Toll Bridge Seismic Retrofit Program Report

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

Fourth Quarter Report

December 31, 2007

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

Toll Bridge Program Oversight Committee
Department of Transportation
Office of the Director
1120 N Street
P.O. Box 942873
Sacramento, CA 94273-0001

February 12, 2008

Mr. James C. Ghielmetti, Chair
California Transportation Commission
1120 N Street, Room 2221
Sacramento, CA 95814

Mr. John Chalker, Vice-Chair
California Transportation Commission
1120 N Street, Room 2221
Sacramento, CA 95814

Dear Commissioners Ghielmetti and Chalker:

The Toll Bridge Program Oversight Committee (TBPOC) is pleased to submit the 2007 Fourth Quarter "Toll Bridge Seismic Retrofit Program Report," prepared pursuant to California Streets and Highways Code Section 30952.2. The Fourth Quarter report includes project progress and activities for the Toll Bridge Seismic Retrofit Program through December 31, 2007.

California Streets and Highways Code Section 30952.1 established the TBPOC to exercise project oversight and control over the Toll Bridge Seismic Retrofit Program. The TBPOC is composed of the Director of the Department of Transportation (Caltrans), the Executive Director of the Bay Area Toll Authority (BATA), and the Executive Director of the California Transportation Commission (CTC). The TBPOC's program oversight and control activities include review and approval of contract bid documents, review and resolution of project issues, evaluation and approval of project change orders and claims, and the issuance of monthly and quarterly program progress reports.

In the fourth quarter, the TBPOC is pleased to report the completion of two major activities that have reduced the overall schedule and cost risk on the program – the 2007 Labor Day

Weekend work to reconstruct a portion of the upper roadway deck of the San Francisco-Oakland Bay Bridge near the Yerba Buena Island Tunnel and the replacement of a submerged electrical cable from Oakland to Treasure Island. Both activities had the possibility of significantly impacting the progress of the project, but were successfully completed on time.

In this current quarter, the TPBOC will achieve two additional major milestones on the San Francisco-Oakland Bay Bridge East Span Seismic Replacement Project with the completion of the Skyway structure and the E2/T1 foundations of the Self Anchored Suspension Span. These two contracts represent nearly $1.5 billion of completed construction value to the project.

Work is also proceeding ahead of schedule on the San Francisco-Oakland Bay Bridge West Approach Project that replaces the bridge approach structures in San Francisco. The contract is forecast to be completed seven months early in January 2009. While the TBPOC is forecasting an increase to the final cost of the West Approach Project, costs are well within the TBSRP program contingency and will result in no change to the overall program budget. These additional costs can be attributed to a number of changes made to complete this very complex project ahead of schedule and performed in a safe and constructible manner with the least impact to the traveling public.

The TBPOC is committed to providing the Legislature with comprehensive and timely reporting on the Toll Bridge Seismic Retrofit Program. If there are any questions or if any additional information is required, please do not hesitate to contact the members of the TBPOC.

Sincerely,

WILL KEMPTON
Director
California Department of Transportation
Chair, TBPOC

JOHN F. BARNA, JR.
Executive Director
California Transportation Commission

STEVE HEMINGER
Executive Director
Bay Area Toll Authority

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Toll Bridge Program Oversight Committee
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Sacramento, CA 94273-0001

February 12, 2008

Mr. Gregory Schmidt
Secretary of the Senate
State Capital, Room 3044
Sacramento, CA 95814

Mr. E. Dotson Wilson
Chief Clerk of the Assembly
State Capital, Room 3196
Sacramento, CA 95814

Dear Messrs. Schmidt and Wilson:

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Executive Summary

The Toll Bridge Program Oversight Committee (TBPOC) submits the 2007 Fourth Quarter Report ending December 31, 2007 for the Toll Bridge Seismic Retrofit Program (TBSRP) in accordance with Assembly Bill (AB) 144 and Senate Bill (SB) 66. This report provides the following:

1. Information on the progress of each project in the program.
2. Baseline budget for Capital Outlay (CO) and Capital Outlay Support (COS).
3. Current projected costs for CO and COS.
4. Expenditures to date.
5. Comparison of the baseline schedule to the December 2007 projected schedule.
6. Summary of the milestones achieved during the quarter.
7. Major risk assessment for the remaining projects.
8. Summary of expenses incurred by the TBPOC in performing its duties.

Major Milestones during the Fourth Quarter 2007

Significant progress on the completion of the seismic retrofit projects continued during this past quarter. Only one of the seven toll bridges in the TBSRP remains to be retrofitted. Appendix D includes a gallery of photos of construction activities on the bridge projects. The major milestones achieved during the quarter include:

- The San Francisco-Oakland Bay Bridge (SFOBB) West Approach Project is 88 percent complete as of December 20, 2007 and is forecasted for an early completion in January 2009. Major ongoing work during the quarter includes the rebuilding of the eastbound I-80 structure with the falsework installation, soffit and deck pours in progress, and will continue through the winter of 2008. An extensive public outreach effort continues and will be necessary until spring of 2008 for the construction of the EB I-80 structure adjacent to the Stillman Street area. Removal of Frame 7U falsework will be ongoing through January 2008. The permanent Sterling On-ramp will be open to traffic by early spring of 2008 and traffic switch onto the permanent EB structure is scheduled for April 2008. (See project diagram on page 13). While the TBPOC is forecasting an increase to the final cost of the West Approach Project, costs are well within the TBSRP program contingency and will result in no change to the overall program budget

  The SFOBB East Span Seismic Replacement Project Skyway contract is substantially complete as of December 2007.

- The SFOBB East Span Seismic Replacement Project Self-Anchored Suspension (SAS) Marine Foundation East Pier and Tower Pier (E2/T1) contract is on schedule to be completed by March 2008 or earlier. Caltrans and its contractor have completed most of the eastbound E2 foundation and column.

- At the Tower Pier (T1), the top slab concrete has been placed. The SFOBB East Span Seismic

Replacement Project Self-Anchored Suspension (SAS) Marine Foundation East Pier and Tower Pier (E2/T1) contract is on schedule to be completed by March 2008. Caltrans and its contractor have completed most of the eastbound E2 foundation and column.

- For the SFOBB East Span Seismic Replacement Project SAS Superstructure contract, American Bridge/Flour (ABF) has completed the design of the crane barge to be used to lift the heavy tower and deck sections. Barge fabrication is ongoing in Oregon, while crane fabrication has started in China. Civil construction work has started at the W2 foundation with falsework for the pier table. The fabricators for the temporary towers and trusses have been selected by the contractor and fabrication is underway. Zhenhua Port Machinery Company (ZPMC) of Shanghai, China, who was contracted to supply and fabricate all the major steel structures in SAS including the tower, orthotropic box girders and bike paths, is currently setting up their facilities for the fabrication of the SAS tower and deck sections. ZPMC has prepared initial test mockups of the bridge sections and has started production fabrication of the orthotropic box girders.

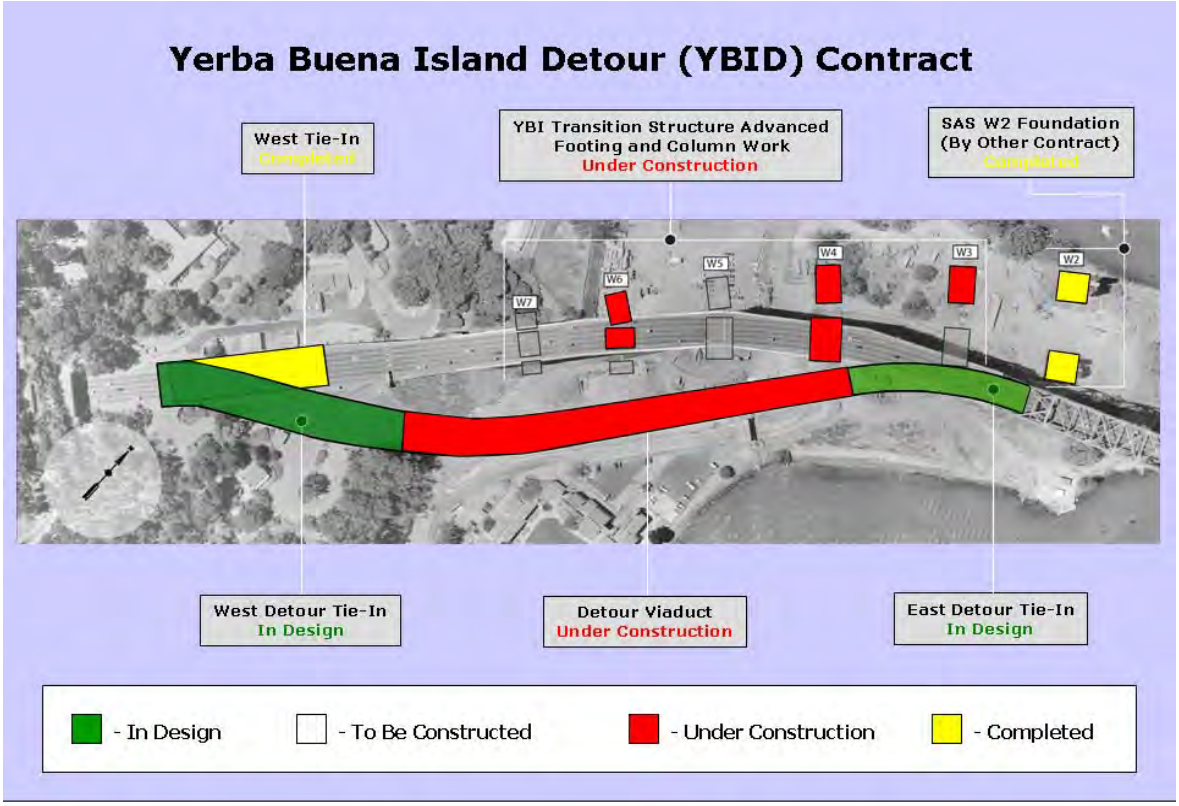
- On the Yerba Buena Island Detour (YBID) temporary structures contract, Caltrans is designing the East and West tie-ins from the existing bridge and tunnel to the detour structure. The construction of the tie-ins is being managed by Caltrans to be completed in conjunction with the SAS schedule to minimize impacts to the traveling public. YBI Detour Viaduct fabrication continues in Korea and the second shipment of the detour viaduct has been received at the Port of San Francisco.

  In March 2007, the TBPOC approved a number of changes to the Yerba Buena Island Detour contract to better integrate the detour work into the current project schedule and to reduce overall project risks by advancing Yerba Buena Island Transition Structures (YBITS) foundation work into the YBI Detour contract. These changes are being negotiated with the Contractor by Caltrans. The cost of these changes could potentially increase the contract budget; however, the net project increase can be funded from the existing program contingency and does not change the overall Toll Bridge Seismic Retrofit Program budget.

- Construction has also begun on the advanced Yerba Buena Island Transition Structures (YBITS) foundation work. Work on the foundation of W4 L/R and W6 L/R is in progress. Caltrans and their contractor successfully rolled into place the pre-cast replacement upper roadway deck section near the YBI tunnel as part of the West Tie-in Phase I. These actions are significantly advancing the permanent SFOBB East Span structure construction on Yerba Buena Island to reduce overall risk to the SFOBB East Span Seismic Retrofit Project.

- The SFOBB East Span Seismic Replacement Project Oakland Touchdown (OTD) Submarine Cable contract has replaced the existing submerged electrical cable from Oakland to Treasure Island. All field work has been completed and the contractor has demobilized. The contract was accepted by Caltrans.

- In March 2007, the TBPOC approved a number of changes to the Yerba Buena Island Detour contract to better integrate the detour work into the current project schedule and to reduce overall project risks by advancing Yerba Buena Island Transition Structures (YBITS) foundation work into the YBI Detour contract. These changes increased the YBI Detour contract budget by $202.5 million and decreased the YBITS contract by $23.2 million. The net project increase will be funded from the existing program contingency and does not change the overall Toll Bridge Seismic Retrofit Program budget.



YBID – Detour Viaduct Erection

YBID - Detour Viaduct Erection

Program Overview

Seven of the nine state-owned toll bridges were identified for seismic retrofit in the TBSRP:

1. Benicia-Martinez Bridge
2. Carquinez Bridge
3. San Mateo-Hayward Bridge
4. Vincent Thomas Bridge
5. San Diego-Coronado Bridge
6. Richmond-San Rafael Bridge
7. SFOBB (West Span, West Approach replacement, and East Span replacement)

Seismic retrofit of these complex structures presents an extremely difficult engineering challenge and nowhere in the world has a bridge seismic safety program of this size been undertaken. Although the Dumbarton and the Antioch bridges were not included in the program, Caltrans is continuing to work on seismic vulnerability studies to assess the potential for necessary retrofit work on these structures. (See discussion on page 28).

As shown in *Table 1-TBSRP Project Status*, a significant portion of the TBSRP is complete. Only the SFOBB West Approach and new East Span Seismic Replacement projects remain to be seismically retrofitted.

The Fourth Quarter 2007 forecast for those projects indicates that they will be completed within the current TBPOC approved cost and schedule estimates. *Tables 2 and 3* on the following pages provide a summary of the cost, schedule, and status of all the TBSRP projects.

Table 1-TBSRP Project Status

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Construction
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
Carquinez Bridge Eastbound Seismic Retrofit	Complete
Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

Table 2-Toll Bridge Seismic Retrofit Program—Cost Summary ($Millions)

Project	Work Status	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (12/2007)	Cost To Date (12/2007)	Cost Forecast*	At-Completion Variance	Cost Status
a	b	c	d	e = c + d	f	g	h = g - e	i
Capital Outlay Support		959.4	-	959.4	560.5	977.1	17.7	
Capital Outlay Construction								
Skyway	Construction	1,293.0	-	1,293.0	1,204.1	1,293.0	-	
SAS E2/T1 Foundations	Construction	313.5	-	313.5	264.6	313.5	-	
SAS Superstructure	Construction	1,753.7	-	1,753.7	348.6	1,767.4	13.7	
YBI Detour	Design/Const	131.9	202.5	334.4	131.6	334.4	-	
YBI Transition Structures		299.3	(23.2)	276.1	-	276.1	-	
* YBITS Contract No. 1	Design				-	214.3		
* YBITS Contract No. 2	Design				-	58.5		
* YBITS Contract No. 3 - Landscape	Design				-	3.3		
Oakland Touchdown (OTD)		283.8	-	283.8	42.0	302.5	18.7	
* OTD Submarine Cable	Complete				7.9	9.6		
* OTD No. 1 (Westbound)	Construction				34.2	226.5		
* OTD No. 2 (Eastbound)	Design				-	62.0		
* OTD Electrical Systems	Design				-	4.4		
Existing Bridge Demolition	Design	239.2	-	239.2	-	222.0	(17.2)	
Stormwater Treatment Measures	Construction	15.0	3.3	18.3	15.7	18.3	-	
			-				-	
Right-of-Way and Environmental Mitigation		72.4	-	72.4	38.8	72.4	-	
Total SFOBB East Span Replacement Project		5,486.6	179.2	5,665.8	2,695.8	5,674.7	8.9	
SFOBB West Approach Replacement	Construction							
Capital Outlay Support		120.0	-	120.0	101.2	120.0	-	
Capital Outlay Construction		309.0	-	309.0	266.2	350.7	41.7	
Total SFOBB West Approach Replacement		429.0	-	429.0	367.4	470.7	41.7	
Richmond-San Rafael Bridge Retrofit	Complete							
Capital Outlay Support		134.0	(7.0)	127.0	126.7	127.0	-	
-							-	
Total Richmond-San Rafael Bridge Retrofit		914.0	(89.0)	825.0	793.3	825.0	-	
Program Completed Projects	Complete							
Capital Outlay Support		219.8	-	219.8	219.4	219.8	-	
Capital Outlay Construction		705.6	-	705.6	698.1	705.6	-	
Total Program Completed Projects		925.4	-	925.4	917.5	925.4	-	
			-				-	
Program Contingency		900.0	(90.2)	809.8	-	759.2	(50.6)	
Total Toll Bridge Seismic Retrofit Program		8,685.0	-	8,685.0	4,798.7	8,685.0	-	

Within Approved Schedule and Budget

Potential Cost and Schedule Impacts: Likely future need for Program Contingency Allocation

Known Cost and Schedule Impacts: Request for Program Contingency Allocation forthcoming

Note: Details may not sum to totals due to rounding effects.

Table 3-Toll Bridge Seismic Retrofit Program—Schedule Summary

Project	AB 144 / SB 66 Project Complete Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (12/2007)	Project Complete Schedule Forecast (12/2007)	Schedule Variance (Months)	Schedule Status	Remarks
a	b	c	d = b + c	e	f = e – d	g	h
SFOBB East Span Replacement Project							
					-		
					-		
SAS Superstructure	Mar 12	12	Mar 13	Mar 13	-	●	See Note.
					-		
					-		
					-		
					-		
					-		
• OTD Eastbound	n/a		Nov 14	Nov 14	-	●	See Note.
Existing Bridge Demolition	Sep 14	12	Sep 15	Sep 15	-	●	See Note.
		-			-		
Open to Traffic Date: Westbound	Sep 11	12	Sep 12	Sep 12	-	●	See Note.
Open to Traffic Date: Eastbound	Sep 12	12	Sep 13	Sep 13	-	●	See Note.
SFOBB West Approach Replacement	Aug 09	-	Aug 09	Jan 2009	(7)	●	
Open to Traffic Date: Mainline		-		April 2008			
		-					
• Seismic Retrofit	Aug 05	-	Aug 05	Oct 05	2	●	Seismic retrofit completed July 29, 2005. Formal acceptance of contract October 28, 2005. $89 million has been transferred to Program Contingency.
• Public Access Project	n/a	-	May 07	Sept 07	4	●	

Note: Schedules for selected projects and the Open to Traffic dates were extended by 12 months from the AB 144/SB 66 baseline schedule due to Addenda #5 and #7 on the SAS Superstructure contract in response to bidder inquiries and to reduce costs.

Program Costs

Baseline and Projected Budget

The 2005 AB 144/SB 66 baseline budget is $7.785 billion for CO and COS plus $900 million in program contingency for a total baseline budget of $8.685 billion. The Fourth Quarter 2007 forecast for the program remains steady at the $8.685 billion budget. The Fourth Quarter 2007 forecast for the SFOBB East Span Project is $5.675 billion, which includes a revised construction cost estimate on the OTD #1 and YBI Detour contracts.

Additional cost estimate and expenditure detail for the TBSRP are included in Appendices A-1 and A-2. The details of the cost estimates and expenditures for the SFOBB East Span are shown in Appendix B.

East Span Deck Replacement

Table 4-Toll Bridge Seismic Retrofit Program Baseline (AB 144/SB 66) and Forecasts ($ Millions)

Contracts	AB 144 / SB 66 Baseline Budget	Approved Changes	Current Approved Budget	4th Quarter 2007 Forecast	Difference from Current Approved Budget
Completed Projects					
Benicia-Martinez	177.8	-	177.8	177.8	-
Carquinez	114.2	-	114.2	114.2	-
San Mateo-Hayward	163.5	-	163.5	163.5	-
Vincent Thomas	58.5	-	58.5	58.5	-
San Diego-Coronado	103.5	-	103.5	103.5	-
SFOBB West Span	307.9	-	307.9	307.9	-
Ongoing Projects					
Richmond-San Rafael	914.0	(89.0)	825.0	825.0	-
SFOBB West Approach	429.0	-	429.0	470.7	41.7
SFOBB East Span	5,486.6	179.2	5,665.8	5,674.7	8.9
Miscellaneous Program Costs	30.0	-	30.0	30.0	-
Subtotal	7,785.0	90.2	7,875.2	7,925.8	50.6
Program Contingency	900.0	(90.2)	809.8	759.2	(50.6)
Total Program	8,685.0	-	8,685.0	8,685.0	-

Program Schedule

Baseline and Projected Schedule

Seismic retrofit on six of the seven toll bridges in the TBSRP is complete. These structures include the Benicia-Martinez, Carquinez, Richmond-San Rafael, San Mateo-Hayward, Vincent Thomas and San Diego-Coronado bridges. Seismic retrofitting of the SFOBB west span was completed in June 2004. The SFOBB West Approach and East Span Seismic Replacement projects are currently under construction. The current December 2007 schedule calls for achieving seismic safety and opening to traffic the SFOBB new East Span in 2013.

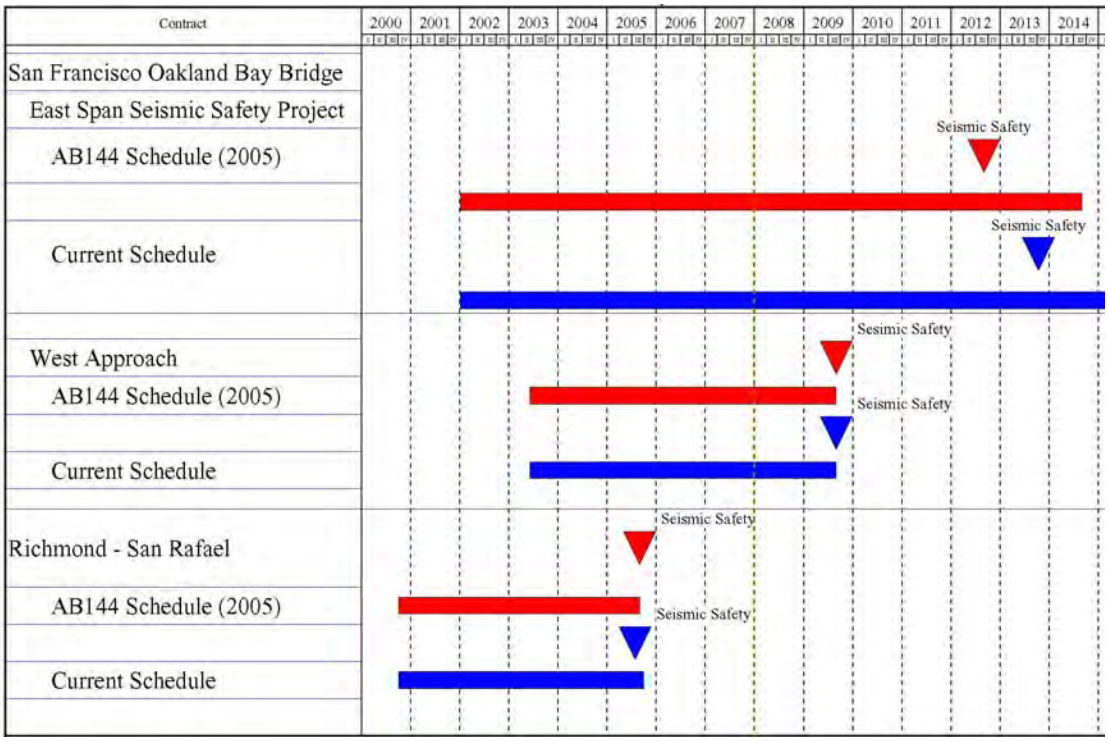
The 12 months of schedule extension was granted by addendum to the SFOBB East Span Seismic Replacement Project SAS contract based on bidder inquiries received during advertisement. While the 12 month schedule extension for the SAS has also extended the schedules for YBITS and OTD contracts accordingly, the TBPOC is scheduling the contracts to accommodate the possibility of early SAS completion-based incentives also included in the SAS addendum.

On the YBI Detour contract, the TPBOC has approved a forecast completion extension to 2010 to reduce overall program risks, including advancing work from future YBITS contracts into the YBI Detour contract and to coordinate work with SAS completion. The extension will not impact the open-to-traffic date for the new East Span and will facilitate possibilities to accelerate opening of the new bridge.

It is estimated that all of the construction activities for the SFOBB East Span Seismic Replacement project will be completed by 2015, marked by the planned demolition of the existing SFOBB East Span. *Chart 1-Toll Bridge Seismic Retrofit Program Schedule*, shows the baseline, AB 144/SB 66 project schedule versus the projected completion schedules for the TBSRP projects under construction.

Chart 1-Toll Bridge Seismic Retrofit Program Schedule

Baseline AB 144/SB 66 vs. Projected Schedule



Program Funding and Financing

AB 144 established a funding level of $8.685 billion for the TBSRP. The bill specifies funding sources for the program, as shown in *Table 5-Program Budget*

.

Table 5-Program Budget as of December 31, 2007 ($ Millions)

	Budgeted	Funding Available & Contributions
Financing		
Seismic Surcharge Revenue AB 1171	2,282.0	2,282.0
Seismic Surcharge Revenue AB 144	2,150.0	2,150.0
BATA Consolidation	820.0	820.0
Subtotal - Financing	**5,252.0**	**5,252.0**
Contributions		
Proposition 192	790.0	789.0
San Diego Coronado Toll Bridge Revenue Fund	33.0	33.0
Vincent Thomas Bridge	15.0	6.9
State Highway Account(1)(2)	745.0	745.0
Public Transportation Account(1)(3)	130.0	130.0
ITIP/SHOPP/Federal Contingency	448.0	-
Federal Highway Bridge Replacement and Rehabilitation (HBRR)	642.0	600.0
SHA - East Span Demolition	300.0	
SHA - "Efficiency Savings"(4)	130.0	10.0
Redirect Spillover	125.0	125.0
Motor Vehicle Account	75.0	75.0
Subtotal - Contributions	**3,433.0**	**2,513.9**
Total Funding	**8,685.0**	**7,765.9**
Allocated to date		**6,667.1**
Remaining Unallocated		**1,098.8**

(1) The California Transportation Commission adopted a new schedule and changed the PTA/SHA split on December 15, 2005.

(2) To date, $645 million has been transferred from the SHA to the TBSRP, including the full $290 million transfer scheduled by the CTC to occur in 2005-06. An additional $100 million has been expended directly from the account.

(3) To date, $130 million has been transferred from the PTA to the TBSRP, including the full amount of all transfers scheduled by the CTC.

(4) To date, $10 million has been transferred from the SHA to the TBSRP, representing the commitment of "Efficiency Savings" identifed under AB 144. Approximately $120 million remains to be distributed as scheduled by the CTC.

Notes: Program budget includes $900 million program contingency.

Funding Status

The program's financial status of revenues and expenditures is summarized in the table below, *Table 6-Toll Bridge Seismic Retrofit Program Financial Status.* The figures include the surcharge revenues collected, transfers from the SHA and the PTA, and expenditures from the Toll Bridge Seismic Retrofit Account (TBSRA) and the Seismic Retrofit Bond Act of 1996 (Proposition 192).

Table 6-Toll Bridge Seismic Retrofit Program Financial Status as of December 31, 2007 ($ Millions)

Revenues:	
Toll Surcharge(1)	687.9
SMIF Interest	97.9
Bond Revenue (Seismic Bond of 1996)	789.0
Bond Revenue (Toll Revenue Bonds)	1,062.0
Commercial Paper(2)	80.0
SANDAG	33.0
Vincent Thomas(3)	6.9
Federal Highway Bridge Replacement and Rehabilitation	600.0
Transfers to TBSRA:	
Motor Vehicle Account	75.0
State Highway Account(4)	745.0
Public Transportation Account(5)	90.0
State Highway Account "Efficiency Savings"(6)	10.0
Total Revenues and Transfers	**4,276.7**
Expenditures :	
Capital Outlay	3,766.2
State Operations	1,032.5
Total Expenditures	**4,798.7**
Encumbrances:	
Capital Outlay	1,860.1
State Operations	8.3
Total Encumbrances	**1,868.4**
Total Expenditures and Encumbrances	**6,667.1**

(1) The Toll Surcharge is dedicated to repayment of bonds beginning September 1, 2003. Toll Surcharge shown here is only toll revenue collected prior to that date.

(2) $80 Million in Commercial Paper issued on or about April 5, 2005.

(3) No additional funding is expected from the Vincent Thomas Toll Revenue Account.

(4) To date, $645 million has been transferred from the SHA to the TBSRP, including the full $290 million transfer scheduled by the CTC to occur in 2005-06. An additional $100 million has been expended directly from the account.

(5) To date, $130 million has been transferred from the PTA to the TBSRP, including the full amount of all transfers scheduled by the CTC.

(6) To date, $10 million has been transferred from the SHA to the TBSRP, representing the commitment of "Efficiency Savings" identifed under AB 144. Approximately $120 million remains to be distributed as scheduled by the CTC.

Program Financing

As discussed above, AB 144 consolidated the administration of all toll revenues collected on the state-owned Bay Area toll bridges and financing of the TBSRP under the jurisdiction of BATA. BATA has direct programmatic responsibilities for the administration of all toll revenues collected on the state-owned bridges in the Bay Area and responsibilities for financial management of the TBSRP program, including:

- Administrative responsibility for collection and accounting of all toll revenues.
- Authorization to increase tolls on the state-owned bridges by $1.00 effective January 1, 2007.
- Project level toll-setting authority as necessary to cover additional cost increases beyond the funded program contingency in order to complete the TBSRP.
- Assumption of funding all of the roadway and bridge structure maintenance from Caltrans once bridge seismic retrofit projects are completed.

In accordance with its responsibilities provided under the law, in September 2005 BATA adopted a finance plan for the TBSRP. The major components of the finance plan include:

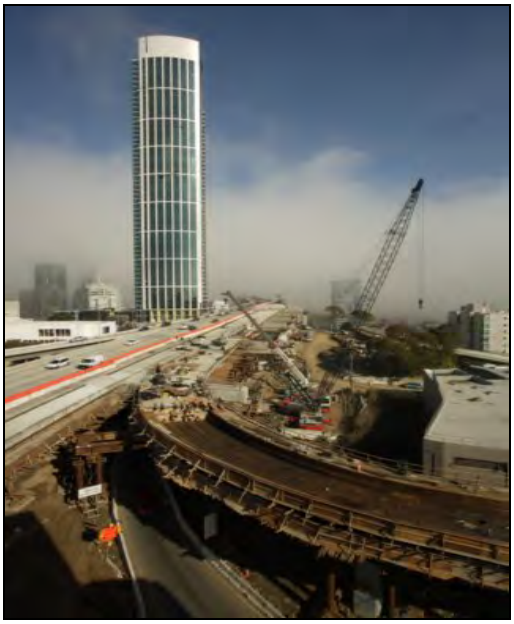
- Issuing $6.2 billion in debt, including defeasance of $1.5 billion in outstanding state Infrastructure Bank bonds and commercial paper.
- Increasing tolls on the state-owned bridges by $1.00 (from $3.00 to $4.00 for two-axle vehicles), effective January 1, 2007.
- Securing the maximum amount of state funding early in the construction schedule to most efficiently use toll funds (see the following discussion concerning the CTC funding schedule).
- Locking in current interest rates to the extent possible in order to improve the chances that the entire toll program construction and the operations and maintenance can be delivered within the $4.00 auto toll level.

In September 2005, BATA approved a Finance Plan for the TBSRP and other toll bridge improvement programs dependent on toll revenues from the state-owned bridges. The finance plan called for $6.2 billion in new debt issuances, including defeasance of the existing outstanding I-Bank bonds. Consistent with the finance plan in December 2005, BATA approved the issuance of up to $1 billion of 2006 toll bridge revenue bonds in February 2006. The bond issuance will provide adequate cash flow to fund the SAS contract for the East Span Replacement project, which was awarded on May 3, 2006.

Furthermore, in March 2006, BATA approved the issuance of $1.2 billion in bonds to defease the I-Bank bonds approved in October 2005. Additionally, pursuant to the law, BATA held two public hearings- one in October and one in November 2005 - to receive public testimony regarding the proposed $1.00 seismic surcharge toll increase beginning on January 1, 2007 on the state-owned toll bridges in the Bay Area. BATA approved the toll increase on January 25, 2006.

Pursuant to AB 144, on September 29, 2005, the CTC adopted a schedule - revised in December 2005 - for the transfer of state funds to BATA to fund the TBSRP. The schedule contains the timing and sources of the state contributions, which began in Fiscal Year (FY) 2005-06, and distributes the contributions over the years of project construction to ensure a timely balance between state sources and the contributions from toll funds. In December 2005, the CTC re-adopted the schedule to reflect opportunities to maximize the use of available PTA funds and correct prior transfer transactions. The CTC's December 2005 revised schedule for the transfer of funds allows BATA to pledge the state fund contribution to the financing of the TBSRP per BATA's adopted finance plan. The CTC schedule is included in Appendix C.

In May 2007, BATA issued $811 million in 2007 Toll Bridge Revenue Bonds. The financing will be used primarily to fund seismic retrofit projects. In October 2007, BATA approved the issuance of $500 million in 2007 Toll Revenue Bonds. The financing will be used primarily to fund seismic retrofit projects. Upon issuance of the 2007 bonds, BATA's total debt will be 5.2 billion.



West Approach Concrete Pour

Project Status

Ongoing Construction Projects

SFOBB West Approach

The SFOBB West Approach Seismic Retrofit Project will remove and replace the west approach to the SFOBB, which includes all of the westbound mainline and most of the eastbound mainline from 4th Street to the SFOBB west anchorage, and all of the connecting entrances and exit ramps in downtown San Francisco. Upon completion of the retrofit project, the west approach mainline and ramps will have the same number of traffic lanes as before, but with improved highway geometrics. The mainline eastbound and westbound structures will be adjacent to each other at 4th Street and transition to a double-deck configuration with their own independent support system from Rincon Hill to the anchorage in order to tie into the existing SFOBB.

Milestones Achieved

The San Francisco-Oakland Bay Bridge (SFOBB) West Approach Project is 88 percent complete as of December 20, 2007 and is forecasted for early completion in January 2009, with the EB traffic switch to the permanent structure forecasted for April 2008. Major ongoing work during this quarter includes rebuilding of the new EB 80 structure, with falsework installation; soffit and deck pours are in progress and will continue through the winter of 2008. An extensive public outreach effort continues and will be necessary until the spring of 2008 for the construction of the EB80 adjacent to the Stillman Street area. Removal of Frame 7U falsework will be ongoing through January 2008. The permanent Sterling On-ramp will be open to traffic by early spring of 2008.

Project Funding

The TBPOC is forecasting an increase due to the final cost of the West Approach Project; however, costs are within the TBSRP program contingency and will not result in a change to the overall program budget. The AB 144/SB 66 baseline budget totals $429 million for the project with $309 million for CO and $120 million for COS. See *Table 7-Baseline and Estimated Budget Need for SFOBB West Approach*

Table 7-Baseline and Estimated Budget Need for SFOBB West Approach ($ Million)

	AB 144/ SB 66 Budget	4th Quarter 2007 Forecast	Difference
COS	120.0	120.0	-
CO	309.0	350.7	41.7
Total	429.0		41.7

Major Risk Issues

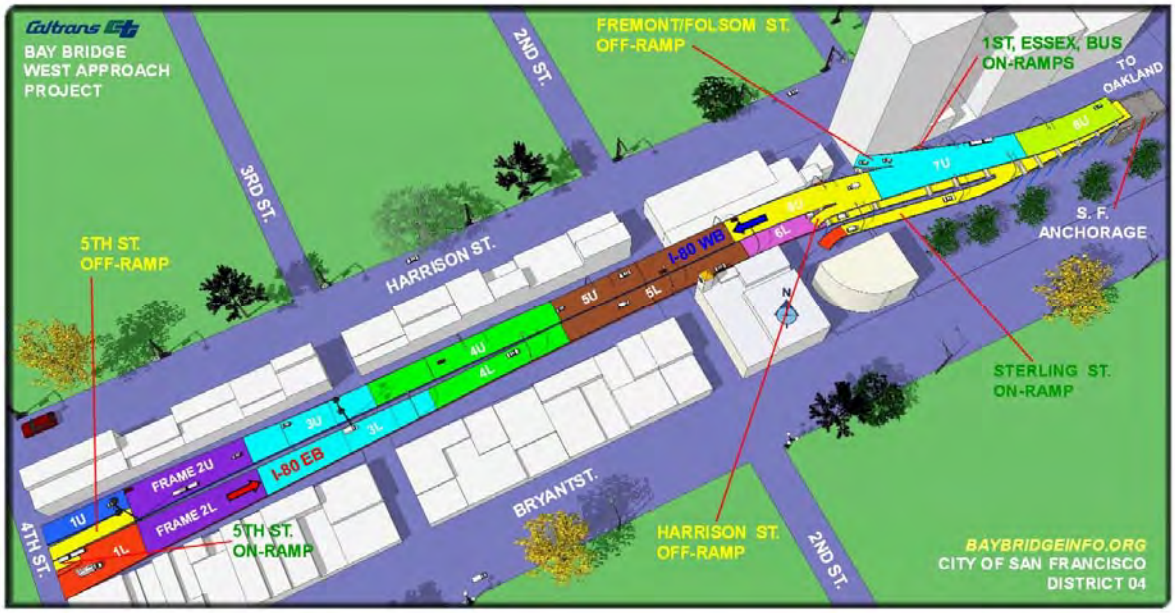
Caltrans' West Approach Risk Response Team is continuing with its efforts to manage project risks. Updated risk assessments have been regularly performed during the Fourth Quarter as a standard project management practice.

Lessons learned to this point in the project continue to be important aspects of the implementation plans designed to mitigate risk, for example:

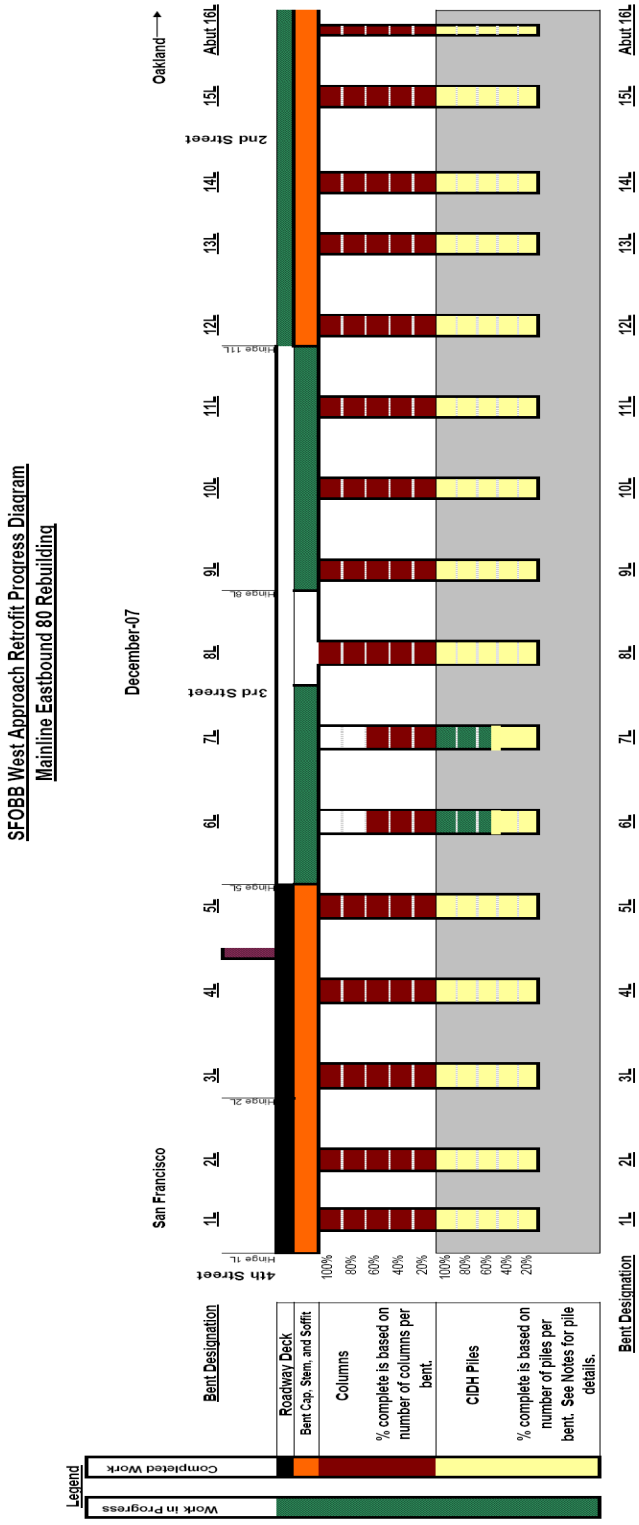
- The aggressive informational campaigns have proven successful in keeping the public fully informed of upcoming demolition operations that would affect traffic, thereby mitigating adverse public perception. Regional and local information campaigns were launched during spring 2007 to proactively address public concerns related to upcoming work on the interim eastbound detour and subsequent demolition work.

- Equipment and labor resources were increased during low traffic times, such as nights and weekends. This strategy reduced inconveniences to the surrounding residents and businesses and minimized impact to the regional motorists while maintaining the level of production required for the project to remain on the target schedule.

West Approach Concrete Pour



West Approach New I-80 Eastbound Westbound Model (Under Construction)



Notes:
1. Bents 1L and 2L each have 5 - 84" Cast In Drilled Hole (CIDH) piles.
2. Bents 3L through 5L each have 5 - 90" Cast In Drilled Hole (CIDH) piles.
3. Bents 6L through 8L each have 4 - 90" Cast In Drilled Hole (CIDH) piles.
4. Bents 9L through 15L each have 3 - 72" Cast In Drilled Hole (CIDH) piles.
5. Abutment 16L has 18 - 30" Cast In Drilled Hole (CIDH) piles.
6. Average Pile lengths are as follows:
   - Bents 1L through 3L = 90'.
   - Bent 4L = 75'
   - Bent 5L = 80'
   - Bents 6L through 8L = 75'
   - Bent 9L = 60'
   - Bent 10L = 70'
   - Bents 11L and 12L = 73'
   - Bent 13L = 70'
   - Bents 14L and 15L = 67'
   - Abutment 16L = 40'
7. Items of work this chart does not include:
   - Lower Deck Retrofit
   - Sterling on-ramp reconstruction

SFOBB East Span Seismic Replacement

The SFOBB East Span Seismic Replacement project will be seismically retrofitted through the complete replacement of the existing span. The project includes construction of the Skyway portion of the bridge (See *SFOBB East Span Replacement Project* table below), which consists of two parallel concrete structures, each approximately 1.3 miles in length; an SAS bridge consisting of a 510-foot tower supporting a bridge deck connecting the Skyway bridge to YBI, transition structures on YBI and on the east end of the bridge connecting to the toll plaza area, and demolition of the existing east span.

The SFOBB East Span Project now consists of 21 contracts. Construction of the Oakland Touchdown (OTD) Approach Structures and the Yerba Buena Island Transition Structures (YBITS) has been split into multiple contracts to facilitate construction flow and acceleration of work elements off the critical path for the completion of the new east span.

The current SFOBB East Span contracts are identified on the following pages: Nine contracts are **complete**:

- Interim Retrofit (Existing Bridge)
- East Span Retrofit (Existing Bridge)
- Pile Installation Demonstration
- OTD Geofill
- YBI Archaeology
- United States Coast Guard (USCG) Road Relocation on YBI
- SAS Land Foundations (W2)
- YBI Electrical Substation
- OTD Submarine Cable

Table 8-SFOBB East Span Seismic Replacement Project Schedule Summary

Contract	AB 144/SB 66 Baseline Pro	Approved Changes	Current Approved Schedule	4th Quarter 2007 Forecast Project Completion Date	Variance (Months)
Skyway	April 2007	8	December 2007	December 2007	-
YBI Detour*	July 2007	36	June 2010	June 2010	-
Stormwater Treatment Measures	March 2008	-	March 2008	March 2008	-
SAS E2/T1 Foundations	June 2008	(3)	March 2008	March 2008	-
Open to Traffic: Westbound	September 2011	12	September 2012	September 2012	-
SAS Superstructure	March 2012	12	March 2013	March 2013	-
Open to Traffic: Eastbound	September 2012	12	September 2013	September 2013	-
Oakland Touchdown (OTD)	December 2013	12	December 2014	December 2014	-
OTD Submarine Cable	n/a		January 2008	January 2008	-
OTD No. 1 (Westbound)	n/a		January 2010	January 2010	-
OTD No. 2 (Eastbound)	n/a		November 2014	November 2014	-
YBI Transition Structure*	December 2013	12	November 2014	November 2014	-
Existing Bridge Demolition*	September 2014	12	September 2015	September 2015	-

Note: The new east span forecast to be fully open to traffic in September 2013. Construction activities will continue beyond that date to complete the project, including demolition of the existing structure.

Six contracts are under **construction**: Note that percent complete figures for construction contracts are based on actual payments made divided by the contract amount, including executed Contract Change Orders (CCOs).

- Skyway contract (99 percent complete)
- YBI Detour
- SAS Marine Foundations (E2/T1) (93 percent complete)
- SAS Superstructure (23 percent complete)
- Stormwater Treatment Measures (96 percent complete)
- OTD #1 contract (12 percent complete)

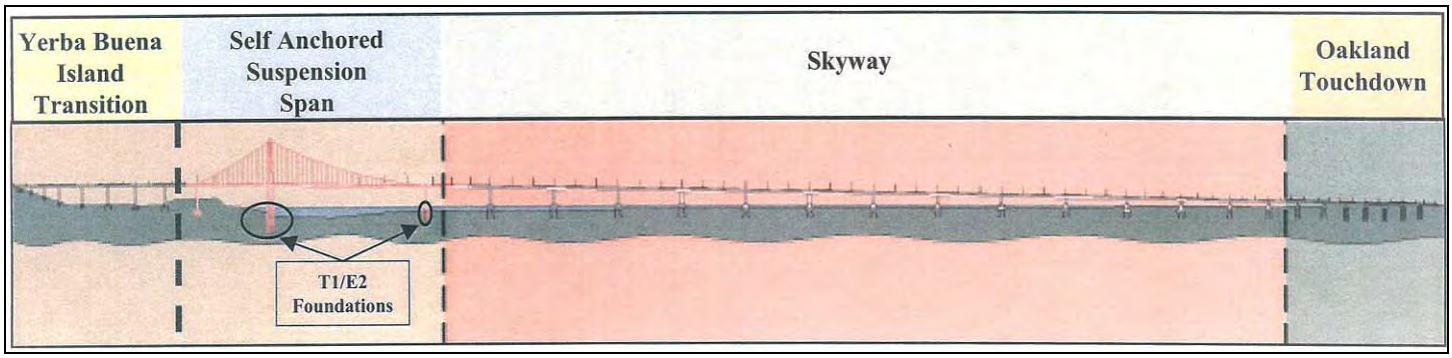
Six contracts are in **design**:

- OTD #2 contract: The contract is planned to be advertised in summer 2010
- OTD portions of the corridor electrical contract: This scope may be executed as a separate contract, or alternatively, may be included within OTD #2 contract and/or the other contracts within the east span corridor.
- YBITS #1 (design 95 percent complete to date)
- YBITS #2 (design 80 percent complete to date)
- YBITS #3 Landscaping contract
- Existing Bridge Demolition design (10 percent complete to date)

The forecast completion date as compared to the AB 144/SB 66 baseline completion date for each of the major components of the SFOBB East Span Seismic Replacement project is shown in *Table 8-SFOBB East Span Seismic Replacement Project Schedule Summary* on page 15.

The approved East Span opening date has been extended by 12 months by the TBPOC through addendum issued on the SAS contract based on bidder inquiries received during advertisement. The current approved schedule does not include the potential for schedule reduction based on an early completion incentive on the SAS contract of six months that was also included in the addendum.

The completion of the Skyway contract has been revised from April 2007 to December 2007 as approved by the TBPOC due to a Contract Change Order executed with the Contractor that resolves a variety of construction issues. The schedule for the YBI Detour contract has been extended to take into account the 12-month change to the SAS contract schedule and the incorporation of additional work scope from the YBITS contract. This extension is not expected to impact the new East Span open-to-traffic date.



SFOBB East Span Replacement Project

Milestones Achieved – East Span Contracts

Skyway Contract

- The Skyway contract is 99 percent complete as of December 2007. The eastbound and westbound structures are 100 percent complete with the erection of all 452 segments. Remaining work includes punch list work.

- Various Notices of Potential Claims (NOPCs) have been issued by the Contractor on behalf of their Steel Orthotropic Box Girder (SOBG) fabrication subcontractor concerning issues related to that work scope. Caltrans and its contractor have tentatively agreed on a settlement to resolve the claims. There were no changes to the contract budget or schedule due to the agreed settlement.

Self-Anchored Suspension Bridge Contract

- The E2/T1 contract is 93 percent complete as of December 2007. At the East Pier (E2), foundation pile driving has been completed. The contractor has completed most of the eastbound and westbound E2 foundation and column. At the Tower Pier (T1), all 13 rock sockets that tie the SAS tower foundation (T1) to bedrock have been installed. The top slab concrete was placed. Remaining work includes punch list work.

- The SFOBB East Span Seismic Replacement Project SAS Superstructure contract is 23 percent complete based on payments to the Contractor as of December 2007. Development of various administrative submittals, including schedule updates, is continuing. The Contractor has finalized agreements with various manufacturers, fabricators, suppliers and subcontractors, including Zhenhua Port Machinery Company (ZPMC), of Shanghai, China, to supply and fabricate all the major steel structures in the SAS. Caltrans has set up facilities and has organized resources in China that will ensure an effective Owner's presence in the steel fabrication shops operated by ZPMC. Barge fabrication is ongoing in Oregon and crane fabrication has started in China. Civil construction work has started at the W2 foundation with falsework for the pier table. The fabricators for the temporary towers and trusses have been selected by the contractor and fabrication is underway. Caltrans is also taking risk mitigation measures to address potential issues during construction due to structural steel plate conflicts and welding methods.

Yerba Buena Island Contracts

- For the Yerba Buena Island Detour (YBID) contract, Caltrans and its consultants have assumed design responsibilities from the Contractor for the design of the East and West tie-ins from the existing bridge and tunnel to the detour structure. Completion of their design is being managed by Caltrans and is to be completed in conjunction with the SAS schedule to minimize impacts to the traveling public. The viaduct segment is being fabricated in South Korea and the second shipment has arrived at the Port of San Francisco.

- Caltrans and its contractor successfully rolled into place the precast replacement upper roadway deck section near the YBI tunnel as part of the West Tie-in Phase I. The work was completed 11 hours early during the full Bay Bridge closure over the 2007 Labor Day Weekend.

- As part of the YBI Advanced work, which was added to the YBID contract, work is continuing on the foundations and columns of W4 L&R and W6 L&R. A need was identified to accelerate work on pier W3L due to the SAS contractor's need for access to that area. The YBI Detour contractor has completed that work and the SAS contractor has been granted access to that area ahead of schedule.

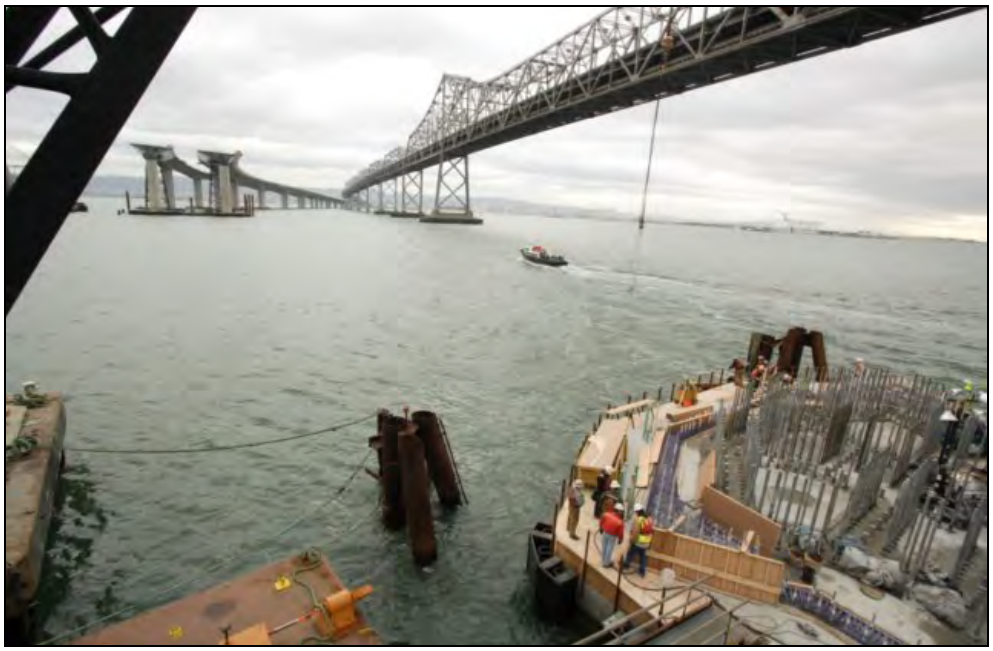
- The YBITS #1 contract will construct structures necessary to connect the new SAS to the existing YBI tunnel. To minimize schedule and

construction risk, the TBPOC approved the option to accelerate portions of YBITS #1 work, including shifting critical path work to the YBID contractor. The YBITS foundation work was added to the YBID contract because foundation work is always the highest risk element of structure construction. Early construction of the foundations would significantly reduce risk to the East Span corridor schedule. Preparation of the final YBITs #1 PS&E package is currently underway.

- The YBITS #2 contract includes demolition of the YBI Detour temporary structure, completion of the new eastbound on-ramp, completion of the bike path section on YBI and reconstruction of local and affected facilities at YBI. The majority of the design work is complete. Preparation of detailed plans and quantity calculations are in progress.

- The YBITS #3 contract is for landscaping, and includes slope restoration, vegetation restoration and plant maintenance for the areas affected by YBI construction. A planting concept and preliminary plans have been developed for a majority of the area. Determination of the extent of the U.S. Coast Guard area to be landscaped is still pending. Development of the final plans has not been completed.

YBI Advance Work - East Span Rebar Installation



East Span Footing Pour at T1

OTD#1 – Pile Driving Bent

Oakland Touchdown Contracts

- The OTD Submarine Cable contract replaced the existing submarine electrical cable from Oakland to Treasure Island. The cable relocation contract placed new electrical cable(s) between the East Bay and Treasure Island, because the existing electrical cable providing power to the island was close to the foundation work necessary for the construction of the OTD #1 contract. All field work has been completed and the contractor has demobilized. Caltrans has accepted the contract.

- The OTD #1 contract involves constructing bents 17 through 23 marine foundations. It also includes the westbound bridge section and roadway approach to the new Skyway from west of the Oakland Toll Plaza. Caltrans awarded the contract to MCM Construction on July 17, 2007. The first contract day of the project is August 22, 2007, with the completion of the "Designated Portion of Work (Oakland Approach Structure – Westbound)" scheduled by June 2009, and contract completion by November 2009. The project is currently at 12 percent completion as of December 20, 2007. Field work in progress includes pile driving operation at Pier 20L, construction of the temporary access trestle and the electrical duckbank, installation of cofferdam at pier 18L, marine excavation at pier 19L, and electrical work for the temporary underground and roadway at grade.

- The OTD #2 contract involves constructing the remaining eastbound bridge section from the new Skyway to the roadway west of the Oakland Toll Plaza. This work will occur once the westbound traffic is shifted onto the new SAS. Design work for the structures portion of the OTD #2 contract is substantially complete. Design work on the roadway portion is ongoing.

Other Contracts

- The Stormwater Treatment Measures contract is 96 percent complete as of December 2007. Remaining work includes punch list work. The Stormwater Project, in and around the Toll Plaza and bridge approach area, was required as part of the environmental mitigation package for the SFOBB Seismic Safety Project by the Regional Water Quality Control Board. The project will reduce the concentration of stormwater runoff pollutants including industrial chemicals, asbestos from brake pads, hydrocarbons, and heavy metals, from entering into the adjacent Emeryville Crescent. The Emeryville Crescent is a 558-acre tidal marsh and cove that supports up to 14,000 shorebirds and thousands of other birds, including the endangered clapper rail, which nests and forages in the vegetative cover of the marsh. This area has been described as supporting the largest number of shorebird species regularly occurring at one place within San Francisco Bay (Bodega Bay Institute, 1978). The project will provide water treatment of at least 85% of the average annual runoff from a 155-acre shed area in the vicinity of the SFOBB Toll Plaza. By removing toxins from the SFOBB runoff, Caltrans will enhance the habitat quality of the Emeryville Crescent and by extension, the San Francisco Bay. Current work includes construction of the Bioretention basins, completion of the drainage systems along Emeryville crescent area, shoulder paving on

WB 80, electrical work for pump stations, and highway lighting.

- Design of the Existing Bridge Demolition contract is 10 percent complete. Design work has been temporarily suspended to assign engineering resources to higher priority tasks, and will resume at a later time. The contract schedule completion date has been extended by 12 months due to a 12-month SAS contract extension.

Project Funding

Baseline and Projected Budget and Schedule

The AB 144/SB 66 baseline budget for the SFOBB East Span is $5.487 billion. The current approved budget for SFOBB East Span is $5.666 billion. See *Table 9-SFOBB East Span Replacement Cost Summary.*

The TBPOC re-evaluates project and contract cost forecasts continuously. The current 4th Quarter 2007-2008 forecast of $5.675 billion for the project includes the following revisions:

- A forecast increase in the cost of COS to $977.1 million as a result of a detailed staffing and consultant contract cost forecast completed as of the end of the First Quarter 2007. This forecast includes considerations of revised and increased construction contract schedules as mentioned elsewhere in this report that require coverage by staff and consultants.

- A forecast $13.7 million increase for the SAS Superstructure contract to cover actions taken to encourage additional bidders for the project, including the bidders' stipend for the lowest three responsive bidders.

- A forecast $18.7 million increase in the CO for the OTD contract due to an approved Engineer's Estimate for the OTD #1 contract. The COS for

Table 9-SFOBB East Span Replacement Cost Summary ($ Millions)

Contract	AB 144/SB 66 Budget	Approved Changes	Current Approved Budget	Cost To Date (12/2007)	4th Quarter 2007 Forecast	Variance
a	b	c	d = b + c	e	f	g = f - d
Capital Outlay Support	959.4	-	959.4	560.5	977.1	17.7
Capital Outlay	-	-	-	-	-	-
Skyway	1,293.0	-	1,293.0	1,204.1	1,293.0	-
SAS E2/T1 Foundations	313.5	-	313.5	264.6	313.5	-
SAS Superstructure	1,753.7	-	1,753.7	348.6	1,767.4	13.7
YBI Detour	131.9	202.5	334.4	131.6	334.4	-
YBI Transition Structures	299.3	(23.2)	276.1	-	276.1	-
* YBITS 1				-	214.3	
* YBITS 2				-	58.5	
* YBITS 3 - Landscape				-	3.3	
Oakland Touchdown	283.8	-	283.8	42.0	302.5	18.7
* OTD Submarine Cable				7.9	9.6	
* OTD Westbound				34.2	226.5	
* OTD Eastbound				-	62.0	
* OTD Electrical Systems				-	4.4	
Existing Bridge Demolition	239.2	-	239.2	-	222.0	(17.2)
Stormwater Treatment Measures	15.0	3.3	18.3	15.7	18.3	-
East Span Completed Projects	90.3	-	90.3	89.2	90.3	-
Right-of-Way and Environmental Mitigation	72.4	-	72.4	38.8	72.4	-
Other Budgeted Capital	35.1	(3.3)	31.8	0.7	7.7	(24.1)
TOTAL	5,486.6	179.2	5,665.8	2,695.8	5,674.7	8.9

Note: Details may not sum to totals due to rounding effects.

the contract was also increased to cover the additional work to split the contract and to administer four separate contracts over a longer duration rather than the original single contract.

- A forecast $17.2 million decrease for the Bridge Demolition Contract due to a re-evaluation of the cost escalation rates for the project.

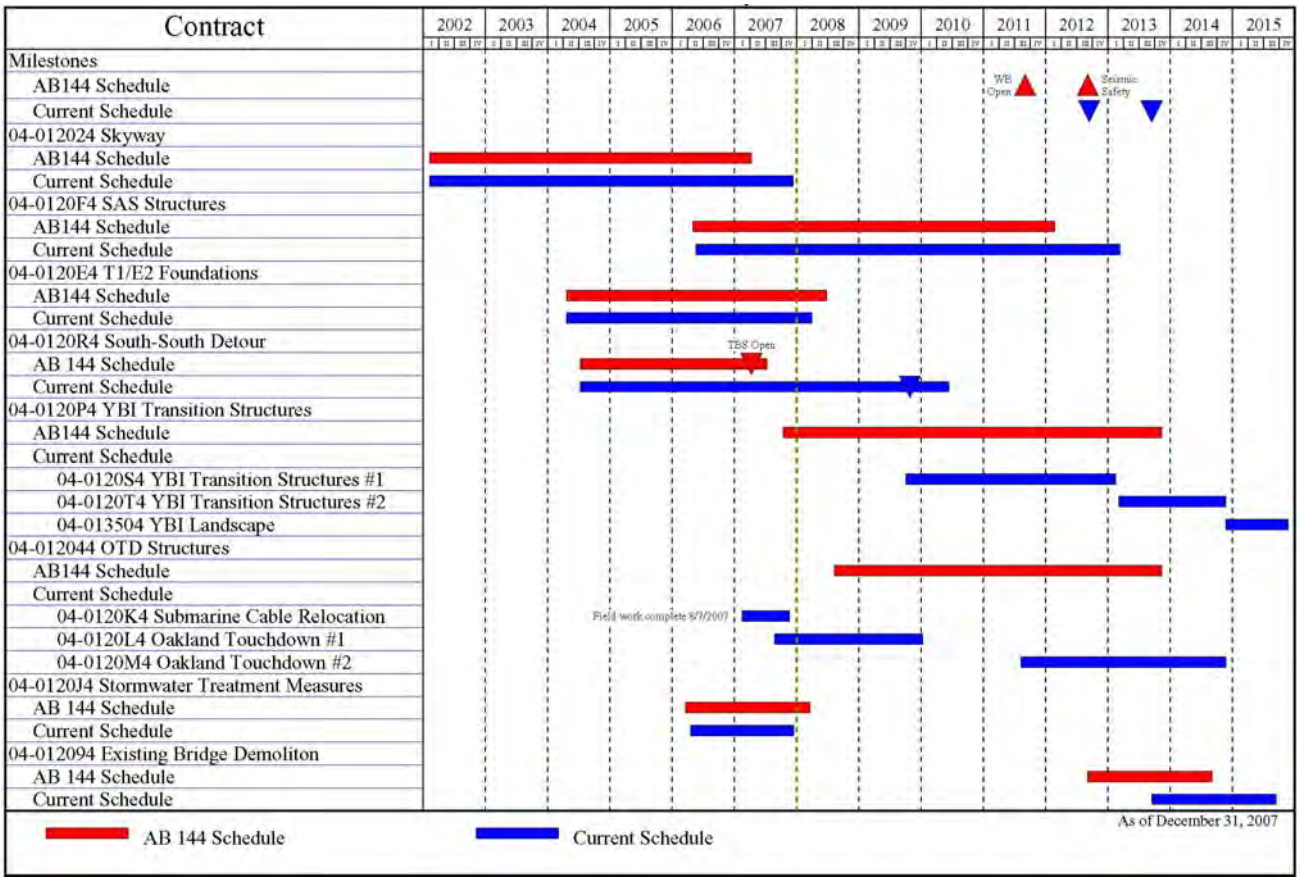
All of the variances discussed above can be funded from a combination of other budgeted capital and Toll Bridge Seismic Retrofit Program Contingency. The forecast for the SFOBB East Span has increased by $8.9 million to $5.675 billion.

The current December 2007 schedule calls for achieving seismic safety and opening to traffic the SFOBB new East Span in 2013. The 12 months of schedule extension from the AB144 baseline schedule was granted by addenda to the SFOBB East Span Seismic Replacement Project SAS contract based on bidder inquiries received during advertisements.

- In March 2007, the TBPOC approved a number of changes to the YBI Detour contract to better integrate the detour work into the current project schedule, to modify the detour viaduct and tie-in designs, and to reduce overall project risks by advancing YBITS foundation work and tunnel viaduct replacement into the SSD contract. These changes increased the overall YBI Detour contract budget by $202.5 million and decreased the YBITS contract by $23.2 million.

- While the 12-month schedule extension for the SAS has also extended the schedules for YBITS

Chart 2-San Francisco-Oakland Bay Bridge East Span Corridor
Schedule Baseline AB 144/SB 66 VS. Current Projected



SAS - W2 Looking East

and OTD contracts accordingly, the TBPOC is scheduling the contracts to accommodate the possibility of an early SAS completion based on incentives also included by the SAS addenda.

It is estimated that all of the construction activities for the SFOBB East Span Seismic Replacement project will be completed by 2015.

The comparison of the AB 144/SB 66 baseline schedule and the current projected schedule is shown in *Chart 2-SFOBB East Span Corridor Schedule, Baseline AB 144/SB 66 vs. Current Projected* on page 21. It should be noted that the schedules shown in *Chart 2* do not at this time account for the potential "worst-case" issues that may affect the schedule identified in the SFOBB East Span Seismic Retrofit Project Risk Management Plan.

Major Risk Issues

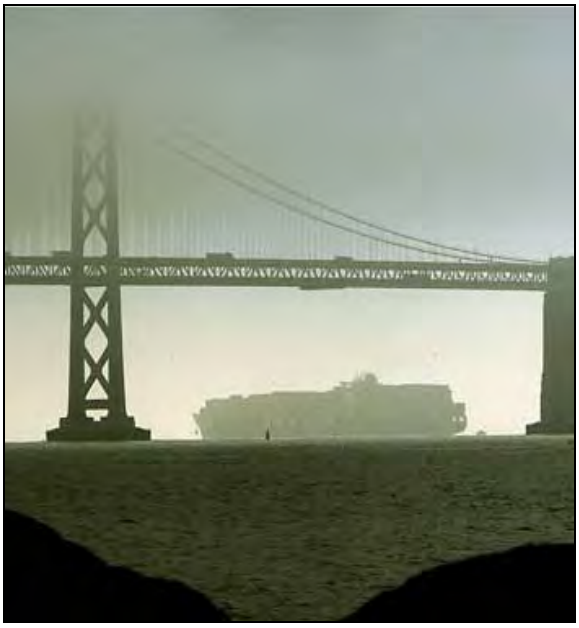
SFOBB East Span Project Replacement Risk Management Plan

Caltrans continues to implement comprehensive risk management on all SFOBB East Span Seismic Replacement Project contracts in accordance with AB 144. Currently, Caltrans and BATA have embarked on an initiative to manage risk jointly. Risk response efforts continue to focus on encouraging responsive bids for future contracts and mitigating the estimated cost/schedule impact of identified risks. (See "Risk Management Program" on page 25 for more information).

Quarterly Environmental Compliance Highlights

SFOBB East Span environmental tasks for the current quarter are focused on mitigation monitoring. All weekly, monthly, and annual compliance reports to resource agencies have been delivered on time with no comments from receiving agencies. Key successes this quarter are as follows:

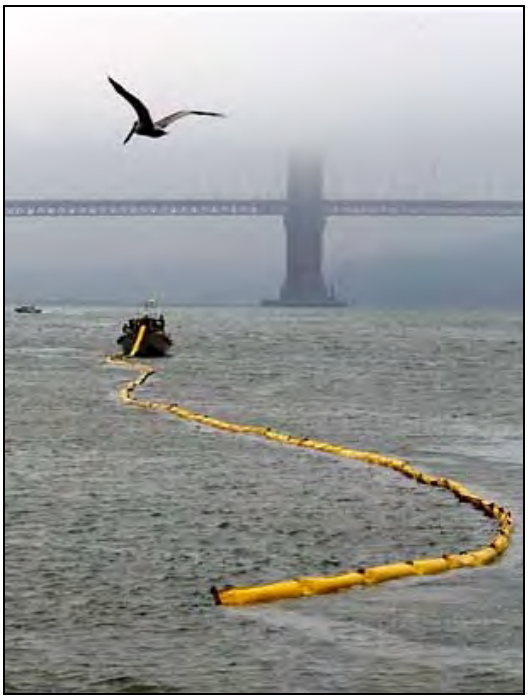
- Bird monitoring was conducted weekly in the active construction areas.
- Turbidity monitoring was conducted without incident during October for pile driving activities associated with the construction of the temporary trestle for the Oakland Touchdown Westbound Contract.
- Amendment Number 17 for the San Francisco Bay Conservation and



The Cosco Busan and the Bay Bridge

Development Commission (BCDC) Permit Number 8-01 was approved on October 9th. This amendment requested an additional year of eelgrass monitoring at the North Basin eelgrass pilot program site and a one year extension for commencement of hazardous waste and infrastructure removal at Skaggs Island. Amendment Number 18, which addressed mitigation measures for the Stormwater Project, was approved on October 23, 2007.

- On November 7th, the Cosco Busan, owned by the Hanjin Shipping Company of South Korea, struck one of the western piers of the Bay Bridge while attempting to navigate through dense fog. The impact resulted in the release of approximately 58,000 gallons of bunker oil, which impacted many of the SFOBB contracts. Caltrans assisted with the oil spill cleanup by acquiring and deploying over 10,000 linear feet of oil-absorbing boom. Additionally, Caltrans' environmental staff assisted with the assessment and subsequent cleanup of the shoreline adjacent to the Oakland Touchdown in conjunction with the Incident Command Center. Oil-impacted birds were also recurred from this location.



Clean Up Efforts After Cosco Busan Struck Pier

Completed Projects

Seismic retrofit and project close-out have been completed on the Benicia-Martinez, Carquinez, San Mateo-Hayward, Vincent Thomas, San Diego-Coronado toll bridges and on the west span of the SFOBB. *See Table 10-Cost Comparison AB 144/SB 66, Fourth Quarter 2007 Forecast and Expenditures through December 2007 for Completed Projects on the next page*.

The Richmond-San Rafael Bridge project expenditures have not been completely closed because Caltrans is in discussions with regulatory agencies regarding potential mitigations for impacts on fish in the project area. Caltrans has completed a contract for the construction of a public access lot on the Marin side of the Richmond-San Rafael Bridge to comply with a Bay Conservation and Development Commission (BCDC) permit condition.

The Richmond-San Rafael Public Access Project provides public access to the Bay shoreline at the north end of the Richmond-San Rafael Bridge in Marin County. This contract was completed in August 2007 and the lot is open to public use.

To close out the Richmond-San Rafael Seismic Retrofit Project, Caltrans faces potential exposures concerning the environmental mitigation for negative impacts on fish, which is currently being discussed with regulatory agencies. Final savings for the Richmond-San Rafael Bridge project will be based on the resolution of pending negotiations with environmental permitting agencies regarding the cost of pile driving mitigation. Initial project cost savings in the amount of $89 million have been transferred to the Toll Bridge Seismic Retrofit Program Contingency, as directed by the TBPOC.

Table 10-Cost Comparison AB 144/SB 66, Fourth Quarter 2007 Forecast and Expenditures through December 31, 2007 for Completed Projects ($ Millions)

Project	AB 144/ SB 66 Budget	Approved Changes	Current Approved Budget	Cost To Date (12/2007)	4th Quarter 2007 Forecast	Variance
a	b	c	d = b + c	e	f	g = f - d
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit Project	307.9	-	307.9	301.1	307.9	-
Carquinez Bridge Retrofit Project	114.2	-	114.2	114.2	114.2	-
Benicia-Martinez Bridge Retrofit Project	177.8	-	177.8	177.8	177.8	-
San Mateo-Hayward Bridge Retrofit Project	163.5	-	163.5	163.4	163.5	-
Richmond-San Rafael Bridge Retrofit Project	914.0	(89.0)	825.0	793.3	825.0	-
Vincent Thomas Bridge Retrofit Project	58.5	-	58.5	58.4	58.5	-
San Diego-Coronado Bridge Retrofit Project	103.5	-	103.5	102.6	103.5	-
TOTAL	1,839.4	(89.0)	1,750.4	1,710.8	1,750.4	-

Note: Details may not sum to totals due to rounding effects. Capital Outlay Support and Capital Outlay have been combined. Although seismic retrofit of the Richmond-San Rafael and San Diego-Coronado bridges are complete, environmental mitigation/monitoring work is still ongoing.

Risk Management Program

The following is a summary of risk management developments during the Fourth Quarter of 2007.

Corridor Schedule

The Corridor Schedule Team (CST) continues to identify ways to enhance completion dates while providing recommendations to program management on scheduling decisions and mitigating potential schedule risks. The CST evaluates opportunities, risks and uncertainties in corridor schedule activities as input in the quantitative corridor schedule risk analysis. To date, the CST has provided recommendations that have streamlined many of the contract tasks, realized opportunities, and reduced risks to the corridor schedule.

Of note is the early completion of installation on the new viaduct at Yerba Buena Island over the Labor Day weekend. The CST worked closely with the contractor to optimize schedule opportunities to construction operations on that weekend, and to ensure that equipment and plans were in place to deal with any contingencies. With work limited to three days, it was essential that there be a high confidence level that work could be completed in that timeframe. The contractor finished the work 11 hours ahead of schedule.

Corridor Schedule Opportunity and Risk Response

While risk identification, updating and mitigation activities are ongoing on all contracts in the project, Caltrans has identified six risk areas that are critical. Caltrans formed focus teams to formulate and implement opportunity and risk response strategies in each of these areas.

1. *Self-Anchored Suspension (SAS) Tower and Deck Fabrication*

The Fabrication Focus Team (Team China) is evaluating the five main elements that might influence the SAS Bridge Fabrication at the Zhenhua Port Machinery Company in China. It is developing strategies to reduce risk and to accelerate fabrication while meeting the specified quality. The five elements identified are: Machines - as used during the fabrication cycle; Information - drawing release and fabrication methodology; Manpower - suitably qualified supervision, inspectors and welders; Materials – steel plate ordering, receipt and approval for use; Environment – foreseen difficulties with the outside climate and working in confined spaces.

2. *SAS Cable Installation*

While the SAS appears to have two cables, there is actually only one continuous main cable that is anchored within the decks at the eastern end where it ties into the Skyway orthotropic box girder sections. This cable is carried over the tower and wrapped around the two side-by-side decks at the western end. The Cable Installation Focus Team is developing strategies and solutions to mitigate potential risks: unique problems in attaining the required cable geometry; difficulties the Contractor may encounter in pulling the unique cable into place; compaction of the cable to the correct dimensions prior to the fitting of the cable bands; complications during load transfer due to the unique three-dimensional geometry.

3. *SAS Barge Crane Procurement and Delivery*

The SAS Contractor is having difficulties with Federal agencies to get its Shearleg Barge Crane "Coastwise" certified under the Federal Jones Act. Violation of the Act would make the Barge Crane non-Coastwise certified and ineligible to operate in U.S. waters. The Barge Crane is essential to SAS bridge construction and is on the critical path of the SAS schedule. Any change to the Contractor's current Barge Crane manufacturing and assembly plan may impact the project. The Barge Crane Focus Team is assessing alternative strategies: construct the Barge Crane as planned and seek USCG Coastwise certification; construct the Barge Crane as planned and seek a Federal Legislative

Coastwise waiver; rehabilitate an existing Coastwise barge or construct a domestic crane and seek USCG Coastwise certification; find an existing barge crane option with USCG Coastwise certification; seek a DOD "Project Specific" waiver for the Barge Crane; seek legislative Project Specific waiver for the Barge Crane.

4. *Corridor Electrical/Mechanical Systems Integration*

The mechanical/electrical/piping (MEP) systems include the traffic operations system, Supervisory Control and Data Acquisition system, and the 15 kV power distribution systems as well as longitudinal mechanical pipes which run the length of the bridge. MEP components are critical to the integrity of the East Span and span its length across multiple contracts. MEP systems must ultimately be fully operational when the new structure is opened to traffic. The MEP Focus Team is developing strategies and solutions to mitigate potential risks related to the MEP systems. Key areas of potential risk have been identified: integrating electrical components from one end of the bridge to the other and who will perform the integration; verifying functionality and completeness of all bridge MEP components; identifying the time frame for the construction of MEP components and by which contract; ensuring MEP systems will function as designed at the completion of the project.

5. *SAS Tower Erection*

The SAS single steel tower will rise 525 feet above the water and will sit on the T1 foundation. The tower is made up of four separate tapering legs connected by shear link beams, which are designed to move separately and absorb most of the shock during a major earthquake. Each leg of the tower will be fabricated in five different sections of varying lengths in China and will be transported by ship to the construction site in Oakland. There, the first section will be lowered over the eight footing dowels and 400+ high-strength rods already in place on the T1 footing and the section will then be bolted down. The subsequent four sections will be attached along with the associated cross bracing and struts. The Tower Erection Focus Team is developing strategies and solutions to mitigate potential risks, including: T1 footing fabrication errors; template errors; footing installation errors; damage by others prior to erection; incorrect use of template at fabrication; misdrilling of holes in the tower base; field dowel and rod installation errors; tower alignment tolerance issues; fit up problems with each tower section, cross bracing and struts; alignment and elevation adjustment problems; tower skirt plate problems; field welding issues; bolted splice fit issues.

6. *SAS Hinge Closure Construction*

The Yerba Buena Island Transition Structure (YBITS) contract includes the construction of Hinge K that completes the connection of YBITS to the SAS structure at Hinge K. The YBITS contract plans require a 90-day waiting period from prestressing of the YBITS superstructure to placement of the Hinge K closure pour. The intent of the 90-day requirement is to manage and control the impacts of creep and shrinkage to the extent possible to limit the YBITS from loading the SAS. The Hinge Closure Focus Team is developing options to prevent the risk of delays to the project schedule due to the 90-day requirement. It is reviewing the relevant schedules, plans and specifications, and investigating the results of creep and shrinkage tests from the new Benicia Bridge and the Skyway contracts.

Adequacy of Program Reserves

AB144 states that Caltrans must “regularly reassess its reserves for potential claims and unknown risks, incorporating information related to risks identified and quantified through its risk assessment processes.”

Each contract has a contingency allowance within its budget. The sum of these contingency allowances is compared to the total of capital outlay, capital outlay support and program risks. Any excess of the risks over the contingency allowances represents a potential draw on the Program Contingency (the reserve). As of the end

of the fourth quarter 2007, the potential draw on Program Contingency ranges from about $160 million to $520 million, as shown in the diagram below. As the draw value increases, the probability of a greater draw decreases.

While the 50% probable cost of risks decreased by $38 million from the previous quarter, the contingency available from contracts diminished by $114 million due to contract change orders. Thus, the 50% probable potential draw has increased by $76 million from the previous quarter. However, the entire range of the potential draw curve is much less than the $809.8 million Program Contingency balance in the TBPOC Q3 2007 Approved Budget, indicating that the reserve is adequate as of the end of the fourth quarter 2007.

External Review of the TBSRP Risk Management Program

A National Cooperative Highway Research Program (NCHRP) Project 8-60 is currently underway to develop a Guidebook on Risk Analysis Tools and Management Practices to Control Transportation Project Costs. The principal investigators met with the SFOBB risk team to learn about the TBSRP risk management program. Their first impressions were communicated to the SFOBB Risk Management Coordinator and they were impressed with the strides our team and Caltrans have made in the past few years. In addition, because of our successes, they will be integrating the accomplishments of the Risk Management Program into their NCHRP research project over the next year.

The December 2007 NCHRP Quarterly Progress Report includes an extensive case study of the TBSRP risk management program and concludes that:

> "The risk management approach adopted is an enhancement of the general Caltrans risk management handbook approach. The main differences … are:
>
> - The risk register for the SFOBB is web based using the Risk Management Information System.

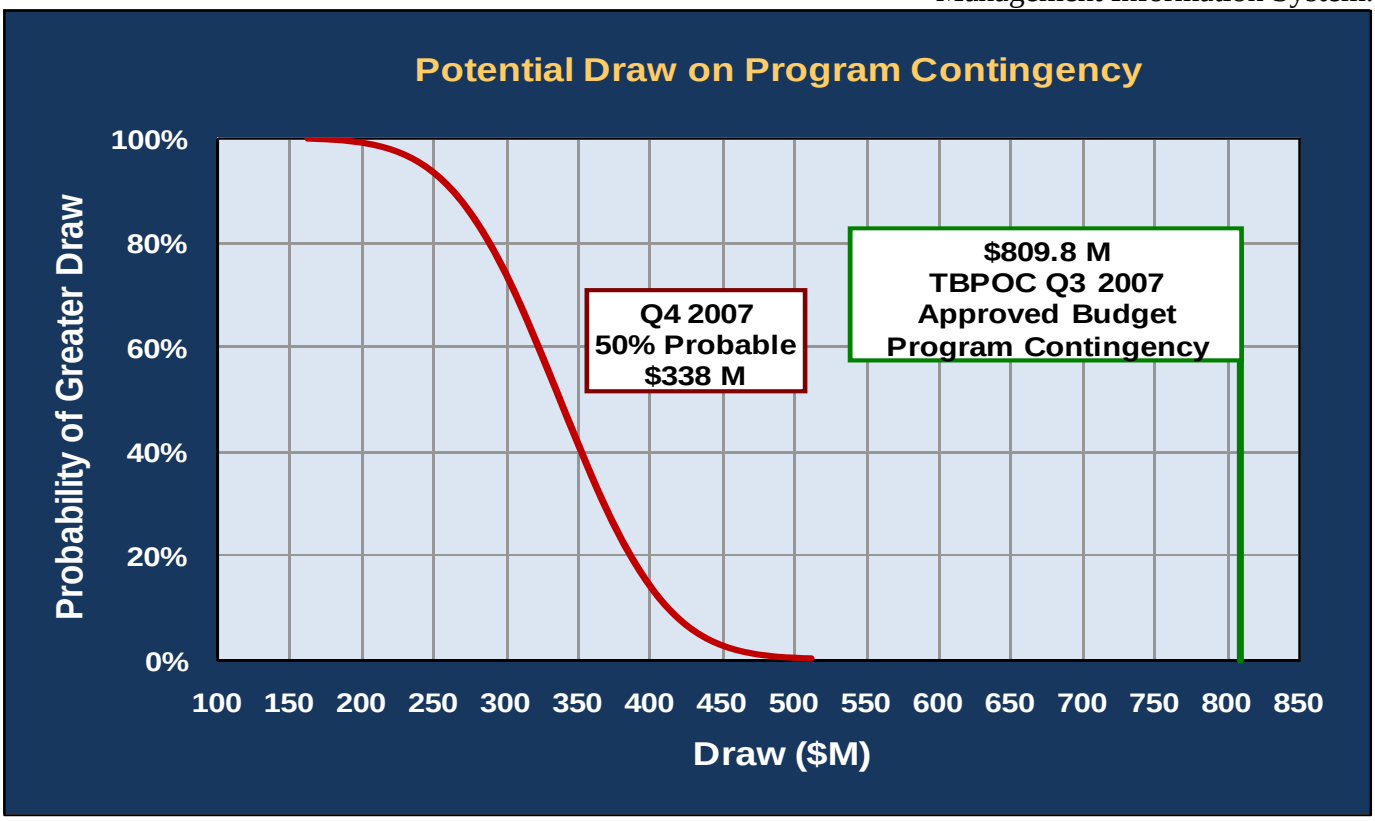


Figure 1. Potential Draw on Program

- Extensive quantitative analysis is carried out on all project risks to derive reliable numerical estimates of impacts on major project objectives, cost and schedule.
- Project risks are split into cost and schedule risks and assessed accordingly to determine the likelihoods of overrunning the budget or the schedule.
- The risk management cost is the total cost of risks, notices of potential claims and contract change orders.
- The influence of the Toll Bridge Program Oversight Committee ensures greater overall commitment of all involved in the risk management process.

These differences improve the accuracy of budget or time estimates derived in several ways. The use of technology especially enhances the risk tracking, updating, monitoring and reporting processes."

This independent assessment confirms Caltrans' major accomplishment in developing a state-of-the-art comprehensive risk management program as required by AB144.

The Antioch Bridge

Other Toll Bridges

Dumbarton and Antioch Bridges

State Route 84 crosses the southern region of San Francisco Bay between the cities of Newark to the east and East Palo Alto to the west. The Route consists of three lanes in each direction and an eight-foot bicycle/pedestrian lane. The AADT of the Route is near 81,000. The bridge is over 2 km in length and is positioned in an approximately normal geometry between two seismic faults which the USGS has reported to pose most of the significant seismic threat to the San Francisco Bay Area: the San Andreas Fault, some 15 km to the west of the bridge; and the Hayward Fault, some 13 km to the east of the bridge.

State Route 160 crosses the San Joaquin River between the city of Antioch and Sherman Island (leading to Rio Vista) via the Antioch Bridge. The Bridge carries a single lane of traffic in each direction. The AADT for the Route is slightly over 13,000 vehicles per day. The bridge is threatened by the Bird's Landing Seismic Zone, Cost Range/Sierra Nevada Boundary Zone and the San Andreas Fault.

Cost and Schedule

A cost estimate, schedule, and an initial risk analysis have been developed to complete a comprehensive seismic analysis for each bridge. In June 2006, BATA approved $17.8 million in funding to proceed with the comprehensive seismic analysis of the bridges. The current forecast of expenditures is within the $17.8 million budgeted.

In September 2006, BATA entered into contract with a geotechnical and geophysical consultant to evaluate the bridges. In April 2007, the field-drilling program was completed and the majority of the laboratory testing was completed by June 2007. Minor laboratory testing to fill in data gaps may be required in the future. Alternative strategies and associated cost estimates of each alternative with the retrofit design duration to complete the PS&E package will be included in the final strategy report and is expected to be completed by early 2009.

Current Progress

These bridges are currently being evaluated for seismic safety and post-earthquake performance. Work is underway in three specific areas: seismology, geology and geotechnical engineering and bridge structural engineering.

Work in the area of seismology is defining the seismic ground motions used for design. Recommended Safety Evaluation (SE) level motions have been developed for both bridges and are currently under review by an external and independent Seismic Safety Peer Review Panel (SSPRP). SE motions represent future large earthquakes. Work in this area to be completed in the near future includes finalizing the SE motions, developing lower level Functional Evaluation (FE) motions, and multiple earthquake time-histories that can be used in the checking phase of the projects. Draft reports have been released. The SE motions have been reviewed by the Toll Bridge Seismic Safety Peer Review Panel on a couple of occasions.

Work in the area of geology and geotechnical engineering includes field drilling and studying of soil samples to identify soil types, locations and engineering properties. This work supports work in defining how the soil at the bridge sites move during earthquakes and how the rigidly the bridges' foundations are held in the soil. The drilling operations are complete at both bridge sites; information is being shared with the seismologic and bridge structure teams. Draft reports have been released.

Work in the area of bridge structural engineering is continuing for both bridges. The structures team, to date, has been collecting and evaluating structural information on the bridges, reducing that information for use in computer models of the bridges, and initiating early computational runs of the models. Geological, geotechnical, and seismological information from the work areas previously mentioned is being incorporated into the bridge evaluations. The design team is currently analyzing the design of the existing structures. Caltrans is also working with the Peer Review Committee to obtain approval of the proposed design.

The Dumbarton Bridge

Summary of TBPOC Expenses

Pursuant to Streets and Highways Code Section 30952.1 (d), expenses incurred by Caltrans, BATA, and the California Transportation Commission (CTC) for costs directly related to the duties associated with the TBPOC are to be reimbursed by toll revenues. *Table 11-Toll Bridge Program Oversight Committee Actual Expenses: September 30, 2007 through December 31, 2007* shows expenses through *December 31, 2007*, for TBPOC functioning, support, and monthly and quarterly reporting.

Table 11-Toll Bridge Program Oversight Committee

Expenses: September 30, 2007 through December 31, 2007 ($ Millions)

Agency/Program Activity	Expenses
BATA	0.4
Caltrans	0.9
CTC	0.4
Reporting	1.6
Total Program	3.3

Appendices

A. TBSRP All Bridges AB 144/SB 66 Baseline Budget, Forecasts, and Expenditures through December 31, 2007 (A-1 and A-2).

B. TBSRP East Span Only AB 144/SB 66 Baseline Budget, Forecasts, and Expenditures through December 31, 2007.

C. CTC Fourth Quarter Schedule.

D. Project/Contract Photographs.

Appendix A-1.

Toll Bridge Seismic Retrofit Program
AB 144/SB 66 Baseline Budget, Forecasts, and Expenditures Through December 31, 2007

($ millions)

Bridge	AB 144/SB 66 Baseline	TBPOC Current Approved Budget	Third Quarter 2007 Forecast	Fourth Quarter 2007 Forecast	Variance (4th Q07-3rd Q07)	Expenditures Through Dec 2007
Benicia-Martinez						
Capital Outlay Support	38.1	38.1	38.1	38.1	-	38.1
Capital Outlay	139.7	139.7	139.7	139.7	-	139.7
Total	177.8	177.8	177.8	177.8	-	177.8
Carquinez						
Capital Outlay Support	28.7	28.7	28.7	28.7	-	28.8
Capital Outlay	85.5	85.5	85.5	85.5	-	85.4
Total	114.2	114.2	114.2	114.2	-	114.2
San Mateo-Hayward						
Capital Outlay Support	28.1	28.1	28.1	28.1	-	28.1
Capital Outlay	135.4	135.4	135.4	135.4	-	135.3
Total	163.5	163.5	163.5	163.5	-	163.4
Vincent Thomas						
Capital Outlay Support	16.4	16.4	16.4	16.4	-	16.4
Capital Outlay	42.1	42.1	42.1	42.1	-	42.0
Total	58.5	58.5	58.5	58.5	-	58.4
San Diego-Coronado						
Capital Outlay Support	33.5	33.5	33.5	33.5	-	33.2
Capital Outlay	70.0	70.0	70.0	70.0	-	69.4
Total	103.5	103.5	103.5	103.5	-	102.6
Richmond-San Rafael						
Capital Outlay Support	134.0	127.0	127.0	127.0	-	126.7
Capital Outlay	780.0	698.0	698.0	698.0	-	666.6 *
Total	914.0	825.0	825.0	825.0	-	793.3
West Span Retrofit						
Capital Outlay Support	75.0	75.0	75.0	75.0	-	74.8
Capital Outlay	232.9	232.9	232.9	232.9	-	226.3
Total	307.9	307.9	307.9	307.9	-	301.1
West Approach						
Capital Outlay Support	120.0	120.0	120.0	120.0	-	101.2
Capital Outlay	309.0	309.0	309.0	350.7	41.7	266.2
Total	429.0	429.0	429.0	470.7	41.7	367.4
SFOBB East Span						
Capital Outlay Support	959.4	959.4	977.1	977.1	-	560.5
Capital Outlay	4,492.1	4,674.6	4,689.9	4,689.9	-	2,134.6
Other Budgeted Capital	35.1	31.8	7.7	7.7	-	0.7
Total	5,486.6	5,665.8	5,674.7	5,674.7	-	2,695.8
Miscellaneous Program Costs	30.0	30.0	30.0	30.0	-	24.7
Subtotal Capital Outlay Support	1,463.2	1,456.2	1,473.9	1,473.9	-	1,032.5
Subtotal Capital Outlay	6,321.8	6,419.0	6,410.2	6,451.9	41.7	3,766.2
Subtotal Toll Seismic Retrofit	7,785.0	7,875.2	7,884.1	7,925.8	41.7	4,798.7
Program Contingency	900.0	809.8	800.9	759.2	(41.7)	-
Total Toll Seismic Retrofit Program	**8,685.0**	**8,685.0**	**8,685.0**	**8,685.0**	**-**	**4,798.7**

Notes: * Budget for Richmond-San Rafael Bridge include $16.9 million of deck joint rehabilitation work that's considered to be eligible for seismic retrofit program funding.
(Due to the rounding of numbers, the totals above are shown within $0.1).

Appendix A-2.

Toll Bridge Seismic Retrofit Program - SAS Alternative
AB 144 Baseline Budget, Forecasts and Expenditures Through December 31, 2007

($ in millions)

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and Encumbrances as of Dec 2007 See Note (1)	Estimated Costs not yet Spent or Encumbered as of Dec 2007	Total Forecast as of Dec 2007 (Columns C +D)
Other Completed Projects					
Capital Outlay Support	144.9	144.9	144.7	0.2	144.9
Capital Outlay	472.6	472.6	472.6	0.1	472.7
Total	617.5	617.5	617.3	0.3	617.6
Richmond-San Rafael					
Capital Outlay Support	134.0	127.0	126.7	0.3	127.0
Capital Outlay	698.0	698.0	673.3	24.7	698.0
Project Reserves	82.0	-	-	-	-
Total	914.0	825.0	800.0	25.0	825.0
West Span Retrofit					
Capital Outlay Support	75.0	75.0	74.8	0.2	75.0
Capital Outlay	232.9	232.9	232.8	0.1	232.9
Total	307.9	307.9	307.6	0.3	307.9
West Approach					
Capital Outlay Support	120.0	120.0	101.7	18.3	120.0
Capital Outlay	309.0	309.0	300.1	50.6	350.7
Total	429.0	429.0	401.8	68.9	470.7
SFOBB East Span -Skyway					
Capital Outlay Support	197.0	197.0	175.8	21.2	197.0
Capital Outlay	1,293.0	1,293.0	1,338.2	(45.2)	1,293.0
Total	1,490.0	1,490.0	1,514.0	(24.0)	1,490.0
SFOBB East Span -SAS- Superstructure					
Capital Outlay Support	214.6	214.6	64.6	150.0	214.6
Capital Outlay	1,753.7	1,753.7	1,649.6	117.8	1,767.4
Total	1,968.3	1,968.3	1,714.2	267.8	1,982.0
SFOBB East Span -SAS- Foundations					
Capital Outlay Support	62.5	51.5	35.4	16.1	51.5
Capital Outlay	339.9	339.9	303.7	36.2	339.9
Total	402.4	391.4	339.1	52.3	391.4
Small YBI Projects					
Capital Outlay Support	10.6	10.6	10.2	0.4	10.6
Capital Outlay	15.6	15.6	16.2	(0.5)	15.7
Total	26.2	26.2	26.4	(0.1)	26.3
YBI Detour					
Capital Outlay Support	29.5	39.5	35.2	4.3	39.5
Capital Outlay	131.9	334.4	327.9	6.5	334.4
Total	161.4	373.9	363.1	10.8	373.9
YBI - Transition Structures					
Capital Outlay Support	78.7	78.7	16.4	62.3	78.7
Capital Outlay	299.4	276.1	0.1	276.0	276.1
Total	378.1	354.8	16.5	338.3	354.8
Oakland Touchdown					
Capital Outlay Support	74.4	74.4	30.8	61.3	92.1
Capital Outlay	283.8	283.8	219.1	83.4	302.5
Total	358.2	358.2	249.9	144.7	394.6
East Span Other Small Project					
Capital Outlay Support	212.3	213.3	198.8	14.5	213.3
Capital Outlay	170.8	170.8	92.7	53.9	146.6
Total	383.1	384.1	291.5	68.4	359.9
Existing Bridge Demolition					
Capital Outlay Support	79.7	79.7	0.3	79.4	79.7
Capital Outlay	239.2	239.2	-	222.0	222.0
Total	318.9	318.9	0.3	301.4	301.7
Miscellaneous Program Costs	30.0	30.0	25.4	4.6	30.0
Total Capital Outlay Support (2)	1,463.2	1,456.2	1,040.8	433.1	1,473.9
Total Capital Outlay	6,321.8	6,419.0	5,626.3	825.6	6,451.9
Program Total	**7,785.0**	**7,875.2**	**6,667.1**	**1,258.7**	**7,925.8**

(1). Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 06/07.
(2). Total Capital Outlay Support includes program indirect costs.
(Due to the rounding of numbers, the totals above are shown within $0.1).

Appendix B.

Toll Bridge Seismic Retrofit Program - SFOBB East Span Only
AB 144/SB 66 Baseline Budget, Forecasts, and Expenditures Through December 31, 2007

($ millions)

East Span Contract	AB 144/SB 66 Baseline	TBPOC Current Approved Budget See Note (1)	Third Quarter 2007 Forecast	Fourth Quarter 2007 Forecast	Variance (4th Q07 - 3rd Q07)	Expenditures Through Dec 2007
SFOBB East Span -Skyway						
Capital Outlay Support	197.0	197.0	197.0	197.0	-	174.7
Capital Outlay	1,293.0	1,293.0	1,293.0	1,293.0	-	1,204.1
Total	1,490.0	1,490.0	1,490.0	1,490.0	-	1,378.8
SFOBB East Span -SAS- E2/T1 Foundations						
Capital Outlay Support	52.5	41.5	41.5	41.5	-	26.0
Capital Outlay	313.5	313.5	313.5	313.5	-	264.6
Total	366.0	355.0	355.0	355.0	-	290.6
SFOBB East Span -SAS- Superstructure						
Capital Outlay Support	214.6	214.6	214.6	214.6	-	61.5
Capital Outlay	1,753.7	1,753.7	1,767.4	1,767.4	-	348.6
Total	1,968.3	1,968.3	1,982.0	1,982.0	-	410.1
SFOBB East Span -SAS- W2 Foundations						
Capital Outlay Support	10.0	10.0	10.0	10.0	-	9.2
Capital Outlay	26.4	26.4	26.4	26.4	-	25.8
Total	36.4	36.4	36.4	36.4	-	35.0
YBI Detour						
Capital Outlay Support	29.5	39.5	39.5	39.5	-	33.9
Capital Outlay	131.9	334.4	334.4	334.4	-	131.6
Total	161.4	373.9	373.9	373.9	-	165.5
YBI - Transition Structures (Total, including the following split contracts and prior-to-split expenses)						
Capital Outlay Support	78.7	78.7	78.7	78.7	-	17.7
Capital Outlay	299.3	276.1	276.1	276.1	-	-
Total	378.0	354.8	354.8	354.8	-	17.7
YBI- Transition Structures Contract No. 1						
Capital Outlay Support			45.0	45.0		1.0
Capital Outlay			214.3	214.3		-
Total			259.3	259.3		1.0
YBI- Transition Structures Contract No. 2						
Capital Outlay Support			16.0	16.0		0.3
Capital Outlay			58.5	58.5		-
Total			74.5	74.5		0.3
YBI- Transition Structures Contract No. 3 - Landscape						
Capital Outlay Support			1.0	1.0		-
Capital Outlay			3.3	3.3		-
Total			4.3	4.3		-
Oakland Touchdown (Total, including the following split contracts and prior-to-split expenses)						
Capital Outlay Support	74.4	74.4	92.1	92.1	-	29.6
Capital Outlay	283.8	283.8	302.5	302.5	-	42.0
Total	358.2	358.2	394.6	394.6	-	71.6
Oakland Touchdown Contract - Submarine Cable						
Capital Outlay Support	-	-	3.0	3.0	-	0.9
Capital Outlay	-	-	9.6	9.6	-	7.9
Total	-	-	12.6	12.6	-	8.8
Oakland Touchdown Contract No. 1 (Westbound)						
Capital Outlay Support	-	-	49.9	49.9	-	8.3
Capital Outlay	-	-	226.5	226.5	-	34.2
Total	-	-	276.4	276.4	-	42.5
Oakland Touchdown Contract No. 2 (Eastbound)						
Capital Outlay Support	-	-	15.8	15.8	-	0.4
Capital Outlay	-	-	62.0	62.0	-	-
Total	-	-	77.8	77.8	-	0.4
Oakland Touchdown Contract - Electrical Systems						
Capital Outlay Support	-	-	1.4	1.4	-	0.1
Capital Outlay	-	-	4.4	4.4	-	-
Total	-	-	5.8	5.8	-	0.1

Appendix B. (Cont'd.)

Toll Bridge Seismic Retrofit Program - SFOBB East Span Only
AB 144/SB 66 Baseline Budget, Forecasts, and Expenditures Through December 31, 2007

($ millions)

East Span Contract	AB 144/SB 66 Baseline	TBPOC Current Approved Budget See Note (1)	Third Quarter 2007 Forecast	Fourth Quarter 2007 Forecast	Variance (4th Q07 - 3rd Q07)	Expenditures Through Dec 2007
YBI/SAS (Archeology)						
Capital Outlay Support	1.1	1.1	1.1	1.1	-	1.1
Capital Outlay	1.1	1.1	1.1	1.1	-	1.1
Total	2.2	2.2	2.2	2.2	-	2.2
YBI - USCG Rd Relocation						
Capital Outlay Support	3.0	3.0	3.0	3.0	-	2.7
Capital Outlay	3.0	3.0	3.0	3.0	-	2.8
Total	6.0	6.0	6.0	6.0	-	5.5
YBI - Substation and Viaduct						
Capital Outlay Support	6.5	6.5	6.5	6.5	-	6.4
Capital Outlay	11.6	11.6	11.6	11.6	-	11.3
Total	18.1	18.1	18.1	18.1	-	17.7
Oakland Geofill						
Capital Outlay Support	2.5	2.5	2.5	2.5	-	2.5
Capital Outlay	8.2	8.2	8.2	8.2	-	8.2
Total	10.7	10.7	10.7	10.7	-	10.7
Pile Installation Demonstration Project						
Capital Outlay Support	1.8	1.8	1.8	1.8	-	1.8
Capital Outlay	9.2	9.2	9.2	9.2	-	9.2
Total	11.0	11.0	11.0	11.0	-	11.0
Existing Bridge Demolition						
Capital Outlay Support	79.7	79.7	79.7	79.7	-	0.3
Capital Outlay	239.2	239.2	222.0	222.0	-	-
Total	318.9	318.9	301.7	301.7	-	0.3
Stormwater Treatment Measures						
Capital Outlay Support	6.0	8.0	8.0	8.0	-	7.8
Capital Outlay	15.0	18.3	18.3	18.3	-	15.7
Total	21.0	26.3	26.3	26.3	-	23.5
Right-of-way and Environmental Mitigation						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay	72.4	72.4	72.4	72.4	-	38.8
Total	72.4	72.4	72.4	72.4	-	38.8
Sunk Cost - Existing East Span Retrofit						
Capital Outlay Support	39.5	39.5	39.5	39.5	-	39.5
Capital Outlay	30.8	30.8	30.8	30.8	-	30.8
Total	70.3	70.3	70.3	70.3	-	70.3
Environmental Phase (Expended)						
Capital Outlay Support	97.7	97.7	97.7	97.7	-	97.7
Project Expenditures, Pre-splits						
Capital Outlay Support	44.9	44.9	44.9	44.9	-	44.9
Non-project Specific Costs						
Capital Outlay Support	20.0	19.0	19.0	19.0	-	3.2
Subtotal East Span Capital Outlay Support	959.4	959.4	977.1	977.1	-	560.5
Subtotal East Span Capital Outlay and Sunk Costs	4,492.1	4,674.6	4,689.9	4,689.9	-	2,134.6
Other Budgeted Capital	35.1	31.8	7.7	7.7	-	0.7
Total SFOBB East Span	**5,486.6**	**5,665.8**	**5,674.7**	**5,674.7**	**-**	**2,695.8**

(1) Current contract allotment to install two submarine electrical cables is $11.5 million. Additional non-program funding to support this allocation beyond the $9.6 million of available programs funds has been made available by the Treasure Island Development Authority.
(Due to the rounding of numbers, the totals above are shown within $0.1).

Appendix C.

CTC TBSRP Contributions
Adopted December 2005

Schedule of Contributions to the Toll Bridge Seismic Retrofit Program ($ million)

Source	Description	2005-06 (Actual)	2006-07 (Actual)	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Total
AB 1171	SHA	290									290
	PTA	80	40								120
	Highway Bridge Replacement and Rehabilitation (HBRR)	100	100	100	42						342
	Contingency				1	99	100	100	148		448
AB 144	SHA*	2	8				53	50	17		130
	Motor Vehicle Account (MVA)	75									75
	Spillover		125								125
	SHA**									300	300
	Total	547	273	100	43	99	153	150	165	300	1830

** Caltrans Efficiency Savings*

*** SFOBB East Span Demolition Cost*

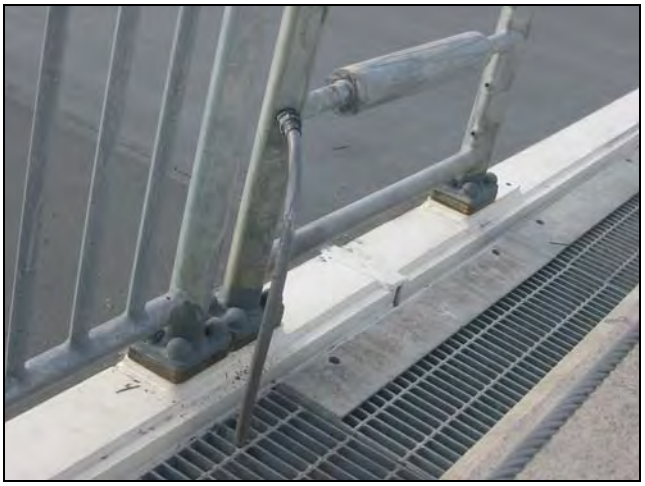
Appendix D.

Project/Contract Photographs

SFOBB East Span Replacement Project

Skyway Contract

Skyway - Skyway Barrier Rail Finish



Skyway - Skyway Rail Bolt caps

Skyway - Skyway Rail Paint

Skyway – Skyway Traveler Ladder

Skyway Contract (Cont'd.)

Skyway - Underside Painting

Skyway - Bridge Looking East from Yerba Buena Island

Skyway - Stairs Leading to the Substation

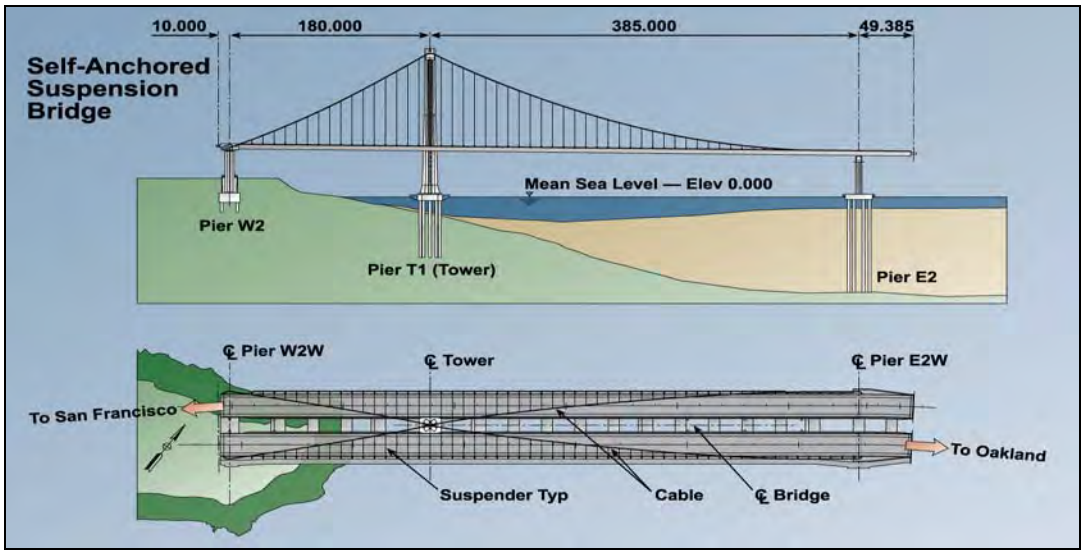
Skyway - Painting the OBG

Skyway - Looking West

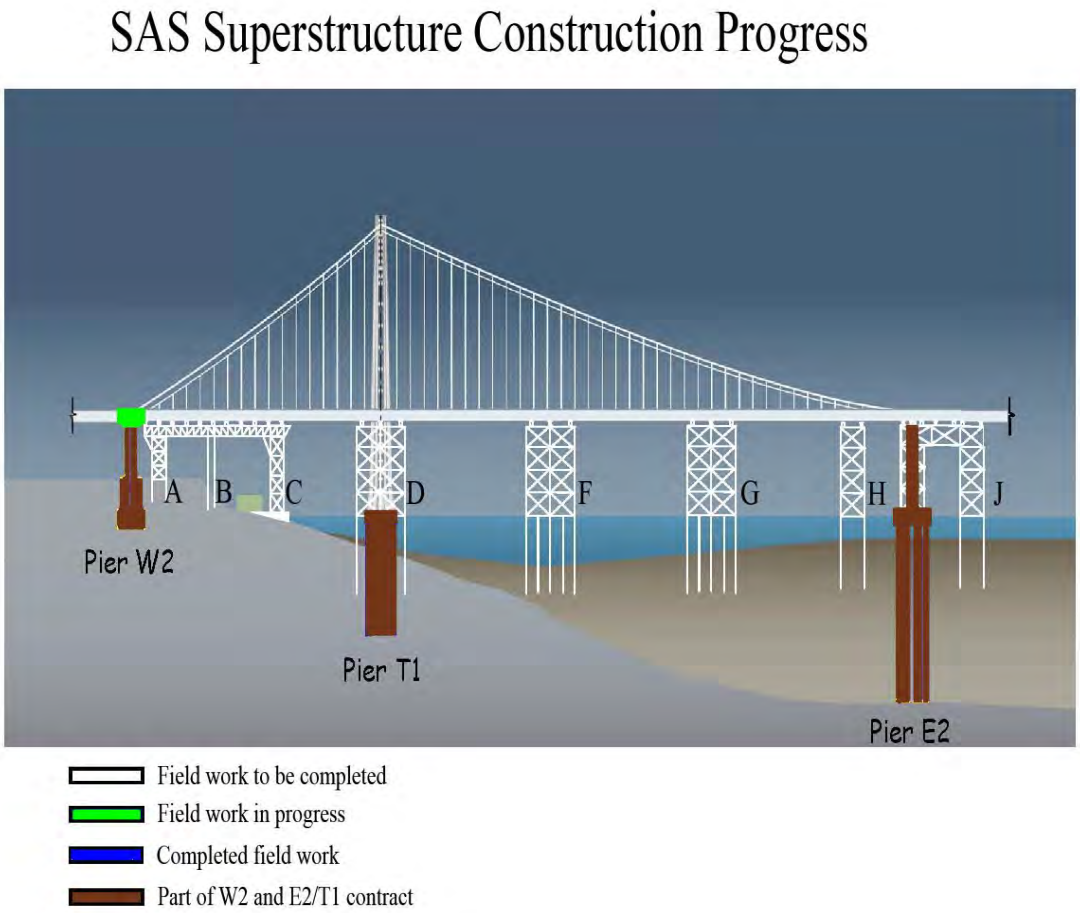
Skyway - Painting the OBG

SAS Superstructure Contract

SAS Superstructure Artist Rendition



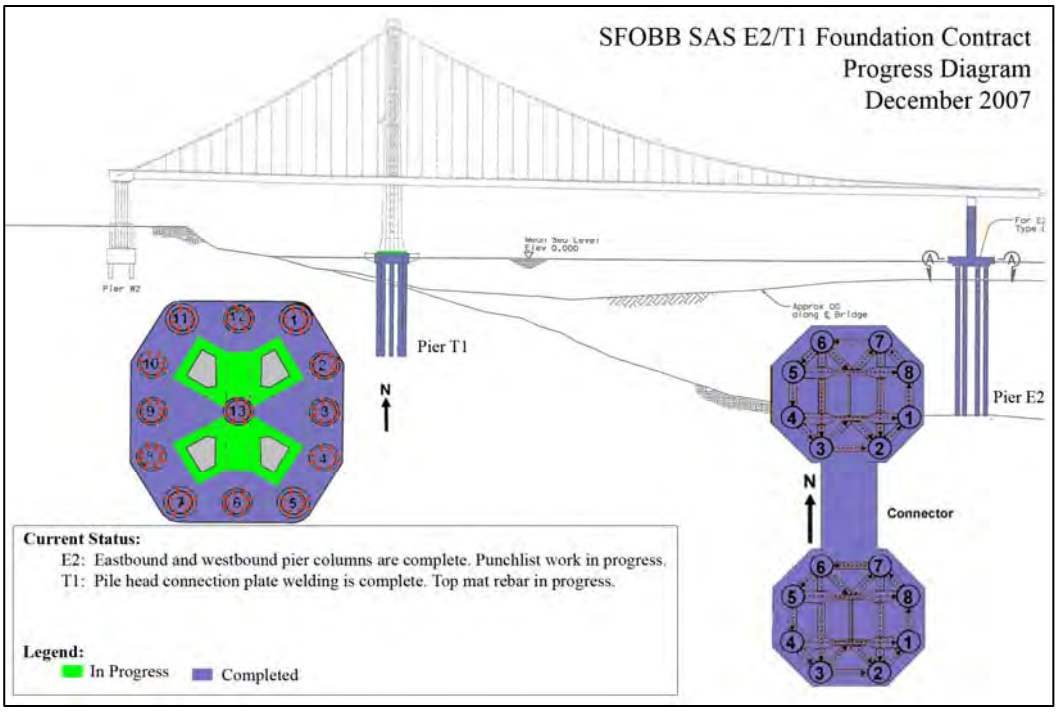
SAS Superstructure Contract (Cont'd.)



SAS - W2 Steel Reinforcement

SAS - W2 Steel Reinforcement

SAS E2/T1 Foundations Contract

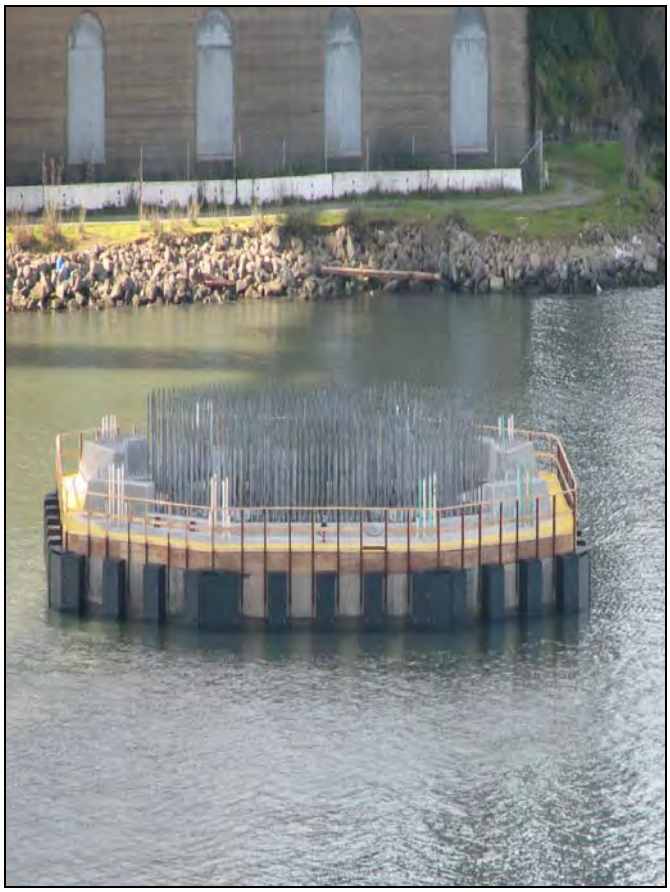


SAS E2-T1 - Completed E2 Column Westbound

SAS E2-T1 - Completed E2 Column EastboundT1 Foundation

SAS E2/T1 Foundations Contract (Cont'd.)

T1 = Foundation for the 530-foot steel tower
E2 = Eastern Support of the suspension roadway
W2 = Western Support of the suspension roadway



E2-T1 - Completed T1 Footing

E2-T1 - Completed E2 Columns

YBID and Stormwater Contracts

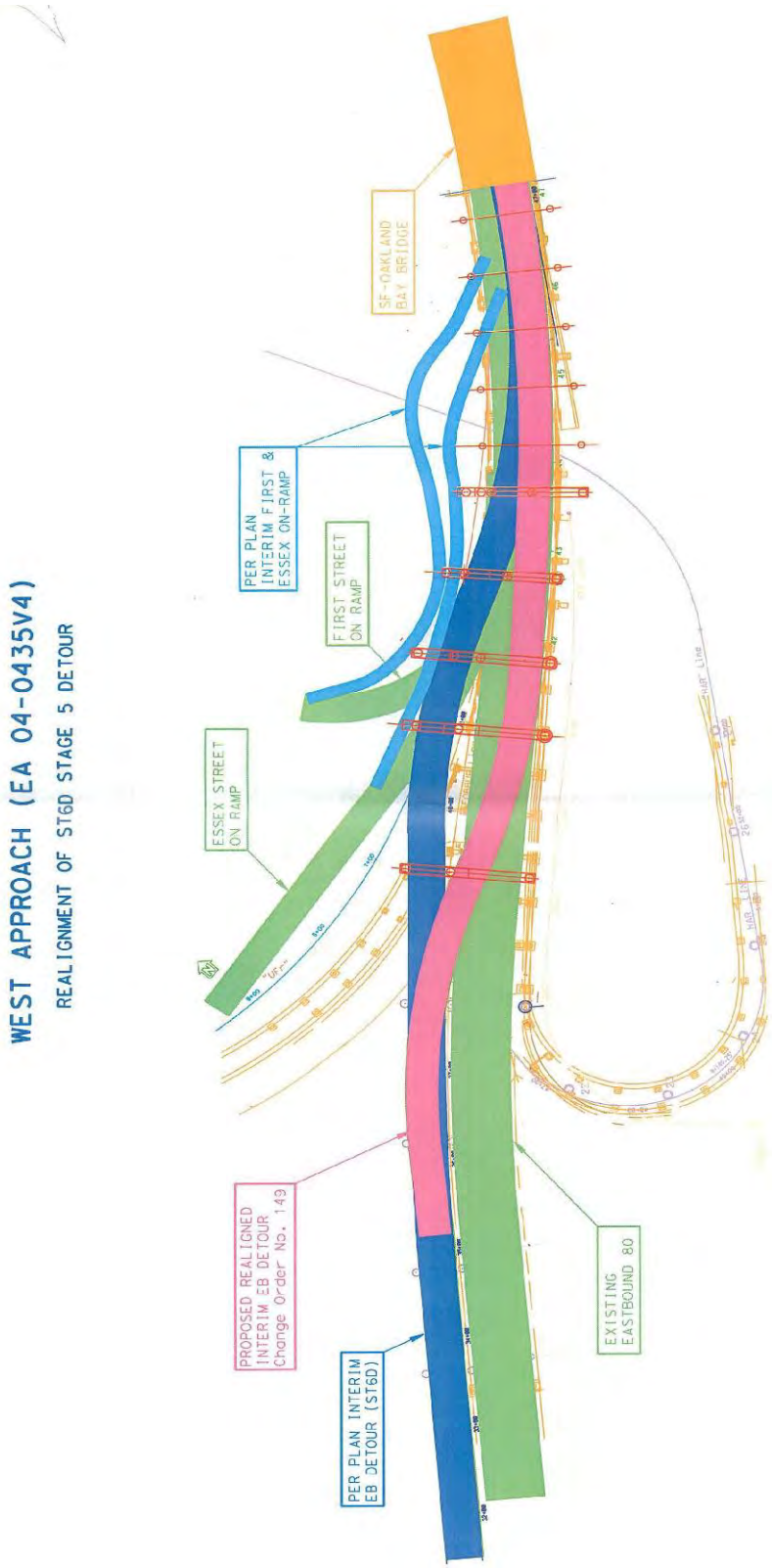
YBID – Bent W4L Construction YBI Advanced Work

YBID - Bent W6 Construction YBI Advanced Work

Stormwater - Forebay Location 5

Stormwater - Radio Road Planting

SFOBB West Approach Replacement Project



SFOBB West Approach Replacement Project (Cont'd.)

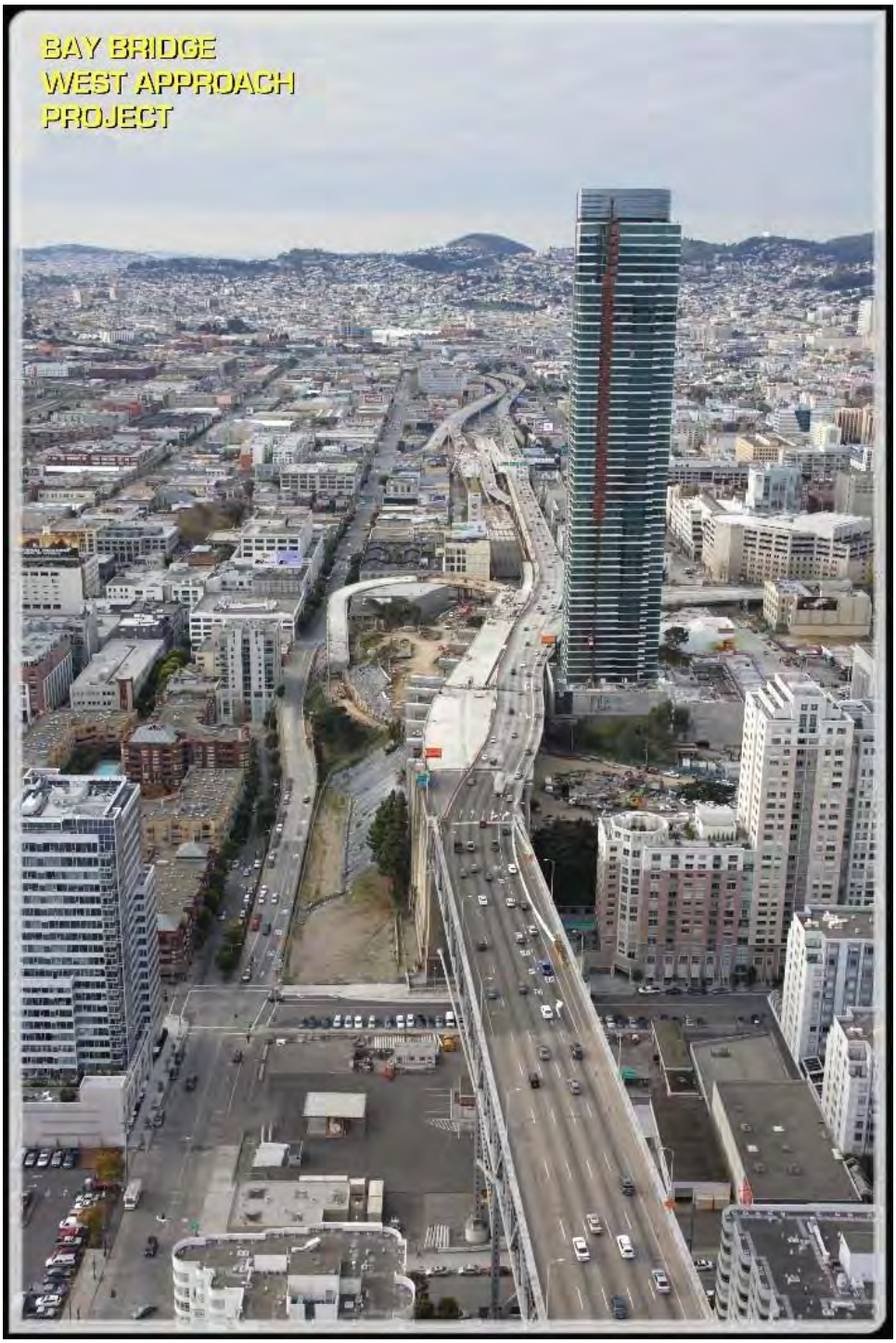
West Approach - I-80 EB-WB 5th St. to 3rd St.

West Approach - I-80 EB WB – 4th St. to 2nd St.

West Approach - I-80 EB WB – 3rd St. to 2nd St.

West Approach – I-80 EB WB – 2nd St. to West Anchorage

SFOBB West Approach Replacement Project (Cont'd.)



West Approach - I-80 EB WB (East to West)