

# The Capital SouthEast Connector Project 2012 Initial Plan of Finance



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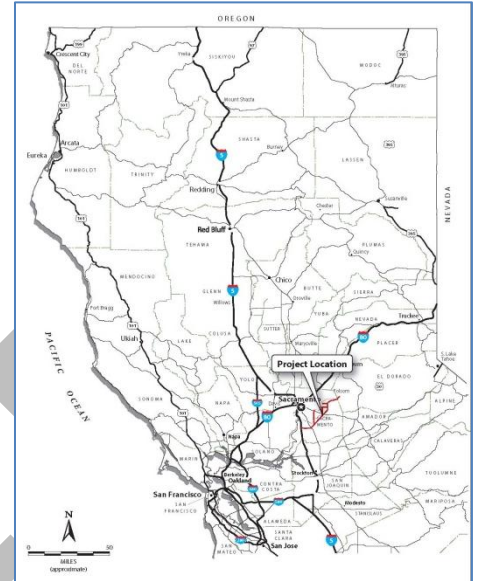
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## Chapter 1 - EXECUTIVE SUMMARY

The Capital SouthEast Connector is a 35-mile long multi-modal transportation facility that will link communities in Sacramento and El Dorado Counties, including Elk Grove, Rancho Cordova, Folsom, and El Dorado Hills. The project is a state-of-the-art controlled access facility that extends from the Interstate 5 (I-5)/Hood Franklin Road interchange in southwest Sacramento County to approximately 35 miles northeastward, terminating at U.S. Highway 50 (US 50) in the community of El Dorado Hills, near Silva Valley Parkway approximately 3 miles east of the Sacramento County/El Dorado County line.



**Exhibit 1-1: Vicinity Map**

The Project is divided into 5 transportation corridor segments that were based on several factors including geographic and jurisdictional boundaries, roadway classification, adjacent community characteristics, projected traffic demand, and potential financing opportunities.

SEGMENT	DESCRIPTION	LOCAL JURISDICTION
A	4-lane expressway, on Kammerer Rd from the I-5/Hood Franklin IC to Bruceville Rd and 6 Lane thoroughfare from Bruceville Rd. to SR99	Sacramento County
B	4 to 6 lane thoroughfare, from SR 99 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

**Exhibit 1-2: Segment Description**

Due to the availability of timely funding to construct the \$456 million project, the Plan of Finance (POF) analyzes a phased, but accelerated, approach to allow the JPA to develop a portion of the project and accelerate some of the benefits to the region, while the JPA also continues to seek out additional funding sources to close the funding gap for the remaining phases. The Plan of Finance is organized into the following Sections:



## **Chapter 2 – Introduction to the Capital SouthEast Connector Project**

Presents the project and the sponsoring agencies.

## **Chapter 3 – Project Cost Estimate to Completion**

Identifies the key cost components and estimating methodology for the \$ project.

## **Chapter 4 – Project Implementation Plan**

Presents the project schedule and identifies the actual and projected expenditures by fiscal year.

## **Chapter 5 – Project Financing and Revenues**

Identifies committed and anticipated funding from the following sources:

- Measure A
- Federal/State Regional
- Member Jurisdiction Developer Impact Fees
- Other Contributions
- Member Jurisdiction Contributions
- Future Potential Revenue Funds
  - Supplemental Local Sales Tax
  - State Vehicle License Fee
  - Federal Stimulus Funds
  - Federal Transportation Grants
  - User Fees
  - Other Miscellaneous Revenues

## **Chapter 6 – Project Cash Flow**

Summarizes anticipated funding account balances on an annual basis and concludes sufficient funds will be in place to meet capital expenditure requirements.

## **Chapter 7 – Other Factors**

Includes cost containment strategies, responsibilities of the sponsors, as well as related agreements and issues pertaining to the project financing requirements.

## **Appendices**

Includes a discussion on design-build procurement and various contracting options, a summary of the evaluation criteria that will be used as a tool to eventually decide how the project should be phased, a preliminary schedule of the projects by contract, a cash flow summary, and a comparison of the scope and cost differences between the Project and the current Metropolitan Transportation Plan (MTP).



## Chapter 2 INTRODUCTION

### Project Description

The proposed project is a 35-mile multi-modal transportation facility that will link communities in Sacramento and El Dorado Counties, including Elk Grove, Rancho Cordova, Folsom, and El Dorado Hills. The project limits extend from the Interstate 5 (I-5)/Hood Franklin Road interchange in southwest Sacramento County to approximately 35 miles northeastward, terminating at U.S. Highway 50 (US 50) in the community of El Dorado Hills, near Silva Valley Parkway approximately 3 miles east of the Sacramento County/El Dorado County line.

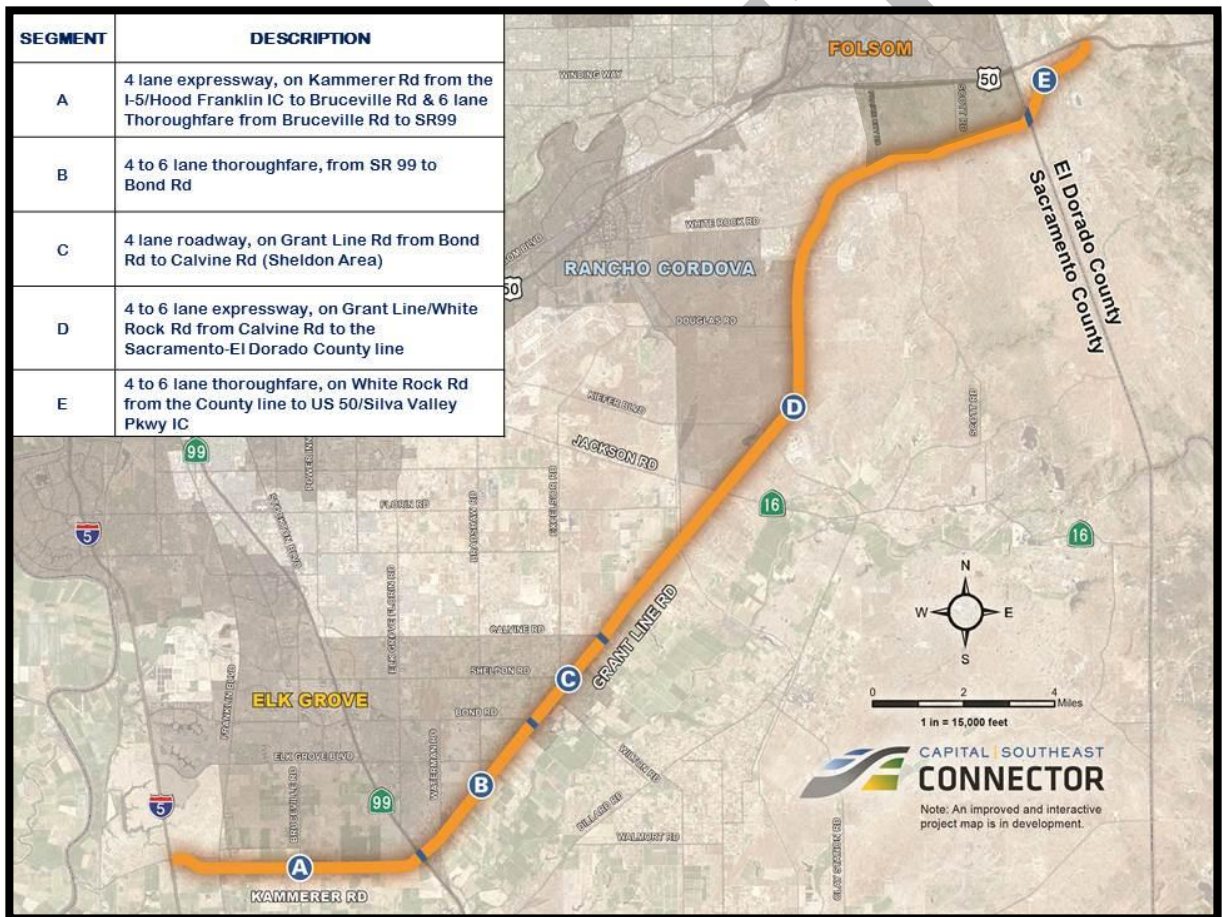


Exhibit 2-1: Project Overview

The Connector is envisioned to link residential areas and employment centers in the Project corridor, serving both local and regional travel needs and substantially reducing the excessive traffic volumes that currently overburden existing two-lane roadways, which were never intended to serve as major commuter routes. When completed, the proposed project would be a road of four to six traffic lanes with

limited access points that would accommodate a variety of regional transportation needs.

The project will consist of the following features for a significant portion of the entire project:

- Controlled access facility consisting of 4 to 6 lane expressway. Exhibits 1-2 through 1-6.
- 3 or 4-leg Interchanges at various locations throughout the facility
- Various typical sections (as shown in the exhibits 1-2 through 1-5) , depending on the type of roadway classification and surrounding land uses including:
  - Expressway (4-6 lanes, expansive natural median, Class I multi-modal trail, limited access, intersection/interchange access connections)
  - Thoroughfare (6 lanes, continuous improved median, Class I or II bikeway, limited intersection spacing)
  - Arterial (4 lanes, continuous improved median, Class I or Class II bikeway, limited intersection spacing)
  - Special Sheldon Community section (4 lanes, continuous improved median, unimproved shoulders, Class I multi modal trail, selected intersection spacing and adjacent parcel access)
- Sustainability elements throughout the corridor, as defined by the Sustainability Concept Committee (SCC)<sup>1</sup>. As a result of the committee's recommendations, 8% of the construction costs (5% of the overall project costs) have been included in the project costs for sustainability elements (The SCC recommendations and input can be found in a separate report title "Capital SouthEast Connector Project Sustainability Approach and Final Assessment Results" dated September 18, 2012).
- Corridor aesthetics, as well as specific segment aesthetic elements as defined by the Stakeholder Advisory Committee (SAC)<sup>2</sup>. (The SAC recommendations and input can be found in a separate report titled

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<sup>1</sup> The Sustainability Concept Committee (SCC) consists of business/industry, agency, program, and advocacy representatives with focused interest and expertise in sustainability.

<sup>2</sup> 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.

“Capital SouthEast Connector Stakeholder Advisory Committee (SAC) Involvement Summary” dated November 6, 2012).

- Intelligent Transportation System (ITS) elements that include:
  - Dynamic message boards
  - Corridor access management
  - CCTV
  - Transit queue jumps
- 100-year flood protection
- Continuous way finding and signage

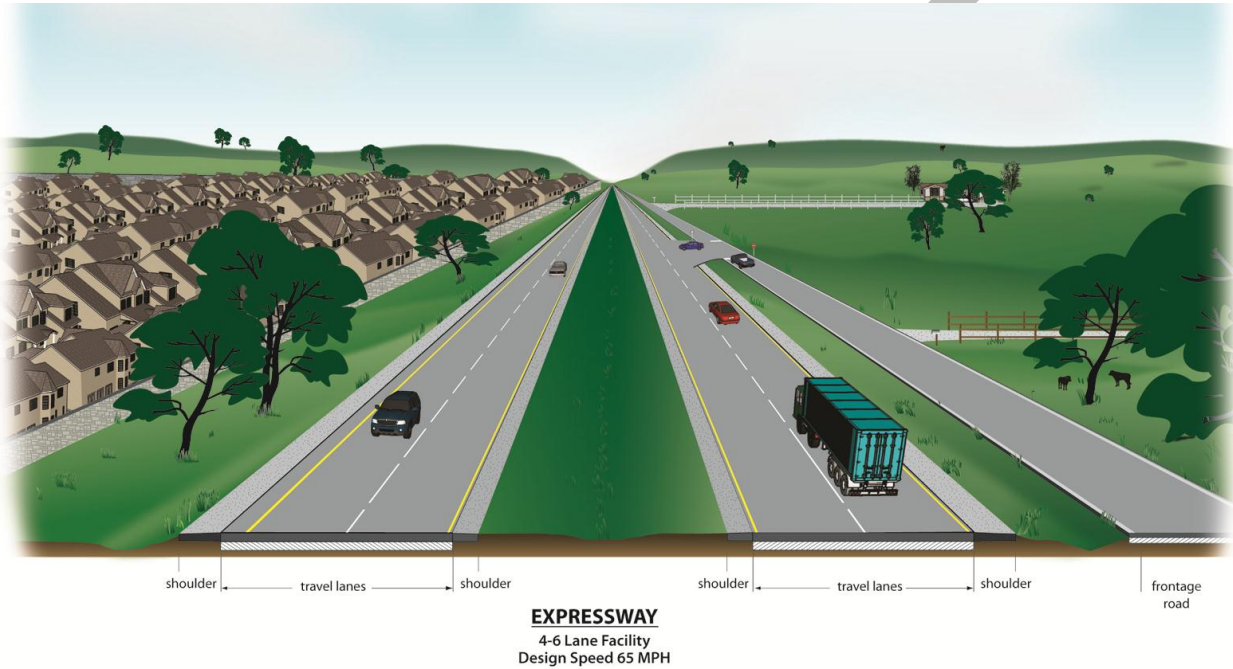


Exhibit 2-2: Typical Expressway w/ Frontage Road Cross Section

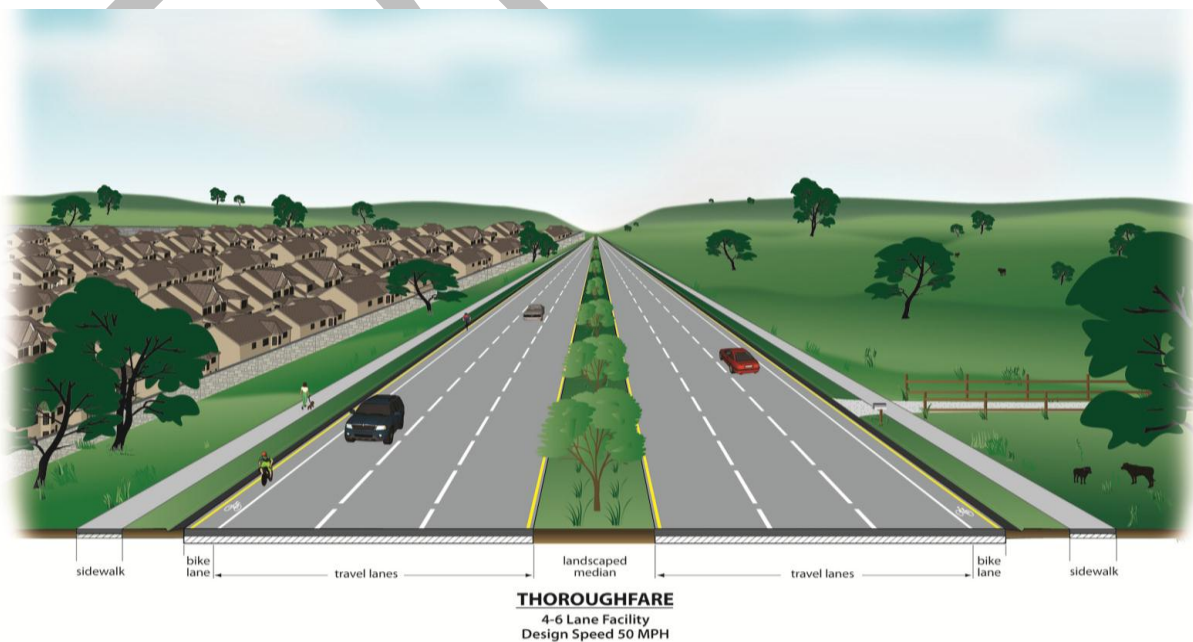


Exhibit 2-3: Typical 4 to 6-Lane Thoroughfare Cross Section



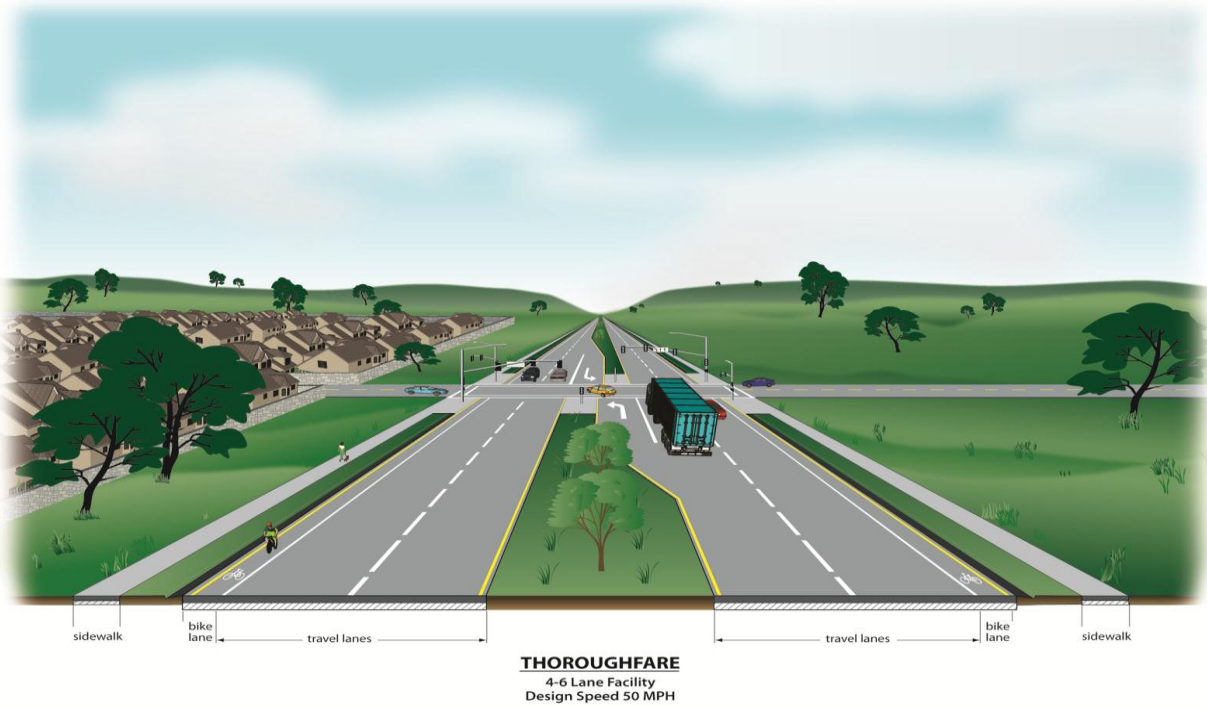


Exhibit 2-5 Typical 4 Lane Thoroughfare at Intersection

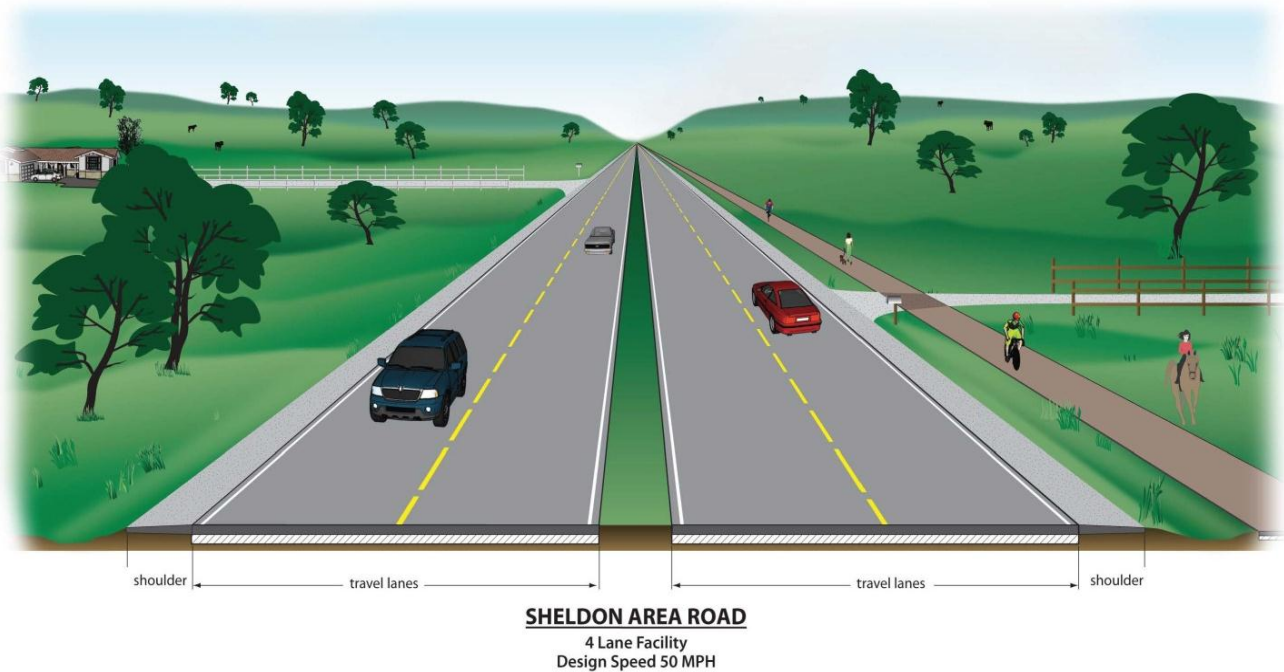


Exhibit 2-4: Sheldon Area Typical Section

## Project Benefits

The Connector will provide options for a variety of travel modes throughout the project corridor, supporting several of the seven principles of the Sacramento Area Council of Governments' (SACOG's) Blueprint, which is an in-depth analysis of land use and transportation development patterns that addresses Vehicle Miles Traveled (VMT) and air quality emissions in SACOG's six-county, 22-city region (Sacramento Area Council of Governments 2004). The 35-mile controlled access facility is intended to:

- ✓ Decrease traffic on several local arterial/collector roadway segments in the traffic analysis study area, as well as decreased traffic volumes on portions of area freeways
- ✓ Reduced congested VMT and VHT percentages on area roadways in the study area
- ✓ Substantially reduced delay and travel times along the project alignment
- ✓ Reduced travel times between communities
- ✓ Improved good movement capabilities in the study corridor
- ✓ Provide comprehensive protection of natural resources in the corridor
- ✓ Introduce a number of positive sustainable practices in project delivery and operations to reduce overall GHG emissions
- ✓ Provide a continuous all weather alternative emergency route across the entire south County of Sacramento
- ✓ Accelerate project completion to enhance the corridors economic competitiveness

The Connector's design will strike a balance between meeting regional transportation needs; preserving open space, habitat and agriculture; and maintaining the livability of neighboring communities. When built, the Connector will have four to six traffic lanes, with limited access points in some areas to keep traffic moving and minimize impacts to local roads. The Connector will provide options for a variety of travel modes throughout the corridor, including transit, bicyclists, pedestrians and even equestrians.

- ✓ Less time behind the wheel
- ✓ More livable communities
- ✓ Easier access to work, shop and play
- ✓ Less congestion on freeways
- ✓ Less fuel consumption
- ✓ Less air pollution
- ✓ Boost to local economy—jobs, goods movement, commercial access
- ✓ Multi-modal—cars/trucks, transit, walkers, bicyclists (even equestrians!)

- ✓ Less cut-through traffic, safer neighborhoods
- ✓ Open space and habitat protection
- ✓ Less traffic on two-lane roads

The project is anticipated to provide extensive positive economic benefit in the form of additional construction, direct and indirect benefits. These benefits will be both increased and accelerated by the construction of the facility as envisioned in this Plan of Finance as opposed to its build-out as currently envisioned.

## Project History

Planning for a regional transportation facility, such as the Connector, to serve the project corridor has proceeded for more than two decades. Sacramento County conducted the East Area Transportation Study in 1984, which identified a need for a circumferential “beltway” to accommodate increasing development, population, and transportation demands (Sacramento County 1984). This became the focus of a feasibility study conducted by SACOG in 1985. In 1986, the California Department of Transportation (Caltrans) prepared a route concept report for two proposed highways in southern Placer County and eastern Sacramento County: State Route (SR) 65 and SR 148. The beltway and the proposed alignments of the highways were located within the corridor between Elk Grove in the south and southern Placer County in the north (Caltrans 1986).

In 1988, the voters of Sacramento County passed Measure A, a countywide 0.5% sales tax to be levied over a 20-year period (1989–2009). The proceeds of the tax were specified to be used to fund a comprehensive program of roadway and transit improvements. In 2004, the voters extended the tax an additional 30 years. The ballot text of the Measure A extension, as approved by the voters, identifies the proposed project as the “I-5/SR99/US50 Connector” and specifies that receipt of funding for construction is contingent on the establishment, approval, and adoption of a habitat conservation approach by the local recipient of funds.

In the early 1990s, Caltrans undertook the SouthEast Area Transportation Study (SATS) to identify transportation alternatives for meeting future travel demand in the same general corridor that had been identified in SACOG’s Metro Study. The SATS was intended to be a feasibility study for a broader area that included the corridor, but with a greater emphasis on multi-modal transportation options (Caltrans 1993).

During preparation of the Metropolitan Transportation Plan (MTP) 2025 by SACOG in 2002, a project in the corridor area was designated as the “Elk Grove–Rancho Cordova–El Dorado Connector” (Sacramento Area Council of Governments 2002). Immediately following adoption of MTP 2025, SACOG undertook a project planning

process—the Elk Grove–Rancho Cordova–El Dorado Connector Study—to generate input from a wide range of stakeholders on project purpose and need for the Connector corridor, and to define a set of conceptually defined project alternatives to be considered in a future environmental review process. As a result of this process, four conceptual alternatives along with a no-project alternative were developed, which generally follow Hood Franklin, Kammerer, Grant Line, and White Rock Roads, and include segments using either Bradshaw Road or Sunrise Boulevard.

As part of the project planning process, SACOG facilitated extensive participation by local government agencies, community residents, and other stakeholders affected by the project. A Stakeholder Advisory Committee (SAC) and a Technical Advisory Committee (TAC) met regularly to develop the elements of the project's objectives and purpose and need, which were presented to a policy advisory committee that included representatives from each of the five member agencies. During this pre-environmental studies phase, these committees continued to meet regularly. Community residents and other members of the public attended these meetings and the six public information sessions. Oral and written comments were received from committee members, local residents, community representatives, and other interested parties. In May 2005, the SACOG Board of Directors approved a final concept plan report (Sacramento Area Council of Governments 2005).

Detailed descriptions of the conceptual alternatives developed during the Connector study were outlined in the report, along with initial elements of purpose and need. The project was also included in MTP 2035 (Sacramento Area Council of Governments 2008), and is part of the current planning efforts to update MTP 2035 to include sustainable communities requirements and be in compliance with Senate Bill (SB) 375.

## **History of the Plan of Finance**

The initial Plan of Finance (POF) for the Connector was approved by the JPA Board in February, 2009. It was developed primarily to outline the Planning and Project Development Funding aspects of the JPA and to allocate costs amongst the member jurisdictions. The aspect of Construction Funding was deferred until such a time that more information regarding the specifics of the Project (alignment, size, right-of-way, resource mitigation) could be determined. With the economic downturn significantly impacting potential project revenues in FY 2009-10, the focus of the plan shifted from developing a capital cost estimate that would accurately convey the cost of the project to exploring alternative funding sources to supplement the known forms of revenue.



In January, 2010, the JPA Board of Directors heard a presentation on the value of P3's (Public Private Partnerships) as a mechanism to provide the necessary financing to accelerate project delivery. One of the considerations of such a partnership would introduce the potential for the Connector to be tolled (or partially tolled) in order to provide the necessary revenue over time to reimburse the private partner and financier. The Board instructed staff to continue to explore the details of such a concept but to not rely on it exclusively as a revenue source.

In March, 2011 and again in January, 2012, the JPA's financial advisor provided the additional details regarding traffic and revenue estimates for developing certain portions of the project as toll facilities. The results indicated variable success with tolling as a primary component of a funding strategy and introduced questions regarding the public acceptance of such a proposal. Complications regarding access, parallel facility requirements, long-term lifecycle costs, and industry compatibility further complicated the concept. Staff began the exploration of revenue alternatives to tolling in earnest but kept the user fee (tolling) model as part of a back-up plan.

Since August, 2012, staff has presented a number of alternative delivery mechanisms with and without tolling a primary component of the plan. Staff also provided the details of a project delivery by the individual member jurisdictions as an alternative to pursuing any comprehensive project development by the JPA. In October 2012, staff recommended that a Design-Build delivery without tolling should be considered as the primary method to fund the project with the Design-Build with tolling as a back-up plan in the event that no reasonable alternative could be considered. The Design-Build strategy also used the concept of project phasing as one way to overcome cash flow and financing cost issues associated with an accelerated project delivery window.

## **Environmental Documentation**

The project represented in this report is described in further detail in the Program Environmental Impact Report for the Capital SouthEast Connector, State Clearinghouse #2010012066 and certified by the JPA Board of Directors in April, 2012.

## Chapter 3 – PROJECT COST ESTIMATES

### Structure of the Cost Estimate

For increased flexibility related to the timing of funding availability, the 5 main corridor segments (A-E) were broken down into smaller segments that were based primarily on geographic and jurisdictional boundaries and roadway classification. The cost estimate for the Capital SouthEast Connector Project is divided into these 9 segments to analyze for potential phases, as shown in Exhibit 3-1 below.

Segment	Phase	Roadway Segment	Segment Length (miles)
A	A1	I-5 to Bruceville Road	3.04
	A2	Bruceville Road to State Route 99	3.01
B	B	State Route 99 to Bond Road	4.38
C	C	Bond Road to Calvine Road	2.72
D	D1	Calvine Road to Jackson Road	4.47
	D2	Jackson Road to White Rock/Grant Line Road	7.22
	D3	White Rock/Grant Line Road to Sacramento/El Dorado County Line	6.37
E	E1	El Dorado County Line to Latrobe	1.09
	E2	Latrobe to US-50/Silva Valley Parkway	1.09
<b>Total</b>			<b>33.41</b>

**Exhibit 3-1: Project Segments**

Within each of the project segments, five cost elements have been identified to breakdown the estimate to a greater level of detail, as shown in Exhibit 3-2. To further refine the estimates, major items were identified for the construction cost estimate as shown in Exhibit 3-3.

Cost Element	Cost Description
<b>1. Preliminary Engineering</b>	Costs include the design consultant contracts under the design- build procurement plan as well as JPA staffing costs.
<b>2. Right-of-Way</b>	Costs Include all non-mitigation related right-of-way
<b>3. Right-of-Way Administration</b>	Costs include Production Consultants, Property Managers, Production/Property Management Oversight, and state staffs.
<b>4. Environmental Mitigation</b>	Costs include environmental mitigation
<b>5. Construction</b>	Costs include construction costs for all segments. Components of the costs are broken down to include roadway, signalized intersections, interchanges, frontage road improvements, multi-use trails, landscaping and irrigation, traffic handling, and sustainability elements.

**Exhibit 3-2: Cost Elements**

## Cost Estimate Methodology

The methodology explains how the cost estimate in current and constant dollars are derived for the Connector Project. The Project was estimated consistent with the Final Program Environmental Impact Report (FPEIR) for the Capital SouthEast Connector at its final buildout. However, two phases were introduced that allows for the base project to be completed while maintaining the flexibility of constructing other improvements (i.e. interchanges, landscape and irrigation, and widening) as the need arises and funding becomes available.

## Project Delivery Method

Although the cost analysis was initially performed assuming a design-bid-build process, the project finance plan is built upon constructing the Capital SouthEast Connector as a design-build project. While there are many risks to benefit variations within the general design-build delivery model, the numbers represented in this Plan of Finance represent a more conservative approach of procurement. It assumes the JPA to be responsible for completion of a number of advance development components such as right-of-way acquisition, utility relocation, and project level environmental review. This reduced level of risk transfer to the design-builder is reflected in a more conservation reduction in overall project costs over what might normally be expected with a greater degree of project development responsibility transfer in other alternative design-build delivery models. Once refinements to a selected delivery process are agreed to prior to contract execution, they will be presented in subsequent updates of this report and they could affect the overall schedule and phasing of the segments. A summary of the various contract options that will be investigated further is discussed in Appendix A.

## Cost Estimate in Current Dollars (\$ 2012)

The previous cost estimates prepared for the Environmental Impact Report were reviewed for both content and methodology. Assumptions were reviewed, items that had the most impact on costs were identified, and considerations were given to 1) the size of the project, 2) the proximity of material sources, 3) items of work that cannot be easily quantified at this stage of the project, and 4) the project delivery method.

The cost estimate was developed assuming that only minor improvements are needed at the I-5 and SR 99 connections. It was also assumed that the Silva Valley Parkway Interchange will be completed with El Dorado Traffic Impact Mitigation Fees (and other outside funding sources), and the project is not included in this estimate. Other projects along the Corridor that are assumed to be funded and

constructed and funded by others include the 4-lane widening of Grant Line Road between Prairie City and White Rock Road (Sacramento County), and the 4-lane widening between East Stockton n Blvd. and Waterman, including construction of the 4-lane railroad grade separation (City of Elk Grove).

Exhibit 3-3 summarizes the methodology, assumptions, and factor considered for each of the major cost elements, with the construction categories broken down into greater detail.

Item of Work	Notes
Project Planning & Preliminary Engineering	
<b>Project Support Costs</b>	<ul style="list-style-type: none"> <li>• Reviewed historical data</li> <li>• Estimated at 20% of the capital construction costs</li> <li>• Includes environmental, design, and construction management</li> </ul>
Right of Way	
<b>Acquisition</b>	<ul style="list-style-type: none"> <li>• Based on EIR estimates</li> <li>• 15% Contingency for Eminent Domain and Unforeseen Items</li> <li>• Reflects additional costs associated with acquisition of access rights along certain locations within the project</li> <li>• Some dedication assumed along the length of the Connector</li> </ul>
Right of Way Administration	
<b>Engineering and Support Costs</b>	<ul style="list-style-type: none"> <li>• Includes allowance for owner appraisals</li> <li>• Approximately 11% of the capital costs</li> </ul>
Environmental Mitigation	
	<ul style="list-style-type: none"> <li>• Includes the dedicated \$15M in Measure A funds for open space protection</li> <li>• Included funds necessary for compliance with the Programmatic EIR for the project</li> <li>• Reflects the commitments made in settlement agreements on prior litigation</li> <li>• Includes estimated funds required for compliance with the future SSHCP and project permits</li> </ul>
Construction	
<b>Clearing and Grubbing</b>	<ul style="list-style-type: none"> <li>• Calculated from non-paved area within Proposed R/W</li> </ul>
<b>Roadway Excavation</b>	<ul style="list-style-type: none"> <li>• Volume based on excavation required for structural section</li> <li>• Factor for Additional Earthwork established based on</li> </ul>

	segment terrain (i.e. flat vs. rolling)
<b>Structural Section</b>	<ul style="list-style-type: none"> <li>Includes HMA/RAC/AB</li> <li>Uniform Pavement Section used for estimate, but R-Value likely varies (i.e. 5 in Elk Grove Area, 20 near Aerojet)</li> </ul>
<b>Drainage</b>	<ul style="list-style-type: none"> <li>Project Drainage Assumed to be 2% of Roadway Costs</li> </ul>
<b>Signing/Striping/Street Lighting</b>	<ul style="list-style-type: none"> <li>Expressways – Lighting at Intersections Only</li> <li>Arterials – Lighting every 150' (both sides)</li> </ul>
<b>At-Grade Intersections</b>	<ul style="list-style-type: none"> <li>Signalized and Right-In/Right-Out</li> <li>Lump Sum Cost Estimates for Turn Lanes/Signals/Lighting</li> </ul>
<b>Interchanges</b>	<ul style="list-style-type: none"> <li>Costs prepared by Mark Thomas &amp; Company</li> </ul>
<b>Railroad Grade Separations</b>	<ul style="list-style-type: none"> <li>Cost for the Elk Grove Grade Separation of GLR between E. Stockton Blvd to Waterman Road not included. Assumed to be constructed under separate contract.</li> </ul>
<b>Frontage Roads</b>	<ul style="list-style-type: none"> <li>Assumes limits established in the EIR Estimate are correct</li> </ul>
<b>Multi-Use Path</b>	<ul style="list-style-type: none"> <li>12' wide path in Expressway segments</li> <li>Costs include path, lighting, landscaping, irrigation, and decorative fencing</li> </ul>
<b>Class 1 Path</b>	<ul style="list-style-type: none"> <li>10' wide class 1 path on both sides of the road for thoroughfare segments</li> <li>10' wide class 1 path on one side of the road in "Rural" Arterial segments</li> </ul>
<b>Landscaping and Irrigation</b>	<ul style="list-style-type: none"> <li>Landscaping and Irrigation costs are included with the Multi-Use path costs for expressway segments</li> <li>Landscaping and Irrigation costs are included with the roadway costs for all other classifications</li> </ul>
<b>Sustainability</b>	<ul style="list-style-type: none"> <li>8% of construction costs (5% of the overall project costs) included for sustainability and aesthetic elements</li> </ul>

**Exhibit 3-3: Cost Element Description**

## Basis for Escalation

Both Present Value Dollars (current dollars) and Year of Expenditure (YOES) Dollars are presented in the Plan of Finance. However, the Cost Estimates in this Chapter are presented in Present Value Dollars. YOES were calculated using an inflation rate and cost increase of 4.79%, which was derived from Caltrans historical data.

## Summaries of the Current Cost Estimates

Summaries of the cost estimates are presented in two different ways as shown in Exhibits 3-4 and 3-5, Present Value Dollars. The first summary allocates the project costs by segment. The second method apportions the project cost estimates by the major project cost elements listed in Exhibit 3-2.

Major Segment	Segment	Roadway Segment	Total Project Cost Estimate	% of Total
A	A1	I-5 to Bruceville Road	\$ 45,998,000	10%
	A2	Bruceville Road to State Route 99	\$ 30,196,000	7%
B	B	State Route 99 to Bond Road	\$ 56,746,000	12%
C	C	Bond Road to Calvine Road	\$ 25,471,000	6%
D	D1	Calvine Road to Jackson Road	\$ 50,721,000	11%
	D2	Jackson Road to White Rock/Grant Line Road	\$106,590,000	23%
	D3	White Rock/Grant Line Road to Sacramento/El Dorado County Line	\$118,324,000	26%
E	E1	El Dorado County Line to Latrobe	\$ 10,654,000	2%
	E2	Latrobe to US-50/Silva Valley Parkway	\$ 11,700,000	3%
			<b>\$ 456,400,000</b>	<b>100%</b>

Exhibit 3-4A: Project Cost Estimate by Segment (PV)

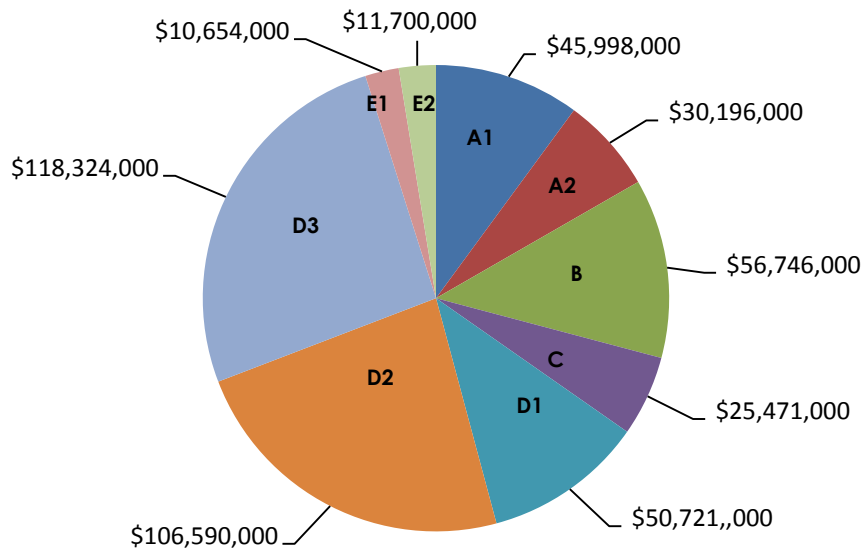


Exhibit 3-4B: Project Cost Estimate by Segment Chart (PV)

## Cost Allocation by Project Element and Contract

The following cost estimates, presented in Exhibits 3-5A&B, are organized by six standard project cost categories (per Exhibit 3-2) for each of the 5 major segments.

Element	Segment A	Segment B	Segment C	Segment D	Segment E	Total Project Cost Estimate
Project Delivery Costs	10.5	6.4	3.0	40.7	2.7	63.2
Right-of-Way	4.7	12.5	3.9	4.4	3.6	29.0
Right-of-Way Administration	0.6	0.8	0.8	0.7	0.2	3.2
Environmental Mitigation	4.4	3.2	2.0	13.1	1.6	24.2
Construction	47.1	29.5	13.3	180.8	11.8	282.5
Construction Contingency	8.4	4.4	2.5	36.0	2.5	53.8
<b>Totals (PV)</b>	<b>75.7</b>	<b>56.7</b>	<b>25.5</b>	<b>275.6</b>	<b>22.4</b>	<b>455.9</b>

Exhibit 3-5A: Project Cost Estimate by Segment Chart (PV \$ in millions)

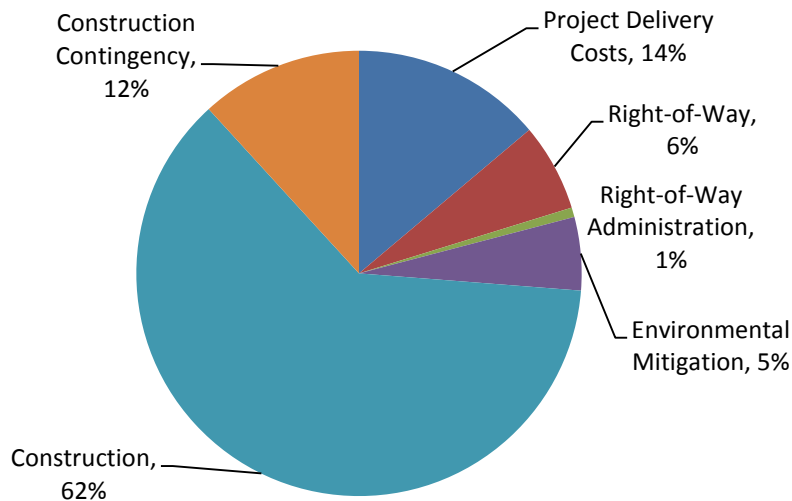


Exhibit 3-5B: Total Project Cost Estimate by Cost Category Chart (PV)

## Costs Incurred to Date (2007 – October 2012)

Exhibit 3-6 summarizes the approved budget and expenditures to date, as well as a summary of the budget vs. expenditures on a per year basis. Since the inception of the Joint Powers Authority, the JPA has expended \$8.7 million from 2007 –through October, 2012, out of a total estimated project cost of approximately \$456 Million. This amounts to approximately 1.7% of the overall project costs that have been



spent to date. The voter approved Measure A is the primary revenue source for the current activities.

Expenditures to date included the formation of the JPA, Project Administration Costs, Project Planning, preparation and approval of the Final Program Environmental Impact Report, Preliminary Engineering to support the Final EIR and cost estimates, development of the Project Design Guidelines, preparation of the Plan of Finance, and various Public Outreach and Agency Coordination.

	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	Totals
JPA Annual Budget	\$1,275,000	\$1,776,454	\$2,775,507	\$2,609,800	\$2,666,688	\$3,004,902	\$14,108,351
Expenditures	\$ 455,243	\$1,651,178	\$1,807,969	\$2,827,723	\$1,427,134	\$ 598,895*	\$ 8,768,142
Balance	\$ 819,757	\$ 125,276	\$ 967,538	\$(217,923)	\$1,239,554	\$2,406,007	\$ 5,340,209

**Exhibit 3-6: Total Revenue vs. Total Expenditures as of October 2012**

\*Thru 10/2012

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## Chapter 4 – PROJECT IMPLEMENTATION PLAN

Major Segment	Segment	Roadway Segment	Phase 1 Cost Estimate	Phase 2 Cost Estimate	Total Costs
A	A1	I-5 to Bruceville Road	\$ 44,444,304	\$ 1,553,552	\$ 45,997,856
	A2	Bruceville Road to State Route 99	\$ 24,099,838	\$ 6,096,544	\$ 30,196,382
B	B	State Route 99 to Bond Road	\$ 45,850,190	\$ 10,896,296	\$ 56,746,486
C	C	Bond Road to Calvine Road	\$ 24,810,822	\$ 660,000	\$ 25,470,822
D	D1	Calvine Road to Jackson Road	\$ 35,384,781	\$ 15,336,192	\$ 50,720,973
	D2	Jackson Road to White Rock/Grant Line Road	\$ 45,450,559	\$ 61,139,733	\$ 106,590,292
	D3	White Rock/Grant Line Road to Sacramento/El Dorado County Line	\$ 69,371,880	\$ 48,951,704	\$ 118,323,584
E	E1	El Dorado County Line to Latrobe	\$ 10,653,793	\$ -	\$ 10,653,793
	E2	Latrobe to US-50/Silva Valley Parkway	\$ 11,700,235	\$ -	\$ 11,700,235
			<b>\$ 311,766,403</b>	<b>\$ 144,634,021</b>	<b>\$ 456,400,424</b>

Exhibit 4-1: Total Costs By Phase

### Project Phasing

Exhibit 4-1, as well as in Section 2, illustrates the overall two-phase strategy for project delivery proposed by the JPA for the Connector Project. The phasing approach is based on the desire to complete a backbone Connector Project that will provide an acceptable level of service throughout the entire length of the corridor as part of a first phase of improvements. These improvements consist of the following “backbone” improvements that include the following:

- 4 continuous travel lanes
- Expanded at grade intersections at all designated major access points
- Continuous multi-modal path
- Right-of-way reservation for the ultimate project including future interchanges
- Project level environmental mitigation (as necessary)
- Utility relocation (as required)
- Selected non-essential features (based on funding availability)

Completion of the first phase of the project should provide capacity for between five to fifteen years depending on the location and growth rate of the adjacent area.

Phase two of the overall program will finish the project by proving the remaining features and additional capacity to allow for full build-out of the land uses analyzed in the programmatic environmental document. While not all of these improvements will be required at the same time, analysis indicates that they can be grouped for delivery based on geographic and/or chronological need into several large contracts. It is expected that the entire program can be divided into five to seven contracts over a 10 to 20 year time frame. Exhibit 4-3 in the “Project Schedule” section illustrates an example of what an overall program delivery might look like.

The anticipated capital cost of Phase 1 will likely require sub-phases of work within the overall Phase 1 program to allow the necessary revenues to be achieved. While additional detail on this aspect of the Plan of Finance is covered under Chapter 4, Project Financing and Revenues, the plan also provides a look into some of the distinctive features and needs of each of the project segments in a comparative matrix shown in Exhibit 4-2.

### Summary of Rankings for Segments

In order to better understand and inform the relative sequencing of the project segments for construction, a number of critical elements in each of the sub-segments were preliminarily studied. The seven elements analyzed were based on existing and future travel management needs as well as technical, environmental, and fiscal factors relative to each other.

Element	Segment A		Segment B	Segment C	Segment D			Segment E	
	A1	A2	SR 99 to Bond	Bond to Calvine	D1	D2	D3	E1	E2
	I-5 to Bruceville	Bruceville to SR 99			Calvine to Jackson	Jackson to White Rock	White Rock to EDC	EDC Line to Latrobe	Latrobe to US 50/SVP
Existing Traffic	N/A	●	◐	●	◐	◐	◐	○	●
Future Traffic	◐	●	◐	◐	○	●	○	●	●
Environmental / Permitting	◐	◐	○	○	◐	◐	◐	○	○
Construction Costs	◐	◐	◐	◐	○	◐	●	●	●
Safety/Accident Considerations	●	○	●	○	○	●	●	○	◐
Fair Share Contributions	◐	●	◐	◐	◐	◐	●	●	●
Ease of Construction	◐	◐	●	●	◐	●	●	●	○

Exhibit 4-2: Comparative Matrix for Ranking Segments

Legend High ● Medium ○ Low ●

Full descriptions of the elements that make up the matrix are shown in Appendix B.

As the matrix indicates, there are several sub-segments of the entire project that may be easier to deliver than others, depending on what particular element is given priority. Safety and level of service considerations would likely take precedence over others unless there are interim measures/improvements that could be applied to remedy a specific issue without committing to the full delivery of that sub-segment. Environmental considerations and ease of construction would also provide additional information regarding both anticipated initiation and duration of construction. The remaining elements regarding construction costs and available fair share contributions will provide a relative perspective on the fiscal deliverability of a sub-section.

It should be noted that the relative order of construction that could result from the application of the matrix may be more suggestive than required since allowing the private partner in a design-build contract some interpretive flexibility could result in substantial capital cost reductions depending on the perspective of a specific design-builder. While a design-build contract could require a precise order of construction it is likely that allowing some flexibility to customize their proposal would likely result in a sequence which would favor the particular abilities, needs, and style of the eventual design-builder.

Given this is the initial release of the Connector Plan of Finance, details and recommendations beyond the basic two-phase delivery approach will not be presented at this time but is being presented for future consideration and use.

## **Project Schedule**

Exhibit 4-3, the summary schedule for the Connector Project, illustrates the project's tasks by overarching project activities as well as by contract for both Phase 1 and Phase 2 projects. This schedule depicts Phase 1 improvements beginning in 2018 with an anticipated completion date by the end of 2023, allowing the backbone of the project to be constructed to provide the needed capacity with an acceptable Level of Service. Once phase 1 is completed, the phase 2 contracts will be completed as funding becomes available (see Chapter 6) and the improvements are warranted based on capacity and development of the surrounding area. This approach will allow the needed flexibility to prioritize the phase 2 improvements as they are needed along the corridor.

Preliminary activities (design, environmental clearance, utility relocation, right-of-way acquisition) are somewhat dependent on the delivery method (i.e. design-

build, design-build finance, Pre-Development Agreement). Since design-build is anticipated to be the delivery method due to cost savings and schedule acceleration, the schedule below is exemplary of the design-build procurement allowing final design to be somewhat concurrent with construction. With the many options available for the design-build procurement, as discussed in Appendix A, there is some schedule flexibility on when the preliminary activities can occur, although it is preferred to complete many of these activities (such as environmental, utility relocation, and right of way acquisition) as early as possible to minimize risk to both the JPA and the contractor.

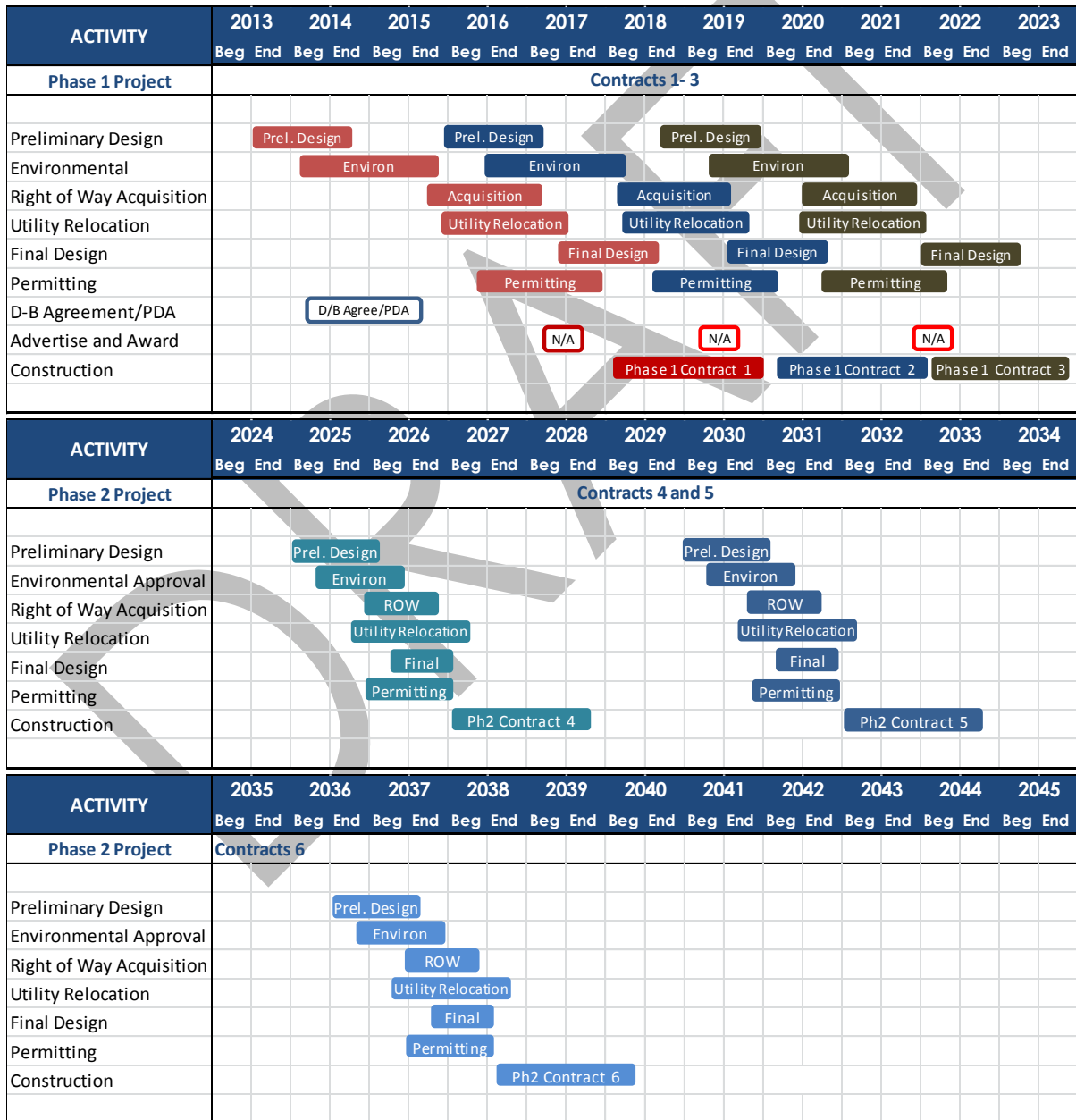


Exhibit -4-3 – Sample Contract Schedules (See Appendix B)

## State Legislative Requirements

Under California state law, there is currently authorization for the use of design/build transportation project delivery on five projects on city or county roads, and ten projects on the state highway system. The projects must be applied for through the California Transportation Commission (CTC) for approval based on a very basic set of information considering project purpose, description, funding and reasoning for using a design/build approach for this particular project.

There are two issues for the JPA that need to be addressed in order to comply with this authorizing legislation. The first is that the JPA is only authorized under current law to pursue a design/build as a P3 in any case, with the consent of a transportation planning agency or a county transportation commission for the jurisdiction in which the transportation project will be developed. In the case of the Connector Project, that entity is SACOG. The second issue is that the current authority requires the project in question to have been approved by the CTC no later than December 31, 2016. This deadline could potentially be an issue, depending on availability of funding to the Connector Road Project and the structure of the design-build arrangement. In any event, it is likely that the introduction of state legislation clarifying the JPA's authority to use design/build for the Connector Road Project and with more flexibility regarding the timing, could be pursued in 2013 or 2014. Such legislation should not be controversial or difficult to pass and signed by the Governor into law.

Contract	Segment(s)	Notice to Proceed	Estimated Completion Date
1	<b>Phase 1 Project: (Base Project) in 3 Contracts</b>	Jan-18	Dec-19
2		Jan-20	Dec-21
3		Jan-22	Dec-23
4	<b>Phase 2 Contract 4: Interchanges and mainline widening</b>	Jan-27	Dec-28
5	<b>Phase 2 Contract 5: Interchanges and mainline widening</b>	Jan-32	Dec-33
6	<b>Phase 2 Contract 6: Interchanges and mainline widening</b>	Jan-38	Dec-39

Exhibit 4-4: Contract Milestones



After all necessary project approvals are obtained, the first major construction activity is anticipated to commence in January, 2018. Exhibit 4-4 summarizes when each contract is proposed to be advertised for purposes of Federal and State funding concurrence, when the Notice to Proceed (NTP) will be given, and the estimated completion date. These scheduled milestones, as well as the other scheduled activities noted in Exhibit 4-3, serve as the basis for the year of expenditure cost estimate calculations (as discussed in Chapter 2) as well as the expenditure forecast (discussed further below). This schedule is based primarily on either of two significant assumptions:

- A design-build contract/P3 relationship will be developed that will provide some element of short-term private equity capital to supplement available public funds that will allow the entire Phase One Project to be delivered without significant interruption over a period of five years. No tolling will be considered in this scenario.
- A design-build contract will be developed using all existing and potential public funds with the primary goal of constructing the entire length of the corridor as a base facility that will provide the level of service elements identified in the PEIR. This construction is expected over a five to seven year period. No tolling will be considered in this scenario.

With the use of these two assumptions in the approach to a Design-Build/P3 relationship, the JPA can maintain maximum flexibility and leverage to choose the best option at the time of contract execution for one or both phases of the project.

Based on these estimated milestones and start of construction date, the baseline project completion for the Connector Project is no later than December, 2025 but could be as early as December, 2022.

## **Actual & Forecasted Annual Expenditures**

### **Actual Expenditures**

As noted in the latter portion of Chapter 2 (Exhibit 3-6), the project has expended \$8.77M from the start of the project planning in 2007 to the end of September, 2012.

### **Forecast Expenditures**

Given the unique aspects of implementing a design-build contract, where engineering and construction tasks occur in parallel and typically start

simultaneously with Notice to Proceed, (NTP) this Financial Plan incorporated design-build expenditure profiles as summarized in the following exhibit.

Prior to the actual start of construction, planning and project development for the Connector must continue beyond the current fiscal year of FY 2012-13, which is the last year in the five-year administrative budget adopted by the JPA Board in February, 2009. Although there are several forms of Design-Build delivery that may be suitable to the JPA, this Plan of Finance represents a more conservative form that integrates the private partner into the delivery process subsequent to Project Environmental, Right-of-Way acquisition, and Utility Relocation. This assumption was made to allow the JPA and member jurisdictions to retain optimal control over sensitive aspects of the project planning. While this model reduces the potential overall cost benefits of the Design-Build concept, it still allows enough flexibility within the contract to significantly reduce cost and delivery scheduling. Accordingly the proposed planning and project development budget for the JPA leading to the initial delivery phase of the project is shown in Exhibit 4-3.

Right-of-way expenditure forecasts were developed based on estimated right of way acquisition schedules developed by the JPA. The schedule of the expenditures for the remaining cost categories related to JPA Project Planning, Preliminary Engineering, and Environmental Stewardship were estimated on a straight-line basis by using the start and end dates identified in the project schedule.

The resulting cash flow summary needed to achieve this schedule is provided in Appendix D.

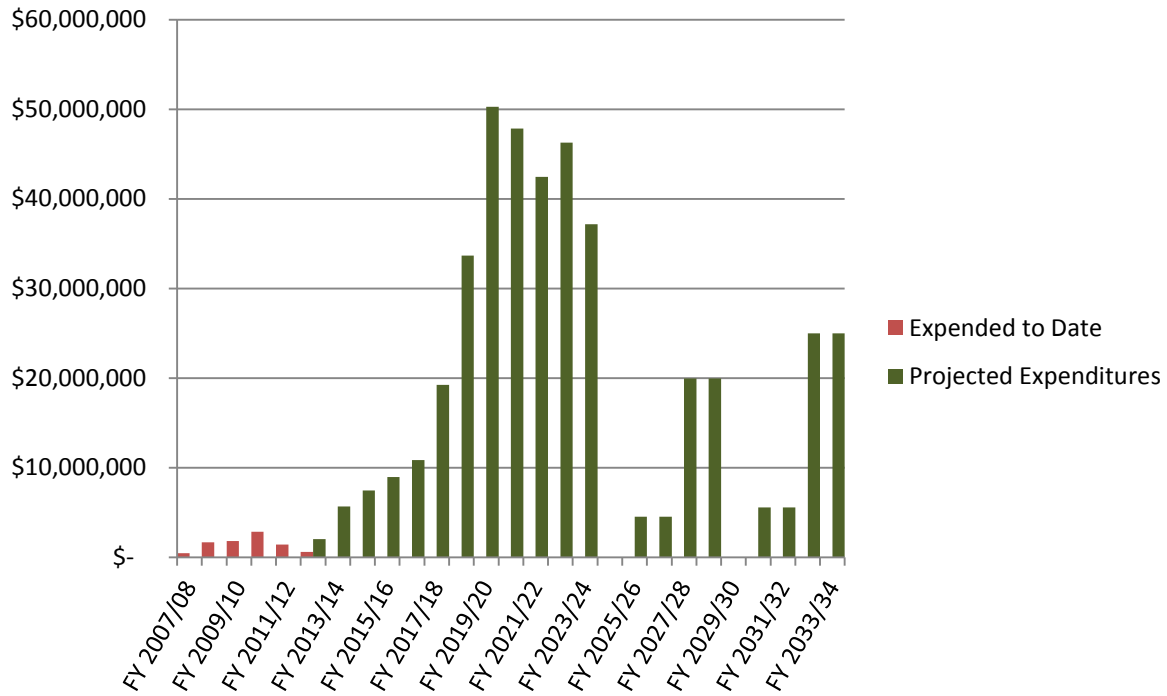
### **Total Expenditure Forecast**

Exhibit 4-5 provides a summary of the combined actual and forecast expenditures for the Capital SouthEast Connector through project completion (as detailed in Appendix D).

Fiscal Year	Expended to Date	Projected Expenditures	Total Expenditures Forecast	Cumulative Expenditures
FY 2007/08	\$ 460,000		\$ 460,000	\$ 460,000
FY 2008/09	\$ 1,650,000		\$ 1,650,000	\$ 2,110,000
FY 2009/10	\$ 1,810,000		\$ 1,810,000	\$ 3,920,000
FY 2010/11	\$ 2,830,000		\$ 2,830,000	\$ 6,750,000
FY 2011/12	\$ 1,430,000		\$ 1,430,000	\$ 8,180,000
FY 2012/13	\$ 600,000	\$ 2,030,000	\$ 2,630,000	\$ 10,810,000
FY 2013/14		\$ 5,650,000	\$ 5,650,000	\$ 16,460,000
FY 2014/15		\$ 7,460,000	\$ 7,460,000	\$ 23,920,000
FY 2015/16		\$ 8,950,000	\$ 8,950,000	\$ 32,870,000
FY 2016/17		\$ 10,840,000	\$ 10,840,000	\$ 43,710,000
FY 2017/18		\$ 19,230,000	\$ 19,230,000	\$ 62,940,000
FY 2018/19		\$ 33,660,000	\$ 33,660,000	\$ 96,600,000
FY 2019/20		\$ 50,260,000	\$ 50,260,000	\$ 146,860,000
FY 2020/21		\$ 47,840,000	\$ 47,840,000	\$ 194,700,000
FY 2021/22		\$ 42,430,000	\$ 42,430,000	\$ 237,130,000
FY 2022/23		\$ 46,260,000	\$ 46,260,000	\$ 283,390,000
FY 2023/24		\$ 37,160,000	\$ 37,160,000	\$ 320,550,000
FY 2024/25		\$ -	\$ -	\$ 320,550,000
FY 2025/26		\$ 4,520,000	\$ 4,520,000	\$ 325,070,000
FY 2026/27		\$ 4,520,000	\$ 4,520,000	\$ 329,590,000
FY 2027/28		\$ 19,950,000	\$ 19,950,000	\$ 349,540,000
FY 2028/29		\$ 19,950,000	\$ 19,950,000	\$ 369,490,000
FY 2029/30			\$ -	\$ 369,490,000
FY 2030/31		\$ 5,570,000	\$ 5,570,000	\$ 375,060,000
FY 2031/32		\$ 5,570,000	\$ 5,570,000	\$ 380,630,000
FY 2032/33		\$ 25,000,000	\$ 25,000,000	\$ 405,630,000
FY 2033/34		\$ 25,000,000	\$ 25,000,000	\$ 430,630,000
FY 2034/35			\$ -	\$ 430,630,000
FY 2035/36			\$ -	\$ 430,630,000
FY 2036/37		\$ 4,520,000	\$ 4,520,000	\$ 435,150,000
FY 2037/38		\$ 4,520,000	\$ 4,520,000	\$ 439,670,000
FY 2038/39		\$ 25,490,000	\$ 25,490,000	\$ 456,000,000
	\$ 8,780,000	\$ 421,850,000	\$ 430,630,000	\$ 456,000,000

**Exhibit -4-5: Annual Actual and Projected Expenditures by State Fiscal Year (PV)**

Exhibit 4-6 provides a graphical summary of the annual actual and forecasted expenditures for the Connector Project as presented above.



**Exhibit -4-6: Graphical Summary of Expenditures**

## Impact of Other Future Cost Changes

The Connector JPA acknowledges the potential for significant changes in expenditure that could occur as the project plan is further developed. These changes are expected and there is flexibility built into this stage of the plan to accommodate the necessary adjustments that may be required. Some of the more significant changes may be the result of the following:

- The actual delivery method chosen within the suite of Design-Build (DB) options. The particular DB model chosen for this Plan of Finance is conservative with regard to applied discounts in engineering, unit pricing, and overall cost escalation
- The need to fund interim site specific improvements along the corridor in advance of segment construction
- The phasing of the project based on available revenues. A more compressed delivery window would reduce costs further
- Changes in the government permitting process that could delay environmental clearance and contract initiation
- Significant changes in the California economy
- Unforeseen site condition changes
- Adjustments in overall project scope
- Litigation

## Comparative Value of Proposed Project vs. “Do Nothing” or General Plan Build-out

It is important to note that completing the project from a regional perspective, with larger contracts, has significant financial advantages over the individual jurisdictions constructing individual, smaller projects along the corridor. These financial advantages include delivering a more cost-effective and higher performing project, and reducing the overall cost to the public, individual jurisdictions, and potential private sector partners along the corridor.

This section focus on two comparative values: 1) a comparison of the proposed project vs. the “Do Nothing Alternative” or General Plan Build-out, and 2) a comparison of the projects scope and costs that are currently in the Metropolitan Transportation Improvement Program (MTIP) and Metropolitan Transpiration Program.

### Comparative Cost and Schedule Value – Current and Year of Expenditure \$

The capital construction costs of the entire project (i.e., the upfront capital required to deliver the project) were analyzed for both the Do Nothing Alternative and the Proposed Project on an accelerated Design-Build Project. Those costs are represented in Exhibit 4-7 as two separate capital cost estimates in both 2011 and YOE (year of expenditure) dollars.

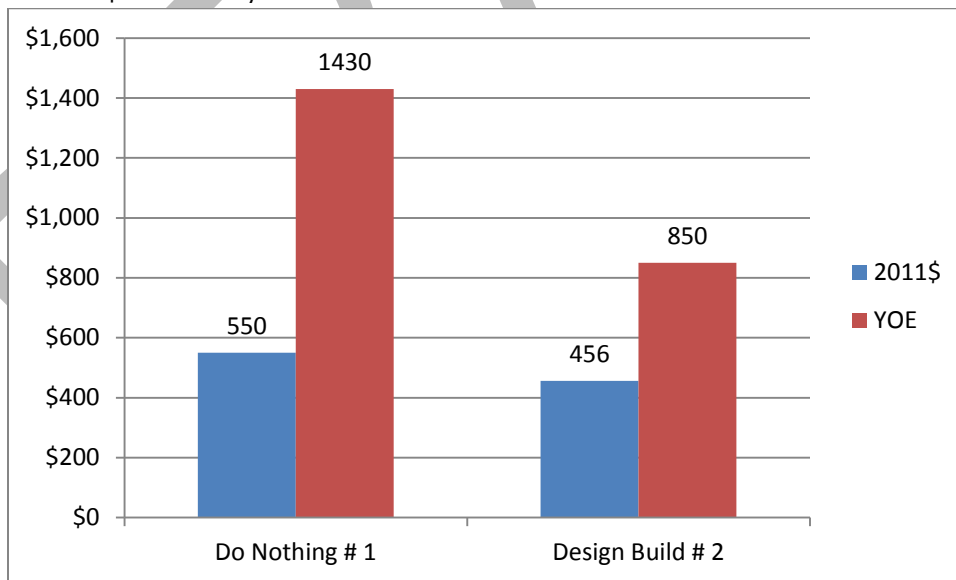
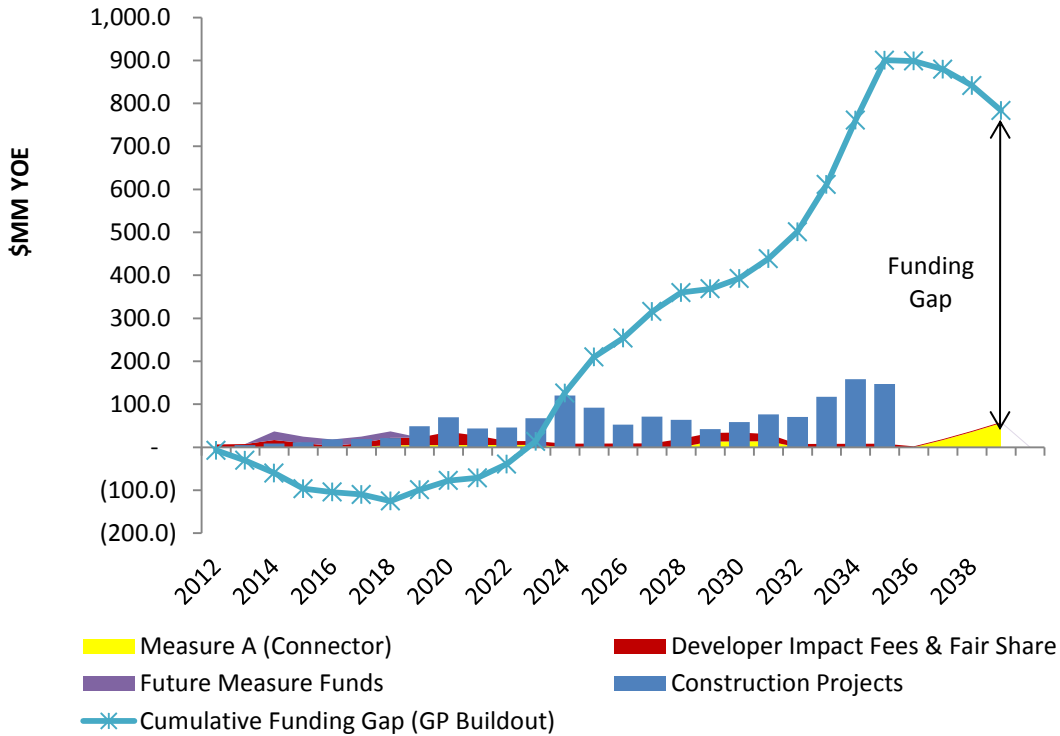


Exhibit 4-7: Cost of Do Nothing vs. Proposed Project

As proposed in this Plan of Finance, Phase One (the base infrastructure for the entire corridor length) of the accelerated Design-Build Project is anticipated to be completed by December 2022 to December 2025.

Comparatively, Figure 4-8 outlines the likely delivery schedule and funding gap for projects proposed by the member jurisdictions to complete their current general plan build-outs of the Connector alignment for the “Do Nothing” delivery option.

**Sources vs. Uses of Funds for Delivery Option #1  
General Plan Buildout**



**Exhibit 4-8: General Plan Buildout**

While the total present value of these funds covers the majority of the total 2012 construction cost estimate of \$550M, the funding gap for the project segments over the 23-year delivery window widens considerably toward the end of that construction period and does not provide the adequate funds necessary to complete the entire project. This shortfall is attributable to the inefficiency of the delivery process as well as the expected escalation of project related materials and labor disproportionate to the increase value of revenue over a corresponding time period. While this figure does not represent the exact number or timing of those projects, it does represent the approximate total time required to build out the corridor as represented in the SACOG MTP. Other likely consequences of this approach to project delivery are:

- Significantly reduced Levels of Service (LOS) along project segments

- Significantly reduced opportunity to leverage Federal or State funds for projects of Regional Importance
- Loss of potential economic opportunity available to a completed project corridor
- Nearly constant construction delays and quality of life impacts along the corridor for an extended period
- Lost opportunity for accelerated conservation and environmental preservation
- Increased potential for project creep and regulatory interference
- Piecemeal project aesthetics and functionality

## Comparative Economic Value

In addition to the cost savings inherent to accelerating the construction schedule, there are also significant economic benefits to completing the project earlier than the general plan build-out. The economic benefits of accelerating the construction of the corridor should be noted and includes much earlier realized revenues spread across all of the jurisdictions, significant Vehicle Miles Traveled (VMT) and time savings for the public through a more efficient corridor, etc...

## Comparative Value of Project as derived from the MTIP

Exhibit 4-9 summarizes the primary funding and scope differences between the Connector Project and the projects that are currently funded in the MTP and the MTIP.

In assessing the Comparative Values, the Connector Project, compared to the projects listed in the MTP/MTIP is more of a "state of the art" corridor that incorporates the community needs using a balanced effort to allow each segment to demonstrate its uniqueness while providing a continuous corridor throughout the project area.

As can be seen from the scope and cost comparisons, the Connector Project includes significant increased value over and above the individual project implementation:

- Enhanced vehicular, pedestrian, bicyclists, and transit corridor mobility.
  - Includes 10 interchanges and much fewer signalized intersections for a significantly increased Level of Service throughout the corridor
  - Sidewalks along the corridor
  - Dedicated funding for Class 1 and Multi-use paths



- Increased structural sections resulting in additional longevity of the facility and less future maintenance costs
- Dedicate funds to Sustainability elements, including constructing an “aesthetic theme” for the corridor
- Dedicated funds to landscaping, irrigational and lighting
- Environmental mitigation costs, included in the Phase 1 improvements
- Additional frontage road improvements

Segment	Cost Comparison		Scope Comparison	
	JPA Costs	MTP Costs	JPA Scope	MTP Scope
A1	\$45,998,000	\$32,950,000	<ul style="list-style-type: none"> <li>• 4-lane Expressway</li> <li>• 2" RAC/8"HMA /25" AB</li> <li>• Includes 4-lane grade separation over UPRR.</li> <li>• \$2.8M Sustainability</li> <li>• \$2.9M Multi-Use Path, landscape, &amp; lighting</li> <li>• Frontage Road improvements</li> </ul>	<ul style="list-style-type: none"> <li>• 4-lanes</li> <li>• Based on PSR quantities, the 3 mile section corresponds to 4.5" HMA/18" AB</li> <li>• Includes 4-lane grade separation over UPRR</li> <li>• no streetlights</li> <li>• Project shown being completed by 2020 in MTP/SCS</li> <li>• \$11.6M of funding from Developer/Impact Fees and other public sources</li> </ul>
A2	\$30,200,000	\$17,000,000	<ul style="list-style-type: none"> <li>• 6-lane Thoroughfare</li> <li>• 2" RAC/6"HMA /25" AB</li> <li>• \$1.6M Sustainability</li> <li>• \$2.3M Path, landscape, &amp; lighting</li> <li>• Frontage Road improvements</li> </ul>	<ul style="list-style-type: none"> <li>• 4-lanes</li> <li>• Based on the PSR quantities, the 3 mile section corresponds to a section of 4.5" HMA/18" AB</li> <li>• no streetlights</li> <li>• Project shown being completed by 2020 in MTP/SCS</li> <li>• \$1.5M of funding has been identified for right of way; no funding identified for construction.</li> </ul>
B & C	\$82,217,000	\$58,312,000	<ul style="list-style-type: none"> <li>• Full reconstruction: 4 Lanes thoroughfare (B)</li> <li>• Widen to 6 lanes between E. Stockton and Bradshaw</li> <li>• 4-lane rural arterial (C)</li> <li>• 2" RAC/6"HMA /25" AB</li> <li>• \$3.4M Sustainability</li> <li>• Class 1 Path, landscape, &amp; lighting</li> <li>• Frontage Road improvements</li> </ul>	<ul style="list-style-type: none"> <li>• Widening GLR only from 2-lanes to 4-lanes between Waterman Road and Bond Road</li> <li>• Includes 4-lane grade separation over UPRR</li> <li>• no streetlights</li> <li>• Project shown being completed by 2020 (Segment B) and 2035 (Segment C)</li> <li>• \$36.4M of funding from Developer/Impact Fees and other Public sources</li> </ul>

			<ul style="list-style-type: none"> <li>• Overlay only – Lent Ranch Parkway to E. Stockton Blvd</li> </ul>	
D1	\$50,721,000	\$21,610,000	<ul style="list-style-type: none"> <li>• 4-lane Expressway</li> <li>• \$2.4M Sustainability</li> <li>• \$4.1 Path, landscape/lighting</li> <li>• Interchange at Sunrise/GLR and construction of multi-use trail</li> </ul>	<ul style="list-style-type: none"> <li>• Assumes full cost of widening GLR from 2-lanes to 6-lanes.</li> <li>• Project shown being completed by 2035</li> <li>• \$32.8M of funding from Developer/Impact Fees and other Public sources has been identified for these segments.</li> </ul>
D2	\$106,590,000	\$86,201,000	<ul style="list-style-type: none"> <li>• 4-lane Expressway</li> <li>• \$3M Sustainability</li> <li>• \$5.4 Path, landscape/lighting</li> <li>• Interchanges at Jackson, Kiefer, Chrysanthy, University &amp; Douglas</li> </ul>	<ul style="list-style-type: none"> <li>• Assumes full cost of widening GLR from 2-lanes to 4-lanes.</li> <li>• Project shown being completed by 2035</li> <li>• \$15.8M of funding from Developer/Impact Fees and other Public sources</li> </ul>
D3	\$118,324,000	\$73,104,000	<ul style="list-style-type: none"> <li>• 4-lane Expressway</li> <li>• \$4.5M Sustainability</li> <li>• \$7.3 Path, landscape/lighting</li> <li>• Interchanges at Prairie City, Grant Line Road, Scott Road &amp; Empire Ranch Road.</li> <li>• Widening and/or Signalization of Grant Line Road, Aerojet Road, Prairie City, Oak Avenue &amp; Scott Road North.</li> </ul>	<ul style="list-style-type: none"> <li>• Sacramento County is widening/realigning WRR from 2-lanes to 4-lanes from Grant Line Road to Prairie City Road.</li> <li>• Full cost of widening WRR from 2-lanes to 4-lanes.</li> <li>• Widening from 4-lanes to 6-lanes from GLR to Prairie City Road, and from 2-lanes to 6-lanes from Prairie City Road to Scott Road.</li> <li>• Project shown being completed by 2020</li> <li>• \$38.9M of funding from Developer/Impact Fees and other Public sources</li> </ul>
E1 & E2	\$22,354,000	\$26,400,000	<ul style="list-style-type: none"> <li>• 4-lane Thoroughfare</li> <li>• \$1.1M Sustainability</li> <li>• Overlay only: Latrobe to Manchester</li> </ul>	<ul style="list-style-type: none"> <li>• Assumes full cost of widening WRR from 2-lanes to 6-lanes.</li> <li>• Project shown being completed by 2035</li> <li>• \$14.1M of funding from Developer/Impact Fees and other Public sources has been identified for these segments.</li> </ul>

**Exhibit 4-9: Project and MTIP Comparison**

In conclusion, the cost estimates shown in the MTP/MTIP for the connector related projects are too low as they do not represent the appropriate scope needed for construction of the Connector Project. In addition, very little revenue has been identified for construction of the majority of these projects.

## Chapter 5 – PROJECT FINANCING AND REVENUES

### Overall Financing Plan

The variety of funding sources to be used is intended to provide a greater degree of flexibility and stability than would result from a single-sourced funding plan. These funds are described individually below as well as shown in Exhibit 5-1 and Appendix D.

#### **Committed Funding Sources - \$ 118.2 Million**

Connector JPA Measure A funds - \$118.2 M – These local sales tax funds were allocated specifically to the project on the 2004 ballot measure. Funds are currently indicated for distribution across the entire 30 years of the tax and accompanying developer fee, with the majority of the funds being deferred to the last 5 years of the Measure's expenditure plan but are largely consistent with the 2012 MTP/SCS.

#### **Anticipated Revenue Sources - \$427.6.7M**

Federal and State Regional Funds – \$151.3 – These are Federal and State funds that are derived from annual apportionments to SACOG for funding of transportation projects. They include federal Regional Surface Transportation Program (RSTP) funds, federal Congestion Management Air Quality (CMAQ) funds, and other federal discretionary funds. State funds include STIP funding. Both sets of funds are modestly escalated based on historical rates but are largely consistent with projection in 2012 MTP.

Member Jurisdiction Development Impact Fees – \$237.7M - These are funds collected from new development on a per unit basis by the member jurisdictions and applied to projects identified in their respective Capital Improvement Plans. Only funds that are currently identified as located on the Connector alignment have been included under this revenue category. Revenues from these fees will depend on development activity because the fee revenue is generated at the issuance of building permits. An average annual level of growth has been assumed throughout the planning period. Growth in the early years of the revenue plan is likely to be less than average. Over time, fee revenues will be variable. The JPA will need to reach an agreement with each jurisdiction regarding the amount and timing of these development fees. There are funds that member jurisdictions have included in their Capital Improvements Programs to fund road projects along the Connector alignment in addition to development impact fees. Jurisdictions are not permitted to include the cost to cure existing deficiencies in their road system in their

calculation of development impacts, so these funds are provided through other sources.

Other Contributions – \$36.3M – These are funds that are anticipated to be collected by the member jurisdictions as a result of mitigation fees for either development projects or other projects such as the Stonebridge and Teichert Quarry projects. These funds are collected specifically to mitigate direct impacts along the Connector alignment above and beyond what is collected as part of a development impact fees. All of these mitigation programs include some modest inflationary cost increases to account for unit cost and other increases.

Member Jurisdiction Direct Contributions – \$2.3M – These are the funds expected to be made available directly from the member jurisdictions as to match funding from other areas. These funds could also include possible in-kind contributions right-of-way, utility relocation, and staffing.

### **Potential Revenue Sources - \$75.0M**

While it is not possible to anticipate the future of transportation funding over the life of the Plan of Finance, historical trending since the year 2000 have shown that revenue supplements have become available from a variety of sources, such as the recent stimulus funding. For this Plan of Finance, it is not possible to quantify the exact amount that may be available to the project, but it is also not practical to assume the status quo and thus limit our capital sources to Committed and Anticipated sources. Using a conservative assumption for funding from Potential sources, the plan estimates additional revenues for capital construction through the below list of sources:

Supplemental Local Sales Tax - This "Measure B" ½ cent sales tax is a 20-year tax that is tentatively planned for approval by Sacramento County voters in 2014 and would be available for use in 2019. It is represented as a lump sum allocation in the plan assuming that bonds were issued and repaid by the sales tax in future years.

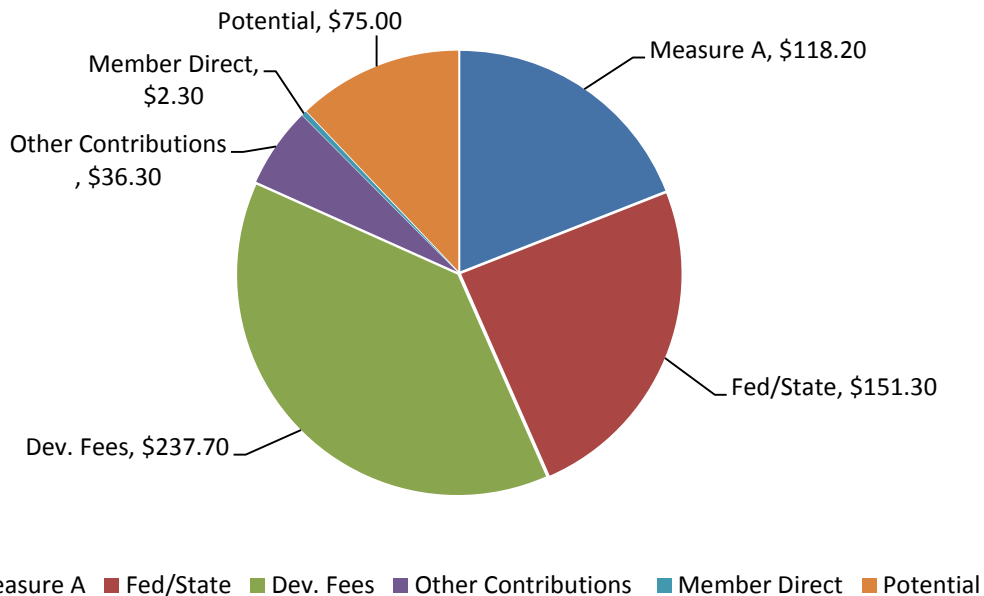
State Vehicle License Fee (VLF) - This is the reinstatement of the original VLF fees applied through annual vehicle registrations. The funds would be distributed to the jurisdictions by the Metropolitan Planning Organization (MPO) and redistributed to the project on an annual basis.

Federal Stimulus Funds - This represents another round of federal stimulus to assist in economic recovery and is considered a conservative estimate with regard to the funds available to the region from the previous stimulus.

Federal Transportation Grants - The current Federal Surface Transportation bill is a two-year bill that will expire in 2014. While it is unknown whether a completely new bill and accompanying revenue source will be developed, it is likely that additional revenues will be realized based on infrastructure needs and the association to the national economy. These revenues are not required to be realized early in the Plan of Finance but are assumed to be bondable such as a GARVEE bond would be.

User Fees – While not included as a Committed or Anticipated Revenue source, tolling and/or some form of mileage-based revenue source is very likely to emerge at the federal or state level as an alternative/substitute for the current gasoline tax.

Other Misc. Revenues - Supplementing revenue for a project of this size could materialize in a variety of forms and origins. Over the last decade both state and federal government have initiated transportation revenue funding from a variety of bonds, fees, surcharges, and levies. It is likely that over the next ten-year period, one or several of these funding sources can be applied to the Plan of Finance.



**Exhibit 5-1 Total projected revenues by source (Millions)**

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## Chapter 6 – PROJECT CASH FLOW

### Revenue Timing by Source

#### Connector JPA Measure A funds - \$118.0M

The FY 2013 Measure A Capital Allocation Plan released on October 1, 2012 by the Sacramento Transportation Authority (STA), indicates \$118M available for the project over the 30 year life of the measure. Of this total, approximately \$7.8M has been expended to date. The remaining \$110M are available primarily towards the latter years of the plan, post FY 2030. One of the assumptions of this plan is that a majority of funds in an available year can be used as backup security against developer fee payments to advance a public or private loan to initiate construction much earlier than would otherwise be possible. By asking the STA to commit a portion of these allocated funds as collateral in the event that developer fees cannot exclusively cover the construction loan payments, the project can proceed without waiting for sufficient cash accruals to be realized. The remaining Measure A funds will be applied to the project on schedule to supplement future construction and or finance costs over the Phase 2 portion of the project build out. Measure A funds are based on present estimates (Oct 2012) provided by the Sacramento Transportation Authority.

Federal and State Regional Funds - \$151.3M - Federal and State Funds equal 1/3 of the project costs and are available at the time the project expenditures occur. These funds have been applied in a range of between 0 and 66% across the duration of the plan with the largest percentage concentrated in the period around the Phase 1 delivery.

Member Jurisdiction Developer Fees - \$237.7M - Development Impact Fee revenues are assumed to be received at an average annual rate through the life of the project based on the identified level of development fees for Connector related projects in each member jurisdiction's development impact fee program. Development fees are highly variable year by year and depend on the pace of development. Annual revenues from these fees are applied to the model at levels representative of the development projections used in the Programmatic EIR for the Connector Project.

Fair Share Contributions - \$36.3 - Quarry Mitigation Fees for Connector related projects are assumed to be available on an average annual basis until the required amount of the mitigation fees are paid. However, these fees are actually tied to funding specific Connector related projects. The flow of Quarry Mitigation Fee revenues are also highly correlated to the level of development activity in any year.

Revenues from these projects are applied equally over a 15 year period beginning at the initiation of construction of the Phase 1 program.

Member Jurisdiction Direct Contributions - \$2.3M - Local Funds provided by member jurisdictions, exclusive of developer fees, to match project expenditures have not been estimated. Local jurisdictions may provide funding during the construction of the Connector based on local priorities or mitigation requirements. These revenues are not represented in the model since they will be used to carry administrative and operation costs of the JPA which is not shown as a part of the construction costs. Some of this revenue could be applied in the model if required

Potential Revenue Sources - \$75.0M - Other potential revenues cannot be predicted with accuracy but are assumed to be available during various heavy construction periods. Revenue from this individual or combination of future funding sources has not been introduced into the model until 2019 but may be available earlier.

### Total Project Revenue Timing

Exhibit 6-1 represents an overall summary of the full cash flow model projection for the project.

Table 1 in Appendix D provides a detailed summary of the various revenue sources in the proposed phased delivery plan. The Cash Flow projections indicate that there should be adequate revenues to fund the construction of the Connector through build-out given the timing of the construction program and the assumptions about the various revenue sources.

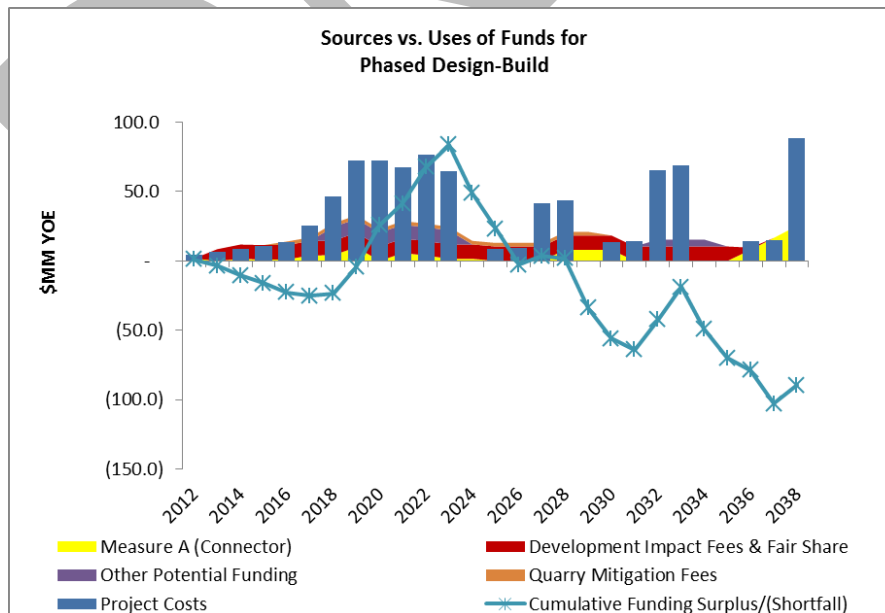


Exhibit 6-1; Cash Flow Model



Given these assumptions, it also indicates a revenue surplus at the end of the planned construction schedule. Overall, the revenue assumptions appear to be reasonable. In constant 2012 dollars, there is a potential surplus of identified revenues if all the sources are actually realized. However, it is likely that not all of the revenues will be received at the level indicated. Even with an inflation factor for revenues at 3.0% and a factor 4.7% for expenditure, there is a surplus of revenues over project expenditures if all revenue are realized.

Although the overall revenue assumptions appear reasonable, the timing of the receipt of the revenues matching the timing of construction is less certain. As previously mentioned in Chapter 4, the JPA has two key strategies for managing cash flow issues:

1. Modification to the Expenditure Plan – Should anticipated revenues be delayed, especially due to a sluggish economy and low levels of development fees, then the construction program can be reprogrammed.
2. Bridge Loans – If there are short-term cash flow shortages with good prospects for repayment, the JPA could take out construction loans and repay the loans with the receipt of the expected revenues.

### **Bridge Loan Concepts**

In order to resolve short cash flow shortages during the life of the Plan of Finance, the Connector Project may need to borrow funds and repay them with the permanent revenues sources. There are at least 3 key possibilities for these loans.

Sacramento Transportation Authority Measure A Funds - Most of the Measure A Funds for the Connector Project are received in the last years of the construction program. In order to facilitate construction of the Connector, STA could provide a short-term loan backed by a small set-a-side of the annual Measure A sales tax. The loan would be paid off as quickly as possible, with interest, through the receipt of the other programmed revenues sources, particularly the development impact fees. The Measure A sales taxes would only be necessary to pay debt service in years where the development fee revenues fell below projects. If the STA approved this approach, there would be a slight delay in the construction of other Measure A projects.

Member Jurisdictions - Member jurisdictions may also provide funding advances from their development impact fee programs to help Connector Project's cash flow. The funding advances would only be available to the extent that the member jurisdiction has prioritized the construction of Connector related improvements.

Jurisdictions would be reimbursed for these funding advances and interest from the programmed funding sources.

California Infrastructure and Economic Development Bank - The California IBANK provides low interest 20 years to facilitate construction of major infrastructure projects that contribute to economic development. An IBANK loan would probably require a secure source of repayment to stand behind the loan, such as a pledge from the Measure A sales tax program. However, the primary source of repayment could be development impact fees or receipt of State or Federal funds.

Development Project Advances - A number of development projects along the Connector Alignment may be another source funding short-term financing. Developers may also be willing to provide advances of their development fees to assist the Connector construction program and receive fee credits against future fees. Some development projects could also provide advance funding to satisfy specific environment mitigation requirements beyond their fair share of funding identified through their development impact fees.

As previously mentioned in this chapter and as shown in the cash flow model represented in Table 1 of Appendix D, adequate surplus revenue exists at the end of the program to allow for some borrowing during peak construction activity periods of Phase 1. Additional analysis work will be performed in support of this Plan of Finance to further define the specifics of this loan.

## Chapter 7 - OTHER FACTORS

### Special Cost Containment Strategies

Throughout the planning phase of the Connector Project and development of this Plan of Finance, the project sponsors have employed value engineering studies to review the cost effectiveness of the design alternatives. During the discussion of tolling/user fees earlier in the development of the plan, life-cycle and maintenance costs were included in the analysis to maximize the value of the project within the identified project budget. That aspect of future project costs are not included in the non-tolled analysis but will be introduced for additional discussion once the capital cost aspects of the plan are completed. In addition, JPA is committed to ensure the proper use of capital funds through a comprehensive and aggressive financial and construction contract compliance audit program to be developed.

Over the course of the project, cost estimates will be updated to reflect current preliminary engineering including construction, right-of-way, utility relocations, mitigation, appropriate contingencies, and other factors. Likewise, the project financial plan, including cash flow analysis, will be updated collaboratively, based upon input from SACOG, the member jurisdictions and other relevant sources. Project and contract scheduling will be used to monitor progress and keep the project on track once a specific delivery method is selected and executed.

### Major Responsibilities of All Parties Involved

All aspects of this report assume the Connector construction will be managed by the JPA, acting as the member jurisdiction's agent on the project. The JPA is responsible for assuring the necessary coordination among the firms contracted to complete design and construction work for the five sections of the project and provide a project wide perspective.

The Plan of Finance was developed to demonstrate what is considered the most viable approach to the timely completion of the entire Connector Project as defined in the PEIR. The analysis relies on cost estimates, timing, and processes that must be executed by a single project representative in order to make those assumptions valid. It is recognized that additional coordination and policy development between the JPA, SACOG, the member jurisdictions, and others will be required to execute this plan. It is also recognized that involvement from the state legislature, Caltrans, and the California Transportation Commission may be required. This plan is a necessary first step to initiate and advance these discussions. Shortly, after the adoption of this plan by the JPA Board, the Authority will begin

discussions on a Memorandum of Understanding (MOU) with the member jurisdictions and possibly others, which establishes the intent and responsibilities of the parties involved.

In conjunction with General Plan and other regulatory approvals, the Authority and the member jurisdictions will expand on the existing MOU and enter into a subsequent financing and operating agreement, addressing in more detail project funding, ownership, operation and maintenance responsibilities, including the JPA's responsibilities for planning, development, design, right-of-way acquisition, and construction of the project. This document will delineate contract approval processes, land transfer issues, inter-jurisdictional policies and relationships, revenue sharing, and accounting audit procedures.

### **Schedule for Future Annual Updates**

Adjustments to the cost estimate will be computed in a manner consistent with the methodology established in this Initial Plan of Finance. For future updates, the Connector Project will maintain its fiscal year (July 1 – June 30) as the project's fiscal year. Using the JPA and member jurisdiction's fiscal year as the benchmark for future annual updates is particularly appropriate given that the majority of the funding for the project is coming from local funds, state agencies, or agents of the State. This timing will facilitate the development of compatible subsequent six-year capital program updates.

Therefore, annual updates to the Plan of Finance will be submitted to the necessary parties within 60 days following the end of Connector Authority's fiscal year, which will be September 1<sup>st</sup> of each year.

## APPENDIX A – DESIGN BUILD PROCUREMENT

### Summary of the Various Contract Options

In order to deliver the project as efficiently as possible, several delivery options have been considered for the SouthEast Connector Project. These delivery options include both traditional design-build and Public-Private Partnerships (P3) as described below:

#### Delivery Options

- Design-Bid-Build (DBB): the public authority completes separate procurements for the design and construction of the project. Long term operations and maintenance remain the responsibility of the public authority
- Design-Build (DB): a private contractor designs and builds the project, while the public authority operates, maintains, and finances
- Design-Build-Finance (DBF): a private contractor designs, builds and finances the project while the public authority operates and maintains
- Design-Build-Finance-Operate-Maintain (DBFOM): a private contractor designs, builds, finances, operates and maintains the project
- Concession: a private contractor designs, builds, finances, operates and maintains the project and also collects the revenue from users of the project
- Availability Payments: A means of compensating a private concessionaire for its responsibility to design, construct, operate, and/or maintain a tolled or non-tolled roadway for a set period of time. For a tolled facility the project sponsor retains the underlying revenue risk associated with the toll facility rather than the private partner

#### Public-Private Partnership (P3)

A P3 is a contractual arrangement between a public agency and a private sector entity structured to meet the need of the public by:

- Optimizing the skills and assets of each sector (public and private) in delivering a service or facility for the use of the general public; and
- Allocating the risks in the delivery of the service and/or facility to the parties best able to manage them.

Note that in all P3 business models, the full ownership reverts back to the public at the end of the term. Control of the asset is maintained by the public through the partnering approach and project agreement.

These delivery methods are summarized in Figure 1 along with an assessment of the risk transfer from the public sector to the private sector and visa versa.

	Design	Construction	Operations/ maintenance	Finance	Revenue
Design-bid-build	○	○	○	○	○
Design-build	●	●	○	○	○
Design-build-finance	●	●	●	●	○
Design-build-finance operate/maintain (availability payment)	●	●	●	●	○
Design-build-finance operate/maintain (toll concession)	●	●	●	●	●

Key: ○ Risk retained by Public Sector  
● Risk transferred to Private Sector

Figure 1 - Risk Transfer variation by delivery option

### Preferred Delivery Option

As presented in the October 2012 Board of Directors Meeting, while several of the above described delivery methods could still be utilized, based on cost and delivery efficiencies design-build procurement will be pursued as the primary delivery method.

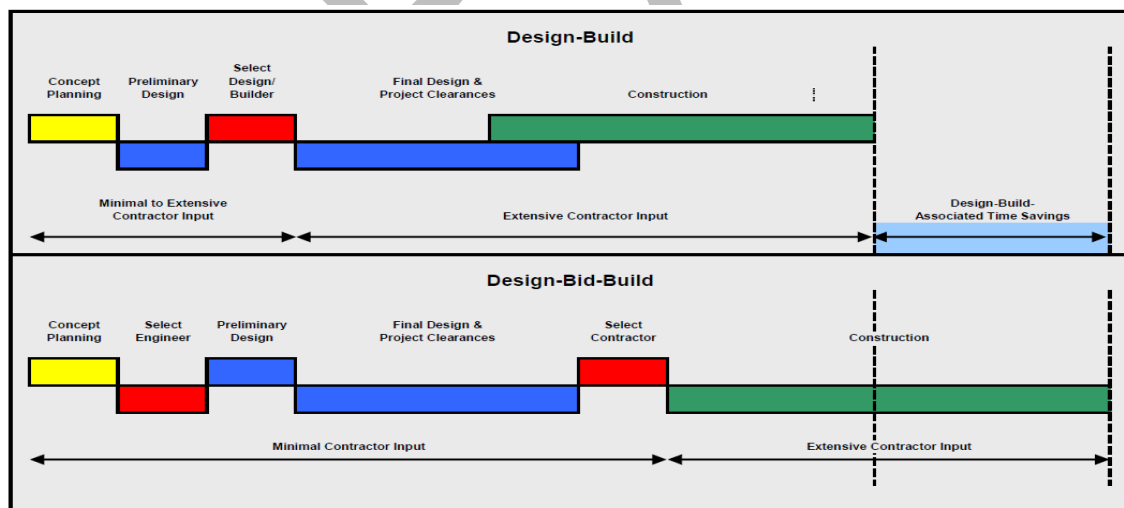


Figure 2 - Sequence of Project Delivery Activities by Contract Approach <sup>3</sup>

<sup>3</sup> Source: Dr. Keith Molenaar, University of Colorado at Boulder

As demonstrated in figure 2, the Design-Build delivery method offers significant time savings over the traditional Design-Bid-Build by consolidating various upfront activities and overlapping a portion of the design process with the actual construction of the project. In the case of the Connector Project, this time saving could be as much as 12 to 18 months per contract.

## **Design-Build Contracting Issues: Risk Assessment**

Within the general classification of design-build, there are variations on that delivery method that offer further flexibility with regard to risk transfer. For the most part, risk transfer is synonymous with exposure to contract areas of work that are out of control of the design-builder. More exposure relates to greater risk and less opportunity for cost savings.

Below is a brief summary of some of the major issues relating to the use of design-build contracting that will directly impact the risk and associated cost for both the contractor and owner:

- Appropriate Level of Preliminary Design:  
While the majority of design-build contracts complete the design to a 30% level, survey results indicate that the level of contracting agency satisfaction reported for design-build projects was higher for lower levels of preliminary design completed before design-build contract award<sup>4</sup>. This can be directly attributed to the design-builder's ability to influence the project design earlier in the process to promote its constructability and cost effectiveness.
- Project Phasing related to Environmental Clearance, Utility Relocations, and Right of Way Acquisition:  
In areas of delivery process that are legislatively controlled such as right-of-way control and utility rights, completing these processes outside of the contract provides security to the design-builder that the construction process can proceed expeditiously once it is started. This can result in lower overall exposure to delay and reduce cost. The same is true for the environmental process which is heavily regulated and subject to delays associated with public interaction and lawsuits. Conversely, should any of these processes be viewed more procedurally as part of a contract, the incentive to take advantage of additional areas of savings could reduce overall contract costs further.

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<sup>4</sup> Design-Build Effectiveness Study - As Required by TEA-21 Section 1307(f) Final Report , January 2006

- Pre Development Agreements

By asking the design-builder to advance the majority of up-front costs associated with the design process, the owner realizes a significant cost savings and allows the design-builder to participate more exclusively in the details of the preliminary design and construction sequencing process. The risk to the owner is the requirement to compensate the design-builder for their participation in the process should the project not advance to construction.

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## APPENDIX B – MATRIX DETAIL

### Plan of Finance Matrix

#### Criteria Descriptions

In order to proceed decisively with a phasing plan for the Connector Plan of Finance, each segment was evaluated on a number of criteria that were considered significant factors that could influence the relative order of delivery. The selected factors are as follows:

- A) Existing Traffic – Are there any current unacceptable delays on a segment that could be reduced or eliminated through the construction of planned improvements. Are these delays related to an emerging pattern of future growth or created by demand from cross streets and/or off corridor influences?
- B) Future Traffic - Which segments are more susceptible to unacceptable delays during the anticipated delivery of the initial phases of the project starting around 2018? What growth areas around the project are more likely to accelerate quicker than others?
- C) Environmental Considerations – Are there any segments which have less environmental impacts or complications that could require additional permits and/or complicating design considerations? Are there segments that are significantly less complex from this perspective? NOTE: Any additional costs related to this criteria are reflected exclusively through the Construction Cost factor noted below.
- D) Construction Costs - Are the total capital costs of any of the segments significantly less on a unit cost basis or more expensive based on unique features, i.e. bridges, overcrossings, mitigation requirements, than the others to improve deliverability?
- E) Safety/Accident Considerations – Is there an outstanding safety improvement consideration outstanding on any of the segments that can be improved by the planned improvements that cannot be remedied by interim improvements at a specific location along the segment?

- F) Fair Share Contributions – Are there significant fair share revenues available from land entitlements, specific plans, or other accrued public funds that are dedicated specifically to a segment? Are those funds available in a timeframe that gives a segment a better opportunity to be completed in a specified time frame?
- G) Ease of Construction – Do any of the segments require less traffic control, phasing, permitting, or geographic constraints that would extend the overall duration of construction? Will any of the phases be more “shovel ready” than others to take advantage of any grants or discretionary funding?

The following is a discussion of the methodology used to rank each of the segments based on the criteria outlined above.

### Existing Traffic

A primary consideration for measuring the existing operational effectiveness through a segment is to compare the volume/capacity ratios, which is a ratio of the existing daily traffic volume divided by the traffic capacity of the segment based on a number of factors such as number of lanes, geometry, grades and traffic signals or stop signs through a segment.

The following table lists the average volume to capacity ratios through each segment:

Segment	Limits	Volume to Capacity Ratio
A1	I-5 to Bruceville Road	NA
A2	Bruceville Road to SR 99	0.15
B	SR 99 to Bond Road	0.52
C	Bond Road to Calvine Road	0.77
D1	Calvine Road to Jackson Road	0.59
D2	Jackson Road to White Rock Road	0.46
D3	White Rock Road to El Dorado County Line	0.47
E1	El Dorado County Line to Latrobe Road	0.36
E2	Latrobe Road to US 50	0.61

The evaluation scale for Existing Traffic is as follows:

Volume to Capacity Ratio	Score
0.61 +	● – High Benefit from Project
0.41 – 0.60	◐
0.31 – 0.40	○
0.21 – 0.30	◑
0 – 0.20	● – Low Benefit from Project

### Future Traffic

Future traffic was based on the 2035 traffic projections analyzed in the Connector Programmatic EIR. The volume to capacity ratio was also used to evaluate which connector segments would have the most traffic operational benefit from the project in comparison to build-out of the route based on the 2035 Metropolitan Transportation Plan (MTP).

The following table lists the average traffic volume to capacity ratios through each segment based on the traffic projections in the 2035 MTP:

Segment	Limits	Volume to Capacity Ratio
A1	I-5 to Bruceville Road	0.62
A2	Bruceville Road to SR 99	0.55
B	SR 99 to Bond Road	0.65
C	Bond Road to Calvine Road	0.84
D1	Calvine Road to Jackson Road	0.79
D2	Jackson Road to White Rock Road	1.06
D3	White Rock Road to El Dorado County Line	0.77
E1	El Dorado County Line to Latrobe Road	0.60
E2	Latrobe Road to US 50	0.41

The evaluation scale for Future Traffic is as follows:

Volume to Capacity Ratio	Score
0.91+	● – High Benefit from Project
0.81 – 0.90	◐
0.71 – 0.80	○
0.61 – 0.70	◑
0 – 0.60	● – Low Benefit from Project

## Construction Costs

Construction costs for each segment were estimated independently and then compared to either the existing estimates in the 2035 MTP or each jurisdiction's estimates. Estimates were then adjusted to split each segment into two phases. The first phase of the project would construct all elements of the Connector except for the interchanges. Interchanges would be built in the second phase when the projected traffic volumes would necessitate the operational improvements.

The following table compares the first phase unit cost per lane mile for each segment:

Segment	Limits	Lane Miles	Unit Cost/Lane Mile (in Millions)
A1	I-5 to Bruceville Road	12.2	\$3.85
A2	Bruceville Road to SR 99	13.0	\$2.18
B	SR 99 to Bond Road	18.2	\$2.61
C	Bond Road to Calvine Road	10.9	\$2.39
D1	Calvine Road to Jackson Road	17.9	\$2.18
D2	Jackson Road to White Rock Road	28.9	\$1.73
D3	White Rock Road to El Dorado County Line	25.5	\$2.94
E1	El Dorado County Line to Latrobe Road	4.4	\$2.46
E2	Latrobe Road to US 50	4.4	\$2.73

The evaluation scale for Construction Costs is as follows:

Unit Cost/Lane Mile (in millions)	Score
>\$2.2	● – High Cost Effectiveness
\$2.21 - \$2.40	◐
\$2.41 - \$2.60	○
\$2.61 - \$2.80	◑
\$2.81+	● – Low Cost Effectiveness

## Safety/Accident Considerations

Accident data for the past 5 years that were available was collected and compiled for each segment. For the purpose of this report, it was assumed that the percentage of correctable accidents in each segment is the same and that the project would reduce the number and severity of accidents in each segment proportionately.

The following table lists the total number of accidents in each segment from 2006 to 2011:

Segment	Limits	# of Accidents
A1	I-5 to Bruceville Road	7
A2	Bruceville Road to SR 99	43
B	SR 99 to Bond Road	90
C	Bond Road to Calvine Road	56
D1	Calvine Road to Jackson Road	54
D2	Jackson Road to White Rock Road	84
D3	White Rock Road to El Dorado County Line	140
E1	El Dorado County Line to Latrobe Road	47
E2	Latrobe Road to US 50	22

The evaluation scale for Safety/Accidents is as follows:

Volume to Capacity Ratio	Score
80+	● – High Benefit from Project
61 - 80	◐
41 - 60	○
21 - 40	◑
0 – 20	● – Low Benefit from Project

### Fair Share Contributions

Future fair share contributions/developer fees that have been earmarked for Connector segments were compiled for each jurisdiction. The anticipated fees were then compared to the estimated cost of each Connector segment and ranked in the following table based on the percentage of the dedicated future fees to the estimated cost.

Segment	Limits	Dedicated Fees/Estimated Cost (%)
A1	I-5 to Bruceville Road	71%
A2	Bruceville Road to SR 99	0%
B	SR 99 to Bond Road	46%
C	Bond Road to Calvine Road	73%
D1	Calvine Road to Jackson Road	44%
D2	Jackson Road to White Rock Road	83%
D3	White Rock Road to El Dorado County Line	0%
E1	El Dorado County Line to Latrobe Road	146%
E2	Latrobe Road to US 50	93%

The evaluation scale for Fair Share Contributions is as follows:

Unit Cost/Lane Mile (in millions)	Score
91%+	● – High Cost Effectiveness
71%-90%	◐
51%-70%	○
31%-50%	◑
0%-30%	● – Low Cost Effectiveness

### Ease of Construction

A number of factors were considered in ranking the segments on Ease of Construction or “shovel readiness”. These factors included evaluating the complexity of the construction staging/traffic handling, right-of-way acquisitions and potential relocations, external coordination with utilities, railroad and Caltrans and environmental permitting factors. These factors were ranked and scored in the table below on a 1 to 3 scale with 1 being relatively easy and 3 indicating there are complexities with that particular item.

Segment	Limits	Staging Traffic Handling	Right-of-Way	Utilities Railroad Caltrans	Permitting	Total Score
A1	I-5 to Bruceville Rd	1	2	3	2	8
A2	Bruceville Rd to SR 99	1	1	2	1	5
B	SR 99 to Bond Rd	2	3	2	1	8
C	Bond Rd to Calvine Rd	3	3	1	2	9
D1	Calvine Rd to Jackson Rd	1	2	1	2	6
D2	Jackson Rd to White Rock Rd	1	1	1	2	5
D3	White Rock Rd to El Dorado County Line	1	1	1	2	5
E1	El Dorado County Line to Latrobe	1	1	1	2	5
E2	Latrobe Rd to US 50	2	1	2	1	6

The evaluation scale for Ease of Construction is as follows:

Total Score	Score
4-5	● – Easier to Construct
6	◐
7	○
8	◑
9+	● – More difficult to Construct

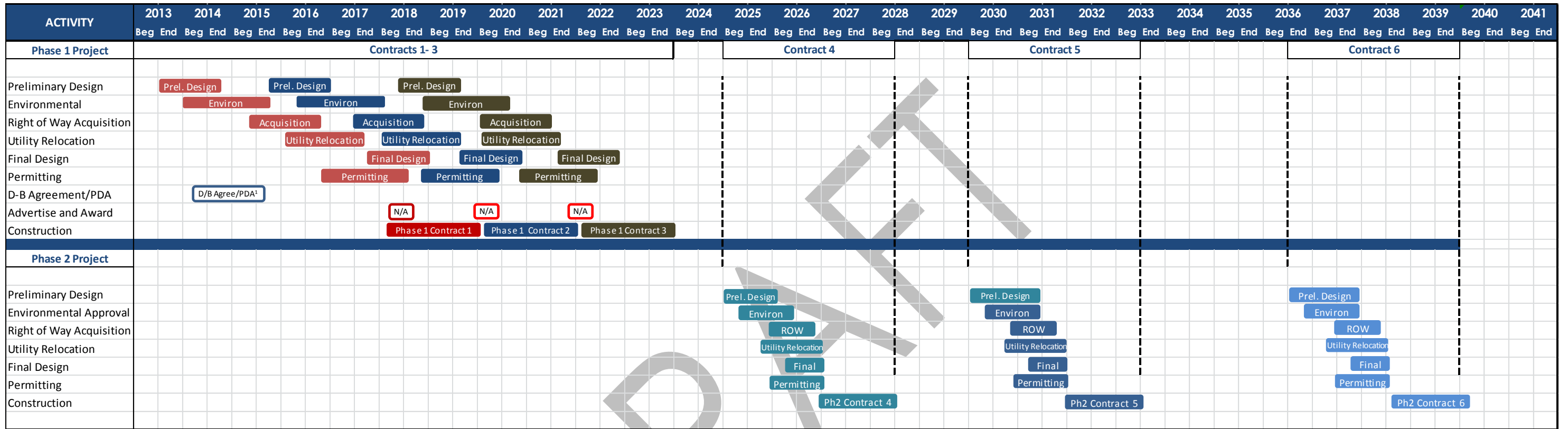
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# APPENDIX C - SCHEDULE



Notes: 1) Design-Build Agreement/ Pre Development Agreement are one of several procurement options (Reference Appendix A for additional information).  
 2) Phase 2 Contracts Timing and Schedule is Dependent on Funding and Need for Improvements.

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## APPENDIX D – CASH FLOW SUMMARY

Table 1 Capital Southeast Connector JPA Cash Flow Summary - Advance Funding From Fee - Adjusted																							Forecast Option: EIR Estimate							
Avail. & Potential Funding - 2012\$		Identified Sources																												
\$mm	YOE	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
<b>Sources</b>																														
	Available Funding																													
	Measure A (Connector)	110.4	2.8	-	1.4	1.0	1.0	3.9	4.1	9.9	-	5.7	3.9	1.5	1.5	-	-	-	7.9	7.9	7.9	-	-	-	-	-	8.0	16.6	25.3	
	Local Funds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	<b>Total Identified Funding</b>	<b>110.4</b>	<b>2.8</b>	<b>-</b>	<b>1.4</b>	<b>1.0</b>	<b>1.0</b>	<b>3.9</b>	<b>4.1</b>	<b>9.9</b>	<b>-</b>	<b>5.7</b>	<b>3.9</b>	<b>1.5</b>	<b>1.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7.9</b>	<b>7.9</b>	<b>7.9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.0</b>	<b>16.6</b>	<b>25.3</b>		
	33% State & Federal Funds	151.1	1.3	1.9	2.5	3.0	3.6	6.3	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	6.6	6.6	2.3	1.8	1.8	8.3	8.3	-	-	1.5	1.5	8.4	
	Development Impact Fees & Fair Share	237.7	-	8.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	1.5	-	-
	Quarry Mitigation Fees	36.3	-	-	-	-	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	-	-	-	-	-	-	-	-	-	
	Other Potential Funding	75.0	-	-	-	-	-	10.0	10.0	10.0	10.0	10.0	10.0	10.0	-	-	-	-	-	-	-	-	5.0	5.0	5.0	-	-	-		
	<b>Total Potential Funding</b>	<b>500.0</b>	<b>1.3</b>	<b>10.3</b>	<b>12.8</b>	<b>13.3</b>	<b>16.5</b>	<b>19.3</b>	<b>32.4</b>	<b>32.4</b>	<b>32.4</b>	<b>32.4</b>	<b>32.4</b>	<b>32.4</b>	<b>22.4</b>	<b>22.4</b>	<b>22.4</b>	<b>19.5</b>	<b>19.5</b>	<b>15.2</b>	<b>12.2</b>	<b>12.2</b>	<b>23.6</b>	<b>23.6</b>	<b>15.4</b>	<b>10.4</b>	<b>3.0</b>	<b>1.5</b>	<b>8.4</b>	
	<b>Total Funding</b>	<b>610.4</b>	<b>4.1</b>	<b>10.3</b>	<b>14.2</b>	<b>14.3</b>	<b>17.5</b>	<b>23.2</b>	<b>36.5</b>	<b>42.3</b>	<b>32.4</b>	<b>38.1</b>	<b>36.4</b>	<b>33.9</b>	<b>23.9</b>	<b>22.4</b>	<b>22.4</b>	<b>19.5</b>	<b>27.5</b>	<b>23.2</b>	<b>20.1</b>	<b>12.2</b>	<b>23.6</b>	<b>23.6</b>	<b>15.4</b>	<b>10.4</b>	<b>11.0</b>	<b>18.0</b>	<b>33.7</b>	
<b>Project Costs - 2012 Dollars</b>																														
<b>Preferred Alt. Accl. Design-Build w/o Tolling</b>																														
\$mm	YOE	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
<b>Uses</b>																														
	Estimated Percent of Development [1]																													
	Mainline Improvements [1]	98%	1.3%	1.8%	2.3%	2.8%	3.4%	6.0%	10.5%	15.7%	14.9%	13.2%	14.4%	11.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
	Interchange Improvements	100%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	3.1%	13.8%	13.8%	0.0%	3.9%	3.9%	17.3%	17.3%	0.0%	0.0%	3.1%	3.1%	17.6%	
	Mainline Improvements	313.8	4.1	5.7	7.5	9.0	10.8	19.2	33.7	50.3	47.8	42.4	46.3	37.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Interchange Improvements	144.6	-	-	-	-	-	-	-	-	-	-	-	-	4.5	4.5	20.0	20.0	-	5.6	5.6	25.0	25.0	-	-	4.5	4.5	25.5		
	<b>Total Project Costs</b>	<b>458.4</b>	<b>4.1</b>	<b>5.7</b>	<b>7.5</b>	<b>9.0</b>	<b>10.8</b>	<b>19.2</b>	<b>33.7</b>	<b>50.3</b>	<b>47.8</b>	<b>42.4</b>	<b>46.3</b>	<b>37.2</b>	<b>-</b>	<b>4.5</b>	<b>4.5</b>	<b>20.0</b>	<b>20.0</b>	<b>-</b>	<b>5.6</b>	<b>5.6</b>	<b>25.0</b>	<b>25.0</b>	<b>-</b>	<b>-</b>	<b>4.5</b>	<b>4.5</b>	<b>25.5</b>	
	<i>Cumulative Project Costs</i>		4.1	9.7	17.2	26.1	37.0	56.2	89.9	140.1	188.0	230.4	276.6	313.8	313.8	318.3	322.8	342.8	362.7	362.7	368.3	373.9	398.9	423.9	423.9	423.9	428.4	432.9	458.4	
	Total Uses																													
<b>Funding Gap - 2012 Dollars</b>																														
	Funding Sources	610.4	4.1	10.3	14.2	14.3	17.5	23.2	36.5	42.3	32.4	38.1	36.4	33.9	23.9	22.4	22.4	19.5	27.5	23.2	20.1	12.2	23.6	23.6	15.4	10.4	11.0	18.0	33.7	
	Project Costs	458.4	4.1	5.7	7.5	9.0	10.8	19.2	33.7	50.3	47.8	42.4	46.3	37.2	-	4.5	4.5	20.0	20.0	-	5.6	5.6	25.0	25.0	-	-	4.5	4.5	25.5	
	4% Interest Expense [2]	0.7	-	-	-	-	-	-	-	-	-	-	-	0.3	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>Funding Surplus/(Shortfall)</b>	<b>151.3</b>	<b>0.1</b>	<b>4.6</b>	<b>6.8</b>	<b>5.4</b>	<b>6.7</b>	<b>4.0</b>	<b>2.9</b>	<b>(7.9)</b>	<b>(15.4)</b>	<b>(4.3)</b>	<b>(9.9)</b>	<b>(3.5)</b>	<b>23.5</b>	<b>17.9</b>	<b>17.9</b>	<b>(0.4)</b>	<b>7.5</b>	<b>23.2</b>	<b>14.6</b>	<b>6.6</b>	<b>(1.4)</b>	<b>(1.4)</b>	<b>15.4</b>	<b>10.4</b>	<b>6.5</b>	<b>13.5</b>	<b>8.2</b>	
	<i>Cumulative Funding Surplus/(Shortfall)</i>		0.1	4.7	11.5	16.9	23.5	27.5	30.4	22.5	7.1	2.8	(7.1)	(10.6)	12.9	30.8	48.7	48.3	55.8	79.0	93.6	100.2	98.8	97.4	112.7	123.1	129.6	143.1	151.3	
	** If negative - Construction Loan is needed and Interest is calculated																													
<b>Funding Gap - Inflated Dollars</b>																														
	Escalation Rate for Funding Sources	3.0%																												
	Escalation Rate for Project Costs	4.7%																												
	Funding Sources	940.6	4.3	10.9	15.6	16.1	20.3	27.7	44.9	53.6	42.3	51.2	50.4	48.4	35.2	33.9	35.0	31.3	45.4	39.5	35.3	22.0	43.9	45.2	30.3	21.0	23.0	38.9	74.9	
	Project Costs	849.9	4.3	6.2	8.6	10.8	13.6	25.3	46.4	72.6	72.3	67.2	76.7	64.5	-	8.6	9.0	41.6	43.6	-	13.3	14.0	65.6	68.7	-	-	14.2	14.9	88.1	
	4% Interest Expense [2]	14.3	-	-	-	-	-	-	-	-	-	1.0	1.6	2.8	3.5	2.3	1.3	0.3	0.8	0.7	-	-	-	-	-	-	-	-		
	<b>Funding Surplus/(Shortfall)</b>	<b>76.3</b>	<b>0.0</b>	<b>4.7</b>	<b>7.0</b>	<b>5.3</b>	<b>6.7</b>	<b>2.4</b>	<b>(1.5)</b>	<b>(19.0)</b>	<b>(30.0)</b>	<b>(16.9)</b>	<b>(28.0)</b>	<b>(18.9)</b>	<b>31.6</b>	<b>23.1</b>	<b>24.6</b>	<b>(10.6)</b>	<b>1.1</b>	<b>38.7</b>	<b>22.0</b>	<b>8.1</b>	<b>(21.7)</b>	<b>(23.4)</b>	<b>30.3</b>	<b>21.0</b>	<b>8.8</b>	<b>24.0</b>	<b>(13.2)</b>	
	<i>Cumulative Funding Surplus/(Shortfall)</i>		0.0	4.7	11.7	17.1	23.7	26.1	24.7	5.7	(24.3)	(41.2)	(69.2)	(88.0)	(56.4)	(33.3)	(8.7)	(19.3)	(18.2)	20.5	42.5	50.6	28.9	5.4	35.7	56.8	65.6	89.6	76.3	
	** If negative - Construction Loan is needed and Interest is calculated																													
[1] Costs prior to 2013 are not shown here and assumed to fund project management expenses.																														
[2] Funding gap not adjusted by interest expense payments.																														

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## APPENDIX E – PROJECT COMPARISONS

### Scope Differences between MTP & Connector Projects

#### Kammerer Road (I-5 to Bruceville Road) – Segment A1

For the Kammerer Road extension from I-5 to Bruceville Road, the primary scope differences between the MTP project and the Connector project are with the proposed structural sections (thickness of asphalt and aggregate base sections) and the overall pavement width based on the facility type.

The cost listed in the MTP for the I-5 to Bruceville extension of Kammerer Road is based on a Project Study Report (PSR) that was prepared for this project in 2009. The PSR cost used in the MTP assumed a standard City 4-lane arterial cross section for Kammerer Road that included four 12-foot wide lanes, a 12-foot wide raised center median, 6-foot bike lanes, 3-foot graded shoulders with roadside ditches and no streetlights. Based on the preliminary quantities used in the PSR estimate, the structural section assumed for the 3-mile Kammerer Road extension corresponds to a structural section of approximately 4.5 inches of asphalt over 18 inches of aggregate base.

The Connector project assumes the same Kammerer Road section will be a divided 4-lane expressway segment which based on Caltrans Highway Design Manual standards corresponds to four 12-foot wide travel lanes, 5-foot wide paved inside shoulders, 10-foot wide paved outside shoulders, 36-foot wide center median, and a 12-foot wide multi-use trail with landscaping and lighting. The pavement section of the expressway segment has been designed using Caltrans standards for pavement design and preliminary geotechnical information about the relatively poor existing soil conditions in the area which show that a larger structural section would be required to handle the projected vehicle and truck traffic through this segment. Based on this preliminary information and Caltrans standard pavement design, the Connector project assumes a structural section of 2 inches of rubberized asphalt over 8 inches of asphalt over 25 inches of aggregate base. The Connector project estimate also includes an additional \$2.8 million in sustainability elements and \$2.9 million in Class 1 path, landscaping and lighting improvements that are not included in the MTP scope.

Segment	Cost Comparison		Scope Comparison	
	JPA Costs	MTP Costs	JPA Scope	MTP Scope
A1	\$45,998,000	\$32,950,000	<ul style="list-style-type: none"> <li>• 4 Lane Expressway</li> <li>• 2" RAC/8"HMA /25" AB</li> <li>• Includes 4-lane grade separation over UPRR.</li> <li>• \$2.8M Sustainability</li> <li>• \$2.9M Multi-Use Path, landscape, &amp; lighting</li> <li>• Frontage Road improvements</li> </ul>	<ul style="list-style-type: none"> <li>• 4-lanes</li> <li>• Based on PSR quantities, the 3 mile section corresponds to 4.5" HMA/18" AB</li> <li>• Includes 4-lane grade separation over UPRR</li> <li>• no streetlights</li> <li>• Project shown being completed by 2020 in MTP/SCS</li> <li>• \$11.6M of funding from Developer/Impact Fees and other Public sources has been identified for this segment.</li> </ul>

### **Kammerer Road (Bruceville Road to SR 99) – Segment A2**

The primary differences between the project scoped in the MTP and the Connector project through this segment are with the proposed structural sections and the assumptions of widening the existing roadway versus full replacement.

The scope and corresponding cost listed in the MTP assumes that existing Kammerer Road will be widened from the existing 2-lane facility to ultimately a 6-lane City standard thoroughfare section. Based on the MTP cost estimate, it is assumed that the structural section for the widened portion of Kammerer Road will match the I-5 to Bruceville section of Kammerer Road of 4.5 inches of asphalt over 18 inches of aggregate base. The MTP breaks this into two phases, an initial widening from 2 to 4 lanes and an ultimate project which widens from 4 to 6 lanes. There will be challenges to implementing the project as scoped in the MTP as the existing structural section of Kammerer Road is not adequate to handle the anticipated future traffic and would likely need to be rebuilt.

The Connector project assumes building this segment in two phases with the initial phase reconstructing Kammerer Road to provide a 4-lane thoroughfare segment. The second phase would utilize the median to widen and provide the ultimate 6-lane thoroughfare segment. Based on the preliminary geotechnical information and Caltrans standard pavement design, the Connector project assumes a structural section of 2 inches of rubberized asphalt over 8 inches of asphalt over 25 inches of aggregate base. The Connector project estimate also includes an

additional \$1.6 million in sustainability elements and \$2.3 million in path, landscaping and lighting improvements that are not included in the MTP scope.

Segment	Cost Comparison		Scope Comparison	
	JPA Costs	MTP Costs	JPA Scope	MTP Scope
A2	\$30,200,000	\$17,000,000	<ul style="list-style-type: none"> <li>• 6 Lane Thoroughfare</li> <li>• 2" RAC/6"HMA /25" AB</li> <li>• \$1.6M Sustainability</li> <li>• \$2.3M Path, landscape, &amp; lighting</li> <li>• Frontage Road improvements</li> </ul>	<ul style="list-style-type: none"> <li>• 4-lanes</li> <li>• Based on the PSR quantities, the 3 mile section corresponds to a section of 4.5" HMA/18" AB</li> <li>• no streetlights</li> <li>• Project shown being completed by 2020 in MTP/SCS</li> <li>• \$1.5M of funding has been identified for right of way; no funding identified for construction.</li> </ul>

### **Grant Line Road (SR 99 to Bradshaw Road) – Portion of Segments B**

Similarly to the Kammerer Road segments, the primary scope differences between the MTP project and the Connector project are with the assumptions of number of lanes, required structural section and the widening or replacement of existing Grant Line Road.

The MTP project scope assumes utilizing the existing Grant Line Road and widening to provide the interim 4-lane project. A project to widen Grant Line Road to 6-lanes is not currently included in the MTP.

The Connector project assumes building this segment in two phases with the initial phase reconstructing Grant Line Road to provide a 4-lane thoroughfare segment. The second phase would utilize the median area to widen and provide the 6-lane thoroughfare segment as defined in the Connector PEIR. Based on the preliminary geotechnical information and Caltrans standard pavement design, the Connector project assumes a structural section of 2 inches of rubberized asphalt over 8 inches of asphalt over 25 inches of aggregate base. The Connector project estimate also includes an additional \$2.1 million in sustainability elements that are not included in the MTP scope.



## Grant Line Road (Bradshaw Road to Calvine Road)

For the segment from Bradshaw Road to Calvine Road, the primary scope differences between the MTP project and the Connector project are with the assumptions of the required structural section and the widening or replacement of the existing Grant Line Road and the consolidation of access points with the Connector project.

The MTP project scope assumes utilizing the existing Grant Line Road and widening to provide 4-lanes through this segment. A project to widen Grant Line Road to 6-lanes is not currently included in the MTP.

The Connector project proposes to reconstruct Grant Line Road to provide a 4-lane thoroughfare segment between E. Stockton Blvd and Bradshaw Road and a 4-lane rural arterial between Bradshaw Road and Calvine Road. Based on the preliminary geotechnical information and Caltrans standard pavement design, the Connector project assumes a structural section of 2 inches of rubberized asphalt over 8 inches of asphalt over 25 inches of aggregate base. The Connector project estimate also includes an additional \$1.3 million in sustainability elements that are not included in the MTP scope.

Segment	Cost Comparison		Scope Comparison	
	JPA Costs	MTP Costs	JPA Scope	MTP Scope
B & C	\$82,217,000	\$58,312,000	<ul style="list-style-type: none"> <li>• Full reconstruction: 4 Lanes thoroughfare (B)</li> <li>• Widen to 6 lanes between E. Stockton and Bradshaw</li> <li>• 4 lane rural arterial (C)</li> <li>• 2" RAC/6"HMA /25" AB</li> <li>• \$3.4M Sustainability</li> <li>• Class 1 Path, landscape, &amp; lighting</li> <li>• Frontage Road improvements</li> <li>• Overlay only – Lent Ranch Parkway to E. Stockton Blvd</li> </ul>	<ul style="list-style-type: none"> <li>• Widening GLR only from 2-lanes to 4-lanes between Waterman Road and Bond Road</li> <li>• Includes 4-lane grade separation over UPRR</li> <li>• no streetlights</li> <li>• Project shown being completed by 2020 (Segment B) and 2035 (Segment C) in MTP/SCS</li> <li>• \$36.4M of funding from Developer/Impact Fees and other Public sources has been identified for these segments.</li> </ul>

## Grant Line Road (Calvine Road to Jackson Road) – Segment D1

For the segment from Calvine Road to Jackson Road, the primary scope differences between the MTP project and the Connector project are with the assumptions of the required structural section, the widening or replacement of the existing Grant

Line Road and the construction of an interchange at Sunrise Boulevard/Grant Line Road with the Connector project.

The MTP project scope assumes utilizing the existing Grant Line Road and widening to provide 6-lanes through this segment.

The Connector project proposes to reconstruct Grant Line Road to provide a 4-lane expressway segment. Based on the preliminary geotechnical information and Caltrans standard pavement design, the Connector project assumes a structural section of 2 inches of rubberized asphalt over 8 inches of asphalt over 25 inches of aggregate base. The Connector project estimate also includes an additional \$2.4 million in sustainability elements and \$4.1 million in path, landscaping and lighting improvements that are not included in the MTP scope.

Segment	Cost Comparison		Scope Comparison	
	JPA Costs	MTP Costs	JPA Scope	MTP Scope
D1	\$50,721,000	\$ 21,610,000	<ul style="list-style-type: none"> <li>• 4 Lane Expressway</li> <li>• \$2.4M Sustainability</li> <li>• \$4.1 Path, landscape/lighting</li> <li>• Interchange at Sunrise/GLR and construction of multi-use trail</li> </ul>	<ul style="list-style-type: none"> <li>• Assumes full cost of widening GLR from 2-lanes to 6-lanes.</li> <li>• Project shown being completed by 2035 in MTP/SCS</li> <li>• \$32.8M of funding from Developer/Impact Fees and other Public sources has been identified for these segments.</li> </ul>

### Grant Line Road (Jackson Road to White Rock Road) – Segment D2

For the segment from Jackson Road to White Rock Road, in addition to the scope differences listed in the previous segments (structural section, widening versus full replacement), the primary scope difference between the MTP project and the Connector project is with the proposed connector interchanges at Jackson Road, Kiefer Road, Chrysanthy Road, University Road and Douglas Boulevard.

The Connector Project estimate also includes an additional \$3.0 million in sustainability elements and \$5.4 million in path, landscaping and lighting improvements that are not included in the MTP scope.

Segment	Cost Comparison		Scope Comparison	
	JPA Costs	MTP Costs	JPA Scope	MTP Scope
D2	\$106,590,000	\$86,201,000	<ul style="list-style-type: none"> <li>• 4 Lane Expressway</li> <li>• \$3M Sustainability</li> <li>• \$5.4 Path,</li> </ul>	<ul style="list-style-type: none"> <li>• Assumes full cost of widening GLR from 2-lanes to 4-lanes.</li> </ul>

			landscape/lighting <ul style="list-style-type: none"> <li>• Interchanges at Jackson, Kiefer, Chrysanthy, University &amp; Douglas</li> </ul>	<ul style="list-style-type: none"> <li>• Project shown being completed by 2035 in MTP/SCS</li> <li>• \$15.8M of funding from Developer/Impact Fees and other Public sources has been identified for these segments.</li> </ul>
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### White Rock Road (Grant Line Road to El Dorado County Line) – Segment D3

For the segment from White Rock Road to the El Dorado County Line, in addition to the scope differences listed in the previous segments (structural section, widening versus full replacement), the primary scope difference between the MTP project and the Connector project is with the proposed connector interchanges at Grant Line Road, Scott Road and Empire Ranch Road. Also major widening and/or signalized intersections will be constructed at Grant Line Road, Aerojet Road, Prairie City Road, Oak Avenue and Scott Road North.

The Connector project estimate also includes an additional \$4.5 million in sustainability elements and \$7.3 million in path, landscaping and lighting improvements that are not included in the MTP scope.

Segment	Cost Comparison		Scope Comparison	
	JPA Costs	MTP Costs	JPA Scope	MTP Scope
D3	\$118,324,000	\$73,104,000	<ul style="list-style-type: none"> <li>• 4 Lane Expressway</li> <li>• \$4.5M Sustainability</li> <li>• \$7.3 Path, landscape/lighting</li> <li>• Interchanges at Prairie City, Grant Line Road, Scott Road &amp; Empire Ranch Road.</li> <li>• Widening and/or Signalization of Grant Line Road, Aerojet Road, Prairie City, Oak Avenue &amp; Scott Road North.</li> </ul>	<ul style="list-style-type: none"> <li>• Sacramento County is widening/realigning WRR from 2-lanes to 4-lanes from Grant Line Road to Prairie City Road.</li> <li>• Full cost of widening WRR from 2-lanes to 4-lanes.</li> <li>• Widening from 4-lanes to 6-lanes from GLR to Prairie City Road, and from 2-lanes to 6-lanes from Prairie City Road to Scott Road.</li> <li>• Project shown being completed by 2020 in MTP/SCS</li> <li>• \$38.9M of funding from Developer/Impact Fees and other Public sources has been identified for these segments.</li> </ul>

## White Rock Road (El Dorado County Line to Silva Valley Parkway Interchange) – Segment E

For the segment from the El Dorado County Line to Silva Valley Parkway, the Connector scope and MTP scope are similar except that the MTP project scope widens White Rock Road to 6 lanes, while the Connector project limits the widening of White Rock Road to 4 lanes. The Connector project also includes \$1.1 million in sustainability elements that are not part of the MTP project scope.

Segment	Cost Comparison		Scope Comparison	
	JPA Costs	MTP Costs	JPA Scope	MTP Scope
E1 & E2	\$22,354,000	\$26,400,000	<ul style="list-style-type: none"> <li>• 4 Lane Thoroughfare</li> <li>• \$1.1M Sustainability</li> <li>• Overlay only: Latrobe to Manchester</li> </ul>	<ul style="list-style-type: none"> <li>• Assumes full cost of widening WRR from 2-lanes to 6-lanes.</li> <li>• Project shown being completed by 2035 in MTP/SCS</li> <li>• \$14.1M of funding from Developer/Impact Fees and other Public sources has been identified for these segments.</li> </ul>