

San Francisco Bay Area Toll Bridge Seismic Retrofit Program

2016 Third Quarter
Project Progress and Financial Update



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

November 10, 2016

Mr. Daniel Alvarez
Secretary of the Senate
State Capitol, Room 3044
Sacramento, CA 95814

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

Dear Messrs. Alvarez and Wilson:

The Toll Bridge Program Oversight Committee (TBPOC) is pleased to submit the 2016 Third Quarter Project Progress and Financial Update, for the San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs (TBSRP and RM1), prepared pursuant to California Streets and Highways Code Section 30952.

The TBPOC was established by Assembly Bill 144 in 2005 to oversee the delivery of the TBSRP and consists of the Executive Director of the Bay Area Toll Authority (BATA), the Director of the California Department of Transportation (Caltrans), and the Executive Director of the California Transportation Commission (CTC). With the opening of the new east span of the San Francisco-Oakland Bay Bridge to traffic on September 2, 2013, all seven state-owned toll bridges in the Bay Area have now achieved seismic safety, either via retrofit, or replacement of existing structures.

Caltrans is proceeding on a number of contracts to remove the old east span of the SFOBB and to complete remaining work on Yerba Buena Island (YBI). The YBI #2 contractor opened the pedestrian/bicycle pathway from the self-anchored suspension span to the island on October 23, 2016. The superstructure dismantling contractor has removed the last of five 504' superstructure trusses and now is in the process of removing the 288' trusses towards the Oakland shoreline. The marine foundation demolition contractor successfully imploded Piers E5 and E4 on October 15th and October 29th respectively. Removal of the remaining marine foundation piers by implosion will have even less environmental impact than the piers imploded to date. Caltrans has obtained environmental approvals for the removal of marine foundations E4 to E18 by the implosion process and plans additional implosions over the next two years.

In May 2016, the TBPOC approved the re-grouting of the tower anchor rods based on recommendations from Caltrans and the peer review group. Caltrans awarded a contract to re-grout the tower anchor rods in October 2016. This work will be funded from seismic funds already allocated to the Self-Anchored Suspension Span contract.

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-wide risks. Any excess of the risks over the contingency allowances represents a potential draw on the program contingency. The program contingency is currently \$67.7 million in accordance with the TBPOC approved budget. As of the end of the third quarter of 2016, the 50 percent probable draw on program contingency is \$177 million. The potential draw ranges from \$100 million to \$250 million.

The legislature established the TBSRP to seismically retrofit seven state-owned long span toll bridges and provided an \$8.685 billion budget to accomplish the work. In 2010, the legislature added two additional long span bridges (Antioch & Dumbarton) to the TBSRP and augmented the program's budget by \$750 million, thus creating a nine bridge TBSRP with a \$9.435 billion budget. Based upon successful completion of the Antioch and Dumbarton Bridge seismic retrofits with substantial savings, and projected TBSRP risks for demolition of the old east span, the TBPOC reduced the TBPOC approved program budget by \$483 million, bringing the current TBPOC approved budget to \$8.952 billion. Per the latest (September 2016) forecast, the \$8.952 billion TBPOC approved budget may be insufficient to cover the cost of identified risks and it is likely that BATA will need to allocate toll funds from its reserves to pay for the remaining TBSRP work.

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

Sincerely,



MALCOLM DOUGHERTY
TBPOC Chair
Director
California Department of
Transportation



STEVE HEMINGER
Executive Director
Bay Area Toll Authority



SUSAN BRANSEN
Executive Director
California Transportation Commission



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Mr. Bob Alvarado, Chair
California Transportation Commission
1120 N Street, Room 2221
Sacramento, CA 95814

Ms. Fran Inman, Vice-Chair
California Transportation Commission
1120 N Street, Room 2221
Sacramento, CA 95814

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MALCOLM DOUGHERTY
TBPOC Chair
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STEVE HEMINGER
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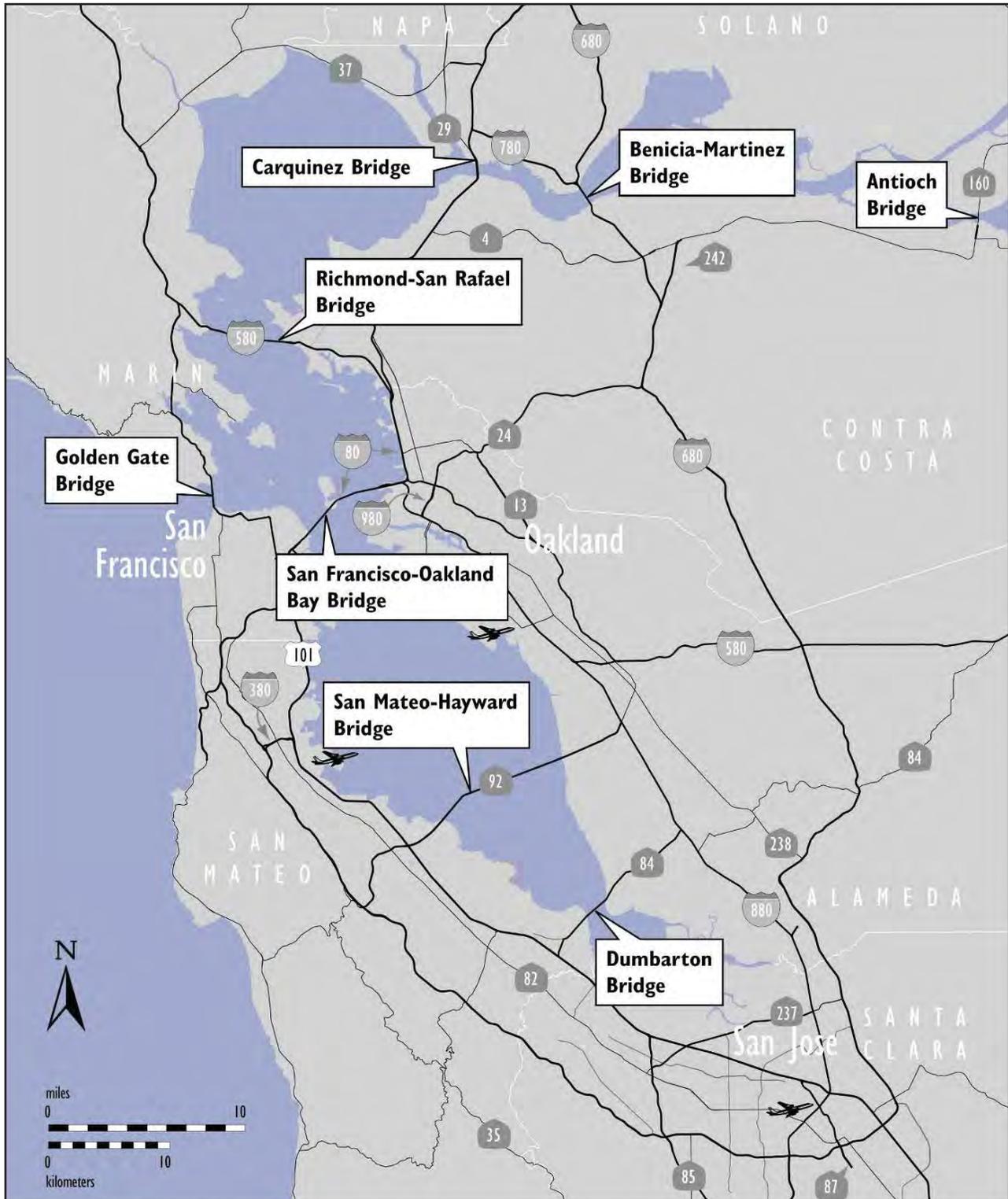
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San Francisco Bay Area Toll Bridges



* The Golden Gate Bridge is owned and operated by the Golden Gate Bridge, Highway and Transportation District.

San Francisco Bay Area Toll Bridges

In July 2005, Assembly Bill (AB) 144 (Hancock) created the Toll Bridge Program Oversight Committee (TBPOC) to implement a project oversight and project control process for the new Benicia-Martinez Bridge and State Toll Bridge Seismic Retrofit Program (TBSRP) projects. The TBPOC consists of the Director of the California 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 project oversight and control processes include, but are not limited to, reviewing bid specifications and documents, reviewing and approving significant change orders and claims in excess of \$1 million (as defined by the TBPOC), and keeping the Legislature and others apprised of current project progress and status. In January 2010, Assembly Bill (AB) 1175 (Torlakson) amended the TBSRP to include the Antioch and Dumbarton Bridges seismic retrofit projects. The current TBSRP is as follows:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
Dumbarton Bridge Seismic Retrofit	Complete
Antioch Bridge Seismic Retrofit	Complete
San Francisco-Oakland Bay Bridge East Span Replacement	Complete*
San Francisco-Oakland Bay Bridge West Approach Replacement	Complete
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
1958 Carquinez Bridge Seismic Retrofit	Complete
1962 Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

* The seismic safety opening of the bridge occurred in September 2013. Remaining work on the project is the removal of the old bridge structure.



Foreground: Lowering of the last 504' main truss. Background: Self-Anchored Suspension Superstructure.

Toll Bridge Seismic Retrofit Program Cost Summary (Millions)

	Contract Status	AB 144/ SB 66/ AB 1175 Budget	TBPOC Approved Changes	Current TBPOC Approved Budget (Sep 2016)	Cost to Date (Sep 2016)	Current Cost Forecast (Sep 2016)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
SFOBB East Span Seismic Replacement								
Capital Outlay Construction								
Skyway	Completed	1,293.0	(55.8)	1,237.2	1,235.6	1,235.7	(1.5)	●
SAS Tower Anchor Rod Grouting	Construction			12.0	0.4	13.8	1.8	●
SAS Marine Foundations	Completed	313.5	(38.7)	274.8	274.8	274.8	-	●
SAS Superstructure	Completed	1,753.7	281.1	2,034.8	1,972.5	2,037.0	2.2	●
YBI Detour	Completed	131.9	341.4	473.3	473.3	473.3	-	●
YBI Transition Structures (YBITS)		299.3	0.1	299.4	269.9	324.2	24.8	
YBITS 1	Completed			203.7	202.5	204.9	1.2	●
YBITS 2	Construction			92.4	67.3	116.0	23.6	●
YBITS Landscaping	Design			3.3	-	3.3	-	●
Oakland Touchdown (OTD)		283.8	46.8	330.6	326.5	329.7	(0.9)	
OTD 1	Completed			205.3	202.8	205.3	-	●
OTD 2	Completed			72.6	71.2	71.9	(0.7)	●
Detour	Completed			47.0	46.7	46.8	(0.2)	●
OTD Electrical Systems	Design			-	-	-	-	●
Submerged Electric Cable	Completed			5.7	5.7	5.7	-	●
Existing Bridge Dismantling		239.2	80.8	320.0	154.7	387.8	67.8	
Cantilever Section	Completed			69.0	68.5	69.0	-	●
504/288 Sections	Construction			103.5	51.2	97.4	(6.1)	●
Marine Foundations				147.5	35.1	221.4	73.9	
Pier-3 Demonstration Project	Completed			17.5	16.8	17.5	-	●
Remaining Marine Foundations	Construction			130.0	18.2	203.9	73.9	●
Stormwater Treatment Measures	Completed	15.0	3.3	18.3	16.9	17.0	(1.3)	●
Other Completed Projects	Completed	90.4	(0.5)	89.9	90.0	90.5	0.6	●
Capital Outlay Support		959.3	352.2	1,311.5	1,301.9	1,392.6	81.1	●
Right-of-Way and Envir. Mitigation		72.4	-	72.4	60.9	70.0	(2.4)	●
Other Budgeted Capital		35.1	(32.8)	2.3	0.7	2.3	-	●
Total SFOBB East Span Replacement		5,486.6	989.9	6,476.5	6,178.1	6,648.7	172.2	●
Antioch Bridge Seismic Retrofit								
Capital Outlay Construction and Mitigation	Completed	-	24.1	24.1	24.1	23.8	(0.3)	●
Capital Outlay Support		-	47.0	47.0	47.0	47.0	-	●
Total Antioch Bridge Seismic Retrofit		267.0	71.1	71.1	71.1	70.8	(0.3)	●
Dumbarton Bridge Seismic Retrofit								
Capital Outlay Construction and Mitigation	Completed	-	46.0	46.0	47.4	45.4	(0.6)	●
Capital Outlay Support		-	66.4	66.4	64.6	66.4	-	●
Total Dumbarton Bridge Seismic Retrofit		483.0	112.4	112.4	112.0	111.8	(0.6)	●
Program Completed Projects	Completed	2,268.4	(74.1)	2,194.3	2,168.9	2,174.5	(19.8)	
Miscellaneous Program Costs		30.0	-	30.0	25.5	30.0	-	●
Net Programmatic Risks		-	-	-	-	25.2	25.2	●
Program Contingency*		900.0	(832.3)	67.7	-	-	(67.7)	●
Total Toll Bridge Seismic Retrofit Program*		9,435.0	(483.0)	8,952.0	8,555.7	9,061.0	109.0	●

*AB144/SB66 established a funding level of \$8.685 Billion in July 2005 for TBSRP, AB1175 added the retrofitting of the Antioch and Dumbarton Bridges in January 2010, providing another \$750 million in funding, bringing Total Toll Seismic Retrofit Program funding to \$9.435 Billion. Since 2010, \$483 million has been removed from the program, bringing the current TBPOC Approved Budget to \$8.952 Billion. The \$483 million removed consisted of:

Antioch Savings (4/12/10) \$137 million - Dumbarton Savings (9/02/10) \$216 million - Program Contingency Redirection (11/05/13) \$130 million, the current TBPOC approved Program Budget is \$8,952 million.

** (Due to the rounding of numbers, the totals above are show within \$0.02).

Toll Bridge Seismic Retrofit Program Schedule Summary

	AB 144/SB 66 Project Completion Schedule Baseline (July 2005)	TBPOC Approved Changes (Months)	Current TBPOC Approved Completion Schedule (Sep 2016)	Current Completion Forecast (Sep 2016)	Schedule Variance (Months)	
	g	h	i=g+h	j	k=j-i	l
SFOBB East Span Seismic Replacement						
Contract Completion						
Skyway	Apr 2007	8	Dec 2007	Dec 2007	-	●
SAS Marine Foundations	Jun 2008	(5)	Jan 2008	Jan 2008	-	●
SAS Superstructure	Mar 2012	42	Sep 2015	Sep 2015	-	●
YBI Detour	Jul 2007	39	Oct 2010	Oct 2010	-	●
YBI Transition Structures (YBITS)	Nov 2013	36			-	
YBITS 1			Feb 2014	Feb 2014	-	●
YBITS 2			Jun 2017	Oct 2017	(4)	●
Oakland Touchdown	Nov 2013	10				
OTD 1			Jun 2010	Jun 2010	-	●
OTD 2			Sep 2015	Sep 2015	-	●
Submerged Electric Cable			Jan 2008	Jan 2008	-	●
Existing Bridge Dismantling	Sep 2014	51	Dec 2018	Dec 2018	-	●
Cantilever Section ⁽²⁾			Jul 2015	Jul 2015		●
504/288 Sections			Mar 2018	Sep 2017		●
Marine Foundations						
E3 Foundation Removal Demo Project			Jan 2016	Jan 2016		●
E4 - E18 Foundation Removal			Dec 2018	Dec 2018		●
Stormwater Treatment Measures			Mar 2008	Mar 2008	-	●
SFOBB East Span Bridge Opening and Other Milestones						
Westbound Seismic Safety Open	Sep 2011	24	Sep 2013	Sep 2013	-	●
Eastbound Seismic Safety Open	Sep 2012	12	Sep 2013	Sep 2013	-	●
Bike/Ped Path to YBI Landing			Dec 2015	Oct 2016	(10)	●
Eastbound On-Ramp			Jun 2016	Jun 2016		●

- Within approved schedule and budget
- Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
- Known project impacts with forthcoming changes to approved schedules and budgets

San Francisco-Oakland Bay Bridge East Span Replacement Project

Seismic Retrofit

Rather than a seismic retrofit, the two-mile long east span of the San Francisco-Oakland Bay Bridge has been completely rebuilt. The new east span consists of several different sections, yet appears as a single streamlined span. The eastbound and westbound lanes of the east span no longer include upper and lower decks. The lanes are side-by-side, providing motorists with expansive views of the bay. These views are also enjoyed by bicyclists and pedestrians, thanks to a new bicycle/pedestrian path on the south side of the bridge that will extend all the way to Yerba Buena Island. The new span features the world's longest Self-Anchored Suspension (SAS) bridge that connects to an elegant roadway supported by piers (Skyway), which gradually slopes down toward the Oakland shoreline (Oakland Touchdown).



Self-Anchored Suspension Bridge Superstructure.



San Francisco-Oakland Bay Bridge East Span Replacement Project

Yerba Buena Island Transition Structures (YBITS)

YBITS 2 - Eastbound On-Ramp and Cantilever Dismantling Contract

Approved Capital Outlay Budget: \$92.4 M & \$69.0 M

Contractor: CEC & Silverado, JV

Status: 80% Complete as of September 2016

The YBITS 2 contract involves dismantling the detour viaduct, constructing a new eastbound on-ramp to the bridge, completing the bicycle/pedestrian path to Yerba Buena Island, and dismantling of the cantilever.

The contract was awarded to California Engineering Contractors Inc/Silverado Contractors Inc., Joint Venture on November 28, 2012. Initial startup activities and

submittals began in March 2013, with actual dismantling starting after the seismic safety opening on Labor Day weekend 2013.

Status: Cantilever removal was completed in July 2015. The eastbound on-ramp was opened on June 2, 2016. The pedestrian/bicycle path is scheduled to open in October 2016. Work to clean up Yerba Buena Island is ongoing.



Eastbound on-ramp and bicycle/pedestrian path.

San Francisco-Oakland Bay Bridge East Span Replacement Project

Former East Span Bridge Dismantling

504'/288' Superstructure Dismantling

Approved Capital Outlay Budget: \$103.5 M

Contractor: CEC & Silverado JV

Status: 60% Complete as of September 2016

The contractor sequenced the bridge removal operations into seven phases of dismantling. These phases begin with the upper deck and initial truss removal operations, through the removal of the 504' and 288' steel truss spans, to the removal of the supporting steel columns.

Status: The upper deck of the old span was removed to lighten the bridge. The first 504' main truss (out of five) was lowered down to barges in February 2016, and the last 504' section was lowered in August 2016. The first out of fourteen 288' sections is scheduled to be lowered in November 2016.



Lowering of the last 504' main truss.



San Francisco-Oakland Bay Bridge East Span Replacement Project

Former East Span Bridge Dismantling

Marine Foundations Removal

Approved Capital Outlay Budget: \$17.5 M for Pier E3

\$130 M for Piers E4 - E18

Contractor: Kiewit/Manson

The original east span of the San Francisco-Oakland Bay Bridge was supported by 21 in-water bridge piers, Piers E2 through E22, along with land based piers at Yerba Buena Island and Oakland. Part of this project is the demolition of Pier E3, which is located 1,535 feet east of Yerba Buena Island and on the east side of a 50-foot deep navigation channel.

The original authorization covered the dismantling of the piers via mechanical means such as saw cutting, flame cutting, mechanical splitting or pulverizing, and hydro-cutting, but did not cover the use of controlled implosion.

Caltrans proposed to remove Pier E3 as a pilot/demonstration project for the effective use of controlled charges to remove the marine foundations of the original SFOBB. Dismantling of Pier E3 used controlled charges and was completed in four phases: 1) mechanical dismantling of pier cap and fender system, 2) drilling of bore holes into caisson and buttress walls and installing a blast attenuation system (BAS), 3) installing charges, activating the BAS and imploding the pier, and 4) management and removal of remaining dismantling pier debris. The pier was removed to -51 feet.

Mechanical dismantling would have required the installation of a cofferdam around Pier E3, which would have required 394 piles of various types. Pile driving alone would take approximately four years, while the four phases of the demonstration project would occur within six months. Using this method is a significant cost risk to the program.

The marine foundation removal is a CMGC (Construction Manager / General Contractor) contract and the selected CMGC contractor is a Kiewit Manson team (KM).

Piers E4 - E5:

The contract was awarded to the KM team in April 2016. Piers E5 and E4 will be demolished in October 2016. The PDT team is coordinating permits for the completion for piers E4 - E18 and in parallel, the PDT team is seeking permits from resource agencies for a "retain in place" for pier E2, and E19 through E22.



Marine foundation demolition.



Marine foundation implosion.

San Francisco-Oakland Bay Bridge East Span Replacement Project

Self-Anchored Suspension Bridge Superstructure Contract

Approved Capital Outlay Budget: \$2.05 B

Contractor: American Bridge/Fluor Enterprises, JV

Status: 100% Completed

The self-anchored suspension span (SAS) of the bridge is not just another suspension bridge. Rising 525 feet above mean sea level and embedded in bedrock, the single-tower SAS span is designed to withstand a massive earthquake. Traditional main cable suspension bridges have twin cables with smaller suspender cables connected to them. While there appears to be two main cables on the SAS, it is actually a single continuous cable. This single cable is anchored within the eastern end of the roadway, carried over the tower and then wrapped around the two side-by-side decks at the western end.

The single-steel tower is made up of four separate legs connected by shear link beams, which function much like a fuse in an electrical circuit. These beams will absorb most of the impact from an earthquake, preventing damage to the tower legs



Status: The TBPOC authorized Caltrans to close out the Self-Anchored Suspension (SAS) span contract with the joint venture of American Bridge/Fluor (ABF). The contract is to be closed out under the terms and conditions consistent with the findings of the July 2013 TBPOC meeting investigative report that found three parties – the contractor, designer, and Caltrans – responsible for the failure of the high-strength rods on the east pier (E2) of the SAS, and the \$24 million cost of the “saddle retrofit” repair.

In May 2016, the Toll Bridge Program Oversight Committee (TBPOC) approved the re-grouting of the tower anchor rods based on recommendations from Caltrans and the peer review group. Caltrans has issued plans for the re-grouting operations to contractors for bid. Bids are due October 10, 2016. The work will be funded from seismic funds already allocated to the Self-Anchored Suspension Span Contract.

Self-Anchored Suspension Bridge Superstructure.

Risk Management Program Update

POTENTIAL DRAW ON PROGRAM RESERVE (PROGRAM CONTINGENCY)

Caltrans continues to implement comprehensive risk management on all TBSRP projects in accordance with AB 144. Cost Risk response efforts continue to focus on mitigating the estimated cost and schedule impacts of identified risks. The “bottom line” of cost risk analysis is whether the Program Contingency remains adequate to cover all identified risks.

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-wide risks. Any excess of the risks over the contingency allowances represents a potential draw on the program contingency. The program contingency, as of the third quarter 2016, is currently \$67.7 million in accordance with the TBPOC approved budget. As of the end of the third quarter of 2016, the 50 percent probable draw on program contingency is \$176.7 million. The potential draw ranges from about \$100 million to \$ 250 million (refer to Figure 1). The \$176.7 million probable draw on program contingency gives a forecast deficit of \$109 million at program completion to the current approved program budget. This represents a \$7.4 million improvement in the programs bottom line since last quarter. The bottom line trend has been improving for the last four quarters, with the forecast deficit decreasing by \$34.2 million (24%) since in peaked at \$143.2 million in Q3 2015.

Since 2010, \$483 million was removed from the TBSRP bringing the current approved program budget to \$8.952 billion. The program contingency is currently insufficient to cover the cost of identified risks and it is likely that BATA will need to allocate additional toll funds from its reserves to pay for the remainder of the work.

RISK MANAGEMENT DEVELOPMENTS

SFOBB East Span COS Budget

Budget To Completion: The Q3 2016 COS forecast to completion is \$1,392.6 million, which results in a cost variance of \$81.1 million to the current budget. This is a \$1.6 million improvement over the last quarter and a \$12.2 million improvement over the Q4 2015 forecast, when the COS forecast peaked out at \$1,404.8 million. The current approved budget of \$1,311.5 million for SFOBB East Span COS will increase to \$1,328.5 million in Q4 2016 when the MTC approves the \$17 million budget increase (approved by TBPOC Sept 8th 2016) to fund the program COS through the end of the 16/17 fiscal year.

Expenditures vs. Budget for first quarter of 16/17

Fiscal Year: On May 12th 2016 the TBPOC approved a total COS budget of \$6 million for the first quarter of 16/17 fiscal year, actual expenditures are estimated at \$4.37 million. Expenditures through Sept 30th 2016 were within the approved budget for this first quarter of fiscal year 16/17.

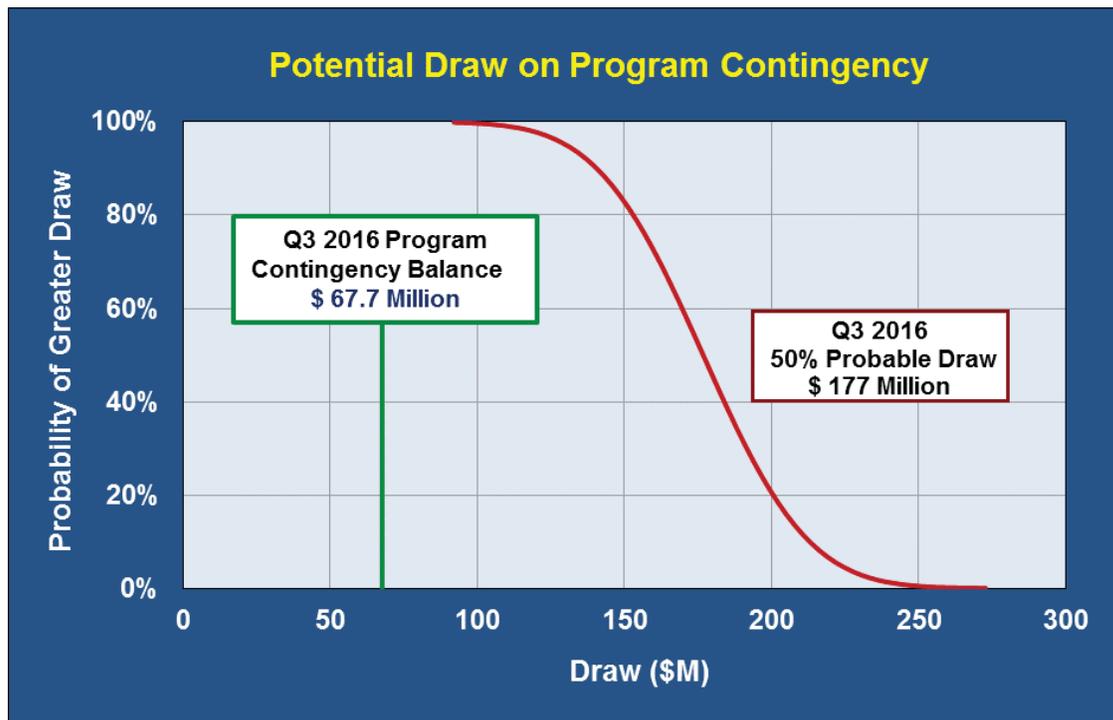


Figure 1 – Potential Draw on Program Contingency*

*Figure 1 Notes:

1. Proposed architectural enhancements and project improvements are excluded unless approved by the TBPOC.

Self-Anchored Suspension Span Contract

Contract Close Out: The SAS contract was accepted on September 24, 2015. The estimate after acceptance included several deductions as credit for issues that Caltrans determined were the responsibility of the contractor. The proposed final estimate was forwarded to the contractor on November 5th 2015 and since the total amount paid exceeded the amount due by \$8.5 million, the contractor owed a payment to the Department for that amount. The contractor submitted his exceptions to the proposed final estimate on November 6, 2015. The contractor documented twelve outstanding disputes totaling \$49.2 million in claims and filed for arbitration on May 23rd 2016. The claims are now subject to the Public Works Contract Arbitration Program and could take many quarters to reach a conclusion.

Repair of Rod Grouting at the Tower Base: The investigation of the tower base anchor rods is complete and a final report was issued in the third quarter of 2016. A scope of work for the repair was developed and on May 12, 2016 the TBPOC approved the procurement of a \$12 million contract to implement the repair. The TBPOC also authorized \$3 million in COS costs to inspect and administer that contract. Bids for this Director's Order work will be opened on October 10th 2016 and the project will be expeditiously awarded to the apparent low bidder.

Yerba Buena Island Transition Structure #2 Contract

Goat Slope: The construction team and the Contractor have not been able to come to an agreement on a lump-sum price for CCO #44 (for which the TBPOC had approved a capital budget of \$5.2 million). If the construction team can't come to agreement on this extra work, the project team will complete the contract slope work as soon as possible on the YBITS2 contract. Meanwhile, the project team, will evaluate an option to break out the CCO work and possibly procure it in a separate contract in order to secure the best price for the work.

Southgate Rd Realignment Alternative: Meetings between all the stakeholders on Yerba Buena Island have identified a more efficient alternative for routing traffic on Southgate Rd. This alternative will significantly increase the level of service of the on-ramp and off-ramps to I-80. The City of San Francisco developed this proposal to realign Southgate Rd that was approved by the TBPOC on May 12, 2016. The proposal significantly reduced future risks on the YBITS #2 contract. The City will incorporate the work in a City of San Francisco contract.



Demolition work on the original truss bridge.

504'/288' Dismantling Contract

Successful Removal of All Five 504' Trusses: The successful removal of all five spans of the superstructure allowed the contractor to deliver the E4 and E5 footings to the Marine Foundations Removal contractor ahead of the contract milestones.

Bird Deterrents & Mitigation: Based on knowledge gained from effective bird exclusion measures developed on the Cantilever Demolition, a project specification was developed for bird deterrence on the 504'/288' contract. The contractor intends to sequence work so as to remove the steel spans outside the nesting season where practical, and install the deterrents contemplated in the plans as applicable. Should a bird still manage to nest on the bridge, the Environmental Team has secured a Miscellaneous Permit from USF&W that will allow the project biologist to relocate bird nests and help prevent delays to the work. Once the nests are relocated from the bridge, Caltrans has a service contract with International Bird Rescue (IBR) to transport eggs and young, incubate eggs and foster young as necessary and release birds back into their natural habitat. Successful bird deterrence in the past has resulted in no delays to the SFOBB from bird nesting issues.

Marine Foundation Removal Contract

Permit Acquisition for E4-E18 Removal By Implosion: The environmental team successfully secured the 7th and final permit for the proposed implosion of piers E4 to E18 ahead of schedule on September 15th 2016. The following permits were secured for the work in the last few months:

- BCDC Permit Amendment #40 – Mechanical Dismantling of Piers E4-18
- BCDC Permit Amendment #41 – Controlled Implosions of Piers E4-E18
- CDFW ITP Amendment #5 – Mech. Dismantling and Controlled Implosions of Piers E4-E18
- NOAA NMFS Fisheries BO – Mech. Dismantling and Controlled Implosions of Piers E4-E18
- NOAA NMFS Office of Protected Resources Incidental Harassment Authorization – Controlled Implosions of Piers E4-E5 (renewed annually)
- USACE Letter of Modification – Mechanical Dismantling of Piers E4-E18
- USACE Letter of Modification – Controlled Implosions of Piers E4-E18.

Attaining these permits will allow the E4 and E5 implosions to proceed on schedule and will help reduce schedule risk going forward.

RISK MANAGEMENT LOOK AHEAD

Self-Anchored Suspension Span Contract

The contract close-out effort will continue. The support cost budget will continue to be spent until final close-out is achieved.

Yerba Buena Island Transition Structure #2 Contract

Contract Change Order Negotiations: The project team will continue to negotiate the cost of the proposed additional Goat Slope work (i.e. CCO #44) and the deletion of a portion of the contract to accommodate the new Southgate Road alignment. Actual contract completion should be brought forward by several months from the current scheduled completion date as a result of the Southgate Rd change. This change will help mitigate any future delays of the YBITS #2 contract.

504'/288' Dismantling Contract

Removal of first 288' Span: The removal of the first 288' span of fourteen total is scheduled for the fourth quarter of 2016. A timely completion of this work will allow the contractor to successfully complete the transfer of piers to the Marine Structures Dismantling contractor, in accordance with the 504'/288' Dismantling contract milestones.

Marine Foundation Removal Contract

Implosion of Piers E4 & E5: The project team needs to successfully implode E4 & E5 in substantial compliance with the conditions specified in the seven permits issued for the work. Successful completion of this seasons work will give the project team leverage to request additional efficiency enhancements to the project that could result in future cost savings. Substantial cost savings might also be realized by allowing two or more implosions at the same time and/or allowing the implosions to occur during the work week.

SFOBB East Span COS Budget

Budget Increase: The current approved budget of \$1,311.5 million for SFOBB East Span COS will run out in the fourth quarter of 2016. In the fourth quarter of 2016, the BATA oversight board and MTC will need to approve the TBPOC approved 2016/17 COS allocation and an increase in the overall SFOBB East Span COS budget to \$1,328.5 million. Additional budget adjustments from program contingency will be required in Q2 2017 to fund the COS through the 17/18 fiscal year and for each fiscal year through program completion.

Program Funding Status

AB 144 established a funding level of \$8.685 billion for the TBSRP. As of January 1, 2010, seismic retrofitting of Antioch and Dumbarton Bridges became part of the Toll Bridge Seismic Retrofit Program with the passage of AB 1175, which provided another \$750 million bringing the total funding to \$9.435 billion. On April 9, 2010, the TBPOC approved a \$137 million reduction in the TBSRP program budget as a result of savings from the Antioch Bridge Retrofit. On September 2, 2010, the TBPOC approved a \$216 million reduction in the TBSRP program budget as a result of savings from the Dumbarton Bridge Retrofit. And finally, on November 5, 2013, the TBPOC approved a \$130 million reduction in the TBSRP program budget as a result of a reduction in the program contingency, bringing the current approved TBSRP budget to \$8.952 billion (see Appendix A-1). The program funding sources are shown in Table 1 - Program Budget.

Table 1 - Program Budget as of September 30, 2016		Budgeted	Funding Available & Contribution
Financing			
Seismic Surcharge Revenue AB 1171		2,282.0	2,282.0
Seismic Surcharge Revenue AB 144		2,150.0	2,150.0
Seismic Surcharge Revenue AB 1175 ⁽²⁾		750.0	750.0
BATA Consolidation		820.0	820.0
Subtotal - Financing		6,002.0	6,002.0
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⁾		745.0	745.0
Public Transportation Account ⁽¹⁾		130.0	130.0
ITIP/SHOPP/Federal Contingency ⁽³⁾		448.0	448.0
Federal Highway Bridge Replacement and Rehabilitation (HBRR) ⁽³⁾		642.0	642.0
SHA - East Span Dismantling		300.0	300.0
SHA - "Efficiency Savings"		130.0	130.0
Redirect Spillover		125.0	125.0
Motor Vehicle Account		75.0	75.0
Subtotal - Contribution		3,433.0	3,423.9
Total Funding		9,435.0	9,425.9
Encumbered to Date			8,883.7
Remaining Unallocated			542.3
Expenditures :			
Capital Outlay			6,691.2
State Operations			1,849.9
Antioch and Dumbarton Expenditures by BATA			14.6
		Total Expenditures	8,555.7
Encumbrances :			
Capital Outlay			240.0
State Operations			5.9
		Total Encumbrances	245.9
Total Expenditures and Encumbrances			8,801.7
⁽¹⁾ The California Transportation Commission adopted a new schedule and changed the PTA/SHA split on December 15, 2005.			
⁽²⁾ As of January 1, 2010, seismic retrofitting of Antioch and Dumbarton Bridges became part of the Toll Bridge Seismic Retrofit Program with the passage of AB 1175.			
⁽³⁾ The Skyway contract is the only contract in the San Francisco-Oakland Bay Bridge East Span Seismic Safety Project with federal funds. The Federal Aid Project No. is 0801(090) for the amount of \$321,645,209.22.			

Summary of the Toll Bridge Oversight Committee (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 3 -Toll Bridge Program Oversight Committee Estimated Expenses: July 1, 2005, through September 30, 2016, shows expenses through September 30, 2016, for TBPOC functioning, support, and monthly and quarterly reporting.

**Table 2—CTC Toll Bridge Seismic Retrofit Program Contributions Adopted December 2005
Schedule of Contributions to the Toll Bridge Seismic Retrofit Program (\$ Millions)**

Source	Description	2005-06 (Actual)	2006-07 (Actual)	2007-08 (Actual)	2008-09 (Actual)	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Actual)	2013-14 (Actual)	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 Dismantling Cost. The last contribution of \$300 million from SHA was made in October 2013 as scheduled.

**Table 3—Toll Bridge Program Oversight Committee
Estimated Expenses: July 1, 2005 through September 30, 2016 (\$ Millions)**

Agency/Program Activity	Expenses
BATA	3.0
Caltrans	3.4
CTC	3.3
Reporting	5.9
Total Program	15.6

Quarterly Environmental Compliance Highlights

Overall environmental compliance for the San Francisco-Oakland Bay Bridge (SFOBB) East Span Seismic Safety Project (SFOBB Project) has been a major success during the third quarter of 2016. The tasks for the current quarter are focused on mitigation, monitoring and environmental permitting. Key successes in this quarter are as follows:

Bird monitoring for the 2016 nesting season was conducted five days a week from February 1st to August 31st, which corresponds with the end of the 2016 bird nesting season. The goal of this monitoring is to document potential impacts to birds and their nests from construction activities. Monitors did not observe any indication that birds were disturbed due to the east span construction activities. A total of 16 occupied nests were removed from the SFOBB Project site under Caltrans' U.S. Fish and Wildlife Service (USFWS) occupied nest take permit and relocated to a rehabilitation facility. On September 29, 2016, three cormorant hatchlings that were removed as eggs from the old east span in May 2016, were released at the project site by a team consisting of the environmental team and volunteers from the rehabilitation center. Caltrans biologists continue to monitor the site for bird activity 1 day a week during the non-nesting season.

In compliance with Special Condition II.A.1 of San Francisco Bay Conservation and Development Commission (BCDC) Permit No. 2001.008, the environmental team obtained plan review approval from BCDC for the 504/288 contract Tower E9 to E22 dismantling plans on August 23, 2016. The environmental team also supported 504-foot truss span removal operations throughout the 3rd quarter of 2016. Meetings were held weekly between Caltrans and 504/288 contractor to discuss bird nesting issues and the ongoing strategy for installation of nesting bird impact avoidance management measures during the 2016 nesting season.

The environmental team, in coordination with DPAC and Wildlands, purchased 4 acres of longfin smelt mitigation credits at Liberty Island Conservation Bank on August 4, 2016. These credits were purchased with \$600,000 in state funds as mitigation for impacts to longfin smelt resulting from the implosion of Piers E3 to E18.

Throughout 2016, the environmental team worked closely with the project management team and natural resource agencies to prepare and submit packages to BCDC, National Marine Fisheries Service (NMFS), United States Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and the Regional Water Quality Control Board (RWQCB) requesting approval to remove Piers E4 to E18 using controlled blasting. During the 2nd quarter of 2016, Caltrans received authorizations

from BCDC and USACE for pre-blast activities, BCDC Plan Approval for pre-blast activities for Piers E4 to E18, and RWQCB approval of the Pier E4 to E18 Storm Water Pollution Prevention Plan (SWPPP). During the 3rd quarter of 2016, Caltrans received the following opinions and authorizations for the controlled blasting of Piers E4 to E18: CDFW Major Amendment No. 5 (issued Aug 4, 2016), NMFS Biological Opinion (issued Aug 24, 2016), BCDC Amendment No. 41 (issued September 2, 2016), USACE Letter of Modification (issued September 2, 2016), and NMFS Incidental Harassment Authorization (issued Sept 15, 2016).

The environmental team provided monitoring support during the mechanical demolition of Piers E4 and E5. Water quality monitoring was conducted throughout mechanical dismantling activities. Water quality, marine mammal, and hydroacoustic monitoring were conducted on August 26 and 27 during the breaking of the Pier E5 pre-cast concrete slabs.

Caltrans finalized and transmitted the Final San Francisco-Oakland Bay Bridge East Span Seismic Safety Project – Marine Foundation Removal Biological Monitoring Program for the controlled implosions of Piers E4 – E8 to the appropriate natural resource agencies on September 22, 2016. This plan summarized Caltrans' Pier E5 hydroacoustic monitoring, fisheries monitoring, marine mammal monitoring, bird monitoring, and water quality monitoring programs.

At the request of the Bay Area Toll Authority (BATA) and the TBPOC, the environmental team discussed the potential retention of Piers E2 and Piers E19 to E23 of the SFOBB original east span with project regulators during the third quarter of 2016. It was clarified by BCDC that Caltrans would need to propose a justification for pier retention, a conceptual plan, and possible mitigation to offset the in-water fill that the project is required to remove under its current permit as mitigation for new fill in the Bay from construction of the SFOBB new east span. Caltrans held meetings with BATA and the Project Management Team (PMT) to discuss how best to proceed. Public access has been proposed as the justification for pier retention. Caltrans has indicated that to retain the piers, additional work would be required that may include, development of a conceptual design for public access, an analysis of environmental impacts from pier retention, a re-opening of the project's current Final Environmental Impact Statement or a separate National Environmental Policy Act/California Environmental Quality Act process, and analysis of potential off-site fill removal projects or mechanisms to satisfy in-kind mitigation should it be required.



Appendices

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B. TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2016.....	20
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Appendix A-1: TBSRP AB 144/SB 66/AB 1175 Baseline Budget, Forecasts and Expenditures through September 30, 2016 (\$ Millions)

Contract	AB 144/SB 66/AB 1175	Approved Changes	Current Approved Budget (09/2016)	Cost to Date (09/2016)	Cost Forecast (09/2016)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
SFOBB East Span Replacement Project						
Capital Outlay Support	959.3	352.2	1,311.5	1,301.9	1,392.6	81.1
Capital Outlay Construction	4,492.2	670.5	5,162.7	4,875.5	5,253.8	91.1
Other Budgeted Capital	35.1	(32.8)	2.3	0.7	2.3	-
Total	5,486.6	989.9	6,476.5	6,178.1	6,648.7	172.2
SFOBB West Approach Replacement						
Capital Outlay Support	120.0	(0.5)	119.5	119.4	119.5	-
Capital Outlay Construction	309.0	31.0	340.0	333.0	338.1	(1.9)
Total	429.0	30.5	459.5	452.4	457.6	(1.9)
SFOBB West Span Retrofit						
Capital Outlay Support	75.0	(0.2)	74.8	74.8	74.8	-
Capital Outlay Construction	232.9	(2.4)	230.5	230.5	230.5	-
Total	307.9	(2.6)	305.3	305.3	305.3	-
Richmond-San Rafael Bridge Retrofit*						
Capital Outlay Support	134.0	(7.0)	127.0	126.7	127.0	-
Capital Outlay Construction	780.0	(94.9)	685.1	668.1	668.2	(16.9)
Total	914.0	(101.9)	812.1	794.8	795.2	-
Benicia-Martinez Bridge Retrofit						
Capital Outlay Support	38.1	-	38.1	38.1	38.1	-
Capital Outlay Construction	139.7	-	139.7	139.7	139.7	-
Total	177.8	-	177.8	177.8	177.8	-
Carquinez Bridge Retrofit						
Capital Outlay Support	28.7	0.1	28.8	28.8	28.8	-
Capital Outlay Construction	85.5	(0.1)	85.4	85.4	85.4	-
Total	114.2	-	114.2	114.2	114.2	-
San Mateo-Hayward Bridge Retrofit						
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	(0.1)	135.3	135.3	135.3	-
Total	163.5	(0.1)	163.4	163.4	163.4	-
Vincent Thomas Bridge Retrofit (Los Angeles)						
Capital Outlay Support	16.4	-	16.4	16.4	16.4	-
Capital Outlay Construction	42.1	-	42.1	42.0	42.0	(0.1)
Total	58.5	-	58.5	58.4	58.4	(0.1)
San Diego-Coronado Bridge Retrofit						
Capital Outlay Support	33.5	-	33.5	33.2	33.2	(0.3)
Capital Outlay Construction	70.0	-	70.0	69.4	69.4	(0.6)
Total	103.5	-	103.5	102.6	102.6	(0.9)

Appendix A-1: TBSRP AB 144/SB 66/AB 1175 Baseline Budget, Forecasts and Expenditures through September 30, 2016 (\$ Millions) Cont.

Contract	AB 144/SB 66/AB 1175	Approved Changes	Current Approved Budget (09/2016)	Cost to Date (09/2016)	Cost Forecast (09/2016)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Antioch Bridge						
Capital Outlay Support	-	24.1	24.1	17.4	23.8	(0.3)
Capital Outlay Support by BATA				6.7		
Capital Outlay Construction	-	47.0	47.0	47.0	47.0	-
Total	267.0	71.1	71.1	71.1	70.8	(0.3)
Dumbarton Bridge						
Capital Outlay Support	-	46.0	46.0	39.5	45.4	(0.6)
Capital Outlay Support by BATA				7.9		
Capital Outlay Construction	-	66.4	66.4	64.6	66.4	-
Total	483.0	112.4	112.4	112.0	111.8	(0.6)
Subtotal Capital Outlay Support	1,682.9	165.0	1,847.8	1,838.9	1,927.7	79.9
Subtotal Capital Outlay	6,787.1	217.2	7,004.2	6,690.6	7,075.8	71.6
Subtotal Other Budgeted Capital	35.1	(32.8)	2.3	0.7	2.3	-
Miscellaneous Program Costs	30.0	-	30.0	25.5	30.0	-
Subtotal Toll Bridge Seismic Retrofit Program	8,535.0	349.3	8,884.3	8,555.7	9,035.8	151.5
Net Programmatic Risks	-	-	-	-	25.2	25.2
Program Contingency	900.0	(832.3)	67.7	-	-	(67.7)
Total Toll Bridge Seismic Retrofit Program**	9,435.0	(483.0)	8,952.0	8,555.7	9,061.0	109.0
Forecast Deficit To Current TBPOC Approved Budget:					(109.0)	
Forecast Surplus To Total TBSRP Budget	374.0					
Forecast Deficit To Current TBPOC Approved Budget:					(109.0)	

* Budget for Richmond-San Rafael Bridge includes \$16.9 million of deck joint rehabilitation work that considered to be eligible for seismic retrofit program funding.

** AB144/SB66 established a funding level of \$8.685 Billion in July 2005 for TBSRP, AB1175 added the retrofitting of the Antioch and Dumbarton Bridges in January 2010, providing another \$750 million in funding, bringing Total Toll Seismic Retrofit Program funding to \$9.435 Billion. Since 2010, \$483 million has been removed from the program, bringing the current TBPOC Approved Budget to \$8.952 Billion. The \$483 million removed consisted of:

Antioch Savings (4/12/10) \$137 million

Dumbarton Savings (9/02/10) \$216 million

Program Contingency Redirection (11/05/13) \$130 million, the current TBPOC approved Program Budget is \$8,952 million.

*** (Due to the rounding of numbers, the totals above are show within \$0.02).

Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2016 (\$ Millions)

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances as of (09/2016) see Note (1)	Estimated costs not yet spent or encumbered as of (09/2016)	Total Forecast as of (09/2016)
a	b	c	d	e	f = d + e
Other Completed Projects					
Capital Outlay Support	144.9	144.9	144.6	-	144.6
Capital Outlay	472.6	472.6	471.9	(0.1)	471.8
Total	617.5	617.5	616.5	(0.1)	616.4
Richmond-San Rafael					
Capital Outlay Support	134.0	127.0	126.8	0.2	127.0
Capital Outlay	698.0	685.1	667.5	0.7	668.2
Project Reserves	82.0	-	-	-	-
Total	914.0	812.1	794.3	0.9	795.2
West Span Retrofit					
Capital Outlay Support	75.0	74.8	74.8	-	74.8
Capital Outlay	232.9	230.5	227.4	3.1	230.5
Total	307.9	305.3	302.2	3.1	305.3
West Approach					
Capital Outlay Support	120.0	119.5	119.5	-	119.5
Capital Outlay	309.0	340.0	332.2	5.9	338.1
Total	429.0	459.5	451.7	5.9	457.6
SFOBB East Span -Skyway					
Capital Outlay Support	197.0	181.2	181.2	-	181.2
Capital Outlay	1,293.0	1,237.2	1,235.6	0.1	1,235.7
Total	1,490.0	1,418.4	1,416.8	0.1	1,416.9
SFOBB East Span -SAS- Superstructure					
Capital Outlay Support	214.6	488.1	515.0	0.1	515.1
Capital Outlay	1,753.7	2,034.8	2,046.9	(9.9)	2,037.0
Total	1,968.3	2,522.9	2,561.9	(9.8)	2,552.1
SFOBB East Span -SAS- Tower Anchor Rod Grouting					
Capital Outlay Support	-	-	0.3	3.1	3.4
Capital Outlay	-	12.0	0.8	13.0	13.8
Total	-	12.0	1.1	16.1	17.2
SFOBB East Span -SAS- Foundations					
Capital Outlay Support	62.5	37.6	37.6	-	37.6
Capital Outlay	339.9	301.3	301.3	-	301.3
Total	402.4	338.9	338.9	-	338.9
Small YBI Projects					
Capital Outlay Support	10.6	10.2	10.2	0.4	10.6
Capital Outlay	15.6	15.2	15.2	0.5	15.7
Total	26.2	25.4	25.4	0.9	26.3
YBI Detour					
Capital Outlay Support	29.5	87.7	87.9	(0.2)	87.7
Capital Outlay	131.9	473.3	473.4	(0.1)	473.3
Total	161.4	561.0	561.3	(0.3)	561.0

Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2016 (\$ Millions) Cont.

Contract	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances as of (09/2016) see Note (1)	Estimated costs not yet spent or encumbered as of (09/2016)	Total Forecast as of (09/2016)
a	b	c	d	e	f = d + e
YBI - Transition Structures					
Capital Outlay Support	78.7	127.5	136.4	25.3	161.7
Capital Outlay	299.4	299.4	302.8	21.4	324.2
Total	378.1	426.9	439.2	46.7	485.9
Oakland Touchdown					
Capital Outlay Support	74.4	119.4	118.2	1.2	119.4
Capital Outlay	283.8	330.6	325.4	4.3	329.7
Total	358.2	450.0	443.6	5.5	449.1
East Span Other Small Project					
Capital Outlay Support	212.3	197.9	197.9	(0.1)	197.8
Capital Outlay	170.8	141.3	126.5	10.4	136.9
Total	383.1	339.2	324.4	10.3	334.7
Existing Bridge Demolition					
Capital Outlay Support	79.7	61.9	25.6	52.5	78.1
Capital Outlay	239.2	320.0	292.7	95.1	387.8
Total	318.9	381.9	318.3	147.6	465.9
Antioch Bridge					
Capital Outlay Support	-	24.1	17.4	0.2	17.6
Capital Outlay Support by BATA	-	-	6.2	-	6.2
Capital Outlay	-	47.0	47.0	-	47.0
Total	267.0	71.1	70.6	0.2	70.8
Dumbarton Bridge					
Capital Outlay Support	-	46.0	39.6	(0.2)	39.4
Capital Outlay Support by BATA	-	-	6.0	-	6.0
Capital Outlay	-	66.4	64.7	1.7	66.4
Total	483.0	112.4	110.3	1.5	111.8
Miscellaneous Program Costs	30.0	30.0	25.5	4.5	30.0
Total Capital Outlay Support (2)	1,712.9	1,877.8	1,870.5	87.2	1,957.7
Total Capital Outlay	6,822.1	7,006.5	6,931.2	147.0	7,078.1
Program Total	8,535.0	8,884.3	8,801.7	234.2	9,035.8

(1) Total Capital Outlay Support includes program indirect costs.

(2) BSA provided a distribution of program contingency in December 2004 based on Bechtel Infrastructure Corporation input.

(3) Construction administration of the OTD Detour is under the YBITS1 contract. Encumbrance is included in YBITS1 contract.

(4) Construction administration of the cantilever segment is under the YBITS2 contract. Encumbrance is included in YBITS2 contract.

(Due to the rounding of numbers, the totals above are shown within \$0.02)

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2016 (\$ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2016)	Cost to Date (09/2016)	Cost Forecast (09/2016)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
San Francisco-Oakland Bay Bridge East Span Replacement Project						
East Span - SAS Superstructure						
Capital Outlay Support	214.6	273.5	488.1	510.6	515.1	27.0
Capital Outlay Construction	1,753.7	281.1	2,034.8	1,972.5	2,037.0	2.2
Total	1,968.3	554.6	2,522.9	2,483.1	2,552.1	29.2
SAS Tower Anchor Rod Grouting						
Capital Outlay Support	-	-	-	-	3.4	3.4
Capital Outlay Construction	-	-	12.0	0.4	13.8	1.8
Total	-	-	12.0	0.4	17.2	5.2
SAS W2 Foundations						
Capital Outlay Support	10.0	(0.8)	9.2	9.2	9.2	-
Capital Outlay Construction	26.4	0.1	26.5	26.5	26.5	-
Total	36.4	(0.7)	35.7	35.7	35.7	-
YBI South/South Detour						
Capital Outlay Support	29.4	58.3	87.7	87.9	87.7	-
Capital Outlay Construction	131.9	341.4	473.3	473.3	473.3	-
Total	161.3	399.7	561.0	561.2	561.0	-
East Span - Skyway						
Capital Outlay Support	197.0	(15.8)	181.2	181.2	181.2	-
Capital Outlay Construction	1,293.0	(55.8)	1,237.2	1,235.6	1,235.7	(1.5)
Total	1,490.0	(71.6)	1,418.4	1,416.8	1,416.9	(1.5)
East Span - SAS E2/T1 Foundations						
Capital Outlay Support	52.5	(24.1)	28.4	28.4	28.4	-
Capital Outlay Construction	313.5	(38.7)	274.8	274.8	274.8	-
Total	366.0	(62.8)	303.2	303.2	303.2	-
YBI Transition Structures (see notes below)						
Capital Outlay Support	78.7	48.8	127.5	133.9	161.7	34.2
Capital Outlay Construction	299.3	0.1	299.4	269.9	324.2	24.8
Total	378.0	48.9	426.9	403.8	485.9	59.0
* YBI- Transition Structures						
Capital Outlay Support			16.4	16.4	16.4	-
Capital Outlay Construction			-	-	-	-
Total			16.4	16.4	16.4	-
* YBI- Transition Structures Contract No. 1						
Capital Outlay Support			72.1	69.8	69.8	(2.3)
Capital Outlay Construction			203.7	202.5	204.9	1.2
Total			275.8	272.3	274.7	(1.1)
* YBI- Transition Structures Contract No. 2						
Capital Outlay Support			38.0	47.4	74.5	36.5
Capital Outlay Construction			92.4	67.3	116.0	23.6
Total			130.4	114.7	190.5	60.1
* YBI- Transition Structures Contract No. 3 Landscape						
Capital Outlay Support			1.0	0.3	1.0	-
Capital Outlay Construction			3.3	-	3.3	-
Total			4.3	-	4.3	-

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2016 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2016)	Cost to Date (09/2016)	Cost Forecast (09/2016)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Oakland Touchdown (see notes below)						
Capital Outlay Support	74.4	45.0	119.4	119.0	119.4	-
Capital Outlay Construction	283.8	46.8	330.6	326.5	329.7	(0.9)
Total	358.2	91.8	450.0	445.5	449.1	(0.9)
* OTD Prior-to-Split Costs						
Capital Outlay Support			21.7	20.0	20.1	(1.6)
Capital Outlay Construction			-	-	-	-
Total			21.7	20.0	20.1	(1.6)
* OTD Submarine Cable(1)						
Capital Outlay Support			0.9	0.9	0.9	-
Capital Outlay Construction			5.7	5.7	5.7	-
Total			6.6	6.6	6.6	-
* OTD No. 1 (Westbound)						
Capital Outlay Support			51.2	51.2	51.2	-
Capital Outlay Construction			205.3	202.8	205.3	-
Total			256.5	254.0	256.5	-
* OTD No. 2 (Eastbound)						
Capital Outlay Support			37.6	38.1	37.6	-
Capital Outlay Construction			72.6	71.2	71.9	(0.7)
Total			110.2	109.3	109.5	(0.7)
* OTD Touchdown 2 Detour⁽²⁾						
Capital Outlay Support			8.1	8.0	8.1	-
Capital Outlay Construction			47.0	46.7	46.8	(0.2)
Total			55.1	54.7	54.9	(0.2)
* OTD Electrical Systems						
Capital Outlay Support			1.5	0.8	1.5	-
Capital Outlay Construction			-	-	-	-
Total			1.5	0.8	1.5	-
Existing Bridge Dismantling						
Capital Outlay Support	79.7	(17.8)	61.9	23.8	78.1	16.2
Capital Outlay Construction	239.2	80.8	320.0	154.7	387.8	67.8
Total	318.9	63.0	381.9	178.5	465.9	84.0
* Bridge Dismantling Prior-to-Split Cost						
Capital Outlay Support			3.9	3.9	3.9	
Capital Outlay Construction			-	-	-	
Total			3.9	3.9	3.9	
* Cantilever Section						
Capital Outlay Support			17.0	1.6	1.6	
Capital Outlay Construction			69.0	68.5	69.0	
Total			86.0	70.1	70.6	
* 504/288 Sections						
Capital Outlay Support			21.0	7.5	20.5	
Capital Outlay Construction			103.5	51.2	97.4	
Total			124.5	58.7	117.9	

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2016 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2016)	Cost to Date (09/2016)	Cost Forecast (09/2016)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
*Marine Foundations						
Capital Outlay Support			20.0	10.8	52.1	
Capital Outlay Construction			147.5	35.1	221.4	
Total			167.5	45.9	273.5	
Sunk Cost for Marine Foundation			-	5.8	5.8	
Pier-3 Demonstration Project						
Capital Outlay Support			-	3.9	4.3	
Capital Outlay Construction			17.5	16.8	17.5	
Total			17.5	20.7	21.8	
Remaining Marine Foundations²						
Capital Outlay Support			-	1.2	42.0	
Capital Outlay Construction			130.0	18.2	203.9	
Total			130.0	19.4	245.9	
Pier-E4 to Pier-E18						
Capital Outlay Support			-	1.0	33.6	
Capital Outlay Construction			130.0	0.7	158.9	
Total			130.0	1.7	192.5	
Pier-E2 and Pier-E19 to Pier-E22						
Capital Outlay Support			-	0.2	8.4	
Capital Outlay Construction			-	17.5	45.0	
Total			-	17.7	53.4	
YBI/SAS Archeology						
Capital Outlay Support	1.1	-	1.1	1.1	1.1	-
Capital Outlay Construction	1.1	-	1.1	1.1	1.1	-
Total	2.2	-	2.2	2.2	2.2	-
YBI - USCG Road Relocation						
Capital Outlay Support	3.0	(0.3)	2.7	2.7	3.0	0.3
Capital Outlay Construction	3.0	(0.2)	2.8	2.8	3.0	0.2
Total	6.0	(0.5)	5.5	5.5	6.0	0.5
YBI - Substation and Viaduct						
Capital Outlay Support	6.5	(0.1)	6.4	6.4	6.5	0.1
Capital Outlay Construction	11.6	(0.3)	11.3	11.3	11.6	0.3
Total	18.1	(0.4)	17.7	17.7	18.1	0.4
Oakland Geofill						
Capital Outlay Support	2.5	-	2.5	2.5	2.5	-
Capital Outlay Construction	8.2	-	8.2	8.2	8.2	-
Total	10.7	-	10.7	10.7	10.7	-
Pile Installation Demonstration Project						
Capital Outlay Support	1.8	-	1.8	1.8	1.8	-
Capital Outlay Construction	9.3	(0.1)	9.2	9.3	9.3	-
Total	11.1	(0.1)	11.0	11.1	11.1	-

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2016 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2016)	Cost to Date (09/2016)	Cost Forecast (09/2016)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Stormwater Treatment Measures						
Capital Outlay Support	6.0	2.2	8.2	8.2	8.2	-
Capital Outlay Construction	15.0	3.3	18.3	16.9	17.0	(1.3)
Total	21.0	5.5	26.5	25.1	25.2	(1.3)
Right-of-Way and Environmental Mitigation						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay & Right-of-Way	72.4	-	72.4	60.9	70.0	(2.4)
Total	72.4	-	72.4	60.9	70.0	(2.4)
Sunk Cost - Existing East Span Retrofit						
Capital Outlay Support	39.5	-	39.5	39.5	39.5	-
Capital Outlay Construction	30.8	-	30.8	30.8	30.8	-
Total	70.3	-	70.3	70.3	70.3	-
Other Capital Outlay Support						
Environmental Phase	97.7	0.1	97.8	97.8	97.7	(0.1)
Pre-Split Project Expenditures	44.9	-	44.9	44.9	44.9	-
Non-Project Specific Costs	20.0	(16.8)	3.2	3.2	3.2	-
Total	162.6	(16.7)	145.9	145.9	145.8	(0.1)
Subtotal Capital Outlay Support						
	959.3	352.2	1,311.5	1,301.9	1,392.6	81.1
Subtotal Capital Outlay Construction						
	4,492.2	670.5	5,162.7	4,875.5	5,253.8	91.1
Other Budgeted Capital						
	35.1	(32.8)	2.3	0.7	2.3	-
Total SFOBB East Span Replacement Project						
	5,486.6	989.9	6,476.5	6,178.1	6,648.7	172.2

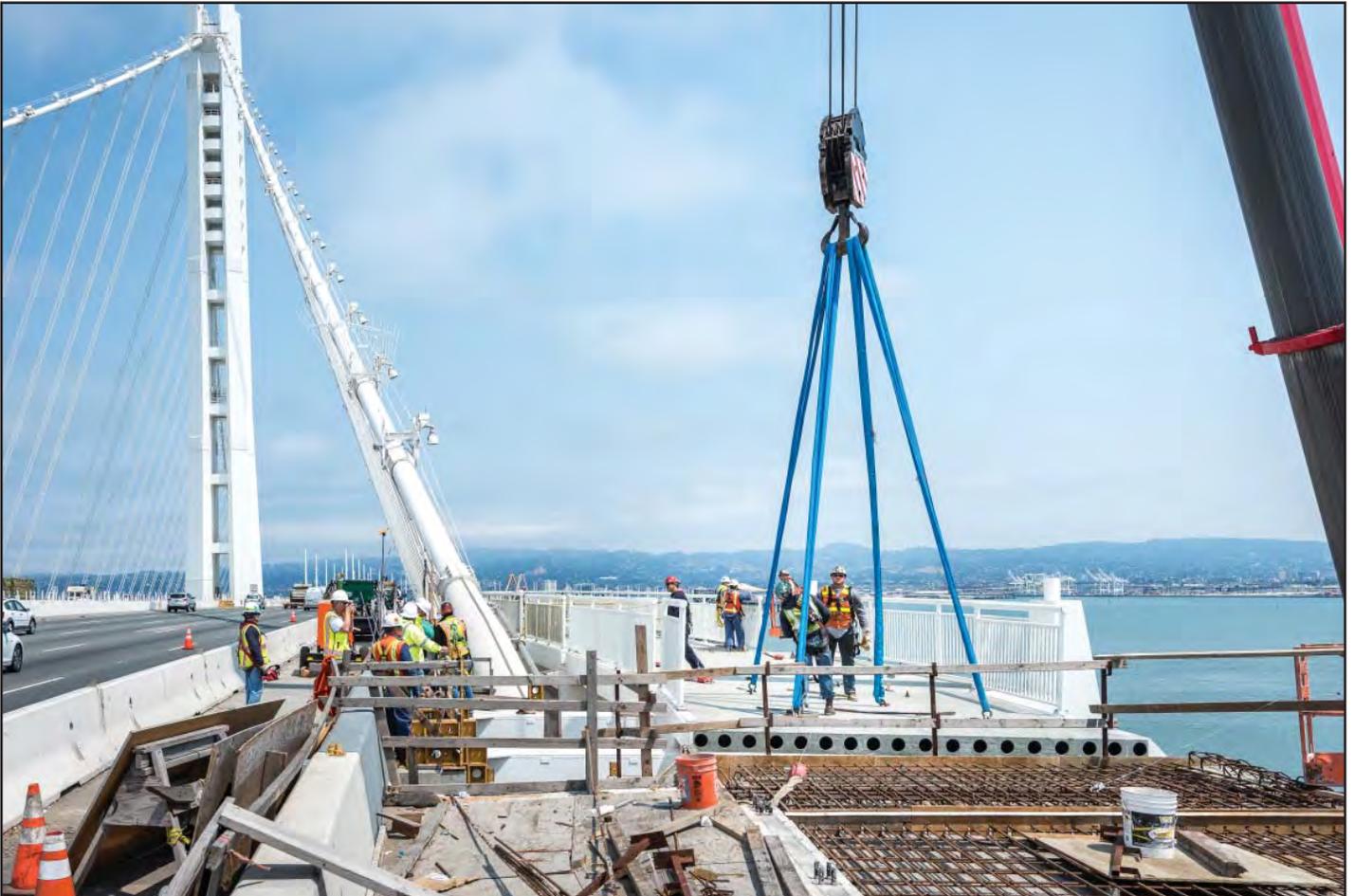
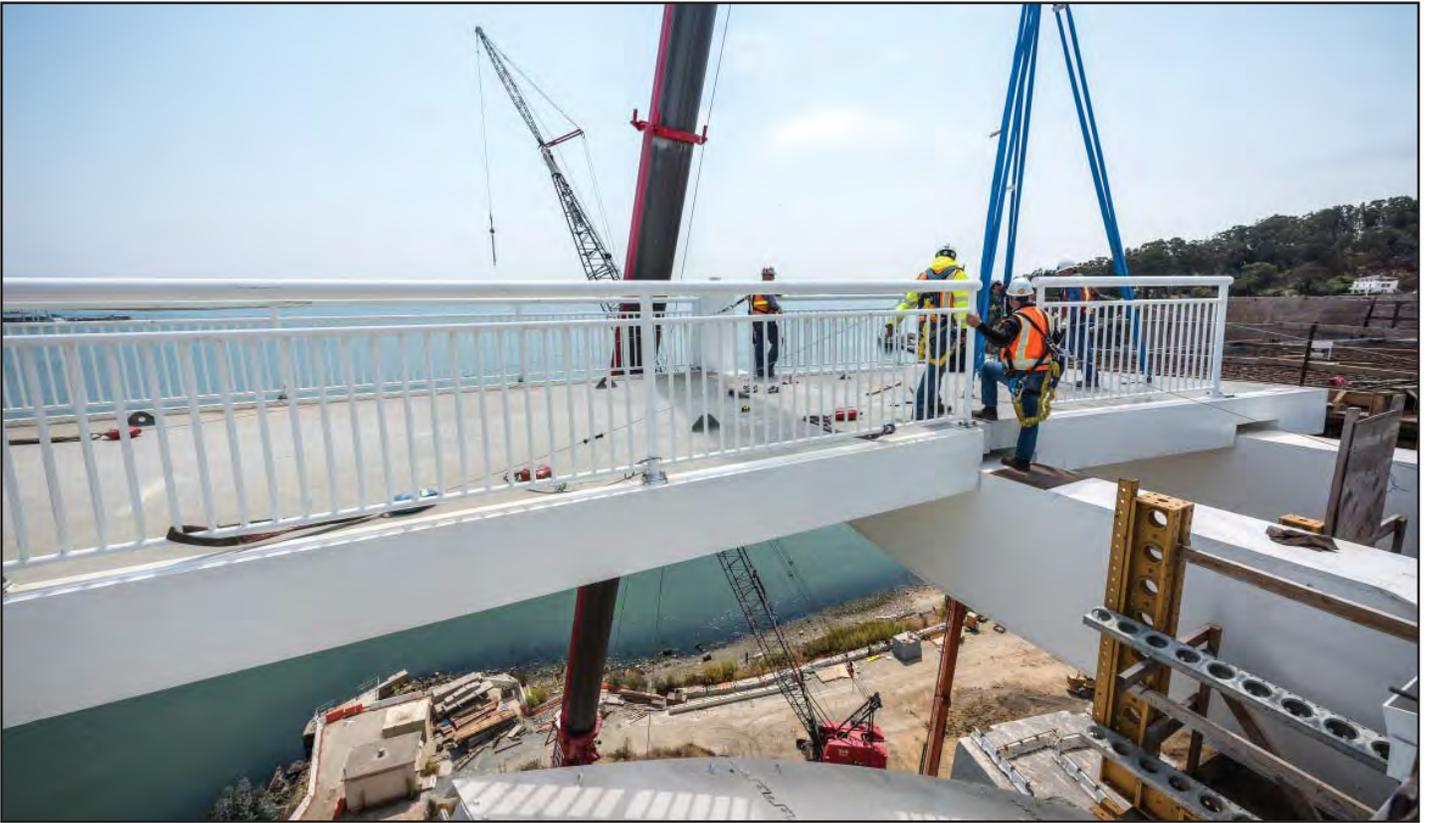
(1) Current contract allotment to install two submarine electrical cables is \$11.5 million. Additional non-program funding to support this allocation beyond the \$9.6 million of available programs funds has been made available by the Treasure Island Development Authority.

(2) Construction administration of the OTD Detour is under the YBITS#1 contract.

(3) Construction administration of the Cantilever segment is under the YBITS#2 contract.

(Due to the rounding of numbers, the totals above are shown within \$0.02).







Appendix: Glossary of Terms

Glossary of Terms

AB 144/SB 66 BUDGET: The planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005, and September 29, 2005, respectively.

AB 144/SB 66/AB1175 PROJECT COMPLETE BASELINE: The planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

APPROVED CHANGES: For cost, changes to the AB 144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

AT COMPLETION VARIANCE or VARIANCE (cost): The mathematical difference between the Cost Forecast and the Current Approved Budget.

BATA PROJECT COMPLETE BASELINE: The planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

CAPITAL OUTLAY SUPPORT (COS): Cost of developing and administering a capital project.

COST FORECAST: The current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

COST TO DATE: The actual expenditures incurred by the program, project or contract as of the month and year shown.

CURRENT APPROVED BUDGET: The sum of the AB 144/SB 66 Budget or BATA Budget and Approved Changes.

HINGE PIPE BEAMS: Pipes between roadway sections designed to move within their sleeves during expansion or contraction of the decks during minor events, such as changes in temperature. The beams are designed to absorb the energy of an earthquake by deforming in their middle or "fuse" section. Hinge pipe beams are also found at the western piers where the SAS connects to the YBITS (Hinge "K" pipe beams).

PROJECT COMPLETE CURRENT APPROVED SCHEDULE: The sum of the AB 144/SB 66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

PROJECT COMPLETE SCHEDULE FORECAST: The current projected date for the completion of the program, project, or contract.

SCHEDULE VARIANCE or VARIANCE (schedule): The mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

% COMPLETE: % Complete is based on an evaluation of progress on the project, expenditures to date, and schedule.



Government code Section 755. This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) on the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs.

