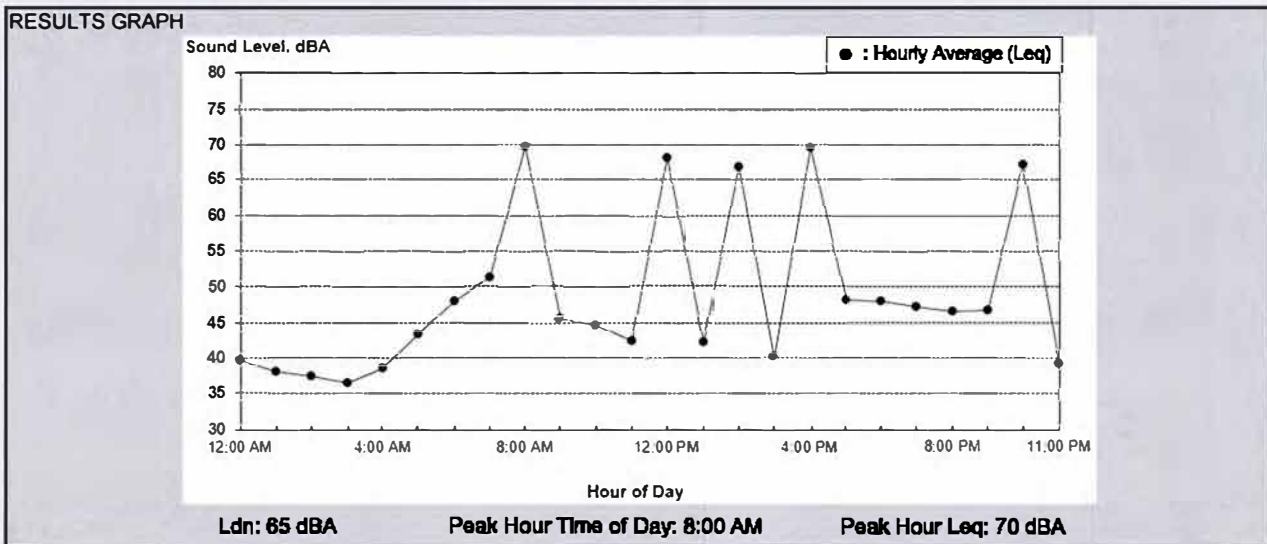
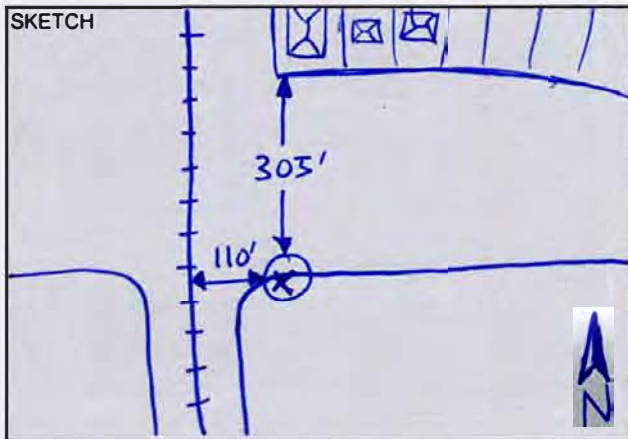
L.T. SITE # LT-6	SITE DESCRIPTION O BILBY ROAD	LAT/LON 38°22'18.90" / 121°26'59.72"
PROJECT Kammerer Road Extension Project	START DATE/TIME 10/01/13 14:00	
BAC JOB # 2013-059	BAC STAFF PAUL B / SON L	END DATE/TIME 10/03/13 14:00

BAC METER # 3	SLM MODEL Larson Davis Model 820	SLM S/N 1459
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114 dB 10.86
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 74°	WIND SPEED / DIR 7 MPH SW	SKY / R.H. CLOUDY
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
R/R

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	1	MED. TRK	1	MED. TRK	1	
HVY TRK		HVY TRK		HVY TRK		



Appendix F-17 : Long - Term Traffic Noise Measurement Field Data Sheet

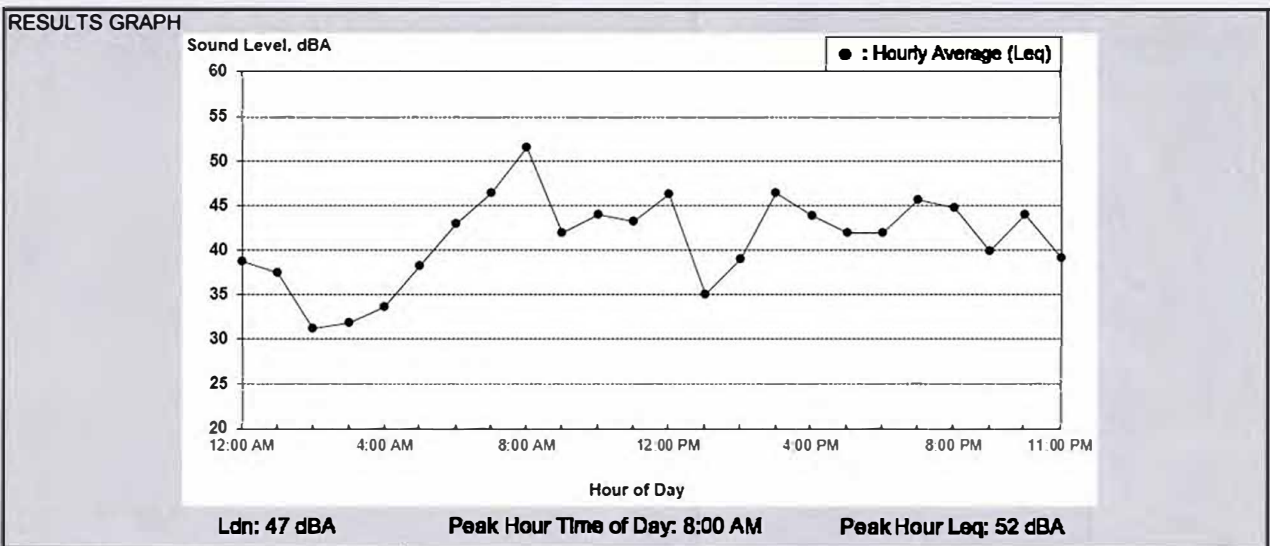
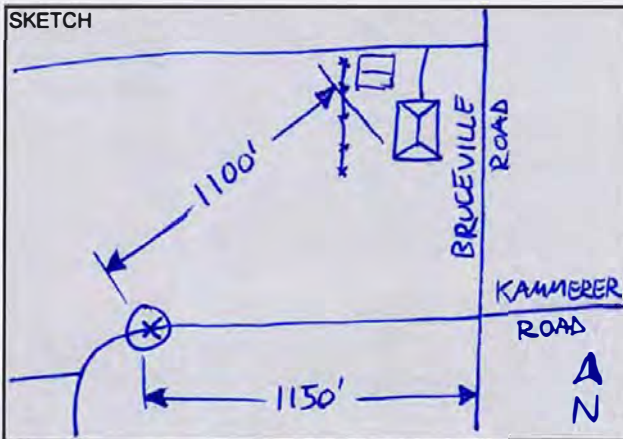
L.T. SITE # LT-7	SITE DESCRIPTION 0 BRUCEVILLE ROAD	LAT/LON 38°22'19.74" / 121°25'17.74"
PROJECT Kammerer Road Extension Project	START DATE/TIME 10/01/13 14:00	
BAC JOB # 2013-059	BAC STAFF PAUL B / JON L	END DATE/TIME 10/03/13 14:00

BAC METER # 5	SLM MODEL Larson Davis Model 820	SLM S/N 1129
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114dB 7.46
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 74°	WIND SPEED / DIR 7 MPH SW	SKY / R.H. CLOUDY
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
Bruceville Rd + Kammerer Rd

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	1	MED. TRK	1	MED. TRK	1	
HVY TRK		HVY TRK		HVY TRK		



Appendix F-18 : Long - Term Traffic Noise Measurement Field Data Sheet

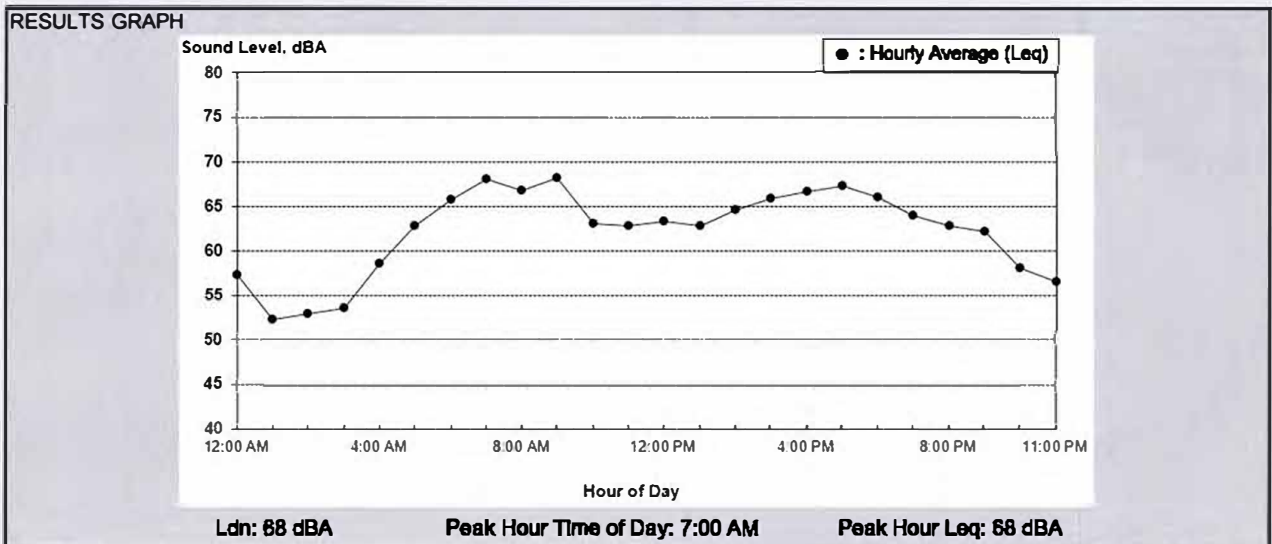
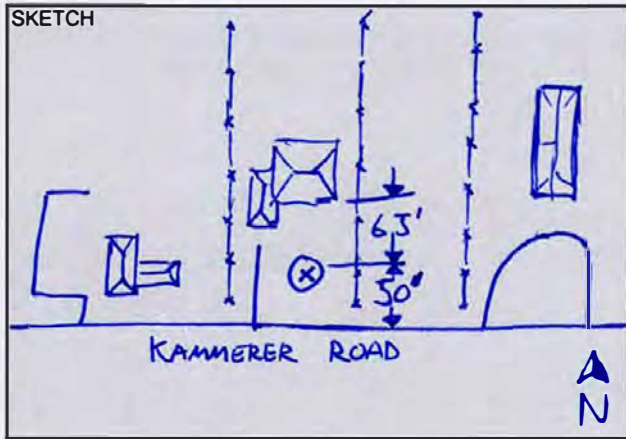
L.T. SITE # LT-8	SITE DESCRIPTION 8051 KAMMERER ROAD	LAT/LON 38° 22' 21.03" / 121° 24' 35.64"
PROJECT Kammerer Road Extension Project		START DATE/TIME 10/01/13 14:00
BAC JOB # 2013-059	BAC STAFF PAUL B / JON L	END DATE/TIME 10/03/13 14:00

BAC METER # 2	SLM MODEL Larson Davis Model 820	SLM S/N 1516
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114 dB / 9.60
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 74°	WIND SPEED / DIR 7 MPH SW	SKY / R.H. CLOUDY
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
Kammerer Rd.

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	1	MED. TRK	1	MED. TRK	1	
HVY TRK	1	HVY TRK	1	HVY TRK	1	



Appendix F-19 : Long - Term Traffic Noise Measurement Field Data Sheet

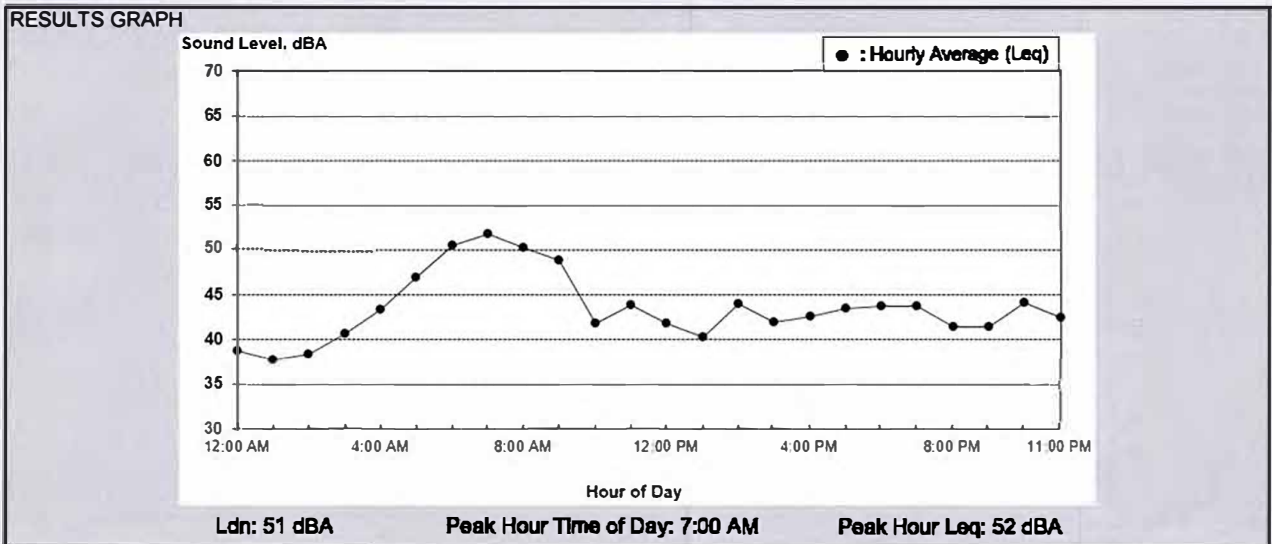
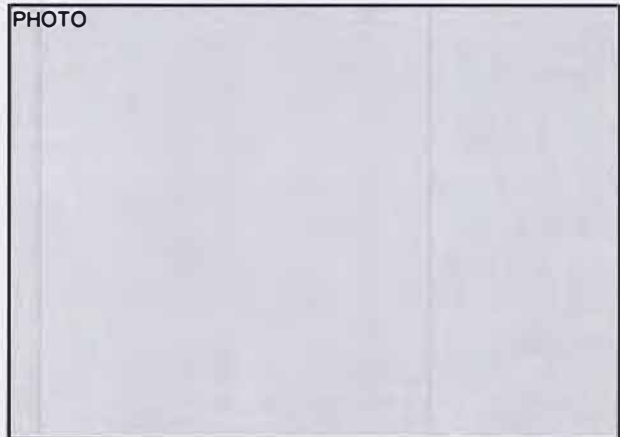
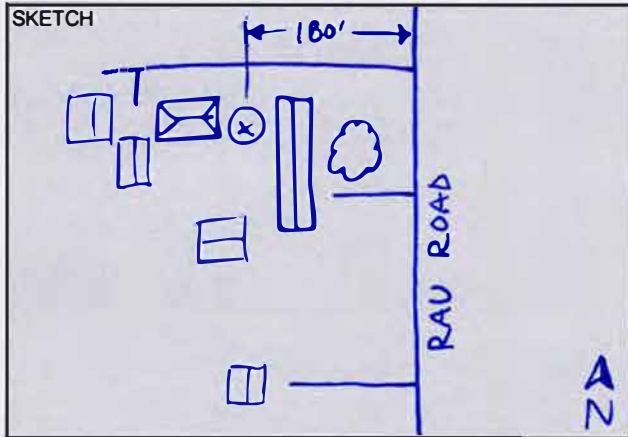
L.T. SITE # LT-9	SITE DESCRIPTION 10650 RAN ROAD	LAT/LON 38°22'17.62" / 121°24'13.90"
PROJECT Kammerer Road Extension Project		START DATE/TIME 10/01/13 15:00
BAC JOB # 2013-059	BAC STAFF PAUL B / JON L	END DATE/TIME 10/03/13 14:00

BAC METER # 6	SLM MODEL Larson Davis Model 820	SLM S/N 0976
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114 dB / 6.80
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 75°	WIND SPEED / DIR 6 MPH W	SKY / R.H. CLOUDY
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
Ran Rd. Shed obstructing roadway view.

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	1	MED. TRK	1	MED. TRK	1	
HVY TRK	1	HVY TRK	1	HVY TRK	1	



Appendix F 20: Long - Term Traffic Noise Measurement Field Data Sheet

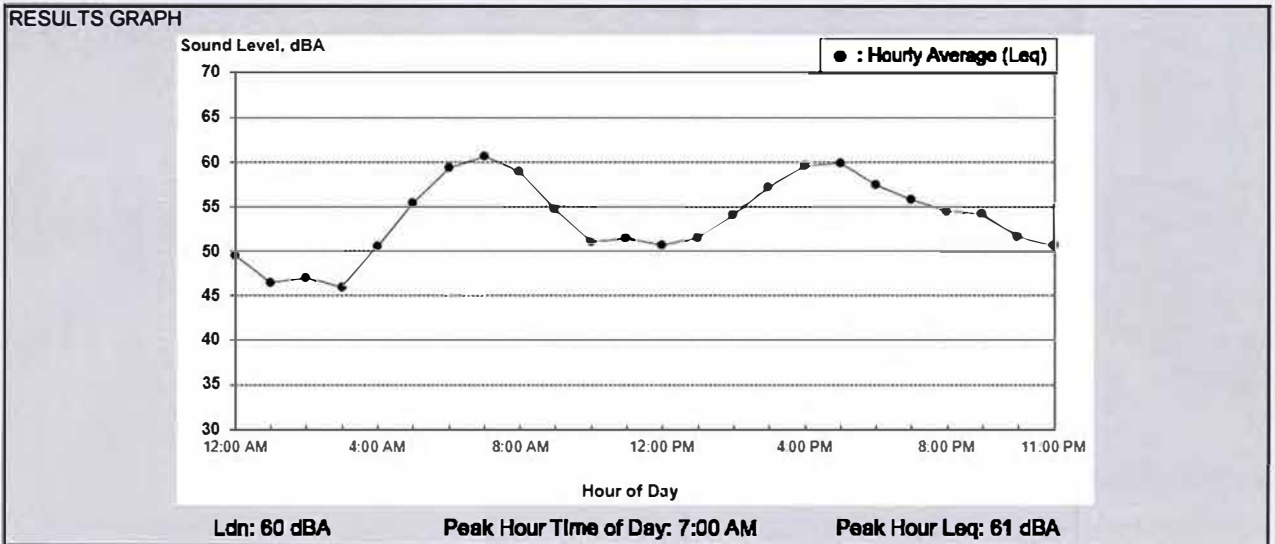
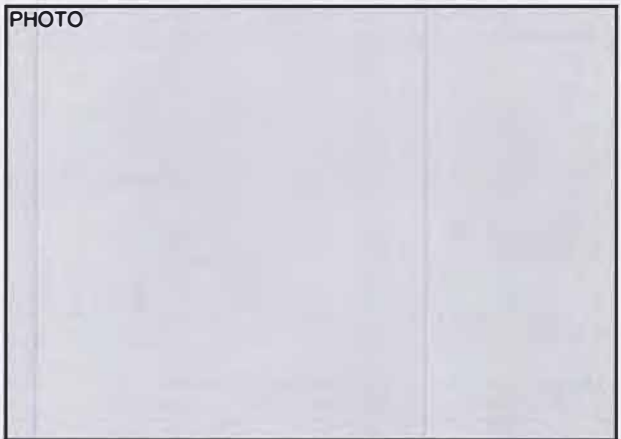
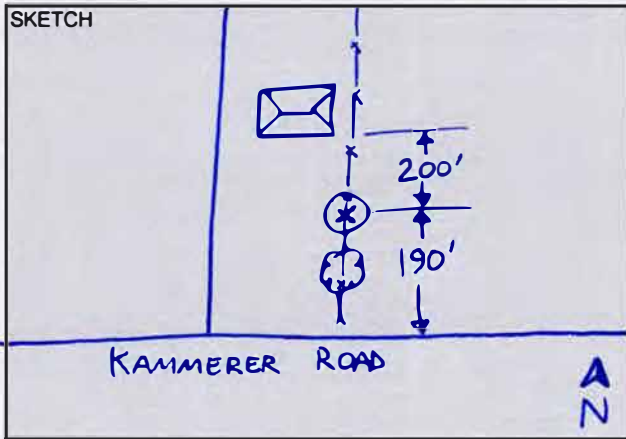
L.T. SITE # LT-10	SITE DESCRIPTION 8499 KAMMERER ROAD	LAT/LON 38°22'23.23" / 121°23'37.21"
PROJECT Kammerer Road Extension Project		START DATE/TIME 10/01/13 11:00
BAC JOB # 2013-059	BAC STAFF PAUL B / JON L	END DATE/TIME 10/03/13 13:00

BAC METER # 7	SLM MODEL Larson Davis Model 820	SLM S/N 1530
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114.6B / 7.20
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 65°	WIND SPEED / DIR CALM	SKY / R.H. PARTLY CLOUDY
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
Kammerer Rd.

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
MED. TRK	1	MED. TRK	1	MED. TRK		
HVY TRK		HVY TRK		HVY TRK		



Appendix F-21 : Long - Term Traffic Noise Measurement Field Data Sheet

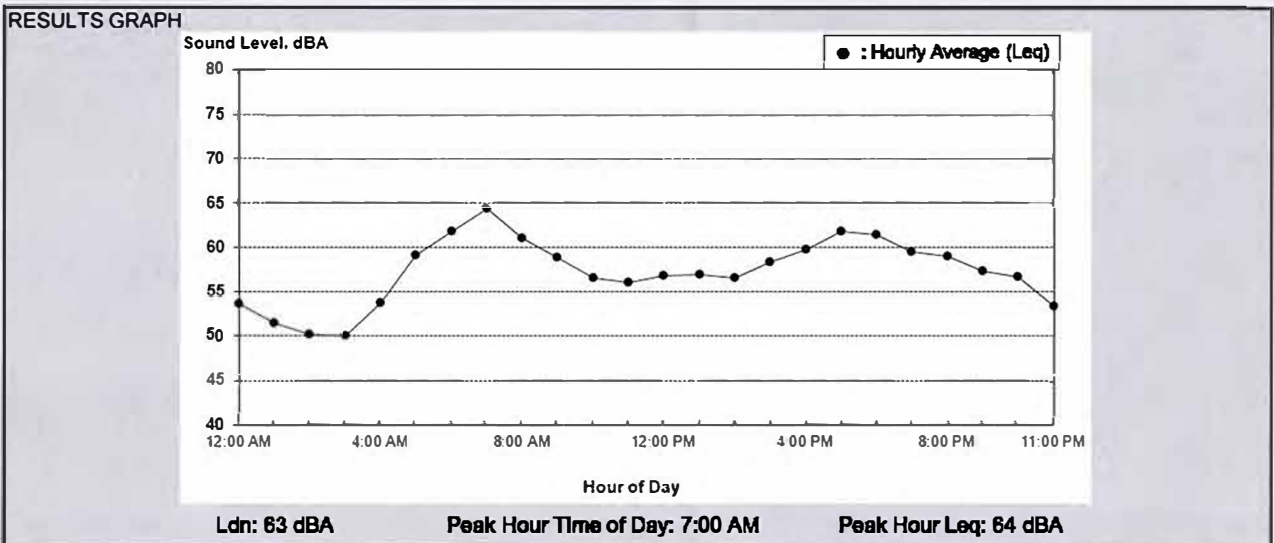
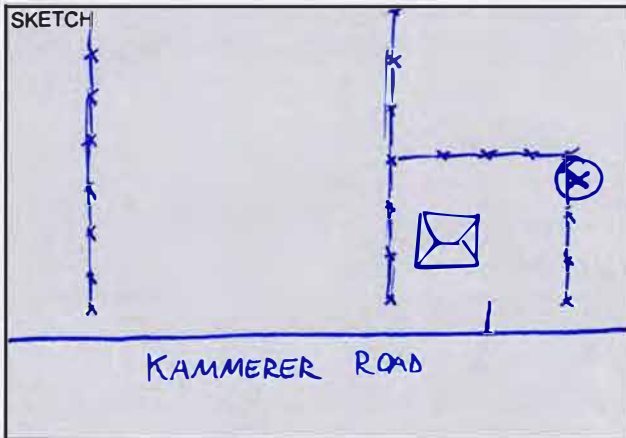
L.T. SITE # LT-11	SITE DESCRIPTION KAMMERER ROAD	LAT/LON 38°22'22.63" / 121°22'56.76"
PROJECT Kammerer Road Extension Project	BAC JOB # 2013-059	BAC STAFF PAUL B / JON L
		START DATE/TIME 10/15/13 14:00
		END DATE/TIME 10/17/13 9:00

BAC METER # 3	SLM MODEL Larson Davis Model 820	SLM S/N 1459
CALIBRATOR LDL CA-200	CAL S/N 4348	CAL LEVEL/OFFSET 114 dB / 12.68
WEIGHTING (circle one) Flat (A) B C	RESPONSE (circle one) Fast (Slow) Impulsive	MIC HEIGHT ABOVE GROUND 5'

TEMP (F) 78°	WIND SPEED / DIR 7 MPH NW	SKY / R.H. CLEAR
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NOISE SOURCE NOTES / OBSERVATIONS / OBSTRUCTIONS
Kammerer Rd.

VEHICLE SPEEDS (mph) (Estimated by driving corridor)	AM Peak		PM Peak		Off Peak	
	AUTOS	55	AUTOS	55	AUTOS	55
	MED. TRK	1	MED. TRK	1	MED. TRK	1
	HVY TRK		HVY TRK		HVY TRK	



F22 Noise Field Data Sheet

Project Name and Number	2379 Kammener Road Extension
Receptor Site #1	North of 10592 Franklin Blvd.
Latitude/Longitude/Description	
Start Date & Time	11:30 AM 1/23/2018
End Date & Time	11:45 PM 1/23/2018
Relative Humidity (%), Temperature (degrees F), Wind Speed/Direction	Humidity - 90% Temperature - 51° Wind speed - 2 MPH
Vehicle Speeds	55 MPH
Notes	11:33 AM Bicyclist greeted staff 11:38 AM - 11:40 AM Train 64.9 dBA eq, Data File #8

Site Sketch (including landmarks—building corners, trees, street signs, curbs, fences)

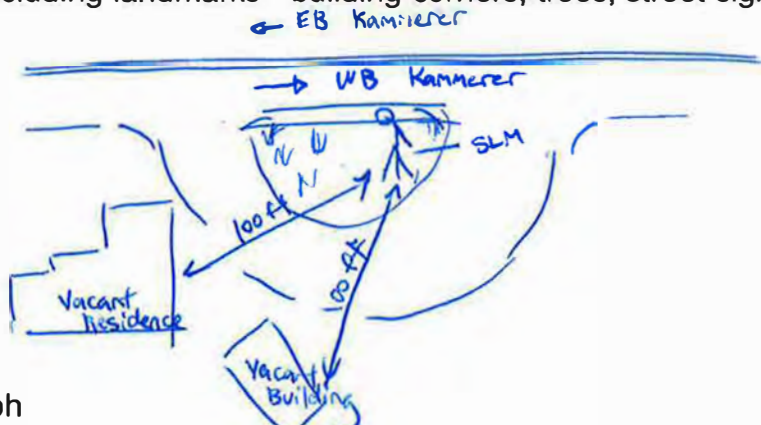


Equipment	Meter Type: Larson Davis 824
	Calibrator: Larson Davis Cal 200
Company meter #	
Staff	Ken C, Athena A.

Noise Field Data Sheet

Project Name and Number	2379 Kammerer Road Extension
Receptor Site #2	7809 Kammerer Road
Latitude/Longitude/Description	
Start Date & Time	12:00 PM 1/23/2018
End Date & Time	12:15 PM 1/23/2018
Relative Humidity (%), Temperature (degrees F), Wind Speed/Direction	Humidity - 92% Temperature - 56°F Wind Speed - 3 MPH
Vehicle Speeds	55 MPH
Notes	67.0 dBA Leq, Data File #9

Site Sketch (including landmarks—building corners, trees, street signs, curbs, fences)



Site Photograph



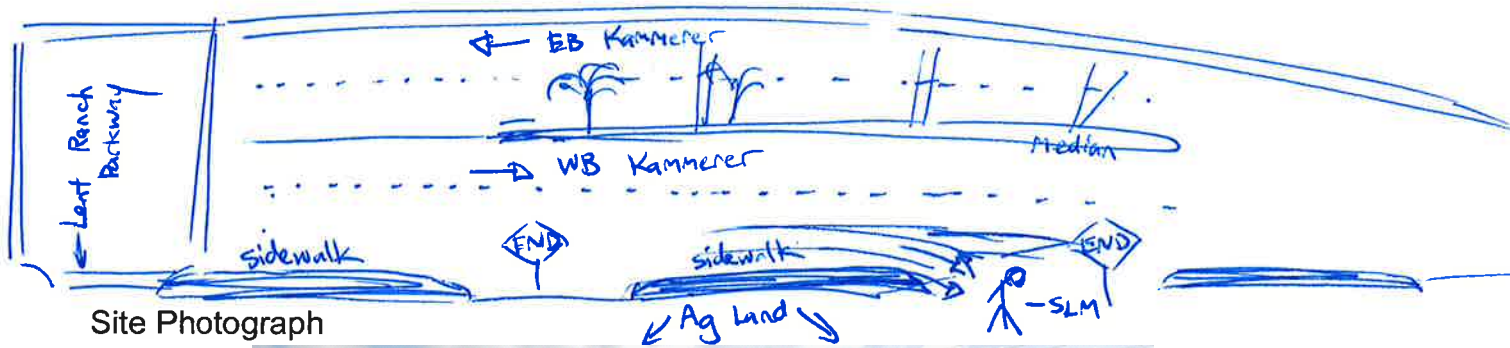
Equipment	Meter Type: Larson Davis 824
	Calibrator: Larson Davis Cal 200
Company meter #	
Staff	Ken C., Althen A.

Noise Field Data Sheet

Project Name and Number	2379 Kammerer Road Extension
Receptor Site #3	Second End Sign West of Lant Ranch Parkway
Latitude/Longitude/Description	
Start Date & Time	12:27 PM 1/23/2018
End Date & Time	12:42 PM 1/23/2018
Relative Humidity (%), Temperature (degrees F), Wind Speed/Direction	Humidity - 72% Temperature - 58° Wind Speed - 5 MPH
Vehicle Speeds	55 MPH
Notes	63.0 dBA, Data File #10

Site Sketch (including landmarks—building corners, trees, street signs, curbs, fences)

Ag Land



Site Photograph

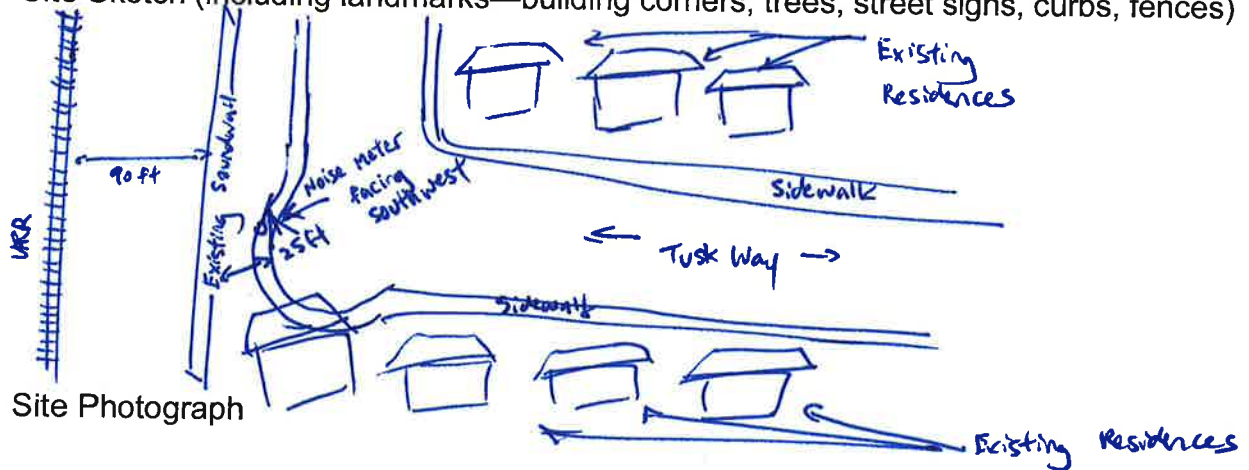


Equipment	Meter Type: Larson Davis 824
	Calibrator: Larson Davis Cal 200
Company meter #	
Staff	Ken C., Althea A

Noise Field Data Sheet

Project Name and Number	2379 Kammerer Road Extension
Receptor Site	4800 Tusk Way
Latitude/Longitude/Description	38.373118 , -121.45008
Start Date & Time	3:56 PM 7/18/2018
End Date & Time	4:11 PM 7/18/2018
Relative Humidity (%) , Temperature (degrees F), Wind Speed/Direction	Humidity - 20% Temperature - 102 °F Wind Speed - 8 MPH
Vehicle Speeds	none
Notes	Data # 11 47.0 dBA recorded

Site Sketch (including landmarks—building corners, trees, street signs, curbs, fences)

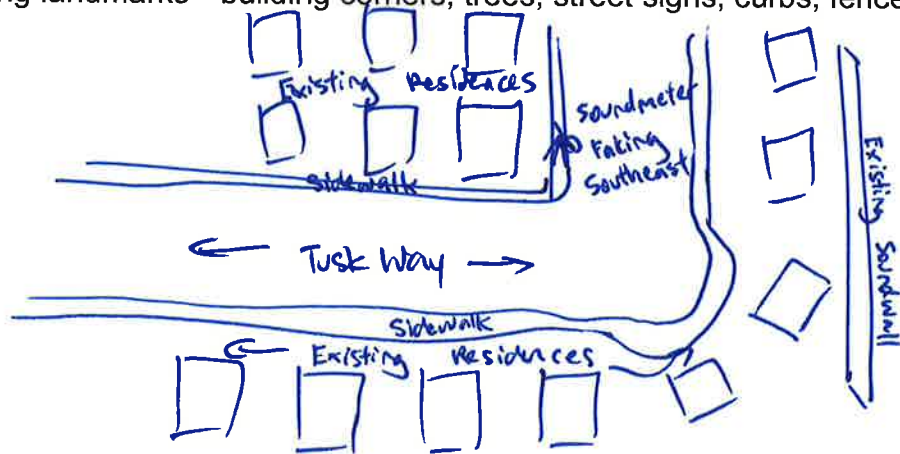


Equipment	Meter Type: Larson Davis 824
	Calibrator: Larson Davis Cal200
Company meter #	
Staff	Ken C. , Zach L.

Noise Field Data Sheet

Project Name and Number	2379 Kammerer Road Extension
Receptor Site	4877 Tusk Way
Latitude/Longitude/Description	38.373193, -121.446594
Start Date & Time	4:25 PM 7/18/2018
End Date & Time	4:40 PM 7/18/2018
Relative Humidity (%) , Temperature (degrees F), Wind Speed/Direction	Humidity - 19% Temperature - 100°F Wind Speed - 11 MPH
Vehicle Speeds	
Notes	Brita # 12 51.1 dBA recorded

Site Sketch (including landmarks—building corners, trees, street signs, curbs, fences)



Site Photograph

Equipment	Meter Type: Larson Davis 824
	Calibrator: Larson Davis Cal 200
Company meter #	
Staff	Ken C., Zach L.

Appendix G
Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
Aesthetics					
VIS-1: Areas that have removed trees, shrubs and created soil disturbance due to construction activities will be re-established by applying a permanent erosion control and planting trees and shrubs where they are deemed appropriate. All finished slopes and graded areas shall be hydroseeded with a permanent seed mix composed of native plant species indigenous to the area.	During and Post Construction	Contractor	<input type="checkbox"/>	_____	
VIS-2: All disturbed areas including staging of vehicles and equipment will be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native species.	During and Post Construction	Contractor	<input type="checkbox"/>	_____	
VIS-3: To minimize visual impacts of staged construction equipment, adherence of Caltrans Standard Specification for Construction would occur. Construction materials and debris shall be stored away from highly visible areas, which shall include, but not be limited to, residences along Kammerer Road, Bruceville Road, Franklin Boulevard, and the Rancho Verde residential development.	During Construction	Contractor	<input type="checkbox"/>	_____	
VIS-4: To minimize visual impacts to the Rancho Verde residential development, design and construction of the overhead grade separation structure would incorporate design features to minimize the appearance of the structure. These design features may include vegetative cover and the use of cut and fill around the structure so it appears to grow out of and blend in with the surrounding landscape. Any hydroseed or vegetation cover would be composed of native species.	During Construction	Contractor	<input type="checkbox"/>	_____	

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<p>VIS-5: During the final design of the Project, the implementing agency will prepare and implement a plan for construction lighting that minimizes the release of light and glare either upward or toward properties and residences adjoining the construction site. At a minimum, the plan will contain the following elements:</p> <ul style="list-style-type: none"> To minimize trespass lighting to the skies, use full cutoff luminaires. Full cutoff luminaires are designed to not emit any light above 90 degrees, thereby reducing sky glow. Use internal or external shields when necessary to minimize light trespass onto neighboring properties. 	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
<p>VIS-6: Operational lighting of the Project will be designed for safety and will include features that minimize the release of light and glare either upward or toward properties and residences adjoining the Project corridor. The lighting design will conform to all applicable City, County, State, Federal and public safety standards, as appropriate. Features could include shielding lighting elements, using lower voltage lighting, incorporating downward casting lighting, using lighting features that conform to the visual character of the area, and similar design measures as listed below:</p> <ul style="list-style-type: none"> Consider the least intrusive lighting when improvements are made at an intersection, when lighting is needed for safety reason, or when a new intersection is constructed. Minimize continuous roadway lighting, Calculate the optimum location, height and spacing for alternative lighting solutions at each intersection using computer software. 	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<ul style="list-style-type: none"> Do not permit the use of high pressure sodium lamps. Metal halide is preferred because of the more natural color rendition and pure white light. Minimize trespass lighting to the skies by using full cutoff luminaires. Full cutoff luminaires are designed to not emit any light above 90 degrees, thereby reducing sky glow. Reduce the amount of light required for an intersection by using Caltrans, Sacramento County, and City of Elk Grove Department of Transportation minimum requirements as appropriate. Use internal or external shields when necessary to minimize light trespass onto neighboring properties. 					
Agriculture and Forest Resources					
AG-1: The proposed Project shall be designed to avoid or minimize the direct conversion of important farmland to nonagricultural uses and indirect conversion of farmland through severance or fragmentation. During future design phases, the implementing agency will locate the proposed Project to avoid or minimize loss of agricultural lands and the potential for fragmenting agricultural lands or production in a manner that would make them uneconomical to farm, to the extent that doing so would not compromise safety or standard design criteria for a road of this type.	During PS&E/Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	
AG-2: For important farmland (prime, statewide, unique, and local) converted by the project, either directly or indirectly as described above, important farmland of the same category will be permanently protected from development at a minimum ratio of 1:1. Productive offsite agricultural land subject to conversion will be protected	During PS&E/Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
through the purchase or transfer of its development rights and establishment of a farmland conservation easement over the agricultural land pursuant to California Civil Code Section 815, et seq. or other statute providing for its conservation in perpetuity for agricultural use. The JPA will provide funds to an agricultural land trust or similar nongovernmental entity for the purchase of agricultural land or development rights on agricultural and establishment of a farmland conservation easement. The JPA shall fund only a land trust or nongovernmental entity with an established record of responsible agricultural land stewardship.					
Air Quality					
<p>AQ-1: Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust, where feasible and applicable to the Project.</p> <p>The implementing agency will require, as a standard or specification of their contract, the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust. Although the following measures are outlined in the SMAQMD’s CEQA guidelines, they are required for the entirety of the construction area. The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p>	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<ul style="list-style-type: none"> Water all exposed surfaces two times daily. Exposed surfaces include (but are not limited to) soil piles, graded areas, unpaved parking areas, staging areas, and access roads. Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered. Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited. Limit vehicle speeds on unpaved roads to 15 miles per hour. All roadway, driveway, sidewalk, and parking lot paving should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. <p>Enhanced Control Measures – Disturbance Areas</p> <ul style="list-style-type: none"> Water exposed soil with adequate frequency for continued moist soil. However, do not overwater to the extent that sediment flows off the site. Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 mph. Install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of construction areas. Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible. Water appropriately until vegetation is established. 					

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<p>Enhanced Control Measures – Unpaved Roads (Entrained Road Dust)</p> <ul style="list-style-type: none"> • Install wheel washers for all exiting trucks, or wash off all trucks and "equipment leaving the site. • Treat site accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads. • Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the District shall also be visible to ensure compliance. <p>Additional Control Measures – Off-Site Mitigation Fees Payable to the SMAQMD</p> <ul style="list-style-type: none"> • In the event that the SMAQMD basic and enhanced construction mitigation measures are not sufficient to reduce NOx emissions below the SMAQMD's construction NOx threshold, the remaining NOx emissions in excess of the SMAQMD's threshold would be offset by the JPA through a fee paid to the SMAQMD who will fund cost-effective Projects that reduce NOx, in the Project area, to the extent possible, and otherwise within the Sacramento air basin. The fee will be calculated using the SMAQMD's current rate of NOx per ton at 					

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<p>the time of construction in addition to SMAQMD administration fees. Currently, the SMAQMD's off-site mitigation fee is \$16,400 per ton of NOx, in addition to a 5% administration fee.</p> <p>AQ-2: Implement SMAQMD Basic Construction Emission Control Practices to Reduce NOx</p> <p>The implementing agency will require, as a standard or specification of their contract, that the construction contractor(s) implement basic control measures to reduce NOx emissions from diesel-powered construction equipment. Although the following measures are outlined in SMAQMD's CEQA guidelines, they will be required by the SMAQMD for the entirety of the construction area. The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p> <ul style="list-style-type: none"> Minimize idling time either by shutting equipment off when not in use or "limiting the time of idling to 3 minutes (5 minutes required by 13 CCR 2449[d] [3], 2485). Provide clear signage that posts this requirement for workers at the entrances to the site. Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated. The Connector JPA will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before 	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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and during construction and documents compliance with the adopted mitigation measures.					
<p>AQ-3: Implement SMAQMD Enhanced Construction Emission Control Practices to Reduce NOx</p> <p>The implementing agency will require, as a standard or specification of their contract, that the construction contractor(s) implement enhanced control measures to reduce NOx emissions from diesel-powered construction equipment. The following measures are outlined in SMAQMD’s CEQA guidelines and are required for the entirety of the construction area. The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p> <ul style="list-style-type: none"> • Provide a plan for approval by the SMAQMD demonstrating that the heavy-duty (50-horsepower or more) off-road vehicles to be used in the construction Project, including owned, leased, and subcontractor vehicles, will achieve a Project-wide fleet-average 20% NOx reduction and 45% PM exhaust reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, alternative fuels, engine-retrofit technology, after-treatment products, or other options as they become available. • Ensure that emissions from all off-road diesel-powered equipment used on the Project site do not exceed 40% opacity 	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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<p>for more than 3 minutes in any 1 hour. Any equipment found to exceed 40% opacity (or Ringelmann 2.03) will be repaired immediately. Non-compliant equipment will be documented and a summary provided periodically to the lead agency and air district. A visual survey of all in-operation equipment will be made at least periodically by the proponent agency(s), and a periodic summary of the visual survey results will be submitted throughout the duration of the proposed Project, except that the summary will not be required for any 30-day period in which no construction activity occurs. The summary will include the quantity and type of vehicles surveyed, as well as the dates of each survey. The air districts or other officials may conduct periodic site inspections to determine compliance. Nothing in this measure will supersede other air district or state rules or regulations.</p> <p>The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p>					
<p>AQ-4: Implement Additional Exposure Reduction Strategies to Further Minimize Potential Health Risks.</p> <p>The implementing agency will implement strategies to reduce the potential for sensitive receptors along the Project corridor to be exposed to DPM. Potential strategies include (but are not limited to) creating a buffer zone of at least 50 feet between the roadway and sensitive land uses (e.g., residences, parks, churches, and medical</p>	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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<p>facilities), as well as planting additional vegetation along the Project corridor (A laboratory study indicates that all forms of vegetation are effective in removing PM10, although the greatest removal rates are achieved with redwood and deodar cedar –[Sacramento Metropolitan Air Quality Management District 2010]). These strategies should be focused in areas where sensitive receptors are directly adjacent to the roadway. Selection of these species should be maximized to the extent feasible.</p> <ul style="list-style-type: none"> A landscape plan shall include a vegetation barrier consistent with the Sacramento Metropolitan Air Quality Management District’s Landscaping Guidance for Improving Air Quality near Roadways. The landscape plan shall include individual plant locations, species, approved alternate species for substitutions, plant material size and plant material source. Landscape plans shall be approved by the Connector JPA prior to site preparation and installation activities. 					
<p>AQ-5: Conduct a Geological Investigation for Naturally Occurring Asbestos and Implement an Asbestos Dust Mitigation Plan if Naturally Occurring Asbestos Is Found in the Project Area.</p> <p>The implementing agency will conduct a site-specific geological investigation for all construction areas with known potential to contain NOA. According to the CGS, this includes all portions of the construction area east of Folsom (California Geological Survey 2006). If NOA is identified in the project area, the implementing agency will submit an asbestos dust mitigation plan to the SMAQMD pursuant to the State of California’s Asbestos Airborne</p>	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. This plan shall be prepared prior to ground breaking by the implementing agency.					
Biological Resources					
BIO-1: As part of project-level environmental review, implementing agencies will ensure that projects comply with the most recent general plans, policies, ordinances, and conservation plans (including any HCPs, NCCPs, and other local, regional, and state plans). Review of these documents and compliance with their requirements will be demonstrated in project-level environmental documentation. Implementing agencies will ensure that projects comply with all policies, ordinances, and plans that exist at the time of project-level review, regardless of whether they existed during the program-level analysis.	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	
BIO-2: Before any work occurs in the Project area, the project biologist will conduct a mandatory environmental awareness training program for all construction personnel working on the Project. The training program will notify construction personnel of the sensitive biological resources occurring within the Project area, their legal status, and penalties for not complying with the conditions of any permits issued for the Project. The education program will emphasize the need to protect water quality, wetlands, and habitat for special-status species. As necessary, a biological monitor approved by the resource agencies will ensure that construction personnel adhere to the guidelines and restrictions of all approved environmental documents, permits, and other agreements.	During construction	Implementing Agency	<input type="checkbox"/>	_____	

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<p>BIO-3: The implementing agency will install orange construction barrier fencing to identify environmentally sensitive areas around sensitive natural communities, and where determined feasible, protected trees.</p> <p>Before construction, a qualified biologist will work with the project engineer to identify the locations for the barrier fencing, and will place stakes around the sensitive resource sites to indicate these locations. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications:</p> <p>The Contractor’s attention is directed to the areas designated as “environmentally sensitive areas.” These areas are protected, and no entry by the Contractor for any purpose will be allowed unless specifically authorized in writing by the implementing agency. The Contractor will take measures to ensure that Contractor’s forces do not enter or disturb these areas, including giving written notice to employees and subcontractors.</p> <p>Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with a maximum 10-foot spacing.</p>	<p>Prior to construction</p>	<p>Implementing Agency</p>	<p><input type="checkbox"/></p>	<p>_____</p>	
<p>BIO-4: If impacts to protected trees cannot be avoided, then the implementing agency will compensate for impacts on protected</p>	<p>Prior to construction</p>	<p>Implementing Agency</p>	<p><input type="checkbox"/></p>	<p>_____</p>	

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<p>trees. For portions of the Project in the City of Elk Grove, the following policies from the City Tree Ordinance will be implemented.</p> <p>Mitigation may take the form of on-site or off-site planting or payment of in-lieu fees. Mitigation planting should be of an equivalent size and species of those being removed. Trees that are of a 1- or 15-gallon container or seedling-sized trees account for 1-inch DBH removed and trees planted that are of 24-, 36-, 60- or 72-inch containers account for 2-inches DBH removed.</p> <p>If tree replacement or transplantation is chosen as the project mitigation strategy, a five-year mitigation and monitoring plan should be prepared. The plan should include maintenance, watering, and monitoring schedules, success criteria, and reporting requirements. Mitigation trees must be monitored by an ISA-Certified Arborist for five years after planting.</p> <p>In-lieu of planting, fees may be paid into the Tree Preservation Fund at a rate established under a Resolution by the City Council. As per a conversation with the City of Elk Grove Planning Department, the current mitigation fee is \$200 per inch of DBH removed.</p> <p>The exact amount of mitigation required will depend on the final design of the project.</p>					
<p>BIO-5: If impacts on protected trees cannot be avoided, then the implementing agency will compensate for impacts on protected trees. For portions of the project in Sacramento County, the following policies from the Sacramento</p>	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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<p>County General Plan (2011) regarding landmark and heritage tree protections will be implemented:</p> <p>CO-138 – Protect and preserve non-oak native trees along riparian areas if used by Swainson’s hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.</p> <p>CO-139 – Native trees other than oak, which cannot be protected through development, shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.</p> <p>CO-140 – For projects involving native oak woodlands, oak savannah or mixed riparian areas, ensure mitigation through either of the following methods:</p> <ul style="list-style-type: none"> • An adopted habitat conservation plan. • Ensure not net loss of canopy area through a combination of the following: (1) preserving the main, central portions of consolidated and isolated groves constituting the existing canopy and (2) provide an area on-site to mitigate any canopy lost. Native oak mitigation area must be a contiguous area on-site which is equal to the size of canopy area lost and shall be adjacent to existing oak canopy to ensure opportunities for regeneration. 					

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<ul style="list-style-type: none"> • Removal of native oaks shall be compensated with native oak species with a minimum of a one to one dbh replacement. • A provision for a comparable on-site area for the propagation of oak trees may substitute for replacement tree planting requirements at the discretion of the County Tree Coordinator when removal of a mature oak tree is necessary. • If the project site is not capable of supporting all the required replacement trees, a sum equivalent to the replacement cost of the number of trees that cannot be accommodated may be paid to the County's Tree Preservation Fund or another appropriate tree preservation fund. • If on-site mitigation is not possible given site limitation, off-site mitigation may be considered. Such a mitigation area must meet all of the following criteria to preserve, enhance, and maintain a natural woodland habitat in perpetuity, preferably by transfer of title to an appropriate public entity. Protected woodland habitat could be use as a suitable site for replacement tree plantings required by ordinances or other mitigation. <ul style="list-style-type: none"> - Equal or greater in are to the total are that is included within a radius of 30 feet of the dripline of all trees to be removed; - Adjacent to protected stream corridor or other preserved natural area; 					

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<ul style="list-style-type: none"> - Supports a significant number of native broadleaf trees; and - Offers good potential for continued regeneration of an integrated woodland community. <p>CO-141 – In 15 years the native oak canopy within on-site mitigation area shall be 50 percent canopy coverage for valley oak and 30 percent canopy coverage for blue oak and other native oaks.</p>					
<p>BIO-6: All exposed/ disturbed areas and access points left barren of vegetation as a result of construction activities will be restored using locally native grass seeds, locally native grass plugs, and/ or a mix of quick-growing sterile non-native grass with locally native grass seeds. Seeded areas will be covered with broadcast straw and/ or jute netting (monofilament erosion blankets are not permitted).</p>	During Construction	Contractor	<input type="checkbox"/>	_____	
<p>BIO-7: Should the Final SSHCP be permitted prior to construction of the project, the implementing agency will provide compensatory mitigation as required by the SSHCP mitigation ratios for non-aquatic natural communities including, but not limited to, valley grassland, irrigated pasture-grassland, and cropland.</p>	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	
<p>BIO-8: Implementing agencies will avoid and minimize impacts on wetlands and other waters by implementing the following measures:</p> <ul style="list-style-type: none"> • Redesign or modify the project to avoid direct and indirect impacts on wetland habitats, including water quality run-off, if feasible. 	Prior to and During Construction	Implementing Agency and Contractor	<input type="checkbox"/>	_____	

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<ul style="list-style-type: none"> Protect wetland habitats that occur near the project site by installing ESA fencing at least 20 feet from the edge of the wetland where feasible. Depending on site-specific conditions and permit requirements, this buffer may be wider than 20 feet (e.g., 250 feet for seasonal wetlands and vernal pools that are considered special-status shrimp habitat). The location of the fencing will be marked in the field with stakes and flagging and shown on construction drawings. Construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced ESA. Avoid installation activities in saturated or ponded wetlands during the wet season (spring and winter) to the maximum extent possible. Where such activities are unavoidable, protective practices, such as use of padding or vehicles with balloon tires, will be used. Where determined necessary by resource specialists, use geotextile cushions and other materials (e.g., timber pads, prefabricated equipment pads, or geotextile fabric) in saturated conditions to minimize damage to the substrate and vegetation. Stabilize exposed slopes and streambanks immediately on completion of installation activities. Other waters of the United States and waters of the state will be restored in a manner that encourages vegetation to reestablish to its pre-project condition and reduces the effects of erosion on the drainage system. In highly erodible stream systems, stabilize banks using a nonvegetative material that will bind the soil initially and break down within a few years. If the project engineers determine that 					

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<p>more aggressive erosion control treatments are needed, use geotextile mats, excelsior blankets, or other soil stabilization products.</p> <ul style="list-style-type: none"> During construction, remove trees, shrubs, debris, or soils that are inadvertently deposited below the ordinary high-water mark of drainages in a manner that minimizes disturbance of the drainage bed and bank. <p>These measures will be incorporated into contract specifications and implemented by the construction contractor. In addition, the implementing agency will ensure that the contractor incorporates all state and federal permit conditions into construction specifications.</p>					
<p>BIO-9: Work will coincide to the driest time. If water is present at the time of construction, water will be diverted around the work area and work will resume after the site is dry. Flows will be diverted using gravity flow through temporary culverts/pipes or pumped around the work site with the use of hoses. When a temporary dam or other artificial obstruction is being constructed, maintained, or placed in operation, sufficient water will at all times be allowed to pass downstream. Any temporary dam or other artificial obstruction constructed will only be built from clean materials, such as sandbags, gravel bags, water dams, or clean/washed gravel that will cause little or no siltation.</p>	During Construction	Contractor	<input type="checkbox"/>	_____	
<p>BIO-10: If the SSHCP is not permitted when the project is ready to move into the construction phase, the implementing agency will compensate for the loss of wetland and waters to ensure there is no net loss of habitat functions and values. The compensation will be at a minimum 1:1 restoration ratio and a 1:1 preservation ratio</p>	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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<p>with the mitigation being met by purchasing credits at a USACE-approved mitigation bank or other USACE-approved mitigation site. The implementing agency will prepare a comprehensive mitigation plan containing the following components: specifications for the conservation/preservation lands; the locations of the compensation lands, provisions for the management and maintenance of those lands in perpetuity by either the implementing agency or other entity, and the instruments by which long-term management and maintenance will be assured. As directed by Policy CO-60 in the Sacramento County General Plan (2011), for segments of the Connector in Sacramento County, mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan.</p> <p>Impacts to waters will be mitigated at an on or off site, agency approved location or a combination of both. Exact mitigation ratios and locations will be determined during the environmental permitting processes.</p>					
<p>BIO-11: If the Final SSHCP is permitted prior to construction of the project, the implementing agency will provide compensatory mitigation for listed aquatic features including wetlands, vernal pools, and other compliance with the Final SSHCP mitigation ratios for wetlands and other waters.</p>	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	
<p>BIO-12: All temporarily disturbed water features will be re-contoured to natural contours and vegetation will be allowed to return to pre-project conditions.</p>	During and Post Construction	Contractor	<input type="checkbox"/>	_____	

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<p>BIO-13: The implementing agency will avoid and minimize impacts to special status plant populations to the greatest extent practicable by implementing the following measures:</p> <ul style="list-style-type: none"> Redesign or modify the project to avoid or minimize direct and indirect impacts on special-status plants. Avoid or minimize construction impacts on special-status plants near the project site by installing environmentally sensitive area fencing (orange construction barrier fencing) around special-status plant populations at least 20 feet from the edge of the population. Wider buffer zone widths set by site-specific conditions and permit requirements, such as those for seasonal wetlands and vernal pools that are considered special-status shrimp habitat, will take precedence over this requirement. The location of the fencing will be marked in the field with stakes and flagging and shown on construction drawings. Construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area. 	Prior to and During construction	Implementing Agency and Contractor	<input type="checkbox"/>	_____	
<p>BIO-14: Prior to construction, the project biologist will conduct pre-construction blooming clearance surveys in areas of direct impacts for the following sensitive plant species in their respective wetland habitats:</p> <ul style="list-style-type: none"> Boggs Lake hedge-hyssop: Surveys must be conducted between the months of April and August. 	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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<ul style="list-style-type: none"> • Bristly sedge: Surveys must be conducted between the months of July and September. • Dwarf downingia: Surveys must be conducted between the months of March and May. • Heckard’s pepper-grass: Surveys must be conducted between the months of March and May. • Legenere: Surveys must be conducted between the months of May and June. • Saline clover: Surveys must be conducted between the months of April and June. • Sanford’s arrowhead: Surveys must be conducted between the months of May and October. 					
<p>BIO-15: If Boggs Lake hedge hyssop, Bristly sedge, dwarf downingia, Heckard’s pepper-grass, legenere, saline clover, and Sanford’s arrowhead cannot be avoided, the implementing agency will compensate for the loss of plants and their habitat by contributing to the conservation and recovery of the affected species. For each special-status plant occurrence impacted, one occurrence of the same species of a similar or greater size will be preserved (to compensate for temporal habitat loss). For impacts on special-status plants, a mitigation and monitoring plan will be prepared that describes how the loss of special-status plant species will be compensated for. The mitigation and monitoring plan will be reviewed and approved by DFG and USFWS. The plan shall contain, but is not limited to, the following performance standards:</p>	<p>Prior to, During and Post construction</p>	<p>Implementing Agency</p>	<p><input type="checkbox"/></p>	<p>_____</p>	

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<ul style="list-style-type: none"> Habitat restoration or establishment, where appropriate and feasible, will be used in conjunction with translocating the affected population. As directed by Policy CO-60 in the Sacramento County General Plan (2011), for segments of the Connector in Sacramento County, mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan or areas specifically identified in the Final SSHCP, when permits are available. Habitat will be restored or newly established (on or off site) at a minimum ratio of 1:1 (1 acre restored for each acre impacted). The mitigation site will be monitored the first year after the mitigation is implemented and every 5 years thereafter, until the mitigation is considered to be successful. Mitigation will be considered successful if the translocated population is determined to be stable and contains at least 60% of the number of plants present in the original occurrence. If the population falls below 60% of the original number of plants, then remediation measures will be initiated. <p>Because special-status species in the project area are state or federally listed or occur in wetlands, the Project will have to comply with state and federal laws and regulations governing these resources, and obtain the applicable take or fill permits. These permits may include specific requirements, including compensation measures and ratios, which will take precedence over the measures and ratios specified in the previous paragraph.</p>					

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<p>BIO-16: The project will implement the following measures into the project plans and specifications:</p> <ul style="list-style-type: none"> • Use certified, weed-free, imported erosion-control materials (or rice straw in upland areas). • Coordinate with the applicable County Agricultural Commissioner and land management agencies to ensure that the appropriate best management practices (BMPs) are implemented. • Educate construction supervisors and managers on weed identification and the importance of controlling and preventing the spread of noxious weeds. 	During Construction	Implementing Agency and Contractor	<input type="checkbox"/>	_____	
<p>BIO-17: Prior to arrival at the project site and prior to leaving the project site, the construction contractor must clean all construction equipment that may contain invasive plants and/or seeds to reduce the spreading of noxious weeds.</p>	Prior to and During Construction	Contractor	<input type="checkbox"/>	_____	
<p>BIO-18: Should the Final SSHCP permits be available prior to construction of the project, the implementing agency will provide compensatory mitigation as required by the approved SSHCP mitigation ratios for special status plant species modeled habitat..</p>	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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<p>BIO-19: The implementing agencies will implement a combination of the following mitigation measures to avoid and minimize significant impacts on special-status wildlife and their habitats:</p> <ul style="list-style-type: none"> • Redesign or modify the project to avoid direct and indirect impacts on special-status wildlife or their habitats, including interruption of migration corridors, if feasible. • Protect special-status wildlife and their habitat near the project site by installing environmentally sensitive area fencing around habitat features, such as vernal pools, seasonal wetlands, burrows, and nest trees. The environmentally sensitive area fencing or staking will be installed at a minimum distance from the edge of the resource as determined through coordination with state and federal agency biologists (USFWS and DFG). The location of the fencing will be marked in the field with stakes and flagging and shown in construction drawings. Construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area. • When feasible restrict construction-related activities near sensitive resources to the nonbreeding season or other periods of activity for special-status wildlife species that could occur in the project area. Typical timing restrictions include, but are not limited to: <ul style="list-style-type: none"> o Valley elderberry long horn beetle – February 15 to November 1 (time period where shrub transplanting can't occur). o Giant garter snake inactive period – October 1 to May 1 	<p>Prior to and During Construction</p>	<p>Implementing Agency and Contractor</p>	<p><input type="checkbox"/></p>	<p>_____</p>	
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Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<ul style="list-style-type: none"> o Swainson’s hawk nesting season – generally February 1 to August 31 o Burrowing owl nesting – generally February 1 to August 31 • As necessary, conduct biological construction monitoring of project areas where work occurs in proximity to sensitive wildlife or their habitat. The implementing agency will hire a qualified wildlife biologist approved by USFWS and DFG to monitor construction activities to ensure that no wildlife is harmed during construction and no wildlife habitat outside of the project area is unintentionally affected by project construction. 					
<p>BIO-20: If all or portions of Mitigation Measure BIO-19 are not feasible and site-specific construction activities would result in significant impacts on special-status wildlife species, compensation for the loss of habitat will be implemented to reduce the impact to a less-than-significant level. Impacted habitat will be mitigated off site at an agency approved mitigation bank. The minimum replacement ratios for wildlife habitat would be determined through consultation with local, state, and federal agencies. As directed by Policy CO-60 in the Sacramento County General Plan (2011), for segments of the Connector in Sacramento County, mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan.</p>	Prior to and During Construction	Implementing Agency and Contractor	<input type="checkbox"/>	_____	
<p>BIO-21: Should SSHCP permits be available prior to construction of the project, the implementing agency will provide compensatory mitigation for impacted special status wildlife species and/or their</p>	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
habitats with the corresponding SSHCP mitigation ratios, as described in the approved SSHCP.					
BIO-22: The contractor must not apply rodenticides or herbicides in the Project area during construction activities.	During Construction	Contractor	<input type="checkbox"/>	_____	
BIO-23: The contractor must dispose of all food-related trash in closed containers, and shall remove it from the Project area each day during the construction period. Construction personnel must not feed or otherwise attract wildlife to the Project area.	During Construction	Contractor	<input type="checkbox"/>	_____	
BIO-24: If any wildlife is encountered during the course of construction, said wildlife will be allowed to leave the construction area unharmed. In the unlikely event a worker inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped, the worker will immediately report the incident to the Project biologist.	During Construction	Contractor	<input type="checkbox"/>	_____	
BIO-25: Vegetation removal and earthwork should be timed outside of the nesting season (February 1st – August 31st). If vegetation removal is required during the nesting season, a pre-construction nesting bird survey must be conducted within 7 days prior to vegetation removal. Within 2 weeks of the nesting bird survey, all vegetation cleared by the biologist would be removed by the contractor.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
BIO-26: If an active nest (excluding western burrowing owl) is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is deemed inactive by a qualified biologist. Restrictions shall include establishment of exclusion zones (no ingress of personnel or equipment) at a minimum radius of 500 feet around an active Swainson's hawk nest, 100 feet around an active raptor nest, and	Prior to and During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	

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50 feet around an active migratory bird nest. Activities permitted within exclusion zones and the size of the exclusion zone may be adjusted through consultation with the CDFW.					
BIO-27: Trees containing active migratory bird and/or raptor (excluding Swainson’s hawk) nests that must be removed as a result of Project implementation shall be removed during the nonbreeding season (September1st – January 31st). Swainson’s hawks are a state listed threatened species; therefore, impacts to active Swainson’s hawk nest trees require regulatory authorization from the CDFW prior to removal.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
BIO-28: If no burrowing owls are detected during the pre-construction surveys, no further mitigation is required. If active burrowing owls are detected, the implementing agency shall implement the avoidance, minimization, and mitigation methodologies outlined in CDFW’s (2012) Staff Report on Burrowing Owl Mitigation prior to initiating Project-related activities that may impact burrowing owls.	Prior to and During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	
BIO-29: A preconstruction survey for western pond turtle shall be conducted within 24 hours of the onset of construction activities in or adjacent to suitable upland and/or aquatic habitat. The survey area shall include a 100-foot buffer of the area to be affected. If juvenile or adult turtles are found within the survey area, the individuals should be moved at least 500 feet downstream to suitable habitat. If a turtle nest is found within the survey area, construction activities should not take place within 100 feet of the nest until the turtles have hatched, or the eggs have been moved to an appropriate location.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<p>BIO-30:Prior to the removal of any oak trees or buildings, a bat survey shall be performed by a qualified biologist between March 1 and July 31. If bat roosts are identified, the City shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed prior to roosting season (typically May to September) and prior to the onset of construction activities. If maternity roosts are identified during the maternity roosting season (typically May to September) they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur onsite, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites that are permanently removed. If no bat roosts are detected, then no further action is required if the trees and buildings are removed prior to the next breeding season. If removal is delayed, then an additional survey shall be conducted 30 days prior to removal to ensure that a new colony has not established itself.</p>	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
<p>BIO-31:If a female or maternity colony of bats are found on the Project site, and the Project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after August 30 and before March 1).</p>	Prior to and During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	

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BIO-32: If an active nursery roost is documented onsite and the Project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after August 30 and before March 1 to prevent the formation of maternity colonies. Nonbreeding bats shall be safely evicted, under the direction of a bat specialist.	Prior to and During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	
BIO-33: Should the Final SSHCP be approved prior to construction of the project, the implementing agency will provide compensatory mitigation for impacted threatened and endangered wildlife species and/or their habitats with the corresponding SSHCP mitigation ratios, as determined by the approved Final SSHCP.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
BIO-34: Protective silt fencing will be installed between the adjacent vernal pool habitats and the construction area limits to prevent accidental disturbance during construction and to protect water quality in the aquatic habitats during construction.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
BIO-35: For every acre of vernal pool habitat directly or indirectly affected, two tadpole shrimp and fairy shrimp habitat preservation credits will be dedicated within a Service-approved conservation bank with a service area covering the proposed Project.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
BIO-36: For every acre of vernal pool habitat directly affected, one vernal pool habitat creation credit will be dedicated within a Service-approved conservation bank with a service area covering the proposed Project.	During Construction	Contractor	<input type="checkbox"/>	_____	
BIO-37: Construction operations, stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to the designated construction staging areas and all operations will be confined to the minimal area necessary.	During Construction	Contractor	<input type="checkbox"/>	_____	

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BIO-38: Standard staging area practices for sediment-tracking reduction will be implemented where necessary and may include vehicle washing and street sweeping.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
BIO-39: A Worker Environmental Awareness Program (WEAP) will be implemented to educate construction workers about the presence of sensitive habitat near the Project area and to instruct them on proper avoidance measures.	Prior to and During Construction	Contractor	<input type="checkbox"/>	_____	
BIO-40: Twenty-four hours prior to the commencement of construction activities, the Project area shall be surveyed for giant garter snakes by a qualified biologist. The biologist will provide the US Fish and Wildlife Service with a written report that adequately documents these monitoring efforts within 24 hours of commencement of construction activities. The Project area shall be re-inspected by the monitoring biologist whenever a lapse in construction activity of two weeks or greater has occurred.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
BIO-41: Project-related vehicles will observe a 20 mile per hour speed limit within construction areas, except on existing paved roads where they will adhere to the posted speed limits.	During Construction	Contractor	<input type="checkbox"/>	_____	
BIO-42: Should work occur within the Swainson's hawk nesting season (February 1st – August 31st), the Project biologist must conduct a pre-construction nesting survey consistent with survey methods recommended by the Swainson's Hawk Technical Advisory Committee within ¼ mile of the Project and two weeks prior to construction clearing and grubbing activities. Should a nesting Swainson's hawk pair be found within ¼ mile of the Project, the Project biologist will coordinate with the wildlife agencies for appropriate buffers. The contractor will not work within the ¼ mile nesting area until the appropriate buffer is established and is	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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prohibited from conducting work that could disturb the birds (as determined by the Project biologist and in coordination with wildlife agencies) in the buffer area until the Project biologist determines the young have fledged.					
BIO-43: If an active nest (excluding western burrowing owl) is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is deemed inactive by a qualified biologist. Restrictions shall include establishment of exclusion zones (no ingress of personnel or equipment) at a minimum radius of 500 feet around an active Swainson’s hawk nest, 100 feet around an active raptor nest, and 50 feet around an active migratory bird nest. Activities permitted within exclusion zones and the size may be adjusted through consultation with the California Department of Fish and Wildlife and/or the City of Elk Grove.	Prior to and During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	
BIO-44: Valley grasslands in the Project area are considered Swainson’s hawk foraging habitat and are protected under Chapter 16.130 of the City Municipal Code, Swainson’s Hawk Impact Mitigation Fees. The following compensatory mitigation measure is required to offset impacts to Swainson’s hawk foraging habitat should the Final SSHCP not be implemented prior to the start of construction for the Project: The City shall mitigate for the permanent loss of Swainson’s hawk foraging habitat at a 1:1 ratio. Mitigation can be accomplished through participation in the City of Elk Grove Swainson’s Hawk Impact Mitigation Fees Ordinance or other method acceptable to the California Department of Fish and Wildlife.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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Cultural Resources					
CR-1: The Kammerer Programmatic Agreement shall be executed between the SHPO and Caltrans and shall detail the remaining actions needed to complete cultural resource identification efforts, evaluation of potential historic properties, assess the potential for substantial adverse changes, and potential mitigation of substantial adverse changes for the project. All stipulations of the Kammerer Programmatic Agreement shall be implemented by the responsible agency as applicable prior to construction, during construction, and post construction activities. Although the Kammerer Programmatic Agreement specifically discusses compliance with Section 106 of the National Historic Preservation Act, the stipulations therein will also ensure that any previously unidentified resources will be treated appropriately in accordance with CEQA.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
CR-2: Should cultural resources be identified during construction, the actions outlined in the Kammerer Programmatic Agreement regarding cultural resource discovery during construction shall be implemented.	During Construction	Implementing Agency	<input type="checkbox"/>	_____	
CR-3: Should human remains be discovered during implementation of the project, they will be treated in accordance with the requirements of Section 7050.5(b) of the California Health and Safety Code. If, pursuant to Section 7050(c) of the California Health and Safety Code, the county coroner/medical examiner determines that the human remains are or may be of Native American origin, then the discovery shall be treated in accordance	During Construction	Implementing Agency	<input type="checkbox"/>	_____	

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with the provisions of Section 5097.98(a)-(d) of the California Public Resources Code.					
CR-4: If Native American human remains are discovered and the Wilton Rancheria is identified as a Most Likely Descendant by the Native American Heritage Commission, the <i>Memorandum of Understanding between the Capital SouthEast Connector Joint Powers Authority, the City of Elk Grove, the Sacramento County, the California Department of Transportation, and the Wilton Rancheria Regarding the Treatment and Disposition of Native American Human Remains Encountered during the Capital SouthEast Connector A1/A2 Kammerer Road Project</i> (Kammerer MOU) will become effective. The Kammerer MOU identifies the appropriate human remains treatment, recovery methodology, documentation, disposition, and information dissemination. Should the Native American Heritage Commission identify a Most Likely Descendant other than the Wilton Rancheria, the responsible agency will initiate consultation with the designated MLD.	During Construction	Implementing Agency	<input type="checkbox"/>	_____	
Paleontological Resources					
PAL-1: The implementing agency shall retain a qualified paleontologist to develop an acceptable monitoring and fossil remains treatment plan or Paleontological Management Treatment Plan (PMTP) for construction-related activities that could disturb potential unique paleontological resources within the Project area. This plan shall be implemented and enforced by the implementing agency during the full phase of construction, and will include: <ul style="list-style-type: none"> • Paleontological late discovery plan; 	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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<ul style="list-style-type: none"> Specifications for paleontological spot-check monitoring; and Guidelines for recordation, evaluation, recovery, and treatment of resources as required by state and local governmental guidelines. 					
PAL-2: Due to the continual potential for discovery of subsurface fossil deposits random spot-check monitoring will be conducted by a qualified paleontologist. Frequency of spot-check monitoring will be determined through research and record search within the PMTP.	During Construction	Implementing Agency	<input type="checkbox"/>	_____	
PAL-3: Prior to the start of construction, all construction personnel would receive a paleontological sensitivity training, detailing the types of paleontological resources that may be encountered and procedures to follow if a find should occur.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
PAL-4: If paleontological resources (i.e., fossils) are discovered during ground-disturbing activities, the implementing agency will immediately be notified, and will ensure that their contractors shall stop work in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and develop appropriate treatment measures. Treatment measures will be made in consultation with the implementing agency, and would be included in the PMTP.	During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	
PAL-5: Grading plan notes will state that there is a potential for paleontological resources to be discovered during ground disturbance, and procedures to follow if a find should occur.	During Construction	Implementing Agency	<input type="checkbox"/>	_____	
Geology and Soils					
GEO-1: Prior to construction, the implementing agency will ensure that the project is designed and constructed in compliance with the	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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latest California Building Standards Code, Caltrans seismic design criteria, and County and City General Plans seismic standards to ensure that all project components can withstand moderate to strong earthquake-shaking.					
GEO-2: Prior to construction, the implementing agency will prepare project-specific geotechnical investigations to guide the design of earthworks and foundations for proposed structures. Based on the subsurface conditions expressed through geotechnical investigation, the implementing agency, in conjunction with soil scientists or engineers, will ensure that specific project elements are designed to accommodate the effects of liquefaction of expansive soils. For roadways and bridges, subsurface borings at regular intervals along proposed roadways and in the vicinity of proposed bridges are recommended as part of the geotechnical evaluations. If the site specific geotechnical investigations find that liquefiable soils, soils susceptible to seismically induced settlement, or expansive soils are present at any location where project activities would occur, corrective actions will be taken. These actions may include, depending on the extent and depth of susceptible soils and findings of the geotechnical evaluations, removal and replacement of soils; on site densification; grouting; and design of special foundations or other similar measures. All of these measures reduce pore water pressure during ground shaking by making the soil denser or improving its drainage capacity. The implementing agency will ensure that their contractors implement one or more of these measures in consultation with a qualified engineer prior to beginning and during construction. The implementing agency will ensure, as a contract specification, that their contractors implement	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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the recommendations of site specific geotechnical reports pertaining to site clearing and preparation, organic removal, engineered fill placement, trench backfilling, foundation design, soundwall systems, exterior flatwork, pavement design, and site drainage to minimize any adverse effects associated with runoff, erosion, and sedimentation.					
Greenhouse Gas Emissions					
CC-1: The Project would incorporate the use of energy-efficient lighting, such as LED traffic signals. LED bulbs cost \$60 to \$70 each, but last five to six years, compared to the one-year average lifespan of the incandescent bulbs previously used. The LED bulbs themselves consume 10 percent of the electricity of traditional lights, which will also help reduce the Project's CO2 emissions.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
CC-2: According to the Department's Standard Specification Section 14-9.02, the contractor must comply with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including air pollution control rules, regulations, ordinances, and statutes provided in Govt Code § 11017 (Pub Cont Code § 10231).	During Construction	Contractor	<input type="checkbox"/>	_____	
CC-3: Conduct a Carbon Sequestration Feasibility Study and Cost Benefit Analysis for Tree Planting as Greenhouse Gas Mitigation to Mitigate Greenhouse Gas Emissions to Net Zero. The implementing agency, in consultation with the SMAQMD, will conduct a carbon sequestration feasibility study and cost benefit analysis for the project, during PS&E. The objective of the study and analysis is to identify optimal species and numbers of trees to	Prior to Construction	Contractor	<input type="checkbox"/>	_____	

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mitigate GHG emissions to the maximum extent feasible, and down to net zero, if practicable. A preliminary feasibility study for carbon offsets from tree planting in northern California was conducted for the Connector (ICF International 2011). This analysis indicated that the theoretical carbon offset potential ranges from 0.4 metric ton of carbon per acre per year (C/ac/year) to 2.0 metric tons C/ac/yr. Of the tree types broadly found in this region, the Douglas fir and hemlock Sitka spruce offer the largest sequestration potential. If future carbon sequestration studies conclude tree planting is appropriate mitigation from both cost and GHG reduction standpoints, the Connector JPA will adopt and implement a sequestration plan committing the Connector JPA to the planting and maintenance of selected evergreen species, such as Douglas fir and hemlock/Sitka spruce for off site plantings and hardwood maple or soft maple for on site plantings, to sequester project generated GHG emissions to the maximum extent feasible, and down to net zero, if practicable. The sequestration plan would identify the location (both on site and off site) and timing of plantings, funding mechanisms, maintenance plans, and other key aspects of the offset potential, including water resources, costs, future climate change impacts, and forest management practices and monitoring needs.					
CC-4: The implementing agency will implement through construction contract terms and specifications that the contractor adheres to the mitigation measure and implements, all applicable SMAQMD best management practices for reducing construction-related GHG emissions. Documentation will be provided to the implementing agency on a weekly basis. The contract provisions	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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<p>and specifications will authorize the implementing agency to sanction contractors for non-compliance. The implementing agency will consult with SMAQMD prior to construction about the most current recommended construction best management practices and will adopt those practices. Practices include the following:</p> <ul style="list-style-type: none"> • Improve fuel efficiency from construction equipment: <ul style="list-style-type: none"> ▪ Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 3 minutes (a 5-minute limit is required by the state airborne toxics control measure—13 CCR 2449[d][3], 2485). Provide clear signage that posts this requirement for workers at the entrances to the site. ▪ Maintain all construction equipment in proper working condition according to manufacturer’s specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated. ▪ Train equipment operators in proper use of equipment, including limiting idling time, minimizing warm-up time, performing routine maintenance, and optimizing equipment use. ▪ Avoid using equipment that is larger than the job requires. ▪ Use equipment with new technologies (e.g., repowered engines, electric drivetrains). 					

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<ul style="list-style-type: none"> • Perform on-site material hauling with trucks equipped with on-road engines (if the air districts or ARB determine them to emit less than the off-road engines). • Use alternative fuels for generators at construction sites, rather than gasoline or diesel (e.g., propane or solar), or use electrical power. • Use an ARB-approved low-carbon fuel for construction equipment. (NOx emissions from the use of low-carbon fuel must be reviewed and increases mitigated.) • Encourage and provide carpools, shuttle vans, and transit passes for construction worker commutes. • Reduce electricity use in the construction office by using compact fluorescent bulbs, powering off computers every day, and using the most efficient heating and cooling units available. • Recycle or salvage non-hazardous construction and demolition debris (goal of at least 75% by weight) to avoid landfill disposal." • Use locally sourced or recycled materials for construction materials (goal of at least 20% based on costs for building materials, and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products utilized should be certified through a sustainable forestry program. • Minimize the amount of concrete for paved surfaces or utilize a low carbon concrete option. • Produce concrete on-site if determined to be less emissive than transporting ready mix. 					

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<ul style="list-style-type: none"> Use Smartway certified trucks for deliveries and equipment transport. Develop a plan to efficiently use water for adequate dust control. 					
Hazards and Hazardous Waste					
HAZ-1: Prior to construction, a visual survey of those areas not accessed at the time of the field reconnaissance visits should be performed. If spills, leaks, or stains from equipment, ASTs, or other containers are observed, soil sampling should be performed to assess the presence of hazardous materials that may pose a potential hazardous waste to the proposed roadway alignment areas.	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	
HAZ-2: The potential exists for herbicides, petroleum hydrocarbons and metals to be present in shallow soil in the vicinity of the UPRR right-of-way. The Project proposes to construct a bridge over the railroad. Prior to construction, soil samples should be collected within the UPRR right-of-way and analyzed for chlorinated herbicides, petroleum hydrocarbons, and metals using US EPA Methods 8151, 8260B, and 6010/7471A, respectively.	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	
HAZ-3: PG&E and SMUD should be contacted to assess the locations of their pipelines prior to construction of the proposed bridge over the UPRR tracks.	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	
HAZ-4: The potential exists for persistent pesticides to be present in soil as a result of historical agricultural use of the area. Additionally, the potential exists for buried asbestos-containing cementitious pipe (“transite”), which was commonly used for water transportation as part of historical agricultural practices, to be	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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present within the Project area. To assess the presence of persistent pesticides and/or asbestos in soil, sampling and analysis is recommended. Soil samples should be analyzed for OCPs using US EPA Method 8081. Additionally, if signs of transite piping are observed during construction activity, sampling and analysis should be conducted at that time.					
HAZ-5: Elevated concentrations of lead (from use of leaded gasoline) and other metals are sometimes associated with older roadways. Based on a review of historical sources, a roadway at the location of Kammerer Road was present from SR-99 west to Bruceville Road since at least 1937. Roads were also present at the locations of Franklin Road and Bruceville Road as early as 1894. In addition, I-5 was present since the mid- to late-1970s. Sampling for ADL in unpaved areas along the existing roadways where soil will be disturbed as part of the proposed Project improvement areas is recommended.	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	
HAZ-6: Comply with Caltrans' Standard Special Provision 14-11.12 "Removal of Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue" regarding yellow striping and pavement marking materials to avoid impacts from the removal of pavement striping during construction.	During construction	Contractor	<input type="checkbox"/>	_____	
HAZ-7: Although not anticipated, should impacted soil (as evidenced by staining and/or odors) be encountered during construction activities, it is recommended that the Caltrans Unknown Hazard Procedures be implemented during construction activities. The resident engineer overseeing construction should have available field monitoring equipment (e.g., PID) to facilitate timely detection of potentially hazardous conditions in the field.	During construction	Contractor	<input type="checkbox"/>	_____	

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HAZ-8: Groundwater is anticipated to be encountered at depths greater than 50 feet bgs. Should groundwater be encountered during construction/excavation activities and dewatering become necessary, regulatory compliance and permitting consistent with the CVRWQCB and NPDES requirements should be adhered to, and groundwater sampling should be conducted.	During construction	Contractor	<input type="checkbox"/>	_____	
HAZ-9: Should domestic or agricultural water wells be affected by the proposed roadway alignment, they should be abandoned or relocated in accordance with local and state guidelines/regulations.	During construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	
HAZ-10: Many of the observed pole-mounted transformers are unlikely to be impacted by the Project. Should transformer removal be required, the utility company be contacted prior to handling or removing of electrical transformers. Should wooden utility poles require removal, it is recommended that additional sampling and analysis be conducted to assess the presence of creosote (often associated with the preservation of wooden utility poles) and resultant waste managed appropriately.	Prior to and During construction	Implementing Agency	<input type="checkbox"/>	_____	
HAZ-11: Should the Project require the demolition of building structures, a survey and sampling for ACMs and LBP should be performed of these building structures after property acquisition and prior to demolition. The surveys should be performed in conformance with the US EPA NESHAPs 40 CFR and Sacramento Metropolitan Air Quality Management District guidelines.	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	

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HAZ-12: A Phase II PSI is required so that special handling, treatment, or disposal provisions associated with hazardous wastes can be included in construction documents.	Prior to construction	Implementing Agency	<input type="checkbox"/>	_____	
HAZ-13: Prior to the issuance of demolition permits for existing onsite structures, asbestos material sampling shall be conducted to determine if materials are present. Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and approval by the appropriate regulatory agency (the Sacramento Metropolitan Air Pollution Management District).	Prior to construction	Contractor	<input type="checkbox"/>	_____	
HAZ-14: Prior to the issuance of demolition permits for existing onsite structures, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor. in accordance with local, state, and federal regulations.	Prior to construction	Contractor	<input type="checkbox"/>	_____	
Hydrology and Water Quality					
HYD-1: The implementing agency will implement the following actions either directly or through contract specifications: 1. During the design of individual projects, in consultation with the applicable regulatory agencies, develop specific design and	Prior to and During Construction	Implementing Agency And	<input type="checkbox"/>	_____	

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<p>construction standards for stream crossings, including, but not limited to, maintaining open surface (bridged versus closed culvert) crossings, infrastructure setbacks, erosion control measures, sediment controlling excavation/fill practices, and other BMPs as described in item 3 below.</p> <p>2. The implementing agency will obtain the required permits from the appropriate agencies for impacts to waters.</p> <p>3. During and after construction activities, monitor and ensure compliance with water quality objectives outlined in the Central Valley RWQCB Basin Plan.</p> <p>4. Minimize sediment transport caused by construction by following BMPs undertaken as part of National Pollutant Discharge Elimination System (NPDES) Permit and Storm Water Pollution Prevention Plan (SWPPP) requirements that will be included in construction permits. The BMPs will be designed so that, when employed in concert, they will meet the requirement of the NPDES permit and avoid the transport of sediment from the project site. BMPs may include, but are not limited to, measures such as the following:</p> <ul style="list-style-type: none"> a. providing permeable surfaces where feasible and where this would not result in erosion or the release of sediment; b. retaining and treating stormwater on site using catch basins and filtering wet basins; c. minimizing the contact of construction materials, equipment, and maintenance supplies with stormwater; d. reducing erosion through soil stabilization, watering for dust control, installing perimeter silt fences, placing rice straw bales, and installing sediment basins; and 		Contractor			

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<p>e. maintaining water quality by using infiltration systems, detention systems, retention systems, constructed wetland systems, filtration systems, biofiltration/bioretention systems, grass buffer strips, ponding areas, organic mulch layers, planting soil beds, sand beds, and vegetated systems such as swales and grass filter strips that are designed to convey and treat either fallow flow (swales) or sheet flow (filter strips) runoff.</p> <p>5. Develop and implement a procedure for spill prevention and control to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during all construction activities. If a spill should occur during construction that causes a release of a hazardous material, including oil and radioactive materials, the proper agencies will be notified, and an Emergency Release Follow-up Notice Reporting Form will be submitted no more than 30 days following the release.</p> <p>6. Use methods such as habitat restoration, reconstruction of [habitat] on site, and habitat replacement off site to minimize surface water quality impacts.</p> <p>7. Comply with conditions included in permits issued under Sections 404 and 401 of the federal CWA.</p> <p>8. Comply with requirements of Section 10 of the federal Rivers and Harbors Act for work required around a water body designated as navigable (and applicable permit requirements).</p> <p>9. Comply with the requirements of a state Streambed Alteration Agreement for work along the banks of various surface water bodies.</p>					

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10. Where feasible, avoid significant development of facilities in areas that may have substantial erosion risk, including areas with erosive soils or steep slopes.					
<p>HYD-2: The implementing agency will require the following actions as part of construction contract specifications.</p> <p>Before discharging any dewatered effluent to surface water the contractor will determine whether the volume of water from the dewatering operation is covered under the NPDES Construction General Permit. If it is deemed that the volume is greater than the Construction General Permit allows, the contractor will obtain coverage under an NPDES Low Threat Discharge and Dewatering Permit from the Central Valley RWQCB. The NPDES Low Threat Discharge and Dewatering Permit will require the water from the dewatering operation to be treated prior to discharge to any local water way.</p>	During Construction	Contractor	<input type="checkbox"/>	_____	
<p>HYD-3: Final design will include, and the implementing agency will implement, either directly or through contract specifications, source and treatment control measures contained in Central Valley Region Phase I MS4 NPDES Permit. General site housekeeping and design control measures incorporated into the project design can include, but are not limited to, conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control measures may include use of vegetated swales and buffers, detention basins, wet ponds, or constructed wetlands, infiltration basins, and other measures. LID approaches will be incorporated into site design and stormwater management to maintain the site's predevelopment runoff rates and volumes. Examples of such</p>	During Construction	Contractor	<input type="checkbox"/>	_____	

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measures include, but are not limited to, sidewalk storage, vegetated swales, landscaped buffers and strips, tree preservation, permeable pavers, and impervious surface reduction and disconnection. The Connector JPA or local agency will select and implement specific LID measures and techniques depending on project size and stormwater treatment needs.					
<p>HYD-4: The implementing agency will conduct drainage studies for later projects on a site-specific basis. The results of the studies will be integrated into the design of the later project's drainage systems. The studies will address county and City drainage study requirements that typically include the following topics:</p> <ul style="list-style-type: none"> • A calculation of predevelopment runoff conditions and post-development runoff scenarios using appropriate engineering methods. This analysis will evaluate potential changes to runoff through specific design criteria and account for increased surface runoff. • An assessment of existing drainage facilities within the project area and an inventory of necessary upgrades, replacements, redesigns, or rehabilitation, including the sizing of onsite stormwater detention features and pump stations. • A description of the proposed maintenance program for the onsite drainage system. • Standards for drainage systems to be installed on a project-/parcel-specific basis. • Design measures to ensure structures will not impact 100-year floodplain areas. 	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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Drainage systems for the individual project will be designed in accordance with the findings of the studies, the requirements of the applicable local flood control agencies, and flood control design criteria established under applicable local ordinances. As a performance standard, the systems will provide for no net increase in peak stormwater discharge relative to current conditions to ensure that 100-year flooding and its potential impacts are maintained at or below current levels and that people and structures are not exposed to additional flood risk.					
HYD-5: The implementing agency will include infiltration systems, where feasible. Infiltration devices will be installed to replace the natural recharge rate of the soil to be paved over, reduce stormwater peak discharges and volumes to downstream catchments, and improve the quality of stormwater discharged to water bodies. Examples of infiltration devices include, but are not limited to, infiltration basins, pervious concrete, retention trenches, and bioretention measures. As discussed in BIO-10, LID techniques will be implemented to increase soil infiltration. Much of the proposed project is located within areas with Hydrologic Soil Group (HSG) D soils where certain infiltration devices do not work well. In these cases, other measures such as detention basins or vegetative barriers that will help retain waters.	Prior to and During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	
HYD-6: Potential impacts of flooding that could result from the proposed Project would be alleviated through the FEMA Letter of Map Revision (LOMR) approval process, as well as the requirements of the Central Valley Flood Protection Board, when applicable. The design of the project will proceed in accordance with the best available mapping from DWR, FEMA, and USACE. The	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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project design will comply with the requirements of the applicable local flood control agencies, and flood control design criteria established under applicable local ordinances. If unavoidable construction would occur within a 100-year floodplain, the implementing agency will prepare a letter of map amendments and submit to FEMA before construction of the project. The LOMR will include revised local base flood elevations for projects constructed within flood-prone areas. If the LOMR is approved, the design will reflect its provisions.					
HYD-7: During the design of individual projects, the implementing agency will consult with the applicable flood control agencies to ensure that the flooding risks of pre-project conditions will not increase as a result of construction of the individual projects. If a project has the potential to impede or redirect flows from a levee or dam failure, such that there would be less than a 1% chance that flooding would extend to areas not previously mapped as inundation areas, the project will be redesigned to the maximum extent practicable so that the project would not expand the area subject to pre-project inundation conditions. This may be achieved through incorporation of culverts or bridges into the project design.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
Noise					
NOI-1: Rubberized and/or open grade asphalt will be used on roadways where noise impacts are anticipated to occur (approximate locations of rubberized asphalt will be determined once project design has developed sufficiently to identify site-specific impacts).	Prior to and During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	

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<p>NOI-2: The implementing agency will incorporate feasible measures to reduce traffic noise. Where CEQA significant impacts are identified, soundwalls will be constructed upon coordination with directly affected homeowners during final design of the project. Where soundwalls are constructed on private right-of-way, 100% of directly affected owners must agree to the wall. Where soundwalls are constructed on public right-of-way, a majority of directly affected owners must agree to the wall (one vote per household). Public input is not required if the soundwall is constructed on the overpass.</p>	During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	
<p>NOI-3: The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the following mitigation measures that will be implemented to reduce the effects of construction noise and vibration. Additional measures may be developed once project design has developed sufficiently to identify site-specific impacts.</p> <ul style="list-style-type: none"> • Comply with all local sound control and noise level rules, regulations, and ordinances of the pertinent City, county, or both. • Limit the hours of noise-generating construction and related activity such as deliveries and staging activities to between 6 a.m. and 8 p.m. on Monday through Friday and between 7 a.m. and 8 p.m. on weekends, or as required by local noise ordinances in effect for site-specific projects. • Require that equipment and trucks used for project construction use noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically 	During Construction	Contractor	<input type="checkbox"/>	_____	

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<p>attenuating shields or shrouds) as necessary to limit noise to compliance levels.</p> <ul style="list-style-type: none"> • Locate stationary noise sources such as generators or pumps as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors will be adequately muffled or an acoustic barrier will be installed to reduce their noise levels to comply with applicable local requirements. • Designate a complaint coordinator at the implementing agency to be responsible for responding to noise complaints received during the construction phase. The name and phone number of the complaint coordinator will be conspicuously posted at construction areas and on all advanced notifications. This person will be responsible for taking steps required to resolve complaints, including periodic noise monitoring and changes to construction activities, if necessary to meet the required mitigation. • Mitigate noise generated from any rock-crushing or screening operations performed within 3,000 feet of any occupied residence by strategic placement of material stockpiles between the operation and the affected dwelling or by other means such as temporary noise barriers approved by the local jurisdiction. • Require contractors to implement appropriate additional noise mitigation measures including (but not limited to) shutting off equipment (including trucks transporting aggregate or other construction materials) so that idling time does not exceed 3 					

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<p>minutes, and notifying adjacent residents by mail not less than 1 week in advance of construction work.</p> <ul style="list-style-type: none"> Prohibit pile-driving or blasting operations within 3,000 feet of an occupied residence on Sundays, legal holidays, and between 9 p.m. and 6 a.m. on other days, or as governed by local noise ordinances at site-specific locations. Use sonic or vibratory pile drivers instead of impact pile drivers (sonic pile drivers are only effective in some soils). If sonic or vibratory pile drivers are not feasible, install acoustical enclosures as necessary to ensure that pile-driving noise does not exceed applicable local noise standards at the closest sensitive receptor. Limit pile driving in residential areas to between 8 a.m. and 5 p.m. Use engine and pneumatic exhaust controls on pile drivers as necessary to ensure that exhaust noise from pile driver engines is minimized to the extent feasible. Where feasible, pre-drill pile holes to reduce potential noise and vibration impacts. 					
<p>NOI-4: During project design, the implementing agency will incorporate feasible measures to reduce traffic noise related to the project such that traffic noise from new roadways does not exceed applicable land use compatibility standards at adjacent uses, and such that traffic noise increases along existing roadways does not exceed Sacramento County significance thresholds for traffic noise increases. Potential measures that can be implemented include (but are not limited to) setbacks, site design, construction of noise barrier walls between the roadway and noise sensitive uses and installation</p>	<p>Prior to and During Construction</p>	<p>Implementing Agency And Contractor</p>	<p><input type="checkbox"/></p>	<p>_____</p>	

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of low noise pavement such as open-grade asphalt or rubberized asphalt. Emphasis will be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.					
Population and Housing					
<p>POP-1: The implementing agency, in developing the final design of the project, will ensure that such design is consistent with the planning principles set forth in the Joint Powers Agreement that established the Connector JPA, including:</p> <ul style="list-style-type: none"> a. Improve access to, and connections between, residential and employment areas within and outside of the Connector Project corridor; b. Acknowledge that the Connector Project is in the Metropolitan Transportation Plan and further support the transportation and land use principles in the general plans of the local jurisdictions and the Metropolitan Transportation Plan; c. Relieve demand on (i) local streets and roads, and (ii) regional freeway facilities (US-50, SR-99, and I-5); d. Strategically apply access control and capacity characteristics to preserve and enhance regional functionality while discouraging growth in areas not designated for growth as determined by the local jurisdiction's general plan; e. Enhance regional mobility and preserving the livability of communities; f. Provide efficient and safe facilities for automobile, transit, bicycle, and pedestrian options for multi-modal travel; 	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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g. Minimize direct and indirect physical impacts on the natural and built environments; h. Preserve open space to reinforce and support approved land use plans; and i. Permit phased implementation with respect to (i) funding, (ii) location, and (iii) design characteristics.					
<p>POP-2: The implementing agency in the final design of the project will consider the Functional Guidelines referenced in the Connector JPA's Joint Powers Agreement, as they may be amended and adopted by the Connector JPA, as summarized below:</p> <ul style="list-style-type: none"> • Capacity and Cross Section: The Connector roadway should be designed and constructed to serve the demand projected in the MTP and adopted local plans. • Access Characteristics: To maximize the efficiency of the roadway, access to the Connector should be allowed only at a limited number of access points; principally, existing primary facilities and new facilities included in the MTP. Access should be limited to the greatest extent possible to retain efficiency, reduce congestion, and enhance mobility. New access to the Connector from areas not designated for growth in the general plans should not be permitted. • Profile: The Connector profile, where feasible, practicable, and consistent with acceptable design standards, should emulate the profiles of existing roadways to the greatest extent possible. The design of the Connector corridor should recognize impacts 	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	

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Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<p>to sensitive habitats, including elevation adjustments to allow for passage of wildlife.</p> <ul style="list-style-type: none"> • Design Aesthetics, Materials, and Maintenance: To minimize the impact on the livability of communities, the Connector should be designed with due consideration to aesthetics for users and adjacent property owners (residents, employers, and employees). • Transit Services: Transit service in the corridor (coverage and frequency) should be maximized to the extent feasible. The design of the Connector Project should accommodate appropriate transit facilities. • NonMotorized Facilities: The Connector should provide flexible and efficient modes of use, including automobile, transit, bicycle, and pedestrian. • Open Space Preservation: Concurrently with the environmental review and design process, the sponsors will develop an open space preservation plan, and associated phasing and funding plan for the corridor consistent with the Sacramento Transportation Authority Measure A expenditure plan. • Other Facilities: In order to meet the goals of the MTP and the Connector, complementary projects may be phased in over time as conditions necessitate. • Phasing and Interim Use: The Connector should be implemented in a phased manner. The design of temporary sections (if any), should provide for widening in accordance with the MTP and local adopted plans at minimal cost and impact. 					

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<ul style="list-style-type: none"> Funding Coordination: Investments in the Connector should be coordinated and balanced with other transportation investments. 					
<p>POP-3: Before proceeding with final design, the implementing agency will develop and implement a relocation plan consistent with California Code of Regulations, Title 25, Section 6038 to ensure that eligible residential, commercial, and industrial uses are compensated for moving and residential/business replacement costs. Eligibility of specific residences or businesses for compensation will be determined after evaluation of the impact on the specific use(s) to be relocated, but would include both full and partial property/parcel acquisitions.</p> <p>The implementing agency will use applicable relocation assistance programs (including those administered by local, state and federal governments) to compensate owners and tenants for the relocation costs of residential, commercial, and industrial uses displaced by the project components.</p>	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
Transportation/Traffic					
<p>TRF-1: The implementing agency, as applicable, will require that the contractor(s) prepare a traffic management plan (TMP) during the final stage of project design to ensure there is no interference with emergency vehicles/services or response/evacuation plans. The plan will list procedures, specific emergency response, and evacuation measures to be followed during emergencies. The contractor will prepare this manual, subject to review and approval by the implementing agency, and distribute the approved plan to</p>	Prior to and During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<p>contract workers involved in the proposed project before construction and during operation of the project. Implementation of the approved plan will be a requirement of the construction contract. The implementing agency will provide project maps to emergency personnel (e.g., fire protection agencies, police and sheriff departments, California Highway Patrol) that describe construction activities as well as access roads to ensure proper emergency response to all parts of the proposed project.</p> <p>Standards found in Caltrans' TMP guidelines (2009) outline the basic requirements for such plans. The Connector JPA or local agencies will require the following measures to be implemented as part of project construction.</p> <ul style="list-style-type: none"> • The contractor will be required to prepare and implement a TMP that identifies the locations of temporary detours and signage to facilitate local traffic/truck patterns and through-traffic requirements. • The contractor will provide emergency service providers (i.e., law enforcement, fire protection, and ambulance services) adequate notice of any street closures during the construction phases of the proposed project. • Construction activities will be coordinated to avoid blocking or limiting auto, truck, bike, and pedestrian access to homes and businesses to the extent possible. Residents will be notified in advance about potential access or parking effects before construction activities begin. Facilities such as traffic lights, turn pockets, or common driveway access will be provided 					

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation

Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<p>continued access. Alternative methods of providing access could also be provided, such as relocation of existing access driveways and sidewalks, provision of frontage roads, construction of joint parking areas and pedestrian access from parking areas.</p> <ul style="list-style-type: none"> • A comprehensive marketing campaign throughout the larger market area will be provided to ensure that customers know that businesses are operating during construction, and how to reach them. This would include signage posted well outside the impacted area, on routes leading into the construction area. • Any interchange, ramp, or road closures required during construction will, to the extent possible, be limited to nighttime hours to reduce effects on businesses within or adjacent to the project limits. • Construction activities will be coordinated to avoid blocking or limiting access to businesses in or adjacent to the project area during business hours. Businesses will be notified in advance concerning construction activities before construction begins near businesses. • The TMP will be prepared to address short-term disruptions in existing circulation patterns during construction. For example, the TMP will identify the locations of temporary detours or temporary roads to facilitate local traffic circulation and through-traffic requirements. 					

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
Utilities and Service Systems					
UTL-1: To minimize interruptions of service to utility customers, a series of coordination letters shall be sent to all impacted utility companies to identify utilities within the proposed Project. Letters will indicate where utility relocations are to be performed and the required time to relocate them. Design plans will be sent to involved utility owners during the project development phase.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
UTL-2: The implementing agency will ensure that the project design will employ LID techniques and features to maintain the site's predevelopment runoff rates and volumes to the extent feasible. The objective of the LID design is to mimic the site's predevelopment hydrology by including project features and techniques that infiltrate, filter, store, evaporate, and detain stormwater runoff close to the source. LID design features and techniques can incorporate (but are not limited to) minimizing impermeable surfaces where practical; inclusion of bioretention facilities or rain gardens; preserving natural drainages, vegetation, and buffer zones; inclusion of grass swales and channels to direct storm drainage; construction of cisterns to collect water for later use in irrigation; inclusion of vegetated filter strips; and use of permeable pavements.	Prior to Construction	Implementing Agency	<input type="checkbox"/>	_____	
UTL-3: The implementing agency will ensure that the design of the project will include a landscaping and irrigation plan that is based on the use of drought-resistant landscaping materials. This includes the use of suitable drought-resistant native plants, where feasible, and nonnative plants that are suitable to the site, such as grasses. Suitable plants are those matched to the climate, soils, and the	Prior to and During Construction	Implementing Agency And Contractor	<input type="checkbox"/>	_____	

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<p>Sacramento region. No invasive, nonnative plants (as inventoried by the California Invasive Plant Council) or noxious weeds (as listed by the California Department of Food and Agriculture) will be used in the landscaping plan. The irrigation system design will rely on recycled water or non-potable water (including water from LID cisterns) whenever available, consistent with quality and health standards. The irrigation system design will include the use of smart irrigation controllers to minimize the amount of supplemental water required to maintain the landscaping.</p>					
<p>UTL-4: The implementing agency will require that the contractor will employ one of the following options for recycling construction and demolition debris:</p> <p>1. If there is room at the construction site for multiple sorting bins, construction and demolition debris will be sorted and dropped off at recycling facilities. Currently, the following facilities accept sorted construction and demolition waste:</p> <ul style="list-style-type: none"> • Kiefer Landfill • Crete Crush, LLC, which accepts brick, gravel, sand, asphalt, concrete, and soil • Elder Creek Recovery & Transfer Station BFI • EBI Aggregates, which accepts concrete and asphalt • Vulcan Materials, which accepts concrete and asphalt • Sims Metal Management • Granite Construction Company, which accepts only clean, separated concrete and asphalt 	<p>During Construction</p>	<p>Contractor</p>	<p><input type="checkbox"/></p>	<p>_____</p>	

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT

Last updated December 5, 2018

Capital SouthEast Connector –A1/A2 Kammerer Road Extension Project

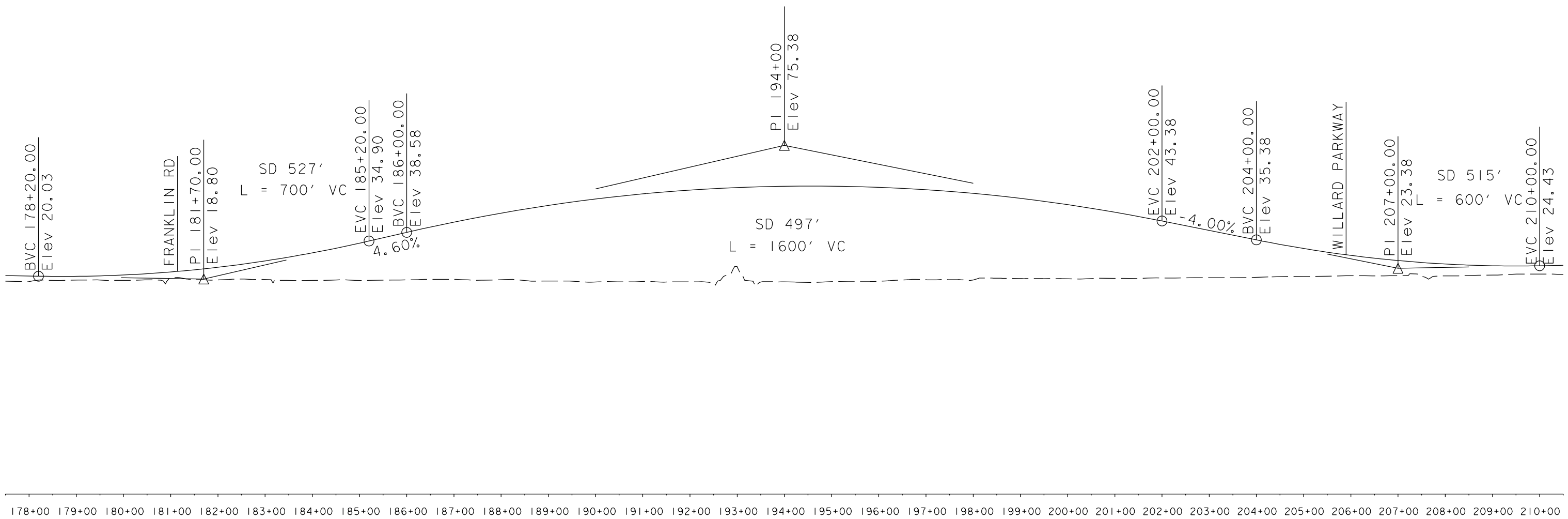
EP:

PA&ED

RE:

Avoidance, Minimization and/or Mitigation					
Task and Brief Description	Timing	Responsible Party	Task Completed	Initials	Remarks/Due Date
<ul style="list-style-type: none"> • Bell Marine Company, Inc., which accepts concrete and asphalt • L and D Landfill Company • Sacramento Recycling & Transfer Station • Sacramento Habitat for Humanity, which accepts tax deductible donations of clean wood and various building materials • Second Cycle, Inc. <p>2. If the construction site is crowded, or mixed recycling is preferable for another reason, the Sacramento Regional Solid Waste Authority provides a list of certified construction and demolition debris sorting facilities.</p> <ul style="list-style-type: none"> • Allied Waste/Elder Creek Transfer and Recovery • L and D Landfill Company • Waste Management/K&M Recycle America • Florin-Perkins Public Disposal <p>If a waste type produced by project construction is a type not accepted by regional landfills, the project engineer(s) will ensure that the waste is disposed of in accordance with all federal, state, and local statues and regulations related to solid waste.</p>					

**Appendix H:
Preliminary Grade Separation Profile Pending
UPRR Approval**



178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00 201+00 202+00 203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00

DE DOKKEN
ENGINEERING

110 BLUE RAVINE ROAD
SUITE 200
FOLSOM, CA 95630

(916) 858-0642

KAMMERER ROAD PROJECT	
OVERCROSSING PROFILE	
NO SCALE	NOVEMBER 2018

Appendix I:
Response to Public Comments

Response to Public Comments

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Comment A: Hassan Farzin (March 5, 2018)

From: Hassan Farzin <mhfarzin@yahoo.com>

Sent: Monday, March 5, 2018 2:42 PM

To: Matt Satow <MSatow@drakehaglan.com>

Subject: Re: Kammerer Road Project - Notice of Intent

Dear Mr. Satow-

Thank you for your courtesy of sending the Environmental Document of Kammerer Road Project-- it is appreciated.

Was there not a meeting/discussion date established for your release of the document? I either have missed the associated letter containing the date for meeting, or did not receive it. If there is/was such date and time, please let me know. We will try to participate, provided that sufficient time was/is provided to make arrangements to travel to Sacramento/Elk Grove area.

A1

Regardless, I like to emphasize our objection to the current proposed alignment of the extension of the Kammerer Road, as it is shown on the draft drawings. We believe such bending of the alignment beyond its natural and existing extension is not required by either engineering, economics, or minimization of tax funding expenditures and values, or related requirements.

A2

Therefore, we request that the road extension to be moved towards the North (i., e., its current & natural alignment) from draft proposed alignment, and follow the continuation of the Kammerer Road as currently aligned, and established, instead of intentionally bending it towards the South prior to reaching borders of our ranch from the East side, and bending it again towards the North after crossing our ranch. Frankly, it appears that the twisted alignment towards South prior to our ranch, and then North again, is created to accommodate a certain future development identified as "Bruceville Meadows" to the North of what is now named as "Shed C Channel" in draft drawings.

A3

Hence, we object to this alignment of Kammerer Road that also threatens the one piece existence of our ranch in two segments: one of which is a very narrow strip that may remain useless.

} A3
Continued

Thank you again.

M.H. Farzin, Managing Member
Sacramento Pacific Capital, LLC

Response A1: The Notice of Intent (NOI) that was mailed to local residents within ¼ mile of the Project and published in the Elk Grove Citizen and Sacramento Bee on February 28, 2018, included information regarding a Public Information Meeting for the Project held on March 6, 2018. The NOI included details on the Public Information Meeting was held at LifePointe Christian Church, 10291 E. Stockton Blvd. Elk Grove, CA 95624.

In addition, we provided the following information to you on March 5, 2018, the day prior to the Public Information Meeting. This response was provided by the Capital SouthEast Connector Joint Powers Authority (Kammerer Road Project) Project Manager, Matt Satow of Drake Haglan:

From: Matt Satow [<mailto:MSatow@drakehaglan.com>]

Sent: Monday, March 05, 2018 4:35 PM

To: Hassan Farzin

Subject: RE: Kammerer Road Project - Notice of Intent

Mr. Farzin,

Thank you for your comments. I have copied the JPA Executive Director, Derek Minnema on this email so he can include your comments and email as part of the public record for the project.

In regards to the public information meeting, the date and time for the meeting was in the Notice of Intent (NOI) I sent you (see attached). It is set for tomorrow, March 6, 2018 from 6-7pm at the location listed in the NOI. Please note that any comments received at tomorrow night's public information meeting will be handled in the same manner as your email below and we will provide a written response to these comments in the final environmental document.

We will also be making an informational presentation on the Kammerer Road environmental to the Elk Grove City Council on March 14th (the meeting begins at 6pm) and you are welcome to attend this meeting. Please note that only written comments will be responded to as part of the environmental document and any verbal comments made by the public at the Elk Grove City Council meeting will not be addressed as part of the environmental.

It is our intent to bring the final environmental document before the Capital Southeast Connector JPA Board on May 25th at 8:30am at the Ranch Cordova City Hall. You are welcome to attend this meeting and will have an opportunity to address the Board if you would like.

Please let me know if you have any other questions or comments.

Thanks.

Response A2: The proposed Project alignment was chosen after a thorough scoping process. This process found the preferred alternative to include the alignment shift to the south at Bruceville Road, to accommodate the planned future interchange. The Connector JPA's Program Environmental Impact Report (PEIR) evaluated a number of alternatives and their environmental impacts, and potential mitigation measures. The proposed alignment follows the existing Kammerer Road (from SR-99 to approximately 1,500 feet east of Bruceville Road, where it begins to shift south) to minimize environmental impacts and the footprint of the Project. The alignment of the proposed extension of Kammerer Road from Bruceville Road to the I-5 and Hood Franklin Road interchange was determined to cause the least environmental impacts of the preliminary alternatives. Further, the proposed Project is designed to meet the goals of the Sacramento

County and City of Elk Grove General Plan (as amended), with regard to planned development of future roadway facilities and level of service (LOS).

Response A3: All currently planned and approved development within the Project vicinity is north of the current Kammerer Road (City of Elk Grove, Development Activity – Mapping Resources, <http://elkmap.maps.arcgis.com/home/index.html>). On page 276 of the A1/A2 Kammerer Road Project Draft Initial Study with Mitigated Negative Declaration, Figure 22. Planned Development in the Project Vicinity displays all of the development projects in the area. None of the planned developments required the proposed Project alignment to be moved to the south. The alignment of the proposed Project was chosen to minimize impacts to local residents. Of the proposed South and North Alignments, the South Alignment would have required displacement of 7 single-family homes, whereas the proposed alignment has been determined to require displacement of only 3 single-family homes. In addition, the South Alignment was found to cause excessive bisection of farmland and would result in insufficient usable land between the thoroughfare and the existing Kammerer Road. Substantial realignment and channelization of the existing drainage channel, Shed C, would also be required with implementation of the Southern Alignment. Further, the South Alignment would also convert existing and protected natural habitat within the Stone Lakes National Wildlife Refuge.

All potential right-of-way negotiations and acquisitions will occur after the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) environmental documents are finalized and after funding for the Project is allocated. The Project's implementing agency would provide advisory assistance to any person, business, farm, or nonprofit organization as a result of the implementing agency's acquisition of real property for public use in accordance to state and federal guidelines, and would provide fair market value for any acquisitions as required by final design of the Project.

Comment B: Colleen Adams (March 6, 2018)



PUBLIC INFORMATION MEETING

**Capital SouthEast Connector
A1/A2 Kammerer Road Project**

Comment Card – March 6, 2018

Name: Colleen Adams

Email Address: _____

Telephone: _____

Comment: It needs to be 4 lane - its already
so busy and when its easier to get from
99- to IS it will be even busier.
2 lane will be bumper to bumper

B1

Would you like to receive updates on this project?

YES

NO

by mail

Submit your comments by returning this card at the information meeting or by mail, or e-mail them to Derek Minnema, Executive Director at MinnemaD@Connector.JPA.net. Comments must be received by April 2, 2018. Only written comments will be entered into the IS/MND record.

Thank you for your comments; they have been included within the Final Environmental Document.

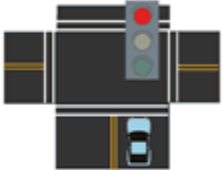
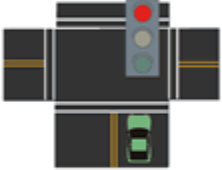
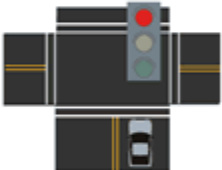
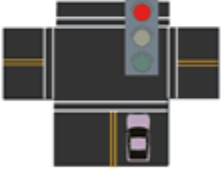
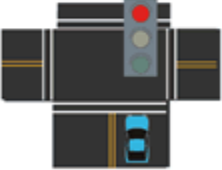

Response B1: The proposed Project is designed for full build-out of a 4-lane facility. There is potential for an interim 2-lane facility due to possible funding restrictions. Depending on funding, the 2-lane facility would be the first phase of the Project. According to the Revised Transportation Impact Assessment (DKS Associates 2018), both the interim project and full build would operate at an acceptable level of service (LOS) under Existing Plus Project conditions.

The need for the 4-lane facility will ultimately be determined by the location and pace of development, both of which are hard to predict beyond a few years out. As a planning-level exercise, a set of ten year growth forecasts were made for Year 2034, which assumes a project opening year of 2024. For the interim project, all intersections within the Project limits from Lent Ranch Parkway to I-5 would operate at LOS C or better, with the exception of the side-street stop-controlled intersection of Kammerer Road and Hood Franklin Road, and implementing a right turn that merges into Kammerer Road would fix this deficiency. For full build, all intersections within the Project limits would operate at LOS C or better. For roadway segments, the interim Project, would operate at LOS D or better from Lent Ranch Parkway to I-5, with exception of Lent Ranch Parkway to Lotz Parkway, Lotz Parkway to Collector 1, Collector 2 to Bruceville Road, and Hood Franklin Road to I-5. For roadway segments reaching deficiencies by 2034, these segments

would be widened from 2 to 4-lanes prior to reaching deficiency levels. For the full build, all roadway segments would operate at LOS B or better. The analysis should be considered as supplemental information; however, the intersection and segment analyses indicate the interim Project would operate acceptably for at least ten years after opening (Year 2034).

LEVELS OF SERVICE

for Intersections with Traffic Signals

Level of Service	Delay per Vehicle (seconds)
A	 ≤ 10
B	 11-20
C	 21-35
D	 36-55
E	 56-80
F	 >80

- Factors Affecting LOS of Signalized Intersections**
- Traffic Signal Conditions:**
- Signal Coordination
 - Cycle Length
 - Protected left turn
 - Timing
 - Pre-timed or traffic activated signal
 - Etc.
- Geometric Conditions:**
- Left- and right-turn lanes
 - Number of lanes
 - Etc.
- Traffic Conditions:**
- Percent of truck traffic
 - Number of pedestrians
 - Etc.

Source: 2000 HCM, Exhibit 16-2, Level of Service Criteria for Signalized Intersections

Comment C: Peter and Mary Sanders (March 14, 2018)

From: <mbarps1@frontiernet.net<mailto:mbarps1@frontiernet.net>>
Date: March 14, 2018 at 5:48:34 PM PDT
To: "MinnemaD@ConnectorJPA.net<mailto:MinnemaD@ConnectorJPA.net>" <MinnemaD@ConnectorJPA.net<mailto:MinnemaD@ConnectorJPA.net>>
Subject: JPA comment card

Wanted to make sure you got my card in time.
Thank You,
Peter and Mary Saunders

Sent from Windows Mail



PUBLIC INFORMATION MEETING

Capital SouthEast Connector
A1/A2 Kammerer Road Project

Comment Card – March 6, 2018

Name: Peter + Mary Sanders

Email Address:

Telephone:

Comment: Access road to back part of ~~fact~~ Ranch
for cows + equipment. Pipeline + pump rerouting?

C1

Would you like to receive updates on this project?

YES

NO

Submit your comments by returning this card at the information meeting or by mail, or e-mail them to Derek Minnema, Executive Director at MinnemaD@ConnectorJPA.net. Comments must be received by April 2, 2018. Only written comments will be entered into the IS/MND record.

Thank you for your comments; they have been included within the Final Environmental Document.

Response C1: As part of the larger SouthEast Connector Program, the Kammerer Road Project is a limited-access thoroughfare and expressway. During final design, property owners will be contacted to discuss potential access solutions for farm equipment. If access cannot feasibly be provided, the remainder lands may be considered an uneconomic remnant (a remainder property that has been determined has little or no utility or value to the owner), and impacts to irrigation, fencing, grazing land, wells, farming structures, and maintenance buildings would be assessed during right-of-way negotiations. Ideally, during final design, the Project will be able to identify all property conflicts and will identify solutions to benefit property owners.

All potential right-of-way negotiations and acquisitions will occur after the CEQA and NEPA environmental documents are finalized and after funding for the Project is allocated. The Project's implementing agency would provide advisory assistance to any person, business, farm, or nonprofit organization as a result of the implementing agency's acquisition of real property for public use in accordance to state and federal guidelines, and would provide fair market value for any acquisitions as required by final design of the Project.

Comment D: Kinder Morgan (March 14, 2018)



March 14, 2018

ENG 4-2-1 (930)
File Reference #18-0234

Derek Minnema
Capital SouthEast Connector
10640 Mather Blvd, Suite 120
Mather, CA 95655
minnemad@connector.JPA.net

Re: A1/A2 Krammerer Road Project

Dear Ms. Caldwell:

This is in response to your inquiry received March 2, 2018, regarding the referenced project.

Based on the information provided, Kinder Morgan has no facilities within the specified project area and therefore has no conflict with the proposed project.

Please refer to our **File Reference Number 18-0234** in any future communications concerning this project.

In the event of project scope changes, please resubmit your request.

Sincerely,

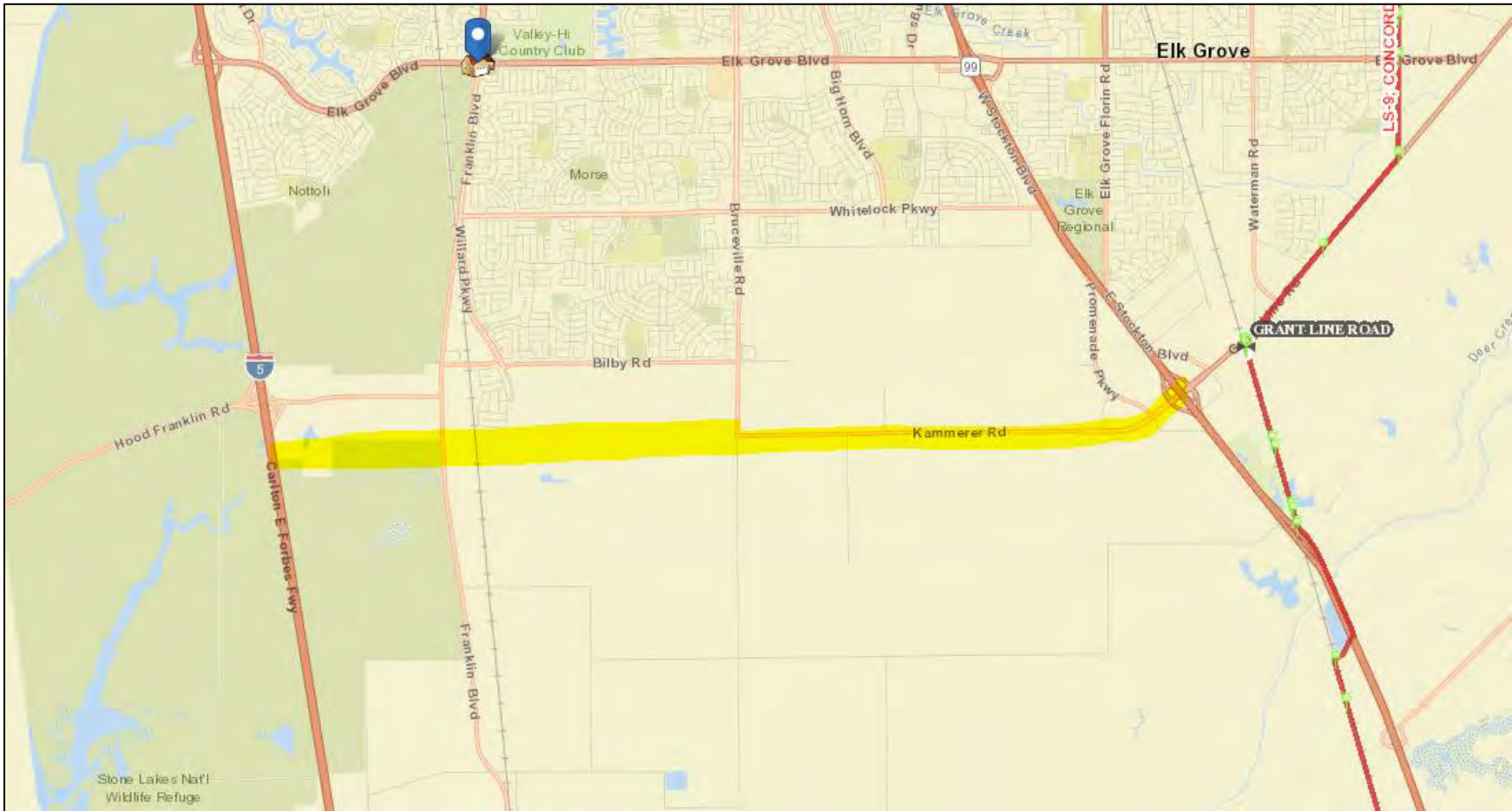
Karly Payne

Karly Payne
Administrative Assistant
Pipeline Engineering Department

T: Quinn\letters\421-(930)\18-0234\kip

Enclosure

} D1



Thank you for your comments; they have been included within the Final Environmental Document.

Response D1: Any further communications with Kinder Morgan will refer to **File Reference Number 18-0234**.

Comment E: Raymond Valim (March 16, 2018)



PUBLIC INFORMATION MEETING

**Capital SouthEast Connector
A1/A2 Kammerer Road Project**

Comment Card – March 6, 2018

Name: RAYMOND VALIM

Email Address: [REDACTED] Address: [REDACTED]

Telephone: [REDACTED]

Comment: THE SOUND WALL THAT IS PROPOSED ON KAMMERER RD THAT IS 300FT LONG SHOULD BE EXTENDED DOWN THE FULL LENGTH OF THE ACCESS ROAD. I FEEL THAT THE SOUND FROM THE TRAFFIC ON THE JPA CONNECTOR WILL BE LOUD, DISRUPTIVE AND INCONVENIENT. THERE WILL BE MUCH HIGHER TRAFFIC LEVELS ONCE THE ROAD IS COMPLETE WHICH WILL INCREASE THE SOUND LEVELS THAT YOU HAVE ALREADY BE MONITORING.

P.S. - CONNECT ACCESS ROAD TO RAU RD. DONT MAKE DEAD END. THANKS Ray

E1
E2

Would you like to receive updates on this project?
 YES NO

Submit your comments by returning this card at the information meeting or by mail, or e-mail them to Derek Minnema, Executive Director at MinnemaD@ConnectorJPA.net. Comments must be received by April 2, 2018. Only written comments will be entered into the IS/MND record.

Thank you for your comments; they have been included within the Final Environmental Document.

Response E1: The Noise Technical Study (Dokken Engineering 2018) took both short- and long-term noise monitoring levels. These levels were used to examine noise level increases for potential future Project-level traffic and construction noise impacts. Federal Highway Administration (FHWA) Guidelines require noise modeling be evaluated for outdoor use areas. For the 4-lane analysis, the sensitive noise receptors along the frontage road in question (identified as R-16, R-17, R-19, R-20, R-21, and R-23), only one sensitive receptor (R-21) had noise modelling results requiring noise abatement in the form of a soundwall (see attached image below). All other sensitive receptors have outdoor use areas behind single-family homes, and consequently, noise modeling results do not require the soundwall to be extended, as required under the FHWA Guidelines for federal analysis. For these reasons, the soundwall has only been proposed for impacts to sensitive noise receptor R-21. For potential noise impacts not requiring soundwall mitigations under the California Environmental Quality Act (CEQA) the Kammerer Road Initial Study with Proposed Mitigated Declaration (IS/MND) proposes as avoidance and minimization measure **NOI-1** on page 339, that rubberized, and/or graded asphalt, be used to reduce noise impacts once project design has developed sufficiently to identify site-specific impacts. **2-lane noise modeling results were found not to require soundwall mitigations under FHWA Guidelines for federal analysis, nor CEQA requirements.**



Response E2: The proposed frontage road is designed to provide a single consolidated driveway for the rural residential properties along Kammerer Road and is not intended to be a full street for through traffic. As such, the frontage road is not designed to accommodate the local residents of Rau Road, or to accommodate oversized vehicle traffic for Rau Road. Rau Road is currently designed as a right in/right out access but is proposed for future of the ultimate Connector phase as a frontage road to Bruceville Road or Big Horn Boulevard.

Comment F: California Water Board (March 21, 2018)



Central Valley Regional Water Quality Control Board

21 March 2018

Derek Minnema
Capital SouthEast Connector Joint Powers Authority
10640 Mather Boulevard, Suite 120
Mather, CA 95655

CERTIFIED MAIL
91 7199 9991 7035 8422 0702



COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT, SCH# 2018022061, SACRAMENTO COUNTY

Pursuant to the State Clearinghouse's 27 February 2018 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the Capital SouthEast Connector – A1/A2 Kammerer Road Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

JOHN E. LONKLEY SO.D., P.E., CHIEF | PAMELA C. CREEDON P.E., MCEE, EXECUTIVE OFFICER

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the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at:
http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan

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(SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

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that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements – Discharges to Waters of the State

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver)

R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

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For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/for_growers/apply_coalition_group/index.shtml or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

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Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water*

(Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

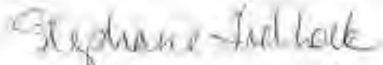
NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

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If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.



Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Thank you for your comments; they have been included within the Final Environmental Document.

Response F1: The Connector JPA will comply with all applicable regulatory requirements.

Comment G: Lynne Wheat (March 28, 2018)

March 24, 2018

Mr. Derek Minnema
Executive Director
Capital SouthEast Connector JPA
10640 Mather Blvd., Suite 120



Dear Mr. Minnema,

Regarding: TIERED INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE
DECLARATION Capital SouthEast Connector – A1/A2 Kammerer Road
Project

Thank you for the opportunity to respond to the project as described.

The Statement of Overriding Consideration acknowledges that the Project will contribute to an increase of traffic emissions above the Sacramento Metropolitan Air Quality Management District's threshold, despite mitigation measures to minimize air quality impacts, and project objectives to minimize the expansion of urban areas and changes in land use, and to restrict access.

G1

However, the Project fails to acknowledge that the excessive number of controlled intersections along the Connector increases the vehicle emissions caused by vehicles starting, stopping, and accelerating. The excessive number of controlled intersections along the Connector also will reduce the ultimate vehicle carrying capacity of the Connector, which is inconsistent with the goals of the project.

G2

As an unavoidable significant air quality impact having scientifically-proven public health impacts, the Project needs to include a health risk assessment for all age cohorts showing the projected number of increased asthma cases and other related lung diseases that would result by exceeding the Air District Standard as proposed. The health risk assessment also needs to analyze the impact of project alternatives having fewer controlled intersections.

G3

Without that data, it is impossible to conclude that the proposed Findings of Overriding Consideration are an acceptable balance of public health impacts and the project objectives.

Sincerely,
Lynne Wheat
Lynne Wheat
Wheat91@yahoo.com

Thank you for your comments; they have been included within the Final Environmental Document.

Response G1: The Statement of Overriding Consideration mentioned above is for the Capital SouthEast Connector Program Environmental Impact Report (PEIR), dated 2012, which does acknowledge an unavoidable significant impact to air quality for the entire SouthEast Connector Program. The Kammerer Road Project is tiered as an Initial Study with Proposed Mitigated Negative Declaration (IS/MND) from the PEIR, according to CEQA Guidelines section 15152. The analysis conducted in connection with the IS/MND determined that no new significant and unavoidable impacts that have not been previously identified within the PEIR will occur due to the Project.

The Initial Study states on page 100, “The Project would have a less than significant impact regarding criteria pollutants for which the Project region is in non-attainment under state ambient air quality standards. The Project would not exceed quantitative thresholds for ozone precursors, NOx and ROG.” Additionally, since the Project has been included in the 2035 Metropolitan Transportation Plan, it has been demonstrated that the Project would not result in an increase of criteria pollutants to a level which would bring the area into non-attainment. Therefore, at the Project-level, no unavoidable significant impacts would occur due to the proposed Project.

Response G2: The number of controlled intersections designed for the proposed Project are consistent with the PEIR (see PEIR Volume 2 - Table 16-13, page 4 of 4; available at <http://www.connectorjpa.net/project-documents.html>). The Air Quality Study, using CT-EMFAC to calculate Project-level emissions of pollutants (related to average daily traffic (ADT) volumes), results are presented in Table 9 on page 102 of the revised Initial Study. The CT-EMFAC model found that pollution concentrations would not exceed quantitative thresholds. Also considered in the Air Quality Study, average daily traffic would be less than 125,000 which is below the U.S. EPA standards for a project of air quality concern, and where the dedicated localized “hot spot” analysis are required for localized impacts of controlled intersections. With the results of the Air Quality and Traffic Analysis performed for the proposed Project, the Project would be consistent with the goals of the Project to improve mobility, access and connections between residential and nonresidential land uses, and improve regional traffic operation, reduce existing and project congestion, and provide a vital component of east-west gap closure.

Response G3: The significant and unavoidable air quality impacts addressed within the PEIR, are Program-level and applicable to the entire SouthEast Connector. The Project would not cause any new significant and unavoidable impacts not previously identified within the PEIR. A health risk assessment was not identified within the PEIR as a mitigating factor of Program-level impacts. The Statement of Overriding Consideration states in Impact AQ-3 section, that while there is a potential for health risks resulting from exposure to vehicle exhaust both during construction and operation of the Project, this impact is considered less than significant with the implementation of Mitigation Measures AQ-2 and AQ-4 stated within the PEIR. No health risk assessment would be required due to the proposed Project; and, no “hot spot” analysis for proposed intersections along the facility would be necessary.

Comment H: Sierra Club and Friends of the Swainson's Hawk (March 28, 2018)



www.swainsonshawk.org



Sierra Club Sacramento

March 28, 2018

Via email

Derek Minemma, Ex. Dir.
Capitol SE Corridor JPA Connector
10640 Mather Blvd. #120
Mather, CA 95655

Comments of the Sierra Club Sacramento and Friends of the Swainson's Hawk on the proposed ISMND A1/A2 Kammerer Road Project.

Dear Mr. Minnema:

Sierra Club Sacramento and Friends of the Swainson's Hawk have reviewed the proposed ISMND A1/A2 Kammerer Road Project. For the following reasons, a Mitigated Negative Declaration is an inappropriate level of review and we request that the JPA prepare and circulate a full Environmental Impact Report.

H1

Conditions have changed since the preparation of the Final EIR on the Capitol Southeast Connector. Among the conditions that have changed are:

1. The JPA has not fully implemented its adopted measures to avoid growth inducement in the A1/A2 segment area.
2. The Sacramento Local Agency Formation Commission on February 7, 2018, approved a Sphere of Influence (SOI) for the City of Elk Grove that would permit urbanization south of this road segment on 1,156 acres of agricultural land previously protected by County policies from urbanization and assumed to remain farmland.
3. The Sacramento LAFCo approval adopted a Statement of Overriding Considerations for 22 significant and unavoidable impacts, including impacts on agriculture, air quality, biological resources and inconsistency with the Metropolitan Transportation Plan.
4. The impending Connector segment has proven to be growth inducing and the EIR from which the MND is tiered is now inadequate to mitigate for the growth inducing impact.
5. The traffic analysis in the MND is inadequate to account for the likely travel demand generated by the growth inducing impacts of the Connector.
6. The Connector segment now conflicts with the Metropolitan Transportation Plan and the region's attainment plans to meet federal air quality standards because of the approval of urbanization induced by the Connector proposed segment A1/A2.

H2

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H4

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H6

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7. JPA adopted mitigation measures are inadequate to offset the direct, indirect and cumulative impacts of the Connector on agriculture, biological resources and air quality.

H8

Appended as reference, please see Sacramento LAFCo agenda materials for February 7, 2018 at the following link:

[7. Landowner Initiated Kammerer/Hwy 99 \(Wackman Ranch\) Proposed Sphere of Influence Amendment \(SOIA\) for the City of Elk Grove, Sacramento Area Sewer District \(SASD\) & Sacramento Regional County Sanitation District \(SRCSD\) - \(LAFC 07-15\) \(CEQA EIR SCH#2016032015\)](#)

H9

• The JPA has not fully implemented adopted measures to avoid growth in the A1/A2 segment area and apparently has not communicated these restrictions to key partners.

In the final PEIR (February 2012), p. 2-17, the JPA assures the Sacramento Metropolitan Air Quality Management District that the design of the Connector will use the concept of access-control and directional interchanges "to limit the extension of roadways beyond Sacramento County's urban service boundary." The PEIR also identifies Mitigation Measures POP-1 and POP-2 as the key mechanisms to "address the access-control policy concerns raised by the SMAQMD." The JPA led the public and the Air District to believe that it was committed to avoidance of growth inducement on agricultural lands in the unincorporated area south of Elk Grove and to maintain consistency with the Metropolitan Transportation Plan.

H10

Yet when the Kammerer/99 SOI Amendment was considered by Sacramento LAFCo (LAFC #07-15; CEQA EIR SCH #2016032015), the JPA apparently did nothing to inform the LAFCo that these access limitations were in place and that the Connector must maintain consistency with the Metropolitan Transportation Plan. Nor did the JPA comment at all on the impacts of an SOI Amendment in this area on the Capitol Southeast Connector.

H11

In addition, in 2013, the JPA agreed to further measures to avoid growth inducement in a Settlement Agreement with the Environmental Council of Sacramento (ECOS). The JPA has not implemented all measures in its ECOS Settlement Agreement that were intended to avoid growth inducing impacts of the roadway.

H12

The JPA also has taken parallel actions that undermine implementation of mitigation measures. It has determined that it will transfer right of way to local jurisdictions. Such a transfer could severely limit the ability of the JPA to enforce limited access to the Connector as promised in the PEIR and elsewhere. Will this allow cities to approve access to the Connector that is not permitted by the PEIR and Settlement Agreement with Environmental Council of Sacramento? Such a policy directly contradicts the intent of the PEIR and the Settlement Agreement with ECOS.

H13

The JPA apparently has not adequately educated its partners and other county agencies about the importance of the implementing mitigation measures to avoid growth inducement and impacts on agriculture in the A1/A2 segment area.

H14

Elk Grove has made no secret that it intends to plan for development south of its current boundary and is preparing a General Plan to formally adopt this scenario. (See Elk Grove presentation to LAFCo, December 6, 2017.

<http://www.agendanet.saccounty.net/sirepub/mtgviewer.aspx?meetid=12219&doctype=AGENDA>)

The City has tried in the past to get an 8,000 acre SOI amendment approved by LAFCo which would entirely transform the agricultural lands south of the Connector.

Has the JPA informed the City of Elk Grove of the limitations on Connector access in this context?

A related concern is that the City of Elk Grove, has proposed General Plan policies that contradict the Connector PEIR attempt to block growth-inducement of the project, and the City is actively planning for urban growth on farmland in the unincorporated area of the County, growth that will be accelerated by the construction of the A1/A2 segment. The Kammerer Road/Highway 99 SOIA *Recirculated* EIR Transportation 3.14-18 Sacramento LAFCo (LAFC#07-15) identifies the following Elk Grove City policies:

Policy CI-12. The City supports efforts to develop the Capital SouthEast Connector, providing a regional roadway connection from Interstate 5 and State Route 99 in Elk Grove to Highway 50. The City recognizes the adopted conceptual route alignment for the Capital SouthEast Connector, utilizing Kammerer Road and Grant Line Road through the City.

CI-12-Action 1. The City will work with the Capital SouthEast Connector Joint Powers Authority (JPA) in the delivery of the planned roadway improvements pursuant to the JPA's Project Design Guidelines *provided that the Project Design Guidelines will not be applied to diminish or alter the rights of City- approved projects and provided that the Project Design Guidelines are not amended to diminish the City's land use authority to approve future projects proximate to or its authority to determine access to the Capital SouthEast Connector.* (Italics added for emphasis.)

• The Sacramento Local Agency Formation Commission (Sacramento LAFCo) on February 7, 2018, approved a Kammerer Road/Highway 99 Sphere of Influence (SOI) for the City of Elk Grove that would permit urbanization south of this road segment on 1,156 acres of agricultural land previously protected by County policy from urbanization.

The Executive Director of LAFCo, on page 4 of his report recommending approval of the SOIA to the Commission, reported that:

"The Application Area has two miles of frontage along the proposed Capital Southeast Connector (Kammerer Road) and is adjacent to ongoing development to the north and existing development to the east. Also, the fully improved Grant Line Road/Hwy 99 interchange is immediately proximate to the northeast of the site. . . . With the major transportation access already defined and at least partially funded, the extension of urban infrastructure to the SOIA area may be fairly feasible and cost effective."

H14
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H15

H16

The Sacramento LAFCo approval hearing included statements by at least two Commissioners voting for approval that a major reason for approving the new Sphere of Influence is the proximity of the Capitol Southeast Connector project to the proposed SOI expansion. Clearly, LAFCo was not aware of the extensive commitments made by the JPA to avoid growth inducing impacts of the Connector. Also clear is that the A1/A2 segment has induced new urban growth on the south side of the Connector.

H16
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Nor did the JPA comment at all on the impacts of an SOI Amendment in this area on the Capitol Southeast Connector. For example, the approval of this SOI Amendment makes it much more difficult to effectively implement the ECOS Settlement Agreement measures because the cost to acquire land to implement these measures has now increased due to removal of County agricultural land protection policies for the SOI area.

In fact the ISMND on page 263, concerning Future Land Use (and Figure 22 and Table 23), describes the area without any reference to the SOIA application dated 5/14/2015. The ISMND states the land use assumption as "minimal land development is anticipated in the unincorporated County near the proposed Project area due to the limitations set by the extent of the UPA and the USB." There is no discussion of the process governed by the Cortese Knox Hertzberg Local Government Reorganization Act which allows farmland to be annexed to cities.

H17

• New impacts must be analyzed, assessed and new mitigation developed for the A1/A2 segment of the Connector.

Approval of the SOIA has made the Connector cost more because the approval of the SOIA greatly increases the speculative value of land within the SOIA, from agricultural to probable future urban development. Speculative land values will likely rise elsewhere along Kammerer Road outside of the SOIA area. Some of the land within the SOIA and on neighboring properties along Kammerer Road will need to be purchased by the Connector JPA for right of way for the Connector.

H18

The LAFCo approval now changes the land use assumptions underlying the JPA Connector EIR and approval. (Kammerer Road/Highway 99 SOIA Final EIR, p. 63.) The traffic analysis in the MND is inadequate to account for the likely travel demand generated by the growth inducing impacts of the Connector. (Kammerer Road/Highway 99 SOIA Final EIR, pp. 76-77.)

H19

The Connector segment now conflicts with the Metropolitan Transportation Plan and the region's attainment plans to meet federal air quality standards because of the LAFCo approval of urbanization induced by the Connector proposed segment A1/A2. "The SACOG MTP/SCS does not identify the SOIA Area for growth. . . . Based on the analysis contained within the Final EIR, other considerations in the record, and the impact evaluation criteria, Sacramento LAFCo finds that the impact associated with consistency of the proposed project with the SACOG 2036 MTP/SCS is significant. No mitigation is available to reduce the effects to a less-than-significant level." (Kammerer Road/Highway 99 SOIA Final EIR, pp. 63-64.)

H20

Moreover, the Sacramento LAFCo approval adopted a Statement of Overriding Considerations for 22 significant and unavoidable impacts, including impacts on agriculture, air quality, biological resources and the Metropolitan Transportation Plan. These are now impacts of the JPA Connector Segments A1 and A2 that were not previously analyzed or mitigated.

H20
Continued

The A1/A2 Connector segment has proved to be growth inducing and the EIR from which the MND is tiered is now inadequate to mitigate for the growth inducing impact.

H21

JPA adopted mitigation measures in the PEIR are inadequate now to offset the impacts of the A1/A2 Connector on agriculture, biological resources and air quality. New analysis and mitigation guarantees are required under CEQA.

H22

Please prepare and circulate a full Environmental Impact Report.

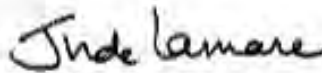
Sincerely,



Barbara Leary, Chair
Sacramento Sierra Club sacramentosierraclub@gmail.com



James P. Pacht
Friends of the Swainson's Hawk, 8867 Bluff Lane, Fair Oaks, CA 95628
swainsonshawk@sbcglobal.net 916 769 2857



Judith L. Lamare

- C: James Corless and Kacey Lizon, Sacramento Area Council of Governments
- Norman Hom, Sacramento Transportation Commission
- Alberto Ayala, Tim Taylor and Paul Philley, Sacramento Metropolitan Air Quality Management District
- Earl Withycombe, California Air Resources Board
- Zac Appleton, USEPA
- Laura Loeffler, Branch Chief, M1, Division of Environmental, Local Assistance and Capital Outlay, Caltrans, District 3 Marysville
- Susan Branson, Ex. Dir., California Transportation Commission
- Jeff Drogensen, California Department of Fish and Wildlife

Thank you for your comments; they have been included within the Final Environmental Document.

Response H1: As noted by the Commenter, the CEQA document type for the A1/A2 Kammerer Road Project (Project) is a tiered Initial Study with Mitigated Negative Declaration (ISMND), tiered from the Connector JPA Program Environmental Impact Report (PEIR). CEQA Guidelines section 15152 and Public Resources Code sections 21000-21178 allow a Mitigated Negative Declaration (MND) to be adopted when an Environmental Impact Report (EIR) has previously been prepared for a program, policy, plan or ordinance. The later project must be consistent with that program or other action. In order to tier from an EIR, the later project must be consistent with the general plan and zoning of the applicable City or county.

According to the findings described within the ISMND, any potentially significant impacts related to the Project can be mitigated to a less than significant level, and as a tiered CEQA document from the PEIR, any previously identified significant impacts would be covered under the PEIR findings. The PEIR has identified significant and unavoidable impacts for the Connector Project as a whole (See Table S-1 of FINAL PEIR) including:

- Climate Change Impacts,
- GHG Emissions,
- Potential Loss or Alteration of Waters of the U.S. and Waters of the State
- Potential Loss or Disturbance of Special-Status Wildlife Species and Their Habitat
- Potential for Damage to or Destruction of Cultural Resources during Project Construction
- Damage to Historical Architectural (Built Environment) Resources
- Convert Farmland to Nonagricultural Uses
- Conflict with Existing Zoning for Agricultural Use or a Williamson Act Contract
- Exposure of Noise-Sensitive Land Uses to Noise and Vibration from Project Construction
- Exposure of Noise-Sensitive Land Uses to Increased Noise from Project Operation
- Inducement of Substantial Population Growth

Per Public Resources Code section 21166, there have been no changed circumstances. As detailed in the IS/MND, the Project is consistent the PEIR and is consistent with the general plan and zoning of the applicable City or county. Thus, the IS/MND is an appropriate level document.

Response H2: This is not a changed circumstance or condition because the Project is a multi-year project. As a result, all mitigation measures, including those related to growth inducement, will be implemented as the Project progresses. Implementation of mitigation measures “POP-1: Require Consistency with the JPA’s Planning Principles” and “POP-2: Require Consistency with the JPA’s Functional Guidelines” are implementable at or after construction of the tiered project segments. Therefore, this does not constitute a changed condition. The JPA is committed to implement measures to avoid growth inducement.

Response H3: The stated Sacramento Local Agency Formation Commission (Sacramento LAFCo) Sphere of Influence Amendment (SOIA) action was finalized after a “A Request for Reconsideration” was filed on March 9, 2018, and denied on May 2, 2018. The Sacramento

LAFCo action does not affect the control access intersections planned for the Project and included within the Settlement Agreement between ECOS and the Connector JPA.

The PEIR states that directional interchanges will be designed to “limit extension of roadways beyond the Sacramento County Urban Service Boundary.” (Capital Southeast Connector PEIR at p. 2-17.) Additionally, the JPA’s Planning and Functional Guidelines only allow limited access to the Connector (PEIR at pp. 13-9 and 13-10). While the A1/A2 Kammerer Road Project IS/MND describes 11 signalized intersections along the proposed Project, the A1/A2 Kammerer Road Project proposes only Bruceville Road and Franklin Road extending south of Kammerer Road neither of which passes through the SOIA area. Consistent with the Connector MMRP POP-1, -2 and -3, and as stated in the A1/A2 Kammerer Road Project IS/MND on page 351-352, the A1/A2 Kammerer Road Project does not provide any new access to the SOIA area.

Response H4: This is not a changed circumstance or condition. The Sacramento LAFCo SOIA is a separate project from that analyzed in the Capital SouthEast Connector PEIR and Kammerer Project IS/MND, with its own project-specific Environmental Impact Report.

As stated in Response H1 above, the Connector Final PEIR identified significant and unavoidable impacts under CEQA and the A1/A2 Kammerer Road Project ISMND is a tiered document consistent with the PEIR. In addition, please refer to Response H3, which describes why the SOIA decision is not a changed circumstance.

Response H5: The Connector Final PEIR identified inducement of substantial population growth as a significant and unavoidable impact of the entire Capital SouthEast Connector Project. (PEIR, page 13-6.) Thus, the growth-inducing effects of the Project have already been acknowledged, analyzed, and mitigated to the extent possible.

Connector PEIR mitigation measures POP-1, -2, and -3 have been incorporated into the A1/A2 Kammerer Road Project IS/MND (pages 353-354) to continue the Connector’s commitment to mitigate growth inducing impacts. Additionally, as stated in the PEIR (page 13-9 and 13-10), the JPA’s Planning and Functional Guidelines only allow limited access to the Connector. Specifically, while the A1/A2 Kammerer Road Project IS/MND describes 11 signalized intersections along the proposed Project, the A1/A2 Kammerer Road Project only proposes Bruceville Road and Franklin Road extending south of Kammerer Road, neither of which passes through the SOIA area.

The Connector JPA has further committed to avoidance of growth south of the City of Elk Grove in its Settlement Agreement with ECOS, whereby the JPA agreed to limit points of access to the Connector "to accommodate only then existing and currently planned land uses," existing on the date of the Settlement Agreement. The JPA is committed to this agreement to ensure access control is maintained. No new access points, other than those previously approved and evaluated in the PEIR (Table 16-13), are contemplated by the A1/A2 Kammerer Road Project.

If this statement is based on the decision by Sacramento LAFCo, please refer to Responses to Comments H1, H3, and H4.

Response H6: This is not a changed circumstance or condition because the traffic analysis within the A1/A2 Kammerer Road Project IS/MND accounts for projected traffic counts and level of service (LOS) for planned and approved developments in accordance with the MTP 2035 projections.

The Connector JPA Planning Principles and Functional Guidelines state that control and capacity characteristics are utilized to preserve and enhance regional functionality, while discouraging growth in areas not designated for growth. (Connector JPA Project Design Guidelines version 4.0; Appendix F.) Further, the Connector JPA Functional Guidelines describe that new access to the Connector from areas not designated for growth in the general plans should not be permitted. The Connector JPA PEIR (page 13-8) recognizes that *“the City General Plan identifies the lands south of these roads as “urban study areas” for future consideration regarding the extent to which urban growth should occur”*. The City’s General Plan does not identify the SOIA area or the projected population or traffic demands of this “urban study area.”

The A1/A2 Kammerer Road Project IS/MND traffic analysis is adequate because it utilizes projected traffic demand presented in the General Plans of the City of Elk Grove and the County of Sacramento, as well as the projected growth numbers presented in the Metropolitan Transportation Plan (MTP).

If the “growth inducing impacts of the Connector” referred to in the comment relates to the SOIA approval, please refer to Responses to Comments H3, H4, and H5. In addition, Sacramento LAFCo prepared an EIR under CEQA to analyze the SOIA. The Connector also recognizes that the Sacramento LAFCo Resolution approving the SOIA [LAFCO#07-15] requires the City to pre-zone and submit a Plan for Services prior to annexation. The Plan for Services submitted with the annexation application must include plans addressing bikeways and trails, transit, traffic/transportation, and consideration of consistency with the MTP, among other things.

Response H7: This is not a changed circumstance or condition because the Project is listed in the MTP 2035 (page 81) and is consistent with the MTP. Since the Project is included in the MTP 2035, it has been demonstrated that the Project would not result in an increase of criteria pollutants to a level which would bring the area into non-attainment.

If the “approval of urbanization” referred to in the comment refers to the Sacramento LAFCo approval of the Kammerer SOIA, please refer to Responses to Comments H3, H4, H5, and H6. The Sacramento LAFCo approval of the SOI for the City of Elk Grove is a separate project unrelated to the consistency of the Kammerer Road Project with the MTP and regional attainment plans.

The Connector Final PEIR document requires that the Connector be *“designed and constructed to serve the demand projected in the MTP and adopted local plans ... [with] access to the Connector allowed only at a limited number of access points; principally, existing primary facilities and new facilities included in the MTP.”* (PEIR Mitigation Measure POP-2; page 13-10.) The JPA

is committed to maintaining access limitations along the A1/A2 Kammerer Road Project in accordance with the Connector Final PEIR document and the ECOS Settlement Agreement.

Response H8: This statement does not present a changed circumstance or condition. The mitigation measures provided within the A1/A2 Kammerer Road Project ISMND are consistent with the PEIR for direct, indirect, and cumulative impacts and will be implemented for agriculture, biological resources, and air quality.

Specifically, mitigation measures AG-1 through AG-2 (page 4 of the MMRP), AQ-1 through AQ-6 (page 5-12 of the MMRP), and BIO-1 through BIO-44 (page 12-34 of the MMRP) have been determined sufficient through the approval of the Connector Final PEIR. As applied to the A1/A2 Kammerer Road Project ISMND, these measures would minimize potential impacts to a less than significant level. The mitigation measures are consistent with the Final PEIR and the planned South Sacramento Habitat Conservation Plan (SSHCP) and the proposed Project will implement these mitigation measures as part of project execution.

Response H9: Thank you for the reference material and information.

Response H10: PEIR measures AQ-1, AQ-2, AQ-3, AQ-4, AQ-5, and AQ-6 have been incorporated into the Project as requested by the Sacramento Metropolitan Air Quality Management District (SMAQMD). The proposed access-controlled and directional intersections have been designed consistent with Table 16-13 of the JPA PEIR, and PEIR mitigation measures POP-1, -2, and -3 have been incorporated into the IS/MND (page 351-352), to continue the Connector's commitment to avoid, minimize, and mitigate for potential growth inducement and air quality impacts.

The intersections identified within the PEIR (Table 16-13) have not been changed or modified within the tiered A1/A2 Kammerer Road Project IS/MND. Specifically, while the IS/MND describes a number of proposed roadways to the north of Kammerer Road, the Project only proposes Bruceville Road and Franklin Road extending south of Kammerer Road, neither of which passes through the SOIA Area.

As identified in Response H5 above, the proposed Project is committed to consistency with the PEIR, and the commitments within the ECOS Settlement Agreement.

Response H11: The PEIR and IS/MND, which analyze the proposed controlled access points for the A1/A2 Kammerer Road Project, have been made available to the public. The JPA consists of the Cities of Elk Grove, Rancho Cordova, Folsom and the Counties of Sacramento and El Dorado, all of which have been informed of the ECOS Agreement and mitigation measures from the PEIR.

The IS/MND does not propose any new or modified access other than that which has been previously analyzed in the PEIR and will maintain access limitations pursuant the Connector Final PEIR and ECOS Agreement.

Response H12: The JPA has not fully implemented all of its adopted measures pursuant the ECOS Settlement, as this is a multi-year Project. The JPA has implemented measures pursuant the ECOS Settlement, by designing the A1/A2 Kammerer Road Project limited access points consistent with the PEIR as follows:

- Use of directional interchanges
- Designing points of access to accommodate only then existing and currently planned land use circulation needs.

Additionally, as part of the SSHCP multi-jurisdictional collaboration, the Capital SouthEast Connector JPA has participated in numerous coordination meetings with the SSHCP staff. As a Plan Permittee of the SSHCP, the JPA has entered into a Memorandum of Agreement for \$100,000 for SSHCP funding in FY 17/18, in order to ensure the successful implementation of the plan. The JPA will continue coordination with SSHCP staff to plan each of the Connector segments to be consistent with the SSHCP, including funding for mitigation for the phases of the project through the SSHCP when it is final.

The JPA has also made a preliminary purchase of 160-acre conservation easement for mitigation lands for the currently planned Connector segments with Gill Ranch, which is located within the SSHCP plan area. The purchase was supported by the U.S Fish and Wildlife Service (USFWS), and is within the area designated by the USFWS as the Cosumnes/Rancho Seco Core Recovery Area in south Sacramento County.

The JPA is committed to implement all of the adopted measures pursuant the ECOS Settlement as the Connector segments continue through the planning, permitting, and construction phases.

Response H13: The JPA is enforcing access limitations consistent the ECOS Agreement and consistent with the PEIR and IS/MND. Please refer to Response H5 above for further information on access limitations. The JPA has not transferred any property to any jurisdiction but did enter into a Memorandum of Understanding with the City of Elk Grove to establish a procedure to transfer three parcels along the B2 segment of the Connector. The JPA currently does not own any right of way along the A1/A2 segment.

Response H14: The JPA consists of the Cities of Elk Grove, Rancho Cordova, Folsom and the Counties of Sacramento and El Dorado; all of which have been informed of the ECOS Agreement and mitigation measures from the PEIR and IS/MND.

Yes, the JPA has expressly identified access limitations and intersections approved within the PEIR for the Project with all of its member jurisdictions, including the City of Elk Grove. No new intersections beyond those approved within the Final PEIR have been proposed as part of the Project.

Response H15: The JPA is the CEQA lead agency for the Project and is not proposing to deviate from the JPA Project Design Guidelines, which limit access along the Connector consistent with the PEIR and ECOS Agreement. Specifically, the JPA Project Design Functional Guidelines state:

“Access Characteristics: To maximize the efficiency of the roadway, access to the Connector should be allowed only at a limited number of access points; principally, existing primary facilities and new facilities included in the MTP. Access should be limited to the greatest extent possible to retain efficiency, reduce congestion, and enhance mobility. New access to the Connector from areas not designated for growth in the general plans should not be permitted.”

In addition, the language stated in this comment is not consistent with what is proposed in the Draft General Plan Update released by the City of Elk Grove on July 27, 2018 (City of Elk Grove, <http://www.elkgrovecity.org/cms/One.aspx?portalId=109669&pageId=2307482>). The IS/MND has been revised to discuss this upcoming change to the City of Elk Grove General Plan on page 279. The existing Circulation Policy CI-12 is proposed to be replaced with the Mobility Policy MOB-7-6:

“Support efforts to develop the Capital SouthEast Connector, providing a regional roadway connection from Interstate 5 and State Route 99 to US 50. The City will work with the Capital SouthEast Connector Joint Powers Authority in implementing the planned roadway improvements.” (City of Elk Grove, Draft General Plan Update, 2018).

Response H16: The JPA will continue to implement the ECOS Agreement, and has designed all controlled-access intersections for the Kammerer Road Project according to the PEIR Table 16-13, page 4 of 4.

The approval of the LAFCo SOIA is a separate project. For further discussion, please refer to Responses to Comments H3 through H7.

Response H17: The A1/A2 Kammerer Road Project ISMND has been updated to reference the LAFCo Kammerer Road SOIA approval on page 278 and the SOIA is displayed in Figure 22. Planned Development in the Project Vicinity. Only annexation would change the jurisdictional boundaries of the area, which would trigger the need for an EIR or other environmental analysis. The A1/A2 Kammerer Road Project is not proposing to annex any farmland into the City. Therefore, no discussion of such an action was included.

For further discussion, please refer to Responses to Comments H3 through H7.

Response H18: Thank you for the comment. It will be considered in further Project deliberations.

Response H19: Please refer to Response H3 and H6 above. Access control limitations for the Kammerer Road Project are consistent with the PEIR Table 16-13 page 4 of 4.

The traffic analysis within the MND accounts for projected traffic counts and level of service (LOS) for planned and approved developments in the Project vicinity. There are no planned or approved developments within the SOIA Area.

If, at a future time, the City of Elk Grove applies to annex the SOIA area, it will be required to comply with numerous conditions imposed by LAFCo in the Resolution approving the SOIA. Among those conditions is the preparation of plans for traffic and consideration of consistency with the MTP.

Response H20: Please refer to Response H7 above. The Project is listed in the MTP (page 81) and is consistent with the MTP. Since the Project is included in the MTP 2035, it has been demonstrated that the Project would not result in an increase of criteria pollutants to a level which would bring the area into non-attainment. Any impacts associated with the Sacramento LAFCo Kammerer Road SOI Amendment Statement of Overriding Considerations are separate from the A1/A2 Kammerer Road Project ISMND and Connector Final PEIR. The A1/A2 Kammerer Road Project is maintaining access control limitations as listed and analyzed in the JPA PEIR (Table 16-13).

Response H21: Please refer to Response to Comment H5 above. The IS/MND is a tiered CEQA document from the Connector Final PEIR, and the access limitations described in the Final PEIR are consistent with those proposed in the IS/MND. The Connector Final PEIR discloses growth inducement as a significant and unavoidable impact for the entire Connector project.

The A1/A2 Kammerer Road Project has maintained all agreed upon restrictions pursuant the ECOS Agreement and the mitigation in the PEIR (Table 16-13).

Response H22: Please refer to the response to comments above. The JPA will continue to implement the conditions of the ECOS Agreement, specifically its access control limitations along the Project, and will continue to implement all mitigation measures. The Project has been designed with controlled-access intersections according to PEIR Table 16-13, page 4 of 4.

It is our understanding that you have filed suit to challenge the SOIA approval by Sacramento LAFCo, which is the proper venue to raise your concerns with that approval. While the Connector JPA, as a regional agency, carefully monitors regional decision-making, the approval of the Kammerer SOIA is a separate project and its environmental impacts were analyzed in its own EIR.

Comment I: Sacramento Metropolitan Air Quality Management District (March 29, 2018)



March 29, 2018

SENT VIA EMAIL

Derek Minnema, Executive Director
Capital SouthEast Connector JPA
10640 Mather Blvd. #120, Mather, CA 95655

Subject: Mitigated Negative Declaration for the Capital Southeast Connector Segment A1 / A2 Project

Dear Mr. Minnema,

Thank you for giving the Sacramento Metropolitan Air Quality Management District (SMAQMD) the opportunity to review the Mitigated Negative Declaration (MND) for the Capital Southeast Connector (Connector) Segment A1 / A2 Project (Project). We have reviewed the project in a manner consistent with the California Health and Safety Code Section 40961 requirement that the District "represent all the citizens of the Sacramento District in influencing the decisions of other public and private agencies whose actions may have an adverse impact on air quality." We offer the following comments.

Greenhouse Gas Emissions Analysis

For greenhouse gas emissions (GHG) analysis, SMAQMD's [Guide to Air Quality Assessment in Sacramento County](#) (CEQA Guide) recommends that the MND quantify and disclose the GHG emissions anticipated to be generated by the project. The CEQA Guide recommends that the annual and total amount of a project's construction-related GHG emissions, and the operational GHG emissions generated per year over the lifetime of the project, be disclosed separately.

While the MND's "Greenhouse Gas Emissions" chapter does provide an operational emissions projection, there is no modeling documentation for the projection. The MND's Appendix C does not contain the CT-EMFAC modeling run for the projection. Additionally, the chapter does not fully disclose construction parameters such as phasing and timing, and Appendix C contains only one sheet of a Roadway Construction Emissions Model (RCEM) run, which does not include information about construction parameters. Further, the GHG construction emissions projection appears to use U.S. tons instead of the metric tons indicated on the model run.

SMAQMD's CEQA Guide also recommends a discussion of whether project construction- and operations-related GHG emissions will exceed the established significance thresholds. The CEQA Guide recommends providing a resulting determination of whether the construction and operational GHG emissions, without mitigation, will represent a cumulatively considerable contribution to the significant cumulative impact.



We recommend an assessment of whether construction- and operations-related GHG emissions exceed a threshold, to support the significance determination. The MND's "Greenhouse Gas Emissions" chapter refers to a greenhouse gas significance determination as "difficult, if not impossible (p. 233)," and does not clearly assess its significance determination against a threshold. Moreover, as noted in previous comment letters on Connector environmental documents, SMAQMD operational and construction GHG thresholds for land development projects are applicable to this project, although the MND indicates otherwise (p. 231).

I2
Continued

Finally, we commend the inclusion of SMAQMD's [Guidance for Construction GHG Emissions](#) as mitigation in the air quality analysis. Without a complete modeling run for the analysis emission projections, however, we cannot adequately evaluate the findings.

I3

Construction Emissions Analysis

SMAQMD's CEQA Guide recommends a discussion of the type of construction activities that will occur and the emissions sources associated with those activities, in addition to parameters such as the timing, phasing, and duration of construction. We recommend including this information in the MND's "Air Quality" chapter construction analysis.

I4

SMAQMD's CEQA Guide also recommends emissions quantification, and environmental review should provide documentation for all data. The construction analysis does include some emissions projections, but Appendix C contains only one sheet of a RCEM run, which does not include information about construction parameters.

Operational Emissions Analysis

We recommend that the MND "Air Quality" chapter construction analysis provide the following information, as consistent with SMAQMD's CEQA Guide.

- Earliest year that operational emissions are expected to commence
- Discussion of whether emissions exceed SMAQMD mass emissions thresholds. (The construction emissions analysis includes this but not the operational emissions analysis.)
- Quantification of maximum daily mass emissions of particulate matter and ozone precursors, along with the input parameters, assumptions, and calculations used to estimate these emission levels

I5

While the operational emissions analysis does provide some emissions projections, Appendix C does not contain the CT-EMFAC modeling run for the projections. We recommend providing the full CT-EMFAC modeling run to provide full public disclosure on project emissions.

Finally, we recommend providing clear, sourced data that justifies the assertion that Kammerer Road would accommodate less than 125,000 average daily traffic (ADT), the amount cited as the US EPA limit for projects of air quality concern. The total for the Table 10 on ADT volume, in the "Design Year Plus Project" column, exceeds 125,000. We

I6

MND for the Capital Southeast Connector Segment A1 / A2 Project
March 29, 2018

also recommend using the SMAQMD screening criteria for local carbon monoxide of 31,600 vehicles per hour at intersections.

Exposure Reduction Strategies to Minimize Potential Health Risks

We commend the inclusion of mitigation to minimize potential health risks with exposure reduction strategies, as the project will be near urban uses in the relatively near future. We further recommend that the MND describe how the project would accommodate vegetative and other exposure reduction strategies, for example right-of-way and funding available to implement these strategies.

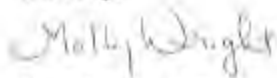
Program Environmental Impact Report and Design Guidelines Considerations

Thank you for the reference to key air quality and greenhouse gas, and growth-inducement mitigation measures from the Program Environmental Impact Report (PEIR). We also maintain our request that environmental review describe any project deviations from the Connector Design Guidelines and Functional Guidelines, or state that the project is completely consistent. We recommend right-of-way cross sections for full public disclosure of project design.

Conclusion

The project is subject to all applicable SMAQMD rules and regulations. The attached document lists all SMAQMD rules and regulations recommended as conditions of approval or construction document language for all development projects. Thank you for your consideration. Please direct any questions on this matter to me at mwright@airquality.org or by calling (916) 874-4207.

Sincerely,



Molly Wright, AICP
Air Quality Planner / Analyst

c: Paul Philley, Program Coordinator, SMAQMD

Attachment: SMAQMD Rules & Regulations Statement

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Continued
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SMAQMD Rules & Regulations Statement (revised 1/2017)

The following statement is recommended as standard condition of approval or construction document language for all development projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):

All projects are subject to SMAQMD rules in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Other general types of uses that require a permit include, but are not limited to, dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower is required to have a SMAQMD permit or a California Air Resources Board portable equipment registration (PERP) (see Other Regulations below).

Rule 402: Nuisance. The developer or contractor is required to prevent dust or any emissions from onsite activities from causing injury, nuisance, or annoyance to the public.

Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities, storage or any other construction activity to prevent airborne dust from leaving the project site.

Rule 414: Water Heaters, Boilers and Process Heaters Rated Less Than 1,000,000 BTU PER Hour. The developer or contractor is required to install water heaters (including residence water heaters), boilers or process heaters that comply with the emission limits specified in the rule.

Rule 417: Wood Burning Appliances. This rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 453: Cutback and Emulsified Asphalt Paving Materials. This rule prohibits the use of certain types of cut back or emulsified asphalt for paving, road construction or road maintenance activities.

Rule 460: Adhesives and Sealants. The developer or contractor is required to use adhesives and sealants that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

Other Regulations (California Code of Regulations (CCR))

17 CCR, Division 3, Chapter 1, Subchapter 7.5, §93105 Naturally Occurring Asbestos: The developer or contractor is required to notify SMAQMD of earth moving projects, greater than 1 acre in size in areas "Moderately Likely to Contain Asbestos" within eastern Sacramento County. The developer or contractor is required to comply with specific requirements for surveying, notification, and handling soil that contains naturally occurring asbestos.

13 CCR, Division 3, Chapter 9, Article 5, Portable Equipment Registration Program: The developer or contractor is required to comply with all registration and operational requirements of the portable equipment registration program such as recordkeeping and notification.

13 CCR, Division 3, Chapter 9, Article 4.8, §2449(d)(2) and 13 CCR, Division 3, Chapter 10, Article 1, §2485 regarding Anti-Idling: Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes. These apply to diesel powered off-road equipment and on-road vehicles, respectively.

Thank you for your comments; they have been included within the Final Environmental Document.

Response 11: The IS/MND follows the SMAQMD CEQA Guide and discloses the Construction and Operation CO2 emissions separately on page 236 within the revised IS/MND. The construction emissions are discussed in total CO2 for Project construction (4,730 metric tons), and is broken down for 2 years of anticipated construction (2,365 metric tons per year). These results are from the Roadway Construction Emissions Model (RCEM) and are in metric tons. Operational emissions were calculated using CT-EMFAC, and these results will be added to Appendix C as reference. Table 21 provides the results of the CT-EMFAC model, which are provided by the model in U.S. tons; however, these will be converted and updated within Table 21 for metric tons, as requested.

Response 12: According to SMAQMD’s Thresholds of Significance Table, CO2 thresholds are set to 1,100 metric tons/year for land development and construction projects and stationary sources. Transportation projects are not listed and no threshold of significance for transportation projects has been set. In discussion with SMAQMD on October 22, 2015 (regarding the D3/E1 Segment of the Connector), it was determined that greenhouse gas thresholds adopted for development project and stationary source projects are not applicable to transportation enhancement projects and no thresholds of significance have been established. The GHG “Environmental Consequences” section has been updated from page 234-237. Construction- and operations-related GHG emissions sections now provide detailed discussion to support significance determinations.

“The PEIR stated that the Project would have cumulative significant impacts to greenhouse gases because impacts under CEQA for greenhouse gases are typically evaluated as cumulative for transportation projects, as an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. The PEIR found cumulative significant impacts as “all design options would generate a net increase in GHG emissions relative to the no-project Alternative. These emissions exceed all published significance criteria (Table 4-7 in Chapter 4). (...) The possibility therefore exists that the design options will contribute to global GHG emissions and global climate change.

Table 4-7 from Chapter 4 of the PEIR can be seen below:

Table 4-7. Adopted Greenhouse Gas Thresholds		
Agency	Threshold	Application
BAAQMD	1,100 (metric tons/year)	Development projects (operational emissions)
	Compliance with GHG reduction strategy	
	4.6 metric tons/service population/year	
	25,000 (metric tons/year)	Stationary source projects (operational emissions)
SCAQMD	10,000 (metric tons/year)	Stationary source projects (operational emissions)
SJVAPCD	Compliance with GHG reduction strategy	Development and stationary source projects (operational emissions)
	Implementation of best performance standards	
	29% reduction in GHG emissions relative to business-as-usual conditions ^a	
Sacramento County (Draft)	4.56 metric tons per capita ^b	Transportation projects

Sources: Bay Area Air Quality Management District 2010; South Coast Air Quality Management District 2008; San Joaquin Valley Air Pollution Control District 2009; Sacramento County 2010d.

^a Defined as emissions that would occur if no GHG mitigation measures were implemented.

^b This threshold is based on a per capita approach. Consequently, it difficult to apply this threshold to the proposed project—there is not a means of identifying the population served by the project, particularly since the project is intended to provide a transportation link across the Sacramento and into El Dorado counties.

As shown, these thresholds do not apply to transportation projects and should only be applied as thresholds of significance to development projects. All of the listed Adopted Greenhouse Gas Thresholds in Table 4-7 for the BAAQMD, SCAQMD, or SJVAPCD are not applicable. Further, the Threshold of Significance as drafted by Sacramento County is not applicable to the project as the population serviced by the project is not easily defined, as stated in Footnote B of the table. Neither at the time of preparation of the PEIR, nor currently, are there established thresholds of significance for CO₂ emissions set by the BAAQMD, SCAQMD, or SJVAPCD for road widening or transportation improvement Projects. In discussion with SMAQMD on October 22, 2015, it was determined that greenhouse gas thresholds adopted for development project and stationary source projects are not applicable to transportation enhancement projects and no thresholds of significance have been established.

The PEIR did identify a significant and unavoidable increase in GHG emissions and found the project may obstruct implementation of AB 32 and SB 375; however, Segment D3/E1 of the Project did not identify any new or additional GHG impacts.”

Greenhouse Gas Emissions Modeling

The Project utilized CT-EMFAC to calculate greenhouse gas emissions. CT-EMFAC is a California-specific project-level analysis tool developed for Caltrans by the University of California, Davis, to model criteria pollutant and CO₂ emissions from on-road mobile sources. The model uses the latest version of the California Mobile Source Emission Inventory and Emission Factors model, EMFAC2007, to quantify running exhaust and running loss emissions using user-input traffic data, including peak-hour and off-peak-hour VMT data allocated into 5-mph speed bins. Running exhaust emissions are emitted from the vehicle tailpipe while the vehicle is traveling, while running loss emissions are evaporative TOG emissions that occur when hot fuel vapors escape from the fuel system or overwhelm the carbon canister while the vehicle is operating. CT-EMFAC will estimate emission factors and project-level emissions for the following pollutants:

- Criteria pollutants: Ozone precursors (ROG and NOX), CO, sulfur oxides, PM₁₀, and PM_{2.5}
- Greenhouse gases: CO₂
- Mobile Source Air Toxics: Acrolein, Acetaldehyde, Benzene, 1,3-Butadiene, Diesel particulate matter (DPM), Formaldehyde

The required inputs to CT-EMFAC to calculate emission estimates included the following:

- Geographic area;
- Analysis year;
- Project Truck/Non-truck percentages;
- Road length;
- Volume of vehicles per hour;
- Average Idling Time in minutes per vehicle; and,
- VMT Distribution by Speed Bin

The truck/non-truck percentages, vehicles per hour, and VMT distribution by speed bin are all contained within the Traffic Report, and input into CT-EMFAC. For each analysis year, the relevant user input information is entered and then run through the model to calculate emissions for the various pollutants.”

Response 13: The CT-EMFAC model results have been added to Appendix C. With the complete modeling run, adequate evaluations of the Project’s findings and significance determinations can be undertaken.

Response 14: The construction emissions analysis has been updated within the Air Quality “Environmental Consequences” section on page 103-104 of the final IS/MND to provide the type of construction activities, length of project and the potential for phasing associated with the

project. Additionally, emissions quantification and results of the CT-EMFAC have been added to Appendix C as reference.

Response 15: The operational emissions analysis has been updated within the Air Quality “Environmental Consequences” section on pages 99-102 of the final IS/MND to provide updated information as requested. Additionally, emissions quantification and results of the CT-EMFAC have been added to Appendix C as reference.

- Due to funding availability, construction could begin as early as 2019, and could require approximately 24 months to complete, making the earliest year for operational emissions 2021.
- The first paragraph within the Operational Impacts section describes how the Project would not exceed mass emissions thresholds for maximum daily operational emissions, and Table 9 has been added to display the results of the CT-EMFAC model to compare results to local mass emissions thresholds.
- Table 10 displays estimated emissions of ozone precursors and PM₁₀ for existing, future year No-Build, and future year Build Alternative conditions for the entire project. The inputs and results used for CT-EMFAC can be found in Appendix C.

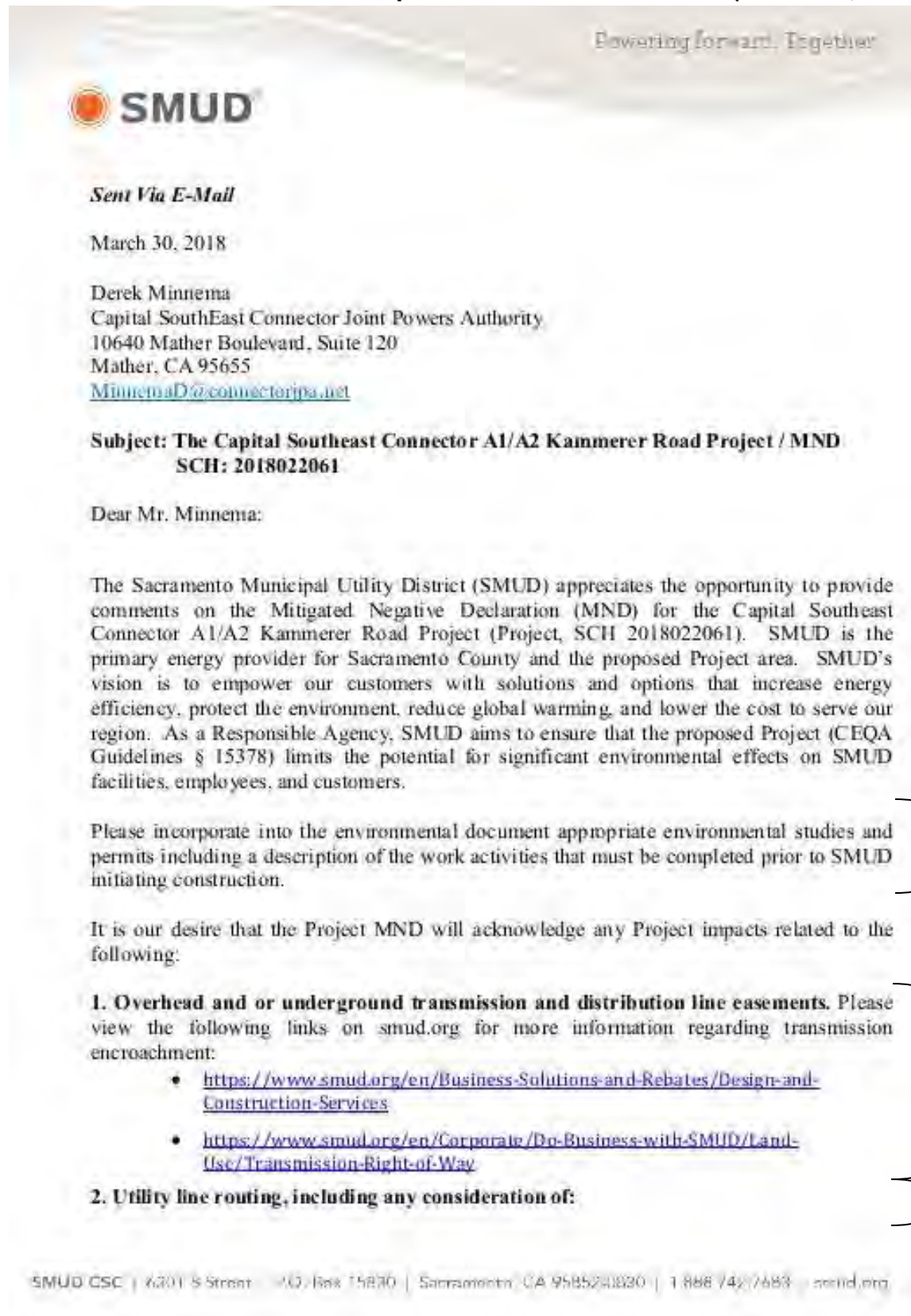
Response 16: All data related to ADT was determined from traffic counts as part of the Transportation Impact Analysis prepared by DKS Associates in December 2018. Table 12 “Projects of Air Quality Concern Considerations” has been added and explains the highest ADT volumes that would occur under Future Plus Project conditions. The ADT volumes would not be added together to provide a total ADT volume for the Project. Conversely, the SR-99 to Promenade Parkway segment ADT volume would be the maximum level of ADT that the entire Project would accommodate. This ADT volume would travel along Kammerer Road and is counted again in these segment numbers. Therefore, no traffic volume increase exceeding the 125,000 vehicle criteria for a POAQC would occur.

Response 17: AG-5 requires the implementing agency to implement a landscape plan consistent with SMAQMD Landscaping Guidance. The landscape plan would include further details on how the Project would accommodate vegetation and other exposure reduction techniques.

Response 18: The Project is consistent with all of the Connector Project Design Guidelines and Functional Guidelines. ROW cross sections will be developed during the final design phase of the project.

Response 19: The Project will comply with all SMAQMD rules and regulations as listed in the attached *Rules and Regulations Statement*.

Comment J: Sacramento Municipal Utilities District - SMUD (March 30, 2018)



Powering forward. Together



Sent Via E-Mail

March 30, 2018

Derek Minnema
Capital SouthEast Connector Joint Powers Authority
10640 Mather Boulevard, Suite 120
Mather, CA 95655
MinnemaD@connectorjpa.net

**Subject: The Capital Southeast Connector A1/A2 Kammerer Road Project / MND
SCH: 2018022061**

Dear Mr. Minnema:

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the Mitigated Negative Declaration (MND) for the Capital Southeast Connector A1/A2 Kammerer Road Project (Project, SCH 2018022061). SMUD is the primary energy provider for Sacramento County and the proposed Project area. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a Responsible Agency, SMUD aims to ensure that the proposed Project (CEQA Guidelines § 15378) limits the potential for significant environmental effects on SMUD facilities, employees, and customers.

Please incorporate into the environmental document appropriate environmental studies and permits including a description of the work activities that must be completed prior to SMUD initiating construction.

J1

It is our desire that the Project MND will acknowledge any Project impacts related to the following:

1. Overhead and or underground transmission and distribution line easements. Please view the following links on smud.org for more information regarding transmission encroachment:

- <https://www.smud.org/en/Business-Solutions-and-Rebates/Design-and-Construction-Services>
- <https://www.smud.org/en/Corporate/Do-Business-with-SMUD/Land-Use/Transmission-Right-of-Way>

J2

2. Utility line routing, including any consideration of:

J3

- Construction near SMUD's 24-inch natural gas transmission pipeline due east of the Union Pacific Railroad tracks.
- Relocating 230kV poles and associated fiber optic facilities to accommodate the overhead crossing at Franklin Boulevard.
- Double circuit 69kV line along the west side of the railroad tracks from SMUD's bulk substation site to the north side of the new Kammerer Road extension.
- Double circuit 69kV line between Franklin Blvd and Bruceville Rd along the north side of the new Kammerer Rd extension; minimum 12.5' PUE for 12kV and 20' exclusive easement for 69kV.
- Reconstruction of the existing single circuit 69kV line between Bruceville Rd and approximately future Lotz Pkwy along the north side; minimum 12.5' PUE for 12kV and 20' exclusive easement for 69kV.
- Maintaining the existing single circuit 69kV line east of approximately future Lotz Pkwy and end of current improvements on the south side of Kammerer Rd.
- Additional distribution facilities will likely be required within a joint trench to support existing services and surrounding planned development along the entire route.

J3
Continued

3. Electrical load needs/requirements

- The proposed Project would require relatively small amounts of electricity to power streetlights and traffic signals. There is no anticipated compromise to SMUD's existing and future customers because the Project is not expected to substantially drain power supplies. The proposed Project would require additional electrical conduits along the roadway alignments to power traffic signals and lights in the Project area. These facilities may be able to tie into existing meters and infrastructure and will not require a new substation or upsized energy facilities. Additional electrical conduits will also be required to construct underground electric facilities to support reliable electric service for planned surrounding development"

J4

4. Energy Efficiency

5. Climate Change

6. Cumulative impacts related to the need for increased electrical delivery

- SMUD operates and maintains one electrical substation south of Bruceville Road, near the Project area, and a new bulk transmission substation site and a two new distribution substation sites are planned to provide reliable electrical service for planned development in the area: the bulk transmission site is one located to the east side of Franklin Boulevard north of the Project area, and the other distribution substation site is located within the SEPA planned development area. SMUD also has a large electrical transmission line running along the east side of the UPRR tracks. SMUD also operates and maintains an overhead sub-transmission and distribution line along the south side of Kammerer Rd between Hwy 99 and Bruceville Rd which must be maintained. SMUD is also proposing a future overhead double circuit sub-transmission and distribution line along the extension of Kammerer Rd between Bruceville Rd and Franklin Blvd. Additional distribution facilities will likely be

J5

required within a joint trench to support existing services and surrounding planned development along the entire route.

SMUD would like to be involved in discussing the above areas of interest as well as discussing any other potential issues. Of particular interest to SMUD is the construction of the overhead crossing of Franklin Boulevard and how its siting relates to SMUD's existing 24-inch natural gas transmission pipeline and the existing 230kV electric transmission lines.

J5
Continued

Natural Gas Transmission Pipeline

SMUD opposes relocating its 24-inch natural gas transmission pipeline, which is currently located due east of the Union Pacific Railroad tracks. SMUD requests that the project extend the overcrossing and abutments east of the pipeline to avoid any encroachment or added fill in the utility corridor, and that any bridge construction temporary falsework be kept at least 20 feet away from SMUD gas pipeline or ROW. Potholing is required to locate and determine the depth of cover of SMUD's gas pipeline and a SMUD standby staff person must be present before any work around the pipeline begins.

J6

230kV Transmission lines and poles

The proposed elevated crossing of Kammerer Road over the railroad tracks poses a clearance issue with SMUD's existing two 230kV transmission lines and associated fiber optic facilities within the proposed project boundaries. The transmission lines run in a north-south direction on the east side of the railroad tracks. Both of the circuits are carried on a single steel pole structure. An elevated crossing of the railroad tracks reduces the phase-to-ground clearance of the transmission lines. To ensure code compliance to industry codes, SMUD would need to install at least two new structures to regain the necessary clearance.

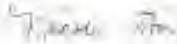
When the Kammerer Road extension moves forward, for the safety of the road construction crews and to maintain SMUD's reliable operation of these critical transmission lines, the transmission pole replacements must occur before any road work occurs within SMUD's legal easement. The installation of the new transmission pole(s) must occur during SMUD's non-peak energy demand period, which is between the second week of October and second week of May. Under no circumstances shall any construction work occur within the SMUD easement without prior written consent from SMUD's Real Estate Department.

J7

Please ensure that the information included in this response is conveyed to the Project planners and the appropriate Project proponents.

Environmental leadership is a core value of SMUD and we aim to be partners in the efficient and sustainable delivery of the proposed Project. If you have any questions regarding this letter, please contact SMUD's Environmental Management Specialist, Ashlen McGinnis, at ashlen.mcginis@smud.org or 916.732.6676.

Sincerely,



Nicole Goi
Regional & Local Government Affairs
Sacramento Municipal Utility District
6301 S Street, Mail Stop A313
Sacramento, CA 95817
nicole.goi@smud.org

Cc: Ashlen McGinnis

J8
Continued

Thank you for your comments; they have been included within the Final Environmental Document.

Response J1: Relocations required to existing SMUD facilities based on Project impacts are included in the proposed Project Environmental Document. Room for potential new facilities would be made available; however, any potential new utilities are not included in the proposed Project Environmental Document.

Response J2: Thank you for this reference information. It will be referenced during future Project considerations and coordination regarding transmission encroachment.

Response J3: Thank you for the information regarding utility line routing within the Project area. It will be referenced during future Project considerations and coordination with SMUD.

Response J4: Conduits required to power street lights and traffic signals required as part of the proposed Project are included in the Environmental Document. The location and design of these facilities will be determined during the final design phase of the Project in coordination with SMUD. Any additional conduits to support planned development are not covered by the proposed Project Environmental Document.

Response J5: The proposed Project will not impact any existing SMUD substations. Relocations required to existing SMUD facilities based on project impacts, including the large transmission line along the east side of the UPRR tracks, are included in the proposed Project Environmental Document. The document environmentally clears the area for utility relocations to Kammerer Road; however, any potential new utilities are not included in the proposed project Environmental Document.

Response J6: Specific potential Project conflicts with the existing 24" natural gas line will be determined during the final design phase of the Project, and a relocation and/or avoidance strategy will be made in coordination with SMUD at that time. Mitigation measures UTIL-1 will be implemented to inform and coordinate with SMUD.

Response J7: Relocations required to existing SMUD facilities based on Project impacts, including the large transmission line along the east side of the UPRR tracks, are included in the proposed project Environmental Document. Relocation of the new transmission structures required to regain the necessary clearance will be made in coordination with SMUD during the final design of the Project. Additionally, the timing of construction of the towers and all work within SMUD easements will be done in coordination with SMUD at that time.

Response J8: Thank you for your comments. Any questions or concerns from the Project planners will be directed to the listed contact.

Comment K: Inderjeet Singh (April 2, 2018)

Hello Derek

I wanted to make a statement regarding Draft Proposal Map of Kammerer road extension .

I own Over 5 Acres Parcel on Hood Franklin Rd APN 132-0262-006.

I do Support fully the Extension Project , However Want you to Re-Do 2-Way traffic Signal right after getting off freeway I-5 and getting on Hood Franklin Rd.

My neighbors (James Aziz & Richard Yuhre) Support same demand In & Out access from Hood Franklin road .

As I spoke to One of your Staff about problems with Re-doing All exit If you do make a 2-Way traffic signal to hood franklin which will cost extra \$50Mil , Then why not Extend on Kammerer road little further and make traffic signal over there ? as shown in the Diagram

See attached Our Proposal Below

I Appreciate your Efforts

Inderjeet Singh
2217 Yarnell way
Elk grove,CA 95758
916 600 0149

K1



Thank you for your comments; they have been included within the Final Environmental Document.

Response K1: Due to access-controlled intersections previously studied within the Connector JPA Program Environmental Impact Report (PEIR), from which the Kammerer Road Project is tiered, new intersections outside of those previously studied cannot currently be included in the Project.

These access control requirements are not typical for most projects; however, due to the ECOS Settlement between the JPA and the Environmental Council of Sacramento (ECOS) the Project will limit the access points through the entire Connector project to those previously stated within the JPA PEIR document, which has set locations for controlled access points along Kammerer Road. The overall intention of these requirements is to minimize potential growth to the south and east. Also, by minimizing intersections, it minimizes the amount of stop-and-go of traffic which can have adverse effects on air quality.

Ultimately, there is the potential for the Connector JPA to acquire right-of-way for the Project, and it would have the ability to transfer right-of-way to local jurisdictions. However, the JPA, must notify ECOS of the proposed transfer of access rights, as a condition of the ECOS Settlement, for which ECOS would have the ability to challenge access if there is a potential for a demonstrable growth inducing effect, or potentially significant environmental impacts.

Comment L: California Department of Transportation - Caltrans (April 2, 2018)

DEPARTMENT OF TRANSPORTATION

DISTRICT 3
703 B STREET
MARYSVILLE, CA 95901
PHONE (530) 741-4004
FAX (530) 741-4245
TTY 711
www.dot.ca.gov/dist3



*Making Conservation
a California Way of Life.*

April 2, 2018

Ref. SCH #2018022061

Derek Minnema
Executive Director
Capital SouthEast Connector JPA
10640 Mather Blvd. #120
Mather, CA 95655

Subj: Capital SouthEast Connector-A1/A2 Kammerer Road Project – Mitigated Negative Declaration (MND)

Dear Mr. Minnema:

On February 28, 2018, the Capital SouthEast Connector Joint Powers Authority (JPA) released the Mitigated Negative Declaration (MND) and Initial Study associated with the Capital SouthEast Connector-A1/A2 Kammerer Road Project. The MND is tiered from the Programmatic Environmental Impact Report (PEIR) for the larger, US 50 to Interstate 5 (I-5) connector road project. We urge the JPA, as we do for all of our partners, to consult and coordinate with us and other partner stakeholders on transportation projects where Caltrans facilities, oversight or other Caltrans stakes may be involved. In order to do so, it is necessary to ensure Caltrans is included in Project Development Team (PDT) activities, with an eye on each project's nexus to other transportation projects. As this project exemplifies, land use is an integral component of the transportation system planning process, as it drives multimodal transportation system demand as well as localized modal choices and, local, regional and interregional distributions of traffic. The JPA, in releasing the MND before we have had the opportunity to review draft project documents, represents an example of the importance of the partnerships we seek. Such partnerships would allow us to proactively and collaboratively address technical and policy issues such as those discussed in this letter.

L1

We have considerable concerns related to the project description, scope of analysis, the identification of transportation system impacts and the identification of mitigation measures. We also have concerns regarding the identification of parties responsible to implement the mitigation, as well as consistency both within the MND and between the MND, PEIR, and the funding and financing strategies and documents. It is Caltrans' professional judgement that the environmental documents provided for this project do not meet the adequacy or disclosure requirements of the California Environmental Quality Act (CEQA). As noted in the MND, Caltrans will become the lead agency for purposes of the National Environmental Policy Act (NEPA), and it is critically important that we come to agreement on the issues presented in this

L2

letter before your CEQA process is concluded. The following comments are based on our review of the MND and its relation to the PEIR.

} L2
Continued

Project Understanding

The project is a connection between State Route (SR) 99 and I-5 in an east-west alignment. As stated in the MND, it will replace an existing portion of Kammerer Road with a four-lane thoroughfare, construct a new four-lane expressway section to I-5, and implement railroad grade separation and interchange modifications, presumably at the Hood Franklin interchange to I-5 where the improvements are most needed. The scope of the project is analyzed as a four-lane facility. The JPA acknowledges that depending on funding, initial construction may consist of a two-lane facility; however, other construction phasing may be considered. As of Thursday, March 22, 2018, Caltrans became aware that the scope of the project is reduced to two lanes at the current phase, based on the funding allocation from the Sacramento Area Council of Governments (SACOG).

} L3

Summary of Caltrans Concerns

The MND states that interchange improvements are part of the project, but they are not analyzed in the MND and funding for this project along with the I-5 interchange appears in large part not to be secured. No analysis of any reconstruction of the interchange is provided as part of the project or as a mitigation measure for impacts resulting from the project in the MND. We see this as a shortcoming in the identification of the affected environment, background traffic volumes, cumulative or growth-inducing frames of reference, or identification and mitigation of operational, safety and air quality impacts either on opening day or at any time within the planning horizon. We need the JPA to provide a project report with a preferred alternative that is vetted through the CEQA review, based on the project's ultimate configuration including the interchange. The project report may detail the phased approach that begins with the currently programmed two-lane configuration, but should document at what point in time in the future the preferred alternative will be ultimately constructed. We had expected the opportunity to review a draft of the project report prior to the release of the CEQA document so that we could collaborate to resolve our concerns early on. This did not happen prior to release of the MND, obligating Caltrans to address our concerns during the CEQA process.

} L4

The following bullet points provide a summary of our concerns, which are described in detail further on in this letter:

- The project analyzed is a four-lane facility, while the project to be constructed is a two-lane facility based on recently allocated funding from SACOG. This has not been analyzed for the purpose of identifying bottlenecks, traffic volumes, queues at offramps, mainline queuing impacts, speed differentials or phasing and actuating conditions to construct necessary mitigations to the interchange or mainline.
- Existing and forecasted left turning movements from southbound I-5 to eastbound Hood Franklin Road call for a double left turn lane on the ramp, with two catchment lanes on

} L5
} L6

- the local road. This will involve widening the existing interchange structure for the southbound offramp to make room for these critical improvements. } L6
Continued
- The onramps to I-5 in each direction from Hood Franklin Road will need to be metered in order to regulate the addition of vehicles onto the mainline during peak hours. } L7
 - High Occupancy Vehicle (HOV) lanes should be extended south from the Elk Grove Blvd. interchange to a mile south of the Hood Franklin Road interchange in each direction to address both demand and additional air pollutant emissions resulting from the project. } L8
 - Auxiliary lanes must be considered between the Hood Franklin Road and Elk Grove Boulevard interchanges. } L9
 - It is unclear when a multiuse pathway, an important component of the project's purpose as stated in the MND and PEIR, will be constructed. } L10
 - Project phasing, mitigation, financing and trigger points related to volume and capacity and other impacting factors are unclear and must be identified as a CEQA requirement. } L11
 - Known but not approved land use intentions made public by the City of Elk Grove are not included in the model. They may need to be accounted for at a later stage and may impact different phases of the conceptual project, including the current project phase. } L12
 - We disagree with the conclusions the MND presents regarding growth-inducing impacts, and find them inconsistent with the conclusions in the PEIR. } L13
 - We need the JPA and all agencies associated with this project and associated interchanges to understand that no net increase in a 100-year storm event's peak discharge may be realized within the State's highway right of way and/or Caltrans drainage facilities as a result of the project or mitigation measures. } L14
 - It is unclear in the MND whether the JPA understands where Caltrans' engagement and participation is necessary; Caltrans is not identified as an agency whose permits and approvals will be required. } L15
 - We must be invited to participate in all PDT meetings and activities, to provide the kind of input this letter provides, and more: We feel that commenting on the CEQA document is inappropriate, but necessary due to the lack of the kind of coordination that would have addressed these concerns well in advance. } L16
 - The variance in project descriptions for both the project in the MND and the Hood Franklin interchange is not appropriate. The project description must be consistent across documents as a funding requirement. } L17

I-5/Hood Franklin Road Interchange

While the project description in the MND includes interchange modifications, the document proceeds to state that the JPA "identifies a future project concept including full interchange reconstruction and grade separated intersections; however, these future improvements are not part of this project as funded at the present phase, nor are they analyzed for the MND. This project does consider both the physical and environmental constraints that would influence the } L18

design for future interchanges, grade separated intersections, and additional lanes.” It continues, “The [p]roject is included in the (SACOG) 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (2016 MTP/SCS). The Project is also included in SACOG’s 2017/2020 Metropolitan Transportation Improvement Program (MTIP) as project numbers SAC24114 (SR 99 to Bruceville Road) and SAC24094 (Bruceville Road to I-5) on pages 40 and 42 of Appendix 3 of the MTIP.”

We don’t see the added environmental considerations for the interchange modifications in the MND or the PEIR. Regarding funding, we see only project support costs programmed in the MTIP. As we expected for the project analyzed in the MND, Caltrans needs to see a draft Project Report (PR) for the interchange, with a preferred alternative that is vetted through the CEQA review, and works for the interchange project’s ultimate configuration. As we state regarding the project analyzed in the MND, the PR for the interchange may detail a phased approach including the phasing for the Connector Road, and must be consistent as lanes are added in the future, from the current two-lane phase. The PR should likewise document at what point in time the preferred alternative will be ultimately constructed. Also, please note that we consider a conceptual project to differ from a planned project, in that the planned project generally establishes project scope, cost and schedule, in addition to a financing plan. Further, we consider a programmed project to be one that is, among other things, funded. The MND refers to the interchange as a concept, however it has some programmed elements as part of the project analyzed in the MND. Even with all else aside, the project description for the interchange is insufficient to identify any configuration, capacity or footprint. Additionally, rebuilt interchanges are not analyzed in the MND, and neither are mitigation measures identified or analyzed where the project articulates with the I-5 Hood Franklin Road interchange. By extension, mitigation sequencing and funding are neither addressed. This is discussed further below.

L18
Continued

Southbound I-5 Offramp/Eastbound Hood Franklin Road

As noted above, the initial buildout will be a two-lane facility at the current phase. The reduced footprint provides for overall reduced environmental effects from what is analyzed for a four-lane facility. However, transportation systems operations differ, as in this case. In the near term, the two-lane configuration for the current phase of the project forms a bottleneck. At the southbound I-5 offramp to eastbound Hood Franklin Road, left-turning traffic volumes exceed service and storage capacity on the ramp, resulting in queues extending onto the freeway mainline and introducing collision hazards due to the speed differentials between exiting traffic and through traffic. The MND appears to concur regarding the current adequacy of the facility, where it states in Section 1.3 that “existing roadways in the [p]roject vicinity and adjacent transportation corridors between the SR-99 and I-5 Hood Franklin Road interchange are insufficient to meet existing and forecasted traffic demand” (Page 23). It continues, “[p]lanned growth in the project area is expected to increase, which will lead to deteriorating LOS [Level of Service] and traffic conditions.” While LOS degradations are not in themselves significant

L19

impacts, the underlying localized delay from bottleneck conditions contribute to the safety concerns addressed here.

The Highway Design Manual (HDM) 405.2(3) states that double left turn lanes should be considered if the left turn demand is 300 vehicles per hour (vph) or more. The MND shows existing volumes for the southbound I-5 offramp to westbound Hood Franklin Road to be 349, just beyond the HDM's recommended threshold. The Cumulative Plus Project turning movements from that same offramp are shown as 960 vph. Even with the reduced intensity scope currently funded, a significant increase in volumes should be anticipated once direct connectivity is established between SR 99 and I-5 even as a two-lane facility. The volumes of left-turning vehicles would at any phase of the project surpass the current volumes. As a consequence, we expect that double left turn lanes will be required on the southbound offramp, and two receiving lanes will be required on the structure heading east along Hood Franklin Road. This will require widening of the structure to make room for the additional turn lane and receiving lanes. We require this safety issue be mitigated by the time this portion of the Connector Road is constructed. Also, the project description for the future interchange reconstruction must be updated to provide for the projected volumes and additional volumes currently not forecasted but associated with the City of Elk Grove's stated land use intentions.

L19
Continued

Hood Franklin Road/Northbound and Southbound I-5 Onramp Metering

Currently the northbound I-5 mainline morning traffic congestion extends to just south of the Elk Grove Blvd. interchange. As a regional connector, the ultimate facility will pull large volumes of traffic to I-5 and SR 99 and exacerbate this congestion. Once the direct link between I-5 and SR 99 is established, it will be necessary to meter the northbound and southbound onramps in order to regulate the flow of vehicle intake during peak congestion periods.

L20

Northbound and Southbound I-5 Mainline

HOV Lanes

Section S.6.1 of the PEIR states that "operation of the project would contribute to an increase of traffic emissions above the Sacramento Metropolitan Air Quality Management District's threshold." When the portion of the project analyzed in the MND is constructed, we believe it would be an appropriate mitigation and air quality management measure for the project proponents to extend the HOV lanes southward to one mile south of the Hood Franklin interchange.

L21

Southbound I-5

An auxiliary lane for southbound I-5 approaching the Hood Franklin offramp will need to be considered. The Connector Road project and adjacent development will increase demand at the southbound I-5 Hood Franklin Road offramp. Where the double left turn lane is required for traffic exiting I-5 and turning left onto eastbound Hood Franklin Road, we expect high volumes

L22

of vehicles requiring the additional capacity for safe weave-merge movements as they prepare to exit I-5 at that interchange. The auxiliary lane would provide that capacity to improve congestion and safety associated with the increased volumes of exiting traffic.

L22
Continued

Northbound I-5

An auxiliary lane should be considered for the high volumes of vehicles accessing northbound I-5 from the Hood Franklin Road onramp, in order to avoid conflicts between through traffic and merging traffic. An auxiliary lane would provide extended opportunities for vehicles entering from the Hood Franklin Road onramp to merge with through traffic.

L23

Project and Mitigation Financing and Trigger Points

It is of great concern that the MND describes interchange improvements as part of the project, without any specificity to address the nexus and proportionality of impacts to the interchange and mainline. The City of Elk Grove is the lead agency for the interchange project. Further, the project descriptions in the funding and programming documents do not address the Connector Road project in any meaningful way related to the interchange, other than claiming that modifications are part of the project as identified in the MND. However, no specific modifications are identified and the Connector Road's nexus to the interchange is wholly neglected. Further, as noted earlier there is no analysis of reconstructed interchanges or identification of interchange configurations based on demands introduced by this large project in concert with projected land use, background and induced growth.

The project description in section 1.1 of the MND states that the Capital SouthEast Connector JPA's PEIR "identifies a future project concept including full (I-5/Hood Franklin Road) interchange reconstruction and grade separated intersections; however, these future improvements are not part of this project." The document continues, stating that "[t]his project does consider both the physical and environmental constraints that would influence the design for future interchanges, grade separated intersections, and additional lanes."

L24

Opening day and cumulative impacts from the project will need to be mitigated in large part at the Hood Franklin Road interchange, as well as along the I-5 mainline. Including it in the project description and then incorporating another agency's programmed project for deferred consideration is inadequate. Please identify project and mitigation phasing, sequencing and financing, as well as the metrics for trigger points at which specific phases and/or mitigations are to be constructed toward the ultimate concept for the project and the interchanges.

We believe a fee-based financing structure linked to new developments along the alignment of the Capital SouthEast Connector may provide significant contributions to the funding of both the Connector itself, and mitigations that will be necessary on the State Highway System as a result of the redistribution of traffic resulting from the Connector. A nexus study will provide the linkages to satisfy the CEQA nexus requirements per *Nollan v. California Coastal Commission*.

Proportionality per *Dolan v. City of Tigard*, can be established by formula according to the particular land uses proposed within the nexus area. This recommendation is consistent with the Sacramento Local Agency Formation Commission's Recirculated Draft Environmental Impact Report for the Kammerer Road/Highway 99 Sphere of Influence Amendment (State Clearinghouse #201603205), where it cites a corresponding Sacramento County General Plan implementation element for transportation goals and policies: "[a]ssess the use of developer fees and/or improvement districts to contribute to improved transit, pedestrian and bicycle facilities in commercial corridors (Page 3.14-11).

L24
Continued

Modeling and Forecasting

The modeling for future demand appears to be a combination of two models that tell different stories, giving anomalous outputs in the model that compromise the cumulative and growth-inducing analyses. The Sacsim model for the current SACOG MTP/SCS shows lower volume forecasts than the model used for the MND. This was explained in the MND and we recognize that a base year of 2044 was used, farther out than the MTP/SCS projections. However, the model used for the MND also appears to be misleading. The ratio of jobs to housing creates an anomaly in the computer model where the model itself seeks equilibrium to represent populations staying within a given area for employment. We know that in developing areas, housing typically comes first, followed by jobs. The MND forecasts 66,361 housing units and 101,293 jobs. The housing-first principle suggests that residents of the 66,361 housing units will most likely commute to the north, at any distance. This will most likely be along I-5 or SR 99. Next, when the 101,293 jobs are built out, the imbalance will increase southbound travel from the more densely populated areas to the north. We don't believe this is adequately expressed in the MND, and determine that it calls the growth factors and volumes forecasted in the MND into question, particularly considering that the goal of the entire Connector Road project in the PEIR is to provide another transportation corridor to accommodate regional commuting and other travel.

L25

Growth Inducing Impacts

While the analysis forecasts beyond the planning horizon for the SACOG MTP/SCS to the year 2044, we believe the growth factors do not quite capture the full demand on the facility. For example, the MND states that the project will not result in growth inducing impacts, which does not appear realistic to us, and we believe this conclusion was likely incorporated into background assumptions regarding growth factors and forecasted demand. This statement in the MND also appears to contradict the PEIR where it states in Section 18.2, "Under certain circumstances, improvements in mobility can result in making land more attractive for development. In such cases, transportation projects can contribute to inducement of growth that fosters "economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment" (CEQA Guidelines Section 15126.2[d]). This issue is particularly relevant in areas where local plans do not call for urban development, as is the case in several sections of the corridor under consideration." In our opinion, this passage applies strongly to the

L26

project analyzed in the MND. For example, it is a fair argument that the proposed annexations associated with the Bilby Ridge Conceptual Land Use Plan, the 1,156-acre annexation along Kammerer Road near SR 99, and other land uses along the length of the ultimate facility will be intensified. The City of Elk Grove has clearly and publicly announced its plans to grow up to 25% by the year 2036, a number that should be considered for the purpose of this analysis. Please provide clarification for the apparent inconsistency between the MND and the PEIR, and expand the analysis to consider the growth announced by the City in addition to the planned and reasonably anticipated changes to land uses in the area. Some of these changes may reasonably need to be accounted for at a later stage and may impact different phases of the conceptual project, starting with the present project phase.

L26
Continued

Hydraulics and Stormwater

The development of this site will increase the localized impervious surface area through the construction of the roadway, ramp widening or interchange reconstruction. No net increase in a 100-year storm event's peak discharge may be realized within the State's highway right of way and/or Caltrans drainage facilities as a result of the project or mitigation measures such as ramp widening. Any direct stormwater impacts or cumulative surface water runoff discharges from the 100-year storm event resulting from any component of the project, or indirect impacts associated mitigations including on the Hood Franklin interchange, should be minimized through project drainage and mitigation measures.

L27

Required Approvals and Permits

Table 1 of the MND lists what the JPA presumes to be the required approvals and permits for the project. Caltrans is not listed on this table. We also note that Caltrans was not listed as a Responsible Agency in the PEIR. The JPA is advised that Caltrans approvals are necessary for the project regarding capital outlay, support and administration of funds. Caltrans serves as Responsible Agency wherever the Connector Road articulates with Caltrans' right of way, or where work or construction occurs in the airspace above and beneath our right of way, or for any nonstandard activities within the same. Two such locations are the I-5 interchange at Hood Franklin Road, and the SR 99 interchange at Grant Line Road. All work proposed and performed within the state's highway right of way must be in accordance with Caltrans' standards, and requires a Caltrans Encroachment Permit prior to commencing construction. Additional approvals are needed with regard to our oversight through Local Assistance, wherein we hold responsibility to ensure that federally funded activities by the JPA adhere to certain requirements and standards. Subsequently, as Caltrans serves as lead agency for the NEPA analysis, adoption of the federal environmental document will be at Caltrans' discretion. The MND suggests that the JPA is unaware of our fundamental role as owner-operator of state highway facilities.

L28

Available Air Pollutant Emissions Avoidance

We recommend the JPA work with us and local partners to consider establishing Park and Ride facilities along the length of the ultimate project, and expect that such a facility along the length of the current phase of the Connector Road would yield substantial benefits in terms of reducing vehicular miles traveled (VMT), a metric associated with mobile source air pollutants. Where Park and Rides are collocated with ramp-metered interchanges featuring unmeted HOV access, we expect those benefits to increase. In conjunction with active mode connectivity and charging infrastructure for zero-emission vehicles (ZEVs), Park and Rides associated with the project can yield substantial results depending on the variables involved in modeling emissions reductions.

Governor's Executive Order B-48-18 states that California is the largest market in the United States for ZEVs. The number of ZEVs in California increased by 1,300% in six years, from 25,000 in 2012 to more than 350,000 as of January of this year. While the transportation sector still emits half of California's total greenhouse gas (GHG) emissions and 80% of nitrogen oxides, which form smog, it is the state's goal to increase the number of ZEVs in California to 1.5 million by the year 2025.

The MND identifies an increase in mobile source air pollutant emissions resulting from the project. In order to fully evaluate the impact avoidance and minimization strategies needed for the city to help achieve California's climate/environmental policy objectives by managing and offsetting the project's projected increase of air pollutants, Caltrans requests that the lead agency analyze the effects that could be achieved, by developing an implementation program for ZEV charging and fueling infrastructure. This can be implemented in part as conditions of approval for new developments. We acknowledge SACOG's current efforts toward a ZEV Blueprint and seek to support this effort. For new and existing facilities, a number of incentive programs are available through the California Energy Commission, the California Air Resources Board, the California Public Utilities Commission and other organizations, following the enactment of Senate Bill 350. Caltrans requests the opportunity to review the results of quantitative analysis demonstrating what emission reductions could be achieved through the implementation of such a strategy.

L29

Please see the web pages at the links below for more information on ZEV infrastructure incentives:

California Energy Commission – Plug-In Electric Vehicles (PEVs)

<http://www.energy.ca.gov/transportation/zev/pev/>

California Air Resources Board – DriveClean PEV Resource Center

<https://www.driveclean.ca.gov/pev/Incentives.php?submit=submit&bev=1>

California Public Utilities Commission – Zero-Emission Vehicles

<http://www.cpuc.ca.gov/zev/>

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability."

Consultation and Coordination

Project Funding, Project Description and Consistency

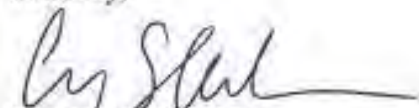
The project includes funding through the Regional Surface Transportation Program, which is federally sourced. As these funds are programmed for the Capital SouthEast Connector project, Caltrans is responsible for making sure the federalized project follows all applicable federal guidelines and procedures. As noted in the MND, Caltrans will serve as delegated lead agency under NEPA. It is unclear whether state funding will also be included in the project, as this will be determined by the CTC in their May 2018 meeting. In cases where state funding is involved, Caltrans likewise retains oversight responsibility to ensure the project meets state requirements and guidelines. However, for the purposes of CEQA, the JPA is the lead agency.

The SACOG MTP/SCS shows programmed support funding for the project, which appears in the Federal Transportation Improvement Program (FTIP) with federal funding associated with it. The project description includes construction of a four-lane facility from I-5 to SR 99 with modifications to the Hood Franklin interchange, a railroad overcrossing and bicycle lanes. The JPA is advised to note that when projects are programmed by a MPO or RTPA, the project description must be consistent with any authorization or allocation request. The project description must likewise be consistent on all documentation, including but not limited to the programming document, Preliminary Engineering Surveys, environmental documents for state and Federal review and Right of Way Certification.

L30

We urge the JPA to consult and coordinate with us and partner stakeholders on these issues. In order to do so, we feel it necessary to ensure Caltrans is present for PDT activities, with an eye on the project's nexus to other transportation projects and land uses. As noted earlier in this letter, this kind of coordination would allow us to proactively and collaboratively address technical and policy issues such as those discussed in this letter. Please contact Gary Arnold, Special Projects and Sustainability Manager, at (530) 741-4004 or by email at gary.arnold@dot.ca.gov or Jim Graham, Acting Deputy District Director of Planning, Local Assistance and Sustainability, at (530) 741-4337, or by email at jim.graham@dot.ca.gov.

Sincerely,



GARY(S. ARNOLD
Special Projects and Sustainability Manager

cc: Scott Morgan, State Clearinghouse

Thank you for your comments; they have been included within the Final Environmental Document.

Response L1:

This comment is categorically incorrect and misrepresents Caltrans' comprehensive role in the Project. As far back as 2010, Caltrans has been involved with the Capital SouthEast Connector (Connector) Joint Powers Authority (JPA) Project. The Connector JPA and Caltrans coordinated during the preparation of the Connector JPA Program Environmental Impact Report (PEIR). Caltrans also provided written comments on the Draft PEIR. Caltrans' input was integral to the PEIR document as well as to the actual design and design guidelines of the Capital SouthEast Connector.

For the A1/A2 Kammerer Road Project, Caltrans has been participating through Project Development Team (PDT) meetings over the course of the project. The A1/A2 Kammerer Road Project coordination was initiated by the City of Elk Gove (the previous CEQA lead) as early as 2014-2015. The project's previously prepared Notice of Preparation was issued by the City and relayed to Caltrans on February 23, 2015. In addition, the project's NEPA technical studies have been in review with Caltrans for the past few years.

Since the initial coordination through the City of Elk Grove, the Project has been revised, and the CEQA document level was changed to a tiered Initial Study with Mitigated Negative Declaration (IS/MND) with the JPA as the CEQA lead agency. Coordination efforts with Caltrans have continued under the JPA's leadership since 2017 which have included regular PDT meetings, extensive traffic study reviews, and NEPA technical study reviews/approvals. The JPA is committed to continue coordination efforts with Caltrans through the CEQA and NEPA approval process and through the Project Report.

Response L2:

The CEQA document type for the A1/A2 Kammerer Road Project (Project) is a tiered IS/MND, tiered from the Capital SouthEast Connector JPA PEIR. CEQA Guidelines section 15152 and Public Resources Code sections 21094-21094 allow a Mitigated Negative Declaration (MND) to be adopted when an Environmental Impact Report (EIR) has previously been prepared for a program, policy, plan or ordinance. The later project must be consistent with that program or other action. In order to tier from an EIR, the later project must be consistent with program or other action, as well as the general plan and zoning of the applicable City or county.

Per CEQA Statutes 21166 there have been no changed circumstances that would result in this tiered IS/MND to be out of compliance with the tiered processes of CEQA Guidelines section 15152 or that would require a new EIR.

As detailed in the IS/MND, the Project is consistent the PEIR, the general plan and zoning of the County of Sacramento and City of Elk Grove, the SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy, and the SACOG Metropolitan Transportation Improvement Program; therefore, the IS/MND is an appropriate level document.

In response to the Caltrans' comment letter issued on the Draft IS/MND, the JPA (and responsible agencies) have held multiple meetings to discuss specific concerns and misunderstandings brought forth in the letter. In addition, the JPA has completed additional traffic analysis.

Response L3:

The JPA is aware of Administrative Modification #21 for the Kammerer Road Project (SACOG ID: SAC24094). As stated within the Administrative Modification, the "Environmental phase (CEQA and NEPA) covers full project scope, to be built in phases: Kammerer Road: In Elk Grove, from Lent Ranch Parkway to I-5/Hood Franklin Interchange: Widen and extend from 2 to 4 lanes." The CEQA IS/MND will analyze both the two phase and the four-lane full-build of the project.

Response L4: The IS/MND footprint and effects analysis considers full build out of the Project. The IS/MND has been revised to further analyze both a two-lane phase and the four-lane full build, including air quality, growth-inducement, and traffic considerations of the project. This analysis also includes consideration of interchange improvements when necessary for future phases of the project. In response to the Caltrans' comment letter issued on the Draft IS/MND, the JPA (and responsible agencies) have held multiple meetings to discuss specific concerns and misunderstandings brought forth in the letter. In addition, the JPA has completed additional traffic analysis. All interchange improvements required by the project are included in the existing project footprint.

A separate cooperative agreement (or memorandum of understanding) will be prepared before the Final Caltrans Project Report is approved that will determine the operations and/or development triggers that will result in the need for additional I-5 interchange and mainline improvements. The cooperative agreement will outline funding responsibilities associated with these improvements.

A Draft Project Report (PR) has been prepared and will be submitted to Caltrans. The Draft Project Report will need to be approved by Caltrans before the NEPA environmental document can be circulated.

Response L5:

The JPA is aware of Administrative Modification #21 for the Kammerer Road Project (SACOG ID: SAC24094). As stated within the Administrative Modification, the "Environmental phase (CEQA and NEPA) covers full project scope, to be built in phases: Kammerer Road: In Elk Grove, from Lent Ranch Parkway to I-5/Hood Franklin Interchange: Widen and extend from 2 to 4 lanes." The CEQA IS/MND will analyze both the two and four-lane built out of the project. In response to the Caltrans' comment letter issued on the Draft IS/MND, the JPA has completed additional traffic analysis for a two-lane phase as well as for the four-lane full build. The results have been presented to Caltrans and multiple traffic focused meetings have occurred.

Response L6:

The Traffic Impact Study (TIS) and Traffic Operations Analysis Report (TOAR) for the I-5/Hood Franklin Road Interchange have been revised with updated forecasting as determined through

multiple coordination meetings with Caltrans. According to the updated reports, the southbound I-5 would not require a double left turn lane on the ramp, or two catchment lanes on the local road. No widening of the existing interchange structure would be necessary due to the proposed project. The IS/MND has been updated with the new TIS and TOAR information.

Response L7:

The Traffic Impact Study (TIS) and Traffic Operations Analysis Report (TOAR) for the I-5/Hood Franklin Road Interchange have been revised with updated forecasting as determined through multiple coordination meetings with Caltrans. According to the updated reports, the I-5 on-ramps from Hood Franklin Road would not require metering in order to regulate the addition of vehicles onto the mainline during peak hours. The IS/MND has been updated with the new TIS and TOAR information.

Response L8:

Through multiple coordination meetings with Caltrans and the responsible agencies of the Project, the extension of the high occupancy vehicle (HOV) lanes on the I-5 mainline from Elk Grove Boulevard to the Hood Franklin interchange will not occur as part of the project.

Response L9:

Through multiple coordination meetings with Caltrans and the responsible agencies of the Project, auxiliary lanes on the I-5 mainline from Elk Grove Boulevard to the Hood Franklin interchange will not occur as part of the project.

Response L10: The multiuse path is a key component of the project. Due to funding, right-of-way needs, and safety considerations, the Class I multiuse path is proposed to be incorporated as part of the ultimate four-lane project.

Response L11: The proposed project description describes that the project may be constructed in phases, according to the availability of funds. Mitigation measures are identified within the IS/MND consistent with the PEIR, and any mitigation during an interim 2-lane phase would occur prior to project construction for the impacts of the interim project. Within the IS/MND "Traffic and Transportation" section, a discussion of trigger points has been added related to volume and capacity.

Response L12: The Sacramento Local Agency Formation Commission (LAFCo) Sphere of Influence Amendment (SOIA) area south of Kammerer Road has been approved. However, the SOIA is not an annexation. According to LAFCo's governing statute, a sphere of influence is limited to a "plan for the probable physical boundaries and service area of a local agency, as determined by the Commission." (Gov Code, 56425.) The SOIA is a separate project, with its own project specific Environmental Impact Report, and has not been planned or approved for development; therefore, no growth-inducing effects of the SOIA can be acknowledged, analyzed, or mitigated for. Additionally, the JPA and the Kammerer Road Project would not be affiliated with the SOIA growth-inducing effects. The Kammerer Road Project IS/MND tiered from the JPA

Connector PEIR has identified growth-inducing impacts for the Connector and has implemented mitigation measures for these impacts.

Response L13: Please refer to Response L12 above.

Response L14: The proposed Project is being designed to ensure that there will not be a net increase in the 100-year floodplain within the State Highway right-of-way and/or Caltrans drainage facilities as a result of the project or mitigation measures. Section 2.9 “Hydrology and Water Quality” discusses hydrology and flooding and mitigation measures that will be implemented to avoid and minimize potential impacts to the floodplain.

Response L15: The JPA and the Project’s responsible agencies have included Caltrans in PDT and coordination meetings since 2014-2015. The Project would comply with Caltrans’ Standards where work is proposed within the state’s right-of-way and will acquire a Caltrans Encroachment Permit where necessary. The Caltrans Encroachment Permit was added to Table 1 “Required Permits and Approvals”. Additionally, the JPA understands Caltrans will have oversight of the federal environmental document and acknowledges this in the Executive Summary: “The California Department of Transportation (Caltrans), as assigned by the FHWA as the National Environmental Policy Act (NEPA) lead agency, will prepare a separate NEPA Environmental Assessment (EA) that will assess the environmental impacts under NEPA.” The JPA understands that Caltrans will need to approve the Project Report following approval of the NEPA environmental document.

Response L16:

It was determined that this was a misunderstanding of the particular commenter from Caltrans. For the A1/A2 Kammerer Road Project, Caltrans has been participating through Project Development Team (PDT) meetings over the course of the project. The A1/A2 Kammerer Road Project coordination was initiated by the City of Elk Gove (the previous CEQA lead) as early as 2014-2015. The project’s previously prepared Notice of Preparation was issued by the City and relayed to Caltrans on February 23, 2015. In addition, the project’s NEPA technical studies have been in review with Caltrans for the past few years. Since the initial coordination through the City of Elk Grove, the Project has been revised, and the CEQA document level was changed to a tiered Initial Study with Mitigated Negative Declaration (IS/MND) with the JPA as the CEQA lead agency. Coordination efforts with Caltrans have continued under the JPA’s leadership since 2017 which have included regular PDT meetings, extensive traffic study reviews, and NEPA technical study reviews/approvals. The JPA is committed to continue coordination efforts with Caltrans through the CEQA and NEPA approval process and through the Project Report.

Response L17:

The project descriptions throughout all of the necessary CEQA and NEPA documents should be consistent, and where any discrepancies have been identified they have been addressed and revised.

Response L18:

The JPA is currently assessing funding options for the A1/A2 Kammerer Road Project, as well as other segments of the Connector. The A1/A2 Kammerer Road Project Initial Study with Mitigated Negative Declaration (IS/MND) has made a conservative analysis of all potential environmental impacts and considerations in regard to the interchange options (roundabout or signalized intersections). The JPA is currently preparing a Project Report (PR) for the A1/A2 Kammerer Road Project and intends to submit the PR as soon as it is prepared. The PR will address Caltrans' concerns about the interchange options and interchange programming. The IS/MND was prepared to scope the full impact of either of the interchange options.

Response L19:

SACOG has modified the Project funding into two SACOG ID numbers, SAC24094 and SAC25082, where SAC24094 is listed as the two-lane extension from existing Kammerer Road from Bruceville Road to Lent Ranch Parkway reconstruction and Kammerer Road from Bruceville Road to Interstate 5/Hood Franklin Interchange. However, SAC24094 specifically lists the Environmental phase (CEQA and NEPA) as covering the full project scope of four-lanes (see MTP/SCS project SAC24114). The scope of the Project has not changed, whereas the funding has been split between SAC24094 and SAC25082 for the extension and widening phases of the Project. The IS/MND provides an analysis for the ultimate four-lane project as identified within SAC24094 and described above. As a result of Caltrans' comment, a comprehensive two-lane analysis has been completed by the JPA's traffic consultants. Based on the results of the traffic analysis, both the interim project (two-lane) and full build (four-lane) would operate at an acceptable level of service under Existing Plus Project conditions. The interim project would fail by the cumulative year (2044) due to roadway segments exceeding a two-lane capacity, although intersections would still operate acceptably. This is due to two factors: 1) low volumes of cross traffic allow for long green times for Kammerer Road, and 2) slower travel times on a two-lane facility would cause some traffic to choose alternate east-west routes. The City would condition developers to increase Kammerer Road from a two to four lane facility as new residential and commercial development occurs. This would ensure the facility is adequately sized to accommodate any future growth along the corridor.

As a part of the new traffic analysis, the JPA provided detailed calculations for the queuing on the southbound off-ramp. The results of the traffic analysis have been presented to Caltrans and multiple traffic focused meetings have occurred. The IS/MND Section 2.16 "Transportation/Traffic" the two-lane and four-lane analysis has been revised to provide projected levels of service for both the interim and full-build of the proposed Project.

Response L20:

Please refer to Response L7.

Response L21:

Please refer to Response L8.

Response L22:

Please refer to Response L9.

Response L23:

Please refer to Response L9.

Response L24:

The IS/MND describes interchange improvements as part of the project because the IS/MND is analyzing all potential environmental impacts of the 4-lane ultimate project including the impacts that may occur with the future interchange improvement options. The City of Elk Grove will be the CEQA lead agency for the interchange project at a future date. The proposed project description describes that the project may be constructed in phases, according to the availability of funds. Mitigation measures are identified within the IS/MND consistent with the PEIR, and the any mitigation during an interim two-lane phase would occur prior to project construction for the impacts of the interim project. The IS/MND "Traffic and Transportation" section has been revised to discuss project phasing, mitigations, 10-year trigger points, and required full-build out timing for the proposed Project.

It was decided that a separate cooperative agreement (or memorandum of understanding) will be prepared before the Final Caltrans Project Report is approved that will determine the operations and/or development triggers that will result in the need for additional I-5 interchange and mainline improvements. The cooperative agreement will outline funding responsibilities associated with these improvements.

In response to the Caltrans' comment letter issued on the Draft IS/MND, the JPA has completed additional traffic analysis for a two-lane phase as well as for the four-lane full build. The results have been presented to Caltrans and multiple traffic focused meetings have occurred.

Response L25:

The JPA has completed an independent review of the traffic analysis provided for the A1/A2 Kammerer Road Project. The independent review determined: "The technical analysis pertaining to intersections and roadways appears to be consistent with best practices of the industry and no issues were found with how the delay and level of service results were calculated. Both the 2013 and 2017 Kammerer Road Studies have a forecast year of 2044, and assume the build out of the City of Elk Grove. This full build-out condition is understood to include the Southeast Policy Area, and other large developments in the vicinity of the Connector." The revised 2018 Transportation Impact Analysis cumulative conditions is based on SACOG's latest 2036 MTP/SCS development forecasts. In the City of Elk Grove, modifications were made to reflect an assumed Year 2044 land use, with full build out of residential development.

The proposed Project is designed for full build-out of a four-lane facility; however, a two-lane facility would be the proposed first phase of the Project. According to the Revised Transportation Impact Analysis (DKS Associates 2018), both the interim project and full build would operate at an acceptable level of service (LOS) under Existing Plus Project conditions.

The need for the four-lane facility will ultimately be determined by the location and pace of development, both of which are hard to predict beyond a few years out. As a planning-level exercise, a set of ten-year growth forecasts were made for Year 2034, which assumes a project opening year of 2024. For the interim project, all intersections within the Project limits from Lent Ranch Parkway to I-5 would operate at LOS C or better, with the exception of the side-street stop-controlled intersection of Kammerer Road and Hood Franklin Road, and implementing a right turn that merges into Kammerer Road would fix this deficiency. For full build, all intersections within the Project limits would operate at LOS C or better. Segments would be widened from two to four lanes prior to reaching deficiency levels. For the full build, all roadway segments would operate at LOS B or better. The intersection and segment analyses indicate the interim Project would operate acceptably for at least ten years after opening (Year 2034).

The results of the additional traffic analysis were presented to Caltrans and multiple traffic focused meetings occurred.

Response L26:

It was determined that this was a misunderstanding of the particular commenter from Caltrans. This comment misrepresents the actions taken by Sacramento LAFCo. The Sacramento Local Agency Formation Commission (LAFCo) Sphere of Influence Amendment (SOIA) area south of Kammerer Road has been approved. However, the SOIA is not an annexation and does not include any development plans or entitlements. (Gov Code, 56425.) Thus, the requested additional analysis related to the LAFCo actions would be speculative.

In addition, the Connector is designed to minimize growth to the south and the east. Access control requirements are not typical for most projects. However, pursuant to a Settlement Agreement with the Environmental Council of Sacramento, the Project must limit the access points through the entire Connector project to those previously stated within the JPA PEIR document, which has set locations for controlled access points along Kammerer Road. The overall intention of these requirements is to minimize potential growth to the south and east.

The Kammerer Road Project IS/MND tiered from the JPA Connector PEIR has identified growth-inducing impacts for the Connector and has implemented mitigation measures for these impacts.

Response L27:

A portion of the proposed Project would be within a FEMA-mapped 1 percent Annual Chance Flood Hazard Area. However, the Project does not create any new growth inducing impacts that were not already considered in the PEIR and would not place housing within a 100-year flood hazard area as mapped on the Federal Official National Flood Hazard Layer or expose people or structures to a significant risk of loss, injury or death involving flooding. The Project would have no impact related to housing within a 100-year hazard area or risk of loss, injury, or death involving flooding.

The proposed Project is anticipated to place structures within the 100-year floodplain in the proposed alignment and interchange from I-5 to approximately 1000 feet west of Franklin Boulevard. The Project would implement the measures below to avoid restriction of potential flood

flows within the 100-year Floodplain. With the implementation of Project BMPs, potential impacts related to placement of structures within a 100-year floodplain would be reduced to a level of less than significant with mitigation incorporated.

Additionally, as one of the Project's objectives, the Project will provide an east-west evacuation route that is higher than the 100-year flood elevation. Project activities such as road widening would create new impervious surfaces. The Project would result in an increase of approximately 91.08 acres of paved surface area, which would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff and which would contribute to an increase in the volume of stormwater runoff from the roadway. In addition, the increase in impervious surfaces, along with the increase in surface water runoff, could increase the nonpoint source discharge of pollutants such as sediment, pesticides, oil and grease, nutrients, metals, bacteria, and trash. However, no net increase in the 100-year storm event's peak discharge is anticipated within the Project area.

BMPs would be implemented for the Project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. The proposed Project will include construction and post-construction BMPs such as stabilized construction entrances and exits, temporary concrete washouts, and sand bag barriers to control increased erosion and sedimentation during construction; and treatment BMPs including detention basins, swales, and other on-site measures to remove pollutants from runoff water. Specific BMPs to be used during construction would be identified as project design advances and finalized within the approved Project SWPPP.

The PEIR discusses these issues at pages 10-1 to 10-35. The IS/MND addresses these issues at pages 253-265.

Response L28:

The Project would comply with Caltrans' Standards where work is proposed within the state's right-of-way, and will acquire a Caltrans Encroachment Permit where necessary. The Caltrans Encroachment Permit will be added to Table 1 "Required Permits and Approvals". Additionally, the JPA understands Caltrans will have oversight of the federal environmental document and the does acknowledge this in the Executive Summary: "The California Department of Transportation (Caltrans), as assigned by the FHWA as the National Environmental Policy Act (NEPA) lead agency, will prepare a separate NEPA Environmental Assessment (EA) that will assess the environmental impacts under NEPA."

Response L29:

The mitigation measures for the Kammerer Road Project regarding air quality impacts would reduce project related potential air quality impacts to a less than significant level. The mitigation measures are consistent with the PEIR and have been updated with coordination with the Sacramento Metropolitan Air Quality Control District. The Kammerer Road Project has not been designed with park and ride or Zero Emission Vehicles (ZEV) charging stations. Analysis of developing an implementation program for Park and Ride, or Zero Emission Vehicles (ZEV)

charging and fueling infrastructure would not be required to reduce impacts to a less than significant level, and at this time the JPA will not be completing this type of analysis.

Response L30:

The Project description has been developed through PDT meetings with the JPA, the project responsible agencies, and Caltrans to develop a description inclusive of all project components as stated within the funding document, technical studies and CEQA/NEPA documents.

Additionally, the JPA, the responsible agencies for the Kammerer Road Project (Sacramento County and City of Elk Grove), and Caltrans have been participating in consultation and coordination through Project Development Team (PDT) meetings over the course of the project planning as early as 2014-2015. For example, the previously prepared Draft Environmental Impact Report for the Kammerer Road Extension Project Notice of Preparation was issued and relayed to Caltrans on February 23, 2015, with the City of Elk Grove as the CEQA lead agency. The Project and the CEQA document have been updated with the JPA as the CEQA lead agency. Coordination efforts and PDT meetings with Caltrans have been in process since 2016-2017 regarding the updated Project, and the JPA will continue to do so through the CEQA and NEPA approval process.

Comment M: Delta Protection Commission (April 2, 2018)

DELTA PROTECTION COMMISSION

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- Honorable Susan Talamantes Eggman**
California State Assembly
- Honorable Cathleen Galgiani**
California State Senate

April 2, 2018

Derek Minnema
Capital SouthEast Connector Joint Powers Authority
10640 Mather Boulevard, Suite 120
Mather, CA 95655

Subject: Capital SouthEast Connector – A1/A2 Kammerer Road Project

Dear Mr. Minnema:

Thank you for providing the Delta Protection Commission (Commission) the opportunity to review the Tiered Initial Study/Mitigated Negative Declaration (IS/MND) for the Capital SouthEast Connector – A1/A2 Kammerer Road Project (Project). The Project consists of improvements to a segment of Kammerer Road between Bruceville Road and State Route 99 to a four-lane thoroughfare and creation of a new four-lane expressway between Bruceville Road and the Interstate 5 (I-5)/Hood-Franklin Road interchange.

The Commission is a state agency charged with ensuring orderly, balanced conservation and development of Delta land resources and improved flood protection. Proposed local government projects within the Primary Zone of the Legal Delta must be consistent with the Commission's Land Use and Resource Management Plan (LURMP). Much of the area west of the I-5/Hood-Franklin Road interchange is the Primary Zone.

Although the Project does not fall within the Commission's jurisdiction over "development" in the Primary Zone, we submit these comments under Public Resource Code Sections 29770(d) and 5852-5855 (The Great California Delta Trail Act). These sections state that the Commission may comment on projects that impact the Primary Zone, and direct the Commission to develop and adopt a plan and implementation program for a continuous regional recreational corridor extending throughout the five Delta Counties linking the San Francisco Bay Trail system to the Sacramento River trails. The Commission is currently preparing the Great California Delta Trail Blueprint Report for Sacramento, San Joaquin, and Yolo counties.

The Commission encourages the Authority to consider the effects of the Project on the Delta in the IS/MND, including increased visitor and through-traffic on the Stone Lakes National Wildlife Refuge, the unincorporated community of Hood, and the larger Delta region. Hood and other Delta communities have experienced

M1

increased levels of traffic on Highway 160, Hood-Franklin Road, and Twin Cities Road from commuters traveling to Sacramento and the San Francisco Bay Area. Construction of Capital SouthEast Connector will likely make Highway 160 and the Delta an alternate route for travelers between the eastern portion of the Sacramento region and the Bay Area.

M1
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The Capital SouthEast Connector will also provide a strong connection for bicyclists between the Sacramento region and the Delta and potentially create demand for new or improved bike trails along Hood/Franklin Road west of the I-5 interchange. We recommend that the IS/MND discuss the Delta Trail in the recreation and transportation setting sections and describe how the Project can connect to future segments of the Delta Trail, particularly bicycle navigation through the I-5/Hood-Franklin Road interchange.

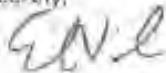
M2

The Project will strengthen the role of Hood-Franklin Road as an important entry point into the Delta, which underscores the need for appropriate signs near the I-5 interchange. The Commission is currently partnering with the Delta Stewardship Council and Sacramento-San Joaquin Delta Conservancy on the development of a Delta Sign Plan, which provides guidance on welcome, directional, and place marker signs. The Commission hopes to work with the Authority and other agencies on installation of signs that inform visitors about Hood, Stone Lakes National Wildlife Refuge and the Delta region.

M3

The Commission appreciates the Authority's consideration of these comments. Please contact Blake Roberts, Senior Environmental Planner, at (916) 375-4237 for any questions regarding the comments provided.

Sincerely,



Erik Vink
Executive Director

cc: Don Nottoli, Sacramento County Board of Supervisors and Commission member

Thank you for your comments; they have been included within the Final Environmental Document.

Response M1: The JPA has made considerations on the potential impacts to recreational and transit within the Project vicinity. Traffic analysis included the I-5/Hood Franklin interchange and the potential for incremental intersection improvements to provide a sufficient level of service (LOS) rating. Section 2.15 “Recreation” of the IS/MND will be updated to include the following information for transit considerations in the delta vicinity:

- Small traffic decrease on Twin Cities Road (approximately 200 Average Daily Traffic (ADT) decrease), due to parallel capacity
- Small traffic increase on Hood Franklin Road and SR-160 west of the I-5 interchange (less than 250 ADT increase)
- Due to the low volume these facilities carry today (less than 5,000 ADT), the changes due to the Project would not result in unacceptable traffic operations.

Response M2: Currently, the Project has a Class 1 multi-use path planned from SR-99/Grant Line Road Interchange to the connection of the Kammerer Road expressway section at Hood Franklin Road. Beyond this point, the Project does not preclude Class II bike lanes from being implemented at a later point, but is not currently part of the Project. Currently, the Project is working with Caltrans to evaluate solutions for the I-5 interchange bike lanes. The Delta Trail has been referenced within the recreation section.

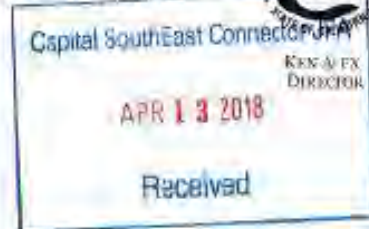
Response M3: The JPA and its member agencies are open to coordinating with the Delta Protection Commission and other agencies on the installation of signs that inform visitors about Hood, Stone Lakes National Wildlife Refuge, and the Delta region.

Comment N: Governor's Office of Planning and Research (April 3, 2018)



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE OF PLANNING AND RESEARCH



April 3, 2018

Derek Minnema
Capital SouthEast Connector Joint Powers Authority
10640 Mather Boulevard, Suite 120
Mather, CA 95655

Subject: Capital SouthEast Connector A1/A2 Kammerer Road Project
SCH#: 2018022061

Dear Derek Minnema:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on April 2, 2018, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures

cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
1-916-322-2318 FAX 1-916-558-3184 www.oprc.ca.gov

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**Document Details Report
State Clearinghouse Data Base**

SCH# 2018022061
Project Title Capital SouthEast Connector-A1/A2 Kammerer Road Project
Lead Agency Capital SouthEast Connector Joint Powers Authority

Type MND Mitigated Negative Declaration
Description Note: Extended Review per lead agency.

The Capital SouthEast Connector Joint Powers Authority proposes to connect SR 99 to I-5 in an east-west alignment. The project will replace an existing portion of Kammerer Road with a four-lane thoroughfare, construct a new four-lane expressway section to I-5, and implement railroad grade separation and interchange improvements. Both the thoroughfare and the expressway will include a Class I bidirectional, multiuse path along the northern extent of the roadway. Additional project features will include utility relocation, drainage improvements, signalized intersections, and frontage roads.

Lead Agency Contact

Name Derek Minnema
Agency Capital SouthEast Connector Joint Powers Authority
Phone 916 876-9094 **Fax**
email
Address 10640 Mather Boulevard, Suite 120
City Mather **State** CA **Zip** 95655

Project Location

County Sacramento
City Elk Grove
Region
Lat / Long 38° 22' 20" N / 121° 25' 00" W
Cross Streets Kammerer Rd between I-5 and SR 99
Parcel No. 13401101680000
Township 6N **Range** 5E **Section** 13-18 **Base** MD

Proximity to:

Highways 99
Airports
Railways UPRR
Waterways Unnamed tributaries to Stone Lake
Schools Franklin ES
Land Use ag, res development, OS

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Central Valley Flood Protection Board; Department of Conservation; Department of Fish and Wildlife, Region 2; Office of Historic Preservation; Department of Parks and Recreation; California Highway Patrol; Caltrans, District 3 N; Air Resources Board, Transportation Projects; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Delta Protection Commission; Delta Stewardship Council; Native American Heritage Commission; Public Utilities Commission

Date Received 02/27/2018 **Start of Review** 02/27/2018 **End of Review** 04/02/2018

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Note: Blanks in data fields result from insufficient information provided by lead agency.



Central Valley Regional Water Quality Control Board

Governor's Office of Planning & Research

21 March 2018

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MAR 22 2018

STATE CLEARINGHOUSE

Derek Minnema
Capital SouthEast Connector Joint Powers Authority
10640 Mather Boulevard, Suite 120
Mather, CA 95655

CERTIFIED MAIL
91 7199 9991 7035 8422 0702

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, CAPITAL SOUTHEAST CONNECTOR – A1/A2 KAMMERER ROAD PROJECT, SCH# 2018022061, SACRAMENTO COUNTY

Pursuant to the State Clearinghouse's 27 February 2018 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the Capital SouthEast Connector – A1/A2 Kammerer Road Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

KARL E. LONGLEY ScD, P.E., CHIEF | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER

11020 Sun Center Drive #200, Rancho Cordova, CA 95670 | www.waterboards.ca.gov/centralvalley



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the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at:
http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan

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that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements – Discharges to Waters of the State

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver)

R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

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For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/for_growers/apply_coalition_group/index.shtml or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water*

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(Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

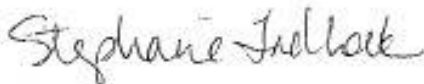
For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.



Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

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Thank you for your comments; they have been included within the Final Environmental Document.

Response N1: Thank you for forwarding the following agency review comments. Please refer to Comment F for response to California Water Board.