



PROJECT DESIGN GUIDELINES

VERSION 4.0

February 13, 2015

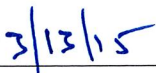
**Capital SouthEast Connector
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MEMBER AGENCY APPROVAL

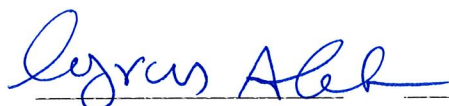
The Project Design Guidelines have been prepared with the support and collaboration from the member jurisdictions of the Capital SouthEast Connector JPA. The member jurisdictions approve of this document and the information contained herein.



City of Elk Grove
Richard Shepard
Public Works Director



Date



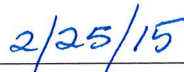
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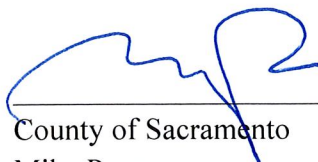
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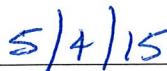
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SECTION 1. INTRODUCTION

1.1. Description of the Capital SouthEast Connector

The Capital SouthEast Connector (Connector) is a 34-mile limited-access roadway spanning from the Interstate 5 / Hood-Franklin interchange, south of Elk Grove, to U.S. 50 at the Silva Valley Parkway interchange just east of El Dorado Hills. It will feature up to six traffic lanes, and accommodate bicycle, pedestrian, equestrian, transit, truck and automobile travel.

The Connector study area is generally bounded by I-5 on the west, the Urban Services Boundary and Kammerer Road on the south, Grant Line and White Rock Roads on the east, and U.S. 50 on the north. Within unincorporated Sacramento County, the corridor passes through the Franklin-Laguna, Vineyard, and Cosumnes communities. Within unincorporated El Dorado County, the corridor is located in the El Dorado Hills community.

The Connector is segmented into five major segments as shown in the map below:

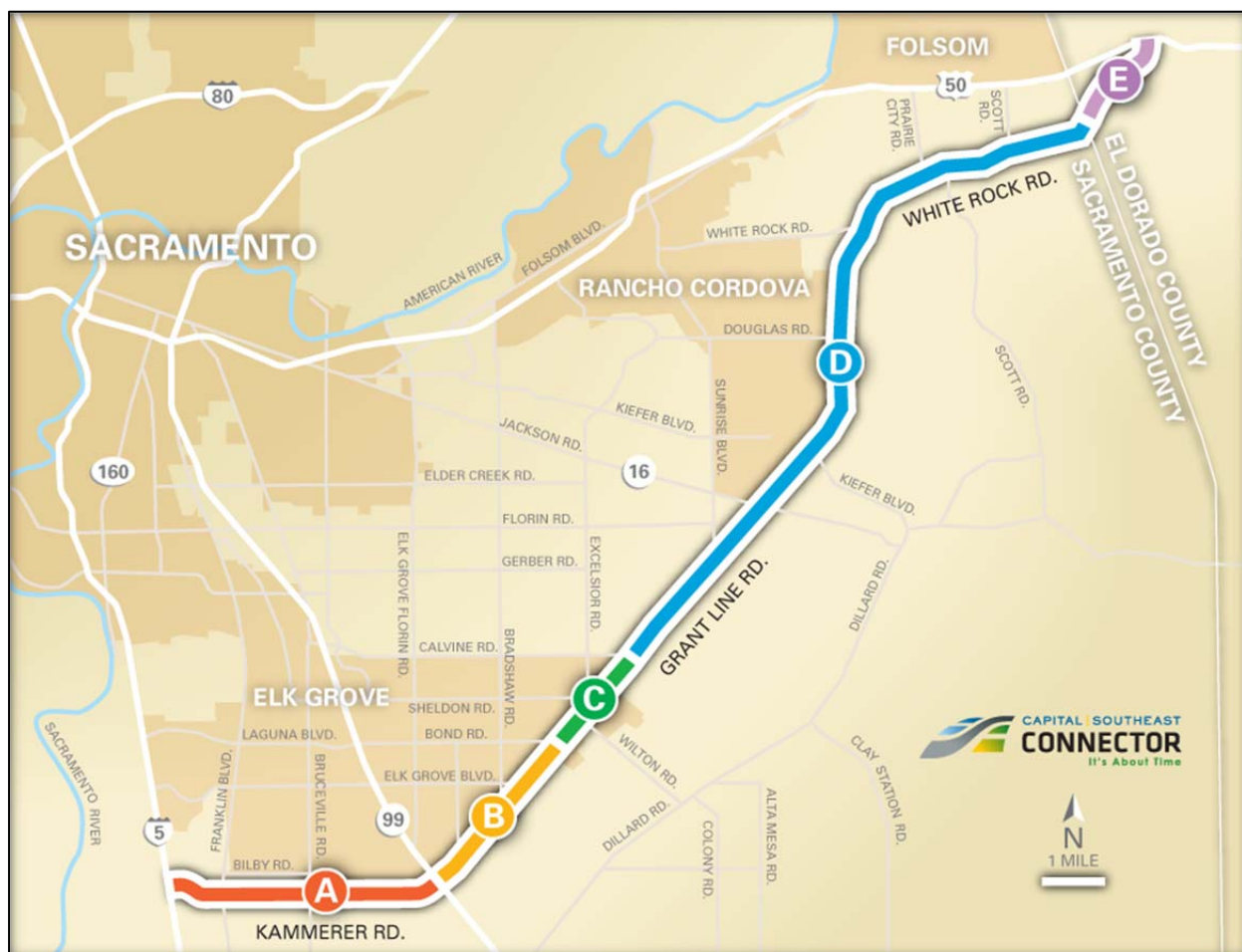


Figure 1-1: Connector Segments

1.2. Description and Role of the Joint Powers Authority

The Connector is managed by a Joint Powers Authority (JPA) that includes the cities of Folsom, Elk Grove and Rancho Cordova, and El Dorado and Sacramento counties. The JPA was formed in December, 2006 when the cities and counties formalized their collaboration to proceed with planning, environmental review, engineering design and development of what was initially called the Elk Grove-Rancho Cordova-El Dorado Connector Project. Up to that point, the Sacramento Area Council of Governments (SACOG) had overseen the early planning stages.

The JPA and its governing board of directors have moved ahead with planning, environmental review, engineering design, development, and eventual construction of the Connector. As the project advances, key decisions made by the JPA Board are also reviewed by each member agency's governing body (i.e., City Council or Board of Supervisors). Each member agency also commits staff to serve on the Connector's Project Development Team (PDT) to help coordinate JPA operations and address technical issues.

1.3. Past Work to Date

Since being formed in 2006, the JPA has prepared a Program-level Environmental Impact Report (PEIR) for the Connector Project. The PEIR was certified by the JPA Board, on March 7, 2012, and a project route was selected, consisting primarily of Kammerer, Grant Line, and White Rock Roads. In 2013, the JPA adopted a Plan of Finance and Project Design Guidelines. In 2014, the Connector was adopted into the General Plan of Sacramento County and the Folsom Plan Area Specific Plan.

In March 2013, the Board adopted the initial Project Design Guidelines with the understanding that there was not a consensus among the member jurisdictions on the proposed Design Exception Policy at that time. In October 2013, the Board approved an update to the PDGs that included the Revised Design Exception Policy (Section 13) and other additional changes requested by the member jurisdictions.

1.4. Purpose of the Project Design Guidelines

These Project Design Guidelines (PDGs) have been prepared to establish one guidance document to enable consistent planning and design of the Connector. The PDGs are a technical tool used for development of a facility to provide clarity in scope, shape, and appurtenant features.

They provide for the development of the Connector such that it has the following characteristics:

- Is uniform in character, appearance, facilities provided, and blends with the communities.
- Is positioned effectively with the surroundings to minimize impacts.
- Provides effectively located access to maximize the efficiency of the corridor.
- Integrates other modes of travel.

- Provides a high Level of Service for traffic operations.
- Provides well-coordinated, efficient traffic operations.
- Implements sustainable solutions.
- Maintains the integrity of the regional transportation systems.
- Allows cost-effective implementation of the project.

1.5. Development of the Project Design Guidelines

The process of developing the initial version of the PDGs included the attention and input from three committees formed to represent key stakeholder focus areas: Technical Advisory Committee, Sustainability Concept Committee, and the Stakeholder Advisory Committee. These committees were organized to focus on their subject matter expertise as follows:

The **Technical Advisory Committee (TAC)** consisted of representatives from each of the five member jurisdictions and other transportation related agencies and planning organizations. This advisory committee provided input on the PDGs with regard to the technical application of engineering policy, planning, and design guidelines.

The **Sustainability Concept Committee (SCC)** consisted of business/industry, agency, program, and advocacy representatives with focused interest and expertise in sustainability. This advisory committee, consisting of individuals with an understanding and expertise in the application and implementation of sustainable solutions, provided input to the JPA through the successful completion of a sustainability assessment process to identify concepts and opportunities to apply to the Connector corridor.

The **Stakeholder Advisory Committee (SAC)** consisted of members from the community, regional organizations, and business or property owners. This advisory committee provided input from the perspective of the eyes, ears, and pulse of the community regarding community elements and broader issues of the Connector corridor.

1.6. Updates to the Project Design Guidelines

The PDGs is also a living document which is a technical tool used for development of a facility to provide clarity in scope, shape, and appurtenant features. The level of detail included is commensurate with the phase of project development. The guidelines are intended to be updated periodically as additional clarification is made and future phases of the project(s) begin. Refinements to the PDGs are vetted through the PDT and then adopted by the JPA Board.

The Connector project is anticipated to be planned, designed, and constructed in phases to accommodate funding conditions, logical termini of facilities, and design and construction constraints. The Connector project delivery and phasing plan will be a function of the Plan of Finance and the General Plan amendment process in coordination with the local jurisdictions.

1.7. Future Phasing of the Connector Project

As stated in the Program EIR of the project, the JPA or individual jurisdictions may move forward with project-level design and environmental review to implement specific project segments. Improvements could take place where design and planning has advanced or where funding will become available. Phasing of the Connector will be planned and coordinated with the local jurisdictions and follow the segmentation schedule in the Plan of Finance.

There may be locations where improvements by a local jurisdiction are necessary on the proposed Connector alignment, or directly adjacent to the corridor, prior to the Connector construction. These local improvements include but are not limited to the following:

- Traffic operations and safety improvements at intersections.
- New or modified property access from individual properties.
- Proposed development projects that will affect Grant Line Road or White Rock Road public right-of-way or create access to/from adjacent development.

Jurisdictions should coordinate review/design of both public and private improvements along the alignment to ensure timely and efficient delivery in accordance with these standards.

These local project improvements shall be coordinated with the JPA and if possible, the improvements should be located to accommodate the Connector and minimize future reconstruction costs.

SECTION 2. GENERAL REQUIREMENTS

2.1. Application of Standards

Standards should be applied to the Connector and the associated improvements, to provide uniformity to the regional transportation network, in the following order:

1. Connector mainline, interchanges, and intersections
2. Local jurisdiction cross streets, frontages, and adjacent street modifications
3. Connectivity to the state highway facilities

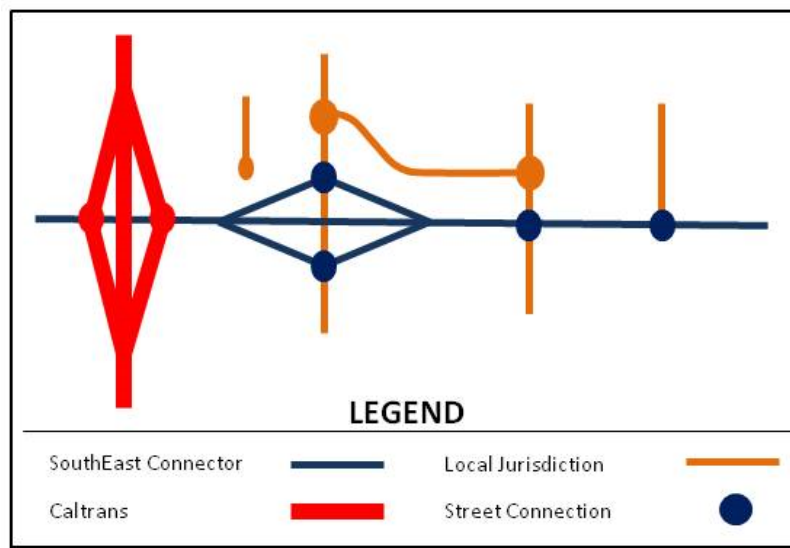


Figure 2-1: Application of Standards per Facility Type

2.2. Exceptions to Standards

The JPA and its member agencies supports the consistent application of the Project Design Guidelines to ensure optimal safety for the traveling public and those who work to construct, operate, and maintain the Connector. Where established criteria cannot be met, a Design Exception will be required. See Section 13.

2.3. Improvements on the Capital SouthEast Connector Mainline

Planning and design of the Connector should be in accordance with American Association of State Highway and Transportation Officials (AASHTO) “A Policy on Geometric Design of Highways and Streets,” most current edition, and these PDGs.

2.4. Improvements within Connector Intersections and Interchanges

Where the Connector intersects local roads the improvements for all facilities within the right-of-way and access control limits at the intersection or interchange should be planned and designed

in accordance with the Sacramento County Improvement Standards, most current edition, within Sacramento County, the El Dorado County Improvement Standards, most current edition, within El Dorado County and these PDGs.

2.5. Improvements on Federal or State Highways

Where the Connector connects to Interstate 5, State Route 16, State Route 99 and United States Route 50, the improvements for all facilities within the right-of-way and access control limits of the intersection or interchange should be planned and designed in accordance with the California Department of Transportation (Caltrans) Highway Design Manual (HDM), most current edition.

2.6. Local Roadway Improvements

Where local roadway improvements are made to accommodate the Connector, including adjacent local roads, frontage roads, or cul-de-sacs, the improvements should be designed in accordance with the improvement standards of the local jurisdiction, most current edition, and these PDGs. Discussion of how and where different standards are interfaced should be discussed between the JPA and local jurisdictions as needed.

2.7. Design Manuals and Criteria

Design manuals and criteria to be used on the Connector are as follows:

- AASHTO Geometric Design of Highways and Streets, 2004
- AASHTO Roadside Design Guide, 3rd Edition 2006 with updated Chapter 6
- AASHTO Guide for Development of Bicycle Facilities, 1999
- County of Sacramento County, Municipal Services Agency, Improvement Standards, dated October 1, 2006
- County of Sacramento Volume 2 Hydrology Standards, December 1996
- City of Elk Grove Improvement Standards, dated June 1999
- City of Elk Grove Rural Road Improvement Policy, dated November 14, 2007
- City of Elk Grove Rural Road Improvement Standards, dated November 14, 2007
- City of Elk Grove Trails Master Plan, dated January 10, 2007
- City of Folsom Design and Procedure Manual and Improvement Standards, dated May 22, 2003
- County of El Dorado Design and Improvement Standards, dated May 18, 1990
- County of El Dorado Standard Plans, 2011 (Draft – pending adoption)
- County of El Dorado Drainage Manual, March 1995
- Federal Highway Administration (FHWA), Equestrian Design Guidebook for Trails, Trailheads and Campgrounds, December 2007
- FHWA Rule 940
- FHWA Systems Engineering Guidebook for ITS

- FHWA Freeway Management and Operations Handbook
- Caltrans Highway Design Manual, Current Edition
- Caltrans Project Development Procedures Manual, Current Edition
- Caltrans Right-of-Way Manual, Current Edition
- Caltrans Traffic Manual, Current Edition
- California Manual of Uniform Traffic Control Devices, Current Edition
- Caltrans Bridge Design Procedures and Design Aids, Current Edition(s)
- Caltrans Highway Performance Monitoring System
- National Association of City Transportation Officials Urban Bikeway Design Guide, Current Edition
- U.S. Department of Transportation's Americans with Disabilities Act (ADA) Standards for Transportation Facilities, 2006 and updated by the Department of Justice's 2010 ADA Standards for Accessible Design
- National ITS Architecture – Version 7.0
- Regional ITS Architecture for Sacramento area
- Institute of Transportation Engineers Manual of Traffic Signal Design

SECTION 3. TERMS, ACRONYMS AND DEFINITIONS

3.1. Acronyms and Abbreviations List

AASHTO	American Association of State Highway and Transportation Officials
ADA	U.S. Department of Transportation’s Americans with Disabilities Act
BRT	bus rapid transit
CA	California
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
Connector	Capital SouthEast Connector
ETW	edge of traveled way
FHWA	Federal Highway Administration
FPEIR	final program environmental impact report
ft.	feet
HDM	Caltrans Highway Design Manual
HMA	hot-mix asphalt
I-5	Interstate 5
in.	inch
ITS	Intelligent Transportation System
JPA	Joint Powers Authority
LED	light-emitting diode
MPH	miles per hour
MUTCD	California Manual of Uniform Traffic Control Devices
NACTO	National Association of City Transportation Officials
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System

PCCP	Portland cement concrete pavement
PDPM	Caltrans Project Development Procedures Manual
PUPF	Public Utilities and Public Facilities
R	radius
ROW	right-of-way
R-value	resistance values
SAC	Stakeholder Advisory Committee
SCC	Sustainability Concept Committee
SCIS	Sacramento County Improvement Standards
Se	superelevation (Emax = maximum superelevation)
SR 99	State Route 99
SSD	stopping sight distance
SSHCP	South Sacramento Habitat Conservation Plan
STAA	Surface Transportation Assistance Act
TAC	Technical Advisory Committee
UPRR	Union Pacific Rail Road
US 50	United States Highway 50
VC	vertical curve

3.2. Definitions

“Applicant” means the person or persons submitting the petition for vacation. Applicant shall be a resident or property holder within the Connector JPA system including the State of California, any of its subdivisions, or an agency of the Federal government.

“Appraisal” means the opinion of fair market value for Public right-of-way in accordance with the Uniform Standards of Professional Appraisal Practice prepared by an Appraiser who is licensed and certified by the State of California.

“Board” is the Board of the Capital Southeast Connector Joint Power Authority.

“Capital Southeast Connector Joint Power Authority” or “JPA” is the Joint Powers Authority comprised of representatives from cities of Elk Grove, Folsom, and Rancho Cordova, as well as El Dorado and Sacramento Counties.

“Determination of Value” means the opinion of fair market value for Public right-of-way prepared in accordance with the Uniform Standards of Professional Appraisal Practice by trained JPA staff or their consultant(s).

“Director” is the duly appointed and acting Executive Director of the Capital Southeast Connector JPA.

“Easement Deed” means the transfer of less than fee simple title to real property. Easement Deeds may be permanent or temporary depending on Project requirements. It also includes Aerial Easements.

“Eminent Domain” is the power to take private property for public use by an authorized municipality to exercise functions of public character, following the payment of just compensation to the owner of that property. A variety of property rights are subject to eminent domain, such as air, water, and land rights. The government takes private property through condemnation proceedings. Throughout these proceedings, the property owner has the right-of-due process.

“Grant Deed” means the transfer of all rights and control over real property. It is used to acquire fee simple title to real property.

“Goodwill Loss” means an impairment or loss of benefits that accrue to a business as a result of its location, reputation for dependability, skill or quality, and any other circumstances resulting in probable retention of old or acquisition of new patronage.

“Person” means every natural person, firm fiduciary, partnership, association, corporation, trustee, receiver or assignee for the benefit of creditors.

“Public right-of-way” means a Connector, right-of-way, street, or alley within cities of Elk Grove, Folsom, and Rancho Cordova, as well as El Dorado and Sacramento Counties open to the public (whether or not constructed) and along the defined corridor of the Capital Southeast Connector. A public right-of-way includes a right-of-way that was originally intended for development as a Connector and was accepted on behalf of the public by deed of purchase, fee simple title, authorized easement, eminent domain, plat, or prescriptive use. Public right-of-way shall include public easements granted to JPA for utility, drainage, access, and other purposes.

“Quitclaim Deed” means the transfer of any right over real property.

“Relocatee” means an individual that is relocated to a new location.

“Severance Damage” means that amount of damage suffered by the remainder of the property after a portion of the larger parcel (parent property) has been taken for a public purpose.

“Staff” means the designated agents, employees, and consultants of the JPA.

“Uneconomic Remnants” means a parcel of real property in which the owner is left with an interest after the partial acquisition of the owner’s property, and in which the acquiring agency has determined has little or no value or utility to the owner.” (49 CFR 24.2 (w)).

SECTION 4. SEGMENT INTENT AND DESCRIPTIONS

The context of a Connector is a critical factor when making fundamental design decisions such as its typical cross section and when selecting the design elements and aesthetic features. Designing a Connector that is sensitive to, and respectful of, the surrounding context is critical for project success in the minds of the JPA and our stakeholders.

A “one-size-fits-all” design philosophy is not JPA policy. Designers need to be aware of and sensitive to land use, community context and the associated user needs of the facility. In some instances, the design criteria and standards in this manual are based on the land use contexts in which the Connector is located, for instance: suburban commercial/residential areas, small rural communities, and rural corridors. This approach ensures the standards are flexible, and the approach allows and encourages methods to minimize impacts on scenic, historic, archaeological, environmental, and other important resources.

4.1. Segment A1: I-5/Hood-Franklin Rd Interchange to Bruceville Road

Facility Type: Expressway

Intent: Provide a high-speed roadway with access control, limited points of access and a railroad grade separation.

Considerations: Multiple alignments are considered but all alignments will traverse farmlands and rural properties near the rural community of Franklin and are entirely within unincorporated Sacramento County. New residential developments exist along Willard Parkway.

4.2. Segment A2: Bruceville Rd to State Route 99

Facility Type: Thoroughfare

Intent: Provide an urban arterial street that accommodates planned development, agricultural operations, and yet limits access and cross street connections.

Considerations: Multiple alignments are considered. Existing Kammerer Road is the dividing boundary between the City of Elk Grove and Sacramento County. Between Lent Ranch Parkway and State Route 99 Kammerer Road is fully constructed to accommodate an 8-lane facility although it is currently striped for 6-lanes.

4.3. Segment B: State Route 99 to Bond Rd

Facility Type: Thoroughfare

Intent: Provide an urban arterial street that accommodates planned development, agricultural operations, and yet limits access and cross street connections.

Considerations: Alignment will remain on existing Grant Line Rd. Existing Grant Line Road is the dividing boundary between the City of Elk Grove and Sacramento County. Between State Route 99 and East Stockton Boulevard Grant Line Road is fully constructed to accommodate an 8-lane facility although it is currently striped for 6-lanes. A 4-lane widening and grade separation project is in construction now from East Stockton Road to new Waterman Road.

4.4. Segment C: Bond Road to Calvine Road (Sheldon Special Section)

Facility Type: “Special Section” as defined in Program EIR – To Be Determined

Intent: Provide an arterial roadway that is consistent with the rural setting of the existing developed street network and maintains identified cross street connections.

Considerations: Grant Line Road currently serves as a rural roadway through Sheldon and passes through its business district. The roadway is on the existing alignment and currently provides access to closely spaced residential and commercial properties through individual driveways and local road intersections.

4.5. Segment D: Calvine Road to Sacramento/El Dorado County Line

Facility Type: Expressway

Intent: Provide a high-speed roadway with access control and grade-separated interchanges or intersections.

Considerations: The alignment is on or near the existing roadway and currently runs along rural properties and properties planned for development. Where the existing roadway contains horizontal and vertical curves that are not appropriate for Expressway design standards a new roadway alignment will be constructed as close to the existing alignment as possible. Numerous habitat conservation areas and wetland preserves exist. Near the County line the natural terrain becomes rolling hills.

4.6. Segment E: Sacramento/El Dorado County Line to US 50

Facility Type: Thoroughfare

Intent: Provide an urban arterial street that accommodates planned development yet limits access and cross street connections.

Consideration: White Rock Road currently serves as an urban arterial through El Dorado Hills. The alignment is developed as a limited-access facility over the majority of its length. Local access is through the connecting street intersections. Residential and commercial driveway accesses are along its length. It will also provide access to US 50 through the US 50/Silva Valley Parkway interchange which is currently under construction.

SECTION 5. ROADWAY DESIGN

Planning and design of the Connector should be in accordance with AASHTO Green Book Chapter 2, “Design Controls,” Chapter 3, “Design Elements,” Chapter 4, “Cross Section Elements”. Planning and design of the cross streets, local roads, and frontages should be planned and designed in accordance with the local jurisdiction standards.

While a consistent cross section is desired, the cross sections may vary in cases where there are right-of-way constraints, portions of roadway have already been constructed, or portions of a project have already been approved.

The Connector is generally described as two different types of roadways: Expressway and Thoroughfare. In addition, a special section has been designated in the Sheldon area (Segment C). For these guidelines, the facility type is further defined as follows:

5.1. Expressway

Expressway segments are planned to be a high-speed, fully divided, access controlled, four-to-six lane roadway with grade-separated interchanges or intersections. Planning and design of the Expressway should be in accordance with AASHTO Chapter 7 for a high-speed, divided, urban arterial.

5.1.1. Design Controls

- Segment A, terrain conditions = flat.
- Segment D, south of Grant Line Rd/White Rock Rd, terrain conditions = flat.
- Segment D, north of Grant Line Rd/White Rock Road, terrain conditions = rolling hills.
- Design speed = 65 miles per hour (MPH).
- Posted speed = 55 MPH.
- Design vehicle on the Connector and cross streets intersections = STAA Design Vehicle.

5.1.2. Design Elements

- A standard crown cross section of -2 percent (no Se) with sufficient curve radii to comply with design standards is preferred.
- Minimum horizontal radius (R) = 2,000 ft.; 3,000 ft. preferred.
- Superelevation (Se) = use Method 5.
- Se, E max = 6 percent, AASHTO Exhibit 3-26.
- Standard cross slope, lanes and shoulders = 2 percent.
- Cross slopes on existing streets = 1.5 percent minimum to 3 percent maximum.
- Minimum stopping sight distance (SSD) = 645 feet (ft.).
- Vertical grades, maximum grade = 5 percent; 4 percent preferred.
- Vertical grades, minimum grade = 0.35 percent; 0.5 percent preferred.

- Vertical curves (VC) = Crest and sag VC lengths should be based on minimum K-values for the design speed.
- VC length, mainline = 200 ft. minimum.
- Vertical alignment, maximum grade break, Connector = 0.5 percent.
- Construction alignments should be set at the centerline of the ultimate roadway for plan and profile.

5.1.3. Cross Section Elements

- Connector lane requirements = four to six lanes; subject to traffic studies.
- Lane width, mainline and auxiliary = 12 ft.
- Lane width, high-occupancy vehicle = 12 ft. (6-lane Expressway only).
- Lane width, left turn = 12 ft. (intersection only).
- Lane width, right turn = 10 ft. (intersection only).
- Shoulder width, outside = 10 ft.
- Shoulder width at right turn lane, outside = 4 ft. (intersection only).
- Shoulder widths, inside = 5 ft. (4-lane Expressway); 10 ft. (6-lane Expressway).
- Median = fully divided, graded (4-lane Expressway); barrier separated (6-lane Expressway).
- Median width, 4-lane = 46 ft.
- Median width, 6-lane = 22 ft.
- Median slope = 6:1 or flatter.
- Graded shoulder width between edge of shoulder and hinge point, outside and inside = minimum 3 ft. at -5 percent.
- Roadway side slopes = 6:1 or flatter preferred, 4:1 or flatter (fill condition), maximum 2:1 (cut condition and structure approaches).
- Horizontal clear recovery zone, mainline = Design in accordance with AASHTO Roadside Design Guide; 30 ft. preferred.
- Vertical clearance = 16 ft. 6 in. minimum over the traveled way of the Connector and cross streets.
- Vertical clearances = 16 ft. 6 in. over Caltrans facilities and 24 ft. over UPRR facilities. Clearance requirements should be confirmed for each crossing location and for minor structures.
- A Class I multi-use path should be provided within the right-of-way. In high-demand areas, a path on each side of the expressway may be required. A minimum separation of 30 ft. (or a minimum distance equal to or greater than the width of the clear recovery zone) from the nearest edge of traveled way should be provided, where feasible, or barrier separation provided.

The following figures graphically illustrate the cross section elements of the expressway:

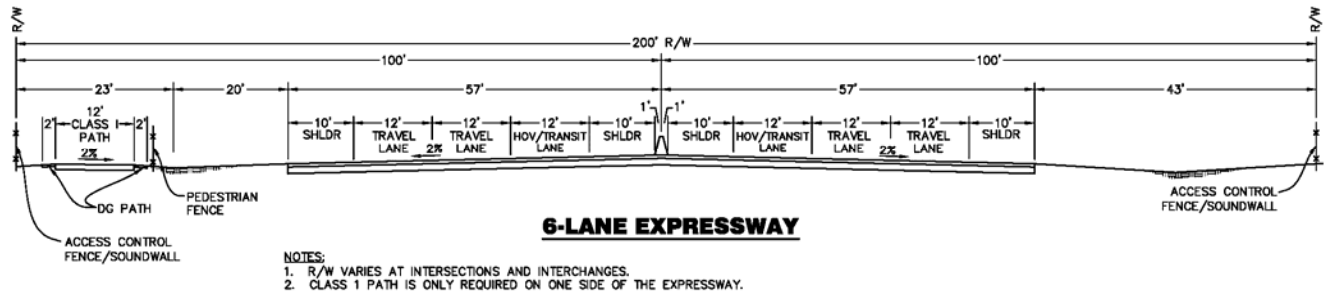


Figure 5-1 – Six Lane Expressway

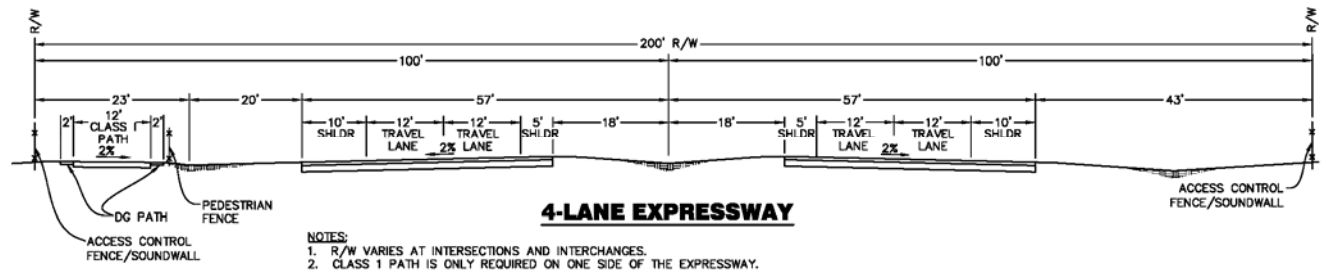


Figure 5-2 – Four Lane Expressway

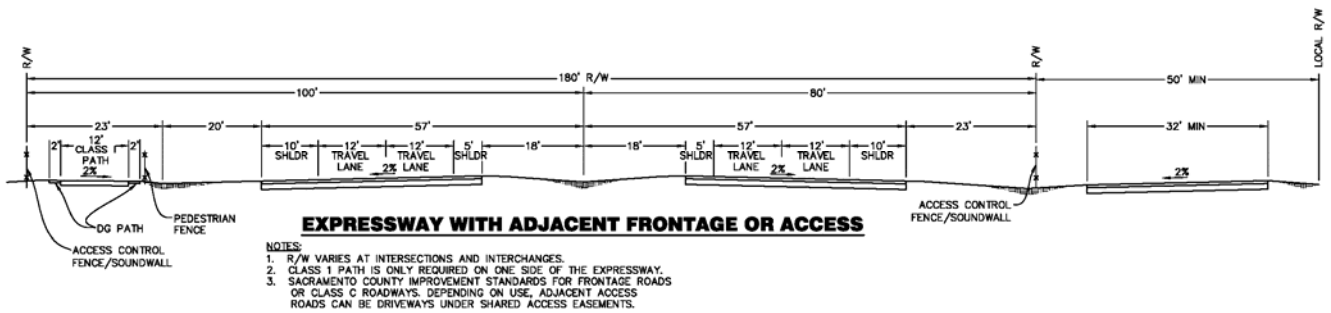


Figure 5-3 – Expressway with Adjacent Frontage or Access

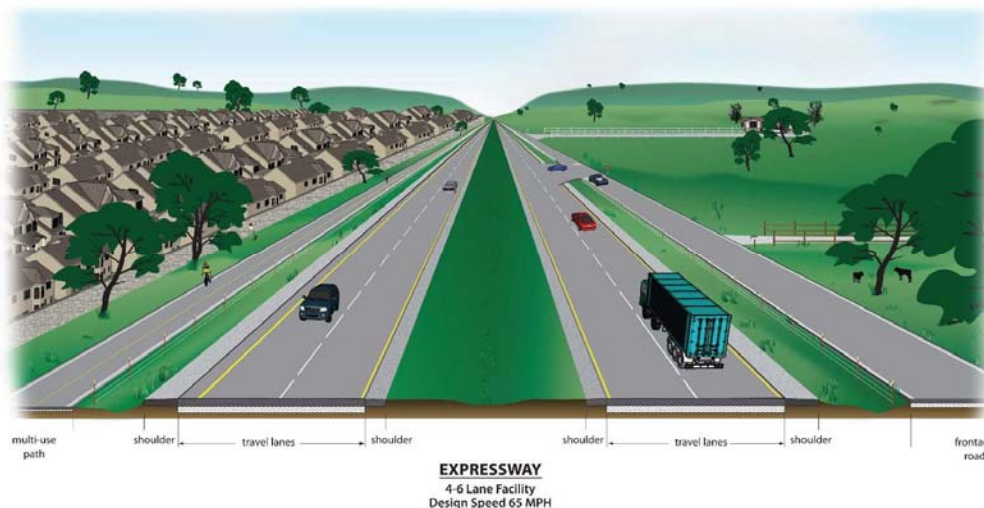


Figure 5-4 – Four Lane Expressway Graphic (shown with Frontage Road)

5.1.4. Other Considerations

- Where possible, partially or fully depress the Connector at interchange locations.
- In areas of sensitive habitat, position the Connector alignment horizontally and vertically to protect/preserve wildlife passage.
- Provide grade separation structures across railroad crossings where they have been identified to remain in service and where the California Public Utilities Commission requires the facility to be grade separated.
- All roadway treatments within the clear zone are to conform to the roadside safety provisions in the AASHTO Roadside Design Guide.
- Access control barriers should be provided at the right-of-way and at the Class I multi-use path. Barriers include fencing, sound walls, or other approved types.
- Consider retaining walls to reduce right-of-way width requirements from excessive side slopes.
- Interchanges, signalized intersections, and limited-access intersections are allowed on expressways at identified cross street locations.
- Direct connection of driveways and local roads, not identified as a cross street in Table 16-13 in the Appendix, are not allowed.

5.1.5. Access Control

- The Connector is an Access Controlled facility. Control of access is achieved by acquiring rights of access to the Connector from abutting property owners and by permitting ingress and egress only at locations determined by the JPA and member jurisdictions.
- On the Connector, direct access from private property to the Expressway is prohibited without exception. Abutting ownerships are served by frontage roads or streets connected to interchanges.
- The number of access control openings on the Expressway shall be held to a minimum. Parcels which have access to another public road or street as well as frontage on the expressway are not allowed access to the expressway.
- Access rights shall be acquired along the Expressway and intersection/interchange ramps to their junction with the nearest public road. At each junction, access control shall extend 100 feet beyond the end of the curb return or as far as necessary to ensure that entry onto the facility does not impair operational characteristics.
- The minimum distance (curb return to curb return) between ramp intersections and local road intersections must be 500 feet, 1,000' preferred.
- For proper control of acquired access rights, fencing or other approved barriers shall be installed.

- The following diagrams are typical access control configurations along the expressway. These diagrams are from the Caltrans Highway Design Manual, Chapter 500.

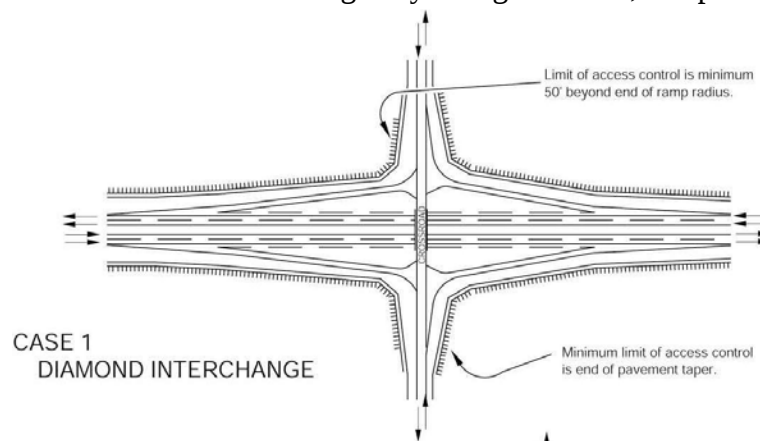


Figure 5-5 – Typical Access Control at a Tight Diamond Interchange

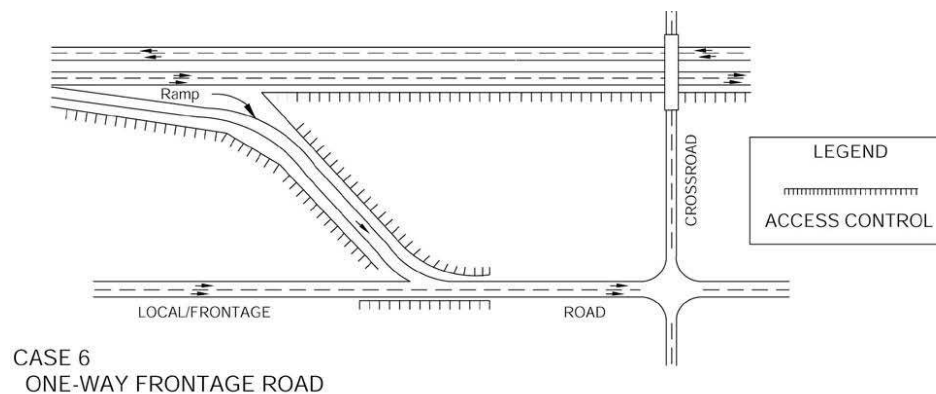


Figure 5-6 – Typical Access Control at a Ramp to a Frontage Road

5.2. Thoroughfare

Thoroughfare segments are planned to be a moderate-speed, partially divided, access limited, four-to-six lane roadway with at-grade intersections. Planning and design of the Thoroughfare should be in accordance with Sacramento County Improvement Standards (SCIS) and El Dorado County Improvement Standards.

5.2.1. Design Controls

- Segment B terrain conditions = flat.
- Segment E terrain conditions = rolling hills.
- Design speed = 50 MPH
- Design vehicle on the Connector and major arterial cross streets intersections = STAA Design Vehicle.

5.2.2. Design Elements

- Minimum SSD = 550 ft.
- A standard crown cross section of -2 percent (no Se) with sufficient curve radii to comply with design standards is preferred.
- Minimum horizontal radius (R) = 2,000 ft.; 3,000 ft. preferred.
- Superelevation (Se) = use Method 5.
- Se, E max = 4 percent, AASHTO Exhibit 3-25.
- Standard cross slope, lanes and shoulders = 2 percent.
- Cross slopes on existing streets = 1.5 percent minimum to 3 percent maximum.
- Vertical grades, maximum grade = 6 percent; 5 percent preferred.
- Vertical grades, minimum grade = 0.35 percent; 0.5 percent preferred.
- Vertical curves (VC) = Crest and sag VC lengths should be based on minimum K-values for the design speed.
- VC length, mainline = 100 ft. minimum.
- Vertical alignment, maximum grade break, Connector = 0.5 percent.
- Construction alignments should be set at the centerline of the ultimate roadway for plan and profile, and Se

5.2.3. Cross Section Elements

- Connector lane requirements = four to six lanes; subject to traffic studies.
- Lane widths, mainline = 14 ft./12 ft./11 ft. (see SCIS for 96 ft. thoroughfare and El Dorado County standards).
- Lane widths, left turn = 10 ft./14 ft. if desired by the local agency
- Lane widths, right turn = 10 ft./12 ft. if desired by the local agency
- Shoulder widths, outside = 5 ft., ETW to lip of curb and gutter, for Class II bicycle lane.
- Shoulder widths, inside = 0 ft. (at face of median curb).
- Median = 6 in. raised curb median with landscape or hardscape surface treatment. 8" curb may be considered for future overlay. Median width = 12 ft. minimum on mainline in Sacramento County, 16 ft. minimum in El Dorado County, and 2 ft. at intersections.
- Median openings = for left turns at signalized intersections and at limited-access intersections for left-in movements.
- Roadway side slopes = 6:1 or flatter preferred, 4:1 or flatter (fill condition), maximum 2:1 (cut condition and structure approaches).
- Curb, gutter, and sidewalk = Provide Type 2 curb and gutter (SCIS) with a separated 10 ft. Class I multi-use path and 8 ft. landscape buffer on both sides of the roadway.
- Horizontal clear recovery zone, mainline = Design in accordance with AASHTO Roadside Design Guide for urban conditions with barrier curb protection.

- Vertical clearance = 16 ft. 6 in. minimum over the traveled way of the Connector and cross streets.
- Vertical clearances = 16 ft. 6 in. over Caltrans facilities and 24 ft. over UPRR facilities. Clearance requirements should be confirmed for each crossing location and for minor structures.

The following figures graphically illustrate the cross section elements of the thoroughfare:

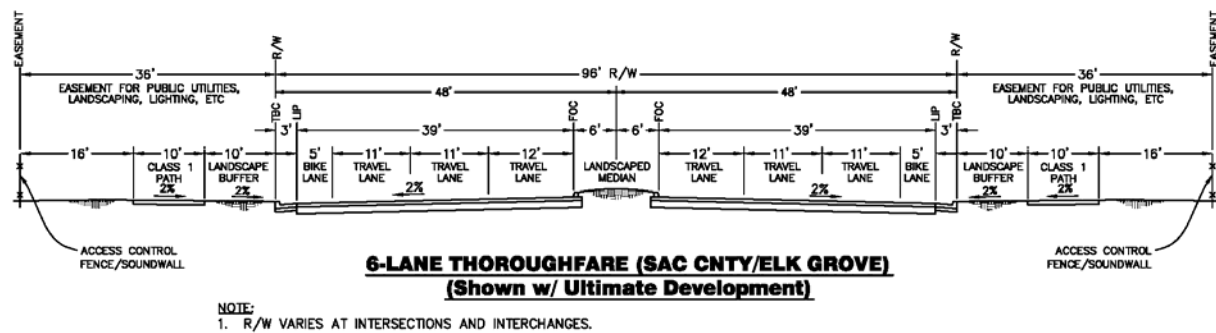


Figure 5-7 – Six Lane Thoroughfare in Sac Cnty/Elk Grove

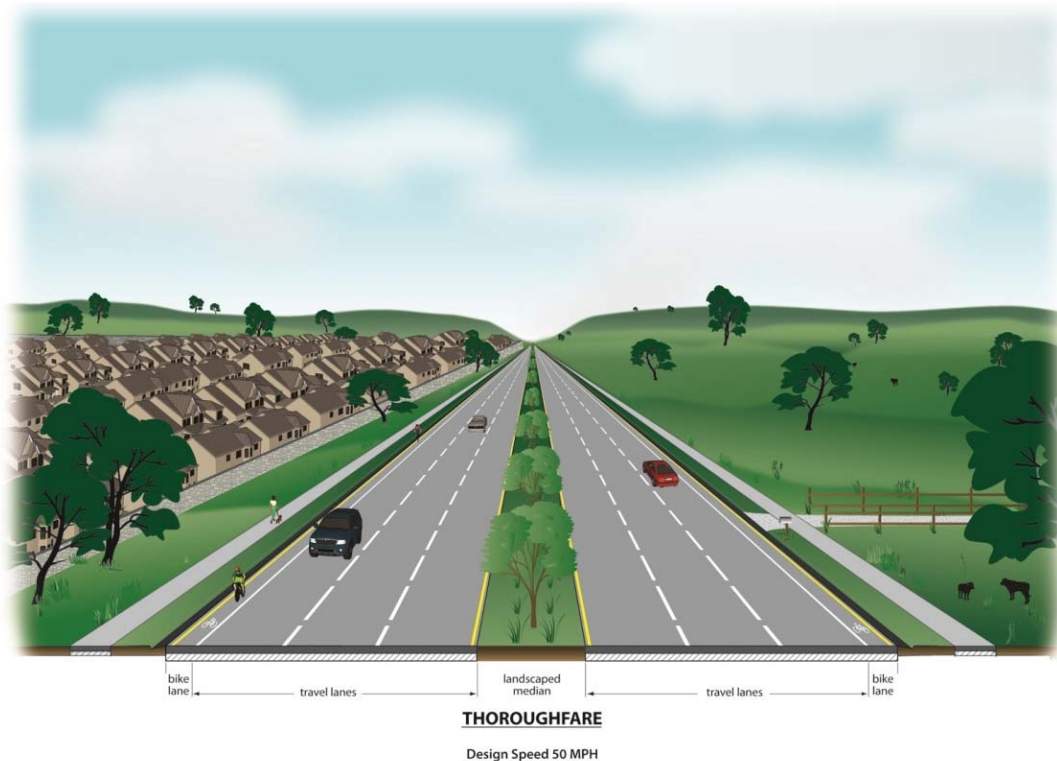


Figure 5-8 – Six Lane Thoroughfare Graphic

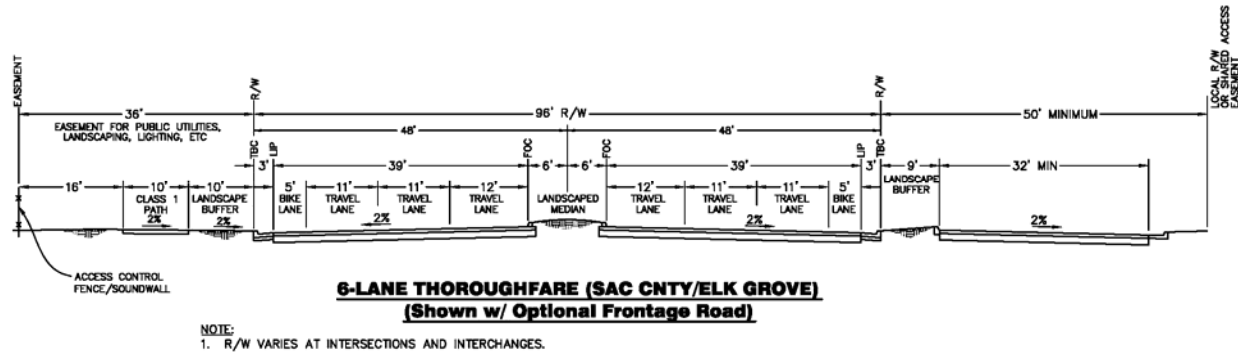


Figure 5-9 – Six Lane Thoroughfare in Sac Cnty/Elk Grove with Adjacent Frontage/Access Rd

As noted above, within El Dorado County the cross section for the thoroughfare is slightly different. The following figures graphically illustrate the cross section elements of the thoroughfare in El Dorado County:

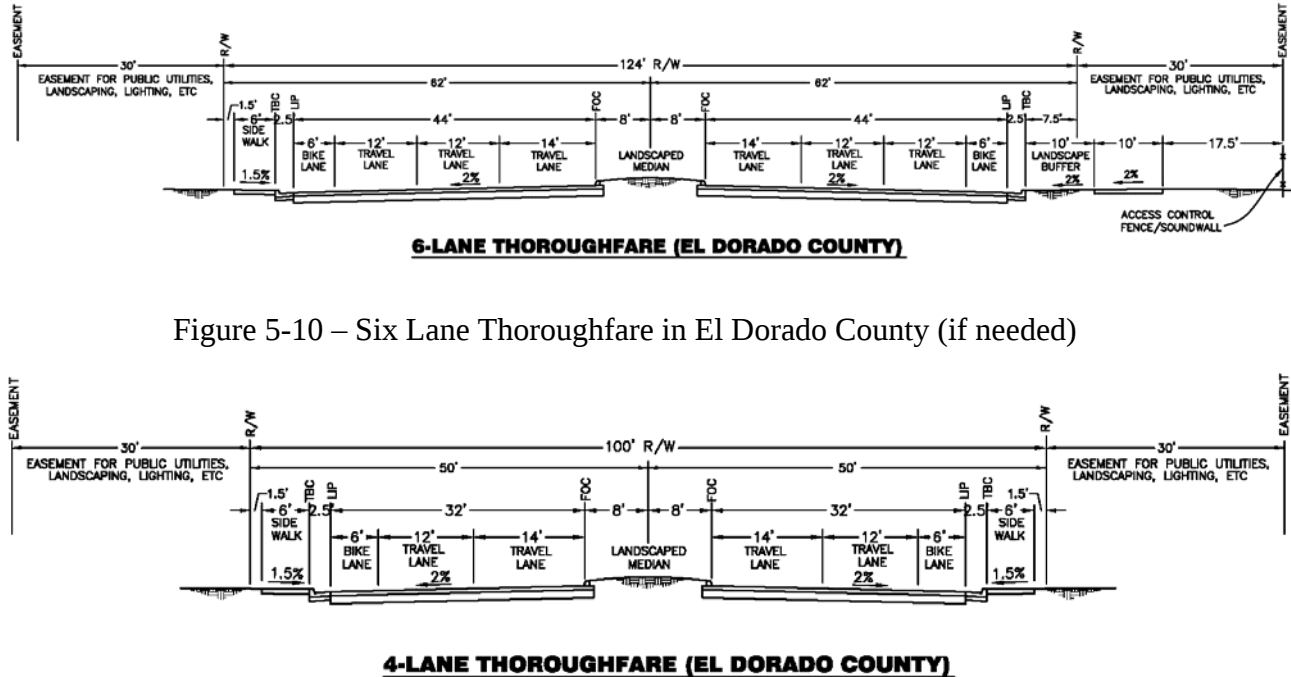


Figure 5-10 – Six Lane Thoroughfare in El Dorado County (if needed)

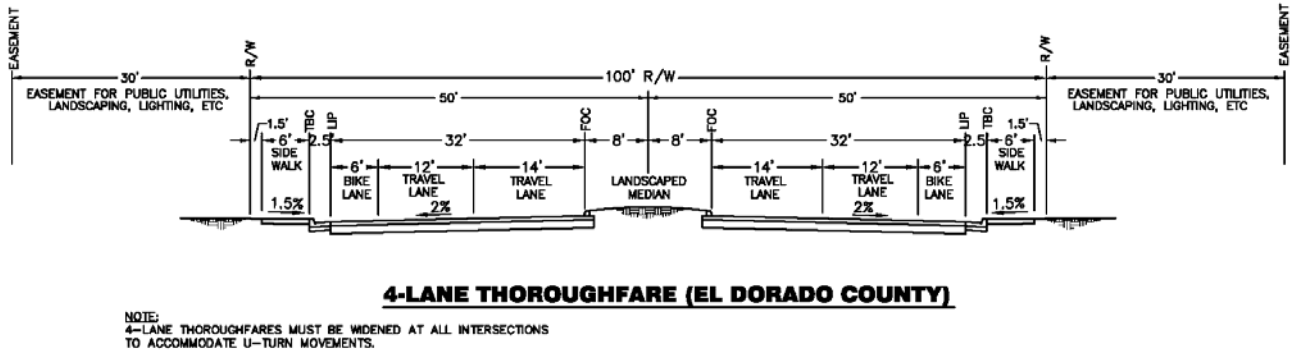


Figure 5-11 – Four Lane Thoroughfare in El Dorado County

5.2.4. Other Considerations

- Connector horizontal and vertical alignments should follow the existing alignments to the greatest extent practical to minimize impacts to the surrounding properties.
- In areas of sensitive habitat, position the Connector alignment horizontally and vertically to protect/preserve wildlife passage.
- Equestrian paths may be required in areas adjacent to Segment C. See Segment C and equestrian criteria in these guidelines.
- Provide grade separation structures across railroad crossings where they have been identified to remain in service.
- All roadway treatments within the clear zone should conform to the roadside safety provisions in the AASHTO Roadside Design Guide, if applicable.
- Access control barriers should be provided at the ROW where necessary. Barriers include fencing, sound walls, or other approved types.
- Consider retaining walls to reduce ROW width requirements from excessive side slopes.
- Signalized intersections for identified cross streets have 1 mile preferred spacing, except in areas with existing cross streets where 0.5 mile minimum spacing is allowed.
- Limited-access intersections, including right-in/right-out and left-in/right-out connections, should be allowed where identified in Table 16-13 in the Appendix. Connections should meet the minimum intersection spacing requirements wherever possible.
- Other local road connections, not identified as cross streets in Table 16-13 in the Appendix, may be allowed as a phased condition if the relocation creates excessive impacts to the adjacent properties. Connections should be consolidated to the greatest extent practical.
- Direct connection of driveways may be allowed subject to the intersection spacing requirements. Individual driveways where allowed should connect no closer than 750 ft. to the signalized intersection and should be right-in/right-out only.

5.2.5. Access Control

With the exception of extensive frontages, access control openings to the Thoroughfare are limited to one opening per parcel. Wherever possible, one opening should serve two or more parcels. In the case of a large frontage under one ownership, the cost of limiting access to one opening may be prohibitive, or the property may be divided by a natural barrier such as a stream or ridge, making it necessary to provide an additional opening. In the latter case, it may be preferable to connect the physically separated portions with a low-cost structure or road rather than permit two openings.

5.3. Special Sheldon Segment

The Sheldon Segment will be planned to provide a partially divided facility, with signalized intersections, limited-access street connections, driveway accesses without cross median access, and frontage improvements. This Segment will be designed in accordance with Sacramento County Improvement Standards or equivalent, Elk Grove Rural Road Improvement Standards, and AASHTO Chapter 7 for an urban arterial.

5.3.1. Design Controls

- Segment C, terrain conditions = flat.
- Design speed = 50 MPH.
- Posted speed - 40 MPH.
- Design vehicle on the Connector and cross streets intersections = STAA Design Vehicle.
- Design vehicle on local streets, frontage roads, and driveway connections – Sheldon Area – to be determined = WB40 minimum (i.e., Design Vehicle with 40 ft. wheel base).

5.3.2. Design Elements

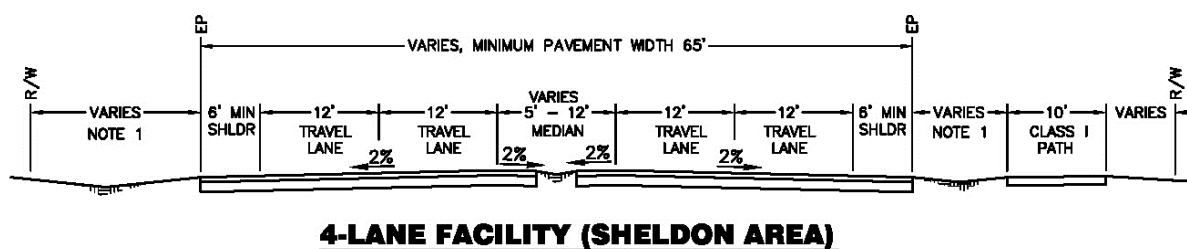
- Minimum SSD = 425 ft.
- Minimum horizontal R = 800 ft.; 2,000 ft. preferred.
- Se = use Method 5.
- Se, E max = 4 percent, AASHTO Exhibit 3-25.
- Standard cross slope, lanes, and shoulders = 2 percent.
- Cross slopes on existing streets = 1.5 percent minimum to 3 percent maximum.
- Vertical grades, maximum grade = 6 percent; 5 percent preferred.
- Vertical grades, minimum grade = 0.35 percent; 0.5 percent preferred, if curb and gutter are planned.
- VCs – Crest and sag VC lengths should be based on minimum K-values for the design speed.
- VC length, mainline = 100 ft. minimum.
- Vertical alignment, maximum grade break, Connector = 0.5 percent.
- Construction alignments should be set at the centerline of the ultimate roadway for plan, profile, and Se.

5.3.3. Cross Section Elements

- Connector lane requirements = four or five lanes; subject to traffic studies.
- Lane widths, mainline = 12 ft.
- Lane widths, left turn = 10 ft.
- Lane widths, right turn = 10 ft.
- Shoulder widths, outside = 6 ft., for Class III bicycle route.

- Shoulder widths, inside = 0 ft. (at face of median curb).
- Median = minimum 6-in. raised curb median (8-in. may be considered for future overlay) with landscaped or paved surface treatment. Median curb can be eliminated where sufficient median separation is provided.
- Median width = 12 ft. preferred (5 ft. minimum) on mainline, 2 ft. at intersections.
- Median openings = for left turns at signalized intersections and at limited-access intersections for left-in movements.
- Graded shoulder width between edge of shoulder and hinge point, minimum 3 ft. at -5 percent.
- Roadway side slopes = 6:1 or flatter preferred, 4:1 or flatter (fill condition), maximum 2:1 (cut condition and structure approaches).
- Horizontal clear recovery zone, mainline = Design in accordance with the AASHTO Roadside Design Guide.
- Vertical clearance = 16 ft. 6 in. minimum over the traveled way of the Connector and cross streets.
- Vertical clearances = 24 ft. over railroad facilities. Clearance requirements should be confirmed for each crossing location and for minor structures.
- Equestrian Trail = Design in accordance with the Elk Grove Trails Master Plan.
- Class I multi-use path – Design in accordance with the Elk Grove Trails Master Plan.

The following figures graphically illustrate the cross section elements of the thoroughfare in the Sheldon Area:



NOTES:

1. WIDTH VARIABLE DEPENDANT UPON HYDRAULIC CONSIDERATIONS, TERRAIN AND RIGHT OF WAY CONSIDERATIONS. ACCEL/DECEL LANES AND FRONTAGE ROADS MAY BE REQUIRED AT CERTAIN LOCATIONS
2. OFF-CORRIDOR MULTI-USE PATH WILL BE CONSIDERED WHEN APPLICABLE.

Figure 5-12 – Four Lane Rural Thoroughfare in Sheldon

5.3.4. Other Considerations

- Connector horizontal and vertical alignments should follow the existing alignments to the greatest extent practical to minimize impacts to the surrounding properties.

- A standard crown cross section of -2 percent (no Se) with sufficient curve radii to comply with design standards is preferred.
- In areas of sensitive habitat, position the Connector alignment horizontally and vertically to protect/preserve wildlife passage.
- Where the multi-use path or equestrian trail is contiguous with the roadway, a minimum separation distance equal to or greater than the width of the clear recovery zone from nearest ETW should be provided, or barrier curb installed.
- Provide grade separation structures across railroad crossings where they have been identified to remain in service.
- Where curb and gutter is not required, drainage swales should be used along the outside edge of roadways.
- All roadway treatments within the clear zone are to conform to the roadside safety provisions in the AASHTO Roadside Design Guide, if applicable.
- Access control barriers should be provided at the ROW where necessary. Barriers include fencing, sound walls, or other approved types.
- Limited-access intersections, including right-in/right-out and left-in/right-out connections, should be allowed where identified in Table 16-13 in the Appendix. Connections should meet the minimum intersection spacing requirements wherever possible.
- Other local road connections, not identified as cross streets in Table 16-13 in the Appendix, may be allowed as a phased condition or if the relocation creates excessive impacts to the adjacent properties. Connections should be consolidated to the greatest extent practical.
- Direct connection of driveways should be consolidated to the greatest extent practical. Frontage and local access road connections to the adjacent street system may be used where necessary, but must be coordinated between the JPA, the City of Elk Grove, and adjacent property owners.
- Individual driveways near signalized intersections should be located as far away from the signal as practical.

5.3.5. Access Control

With the exception of extensive frontages, access control openings to the Special Sheldon Segment are limited to one opening per parcel. Wherever practical, one opening should serve two or more parcels. In the case of a large frontage under one ownership, the cost of limiting access to one opening may be prohibitive, or the property may be divided by a natural barrier such as a stream or ridge, making it necessary to provide an additional opening. In the latter case, it may be preferable to connect the physically separated portions with a low-cost structure or road rather than permit two openings.

5.4. Frontage Roads

Public or Private frontage roads are new roadways located generally along the Connector right-of-way and are used to consolidate existing street and driveway access, and do not currently exist as part of the local street network. A facility type should be identified in conjunction with the local jurisdiction that meets the project need and maintains continuity with the surrounding street network.

5.4.1. Design Controls

- Design and posted speed = to be determined during the project level environmental documentation phase.

5.4.2. Design Elements

- Vertical grades, maximum grade = 6 percent; 5 percent preferred.
- Vertical grades, minimum grade = 0.35 percent; 0.5 percent preferred.
- VCs – Crest and sag VC lengths should be based on minimum K-values for the design speed.
- VC length = 50 ft. minimum.
- Vertical alignment, maximum grade break = 2 percent.

5.4.3. Cross Section Elements

- Lane requirements = subject to adjacent street system and traffic studies.
- Roadway side slopes = 6:1 or flatter preferred, 4:1 or flatter (fill condition), maximum 2:1 (cut condition and structure approaches).
- New frontage road right-of-way width = 50 ft. minimum.

5.4.4. Other Considerations

- A half street widening may be used in accordance with the local standards.
- Proposed street improvements that are part of a planned development may be impacted by the Connector design. Where this occurs, the Connector will be designed consistent with the requirements of the Project Design Guidelines and to accommodate the revisions to the planned development. Modifications required to the planned development to accommodate the Connector will remain the responsibility of the planned development area.

5.5. Cross Street Connections

Interchanges and intersections should be provided at the locations listed in Table 16-13, “Assumed Travel Lanes and Access to Connector for Proposed Project,” in the Appendix. Any

new or alternative points of access would be subject to the design exception process as set forth in the Policies section of these guidelines as well as further environmental review and public hearings.

In general, interchanges and intersections are limited to the following:

- 1 mile minimum spacing on the expressways
- 1 mile preferred, 0.5 mile minimum spacing on the thoroughfares
- 0.5 mile minimum spacing on the Special Section Sheldon Area

5.6. Interchanges

The preferred intersection connection type for expressways is the interchange, as follows:

- Interchanges should be designed at the locations identified in Table 16-13.
- Caltrans HDM, Chapter 500, should be the basis of design for the interchanges and ramps.
- The interchange type selected should be determined through detailed analysis of the applicability of the interchange to the project conditions, including standard interchange design requirements, traffic demand, existing and future site conditions, and project phasing. Uniformity in the types of interchanges included along the Connector should also be considered.
- The preferred interchange type should be a Type L-1 “tight diamond” configuration, subject to confirmation of its applicability. Other configurations will be considered when traffic operations or special circumstances dictate.

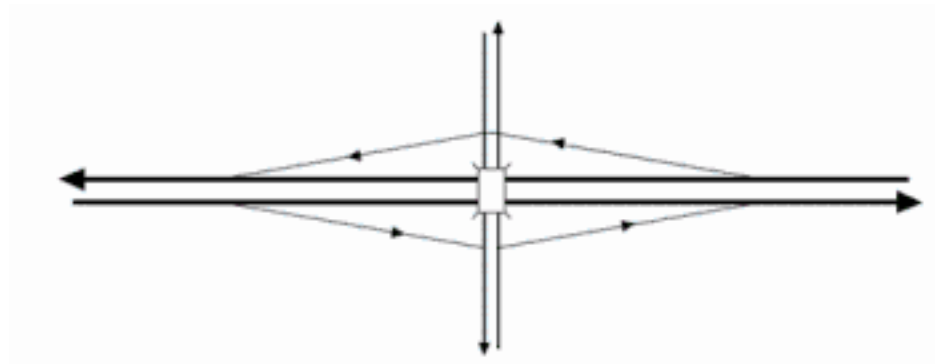


Figure 5-13 – Standard Type L-1 (Tight Diamond) Interchange

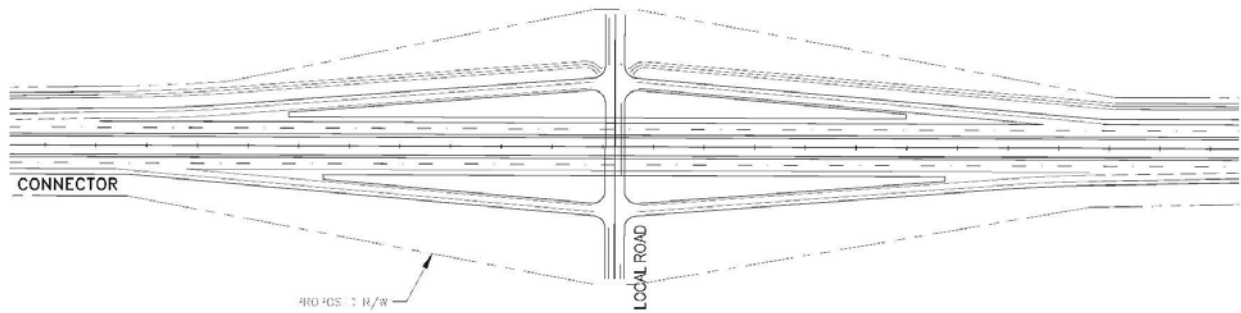


Figure 5-14 – Diamond Interchange Typical Layout

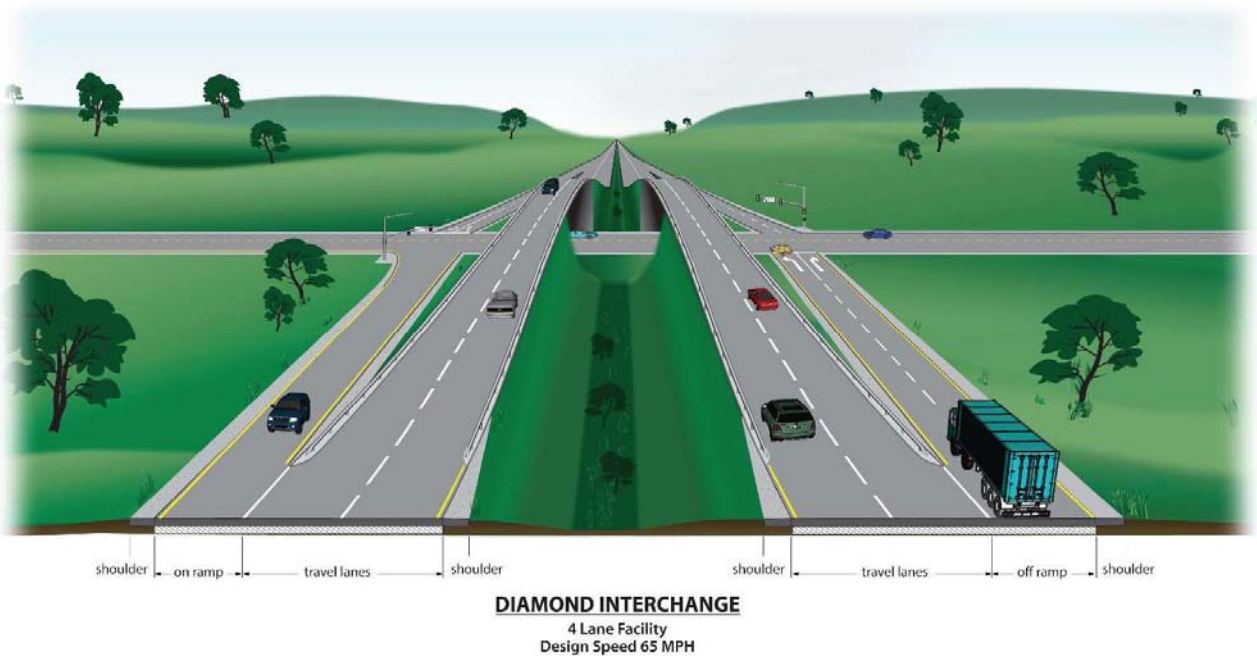


Figure 5-15 – Tight Diamond Interchange Graphic (shown with Connector mainline above cross street – options with cross street above Connector are possible as well)

- Where access beyond the Connector is not desirable because of environmental conditions or to limit development, or because a future roadway extension is not identified in the Sacramento County General Plan, a Tee interchange-type (limited access directional interchange) connection should be considered.

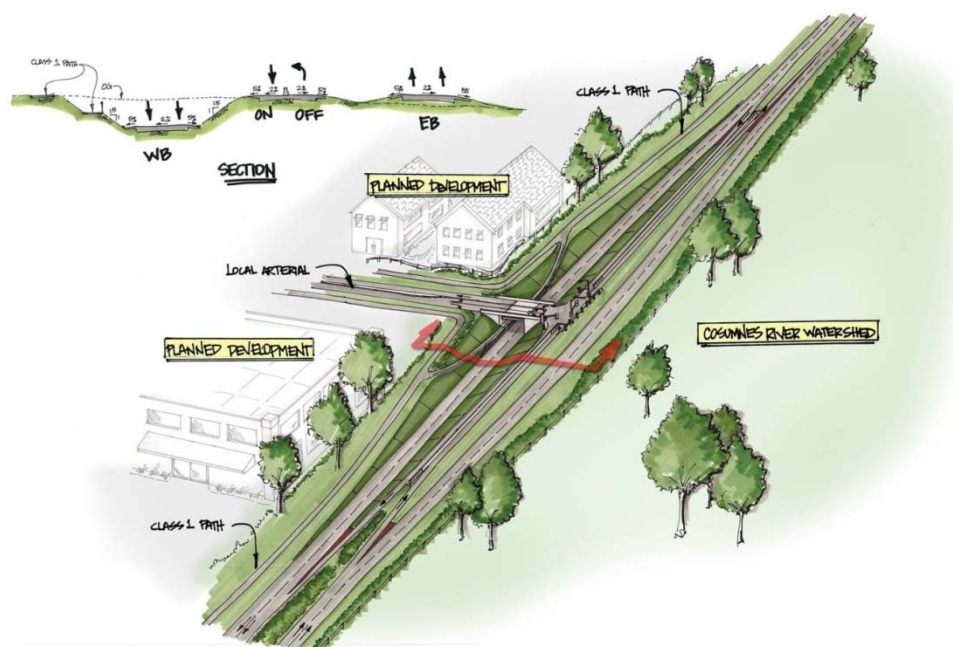


Figure 5-16 – Limited Access Directional Interchange Configuration

- Every effort should be made to minimize the footprint of the selected interchange type.
- Where traffic studies show that a signalized intersection will operate at a Level of Service C or better at the expressway intersection in lieu of the interchange, the footprint for the interchange should be established for the right-of-way based on the preferred Type L-1 diamond configuration, and the signalized intersection must be designed as a phased improvement.
- Where existing intersections cannot be economically relocated to accommodate the required interchange spacing, a right-in/right-out connection or a signalized intersection meeting the minimum spacing requirements may be considered as a phased condition. Any connection considered should be analyzed to enable acceptable traffic operations for the proposed connection.
- No driveway or street connections should be allowed within the interchange access control.
- Signalized intersections shall not be less than 1,000' from ramp intersections.
- Street and driveway connections to the interchange cross street that are within 500 ft. of a planned ramp intersection should be right-in/right-out only.
- Spacing between ramp intersections should be based on storage length requirements for left-turn movements and channelization for the storage pockets. Side-by-side left-turn lanes that extend the entire distance between ramp intersections are acceptable, but the lanes should not extend through the intersections.
- The design of the interchanges and ramps should provide for the future accommodation of ramp metering and auxiliary lanes.

- Ramps should intersect the cross street at a preferred 90 degree angle, but not less than 75 degrees.
- Ramps should have 12 ft. lanes, 4 ft. left and 8 ft. right shoulders.
- Ramp intersections should be designed to comply with current ADA requirements.
- Provisions for bus stops are not allowed on the cross street between ramp intersections.
- Side slopes and graded shoulders should match the conditions of the Connector and the connecting roadway.
- Interchanges and ramp design should accommodate a Class I multi-use path and/or PUE at the ROW line.

5.7. Signalized Intersections

Intersection Control Evaluation should be done at each intersection to justify the installation of traffic control systems. The preferred connection type for thoroughfares, expressways and for the Sheldon Area is the signalized intersection, as follows:

- Signalized intersections should be provided at the locations identified in Table 16-13.
- Planning and design of signalized intersections should conform to the requirements in SCIS for a 96-ft.-wide thoroughfare and in AASHTO Green Book, Chapter 9, “Intersections.” Consideration will need to be made for connecting streets that are narrower.
- Where traffic studies indicate the proposed signalized intersection cannot meet the LOS C or better criteria, an alternative intersection configuration that can meet the criteria should be identified. An interchange may be considered subject to meeting minimum spacing requirements.
- Cross streets should intersect at a preferred 90 degree angle, but not less than 75 degrees.
- Intersection channelization should accommodate the design vehicles specified for the connecting streets.
- Intersections should be designed to comply with current ADA requirements.
- Profile grades of the larger street should govern over the smaller connecting street. The smaller street profile should connect at the projected lip of gutter of the larger street (larger street determined by higher volume/higher standard).
- No driveway or street connections will be allowed within the cross street control of access.
- Street and driveway connections to the cross street that are within 500 ft. of a planned intersection should be right-in/right-out only.

5.8. Other Intersection Types

The following unsignalized intersection connections have been identified in Table 16-13 in the Appendix, to provide limited access to the Connector:

- Right-in/Right-out Tee intersection
- Left-in and Right-in/Right-out Tee intersection

Where these connections are included, they should provide for the following:

- Speed-change lanes and transitions on the Connector alignment of sufficient length to accommodate traffic operations
- Intersection channelization using raised medians and islands to discourage wrong-way movements
- Passage of pedestrian, bicycle, and equestrian traffic, where present
- Alternate intersection designs may be considered, where appropriate and improvement to the Connector traffic operations is realized, subject to approval by the JPA.

5.9. Pavement Engineering / Structural Section

Planning and design of roadway structural sections should be in accordance with Caltrans HDM, Chapter 600, “Pavement Engineering,” methodology. Traffic indices and soils resistance values (R-value) for each roadway in each segment of the Connector will be developed as follows:

- The traffic index for each roadway will be developed based on volumes from the traffic report. At a minimum, the following values should be used for each type of roadway unless the traffic data show a larger value is necessary:
- I-5, SR 99, and US 50 – coordinate with Caltrans
- Expressway and thoroughfare segments – traffic index = 11
- Interchange ramps = 10
- Cross streets, frontage roads, and local roadways and driveways – coordinate with local jurisdiction standards

R-values will be established, based on project-specific soils reports, for all segments of the Connector and all major arterial cross streets.

On local streets and frontage roads, a minimum R-value of 5 may be used in lieu of a soils report with JPA approval.

New roadway structural sections should consist of one of the following:

- Rubberized Hot-Mix Asphalt (RHMA), Hot-Mix Asphalt (HMA), Aggregate Base Class 2 (AB), and sub base materials (where necessary)
- Portland cement concrete pavement (PCCP)
- Life-cycle cost analysis should be done for HMA vs. PCCP surfacing.
- Where R-values are low and highly variable, stabilization/treatment of the subgrade materials with cement, lime, geotextile materials, or others soil-strengthening methods, will be considered

Alternate road-building materials may be used, as recommended by the geotechnical engineer or as required to mitigate traffic noise impacts as follows:

- Subgrade stabilizing, isolating geotextiles, and grids
- Pavement stress-absorbing layers
- Subgrade add mixtures
- Recycled materials
- Rubberized asphalt concrete (RAC) or open graded asphalt
- Sub base drainage facilities

Where roadways are planned to be constructed in phases, either by the project or in coordination with future development, the interim (temporary) street structural section should be planned and designed to provide the full structural section for future widening.

In transition areas between street standards, the stronger structural section should be used in the transition area.

5.10. Pavement Delineation and Signing

Pavement delineation and signing should be planned and designed in accordance with the following:

- Expressways – Caltrans Traffic Manual, California MUTCD
- Thoroughfares – SCIS, California MUTCD
- Sheldon Special Section – SCIS, California MUTCD
- Cross streets, local roads, and frontages – Local jurisdiction standards, California MUTCD

In addition to these guidelines, the Program EIR, Functional Guidelines, and Integrated Modes Policy specify the following:

- Proposed project signing should minimize the visual impact on the Connector corridor.
- Signalized intersections should have marked cross walks when appropriate.
- Marked cross walks may be installed at other high-volume locations without median or curb extensions if a traffic study shows a benefit.

SECTION 6. SIGNALS, LIGHTING, ITS

The ultimate Connector is a mix of free-flowing expressways with interchanges, high-speed urban thoroughfares with signal control, rural arterials with signal control, and intermittent unsignalized limited-access control connections. In addition, there are six different agencies with jurisdiction over the regional system that the Connector serves.

These facilities should be coordinated, through the use of a combination of effective traffic signing and pavement delineation, signalization of intersections and crossings, and ITS solutions to provide an efficient transportation system.

Traffic signals and lighting on the Connector should comply with the SCIS. Where the signal and lighting are part of a State highway facility, the traffic signal and lighting and any required modifications should comply with Caltrans standards. Where the traffic signal lighting is on a cross street or other local roadway, it should comply with the requirements of the local jurisdiction.

6.1. Traffic Signals

Items for consideration during the planning and implementation of traffic signals include the following:

- Provide traffic signals or other control mechanisms at intersections.
- Provide pedestrian and bicycle push button and loop detector facilities at all signalized crossings.
- Provide railroad signal and crossing gate systems where at-grade crossings are allowed.
- Provide interchange ramp metering signals where required.
- Consider signalized mid-block pedestrian crossings on thoroughfares, where appropriate.
- Consider transit signal priority, where appropriate.

6.2. Lighting

Items for consideration during the planning and implementation of lighting systems include the following:

- Provide roadway lighting systems for the Connector interchanges and intersections.
- Provide street lighting systems for the cross streets and local streets.
- Provide lighting systems for the Class I multi-use paths, where appropriate. Consider continuous lighting from direct or adjacent sources.
- Provide continuous street lighting along thoroughfare segments.
- Provide lighting fixtures that are the same or similar throughout the Connector corridor.
- Provide lighting methods consistent with the PEIR that minimize the release of light and glare upward or toward residences and properties adjoining the corridor.

- Provide lighting facilities that are uniform and meet current energy star requirements.
- Provide lighting fixtures that are “Dark Star”-compliant.
- Low energy lighting systems, such as light-emitting diode (LED) fixtures, should be evaluated for application.

6.3. Intelligent Transportation Systems

Items for consideration during the planning and implementation of Intelligent Transportation Systems (ITS) include the following:

- Provide ITS systems to interconnect traffic signal systems on the Connector to efficiency of moving traffic through the major intersections.
- Consider providing ITS systems to interconnect the Connector signal systems with the local jurisdiction traffic signal network.
- Consider other ITS solutions to maximize efficiency and safety of the Connector and adjacent street network.

SECTION 7. DRAINAGE

Drainage within the Connector corridor is a mix of natural drainage ways and culvert crossings in the rural or undeveloped areas of Segments A, B, C, and D, and closed-conduit curb and gutter sections in the developed areas in Segments B and E. Areas of flooding and creek influences are on the Connector corridor. To provide a consistent approach to the design and construction of drainage and stormwater infrastructure, the following design approach, standards, and design criteria should be used for construction of the project. The drainage design should be consistent with the mitigation measures set forth in the FPEIR and achieve the following:

- Maintain existing drainage flow patterns and incorporate existing drainage infrastructure as much as possible, given the existing physical constraints.
- Minimize diversions from one watershed to another.
- Provide low-impact development and stormwater treatment best management practices to treat the pavement runoff to the maximum extent practicable in accordance with applicable National Pollutant Discharge Elimination System (NPDES) permit requirement.
- Improve water quality of stormwater runoff leaving the right-of-way.
- Protect stormwater quality from the impacts of the project.
- Control flows to minimize erosion and sedimentation downstream.
- Reduce water pollution from construction activities.

7.1. Hydrologic and Hydraulic Design Standards

The following design manuals and permits should be used to perform hydrologic and hydraulic analysis and design of drainage features for the project, and are incorporated by reference.

For projects within State right-of-way, the following design standards and manuals should be used:

- HDM, Chapter 800
- Stormwater Quality Handbook, Project Planning Design Guide
- California Bank and Shore Protection Manual

For projects within Sacramento County, the Sacramento City/County Drainage Manual, Volume 2: Hydrology Standards should be used.

For projects within the County of El Dorado, the County of El Dorado Drainage Manual should be used.

Where local and state design manuals do not provide adequate design criteria, other available engineering design manuals may be used; for example, the following:

- FHWA Hydraulic Engineering Circulars
- FHWA Hydraulic Design Series
- United States Army Corps of Engineers Engineering Manuals
- City of Sacramento Design and Procedures Manual, Section 11 – Storm Drainage Design Standards
- Design and Construction of Urban Stormwater Management Systems (American Society of Civil Engineers Manual of Practice No. 77)

The following standard design criteria should be applied for the Connector project:

- All roadway drainage facilities design should be based on a 10-year, 25-year, and 100-year storm events, dependent on the facility involved.
- Drainage systems for Segments A and D – expressways and Segment C – Sheldon Area should consist of open-swale systems and cross culverts/structures to convey stormwater from the corridor to its natural water course.
- Drainage systems for Segments B and E – thoroughfares should be closed-conduit systems, matching the existing conditions, with inlets, laterals, manholes, and storm drain mainlines connecting to existing water courses.
- The Connector drainage systems should be planned and designed based upon the drainage needs of the ultimate conditions.

The Connector is an emergency route and should be designed to be above the 100-year flood event.

Where established waterway crossings occur, the design of the crossing should consider wildlife passage in the area when selecting the crossing structure. Types include the following:

- Bridges
- Open-bottom concrete box culverts or arches
- Reinforced concrete box culverts
- Pipe culverts

Maintenance access roads should be provided where required for upkeep of the facilities. The preferred locations of the maintenance access connections are at the cross streets.

7.2. Stormwater Quality Analysis and Design Standards

The following design manuals and permits should be used to perform stormwater quality analysis and design:

- Projects within the cities of Folsom, Elk Grove, and Rancho Cordova are subject to the Sacramento Areawide NPDES Municipal Stormwater Permit (Order No. R5-2008-0142).

For projects within the cities of Folsom, Elk Grove, and Rancho Cordova, use the Sacramento Stormwater Quality Partnership Stormwater Quality Design Manual, 2007.

- Projects within Caltrans right-of-way are subject to Caltrans' Statewide NPDES permit (Order No. 99-06-DWQ). This permit is anticipated to be renewed in 2012, and Caltrans is expected to reissue its Stormwater Quality Handbook. For projects within Caltrans right-of-way, use the Caltrans Stormwater Quality Handbook, Project Planning Design Guide, 2010.
- Projects within the unincorporated areas of El Dorado and Sacramento Counties are subject to Order No. 2003-0005-DWQ. This permit is anticipated to be renewed in 2012, with new requirements. Projects within the unincorporated areas of El Dorado and Sacramento Counties should comply with the most current version of this permit.

Projects should incorporate low-impact design to slow down runoff and reduce peak flows and volumes. Preference is given toward design measures that rely on evapotranspiration, infiltration, and rainwater harvesting. Specific examples of stormwater treatment best management practices include the following:

- Bioretention areas
- Extended detention basins
- Flow-through planter boxes
- Infiltration trenches and basins
- Media filters
- Tree well filters
- Vegetated buffer strips
- Vegetated swales
- Green roofs
- Pervious paving

Where required by the NPDES permits, projects should also incorporate hydromodification management measures that promote infiltration or otherwise minimize the change in the rate and flow of runoff, when compared to the predevelopment condition.

7.3. Construction Stormwater Standards

Construction of any project will be subject to the requirements of the Construction General Permit (Order No. 2009-0009-DWQ) plus amendments (Order No. 2010-0014-DWQ). Projects constructed within State right-of-way will also be subject to Caltrans' Statewide NPDES Permit (Order No. 99-06-DWQ). This permit is currently being considered for renewal by the State Water Resources Control Board. A draft permit is under review and subject to public review and comment period. The new permit is anticipated to be issued in 2012.

SECTION 8. LANDSCAPING & AESTHETICS

Aesthetics is how we translate our visual appeal with respect to the appearance of our surroundings to a project. We think about and design the aesthetics features of a project to look appealing or pleasing in a particular setting. Aesthetics are usually accomplished by employing the shape, texture, color, type of material, symmetry, and simplicity of repeated patterns used in the design. For the Connector, aesthetics should be included in the development of the project. The aesthetic features should include the following:

- Application of a common thematic design to enable uniformity to the Connector as a single facility.
- Application of unique thematic detail to represent the character of individual communities.
- Incorporation of the urban, rural, natural environmental and historical settings that surround the Connector corridor.
- Strategic placement of facilities to blend with the surroundings.
- Minimization of visual obstructions through lowered profile designs and undergrounding of overhead infrastructure.

Landscaping and aesthetics includes the application of shape, texture, and color to roadway bridges, retaining walls, barriers, fencing, sound walls, and the inclusion of vegetation, surface treatments, and materials selection into the roadsides, urban and rural streetscapes, and other infrastructure improvements to aid in the blending of the Connector with the surroundings, consistent with the FPEIR and adopted mitigation measures.

8.1. Stakeholder Advisory Committee

The JPA, through the SAC has provided initial guidance on project aesthetics. The results of their efforts are included in the Capital Southeast Connector SAC Involvement Summary Memorandum included in the Appendix.

The purpose and role of the SAC is as follows:

- To represent the pulse of the users and communities within the project area.
- To provide a community perspective and input on the aesthetic elements for the Project Design Guidelines.
- To identify and collaborate on themes that can translate throughout the project.
- To work with the project team to better understand how people circulate within the communities along the Connector and the region, considering various integrated modes of transportation.

Their work has provided initial community input on thematic principles for the Connector, for the individual communities, and for the environments. This work will be continued in subsequent efforts to be incorporated in the Connector project.

8.2. Image Concept

Figure 8-1 is an image concept developed to memorialize the SAC's contribution and support for defining and enhancing the beauty, character, and functionality of the Connector. This image is intended to illustrate the regionally and historically significant oak tree leaf blending into the Connector roadway in a natural color scheme.



Figure 8-1: Connector Theme

8.3. Segment Fact Sheets

Working with the community through a series of SAC meetings and an aesthetics workshop, project Fact Sheets were developed which summarize the SAC perspectives and input that are unique to each segment yet thematically contiguous along the corridor. See Appendix C for Segment Fact Sheets which represent the SAC input on local mobility, aesthetics, and theme by each segment along the corridor.

8.4. Additional Features

In addition, the Connector project has identified features that should be considered as part of the project development process consistent with the FPEIR, Functional Guidelines, and the Integrated Modes Policy. These are summarized as follows:

- High-canopy trees and landscaping should be considered as a buffer and for shading on the Class I path where space allows.
- Where appropriate, include landscaping; quality materials; treatments for medians; pedestrian areas; and adjacent facilities, barriers, and buffer zones.
- Aesthetics need to consider users and adjacent properties.
- Landscape buffer may be used between the roadway and the Class I path.
- Consider using native, noninvasive, drought-tolerant plant species.
- Consider using plants that will not pose a safety hazard to the corridor.
- Consider a layering concept based on the appropriate clear zone for the roadway segment.

- Consider vegetative bioswales for filtration of road runoff.
- Where landscape and aesthetic concepts are implemented, they should be consistent and uniform in color and design throughout the corridor.

SECTION 9. MULTI-MODAL FACILITY COORDINATION

The Connector is a multi-modal facility. Integrated travel modes, including transit, bicycle, pedestrian, and equestrian, should be considered when planning and designing the Connector.

9.1. Transit

The Connector project will coordinate with transit providers to coordinate transit services and facilities needs to better use the corridor in accordance with the Integrated Modes Policy and the Functional Guidelines as follows:

- Work with transit providers to plan transit services and provide facilities that maximize transit route and service planning for new/modified local fixed route, express bus, and bus rapid transit (BRT) with the transit operators including City of Elk Grove, Folsom Stage Lines, El Dorado Transit, and Sacramento Regional Transit.
- Help provide ROW and/or facilities to create meaningful travel time improvement for transit routes within the Connector corridor.
- May support strategic, cost-effective transit improvements such as queue jumps and signal priority/ITS equipment on other roadway segments, especially on parallel routes that show strong potential for successful, well-used service.
- Where identified, expressway segments should provide more than four lanes; the fifth and sixth lanes should be high-occupancy vehicle/transit unless the traffic analyses show unacceptable traffic operations for a segment.
- Encourage connectivity between different travel modes; that is, help provide park and ride lots and transit centers at strategic locations within the corridor accessible by pedestrian, bicycle, bus, and auto travel modes.
- Encourage smart growth with developers/jurisdictions to provide transit-friendly development within Connector corridor.

9.2. Pedestrians and Bicycles

The Connector will provide continuous, uniform bicycle and pedestrian facilities with access and connectivity to the roadway, transit, and other bicycle/pedestrian facilities. The alignments and access points will be coordinated between the Connector facilities and the following:

- Existing and future development of the off-corridor multi-use trail system
- Locations where local/regional trails intersect
- Local development access within 0.5 mile of the corridor
- Existing and future transit facilities
- Existing and future equestrian facilities

Planning and design of the Class I path should be in accordance with Caltrans HDM, Chapter 1000. Where information is not available, the design should conform to the NACTO Urban Bikeway Design Guide, as follows:

- Paths should have a minimum paved width of travel way of 10 ft. with graded, all-weather, 2 ft. wide shoulders. When on a structure, the minimum paved width shall be 14 ft.
- Within the Sheldon area, the path should be 10 ft. wide. Graded shoulders a minimum of 2 ft. and equestrian friendly.
- Class I paths should connect to cross streets at the nearest signalized intersection.
- Where bicycle and pedestrian volumes along the Connector are high and may adversely affect the cross street operations, a grade-separated crossings of the affected cross street(s) should be considered.

Where spacing between intersections is greater than 0.5 mile or where bicycle and pedestrian crossing demand is anticipated to be high, a protected crossing at the intersection should be provided. The following types should be considered, subject to safe traffic and crossing operations:

- A grade-separated structure
- Pedestrian signals with raised median refuge (thoroughfares only and only at select locations)
- As a phasing option, separate paths on both sides of the Connector with access via planned cross streets
- Where grade-separated structures are proposed, both overcrossing and undercrossing structures should be considered
- On expressways, access control fencing should be installed between the path and traveled way. The fence height should be a minimum of 54 in and should not be a hazard to the drivers or bicyclists. Where installations are necessary within the expressway clear recovery zone, it should be designed integrally with the protective barrier
- On thoroughfare Segments B and E, protective-barrier curb and a landscape buffer should be provided between the roadway and path, and access fencing will not be required
- On Segment C – Sheldon Area, when an off-corridor alignment is not used, barrier protection should be provided if the separation from the roadway is less than the horizontal clear recovery zone
- Class I paths should intersect frontage roads and driveways as close to a 90 degree angle as possible, with no connection less than 75 degrees
- Street and driveway crossings should meet ADA standards for grade and cross slope
- Transportation Management Plans and traffic control plans should consider pedestrians, equestrians, and bicyclists through construction work zones

9.3. Equestrian

The Connector will provide equestrian facilities to maintain continuity of the existing equestrian trail systems near the communities of Sheldon and Wilton in Segment C. The alignments and access points will be coordinated between the Connector facilities and the following:

- Planned bicycle and pedestrian facilities
- Existing and future development of the off-corridor multi-use trail system
- Locations where local/regional trails intersect
- Local development access within 0.5 mile of the corridor
- Planning and design of the trail should be in accordance with the Elk Grove Trail Master Plan. Where information is not available, the FHWA Equestrian Design Guidebook for Trails, Trailheads and Campgrounds will be used, including the following guidance:
- The trail may be located either immediately adjacent to the roadway ROW or off-corridor along a separate trail or local roadway system
- If the location is close to the Connector, sufficient separation should be provided to eliminate the need for barrier protection. If insufficient separation is available, barrier curb separation will be required at the edge of roadway
- Where a Class I multi-use path is planned, the equestrian trail may be located jointly with the path, as shown on Figure 5 of the Elk Grove Trails Master Plan
- The trail should provide connections to the existing trail system where appropriate
- The trail should provide the trail connectivity identified in the master plan through Segment C

SECTION 10. STRUCTURES

Roadway structures including railroad grade separations, bridges, canal crossings, local road overcrossings and undercrossings are within the project limits. Locations of the current facilities are as follows:

- I-5/Hood-Franklin Road Overcrossing
- SR 99/Grant Line Road Overcrossing
- UPRR/Grant Line Road Overhead
- Grant Line Road/Folsom South Canal Crossing
- US 50/Silva Valley Parkway Overcrossing

New structures are anticipated at interchanges on expressways, creeks and streams if necessary, and Class 1 paths and trails. At a minimum, new structures are anticipated at following locations:

- UPRR/Franklin Road Overhead or Underpass
- White Rock Road / Alder Creek Tributary (potential wildlife crossing)

All structures proposed on the project should follow the Caltrans structure type selection process for approval by the JPA. To maintain continuity throughout the corridor, structure types should consider the following:

- The existing character of structures and facilities across the segment should be considered to achieve a consistent design aesthetic, rather than a series of disconnected and random structures.
- New construction should be of the same design family as existing facilities.
- Individual projects should be considered as part of the larger context of the Connector facilities.
- Construction-related studies should include staging approaches, potential traffic management approaches during construction over existing operating roadways and railways, and approaches for widening existing bridges. Staging of structures at major interchanges with I-5, SR 99, and US 50 should be studied to determine potential impacts on structures types and feasibility of construction.

A consistent aesthetic should be maintained for the bridges, walls, and other structures along the length of the corridor. Visual quality standards that address forms, textures, details, and other design features should be developed in conjunction with the project public involvement program and allow for community preferences.

10.1. Retaining Walls

Retaining wall locations have not been determined at this time. Where bridge and retaining wall structures are required, the structures should be planned and designed in accordance with Caltrans Bridge Design Standards and Design Aids, including project structure design requirements for the following:

- Design loads
- Minimum clearances (during both construction and operation)
- Material requirements
- Design life
- Durability standards
- Geotechnical assessments and potential foundation types
- Standard design details

10.2. Wildlife Crossings

The project corridor traverses through widely varied wildlife habitats and terrain conditions. To incorporate the corridor into these surroundings, animal crossings have been identified as potential mitigation in the FPEIR. Crossings will vary widely to accommodate the types of terrain and degree of development, including rural, urban, farmland, river, creeks, rolling foothill, and other conditions. Crossings should consider the following:

- Species and size of animal
- Type and location of habitat crossing
- Development – existing and future conditions
- At-grade surface crossings
- Grade-separated crossings
- Modification of existing roadway and drainage crossing locations to accommodate wildlife crossings
- Combined wildlife crossings, subject to compatibility:
- Drainage/stream
- Equestrian/pedestrian
- Connector and cross street roadway structures
- Appurtenances for effective crossing control, including fencing and advanced warning signage

Following the assessment of potential locations for crossings, further study should be conducted into appropriate crossing configurations and geometric requirements.

Where crossings are identified to be included in the project, the planning and design of the crossing infrastructure should be in accordance with the following:

- Chapter 4 – “Selecting Avoidance, Minimization, or Compensatory Mitigation Measures,” Wildlife Crossings Guidance Manual, Caltrans, Version 1.0, October 2007
- Chapter 4 – “Design, Toolboxes, Guidelines, and Practical Applications,” Wildlife Crossing Structure Handbook, Design and Evaluation in North America, FHWA Central Federal Lands, Publication No. FHWA-CFL/TD-11-003, March 2011.

SECTION 11. SUSTAINABILITY

The JPA, through the Sustainable Communities Committee has provided an initial assessment of a best practice approach to integrate sustainability into planning, design, and construction of the Connector. The results of their efforts are included in the Connector JPA Sustainability Assessment Update Memorandum included in Appendix E.

The purpose and role of the SCC is as follows:

- To provide input/feedback on the sustainability assessment process.
- To help identify sustainable solutions that can make the project more sustainable.
- To provide guidance on technical aspects of sustainable solutions.
- To integrate sustainability into the project.

Their work will be continued in subsequent efforts to be incorporated in the Connector project.

In addition, the Connector project, as part of FPEIR, Functional Guidelines, and the Integrated Modes Policy and a separate sustainability assessment, has identified sustainable design and construction practices that should be considered throughout the corridor as part of the project development process consistent with the FPEIR. These are summarized as follows:

- Recycled materials (pavement, Poly-pipe, etc.)
- Noninvasive native, drought-tolerant plant species for landscaping
- Oversized drainage structures to improve ecological connectivity, where practical
- Roadway lighting or luminaires that meet current energy star requirements
- Solar panels to offset energy requirements for illuminated signs, etc.
- Permeable pavement in the shoulders and/or multi-use paths
- Quiet pavement for the travel lanes
- Vegetative bioswales or natural drainage systems for treatment of water runoff, where appropriate
- Reduction of fossil fuel requirement for the non-road construction equipment fleet and required use of biofuel or biofuel blends as a replacement for fossil fuel in a percentage of the construction equipment
- Use of local materials
- Warranty for the pavement structure

SECTION 12. MISCELLANEOUS FACILITIES

12.1. Railroad Facilities

Several identified railroad facilities are within the segments as follows:

- Segment A – Union Pacific Railroad, east of Franklin Boulevard
- Segment B – Union Pacific Railroad, east of Stockton Boulevard
- Segment C – Sacramento Northern, east of Aleilani Lane
- Segment D – Sacramento Placerville Transportation Corridor, east of Scott Road

These facilities should be planned to be grade separated at the Connector crossings where the facility is identified to have a Class 1 rating or above as identified by the Federal Railroad Administration. The crossings should be planned in conjunction with the local jurisdiction, the California Public Utilities Commission, and the railroad company requirements.

Where Connector paths and trails cross a railroad right-of-way, they should be grade separated in the ultimate condition. Use of at-grade railroad crossings as a phase of the project is subject to the railroad company approval.

12.2. Sound Barriers

The corridor passes through a mix of open lands, urban commercial, and urban and rural residential areas. The existing facilities along the established street sections of the corridor consist of masonry block fencing at the property lines. These residential areas and other new locations may require mitigation for noise-level increases based on noise studies performed during the Tier II environmental process. In the areas where noise attenuation is identified and cannot feasibly be addressed with setbacks or site design, sound barriers should be planned and designed as follows:

Sound barriers should be planned and designed in accordance with Caltrans PDPM, Chapter 30, “Highway Traffic Noise Abatement,” and the Caltrans Memo To Designers, 22-1 “Soundwall Design Criteria.” Sound-barrier materials considered should include the following:

- Masonry block
- Precast concrete panel
- Other concrete, timber, steel, plastic, composite, or recycled material designs
- Additional information on the above material types are included in the FHWA, Noise Barrier Design Handbook, Chapter 5, “Noise Barrier Materials and Surface Treatments”

Wherever possible, the use of earthen berms should be considered, as follows:

- Where the Connector profile is depressed
- Where ROW is not constrained

- Where wall heights would be considered excessive
- Where a wall would not be consistent with the corridor aesthetics
- The dimensions of the earthen berms should be determined on a location by location basis

Where there are existing walls adjacent to the proposed location(s), the same or similar wall type and aesthetic treatment should be maintained

Wall types used should be consistent throughout each location. If multiple locations are in proximity, the wall type used for the series of locations should also be consistent.

Sound barriers should be located at the right-of-way line unless the noise study identifies additional need or an alternate location to improve attenuation.

Vegetation should be used in barrier design, where appropriate for both aesthetic appeal and to discourage graffiti.

SECTION 13. EXCEPTIONS TO THE PROJECT DESIGN GUIDELINES

Herein describes an exception approval process for non-standard or special conditions which deviate from the standard policy or requirements contained in the Connector Project Design Guidelines (PDGs).

13.1. Policy

Approvals for proposed non-standard conditions are needed when the JPA and a local jurisdiction(s) or project partner are sharing responsibilities or funding for a project along the Connector. The approval process should be documented to record the background and basis for the deviation from standard policy or requirements contained in the PDGs. The need for the Design Exception Policy is to provide a mechanism to allow changes to the Connector project above and beyond that already identified in the Program EIR while providing conformance to the following:

- Consistency in the planning and design of the Connector
- Consistency with the functional guidelines
- Assuring the intended minimum Level of Service (LOS) on the Connector is not compromised
- Protecting the validity of the PEIR for the project
- Assuring conformance with the provisions of the approved settlement agreement with the Environmental Council of Sacramento
- Accounting for any additional private funding contributions to the Connector Plan of Finance
- Project financing
- Approval of exceptions should be pursued and obtained as early as possible in the project development process for the request, particularly when the project concepts, costs or funding depend upon the approvals.

13.2. Definition and Background

The Connector project consists of a combination of existing and new roadway alignments through rural and urban environments. The development of the Connector project is anticipated to be accomplished in phases (noted as segments in this Project Design Guidelines) that will be generally consistent with these environments. Also, planned projects within the Connector corridor are in various stages of design and construction by state and local agencies that will construct portions of the Connector. The order of implementing the various segments is not determined at this time. It will be subject to funding availability and existing and future traffic demand.

The PDGs have been prepared to establish one overall guidance document to enable consistent planning and design of the Connector. They provide for the development of the Connector project such that it has the following characteristics:

- Is uniform in character, appearance, facilities provided, and blends with the communities.
- Is positioned effectively with the surroundings to minimize impacts.
- Provides effectively located access to maximize the efficiency of the corridor.
- Integrates other modes of travel and provides a high level of service.
- Provides well-coordinated, efficient traffic operations.
- Implements sustainable solutions.
- Maintains the integrity of the regional transportation systems.
- Allows cost-effective implementation of the project.

The PDGs are a technical tool used for development of a facility to provide clarity in scope, shape, and appurtenant features. In addition, the guidelines and the final program environmental impact report (FPEIR) will provide supporting documentation to the JPA and the local jurisdictions for the various general plan amendment processes to incorporate the Connector project.

The guidelines establish design guidance for the preliminary planning and are intended to help designers as follows:

- Establish street configurations
- Identify and plan appurtenant facilities
- Identify anticipated project right-of-way (ROW)
- Identify areas of ownership/responsibility
- Maintain continuity between project segments
- Maintain continuity with the communities

The level of detail included is commensurate with the phase of project development. The guidelines are intended to be updated periodically as additional clarification is made and future phases of the project(s) begin.

Where guidelines conflict or information is missing, the designer should bring it to the attention of the JPA for resolution. The JPA will maintain ownership of the project design guidelines and will provide periodic updates at its discretion. Changes to the guidelines will require review and approval by the JPA Board of Directors before being used on the project.

13.3. Roles and Responsibilities for Design Exception Requests

13.3.1. JPA Technical Committee

The JPA Technical Committee shall consist of:

- Transportation and/or Public Works Directors from each of the five member jurisdictions
- Planning Director or designee from SACOG
- JPA Executive Director

The Technical Committee will have the following role:

- Develops policies and procedures to implement the Policy objective.
- Reviews, oversees, and ensures compliance with agreed upon terms through the implementation process, including supplemental studies, review, or analyses required to evaluate outcomes.
- Coordinates the development of language or process documentation in collaboration with other involved agencies or entities as necessary.
- Coordinates review and approval of documented process by approving authorities.
- Participate in resolving requests by local entities for deviation from JPA standard policies and procedures.

13.3.2. JPA Executive Director

The JPA Executive Director will have the following role:

- Coordinates the review and approval by legal counsel, accounting, and other entities, as necessary.
- Reports on the status of policy review, approvals, and implementation to the Board of Directors.
- Executes Board policies.
- Approves Category 1 design exceptions.
- Provides recommendations to the JPA Board of Directors on Category 3 Design Exceptions.

13.3.3. JPA Board of Directors

The JPA Board of Directors will have the following role

- Approves or adopts JPA policies and exceptions from standard policy processes or implementation.
- Institutes a Board Resolution to recommend approval or denial of the access change request for the hearing process at the member jurisdictions elected body for final consideration.

13.4. Design Exceptions

Design exceptions assist designers and owners in finding a transportation solution that balances impacts to design characteristics, site constraints, site specific needs, and environmentally

sensitive areas while still providing for safety and mobility. Due to circumstances presented within the multi-agency corridor, a situation may arise in which the existing design requirements cannot be met, the impact of meeting the requirements is too restrictive, or the jurisdiction along the corridor requests changes due to other factors. In this case, designers or individual jurisdictions must request a design exception.

Design exceptions will be classified into three categories which have different levels of approvals required. All design exception requests are required to have preliminary approval of the governing Local Jurisdiction Staff prior to a formal request being sent to the JPA.

13.4.1. Category 1 (Local Agency /JPA Executive Director Approval Authority):

Category 1 design exceptions include minor exceptions to the design standards that are not classified as Category 2 or Category 3, are deemed to be non-safety and non-controversial between jurisdictions, or are consistent with the examples listed in Table 1. Approval for Category 1 design exceptions lies with the Local Jurisdiction and the JPA Executive Director.

If there is disagreement between the two approval authorities, the exception request is elevated to Category 2.

13.4.2. Category 2 (JPA Technical Committee/JPA Director Approval Authority):

Category 2 design exceptions include exceptions to the design standards that are generally classified as technical design standards or those listed in Table 1. Approval for Category 2 design exceptions lies with the JPA Technical Committee and the JPA Executive Director.

If there is disagreement between the two approval authorities, the exception request is elevated to Category 3.

13.4.3. Category 3 (JPA Board Referral):

Category 3 design exceptions include exceptions to the design standards that are generally related to safety, access, right-of-way, or involve/require a public hearing before a member jurisdictions elected body, such as the examples listed in Table 1. Recommendations shall be made by the Local Agency, Technical Committee and Executive Director. The request, with the appropriate level of justification and technical analysis (see below) must then be made to the JPA Board for their consideration and recommendation at a public JPA Board meeting. That recommendation (via resolution), will then be incorporated into the hearing process at the member jurisdictions elected body for final consideration. To be recommended for approval, exceptions must be found to be in the best interest of the JPA. In general, exceptions should not: (1) adversely affect peak hour conditions (as described in this document), safety, or project financing; or (2) be inconsistent with Measure A or the JPA's original Functional Guidelines.

The benefits of any Design Exception granted must outweigh the impacts, and may be subject to supplemental CEQA review.

Table 1 – Examples of Design Exception Categories			
Design Exception	Category		
	1	2	3
Technical Design - design elements* - cross section elements* - structural section - other considerations*		X	
Drainage - hydrologic and hydraulic design standards* - stormwater quality analysis and design standards* - construction stormwater standards*		X	
Integrated Travel Modes*	X		
Interchanges & Intersections* - interchange/intersection spacing and locations - access that differs from the PEIR			X
Right-of-way, Utilities & Railroad Facilities*			X
Structures		X	
Traffic - pavement delineation & striping - signal equipment, lighting & ITS*		X	
Landscaping & Aesthetics*	X		
Sustainability		X	
Environmental* - sound barriers - wildlife crossings - South Sacramento Habitat Conservation Plan			X

13.5. Requirements in Support of Exception Requests

13.5.1. Category 1

Exceptions are in conformance with the environmental document(s) and do not significantly affect the project costs.

13.5.2. Category 2

Exceptions are in conformance with the environmental document(s), do not significantly affect the project costs, and meet the standard of care for typical design guidelines and requirements. Additionally, the exception cannot jeopardize federal funding, if applicable, which require conformance with the Caltrans Local Assistance Procedures Manual and Local Assistance Program Guidelines.

13.5.3. Category 3

Access changes must be requested in writing by jurisdictions along the Connector corridor for JPA Board consideration. Any private sector request must be conveyed through the respective member jurisdiction and not directly to the JPA. This will insure initial compliance with local planning standards and requirements. Any change to the location and the type of access will require a transportation report to document the effect to traffic operations on the Connector.

JPA staff will review and approve the minimum requirements of the access change transportation report which will be included as part of the request to the JPA Board of Directors for their recommendation(s) to the requesting jurisdiction. JPA staff will need to be consulted early in this process to assist with developing the transportation report scope and requirements. The access change transportation report may be combined with the transportation analysis required by CEQA in support of the discretionary action.

13.6. Transportation Report Outline

In general, the access change request transportation report should contain the following sections.

1. Project Description – describe the proposed change in access
2. Study Area – define the study locations
3. Analysis Methodology – discuss the travel forecasting and operations analysis methods
4. Data Collection – provide the traffic counts, travel time measurements, and other data
5. Existing Conditions – document the current operating conditions in the study area
6. Travel Demand Forecasts – describe the process to develop future traffic volumes
7. Operations Analysis – report on the performance measures under future conditions

13.7. Analysis Criteria

All Category 3 design exception requests will be presented to the JPA Board for a recommendation to the requesting jurisdiction. For a change in access to be presented to the JPA Board with JPA staff recommendation of approval, the transportation study must show that the proposed access change request will provide acceptable peak period conditions for the following performance measures, as applicable:

- intersection level of service (LOS)
- expressway segment LOS, and
- thoroughfare travel speed.

On the Connector, signalized intersections should operate at LOS D or better except for the Sheldon Area Section C, where the LOS is E. At unsignalized intersections, the movement with the worst delay must operate at LOS E or better.

For thoroughfare segments (4 or 6 lanes), average travel speed is used as an additional performance measure. This will ensure that operations along the Connector are favored over side-street approaches. Average segment speeds were developed based on the posted speed and average signal delay of 20 seconds per intersection. Table 1 lists the threshold travel speed. The average travel speed for the thoroughfare segment must be equal to or greater than the threshold travel speed shown in Table 1.

For expressway segments operating with intersections prior to Phase II interchange conversions, any additional access requests must also satisfy expressway LOS D or better for the new intersection and meet the threshold travel speeds shown in Table 2.

In addition, the study must demonstrate that the new intersection can operate at LOS D during the Phase II configuration as well, including ramp merge, diverge, and weave movements.

Table 2 – Thoroughfare Travel Speed Thresholds

Thoroughfare Segment	Limits		Posted Speed	Threshold Speed
	From	To		
A2	Bruceville Road	Highway 99	45	28
B	Highway 99	Bond Road	45	33
C	Bond Road	Calvine Road	40	30
E1	El Dorado County Line	Latrobe Road	45	24
E2	Latrobe Road	Highway 50	45	31

13.8. Analysis Methodology

A scope of work for the requested access change will be developed in consultation with JPA staff, and the JPA will approve the final scope of work and all assumptions and methodologies used in the study. The cost for preparation of the study shall be borne by the applicant.

In general, for traffic operations analysis the methodology needs to be consistent with the latest version of the Transportation Research Board's Highway Capacity Manual (HCM). Given the close-spacing of intersections and sensitivity to turn pocket lengths, thoroughfare segments should use traffic simulation software to analyze intersection operations and determine segment travel time. Expressway segments that operate with LOS D or better conditions under cumulative conditions may use the deterministic analysis methods from the HCM. Expressway

segments with LOS E or worse conditions should be analyzed using simulation software so that the extent and duration of congestion can be determined.

The existing conditions simulation models should be calibrated and validated to observed conditions using FHWA guidance: Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software. Importantly, both traffic volume and travel time must be validated for the existing conditions models.

Important input to be considered in the operational analysis is truck percentage, peak hour factor to account for the peak 15-minute traffic volumes, the analysis period, and pedestrian volume.

NOTE: The methodology of the study may be adjusted by the JPA as needed to fit the particulars of the request. The Transportation Report may be waived by the JPA if there is agreement by JPA staff and the member jurisdiction requesting the change that the request will not adversely affect the performance of the corridor, and the overall measure of performance will remain as stated herein.

13.9. Analysis Results

The report must contain all of the assumptions and critical input used, the analyses performed and the resulting impacts on traffic operations and performance measures. Tables and figures should be used to help the reader more easily understand the analyses and conclusions. If applicable, visual simulation results should be shown. Resulting changes in performance (intersection LOS and through travel speed) due to the proposed project should be conveyed for all scenarios, including existing, opening year, interim year, 20-year horizon and build out conditions. If applicable, a discussion should be provided that points out the deficiencies of the proposed project and suggests further design or operational changes/mitigations to improve operations such as adding lanes, extending storage lengths of turn lanes, and changing signal timing to improve traffic progression on the Connector.

SECTION 14. RIGHT-OF-WAY

14.1. Goals

The goal of this Section is to establish a fair and efficient process to complete the acquisitions or transfers of property and coordinate any conflicting utility relocations for the Capital SouthEast Connector Project. This process shall ensure that persons, required to sell land or to move their facilities because of the Connector, are treated fairly, equitably, and humanely in an open, honest, and professional manner.

The mission of the JPA will be to expedite the acquisition of real property by agreement to avoid litigation and relieve congestion in the courts; to assure consistent, equitable treatment of all owners of real property acquired for Connector programs; and to promote public confidence in right-of-way acquisition policies related to these programs.

Right-of-way or parts thereof shall not be acquired, abandoned and/or vacated so as to leave any real property adjoining the public right-of-way without access to an established public right-of-way.

14.2. Introduction

The Capital SouthEast Connector Project will be built in phases (Phase 1 and Phase 2), and in geographic sequences along the Connector alignment. Phase 1 will construct a 4-lane backbone for the Connector Project in a series of segments to provide an acceptable level of service throughout the entire length of the Connector Project.

The JPA has obtained legislation allowing it to utilize Alternative Delivery Methods to deliver the Project. This method of procurement will allow the JPA to maximize efficiencies in the construction of the Project for portions of the Project to be constructed by the JPA. As set forth below, however, the JPA's member jurisdictions (including the cities of Elk Grove, Rancho Cordova, and Folsom, and the counties of El Dorado and Sacramento) retain the ability to construct portions of the Project within their boundaries, rather than allowing the JPA to construct the Project on their behalf.

The member jurisdictions will acquire right-of-way (ROW) for the ultimate Phase 2 of the Connector Project when it considers an application for a land use change in an area adjacent to the Connector Project, consistent with the member agency's policies and procedures.

To the extent ROW cannot be obtained by the member jurisdictions through dedications or irrevocable offers of dedication, or easements, the JPA will acquire ROW according to the procedures set forth herein. To the extent funding is available during Phase 1, the JPA will acquire the ultimate ROW, or at a minimum an irrevocable offer of dedication for Phase 2, with a lease back option (where feasible).

The JPA anticipates acquiring land that is adjacent to the current ROW along Kammerer Road, Grant Line Road, and White Rock Road. The notable exception will be at future locations of interchanges, where the JPA anticipates that its member jurisdictions will reserve the ultimate ROW needed for the wider intersection locations, to the extent such land is not already subject to a Development Agreement. It is anticipated that a combination of building setback requirements, zoning requirements, access requirements, right-of-way dedication, and irrevocable offers of dedications will be needed to secure the future Connector interchanges.

14.2.1. Acquisition by Member Agencies

Member jurisdictions will acquire/preserve ROW according to their existing policies, and consistent with applicable law.

Each jurisdiction will preserve ROW for the Connector Project when it considers applications for the following land use changes, consistent with adopted General and/or Specific Plans:

- Annexation
- Subdivision
- Commercial or Industrial Development
- Zone Change

Dedication of right-of-way, irrevocable offer of dedication, or granting of a permanent roadway right-of-way easements in the name of the local agency are recommended as a condition of each of the above proposals. Transfer of right-of-way to the JPA will occur at a later time, as needed to allow the JPA to construct a portion of the Connector Project.

14.2.2. Acquisition and Construction by Connector JPA

In the event that the Connector JPA has funding available to acquire ROW and/or will construct a segment of the Connector Project, the JPA will acquire ROW needed for project segments which has not been acquired by the applicable member jurisdiction through dedication, irrevocable offers of dedication, or easement.

In addition, when a Connector Project segment moves forward, the dedicated ROW (including any easements) held by the applicable member jurisdiction will be transferred from the member jurisdiction to the JPA (along with all associated liabilities) if needed for construction. Where an easement is transferred, this will allow the easement area to remain under the care of the underlying property owner until the Connector Project phase is constructed.

Following project completion and acceptance by the JPA for the individual segment constructed, the Project ROW, including any easements, will be transferred to the member jurisdictions (along with all associated liabilities), consistent with subsequent Reciprocal Use and Funding Agreements that will be executed among the JPA and the member agencies.

To the extent possible, the Connector JPA will acquire ROW or easements from willing sellers. Where ROW cannot be acquired from willing sellers, the JPA will utilize the procedures set forth below.

14.3. Applicable Laws, Codes and Regulations

The JPA will comply with the requirements of all applicable federal and state laws, statutes and regulations, particularly, Title 49 of the Code of Federal Regulations, Part 24, Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended (Uniform Act); Title 25, California Code of Regulations, Chapter 6, Article 1, Sections 6000 et seq., Relocation Assistance and Real Property Acquisition Guidelines; California Code of Civil Procedure; California Government Code Section 7260-7277; and Uniform Standards of Professional Appraisal Practice (USPAP).

In the event of any conflict between current applicable statutes and regulations and the policies and procedures set forth in this manual, the JPA will comply with applicable law.

14.3.1. CA Department of Transportation Coordination

When Caltrans oversight of federal or state funding is required, the JPA will conform to the Caltrans Right-of-Way Manual and seek Caltrans concurrence of right-of-way requirements prior to completing the appraisal and making the offers per Caltrans policies and procedures.

14.3.2. Just Compensation

State and Federal Law provide that an owner of private property acquired for public use is entitled to the payment of just compensation for the property acquired. This includes, but is not limited to, the fair market value of the property acquired and compensation for impacted structures or site improvements. Residential occupants and business operators on the property who are relocated will be afforded relocation payments.

14.3.3. Compliance with the Americans with Disabilities Act

Property to be appraised shall be inspected on the date of valuation for its compliance or non-compliance with ADA regulations. All comparable sales should be analyzed as to their compliance or non-compliance to ADA regulations.

14.4. Property Owned By a JPA Employee or Board Member

When property or property rights to be acquired is owned by a JPA employee or a member of the JPA Board, the JPA will order two (2) appraisals for the property/property rights to be acquired. The Offer of Just Compensation shall be based on the higher of the two appraisals. Should the property owner reject the Offer of Just Compensation, the JPA will not conduct further negotiations with the property owner and immediately refer the acquisition to the JPA legal counsel for condemnation.

14.5. Administrative Procedures

14.5.1. Intra-Agency Coordination

Each of the JPA's member agencies has agreed to notify the JPA of pending development applications, and to allow the JPA to review, and comment on such applications. JPA staff, in coordination with staff from the member jurisdictions, will review and assess the potential impacts that a proposed development will have on the Connector Project and the overall transportation system, and will analyze and evaluate the preliminary development proposals for conformance with the JPA's Design Guidelines.

14.5.2. Use of a Consultant

The JPA will assign work to a Right-of-way consultant to assist in the delivery of the assigned work. The right-of-way consultant shall be selected through the JPA's contract procurement process. The JPA will oversee all work assigned to the right-of-way consultant to ensure compliance with JPA's policies and procedures, federal and state regulations, and in cases of On-System Connector projects, the Cooperative Agreement with Caltrans.

14.5.3. Consistent Process

All right-of-way acquisition policies and procedures, including those applicable to title search, appraisal, negotiations, payments, closings, condemnation, possession, clearing and all other related right-of-way activities, shall be applied consistently to all property owners from whom lands, property or rights must be acquired for Connector purposes .

14.5.4. Right-of-Way Key Map

A key map that depicts the right-of-way needs of the Connector will be created by the JPA, in cooperation with the member agencies, once a project specific environmental document has been identified by the JPA. At a minimum, this right-of-way needs map will be used in an advisory capacity for the member agencies when working with developers to ensure that developers set aside land to meet future transportation facility needs.

14.5.5. Title and Escrow Services

- The JPA will secure title insurance on fee parcels to be acquired.
- Purchase and sale of permanent interests in real property will be handled through an escrow account with a Title Company.
- Matters where there are title issues, vesting is in question, or cloud on title, will be referred to the JPA legal counsel.
- When acquiring real property pertaining to real estate, a mobile home or manufactured dwelling, requiring a Limited Power of Attorney to transfer title, the Real Property

Manager must obtain authorization memorandum from JPA's General Counsel's Office to execute documents on behalf of JPA.

14.5.6. Eminent Domain Actions

The JPA will process all eminent domain actions with an affirmative 4/5 vote of the JPA Board of Directors. The JPA Board will not exercise its power of eminent domain within the jurisdiction of a Member Agency without that Member Agency's governing body's prior consideration and concurrence.

14.5.7. Payment Authorization

The JPA Executive Director is authorized to release funds for payment of invoices, escrow fees, just compensation, relocation claims, condemnation deposits, return of security deposits, rent credits, and any other right-of-way or property management related payments. If the amount to be released exceeds the Executive Director's signature authority, the Director will submit a request for approval to the JPA Board.

14.6. Phase 1 and Phase 2 Right-of-Way and Easement Acquisition

To the extent funding is available, the JPA will acquire right-of-way for Phase 1 and Phase 2 of the Connector Project prior to the start of Phase 1 construction.

The JPA will acquire Phase 2 right-of-way (or at a minimum an irrevocable offer of dedication), with a lease back option, where feasible, for properties adjacent or having an impact along the corridor.

At future locations of interchanges, the JPA has requested that each jurisdiction amend its General Plan to reserve the right-of-way for the ultimate width needed for Phase 2 of the Project. It is anticipated that a combination of building setback requirements, zoning requirements, access requirements, right-of-way dedication, and irrevocable offers of dedications will be needed to secure the future Connector interchanges. When the Connector moves forward, the easement area would be dedicated as right-of-way at that time. This would allow the easement area to remain under the care of the underlying property owner until the Connector is constructed.

The Connector further intends to construct frontage roads and/or consolidate access to adjacent properties to concentrate access at appropriate intersections/interchanges onto the Connector roadway, as defined by the Project Design Guidelines and subsequent General Plan updates. These frontage roads may be public or private. The JPA would be responsible for acquiring the necessary ROW to accommodate the planned public frontage roads and compensating property owners for the configuration of private frontage roads.

This allows the JPA to: (1) Preserve ROW from conflicting encroachments for the ultimate project phase; (2) Avoid conflicts and additional project throwaway cost; and (3) Optimize funding with present dollars.

14.7. Development Adjacent to the Connector

The JPA, as far in advance as possible, shall be notified by member agencies when a development proposal, application or Tentative Map is being considered or has been submitted to a member agency. The JPA shall be allowed to review and comment on the development proposal, agreement, or Tentative Map.

The JPA will review and assess the potential impacts that the proposed developments will have on the Connector and will evaluate the preliminary development proposals for conformance to JPA Project Design Guidelines including but not limited to access control, location of streets and accesses that may impact the Connector footprint, and appropriate setbacks based on the proposed right-of-way footprint. Consideration should also be given to the location of pedestrian and bicycle facilities so that connections to the future Connector pedestrian and bicycle trail are anticipated.

The following land use proposals should trigger a right-of-way preservation action by the member agencies:

- Rezoning
- Annexation
- Subdivision
- Commercial or Industrial Development (where applicable)

The member agencies may wish to secure an irrevocable offer of dedication for property within the Connector right-of-way footprint, which may be used as interim open space within a subdivision development until needed for roadway improvements. This would allow the dedicated area to remain under the care of the underlying property owner until needed for Connector construction.

Dedication of right-of-way, irrevocable offer of dedication, or granting of a permanent roadway right-of-way easements in the name of the local agency are recommended as a condition of each of the above proposals. Transfer of right-of-way to the JPA will occur at a later time, if necessary, once a specific project has been identified. The road right-of-way and easements will be transferred back to the jurisdictions upon project acceptance by the JPA for the individual sequence or phase, as will be detailed in the subsequent Reciprocal Use and Funding Agreements that will be executed among the JPA and the member agencies.

14.8. Environmental Soil Assessment, Remediation and Mitigation

To the extent applicable, the JPA will follow the Caltrans Request for Acquisition of Contaminated Property (RACP) policies and procedures.

In the event any property is conveyed to the State for incorporation into the freeway system, a Request for Acquisition of Contaminated Property will be obtained per Caltrans Policies and Procedures.

14.9. Appraisal of Property for Acquisition

1. JPA will secure an Appraisal of all properties to be acquired, exchanged or sold, except those that are exempt under the Uniform Act. Appraisals shall conform to the requirements of the Uniform Standards of Professional Appraisal Practice and the Uniform Act.
2. All appraisals shall be reviewed by an Independent Appraiser who will approve, amend, or reject the appraisal.
3. An Independent Review Appraiser shall approve the appraisal in writing.
4. All property owners shall be given notice of the date and time of inspection and shall be given the opportunity to be present or be represented when the appraiser inspects their property. Property owners can submit evidence as to the value of their property.
5. Fixtures and Equipment valuations, if applicable, shall be included in the Appraisal Report.
6. Loss of Goodwill appraisal will be performed upon receipt of a Loss of Goodwill Claim, tax returns and any other supporting financial data that is furnished by the business owner affected by the Connector project. The premise for the goodwill appraisal is not estimated directly but by a residual process. The first step is to estimate the value of the total business enterprise and then subtract the value of the separately valued assets of the business, both tangible and marketable intangible, from the total value. The residual value, if any, represents the intangible asset of goodwill.
7. The Real Property Manager, prior to approval of just compensation, shall determine that the appraisal has addressed all design impacts.
8. Appraisals shall be based on a “Sales Comparison Approach,” “Cost Approach,” or “Income Approach,” as appropriate.

14.10. Acquisition Process

Upon certification of the National Environmental Policy Act and/or the California Environmental Quality Act (NEPA/CEQA) Environmental Document by the JPA Board of Directors, the JPA will begin the right-of-way acquisition process.

The following describes the process the JPA will follow:

1. All offers shall comply with Section 7267.2 of the California Government Code.

2. All offers will include acquisition of all applicable real property interests, land and improvements, fixtures and equipment, and tenant interests for permanent right-of-way, or for temporary construction.
3. An un-segregated offer for fixtures and equipment will be made to the property owner and business owner, if applicable. A segregated offer shall be made to the property owner and tenant upon receipt of the executed Offset Statement, signed by all parties of interest.
4. An offer for Loss of Business Goodwill, if any, will be made upon an approved Loss of Business Goodwill appraisal. An appraisal will be completed after the business owner files a claim for Loss of Goodwill.
5. Prior to making the Loss of Goodwill offer, the acquisition agent shall recognize any “in-lieu” or reestablishment payments that may have been or will be made under Relocation Assistance in order to avoid duplication of payment.
6. The Executive Director has the authority to approve Just Compensation.
7. Prior to making the first written offer, JPA’s right-of-way staff/consultant shall ensure that the offer is consistent with the appraisal.
8. Just Compensation shall not be less than the approved appraisal.
9. Property owners are entitled to order their own appraisal of the real property interests being acquired by JPA in compliance with the California Code of Civil Procedure Section 1263.025.
10. The Director and/or JPA Legal Counsel and/or JPA right-of-way consultants, under the direction of the Executive Director or Legal Counsel, will conduct negotiations for acquisition of property rights for JPA.
11. At any time during the acquisition process, if the property owner is represented by legal counsel, JPA’s General Counsel shall be notified.
12. Where an acquisition involves a mobile home, condominium complex, or when there is a Home Owners’ Association ownership or involvement, JPA staff shall seek legal opinion as to ownership interests prior to making the first written offer.
13. The Executive Director shall make recommendations as to the least harm to determine design changes and when to seek Resolutions of Necessity (RONs).
14. All negotiations shall be expeditious, shall involve no coercion, and shall result in the property owner receiving just compensation.
15. Execution of Contracts, Agreements, and other Real Estate Documents are delegated by the Director provided they are within the delegated authority limits.
16. The JPA may sell at public auction or exchange excess or surplus real property no longer needed for present or future roadway improvements or JPA maintenance and operations.

17. If the acquisition of only a portion of a property would leave the remaining portion in such a shape or condition as to constitute an uneconomic remnant, the JPA shall offer to acquire the entire property if the owner so desires.
18. The replacement of an existing water well can be done by a cash payment or by the JPA contracting for the drilling of a replacement well. If the JPA will be contracting for the replacement of the well, copies of all the standard tests on both the existing well and new well should be kept in the parcel file. The new well should produce the same or better quality and quantity of water compared to the old well.
19. Interests in land owned by Federal and State agencies are secured under appropriate Federal or State statutes (Federal Connector Act of August 27, 1958 (23 USC 107(d) and/or 317), Section 101.5 of the Streets and Highways Code, or 6210.3 Public Resources Code). In most cases, the right to the land is secured at no cost in terms of cash payment, although there can be considerable expenditure for replacement or relocation of existing facilities.
20. An unpatented mining claim establishes an interest in land, which will continue in existence until eliminated, whether by an appropriate conveying document or legal process before a court of competent jurisdiction. Every reasonable effort shall be made to obtain quitclaim deeds to the right-of-way from persons holding mining claims on the land to be acquired even though the claim may appear to be abandoned. If clearance of the claim cannot be obtained by Purchase Contract and Quitclaim Deed, then condemnation shall be instituted. However, if after diligent search, the owner cannot be located, a statement of the facts is to be noted on the Acquisition File and a recommendation may be made to acquire title subject to this outstanding interest. Such recommendation must be approved by the JPA Legal Counsel.
21. Right-of-way already in possession by the member agencies will be transferred from the member agency to the JPA, to the extent necessary.

14.11. Advance Right-of-Way Acquisition, Hardship and Protective Buying

Where necessary or appropriate, the JPA will consider full acquisition of “non-viable” uneconomic remnant properties, if the owner so desires, on areas outside the ROW take needed for the project. This allows the JPA to maintain goodwill with property owner(s), maintain access control, and potentially use the area for environmental mitigation.

The JPA Board may acquire a limited number of parcels prior to completion of processing of the final environmental statement, which are in the public interest to:

1. Alleviate particular hardship to a property owner.
2. Prevent imminent development and increased costs of a parcel that would tend to limit the choice of Connector alternatives (Protective Acquisition).
3. Take advantage of willing seller/owner opportunities.

4. Reserve environmental mitigation sites.

Title 23 of the Code of Federal Regulations, Section 710.503, provides that an agency may acquire a particular parcel or parcels within the limits of a proposed transportation corridor, such as the Connector corridor, prior to completion of processing of the final environmental statement or adoption of the appropriate documents. Proper documentation shall be submitted to the appropriate federal agencies to show that the acquisition is in the public interest and is necessary. Such acquisitions shall comply with all statutes and regulations related to advance acquisition, including, but not limited to, Title 23 of the Code of Federal Regulations, section 771.117 (d) (12).

A major consideration in making a decision on Advance Acquisition is the effect on federal funding for the parcel and the project as a whole. It is important to keep in mind that if federal regulations (40 CFR part 24) are not followed in the advance acquisition of a parcel, the FHWA or FTA, as the case may be, may deny federal funding for the whole project; or, if it is determined that the advance acquisition of a parcel influenced the environmental assessment of the project, the cost to acquire the parcel may not become eligible for use as the credit towards the agency's share of a federal-aid project. In the latter instance, the project's application for environmental clearance under NEPA may also be denied.

14.12. Settlement Delegation Authority

Administrative and Legal Settlement Delegation Authority Thresholds (Real Property Interests Only, excludes Relocation Assistance):

1. The Executive Director is authorized to approve an administrative or legal settlement when the difference between the approved appraisal and the property settlement is no more than 10% or \$50,000 over the approved appraisal whichever is greater; or
2. When the difference between the approved appraisal and the proposed settlement is over 10% or \$50,000 above the appraisal, the proposed settlement must be approved by the JPA Board of Directors.

This allows the JPA to react quickly to settlements outside the monthly JPA Board hearings, effectively manage the schedule, project priorities, budget, and environmental mitigation, best determine project needs and share risk with the contractor.

14.13. Administrative and Legal Settlements

All Administrative Settlements must be accompanied by a written recommendation prepared by a Real Property Agent, recommending settlement. The Executive Director or JPA Board may then approve the settlement, consistent with Section 14.11, above. All Legal Settlements shall be accompanied by a written justification prepared by the JPA General Counsel. Legal Settlements may be recommended once an eminent domain suit has been filed.

14.14. Eminent Domain: Resolutions of Necessity (RONs)

Eminent Domain will only be utilized for the acquisition of ROW as a method of last resort. Pursuant to Amendment No. 1 to the “Joint Exercise of Powers Agreement” for the Capital SouthEast Connector Joint Powers Authority (JPA):

“The affirmative vote of at least four directors is required to exercise the powers of eminent domain and to amend the Functional Guidelines referenced In Section 1 of this Agreement. The Board will not exercise its power of eminent Domain within the jurisdiction of a Member without that affected Member’s Governing body’s prior consideration and concurrence.”

The procedures set forth hereinafter apply where the property being condemned is in the jurisdiction of the JPA or where the property is within the jurisdiction of a Member and the Member's governing body has given prior consideration and concurrence.”

If the JPA votes to exercise its power of eminent domain, the JPA will comply with the requirements of federal and state law, statutes and regulations, particularly, Code of Civil Procedure, Section 1245.230, Title 49 of the Code of Federal Regulations, Part 24, Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended (Uniform Act); Title 25, California Code of Regulations Ch 6, Art 1, Section 6000 et seq., Relocation Assistance and Real Property Acquisition Guidelines; California Code of Civil Procedure; California Government Code Section 7260-7277; and Uniform Standards of Professional Appraisal Practice (USPAP).

In addition to federal and state law, the United States Constitution and California State Constitution provide that an owner of private property that is acquired for public use is entitled to the payment of just compensation for the property acquired. This includes, but is not limited to, the fair market value of the property acquired and compensation for any impacted structures or site improvements. Residential occupants and business operators on the property who are being forced to relocate due to the project are afforded relocation payments to assist in moving to a new location. Machinery, equipment and fixtures that cannot be moved are appraised separately and acquired as part of the real estate. Finally, the owner of a business is entitled to payment for the loss of business goodwill if, after moving and unsuccessfully attempting to preserve goodwill, a loss is suffered.

Upon the affirmative vote of the Members of the JPA Board to exercise its power of eminent domain to take a specific property, RONS shall be prepared pursuant to Code of Civil Procedure, Section 1245.230. The Director, in consultation with the Member Jurisdiction, or designee shall establish an amount of just compensation. A written offer will be made to the owner or owners of record to acquire the property for the full amount so established, unless the owner cannot be located with reasonable diligence. The offer may be conditioned upon the JPA’s ratification of the offer by execution of a contract of acquisition or adoption of a Resolution of Necessity or both.

If an owner believes that its property should not be required or that the project should be realigned to avoid its property, the owner may request an appearance before the JPA Board

regarding the Resolution of Necessity. This request must be made in writing within 15 days from mailing of the Notice by JPA. The negotiating process continues and assures that all issues are identified and resolved, if possible, prior to Board meeting.

Property Owners shall be given, at least 30 days, to consider the offer prior to scheduling a RON hearing.

14.14.1. 1st and 2nd Level Review Prior to RON Hearing

If the Property owner has issues relating to project need, project design, and/or the necessity, the Property Owner can request a Review Hearing at any time during the acquisition process.

At any time during the acquisition process, JPA Executive Director will request a 1st Level Review prior to a Notice of Hearing.

1. 1st Level Review: JPA Executive Director will conduct the 1st Level Review. This will be attended by the Property Owners and their representatives, JPA legal counsel, if necessary, the Real Property staff and/or right-of-way consultant, Caltrans representative(s), if applicable and chaired by the JPA Executive Director. This 1st Level Review panel will not consider issues relating to compensation. If issues remain unresolved after the 1st Level Review Hearing, an Appearance Information Sheet (AIS) will be prepared and issued by the Real Property staff and/or right-of-way consultant and a 2nd Level Review Hearing will be scheduled within thirty (30) days after the issuance of the AIS, if requested by the Property Owner.
2. 2nd Level Review: The 2nd Level Review Panel will consist of a Chairperson of the JPA Board and representative from the JPA Board if the property is not within the jurisdictional representation of the Chair, the JPA Legal Counsel, if necessary, Caltrans Representative(s), if applicable, and the JPA Executive Director. If issues remain unresolved after the 2nd Level Review Hearing, documents will be prepared consisting of (a) a written summary of unresolved issues; and (b) Chronology of contacts with the Property Owner or representative(s).

14.15. Relocation Assistance Payments

The JPA shall comply with all applicable laws and regulations related to relocation assistance at the time any property is acquired.

14.16. Property Management

When the JPA acquires real property for transportation purposes, the JPA will strives to manage its real property with the objective of maximizing existing and future public transportation benefits, safety, and financial income by means of professional property management policies and procedures. This includes entering into lease agreements, issuing licenses and rights of entry for authorized third-party uses, as well as investigating and resolving issues regarding uses that

are not authorized by JPA. On certain occasions, JPA may also grant easement. General maintenance activities and security measures are also part of the property management scope of work on all JPA properties.

The JPA staff and/or right-of-way consultant shall have management responsibilities for properties acquired and owned by JPA, including the following:

1. Manage existing leases, licenses, and rights of entry through periodic field inspections to assure compliance with the terms and conditions of their respective agreements.
2. Review the terms and conditions of existing agreements, ensuring annual license/lease rates are based on the property's fair market value and consistently implement fair market adjustments and Consumer Price Index (CPI) adjustments with lease terms greater than one year. Property's fair market value shall be reviewed, at least, every five (5) years.
3. Maintain a tenant revenue spreadsheet that flags fair market adjustments 90 days in advance of scheduled adjustment dates.
4. Implement insurance requirements as determined by the JPA General Counsel. Consult with JPA General Counsel for approval of changes to the standard insurance requirements. Review tenant insurance certificates to ensure compliance with the insurance terms and conditions in their respective agreements.
5. Prepare and issue new licenses, leases and rights of entry for use of JPA property in conformity with JPA policies.
6. Consult with JPA General Counsel for approval of changes to the standard rights of entry, licenses and lease agreements.
7. Coordinate with JPA's Accounting Department in the organization and maintenance of a revenue collection system designed to operate in conjunction with other JPA staff.
8. Manage all properties to minimize maintenance and prevent unauthorized uses.
9. Identify excess/surplus properties that may be candidates for sale and maximize benefits to be received from sale.

14.16.1. Excess Land

JPA shall follow Government Code Section 54220-54323 in the disposal and sale of excess or surplus properties. Excess property may be used in exchange for other property required for the project. Exchanges of land in right-of-way transactions should be limited to those cases where the excess real property is contiguous to the remaining property owned by the grantor of the property being acquired. Non-contiguous exchanges are not recommended since it may be injurious to the interests of an abutting property owner.

14.16.2. JPA Excess Land Committee

The JPA Excess Land Committee is empowered by the JPA Board to declare JPA owned property as Excess. The Excess Land Committee is likewise empowered to determine the manner of disposal and the consideration for the disposal of Excess Land, except that no property transferred to the JPA by a member jurisdiction shall be disposed of as excess or surplus property without written authorization from the applicable member jurisdiction.

The Excess Land Committee shall include the JPA Executive Director, Finance and Administration staff, Real Property staff and/or right-of-way consultant, JPA General Counsel, and member agency representative.

The JPA Excess Land Committee shall meet when there is a need to present a request to declare a property as excess to the JPA Board.

14.17. Notice of Completion and Right-of-Way Transfer to Member Agencies

Upon a Notice of Completion adopted by the JPA Board of Directors, the JPA will begin the right-of-way transfer process to return the right-of-way to the member jurisdictions, as necessary.

SECTION 15. UTILITIES

This Section prescribes policies, procedures, standards, and practices for the coordination of utility relocations required for the construction of the Connector. In general, utility policies apply to public utilities. “Public utilities” are defined as those utilities either publicly, cooperatively or privately owned that provide a product or service, either directly or indirectly, to the public for a fee.

15.1. Goals

The goal of this Section is to establish a fair and efficient process to coordinate any conflicting utility relocations for the Capital SouthEast Connector Project. The JPA intends to design the project to avoid conflicts where possible. The JPA also does not intend to preclude the acquisition of a public utilities and public facilities easement immediately adjacent to the Connector right-of-way.

15.2. Applicable Laws, Codes and Regulations

State law authorizes the use of local thoroughfare rights of way for public utility facilities owned by public agencies or by private companies recognized by the California Public Utilities Commission for a public utility service, when such use does not interfere with the primary purpose of the local thoroughfare.

15.3. Administrative Procedures

15.3.1. Intra-Agency Coordination

The JPA, as far in advance as possible, shall be notified by member agencies when Encroachment Permit applications are being considered or have been submitted to the member agency. The JPA shall be allowed to review, and comment on the Encroachment Permit.

The JPA will review and assess the potential impacts that the proposed encroachment will have on the Connector and will evaluate the permit application for conformance to JPA Project Design Guidelines including but not limited to access control, planned Connector facilities, or planned maintenance and operations. These evaluations will be based upon several factors:

- Construction staging
- Interim and ultimate roadway alignments
- Future interchange locations and vertical/horizontal clearance to pole lines and buried facilities
- Existing topography
- Future and existing alignments of connecting streets
- Adjacent land owner impacts
- Development needs

- Design criteria and safety concerns adopted by the JPA Board
- Visual impacts to future urban land uses
- Potential environmental impacts identified in the JPA's Final Program Environmental Impact Report

15.3.2. Utilities on State Facilities

JPA will follow the Caltrans Right-of-Way Manual on all On-System projects and adhere to existing Cooperative Agreement(s) entered into between the agency and the utility for cost share and other conditions. JPA will follow the Caltrans Local Assistance Manual for all federally funded off-system projects.

15.4. Accommodating a Public Utilities and Public Facilities Easement

In locations where a frontage or access road is not located adjacent to the Connector, the JPA intends to provide a Public Utilities and Public Facilities (PUPF) easement. The PUPF easement can vary in location and width. The JPA considers a PUPF easement to be a land right for the local member jurisdiction (City or County) and does not assume liability for facilities outside of the right-of-way.

All future utility facility encroachments shall be relocated into the acquired PUPF easement at the time and manner as determined by the Executive Director of the Connector JPA or designee. This will likely be when a JPA project phase has been funded and environmentally cleared.

In developed urban sections of the Connector corridor, where existing utilities exists, the relocation of the utility into the proposed PUPF easement may not be practical. The Executive Director will collaborate with the member agencies to determine the potential impacts of these utility facilities remaining in the ROW and resolve their final alignment.

A utility may be compelled to pay for one relocation, but may resist the cost of a temporary relocation followed by a permanent relocation where that is necessary for construction staging. Therefore, new encroachment permits into the Connector alignment shall be conditioned to require placement in their ultimate location in the PUPF easement defined in the Connector Design Guidelines, where practicable.

When the JPA is the lead for a portion of the Connector alignment, the JPA in coordination with the member agencies, shall fund, environmentally clear and obtain the PUPF easement for this relocation. In some instances this may be accomplished by conditions on private development adjacent to the Connector alignment through the member agencies adoption of the Connector into their General Plan.

15.4.1. Frontage Roads

In cases where a frontage road adjacent to the Connector alignment is proposed, an additional PUPF easement should not be required. Utilities can be relocated into the frontage road right-of-way and maintenance access to and from the utility shall be from the frontage road, not the Connector.

15.5. Utility Relocations - Utility Owner under Franchise Agreement

For utility relocations that involve franchise agreement utilities the member agency shall make the relocation demand of the utilities and state that JPA staff is acting as their agent. The JPA will coordinate with the utilities for relocation of all facilities into a PUPF easement or frontage road right-of-way, as necessary.

The Director shall notify in writing any owner or operator having utility facilities of any nature upon, in, over or under the Connector to remove or adjust so much of their facilities as will allow the prosecution of the public work. The Notice shall be accompanied by a copy of the plans and specifications for the authorized public work showing the location of the work in the streets and describing the same. The Notice shall specify a time within which all affected utility facilities must be removed or adjusted.

The facility owner shall be responsible for design of all utility facility relocations. The only exception is when the utility owner has requested the JPA to perform the design and construction to be done as part of the Connector project. The design and construction of the relocation shall be included in a special Utility Agreement that may be entered into with the utility owner.

In the event that an establishment of prior rights is not clear or a relocation schedule does not meet the project goals, these situations may be resolved by the JPA negotiating a cost sharing settlement or agreement to advance payment by the JPA in return for schedule compliance, with a reservation of rights to determine who was responsible for the cost at a later date. Alternatively, it may be desired to “share” the work required for a utility relocation and incorporate the work into design-build contract. In order to address this, the JPA may enter into Master Utility Relocation Agreements with the utility company that address cost allocation, work allocation, schedule compliance, payment requirements, betterments and other matters.

During the design and engineering process, utilities affected by the proposed construction will be identified. Typically, the affected utilities may need to be relocated, protected in place, or possibly abandoned. The JPA will undertake early identification of affected utilities and early coordination with the affected utility company, as timely design and completion of all utility adjustments will affect the JPA’s ability to commence project construction. In addition, it is recognized that Utility Owners require lead-time to develop budgets and plan work required for ordered relocations. Additional lead time may be required to order long lead time materials, to schedule work during non-peak demand periods when utility facilities may be removed from

service, and to comply with PUC General Orders. The JPA staff will identify all necessary utility relocations and provide a public utility easement for relocation.

If any owner or operator shall fail, neglect, or refuse to comply with the requirements set forth in the Notice issued then, and in that event, the Director shall cause to be removed or adjusted so much of the utility facilities as may be required for the prosecution of the said authorized public work according to the plans and specifications; and any incidental expenses incurred in the removal or adjustment shall be chargeable to the owner or operator failing, neglecting, or refusing to comply with the requirements of the Notice, and may be recovered in an action at law brought in the name of the JPA against such owner or operator.

15.6. Franchise Agreements and CPUC Conformance

The California Public Utilities Code (“CPUC”) outlines the conditions under which public utilities may operate franchises throughout the state and states in pertinent part:

“Every franchise or privilege to erect or lay telegraph or telephone wires, to construct or operate street or interurban railroads upon any public street or highway, to lay gas pipes for the purpose of carrying gas for light, heat, or power, to erect poles or wires for transmitting electricity for light, heat, or power, along or upon any public street or highway, or to exercise any other privilege whatever proposed to be granted by the governing or legislative body of any county, city and county, or city shall be granted upon the conditions in this article.....”

(Cal. Pub. Util Code Section 6001 et seq; see also Cal. Pub. Util. Code Section 6201 et seq. (gas, oil, water, and electric franchises); Cal. Pub. Util. Code Section 6091, 6092 (steam heat franchises)).

State law requires utilities to relocate their facilities at their own expense for the purposes of certain street improvements. The CPUC states, in pertinent part, that “the grantee shall remove or relocate without expense to the municipality any facilities installed, used, and maintained under the franchise if and when made necessary by any lawful change of grade, alignment, or width of any public street, alley, or place. (See also, Cal. Pub. Util. Code § 6297.)

In addition to the its efforts to articulate the franchise rights of utilities throughout California, the State nevertheless allows for the imposition of additional terms and conditions on franchise agreements that do not conflict with state law. Section 6002 provides that local governments may “impose such other and additional terms and conditions” that do not conflict with state law, “whether governmental or contractual in character, as in the judgment of the legislative body thereof are to the public interest.” (Cal. Pub. Util. Code § 6002.)

Public or private utility easements may or may not have a facility located (overhead, surface or underground) in the property. Clearance and elimination of private easements from the right-of-

way being acquired may be required. This is usually done by Quitclaim Deed with an obligation in the Purchase contract to secure a replacement easement, if necessary. If the easement is public (easement in gross) and no facility exists, it must be determined whether to take title subject to the easement. The utility company may have plans for a future facility and it is incumbent upon the JPA to negotiate an agreement with the utility company recognizing such future use.

15.7. Utility Relocations – Utility Owner with Prior Rights

For utility relocations that involve utilities located within an utility easement or other conveyance document with prior rights, the JPA will coordinate with the utility owner for relocation of their facilities into the PUPF easement that will be acquired by the JPA. This replacement area is subject to the same controls and clearances that apply to regular rights-of-way, including hazardous waste clearances. The JPA will obtain and analyze data to allocate cost between Owner, JPA, State and/or Local (when applicable) for all required utility adjustment work and to clearly document, support, and set for the basis of the finding in a Report of Investigation. The JPA will coordinate positive location requirements for all High Risk utility facilities within the project limits and prepare and issue Notices to Owner and Utility Agreements for relocations.

The facility owner shall be responsible for design of all utility facility relocations. The only exception is when the utility owner has requested the JPA to perform the design or construction to be done as part of the Connector project. The or and construction of the relocation shall be included in a special Utility Agreement that may be entered into with the utility owner. If the utility owner's new facilities are planned for installation in a local street or road underlying JPA's project, any additional cost is the utility owner's. Where the utility owner has a superior right to member jurisdiction or JPA's interest, the additional utility construction features required to satisfy the future project needs is at JPA's expense. The utility owner is responsible to prepare, document, and submit a claim for their declared right-of-occupancy. If the JPA's investigation confirms the owner has rights prior and superior to those of Agency or JPA, and JPA concurs, the owner is paid for all or a portion of the relocation work.

15.8. Utility Encroachments into Right-of-Way

It is the JPA's intent to have the Connector right-of-way free from longitudinal utilities and for all utilities to be located within an easement outside of JPA right-of-way. However the JPA recognizes that circumstances may arise where an encroachment into the right-of-way is necessary.

Utilities may be issued permits to place their facilities within Connector right-of-way as long as they adhere to the requirements of the permit and State regulations governing the permits. The permit stipulates how utilities must be installed to minimize risk to the traveling public, and makes the utility responsible for the proper installation.

In addition to the requirements set forth by an Agreement or Permit from the State or local jurisdiction, the following special conditions of the Connector JPA below shall apply. Should there be ambiguity or conflict between the Agreement and/or Permit (issued by the local jurisdiction) and special conditions of the Connector JPA, the JPA conditions shall apply.

1. Vertical clearance above pavement and location of poles, guys, and related ground-mounted utility appurtenances along the roadside are factors of major importance to preserve a safe traffic environment, the appearance of the Connector, and the efficiency and economy of maintenance. In all cases, full consideration shall be given to measures, reflecting sound engineering principles and economic factors, necessary to preserve and protect the integrity and visual quality of the Connector, its maintenance efficiency and the safety of Connector traffic. All encroachments shall be thoroughly engineered and properly installed so as they are integrated into and become an unseen part of the Connector corridor itself. The type and size of utility facilities and the manner and extent to which they are permitted along or within the Connector right-of-way can materially alter the scenic quality, appearance, and view of highway roadsides and adjacent areas.

For these reasons additional controls are applicable. Therefore, all new above ground utilities may be conditioned to be placed underground so as to not impair the visual quality of the lands being traversed where there is feasible and prudent alternative. Where this is not the case, aerial facilities shall be considered only where:

- a. Other locations are unusually difficult and unreasonably costly, or are more undesirable from the standpoint of visual quality; and/or
- b. Undergrounding is not technically feasible or is unreasonably costly, and the proposed installation can be made at another location and will employ suitable designs and materials that give adequate attention to the visual qualities of the area being traversed.

These controls shall be determined the Director of the Connector JPA or designee and apply to installations that are needed for a Connector purpose, such as for highway lighting, traffic signals, changeable message signage, or other JPA use.

2. All utility installations on, over, or under Connector right-of-way and attachments to Connector structures shall be of durable material designed for a minimum service life of 30 years and be relatively free from routine servicing and maintenance.
3. Utility facilities shall be located to minimize need for later adjustments to accommodate future Connector improvements and to permit servicing such lines with minimum interference to Connector traffic.
4. Any necessary permits, including the accommodation of utilities on Connector right-of-way and environmental controls, shall be the responsibility of the utility. Underground installations will be so designed that the facility can be located without disturbing the

roadway structure. If the installation includes the use of “non-toneable” piping, conduit, or direct bury lines, locator lines will be placed in conjunction with the utility line installation.

5. Longitudinal installations shall be located on a uniform alignment as near as practicable between the ditch line and the right-of-way line so as to provide a safe environment for traffic operation and preserve space for future Connector improvements or other utility installations.
6. If the installation is between the ditch-line and right-of-way line, the utilities facilities must have a minimum cover depth of thirty-six (36) inches. If the installation is between the ditch line and the edge of pavement, the utilities facilities must have a cover depth of forty-two (42) inches below the top of pavement. If the minimum bury as set forth cannot be obtained, the facility shall be re-routed. When not practicable to re-route, it shall be protected by other approved methods. The top of the pipe must not project into the sub-base.
7. Conditions which are generally unsuitable or undesirable for utility crossings must be avoided. These include locations such as deep cuts; near footings of bridges and retaining walls; across at grade intersections or ramp terminals; at cross drains where flow of water, drift, or stream bed load may be obstructed; within basins of an underpass drained by a pump if the pipeline carries a liquid or liquefied gas; and in wet or rocky terrain where it will be difficult to attain minimum bury.
8. Only (CPUC defined) public utility companies may occupy the Connector right-of-way longitudinally along the roadway in the PUE. Perpendicular crossings may be permitted to private companies or individuals, subject to conditions described herein.
9. To the extent feasible and practicable, utility line crossings of the Connector shall cross on a line generally normal (90 degrees) to the Connector alignment but in no case shall the angle of crossing be less than 75 degrees. Permanent markers which are readily identifiable and suitable shall be placed by the utility at the Connector right-of-way line where it is crossed by a utility facility and over longitudinal encroachments in the Connector right-of-way at appropriate intervals, as determined by the Director of the Connector JPA or designee.
10. The horizontal and vertical location of utility lines within the Connector right-of-way limits shall conform to the clear roadside policies applicable and consistent with the clear zones as stated in the AASHTO-Roadside Design Guide, latest edition, and the Access and Roadside Management Standards, latest edition. The minimum vertical clearance for overhead power and communication lines above the Connector and the minimum lateral and vertical clearance from bridges shall be as required by the determination of the Director of the Connector JPA or designee and/or applicable Public Utility Commission Rules and Regulations.
11. Manholes shall not be located in the pavement or shoulders of the Connector. Exception may be made on streets at those locations where manholes are essential parts of existing lines that are permitted to remain in place under existing and proposed roadways as determined by the Director of the Connector JPA or designee.

12. In some cases, attachment of utility facilities to highway structures, such as bridges, is a practical and necessary arrangement and may be permitted by Permit. However, attaching utility lines to a highway structure can materially affect the structure, the safe operation of traffic, the efficiency of maintenance and inspection, and the appearance. Therefore, where it is feasible and reasonable to locate utility lines elsewhere, attachments to bridge structures should be avoided.
13. All costs of installing and maintaining any utilities within the JPA right-of-way shall be at the expense and effort of the utility company, with typical “Franchise Utilities”. Failure to maintain such utility in an acceptable manner shall be grounds for revoking the encroachment permit and removal of the utility at the utility company’s expense. Any damages or adverse impacts to the structural integrity of the structure resulting from installation or maintenance of the utility will be corrected at the expense and effort of the utility company.
14. Upon completion of the permitted work, the utility must supply accurate as built drawing within 60 days to the Director of the Connector JPA or designee. Records shall be maintained by the utility owner that describe the utility, usage, size, configuration, material, location, height or depth, and any special features such as encasement. This information should be in a reproducible form available to other utilities and highway agencies.

APPENDIX

A – Table 16-13

B – Figure 16-16

C – Segment Fact Sheets

D – Stakeholder Advisory Committee Involvement Memo

E – Sustainable Communities Committee Sustainability Assessment Memo

F – Functional Guidelines

G – Integrated Modes Policy

Table 16-13. Assumed Travel Lanes and Access to Connector for Proposed Project

Connector Roadway	Cross Street	2035 Baseline			2035 Proposed Project			
		Lanes - Facility Type	Traffic Signal	Comments on Assumed Access	Lanes - Facility Type	Traffic Signal	Interchange	Comments on Assumed Access
White Rock Road	US 50 EB Ramps	4-T	1		4-T	1		
	Vine/Valley View Pkwy		1			1		
	Sunset			Right in/out				Right in/out
	Keables Lane							
	Monte Verde Dr			Left in/Right out				Left in/Right out
	Post St							
	Latrobe Road		1			1		
	Windfield Way		1			1		
	Manchester Drive		1			1		
	Bailey Circle			Right in/out				Right in/out
	Stonebriar/ Four Seasons	1		1				
	Carson Crossing	1		1				
	Empire Ranch Road	4-T	1		4-E		1	
	Placerville Rd/Payen Rd		1					Right in/out
	RR Crossing			At-Grade Crossing				At-Grade Crossing
	Scott Road (E)		1				1	
	Collector	6-T		Right in/out	4 + 2 HOV - E			No connection
	Oak Avenue Pkwy		1			1		Acceptable 2035 LOS as signalized intersection
	Scott Rd (W)		1					Existing access eliminated and realigned with Prairie City Rd Interchange
	Collector			Right in/out				No connection
	Prairie City Rd		1				1	
	OHV Park East Ent			Right in/out (except events)				Connected to realigned Scott Rd (W) with access to Prairie City Rd Interchange
	OHV Park West Ent/ Aerojet Rd		1			1		

Table 16-13. Continued

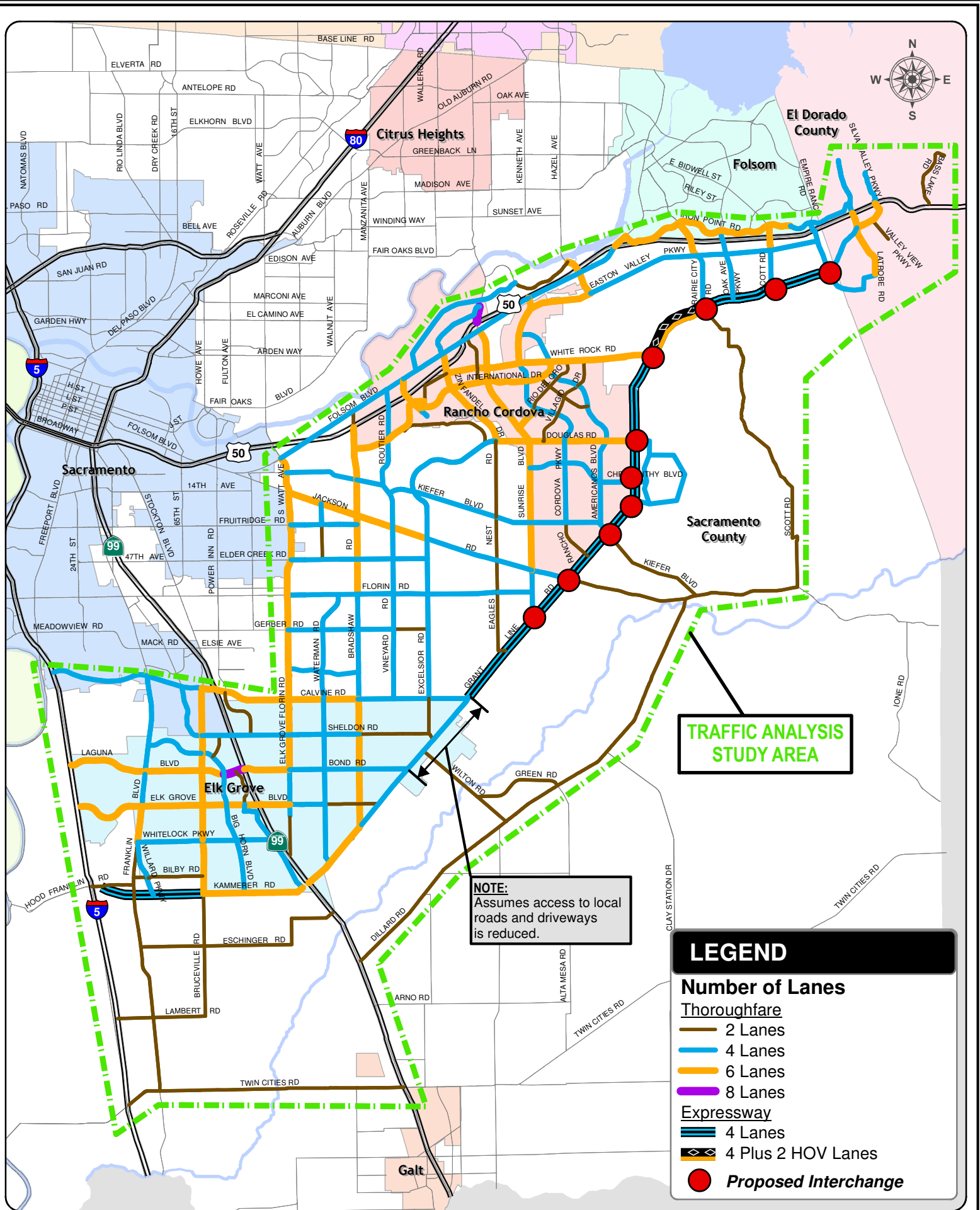
Connector Roadway	Cross Street	2035 Baseline			2035 Proposed Project			
		Lanes - Facility Type	Traffic Signal	Comments on Assumed Access	Lanes - Facility Type	Traffic Signal	Interchange	Comments on Assumed Access
Grant Line Road	Grant Line Rd	4-T	1		4-E		1	
	Teichert Entrance			Realign across from either North Douglas access or White Rock Rd				No access between White Rock Rd and Centennial
	North Douglas Access (future Centennial)		1	Centennial extension post-2035		1		Future interchange with interim signal
	Douglas Rd		1				1	Potential Right in/out access for residence north of Douglas Rd
	Glory Lane			Access through Cordova Hills or Right in/out				Access through Cordova Hills or Douglas Rd
	North Loop Road		1					Traffic signal for Connector Phase 1 & Right in/out for Ultimate Connector
	Chrysanthy Blvd		1				1	
	University		1				1	
	Kiefer Blvd		1				1	
	Rancho Cordova Pkwy		1	Rt in/RT out to driveways		1	Acceptable 2035 LOS as signalized intersection	
	Jackson Rd		1				1	Frontage road to Michlen Ct for driveway access north of Jackson Rd
	Sunrise Blvd		1				1	Frontage road connecting existing six driveways on SE side to single right in/ out access; access to residence near Sunrise Blvd via frontage road
	Eagles Nest Rd/ Sloughhouse Rd		1				1	Right in/out for residence

Table 16-13. Continued

Connector Roadway	Cross Street	2035 Baseline			2035 Proposed Project			
		Lanes - Facility Type	Traffic Signal	Comments on Assumed Access	Lanes - Facility Type	Traffic Signal	Interchange	Comments on Assumed Access
Grant Line Road	Calvine Rd	4-T	1	Rt in/RT out to driveways	4-T	1		Three field entrances connected via frontage road with one access point; Residence access Calvine Rd via frontage road; North private drive access via frontage road to Sloughhouse Rd
	Farm Road						High Access Roadway: Maintain access to all driveways and local roads with Right in/ out with signals at same locations as Baseline Reduced Access Roadway: Reduce the number of driveways and local road connections along Grant Line Road and provide access to properties via alternative access Deer Creek Causeway: No access on causeway. Maintain access to all driveways and local roads along Grant Line Road	
	Richert Lane							
	Poppy Seed Lane							
	Spanish Grant Rd							
	Public Road							
	Bradley Ranch Rd							
	Beitzel Rd							
	Graybill Lane							
	Oak Pond Lane							
	Sheldon Woods Way							
	Sheldon Rd		1			1		
	Mooney Rd							
	Siefker Ct		1			1		
	Aleilani Lane		1			1		
	Wilton Road		1			1		
	Pleasant Grove School Rd			Right in/out				
	De Souza Lane			Realign with Sherman Oaks				
	Sherman Oaks Ct		1	Right in/out for all driveways and local roads				
	Upton Ct							
	Menlo Oaks Ct							
	Clark Lake Lane							
	Bond Road		1			1		

Table 16-13. Continued

Connector Roadway	Cross Street	2035 Baseline			2035 Proposed Project			
		Lanes - Facility Type	Traffic Signal	Comments on Assumed Access	Lanes - Facility Type	Traffic Signal	Interchange	Comments on Assumed Access
Grant Line Road	Equestrian Dr	4-T		All driveways and local roads remain open	4-T			Cul-de-sac; access to Wrangler Dr.
	Pavich Lane							Right in/out
	Freeman Rd							Right in/out
	Jetmar Way							Realigned to Elk Grove Blvd
	Elk Grove Blvd		1			Left in (no LT out) could be considered at some local roads	1	Driveway access via frontage roads to Bradshaw Rd and Elk Grove Blvd
	Bradshaw Rd		1	1				
	Mosher Rd	6-T	1	6-T	1		One access for 2 residents on NW side; frontages roads to Mosher & Bradshaw	
	Waterman Road		1		1			
	UPRR						Grade separated	
	E. Stockton Blvd		1		1		Driveways routed to E. Stockton/Survey	
	SR 99 NB Ramps		1		1			
Kammerer Road	SR 99 SB Ramps	6-T	1	6-T	1		Existing right in/out access points maintained	
	W Stockton Blvd		1		1			
	Lent Ranch Pkwy		1		1			
	Lotz Pkwy		1		3 existing right in/ out access points	1	Existing right in/ out access points maintained	
	Collector		1			1		
	Big Horn Blvd		1			1		
	Rau Road		Right in/out			Frontage road to Bruceville or Big Horn		
	Collector 2	1		1		No access to Kammerer Bypass Option		
	Bruceville Rd	4-T	1	4-E	1			
	Willard Pkwy		1		1			
	UPRR					Grade separated		
	Franklin Blvd		1		1			
	Hood Franklin Rd					Right in/out		
	I-5 NB Ramps		1		1			
Red = Future Roadways		Total	49		Total	34-36	10	Bold = Major Cross-Streets
Source: DKS Associates 2010.		T = Thoroughfare E = Expressway			3 additional signals with Sheldon No Build Option			



Character and Theme through Eyes of the Community

How We Move...

Current mobility needs identified through mobility mapping with the SAC

Motorized Movements

- East Franklin residential area is using Bruceville Rd on the east.
- Majority of residential area on west is using Hood Franklin Blvd for a back route into/out of Elk Grove.
- Hood Franklin community has concerns about traffic through their community.
- Majority of the traffic generated in the southg area of Elk Grove uses SR99.
- The two existing access points could get really congested.
- Ranchers with farm machinery are accessing these narrow roads.
- Industrial area is limited in access points.

Bicycle and Pedestrian Movements

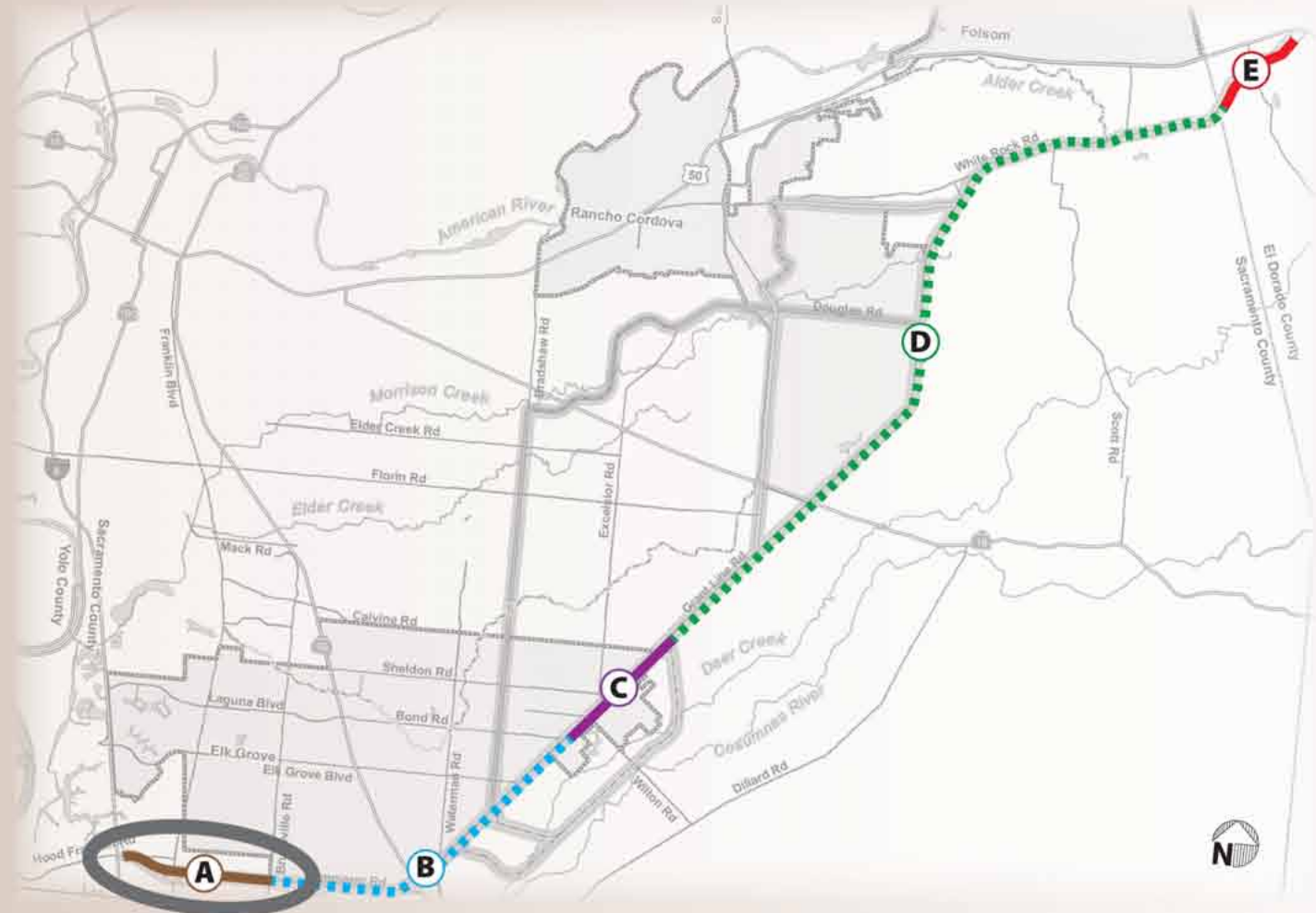
- Not aware of any current bike/pedestrian movements.
- A pathway towards and along the river would be a draw.
- A bike trail would probably get a lot of recreational use.
- Very few people would use for work, only recreational use.
- It is rare that you see people running or biking since Kammerer Road is so narrow.
- People are not cycling or walking, but if it were built, they would use it.
- Bike commuters won't go west.
- No one wants to recreationally ride on such a busy highway.

Transit and Commute Movements

- Parking at SR-99 and I-5 for commuters.

Future Planned Development Projects

- There have been discussions about a college with dorms coming into the area.
- Tolling will be a problem if the goal is to attract businesses to this area. We can't tell these businesses their only access is a toll road.



How It Feels...

SAC members selected from a sampling of families that represent the feeling of the land, fabric, structure, and color of their communities.



SEGMENT A

Four lane expressway, on Kammerer Road from the I-5/Hood Franklin Interchange to Bruceville Road

Aesthetic Continuum

Each segment falls within different levels of intensity along the aesthetic continuum.

SEGMENT	1	2	3	4	5	HERITAGE
	LESS PASTORAL				MORE PASTORAL	
A	West of RR			More Pastoral		Some
	East of RR	Suburban Area				
B	West of Waterman					
	East of Waterman					
C	Transition					
	Sheldon Area					
	Transition					
D	West End					
	East End					
E	El Dorado Hills					

INTENT

Provide a high speed connection to I-5 with controlled access.

CONSIDERATION

The Connector joins two existing streets, Hood-Franklin Road and Kammerer Road. The alignment is along farmlands and rural properties (natural terrain) except where it meets with Hood-Franklin at I-5. Currently, local access uses the adjacent street system and is not reliant on the Connector alignment for traffic circulation and property access, except at the I-5 connection.

FACILITY TYPE

EXPRESSWAY – A high speed, fully divided, urban arterial.



Character and Theme through Eyes of the Community

How We Move...

Current mobility needs identified through mobility mapping with the SAC

Motorized Movements

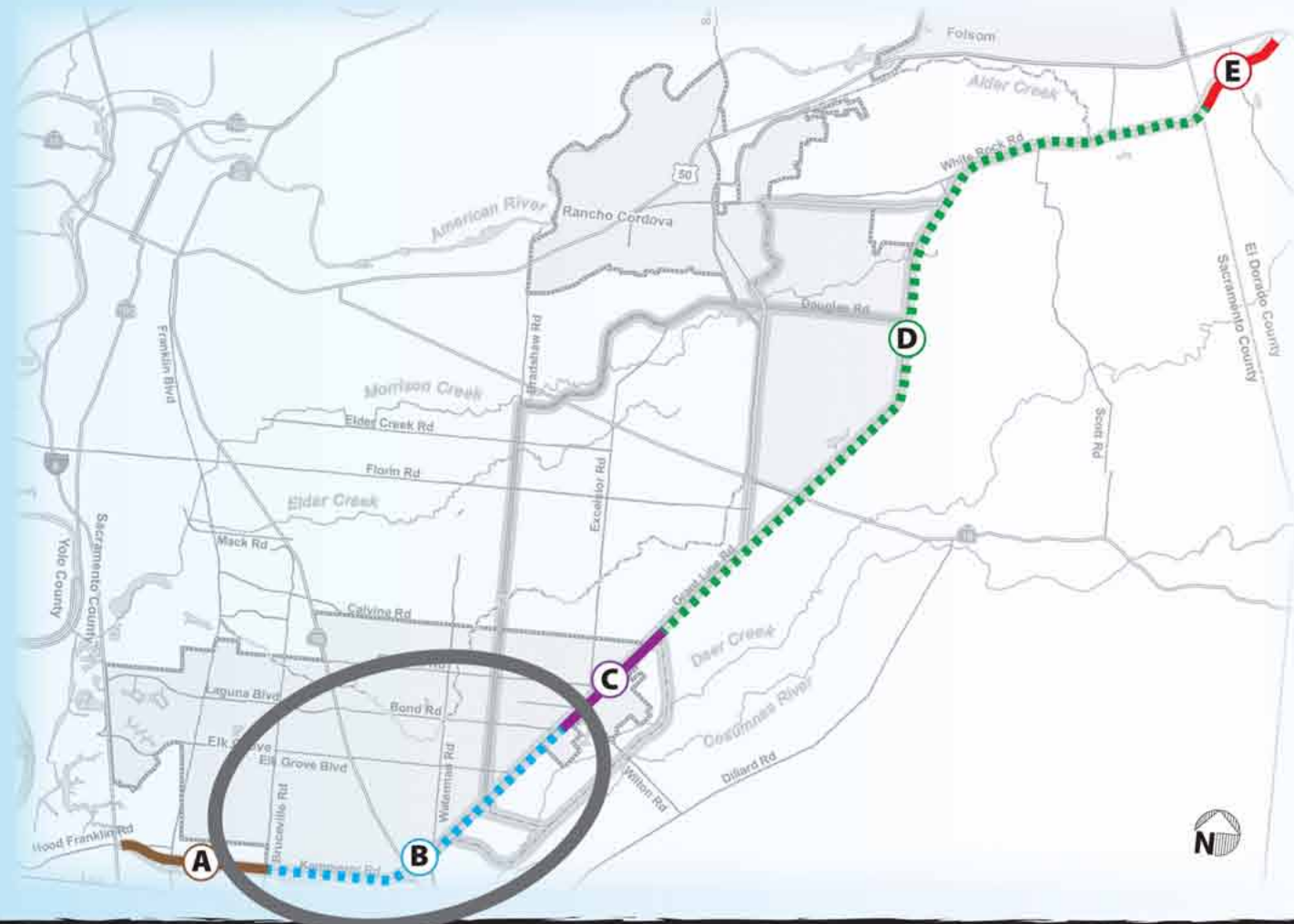
- Lots of farm equipment and agricultural access from SR-99 east on Grant Line Road.
- Residents use Waterman Road south and north into and out of Elk Grove.
- Residents use Bradshaw Rd, Elk Grove Blvd and Bond Rd as main access in and out of Elk Grove.
- Parcels south of Grant Line Road use Wilton Rd to Dillard Rd to access farming land and SR-99 and traffic is increasing.
- Levee Road is not heavily used.

Bicycle and Pedestrian Movements

- Potential recreational trail use through Southeast Policy Area following creek bed.
- Transit and Commute Movements**
- Park and Ride at Grant Line Rd and SR-99.
- Transit destination at W. Stockton Blvd. and Promenade Parkway where there is heavy commercial development.
- Long-term light rail (bus rapid transit) will eventually be built through Southeast Policy Area into the Sterling Meadows Development.

Future Planned Development Projects

- West of SR99: Southeast Policy Area, Sterling Meadows, Lent Ranch.
- East of SR99 to UPRR: Industrial.
- East of UPRR: Industrial, residential, rural use.



How It Feels...

SAC members selected from a sampling of families that represent the feeling of the land, fabric, structure, and color of their communities.



SEGMENT B

4 to 6 lane thoroughfare, on Kammerer Road and Grant Line Road from Bruceville Road to Bond Road

Aesthetic Continuum

Each segment falls within different levels of intensity along the aesthetic continuum.

SEGMENT	1	2	3	4	5	HERITAGE
	LESS PASTORAL				MORE PASTORAL	
A	West of RR					
	East of RR					
B	West of Waterman	Industrial				
	East of Waterman	Suburban Area	Some Pastoral			
C	Transition					
	Sheldon Area					
	Transition					
D	West End					
	East End					
E	El Dorado Hills					

INTENT

Intent – Provide an urban arterial street that is consistent with the existing developed street speeds and maintains major street connections.

CONSIDERATION

These connecting streets currently serve as an urban arterial roadway leading into and through the southern limits of Elk Grove. The roadway is on the existing street alignment and currently provides access to residential and commercial properties through individual driveways, through local road intersections, and to SR-99 at the Grant Line Road Interchange

FACILITY TYPE

THOROUGHFARE - An urban arterial with raised median.



Character and Theme through Eyes of the Community

How We Move...

Current mobility needs identified through mobility mapping with the SAC

Motorized Movements

- The circulation issue is property owners need access. There are about 100 owners between Calvin and Bond.
- There is limited existing property access.
- The main issue is property owners only have one way to get in and out. They turn directly onto/off of Grant Line Rd from their property.
- People like the way it works now.
- As more traffic happens, it will eventually be an issue, but currently ok as-is.

- Customers of the local businesses come from all over, not just local customers.
- Most local trips, but there are regional trips to/from the commercial core.
- There is a school on Pleasant Grove School Road that uses Grant Line Rd for access.

Bicycle and Pedestrian Movements

- People are walking on other roads but no one is walking to the businesses.
- There are bikes and pedestrians along the commercial core area. Bikes and pedestrians need to cross Grant Line Rd.

Equestrian Movements

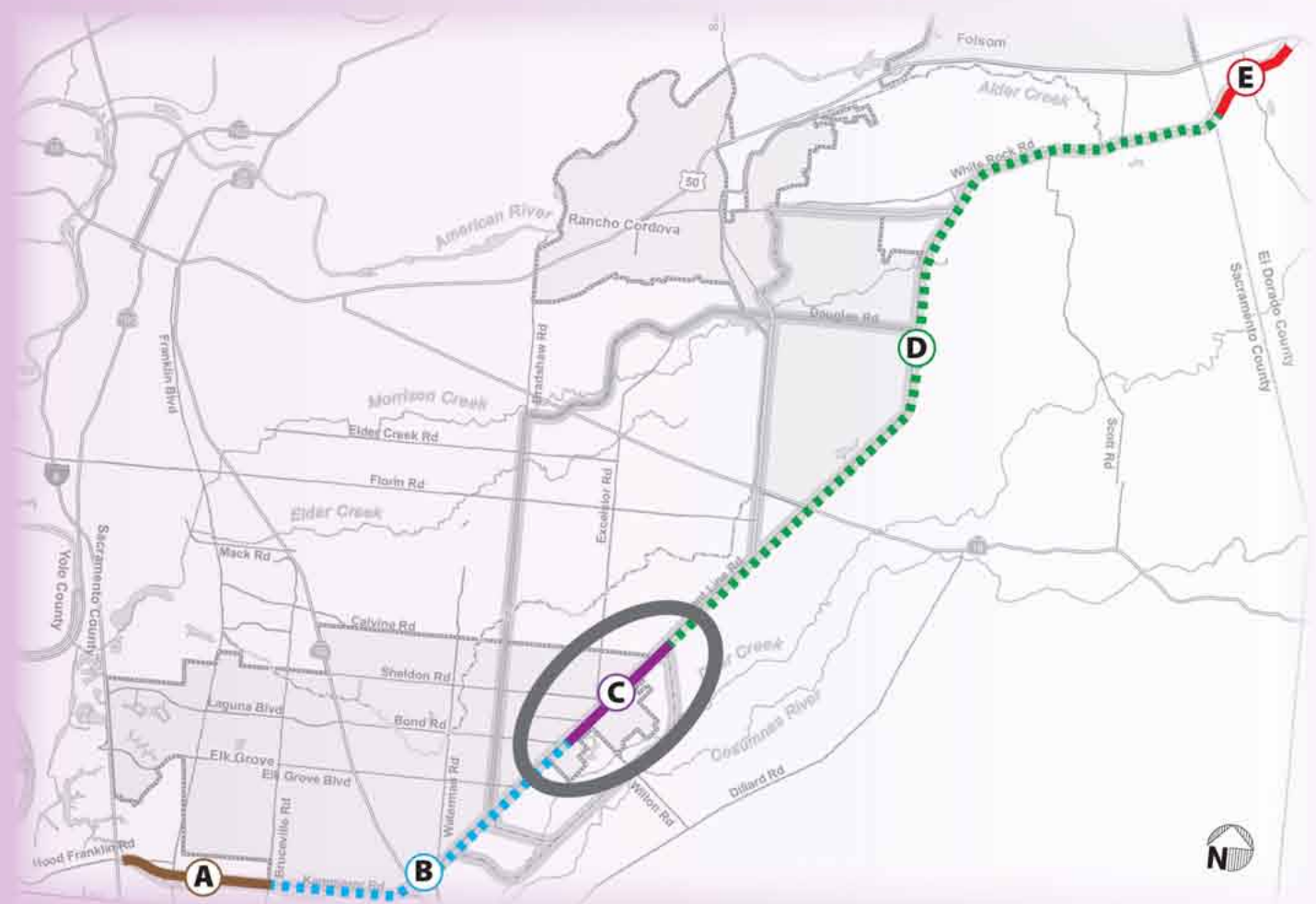
- There is an equestrian trail that follows the old railroad line.
- There is limited equestrian parking. It is needed for local business access along Grant Line Rd between Sloughouse and Bond roads.
- There are a dozen equestrian centers within a 10-mile radius in the area.
- People ride their horses to/from the commercial core and leave them outside to do business.

Transit and Commute Movements

- None noted.

Future Planned Development Projects

- None noted.



How It Feels...

SAC members selected from a sampling of families that represent the feeling of the land, fabric, structure, and color of their communities.



SEGMENT C

Four lane roadway, on Grant Line Road from Bond Road to Calvin Road (Sheldon Area)

Aesthetic Continuum

Each segment falls within different levels of intensity along the aesthetic continuum.

SEGMENT	1	2	3	4	5	HERITAGE
LESS PASTORAL ← → MORE PASTORAL						
A	West of RR					
	East of RR					
B	West of Waterman					
	East of Waterman					
C	Transition		Some Pastoral			Some
	Sheldon Area					More
	Transition		Some Pastoral			Some
D	West End					
	East End					
E	El Dorado Hills					

INTENT

Provide a rural arterial street that is consistent with the existing developed street system and maintains major street connections.

CONSIDERATION

Grant Line Road currently serves as a rural roadway for the communities of Sheldon and Wilton. It passes through the center business district of Sheldon. The roadway is on the existing alignment and currently provides access to closely spaced residential and commercial properties through individual driveways and through local road intersections.

FACILITY TYPE

"SPECIAL SECTION" - A rural arterial.



Character and Theme through Eyes of the Community

How We Move...

Current mobility needs identified through mobility mapping with the SAC

Motorized Movements

- This is a high speed area.
- High truck volumes on Grant Line Rd to Sunrise Blvd.
- Commuters use Grant Line Rd to Sunrise Blvd from Elk Grove.
- Lots of through traffic in this area from Rancho Cordova.
- Lots of people in Elk Grove go to Folsom area for work.
- Lots of farm equipment along Grant Line Rd.
- People use Dillard Rd as an alternative to Grant Line Rd.
- Lone/Jackson commuters use Jackson Road to get to US 50.
- Lots of truck traffic to/from landfill east of Kiefer Blvd.
- High volumes at White Rock Rd and Grant Line Rd.

- Teichart Gravel pit has high truck volumes.
- Prairie City Rd sees high volumes especially during ski season when US 50 is at capacity.
- El Dorado Hills residents take Prairie City Rd to Scott Rd to White Rock Rd and vice versa.

- High year-round volumes at Prairie City State Vehicular Recreation Area.

Bicycle and Pedestrian Movements

- More bike/pedestrian potential further to west and south.
- There is a planned bike/pedestrian pathway east of Prairie City Rd.
- Minimal bike/pedestrian demand between White Rock Rd and Calvine Rd.
- Multiple planned bike trails including underpass at the Connector to tie into the trail near Deer Creek Hills.

Transit and Commute Movements

- High commute segment with need for Park and Ride (Sunrise Blvd and Jackson Rd)
- High commute area at White Rock Rd and Grant Line Rd.

Future Planned Development Projects

- Significant development planned along Prairie City Rd.
- Folsom Planning Area shows more access locations at Grant Line Rd.



How It Feels...

SAC members selected from a sampling of families that represent the feeling of the land, fabric, structure, and color of their communities.



SEGMENT D

4 to 6 lane expressway, on Grant Line Road and White Rock Road from Calvine Road to the Sacramento-El Dorado County line

Aesthetic Continuum

Each segment falls within different levels of intensity along the aesthetic continuum.

		1	2	3	4	5	
		LESS PASTORAL ← → MORE PASTORAL					HERITAGE
A	West of RR						
	East of RR						
B	West of Waterman						
	East of Waterman						
C	Transition						
	Sheldon Area						
D	West End						
	East End						
E	El Dorado Hills						

INTENT

Provide a high speed arterial street with limited access.

CONSIDERATION

These connecting streets currently serve as a rural roadway between Elk Grove and the El Dorado Hills Community. The alignment is on the existing roadway and currently runs along rural properties (natural terrain) with widely spaced driveways road intersections. Local access is provided by the roadway.

FACILITY TYPE

EXPRESSWAY – A high speed, fully divided, urban arterial.



Character and Theme through Eyes of the Community

How We Move...

Current mobility needs identified through mobility mapping with the SAC

Motorized Movements

- White Rock Rd to Placerville Rd to US 50 is a high volume route.
- High trip volume on Latrobe to White Rock Rd to and from business park.
- High volumes of El Dorado Hills residents crossing US 50 to get to shopping and services on the south side of US 50.
- The public parking on Latrobe and White Rock Rd is totally full. People are parking outside the public parking area.
- Four Seasons will become an island surrounded by traffic.
- Highly developed commercial business park cannot accommodate all parking.
 - Senior housing, schools, medical offices, swim school, day care
- A lot of service businesses in this area.

Sunday traffic due to large church. The church has many activities throughout the week, not just on Sundays.

- Fire department
- Heavy traffic because coffee shop and In and Out Burger opened. There have been several collisions.

Bicycle and Pedestrian Movements

- El Dorado Hills is a big bike area.
- Bikers take Iron Point Rd to the America River Trail.
- High bike volumes along White Rock Rd from Latrobe Rd to Payen Rd.
- People are walking to shopping centers (Target, Nugget) from Serrano Parkway.
- People are walking to shopping from the Carson Crossing area to Latrobe Rd.
- Heavily traveled area for bike users from the County line to Placerville Rd is horrible.

- No sensors on traffic signals that pick up bike riders.
- Not enough time to walk across Latrobe Rd at White Rock Rd.
- Not an equestrian area.

Transit and Commute Movements

- High commute volumes to/from business park using Latrobe and back streets to White Rock Rd.
- Commuters use White Rock Rd to Scott Rd and Prairie City Rd to get to US 50.
- Park and Ride opportunities in this area.

Future Planned Development Projects

- Fire Department is building a new training facility in the business park area.



How It Feels...

SAC members selected from a sampling of families that represent the feeling of the land, fabric, structure, and color of their communities.



SEGMENT E

4 to 6 lane thoroughfare, on White Rock Road from the County line to US 50/Silva Valley Pkwy IC

Aesthetic Continuum

Each segment falls within different levels of intensity along the aesthetic continuum.

SEGMENT	1	2	3	4	5	HERITAGE
A	West of RR					
	East of RR					
B	West of Waterman					
	East of Waterman					
C	Transition					
	Sheldon Area					
	Transition					
D	West End					
	East End					
E	El Dorado Hills	Suburban Area				

INTENT

Provide an urban arterial street that is consistent with the existing developed streets, maintains major street connections and accommodates key local access locations.

CONSIDERATION

White Rock Road currently serves as an urban arterial through the El Dorado Hills Community. The alignment is developed as a limited access facility over the majority of its length. Local access is through the connecting street intersections. There are a few remote residential and commercial driveways along its length. It will also provide access to US-50 via the US-50/Silva Valley Parkway project, which will construct a new interchange on US-50 and develop the eastern-most end of the Connector project between Latrobe Road and US-50.

FACILITY TYPE

THOROUGHFARE – An urban arterial with raised median.



Capital Southeast Connector Stakeholder Advisory Committee (SAC) Involvement Summary

TO: Stakeholder Advisory Committee
Connector JPA Staff

COPIES: File

FROM: CH2M HILL

DATE: November 6, 2012

This memorandum provides background and a summary of information developed for and in collaboration with the Stakeholder Advisory Committee (SAC) for the Capital SouthEast Connector ("Connector") Project. This memo includes:

- Background regarding current JPA activities relating to the Connector project
- A summary of the stakeholder advisory process
- SAC coordination, objectives and meetings
- Key inputs from SAC members during and after the SAC Meeting #1 on June 21, 2012, Meeting #2 on August 15, 2012, and Meeting #3 on October 17, 2012, and how we propose to address these
- Updates to information discussed in the SAC meetings
- Results from the SAC and their implementation in the Project Design Guidelines (PDGs)

I. Current JPA Activities for the Connector Project

The Connector Joint Powers Authority (JPA) is undertaking a process involving three concurrent and related activities for the Connector project, following completion of the Final Programmatic Environmental Impact Report (PEIR) which was certified in March 2012. This process is intended to be a collaborative effort involving partner agencies, special interests, and the community to develop the Connector Project Design Guidelines (PDGs). The PDGs will provide enough design detail to guide the engineering, planning, and general planning to support the Tier 2 project environmental documentation process. Separate attention is being given to assessing sustainability opportunities that will be incorporated into the PDGs, as appropriate, and/or documented for further consideration during more advanced stages of project development.

Three Committee Process

The process of developing the Connector PDGs is dependent upon the attention and input from three committees formed to represent key stakeholder focus areas: Technical, Sustainability, and Community. These committees were organized to focus on their subject matter expertise as follows:

- 1) The Technical Advisory Committee (TAC) consists of representatives from each of the five member jurisdictions. This advisory committee with expertise in the technical application of engineering policy, planning and design guidelines was formed to provide input to the JPA on the PDGs for the Connector corridor.
- 2) The Sustainability Concept Committee (SCC) consists of business/industry, agency, program, and advocacy representatives with focused interest and expertise in sustainability (as referred to the Triple Bottom Line for economy, people, and environment). This advisory committee comprised of individuals with an understanding and expertise in the application and implementation of sustainable solutions, was formed to provide input to the JPA through a sustainability assessment process, identifying sustainability concepts and opportunities to apply sustainability solutions from project planning through construction.
- 3) The Stakeholder Advisory Committee (SAC) consists of members from the community, regional organizations, and business or property owners. This advisory committee is viewed as the pulse of the community and was formed to provide input on the community elements and broader issues of the Connector project.

These committees each participated in three facilitated meetings in a parallel process through October 2012. The committees were given an opportunity to review prepared project materials and provide their input in the areas of their subject matter expertise through the PDGs development and Sustainability Assessment process. The efforts from these three committees will be coordinated and integrated into the PDGs, to be presented to the JPA Board in January 2013 along with the Sustainability Assessment Report.

II. Stakeholder Advisory Committee (SAC) Coordination

Purpose and Role of the SAC

The purpose and role of the SAC is:

- To represent the pulse of the users and communities within the project area.
- To provide a community perspective and input on the aesthetic elements for the PDGs.
- To identify and collaborate on themes that can translate throughout the project.
- To work with the project team to better understand how people circulate within the communities along the Connector and the region, considering various integrated modes of transportation.

SAC Meeting #1: Stakeholder Kick-Off (June 21, 2012)

The first stakeholder meeting provided an introduction to the study area and the PDG development process, including a framework for the process. The project team explained the role of each committee and how the input collected would be incorporated into the PDGs. The meeting also provided an opportunity for the SAC to communicate their concerns, issues and interest with the Connector project.

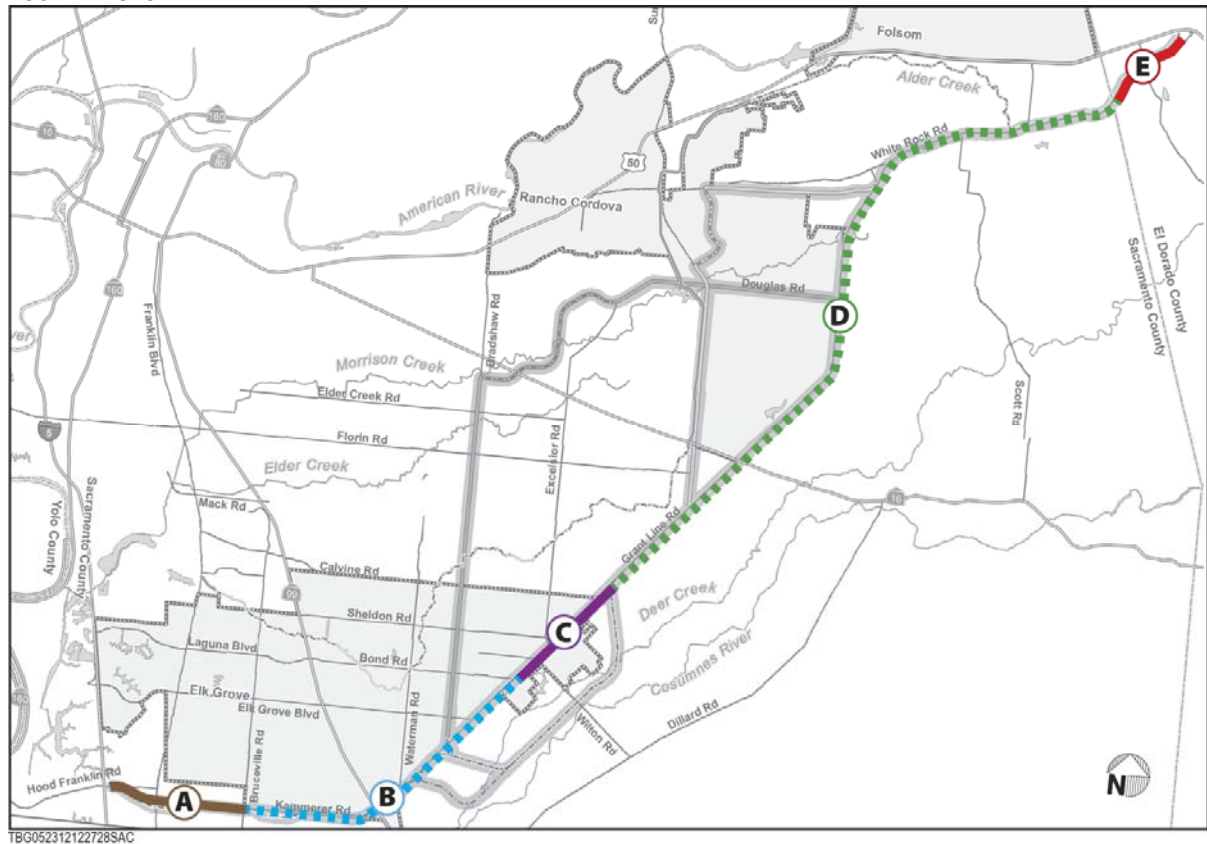
The 35-mile long Connector corridor identified in the EIR traverses the southern Sacramento Valley and eastern foothills through the Cities of Elk Grove, Rancho Cordova, and Folsom and Counties of Sacramento and El Dorado, via Kammerer Road, Grant Line Road and

White Rock Road, with connections to I-5 at Hood Franklin interchange (IC) and US-50 at the Silva Parkway IC. For the purpose of the PDG framework and development, the corridor is divided into 5 segments as follows (See Table 1 and Figure 1 below):

TABLE 1 – SEGMENT DESCRIPTIONS

SEGMENT	DESCRIPTION	LOCAL JURISDICTION
A	4 lane expressway, on Kammerer Rd from the I-5/Hood Franklin IC to Bruceville Rd	Sacramento County
B	4 to 6 lane thoroughfare, on Kammerer Rd and Grant Line Rd from Bruceville Rd to Bond Rd	Elk Grove, Sacramento County
C	4 lane roadway, on Grant Line Rd from Bond Rd to Calvine Rd (Sheldon Area)	Elk Grove, Sacramento County
D	4 to 6 lane expressway, on Grant Line/ Rd and White Rock Rd from Calvine Rd to the Sacramento-El Dorado County line	Rancho Cordova, Sacramento County, Folsom
E	4 to 6 lane thoroughfare, on White Rock Rd from the County line to US 50/Silva Valley Pkwy IC	Folsom, El Dorado County

FIGURE 1 – SEGMENT MAP



SAC Meeting #2: Mobility Needs and Issues (August 15, 2012)

The second stakeholder meeting focused on the current mobility needs within each of the communities along the Connector. The mobility needs were organized and categorized into five major movements as follows:

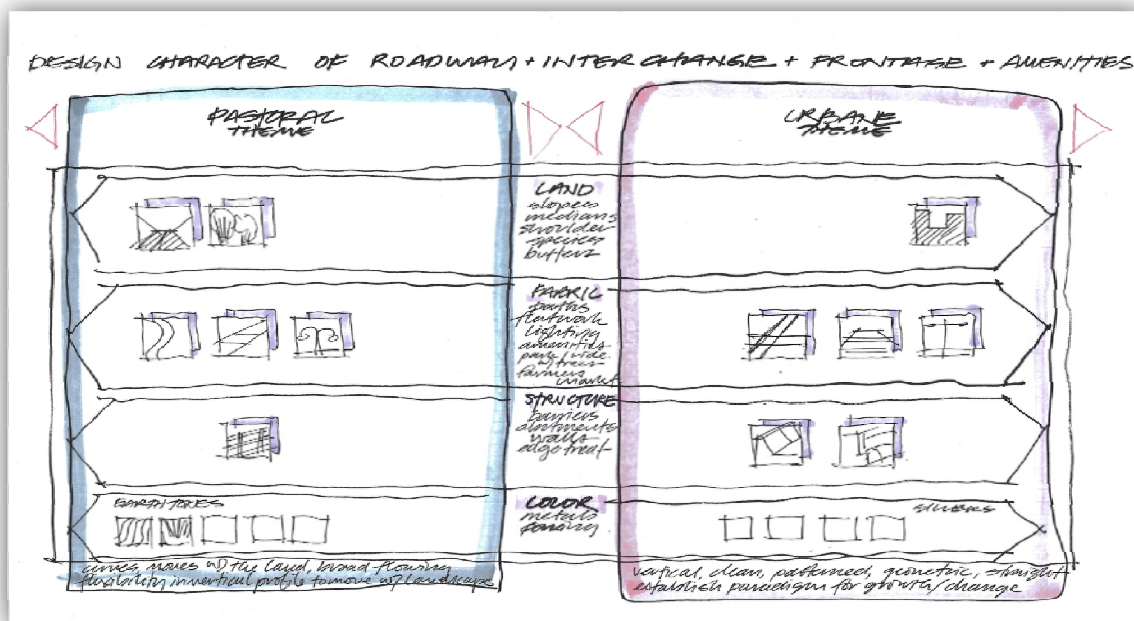
- 1) Major motorized movements
- 2) Major pedestrian movements
- 3) Major bicycle movements
- 4) Major equestrian movements
- 5) Major transit/commute movements

The SAC provided insight on how people circulate along the Connector through a mobility mapping exercise that focused on each of the major movements by segment. The key circulation points presented by the SAC are listed in the Segment Fact Sheets in the Attachments.

SAC Meeting #3: Aesthetic Theme Guidelines (October 17, 2012)

The third stakeholder meeting consisted of an interactive workshop focused on building an aesthetic theme for the corridor. A process tool was used (See Figure 2 below) during the workshop to help develop a theme for each Connector Segment based on SAC input. A set of four different families were organized to represent the land, fabric, structure, and color of the corridor. A sampling of aesthetic features from each of the families was presented and the SAC identified aesthetic features of civil infrastructure that best suited the desired landscape for their individual communities.

FIGURE 2 – THE AESTHETIC CHARACTER PROCESS TOOL



The thematic exercise began with the project team presenting two distinct themes-- "pastoral" or "urbane" – and the definition of the theme would be built based on what resonated with the SAC members' interests. Throughout the discussion, it was determined that the "urbane" theme did not apply to any segment and the feel of each segment would fall somewhere within the "pastoral continuum" with varying levels of intensity. Figure 3 shows the word clouds of the "pastoral" and "urbane" themes used by the project team to communicate the feel and tone for each aesthetic theme on the initial aesthetic continuum.

FIGURE 3 – PASTORAL AND URBANE THEME WORD CLOUDS



The Sheldon Area (Segment C) was an exception to the overall "pastoral" theme and was categorized under a newly defined "Heritage" theme proposed by SAC members. The "Heritage" theme is intended to reflect more history and "California Gold Rush" elements, while the transitions in and out of Sheldon having pastoral elements.

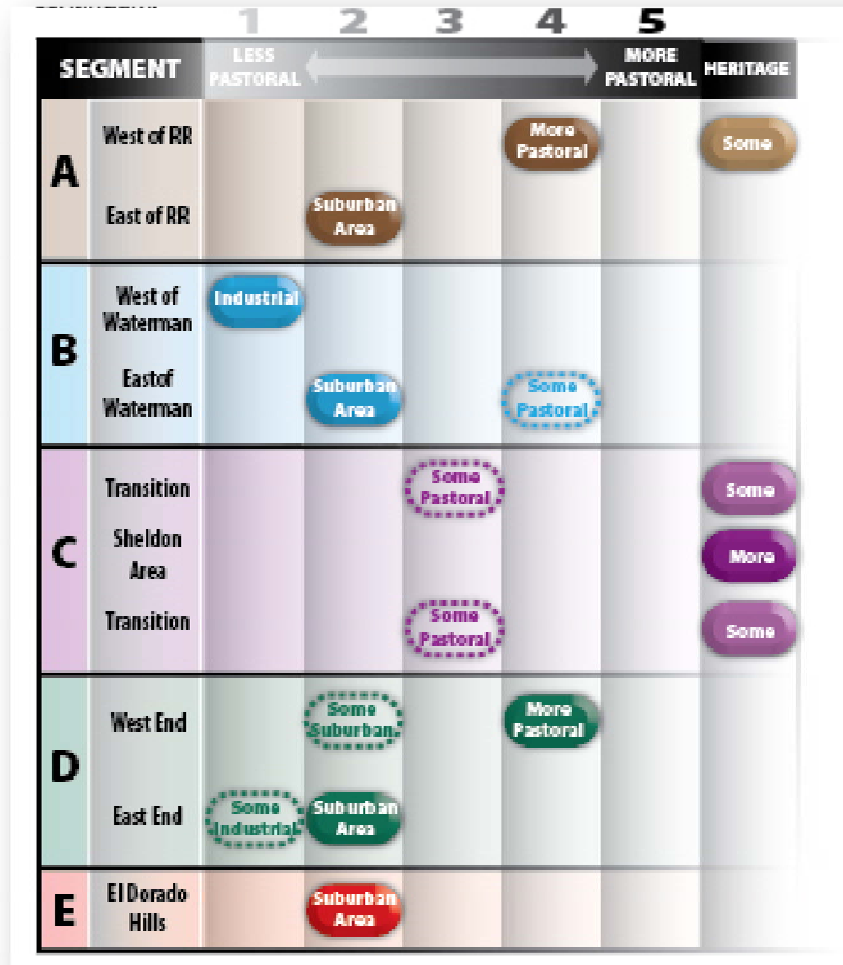
The SAC attendees participated in an exercise of identifying aesthetic features that would apply to the corridor, selecting photographs of amenities, structures, treatments, and landscaping they felt best defined the "pastoral" theme of the project. Some of the photos they selected can be seen on the segment sheets in the attachments. In general, the following features were preferred by the SAC:

- Landscaped abutments preferred to paved and textured abutments.
- Earth slopes preferred to walls. If walls are necessary, textures should be used instead of patterns. Soundwalls should be earth toned and block like.
- Structures should have a light, thin quality. Nothing too bulky or visually obtrusive.
- Barrier rails should be open.
- Paths should be paved and a buffer should be provided between bicycle/pedestrian traffic and vehicular traffic.
- Meandering, flat paths preferred.
- Historic/Heritage style preferred for benches.
- Edgy, vertical architecture will not fit in.
- Importance with transitions throughout the alignment, blending with the community, maintaining continuity, and avoid bold statements by keeping the design modest, minimal, and maintaining view sheds.

Each of the segments was then rated on the matrix as shown in Figure 4. The matrix was used to establish the level of intensity along the "pastoral" continuum. A rating of 1 would apply to less pastoral (more industrial, suburban) areas and a rating of 5 was assigned to more pastoral or agricultural areas along the corridor. The Heritage rating was unique to Segment C in the Sheldon area and some parts of the Elk Grove area.

FIGURE 4 - AESTHETIC CONTINUUM

Each segment falls within different levels of intensity along the aesthetic continuum.



At the end of the meeting, the SAC attendees were asked to identify key words or features they felt were relevant to every segment along the corridor. These features triggered the overall environment and feel of the project area. The SAC provided the following words that represent ideas that overlay and tie the project together:

- Agriculture
- Blending
- Community
- Heritage
- Historic
- Oak Trees
- Pastoral
- Regional Facility
- Timeless

A collection of the workshop outputs including selected photos, themes, and the pastoral continuum are shown in a montage created for each segment in the Attachments.

III. SAC Inputs

Input from the SAC was collected and documented in the meeting summaries provided in the Attachments. SAC comments on the process are included in a comment resolution table which will be an attachment to the PDGs.

IV. General Results, Updates, and Follow-Up

By the close of the third SAC meeting, the project team was able to gather input from the SAC to help further shape the intent and character of the Connector project. The feedback provided by the SAC also helped to tie together the common theme for the segments. It is a balanced effort to allow each segment to demonstrate its uniqueness while providing a continuous corridor throughout the project area.

Figure 5 is an image concept developed to memorialize the SAC's contribution and support for defining and enhancing the beauty, character, and functionality of the Connector. This image is intended to illustrate the regionally and historically significant oak tree leaf blending into the Connector roadway in a natural color scheme.

The SAC will receive a copy of the PDGs in November and have an opportunity to provide input on the document. Upon completion of the review period for all committees, the JPA project team will collect, document, and address comments as part of the PDG update for the Project Development Team (PDT) distribution and Board Approval in January 2013.



FIGURE 5 - CONNECTOR WATERMARK (PROPOSED, DRAFT)

Figure 5 is a watermark that was developed in an effort to memorialize the SAC's contribution and support for defining and enhancing the beauty, character, and functionality of the Connector. This image is intended to illustrate the regionally and historically significant oak tree leaf blending into the Connector roadway in a natural color scheme.

Capital SouthEast Connector Project Sustainability Approach and Final Assessment Results

TO: Sustainability Concept Committee
Connector JPA Staff

COPIES: Judy Matsui-Drury/CH2M HILL
Lisa Reid/CH2M HILL

FROM: Tim Bevan/CH2M HILL

DATE: September 18, 2012

This memo provides background and a summary of information developed for and in collaboration with the Sustainability Concept Committee (SCC) for the Capital SouthEast Connector ("Connector") Project. This memo includes:

- background regarding current JPA activities relating to the Connector project;
- a summary of the sustainability assessment approach and process;
- SCC coordination, objectives and meetings;
- key inputs from SCC members during and after the SCC Meeting #1 on June 7, 2012 and Meeting #2 on July 18, 2012, and how we propose to address these;
- updates to information discussed in the SCC meetings;
- results from the assessment of potential sustainable solutions for the project.

I. Current JPA Activities for the Connector Project

The Connector Joint Powers Authority (JPA) is undertaking a process involving three concurrent and related activities for the Connector project, following completion of the Final Programmatic Environmental Impact Report (PEIR) which was certified in March 2012. The process is intended to be a collaborative effort involving partner agencies, special interests, and the community to develop the Connector Project Design Guidelines to a level appropriate for guiding the engineering, planning, and general plan hearings for a Tier 2 project environmental documentation process. The JPA's commitment to sustainability along the corridor requires building a foundation for sustainability best practices to be applied to the planning, design and construction phases for the project. Separate attention is being given to assessing sustainability opportunities on the project which will be incorporated into the Project Design Guidelines, as appropriate, and/or documented for further consideration during more advanced stages of project development.

The process of developing the Connector Project Design Guidelines is dependent upon the attention and input from three committees formed to represent key stakeholder focus areas: Technical, Sustainability, and Community. These committees will be organized to focus on their subject matter expertise as follows:

- 1) The Technical Advisory Committee (TAC) consists of representatives from each of the five member jurisdictions. This advisory committee with expertise in the technical application of

engineering policy, planning and design guidelines was formed to provide input to the JPA on the Project Design Guidelines for the Connector corridor.

- 2) The Sustainability Concept Committee (SCC) consists of business/industry, agency, program, and advocacy representatives with focused interest and expertise in sustainability (as referred to the Triple Bottom Line for economy, people, and environment). This advisory committee comprised of individuals with an understanding and expertise in the application and implementation of sustainable solutions was formed to provide input to the JPA through a sustainability assessment process, identifying sustainability concepts and opportunities to apply sustainability solutions from project planning through construction.
- 3) The Stakeholder Advisory Committee (SAC) consists of members from the community, regional organizations, and business or property owners. This advisory committee is viewed as the pulse of the community and was formed to provide input on the community elements and broader issues of the Connector project.

These committees will each participate in three to four facilitated meetings in a parallel process through November 2012. The committees will be given an opportunity to review prepared project materials and provide their input in the areas of their subject matter expertise through the Project Design Guidelines development and Sustainability Assessment process. The efforts from these three committees will be coordinated and integrated into the Project Design Guidelines which will be presented to the JPA Board in December 2012 along with the Sustainability Assessment Report.

II. Process for Sustainability Assessment

CH2M HILL will work with the JPA and the SCC to determine the appropriate sustainability solutions and practices to apply to the Connector project and develop a best practice approach to integrate sustainability into planning, design and construction. To utilize available tools proactively, the approach must consider agency sustainability goals and the global, regional, or local context; involve stakeholders; be inter-disciplinary; incorporate accountability; and ensure feedback to agencies and project owners. The approach proposed includes the following seven steps:

- Step 1: Define Sustainability and a Sustainable Roadway
- Step 2: Confirm Sustainability Goals
- Step 3: Understand the Context for Project
- Step 4: Identify a Range of Sustainable Solutions
- Step 5: Evaluate to Determine Appropriate Solutions
- Step 6: Track/Confirm/Incorporate throughout Implementation
- Step 7: Lessons Learned/Feedback

Within this approach, CH2M HILL worked with the JPA to consider sustainability options, also known as credits (or criteria), that are included in FHWA INVEST, and the Greenroads rating system, along with other sustainability concepts proposed by SCC members and project stakeholders.

III. SCC Coordination

Purpose and Role of the SCC

The purpose and role of the SCC Committee are as follows:

- Provide input/feedback on the sustainability assessment process
- Help to identify sustainable solutions that can make the project more sustainable
- Provide guidance on technical aspects of sustainable solutions
- Integrate sustainability into the project

Coordination with the SCC has primarily been accomplished at one of three meetings to be held for the project. Each meeting and its purpose is described in more detail below.

SCC Meeting #1: Sustainability Kick-Off (June 7, 2012)

The first meeting was focused on introduction of this approach and preparation for evaluation of sustainability solutions. We described the seven-step approach in more detail and discussed roles and responsibilities of the SCC members related to integration of sustainability into this project.

The meeting included discussion confirming the sustainability definition and goals (Steps 1 and 2). The context of the project was also discussed (Step 3) and how that context imposes boundaries or creates opportunities that affect the implementation of sustainable solutions. The range of sustainable roadway solutions was discussed, including the consideration of concepts from sustainability rating or evaluation systems. Finally, the criteria to be used to evaluate potential sustainable solutions for inclusion in the project were discussed.

SCC Meeting #2: Evaluation of Solutions (July 18, 2012)

In advance of this meeting, CH2M HILL prepared and provided a table listing of sustainable solutions that could potentially be integrated into the Connector project (Step 4). Using the evaluation criteria confirmed in SCC Meeting #1, we performed a preliminary evaluation of the potential solutions collected for this project (Step 5). During SCC Meeting #2, we reviewed the range of solutions identified and the preliminary evaluation of those solutions for inclusion in the Connector project and addressed comments and additional input from the SCC members for incorporation into the solutions matrix.

SCC Meeting #3: Confirmation of Solutions (September 27, 2012)

Following SCC Meeting #2, we refined the solutions and evaluation of those solutions reviewed in SCC Meeting #2. Additional solutions identified by the SCC and evaluations needing more research were performed, documented in a comment resolution table, and finalized in the solutions matrix. The final recommendations for sustainable solutions will be presented at this final meeting. Also presented will be tools to track the implementation of chosen solutions into the planning, design and construction of the project, and to learn from past performance and improve implementation of sustainable solutions in the future (Steps 6 and 7).

IV. Committee Input and Proposed Revisions

Key SCC inputs

Key inputs provided by the SCC have been documented in the Review Comment Summary included in the Appendix. Responses to the input are recorded in the Summary and further explained in the memorandum below.

Listed below are the proposed revisions to five of the seven steps of the sustainability assessment process previously presented to the SCC.

Step 1: Define a Sustainable Roadway – *Proposed Revisions*

The following are proposed changes to the definitions in underline.

Sustainability:

“Satisfying basic social and economic needs, both present and future, and the responsible use of natural resources, all while maintaining or improving the well-being of the environment on which life depends. Sustainability refers to our community’s ability to endure and prosper over the long term. This ability has environmental, economic, and social dimensions that must be considered in thinking about human activity.” (input from SCC)

Sustainable Development:

“Development which meets the needs of current generations without compromising the ability of future generations to meet their own needs.” (Brundtland Commission of the United Nations (1987)

Sustainable Highway: The Federal Highway Administration has developed the following definition that we can consider for use:

“A sustainable highway should satisfy life cycle functional requirements of societal development and economic growth while striving to enhance the natural environment and reduce consumption of natural resources.” (The Federal Highway Administration)

“A sustainable transportation system is one that contributes positively to the environment, economic, and social sustainability of its community. A sustainable roadway/highway must provide accessibility to desired destinations in its vicinity for all modes of transportation.” (input from SCC)

“A sustainable roadway/highway should be developed so that it contributes to sustainable development and growth in our region.” (input from SCC)

Step 2: Confirm Sustainability Goals – *Proposed Revisions*

The goals proposed for the project relating to sustainability include the following. Shown in underline are inputs from the SCC Meeting #1.

- Balance social, environmental and economic principles of sustainability when developing the designs of each project.

- Use the FHWA INVEST (self-assessment) and Greenroads (3rd party certification) systems to confirm the sustainability of the Capital Southeast Connector project. Achieve a Gold overall assessment for the project and at least a Silver or better assessment for each project.
- Use the Context Sensitive Solutions approach for development of each project.
- Perform a Lifecycle Cost Analysis on high cost project elements.
- Demonstrate best practices application of sustainability on this project. Communicate benefits and technical applications for other agencies and partners in the region and the state.
- Put a priority on sustainable solutions that contribute to sustainable growth for the region.
- Promote multi-modal access along the corridor and connectivity within communities.

Step 3: Understand Context – *Proposed Revisions*

The context for the project was discussed in SCC Meeting #1. The context for the project has been defined and documented in the PEIR. Of particular importance for this project is the rural nature of the corridor; providing access and support to agricultural land; regional air quality concerns; concerns regarding growth management and appropriate growth; and multi-modal access. Also of note is that through the PEIR, the JPA has committed to nearly 50 mitigation measures. These mitigations generally contribute to and support sustainability.

Step 4: Identify a Range of Sustainable Solutions – *Proposed Revisions*

Underlined text shows revisions to this step. We proposed to start by considering sustainable best practices that have been identified for sustainable roads rating/evaluation systems. These best practices have been identified, reviewed, and tested over the past several years, and are becoming the standards for evaluating sustainability for roads. These systems include specifications to establish best practices requirements, and will be used in the future as standards for justifying funding.

These sustainable roads best practices include those identified in The U.S. Federal Highway Administration’s INVEST Tool, and in the Greenroads Foundation’s Greenroads Rating System. These two systems are described below.

- **INVEST (Infrastructure Voluntary Evaluation Sustainability Tool).** The Federal Highway Administration (FHWA) has created a sustainability self-evaluation tool covering all aspects of major highway investment and maintenance. The focus of the tool is rating of the planning, design, construction, operation and maintenance. The tool includes 30 sustainable practices that can be considered in the Project Development phase (project planning, design, and construction). Three iterations have been used to develop the Version 1 that has been launched in May, 2012. www.sustainablehighways.org
- **Greenroads.** Sponsored by the Greenroads Foundation as a 3rd Party Certification system. This rating system focuses on urban and rural roadway planning, design and construction. This system has been under research and development since 2007 and the third iteration, Version 1.5 was completed in February 2011 and includes 48 sustainable roads best practices along with specific examples, strategies, research, and citations. www.greenroads.us

In addition, SCC members have suggested additional measures relating to growth management; access and support to agricultural lands; air quality and emissions reductions; Green House Gas emissions; and public health. These concepts were included in the Sustainability Assessment that follows in this memo (as solutions 78-to-88). Eight additional concepts were added to the assessment for consideration by the JPA (solutions 88-to-95).

Step 5: Evaluate to Determine Appropriate Solutions

The evaluation of potential sustainable solutions to be applied to the project was accomplished and is summarized below. Details from the review of sustainability options is shown in the attached table. A legend for the table is also provided. The results will be discussed further at SCC Meeting #2.

Development of Solutions

CH2M HILL assembled 29 sustainable solutions from INVEST and 48 sustainable solutions from Greenroads and developed 11 more based on suggestions and input by the SCC for assessment for the appropriateness to the Connector project. These solutions include sustainability techniques and best practices for integration of sustainability into the planning, design, and construction of the Connector project. All disciplines were represented within the solutions assembled.

Evaluation Criteria

The solutions were organized into a table, called the Sustainable Option Matrix, attached. The table includes additional information, or evaluation criteria, about the sustainable solutions. This is to aid in the process of assessing each for applicability into the Connector project and tracking the decision-making process regarding its implementation. The topics, in columns within the table, are as follows.

- Source (INVEST, Greenroads, SCC)
- Discipline
- Phase to Implement
- Dimension of Sustainability (Triple Bottom Line)
- Sustainable Benefit/Value
- Relative Initial Capital Cost
- Relative Life Cycle Cost
- Demonstrated Feasibility
- Matches or Similar to Solution (identifies duplicate solutions between INVEST and Greenroads)
- Supports Mitigation Measures
- New Technologies that could Support New Jobs
- Supports TIGER Grant Criteria

An explanation of the evaluation criteria can be found in the Legend for the Sustainability Options Matrix, also attached.

An evaluation disposition of solutions (accept, evaluate, or reject) is based on the above-mentioned evaluation criteria and project scope. The solutions selected as “accept” and “evaluate” will become the sustainable solutions to receive further consideration for this project.

Step 6: Track Progress throughout Implementation

The recommended sustainability solutions have been identified on the attached table. After these have been reviewed and approved by the PDT and the JPA, then the table can be used as a checklist to track integration of the solutions throughout planning, design and construction.

Once sustainable solutions are selected for implementation within a project, tracking progress is necessary to ensure and help project teams plan, design, and implement the solutions into the project. Without this step, there may be little or no accountability for ensuring that sustainable solutions agreed upon by the agency and project team are implemented throughout project development.

Best Practices for Tracking Progress

- The first task in tracking progress is to finalize the selected solutions with the PDT and the JPA. The approach for this task includes clarification where necessary, evaluation of solutions selected for further consideration, and maintenance of the database.
- The final assessment should note when the project team must integrate the solution for it to be successfully implemented into the roadway project. For example, to require management of the construction waste stream, the specifications need to state that requirement, so this decision must be incorporated during design.
- Solutions that were assessed as needing further evaluation to determine if they should be included in the design will need to be evaluated by the agency and project team. Once this evaluation is complete, the JPA and project team can decide whether each solution should be accepted for inclusion in the roadway project.
- As more detail is added to the solutions and decisions about including each solution are made, it is important to maintain the database with the most recent information for the design team.
- As the project continues throughout design, a sustainability manager must be involved at regular intervals to ensure the project team is making progress towards integrating the sustainable solutions into the project. This will require an understanding of when the project team must incorporate the solution in order for it to be achieved. For example, some solutions may become part of the design as early as 10% design and others may not be incorporated until the end of the project design when the project team is writing and modifying specifications.
- A sustainability manager may seek agency and stakeholder involvement and engagement on sustainability integration throughout the design process.
- Leveraging a sustainability manager as a quality control reviewer to check that solutions were incorporated at reviewable milestones in the project.
- Include a sustainability manager in pre-construction and construction kick-off meetings to help communicate unique solutions to the contractor and ensure that they are constructed as intended.
- Include maintenance and operations staff in the evaluation process and ensure they have the information needed to maintain the facility as intended.

An example for how the process of tracking implementation of sustainability solutions is as follows. The final list of selected sustainability solutions is assembled, sorted, turned into a checklist by discipline. The project team uses these checklists to guide their work and a sustainability manager is included as a quality control reviewer at each submittal to ensure that the solutions were incorporated, and that they were incorporated correctly. A sustainability manager is engaged in the preconstruction and construction kick-off meetings to ensure solutions are understood and constructed as designed.

Step 7: Lessons Learned/Feedback

As the project is implemented over time, a sustainability manager or other staff should lead an effort to capture lessons learned and feedback about the process of applying the sustainable solutions and share that information with the JPA and stakeholder agencies along with suggestions for improvements to the process or opportunities to eliminate barriers to success. One of the most valuable activities is to gather and record lessons learned and feedback received from the agency, stakeholders, and project teams. This will help the agency adopt a programmatic approach to integrating sustainability in project development and will aid project teams in integrating sustainability on future projects.

Best Practices Collecting and Communicating Lessons Learned/Feedback

- Maintain databases of potential goals, sustainability solutions and evaluation criteria (to evaluation solutions). Update these as new information and lessons learned are captured throughout the project.
- Perform a post-mortem review of the process on the project, including the project team, JPA, stakeholders and contractors and incorporate lessons learned into the databases of information for future projects.

Example

An example for how lessons learned/feedback can be collected and disseminated is as follows. A special provision was required for porous pavement used on a bike path adjacent to the roadway; however, the contractor had to make minor adjustments to the mix design to match available materials from the local distributors. This approach was acceptable to the designers and met the intent of the sustainable solution. A sustainability manager provides this information back to the engineers so that the special provision can be modified for use in future projects.

V. General Results

Based on the assessment and input from the SCC, the results of the assessment are as follows:

- 60 recommended to be Accepted for inclusion in the project
- 30 recommended to Need further evaluation to be included in the project
- 5 recommended to be Rejected or are not applicable for the project

Solutions needing further evaluation include: solutions that may not have applicability based on the project scope and information known at this time or solutions with questionable feasibility in terms of their technical development (such as quiet pavements).

Solutions rejected include solutions that are not applicable to this project (such as economic analysis which occurs earlier in the project implementation phase); solutions that may not be feasible due to availability of resources (such as biofuels); or that may restrict the number of contractors who can bid on the project (such as Environmental Management System) and impact the cost of the project.

Of the total of 90 options that recommended for acceptance or further evaluation, note that 25 are very similar or the same options from the two rating systems that were reviewed for potential application. When these have been identified as potential options, both are listed so that performance against ratings systems can be tracked. Also, 32 options in the recommendations are either mitigation or other JPA commitments. These recommended options will be further reviewed with the PDT and the JPA Board. Also, as the project moves toward implementation, further reviews

will occur and those evaluations will be tracked to document performance over time (note tracking columns in the table of Sustainable Solutions).

The “accepted” and “to be evaluated” solutions have been separated into five program or project categories to organize the area in which implementation of the solutions would be managed. Some of the solutions are listed under duplicate categories (such as habitat restoration, cultural preservation, and site maintenance) because implementation of the solution may require extensive coordination and interagency agreement prior to defining the extent or applicability in the project.

Program/Project Categories (Number of Solutions)

- JPA/Management (17)
- Project Delivery/Process Recommendations (6)
- Interagency Agreements (10)
- Design Features (35)
- Construction/Contractor Requirements (16)

The solutions are listed below by category with reference to relative initial capital cost, relative life cycle cost, (initial) demonstrated feasibility, and associated mitigation measure (Mitigation, Monitoring and Reporting (MMRP) as referenced in the Programmatic Environmental Impact Report). More detailed information on the solutions assessment is included in the Appendix.

Table - Program/Project Categories

Solution No	Solution Title	Relative Initial Capital Cost	Relative Life Cycle Cost	Demonstrated Feasibility	Supports MMRP (PEIR)
JPA/Project Management					
2, 31	Life-Cycle Cost Analyses (materials, resources)	Low	n/a	Yes	No
5, 40	Educational Outreach (sustainability)	Low	Low	Yes	No
15	Historical, Archaeological and Cultural Preservation (educational opportunities)	Med	Low	Yes	Yes (CUL-1, CUL-2, CUL-3, CUL-4)
32	Life Cycle Inventory (pavements)	Low	n/a	Maybe	No
37	Low Impact Development (stormwater BMPs)	Low	Med	Yes	Yes (HYD-5, PS-1)
38	Pavement Maintenance (maint program)	Low	Low	Yes	No
39	Site Maintenance (aesthetics)	Low	n/a	Yes	No
52	Traffic Emissions Reduction (congestion Pricing)	Low	Low	Yes	No
49	Safety Audit	Low	n/a	Yes	No
66	Life Cycle Assessment	Low	n/a	Maybe	No
70	Regional Materials	Low	n/a	Yes	No
80	Access to Agricultural Land	Med	Low	Yes	Yes (LU-1)

Solution No	Solution Title	Relative Initial Capital Cost	Relative Life Cycle Cost	Demonstrated Feasibility	Supports MMRP (PEIR)
81	Traffic Emissions Evaluation and Reduction (geometric design, anti-idling)	Med	Med	Yes	No
83	Demonstrating and Promoting Sustainability for Roadways (leadership, advocate)	Low	Low	Yes	No
85	Reduce Diesel Particulate Matter Exposure (buffer zones, site vegetation)	Med	Low	Maybe	Yes (AQ-5)
87	Trees for Air Pollution Impact Reduction (carbon sequestration feasibility study)	Med	Low	Maybe	Yes (AQ-8)
93	Value Engineered Design (minimum intersection)	Low	Med to High	Maybe	Yes, POP—2B (Proposed)
Project Delivery Process					
3, 51	Context Sensitive Project Development	Med	Low	Yes	No
4, 49	Highway and Traffic Safety (quantitative)	Low	n/a	Yes	No
5, 40	Educational Outreach (sustainability)	Low	Low	Yes	No
6	Tracking Environmental Commitments (environmental compliance tracking)	Low	Low	Yes	No
30	Environmental Review Process	Med	n/a	Yes	No
78	Growth Management Land Use Controls (growth management system/plan)	Low	Low	Yes	No
Inter-Agency Agreements					
7, 46	Habitat Restoration (restore, preserve)	Med	Low	Yes	Yes (BIO-2b, BIO-3, BIO-4a/b, BIO-5b, BIO-6a/b)
15	Historical, Archaeological and Cultural Preservation (educational opportunities)	Med	Low	Yes	Yes (CUL-1, CUL-2, CUL-3, CUL-4)
39	Site Maintenance (aesthetics)	Low	n/a	Yes	No
80	Access to Agricultural Land	Med	Low	Yes	Yes (LU-1)
89	Hydrogen Fuel Cell Bus Program (refueling station)	High	High	Maybe	Yes, AQ-8C (Proposed)

Solution No	Solution Title	Relative Initial Capital Cost	Relative Life Cycle Cost	Demonstrated Feasibility	Supports MMRP (PEIR)
90	Farmers Market	High	Med	Maybe	Yes, LU-1B (Proposed)
91	Solar Project	High	High	Maybe	Yes, AQ-8E (Proposed)
92	Regional Bicycle System Connectivity	Med to High	Med	Maybe	Yes, REC-1B (Proposed)
94	Transit Support	Med to High	Med to High	Maybe	Yes, AQ-8D (Proposed)
95	Long Range Planning for Light Rail	High	High	Maybe	Yes, AQ-8E (Proposed)
Design Features (Separated by Discipline)					
Civil					
89	Hydrogen Fuel Cell Bus Program	High	High	Maybe	AQ-8C (Proposed)
Cultural/Historic					
57	Cultural Outreach	Low	Low	Yes	No
Electrical					
48	Light Pollution	Low	Low	Yes	Yes (AES-1, AES-2)
17, 71	Energy Efficiency	Med	Low	Yes	No
Environment					
7, 46	Habitat Restoration	Med	Low	Yes	Yes (BIO-2b, BIO-3, BIO-4a/b, BIO-5b, BIO-6a/b)
9, 47	Ecological Connectivity	Med	Low	Yes	No
85	Reduce Diesel Particulate Matter Exposure	Med	Low	Maybe	Yes (AQ-5)
87	Trees for Air Pollution Impact Reduction	Med	Low	Maybe	Yes (AQ-8)
Landscape					
18, 45	Site Vegetation	Low	Low	Yes	Yes (PS-1)
88	Shade Canopy	Med	Low	Yes	No
Materials/Resources					
20, 69	Reduce and Reuse Materials	Low	Low	Yes	No

Solution No	Solution Title	Relative Initial Capital Cost	Relative Life Cycle Cost	Demonstrated Feasibility	Supports MMRP (PEIR)
21, 68	Earthwork Balance	Low	Low	Yes	No
Parks & Recreation					
82	Public Health	Med	Med	Yes	Yes (REC-1)
90	Farmers Market	High	Med	Maybe	LU-1B (proposed)
Pavement					
22, 72	Long-Life Pavement Design	Med	Low	Yes	No
23, 74	Reduced Energy and Emissions in Pavement Materials	Low	n/a	Yes	No
19, 67	Pavement Reuse	Low	Low	Yes	No
73	Permeable Pavement	Low	Low	Yes	No
75	Cool Pavement	Low	Low	Yes	No
76	Quiet Pavement	Low	High	Maybe	No
Roadway Design (including Bicycles, Pedestrian Features)					
10, 53	Pedestrian Access	Low	Low	Yes	No
11, 54	Bicycle Access	Low	Low	Yes	No
12, 55	Transit and HOV Access	High	Low to High	Yes	No
13	Freight Mobility	High	Med	Yes	No
16	Scenic, Natural, or Recreational Qualities	Med	Low	Yes	No
79	Growth Management Access Controls	Low	Low	Yes	No
80	Access to Agricultural Land	Med	Low	Yes	Yes (LU-1)
91	Solar Project	High	High	Maybe	A-8B (Proposed)
92	Regional Bicycle System Connectivity	Med to High	Med	Maybe	REC-1B (Proposed)
93	Value Engineered Design	Low	Med to High	Maybe	POP-2B (Proposed)
94	Transit Support	Med to High	Med to High	Maybe	AQ-8D (Proposed)
95	Long Range Planning for Light Rail	High	High	Maybe	AQ-8E (Proposed)

Solution No	Solution Title	Relative Initial Capital Cost	Relative Life Cycle Cost	Demonstrated Feasibility	Supports MMRP (PEIR)
Stormwater					
8, 42, 43	Stormwater	Low	Low	Yes	Yes (HYD-3, HYD-4)
37	Low Impact Development	Low	Med	Yes	Yes (HYD-5, PS-1)
Traffic Operations & Safety					
14, 50	ITS for System Operations	High	Low	Yes	No
Construction/Contractor Requirements					
23, 74	Reduced Energy/Emissions in Pavement Materials	Low	n/a	Yes	No
24, 65	Contractor Warranty	Low	n/a	Yes	No
25, 59	Construction Environmental Training	Low	Low	Yes	Yes (BIO-1)
26, 62	Construction Equipment Emission Reduction	Low	n/a	Yes	Yes (AQ-3, AQ-4)
27, 34	Construction Noise Mitigation	Low	n/a	Yes	Yes (NOI-1)
28, 33	Construction Quality Control Plan	Low	Low	Yes	No
29, 35	Construction Waste Management	Low	n/a	Yes	Yes (PS-3)
36	Pollution Prevention Plan	Low	n/a	Yes	No
58	Quality Management System (QMS)	Low	Low	Yes	No
60	Site Recycling Plan	Low	n/a	Yes	No
63	Paving Emissions Reduction	Low	n/a	Yes	Yes (AQ-3, AQ-4)
64	Water Use Tracking	Low	n/a	Yes	No
69	Recycled Materials	Low	Low	Yes	No
77	Pavement Performance Tracking (construction quality and long term performance)	Low	Low	Yes	No
84	Dust Control	Low	Low	Yes	Yes (AQ-1)
86	Reduce Construction GHG Emissions (SMAQMD BMPs)	Low	Low	Yes	Yes (AQ-8)

VI. Conclusions

The next steps are to further review and confirm these recommendations with the PDT and JPA. Then, many of these concepts will be evaluated by the JPA for inclusion in the Project Design Guidelines and/or for consideration into the Connector project development process as listed in the tables included above in Section V of this memorandum.

FUNCTIONAL GUIDELINES

INTRODUCTION

Purpose and Scope

The improvements that make up the Connector Project (“Project”) consist of roadway, transit, and non-motorized facilities, along with open space acquisition and preservation serving a regional area in excess of 150 square miles. The Project will be implemented over a period of many years through the cooperative efforts of five local jurisdictions: Sacramento County, El Dorado County, and the cities of Elk Grove, Rancho Cordova, and Folsom. Given this cooperative sponsorship structure and the size and scope of the Project, successful completion will require cooperation and coordination among the participating jurisdictions, and other agencies such as SACOG, the Sacramento Transportation Authority (STA), and the El Dorado County Transportation Commission (EDCTC), as well as other agencies.

These Functional Guidelines set forth the principles and broad objectives addressing the planning, design, and implementation of the Project, as well as complementary projects to be undertaken by the Project sponsors that enhance the regional transportation system.

These Functional Guidelines address common or standard characteristics and features of the proposed Project. These Functional Guidelines will serve as the background for the more detailed environmental analyses and technical engineering that will occur in subsequent phases of the Project’s development. Those areas left for interpretation in these guidelines or for more detailed description shall fall to the discretion of the governing body of the Joint Powers Authority for the project.

Planning Principles

The following planning principles provide the foundation for the Functional Guidelines:

- Improve access to, and connections between, residential and employment areas within and outside of the Project corridor.
- 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 in the Metropolitan Transportation Plan.
- Relieve demand on (i) local streets and roads, and (ii) regional freeway facilities (US-50, SR-99, I-5).
- 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.

- Enhance regional mobility and preserving the livability of communities.
- Provide efficient and safe facilities for automobile, transit, bicycle, and pedestrian options for multi-modal travel.
- Minimize direct and indirect physical impact on the natural and built environments.
- Preserve open space to reinforce and support approved land use plans.
- Permit phased implementation with respect to (i) funding, (ii) location, and (iii) design characteristics.

FUNCTIONAL GUIDELINES

Connector Roadway

Capacity and Cross-Section

The Connector roadway should be designed and constructed to serve the demand projected in the MTP and adopted local plans. The right-of-way should be preserved for future build-out conditions, in accordance with adopted local plans. The roadway cross-section should include through travel lanes, median, outside shoulders, and Class II bike lanes, where feasible and appropriate. The roadway also should provide for curb and gutter, sidewalk, and buffer zones on both sides, where appropriate.

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 existing slopes and vertical curves should be modified as necessary to conform to speed and safety standards. The roadway elevation shall be planned to accommodate at least limited operation during a 100-year flood event. The design of the Connector corridor should recognize impacts to sensitive habitats, including elevation adjustments to allow for passage of wildlife. Where appropriate, grade separations should be provided for railroads and for roadways not meeting Connector access standards but also not suitable for closure or diversion.

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). Where appropriate, the facility should include landscaping, quality materials, treatments for medians, pedestrian areas, and adjacent facilities, and barriers and buffer zones.

Transit Services

Route and service planning for new and/or modified local fixed route, express bus, and Bus Rapid Transit (BRT) service in the Connector may be undertaken by transit operators and other sponsor agencies within the corridor including, but not limited to, the City of Elk Grove, Folsom Stage Lines, El Dorado Transit, and Sacramento Regional Transit District. 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.

Non-Motorized Facilities

The Connector should provide flexible and efficient modes of use, including automobile, transit, bicycle, and pedestrian. To facilitate the use of non-motorized options, the Connector roadway should be sized and striped for Class II bicycle lanes, except where right-of-way limitations and/or safety issues make them infeasible. In those segments where Class II lanes are deemed to be infeasible, alternate bicycle routes should be provided. Where appropriate, sidewalks and other pedestrian amenities should be provided throughout the corridor.

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 the Sacramento Transportation Authority Measure A expenditure plan.

Other Facilities

The functionality of the Connector relies on the overall functionality of the regional transportation system. In order to meet the goals of the MTP and the Connector, complementary projects may be phased in over time as conditions necessitate. Planning, design, and construction of new or modified roadway facilities in the Project corridor that could materially affect operation of the Connector should be accomplished in a manner that is consistent with, and supports, the MTP, as well as the Connector purpose and need.

PROJECT IMPLEMENTATION

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

The Project Joint Powers Authority should establish and maintain a funding plan and process to coordinate commitments, costs, revenues, and expenditures. The funding plan and process will be shared with other transportation planning agencies (e.g., SACOG, Sacramento Transportation Authority, Caltrans) as required and appropriate, and should be consistent with similar plans in appropriate regional programming documents, such as the Regional Transportation Improvement Program (RTIP), the State Transportation Improvement Program (STIP), and the Metropolitan Transportation Improvement Program (MTIP). Investments in the Connector should be coordinated and balanced with other transportation investments in a manner that maximizes benefits to the public while minimizing costs.

INTEGRATED MODES POLICY

INTRODUCTION

The Purpose and Need Statement calls for the Capital SouthEast Connector Project to provide transportation options that “enable flexibility among automobile, transit service, bicycle, and pedestrian uses, while incorporating ITS elements where possible.” Traditionally, roadways have been designed primarily to facilitate automobile travel, with limited consideration given to accommodating the use of bicycles as an effective alternative to meeting our transportation needs. This practice is changing, however, due to a growing awareness that bicycles offer a viable and economical mode of transportation with fewer negative impacts on air quality and finite land resources than those associated with the automobile.

Bicycle and pedestrian facilities are viable alternative modes of transportation that must be accommodated in the design of the project. Bicycle and pedestrian facilities are not “add-ons,” mitigation measures, aesthetic treatments, or intended to address recreational use only. They are needed to provide transportation options for non-motorized mobility needs throughout the corridor. These policies recognize the JPA’s overall perspective regarding establishing integrated modes as an integral component of the project rather than a separate consideration.

The purpose of the integrated modes policy is to provide for continuous, uniform bicycle and pedestrian facilities within the project corridor which will provide access and connectivity to the roadway, transit and other bicycle/pedestrians facilities such that the multi-modal transportation usage of the Connector is maximized while meeting the existing and future needs of the adjacent land use. ITS elements shall be incorporated into all aspects of the facilities for the project to maximize efficiency and safety of all modes of transportation.

The bicycle and pedestrian facilities shall be designed based on the following Federal, State and local guidelines and standards.

- Bicycle facilities for the project shall be designed in accordance with the American Association of State Highway and Transportation Officials (AASHTO) “Guide for Development of Bicycle Facilities” and Chapter 1000 of the Caltrans Highway Design Manual “Bikeway Planning and Design.”
- Pedestrian facilities for the project shall meet the State of California and Federal Americans with Disabilities Act (ADA) requirements.
- The bicycle and pedestrian facilities shall also be designed based on the local jurisdiction standard plans and policies.

The Connector alignment consists of several different typical sections. The multi-modal features are specific to each typical section. See Figure 1 for the proposed typical section segments along the Connector.

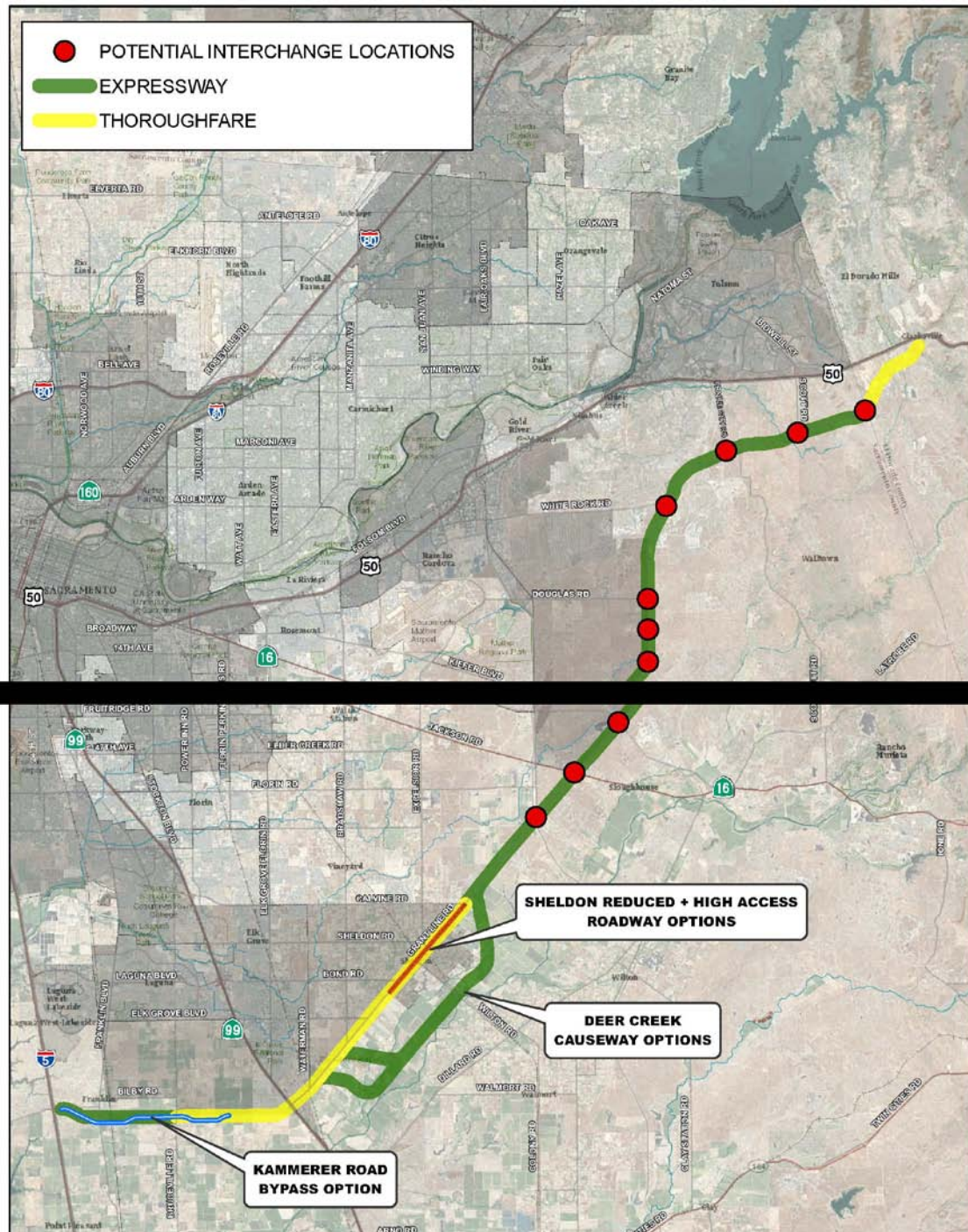


Figure 1: Proposed Project Typical Section Segments

POLICY FRAMEWORK

In developing the Integrated Modes System Goals for the Connector, an emphasis is placed on the importance of providing a completed system of bicycle, pedestrian, and transit facilities and increasing the percentage of trips made by bicycles, pedestrians, and transit users (a.k.a., “Alternative Modes”).

Each objective is to be met through the implementation of policies that pursue particular strategies, develop specified programs, or engage in defined courses of action to ensure the achievement of the goal and objectives established in the Plan.

The Connector has the following goals, objectives, and policies for the planning, development, and operation of its multi-modal system:

BICYCLE SYSTEM ELEMENT

GOAL: To provide an enhanced comprehensive system of connecting and direct in-corridor bicycle facilities that will encourage increased ridership and safe bicycle travel.

BICYCLE OBJECTIVE NO. 1

The Connector Project will create an enhanced, comprehensive, connected system of bicycle facilities through the corridor.

BP 1.1 Provide Class I Bicycle Facilities on Expressway and Thoroughfare Roadways

Class I bicycle facilities shall be provided on all newly constructed expressway and thoroughfare roadways. For expressway segments, the Class I facility will be separated from the edge of the nearest travel lane by a minimum of 30’ (Clear Recovery Zone) where feasible. In thoroughfare segments, the Class I facility will be a multi-use path (pedestrians and bicycles) and separated from the roadway by a curb and gutter and landscape buffer.

BP 1.2 Provide Class II Bicycle Facilities on Thoroughfare Roadways

Bicycle lanes shall be provided on all newly constructed thoroughfare roadways. While Class I facilities are being provided, some cyclists prefer to ride with traffic. Therefore, Class II facilities shall be provided as well.

BP 1.3 Provide Class III Bicycle Facilities in Sheldon Area

A minimum 6' wide paved shoulder shall be maintained in the Sheldon area to allow for on-street bicycle use through the area.

In addition to the paved shoulder, a Class I facility or equivalent will be investigated with community leadership in an effort to provide an acceptable alternative facility through the Sheldon community. Such a facility will be approved by the Board of Directors in advance of any R/W acquisition or construction by the Connector.

BP 1.4 Connecting to Other Facilities

To enhance the system of in-corridor facilities, the Connector shall encourage and support the development of connecting bicycle and pedestrian facilities that would intersect with the in-corridor alignment. This could be accomplished by either signalized or direct connection.

The Class I multi-use path would also include bicycle/pedestrian overcrossings at key locations between the interchanges to provide connectivity to local development, as needed. Access/connectivity to the Connector shall be provided within 0.5 miles of local development.

BP 1.5 Eliminate Barriers to Bicycle Travel

The Connector shall actively pursue a comprehensive system of bicycle facilities through designing and constructing projects, as resources are available, and implementing standards and regulations designed to eliminate barriers to bicycle travel.

As a result of this policy, new developments or major transportation projects will neither create new, nor maintain existing barriers to bicycle travel. Within the expressway roadway, the Connector will require either under-crossings or overcrossings at interchanges to reduce the number of vehicle/path conflict points within the corridor. The Connector will adopt, include, and use bicycle supportive design and signage standards as part of roadway design standards, and other appropriate documents. As resources are available, the Connector will support projects designed to eliminate identified barriers relating to bicycle travel, either as stand-alone projects or as part of a major capital improvement project.

BP 1.6 Bicycle Routes and Signage

As resources are available, the Connector shall, in consultation with local jurisdiction bicyclist groups, review existing and proposed bicycle facilities, identify preferred routes, and make improvements as necessary to make these routes function better for bicyclists. These routes shall be identified by signage on the routes and shown on updates of the local jurisdictions' bicycle route maps.

BICYCLE OBJECTIVE NO. 2

The Connector will seek to increase the percent modal share of bicycles by fostering an environment that eliminates deterrents to bicycling and encourages bicycle use Connector-wide for all types of trips.

BP 2.1 Require Relevant Bicycle Accommodations During Transportation Construction Projects

The Connector shall require each construction project within the corridor to include consideration of bicyclists in the traffic control plan; this will include placement of signs, routing, and lane width. Care will be taken to ensure that the facility is accessible to all users during construction. High standards for resurfacing and sweeping shall be required of all construction projects in the roadway right-of-way.

BP 2.2 Transition Bicyclists - New and Existing Segments

Should a segment of the Connector be newly constructed and intersect with existing roadway without the enhanced multi-modal facilities, every effort will be made to transition the bicyclist or pedestrian to a sensible and safe facility.

BP 2.3 Establish Minimum Standards for Bicycle Facility Maintenance

The Connector shall develop minimum standards that will maintain bicycle facilities clean of debris, properly striped, and clearly marked and signed.

BP 2.4 Develop a Maintenance Reporting Program

To assist the Connector in achieving a high standard of maintenance on existing bicycle facilities, a program shall be developed that allows the public to identify repair, sweeping, and other maintenance needs.

BP 2.5 Bicycle Parking at Transit and Intermodal Facilities

The Connector shall encourage the installation of public bicycle parking facilities at park and ride facilities, transit stations, and other intermodal facilities.

PEDESTRIAN SYSTEM ELEMENT

GOAL: To provide a comprehensive system of connecting sidewalks and walkways that will encourage and increase safe pedestrian travel.

PEDESTRIAN OBJECTIVE NO. 1

The Connector shall create a comprehensive system of pedestrian facilities.

PP 1.1 Provide an Enhanced Pedestrian Facility

The Connector shall provide a separated multi-use pathway on all newly constructed expressway and thoroughfare roadways. For expressway segments, the multi-use path will be separated from the edge of the nearest vehicle travel lane by a minimum of 30' (Clear Recovery Zone) where feasible. In thoroughfare segments, a multi-use path (pedestrians and bicycles) will be separated from the roadway by a curb and gutter and landscape buffer.

PP 1.2 Focus Attention on Intermodal Connections

Sidewalks and walkways shall complement access to transit stations/stops, train stations, and multi-use paths. Activity centers and business districts should focus attention on and encourage pedestrian travel within their proximity.

PP 1.3 Ensuring Future Sidewalk Connections

All future development shall include sidewalk and walkway construction as required by the adopted Connector Preliminary Design Guidelines. All road construction or rehabilitation projects shall include sidewalks or multi-use pathways.

The Connector shall support, as resources are available, projects that address identified barriers to pedestrian travel or safety.

Where the spacing between intersections is greater than ½ mile and/or the cross corridor demand for pedestrians crossing the Connector is high, a number of items will be considered between the intersections:

1. Grade separation with a pedestrian overcrossing or undercrossing
2. Pedestrian signal
3. Pedestrian median refuge in combination with the signal, enabling the user to navigate one direction of traffic at a time.

PP 1.4 Complete Connections with Crosswalks

All signalized intersections shall have marked crosswalks. School crosswalks will be marked where crossing guards are provided. Marked crosswalks, along with safety enhancements (medians and curb extensions), shall be provided, as resources are available, at unsignalized intersections and uncontrolled traffic locations in order to provide greater mobility in areas frequently traveled by persons with limited pedestrian capabilities. Marked crosswalks may also be installed at other high volume pedestrian locations without medians or curb extensions if a traffic study shows there would be a benefit to those pedestrians.

PEDESTRIAN OBJECTIVE NO. 2

The Connector shall seek to increase the percent modal share made by pedestrians with the following policies.

PP 2.1 Maintaining and Assuring the Quality of Facilities

The Connector shall establish standards for the maintenance and safety of pedestrian facilities. These standards shall include the removal of hazards and obstacles to pedestrian travel, as well as maintenance of benches and landscaping.

PP 2.2 Promotion of Walking for Health and Community Livability

The Connector shall encourage efforts that inform and promote the health, economic, and environmental benefits of walking for the individual and the community. Walking for travel and recreation shall be encouraged to achieve a more healthful environment that reduces pollution and noise to foster a more livable community.

PP 2.3 Connecting the Off-Corridor Network

To enhance the system of in-corridor facilities, the Connector shall encourage and support the development of connecting bicycle and pedestrian facilities that would intersect with the in-corridor alignment. This could be accomplished by either signalized or direct connection.

The Class I multi-use path would also include bicycle/pedestrian overcrossings at key locations between the interchanges to provide connectivity to local development, as needed. Access/connectivity to the Connector shall be provided within 0.5 miles of local development.

PEDESTRIAN OBJECTIVE NO. 3

The Connector shall seek to optimize the pedestrian experience, to provide safe and usable pedestrian facilities for all pedestrians, and to assure compliance with all federal, state, and local regulations and standards.

PP 3.1 Compliance with ADA Standards

The Connector shall comply with the requirements set forth in the Americans with Disabilities Act (ADA) regarding the location and design of sidewalks. The member jurisdictions' design standards will be consulted, should their standards be more stringent.

TRANSIT ELEMENT

Transit is an integral component of the Connector project. These policies will be revised on an ongoing basis as the project and conditions in the Connector Corridor area evolve. The JPA will provide the necessary commitments to insure that a desired level of capital support is provided as required.

GOAL: A public mass transit system that provides convenient and accessible transit services to the users of the Connector Corridor.

TRANSIT OBJECTIVE NO. 1

Ensure that transit services are accessible to the Connector Corridor residences and businesses.

TP 1.1 Development of Transit Services

The transit services operating on the Connector Project and on parallel routes will be operated by Regional Transit and/or other transit providers in the Connector Corridor. The Capital SouthEast Connector JPA will work with transit providers to plan future transit services and provide facilities that would help make those services effective. New and enhanced transit services in the Connector Corridor will be added over time as new development occurs in the Corridor.

TP 1.2 Transit-supportive Corridor and Smart Technology

The Capital SouthEast Connector Project will help provide right-of-way and/or facilities that create a meaningful travel time improvement for transit routes within the Connector Corridor. While the emphasis of the Capital SouthEast Connector Project will be to provide cost-effective transit facilities along the selected Connector alignment, it may also support strategic, cost-effective transit improvements (such as queue jumps and transit signal priority/ intelligent transport system - ITS equipment) on other roadway segments in the Connector Corridor, especially on routes that parallel the selected Connector alignment and show strong potential for successful, well-utilized service.

TP 1.3 HOV and Transit-supportive Roadway Design/ Expansion

For the expressway segments of the Capital SouthEast Connector Project that will have more than four travel lanes, the fifth and sixth lanes will be HOV/transit lanes unless analysis indicates that unacceptable traffic operations will exist for a segment.

TP 1.4 Intermodal Connectivity

The JPA shall encourage connectivity between different travel modes. The Capital SouthEast Connector Project will help provide park-and-ride lots and transit centers at strategic locations within the Corridor. Transit transfer and park-and-ride facilities should be accessible by pedestrian, bicycle, bus, and automobile travel modes

TP 1.5 Transit Supportive Growth

The JPA will encourage smart growth in the Connector Corridor, especially the creation of villages or “nodes” of development of significant size and density that are easy to serve by transit, in order to reach desired levels of transit ridership. Capital funding and provision of facilities by the Connector will encourage jurisdictions and developers to partner with the JPA to provide transit-friendly development within the Connector Corridor.

TRANSIT OBJECTIVE NO. 2

A financially stable and adequately funded transit system for the Connector corridor.

TP 2.1 Adequacy of Long-term Funding

The Connector shall support regional efforts to identify and implement transit funding strategies that will provide adequate, long-term, and stable revenue sources for the public transit system.

EQUESTRIAN SYSTEM ELEMENT

GOAL: To provide accommodations for equestrians that will encourage and promote safe equestrian travel.

EQUESTRIAN OBJECTIVE NO. 1

Existing and proposed equestrian facilities will be accommodated in rural areas by the Connector. Equestrian crossing connections will be maintained and expanded as Connector routes are widened or newly constructed, and in some cases parallel trails may be provided to maintain equestrian trail system connectivity.

EP 1.1 Provide an Equestrian Path in the Sheldon Area

The Connector shall provide a multi-use pathway on newly constructed roadways in the Sheldon Area. Either a natural ground pathway adjacent to the multi-use path will be provided for equestrians or an alternative trail, within proximity of the roadway, will be identified to address equestrian usage.

**EP 1.2 Establish Minimum Standards for Equestrian Facility
Maintenance**

The Connector shall develop minimum standards that will maintain equestrian facilities and ensure the facility is clearly marked and signed.