ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT
SF-101 Bridge Painting (EA 04-2J800)

Resolution SHOPP-P-1819-09B
(will be completed by CTC)

1. FUNDING PROGRAM

- ☐ Active Transportation Program
- ☐ Local Partnership Program (Competitive)
- ☐ Solutions for Congested Corridors Program
- ☒ State Highway Operation and Protection Program
- ☐ Trade Corridor Enhancement Program

2. PARTIES AND DATE

2.1 This Project Baseline Agreement (Agreement) for the *SF-101 Bridge Painting (EA 04-2J800)*, effective on, DECEMBER 6, 2018 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, *Caltrans*, and the Implementing Agency, *Caltrans*, sometimes collectively referred to as the "Parties".

3. RECITAL

3.2 Whereas at its March 22, 2018 meeting the Commission approved the State Highway Operation and Protection Program, and included in this program of projects the *SF-101 Bridge Painting (EA 04-2J800)*, the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as Exhibit A and the Project Report attached hereto as Exhibit B, as the baseline for project monitoring by the Commission.

3.3 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.

4.2 To adhere, as applicable, to the provisions of the Commission:

- ☐ Resolution *Insert Number*, "Adoption of Program of Projects for the Active Transportation Program", dated
- ☐ Resolution *Insert Number*, "Adoption of Program of Projects for the Local Partnership Program", dated
- ☐ Resolution *Insert Number*, "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
- ☒ Resolution G-18-13, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated March 22, 2018
- ☐ Resolution *Insert Number*, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated

4.3 All signatories agree to adhere to the Commission's State Highway Operation and Protection Program, Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.

4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.

4.5 Caltrans agrees to secure funds for any additional costs of the project.

4.6 Caltrans agrees to report on a quarterly basis; after July 2019, reports will be on a semi-annual basis on the progress made toward the implementation of the project, including scope, cost, schedule, outcomes, and anticipated benefits.

4.7 Caltrans agrees to prepare program progress reports on a quarterly basis; after July 2019, reports will be on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.

4.8 Caltrans agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.

4.9 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits during the course of the project, and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.10 The Transportation Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for four years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

5.1 Project Schedule and Cost
See Project Programming Request Form, attached as Exhibit A.

5.2 Project Scope
See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.

5.3 Other Project Specific Provisions and Conditions

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT
SF-101 Bridge Painting (EA 04-2J800)

Resolution SHOPP-P-1819-09B

Rui "Ricky" Gao — Date 10/31/2018

Project Manager

Project Applicant

Tony Tavares — Date 10/31/18

District Director

California Department of Transportation

Laurie Berman — Date 11/13/18

For

Director

California Department of Transportation

Susan Bransen — Date 1/31/19

Executive Director

California Transportation Commission

Baseline agreement information was extracted from Caltrans' project data systems. Project description, funding and performance measures are from CTIPS. Project delivery milestones are from PRSM. All information is current and accurate.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

BASELINE AGREEMENT | **Date:** 10/31/18 03:10:19 PM

District	EA	Project ID	PPNO	Project Manager
04	2J800	0415000034	1483S	GAO, RUI

County	Route	Begin Postmile	End Postmile	Implementing Agency	
SF	101	4.1	R 5.1	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Caltrans

Project Nickname

04-2J800_SF 101 Bridge Painting PID

Location/Description

In the City and County of San Francisco, at the Central Viaduct No. 34-0077 from south of 17th Street to S. Van Ness Avenue; also on Route 80, at the Bayshore Viaduct No. 34-0088 from Route 101 to 4th Street (PM 3.9/4.8). Paint superstructure steel members. (G13 Contingency)

Legislative Districts

Assembly:	17	Senate:	11	Congressional:	08

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Bridge Goods Movement Upgrades			1206138.0		1206138	Square feet
Programmed Condition	Bridge Goods Movement Upgrades	1206138.0				1206138	Square feet

Project Milestone	Actual	Planned
Project Approval and Environmental Document Milestone		12/01/18
Right of Way Certification Milestone		03/01/20
Ready to List for Advertisement Milestone		04/01/20
Begin Construction Milestone (Approve Contract)		12/15/20

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	17/18	2,500					2,500
PS&E	18/19	9,200					9,200
RW Support	18/19	300					300
Const Support	19/20	13,000					13,000
RW Capital	19/20	62					62
Const Capital	19/20	100,793					100,793
Total		125,855					125,855

04 - SF - 80, 101 - 3.8/5.0, 4.1/R5.1
EA 04-2J8000 – Project No.: 0415000034 – PPNO 1483S
SHOPP 20.XX.201.110 – Bridge Rehabilitation Program
December 2018

Project Report

For Project Approval

On Routes 80 and 101 in the City and County of San Francisco

At Central Viaduct (Bridge No. 34-0077)

And Bayshore Viaduct (Bridge No. 34-0088)

I have reviewed the right-of-way information contained in this report and the Right of Way Data Sheet attached hereto and find the data to be complete, current, and accurate:

Mark L. Weaver, Deputy District Director
Right of Way and Land Surveys

APPROVAL RECOMMENDED:

Rui (Ricky) Gao, Project Manager

Lawrence A. Jones, Office Chief, Design, Special Projects

PROJECT APPROVED:

Helena (Lenka) Culik-Caro
Deputy District Director, Design

December 21, 2018
Date

Vicinity Map

This project report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

REGISTERED CIVIL ENGINEER *DATE* 12/14/18

REGISTERED PROFESSIONAL ENGINEER
Hung H. Do
No. C55485
Exp. 12/31/20
CIVIL
STATE OF CALIFORNIA

Table of Contents

1. INTRODUCTION

This project proposes to paint the superstructure steel members of the Central Viaduct (Bridge No. 34-0077) and the Bayshore Viaduct (Bridge No. 34-0088) on U.S. Highway 101 (US-101) and Interstate 80 (I-80) in the City and County of San Francisco. Refer to Attachment A for the location map. The cost of the project is estimated to be $100,793,000. Refer to Attachment B for the cost estimate. Funding will come from the State Highway Operation and Protection Program (SHOPP) 201.110 (Bridge Rehabilitation Program) in the 2019/20 fiscal year. The following table summarizes some of the key details of the project.

Project Limits	04 - SF - 80/101 PM 3.8/5.0,4.1/R5.1	
Number of Alternatives	Two (Including the No-Build Alternative)	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay Support	$25,000,000	$25,000,000
Capital Outlay Construction	$82,052,000	$100,793,000
Capital Outlay Right of Way	$215,000	$229,000
Total Capital Outlay Costs	**$107,267,000**	**$126,022,000**
Funding Source	SHOPP 201.110	
Funding Year	Fiscal year 2019/20	
Type of Facility	Multi-lane freeway	
Number of Structures	Two	
SHOPP Project Output	Two bridges	
Environmental Determination or Document	Categorical Exemption (CEQA)/Categorical Exclusion (NEPA)	
Legal Description	In The City and County of San Francisco on Route 80 From 17th Street to 4th Street and on Route 101 From 17th Street to South Van Ness Avenue	
Project Development Category	Category 5	

Notes:
CEQA = California Environmental Quality Act
NEPA = National Environmental Policy Act
PM = post mile
SF = City and County of San Francisco
SHOPP = State Highway Operation and Protection Program

2. RECOMMENDATION

It is recommended that this report be approved and proceed to design phase.

3. BACKGROUND

US 101 is one of the last remaining and longest U.S. routes still active, and the longest of any kind, in California, running 807 miles from Los Angeles in the south to the Oregon border in the north. It was one of the original national routes established in 1926. Although the highway has been superseded in overall importance for transport through the state by Interstate 5, US 101 continues to be the major coastal north–south route that links the greater Los Angeles area, the Central Coast, the San Francisco Bay Area, and areas to the north.

In the San Francisco Bay Area, US 101 is primarily urban in character; it serves as a major south-north connector between Silicon Valley in the South Bay and San Francisco. US 101 on the Peninsula is the main access route to the San Francisco International Airport (SFO). The Bayshore Freeway, as it is called on the Peninsula, is generally eight to ten lanes.

US 101 in San Francisco is also referred to as the "James Lick Freeway," named after philanthropist James Lick, from the San Francisco–San Mateo county line to the junction with I-80 and the Central Freeway near the Civic Center in San Francisco. US 101 continues in a northwestern direction on the Central Freeway, and then leaves the freeway to run north on Van Ness Avenue. At the intersection of Van Ness Avenue and Lombard Street, US 101 heads west on Lombard Street and then onto Richardson Avenue near the Presidio, where it becomes a divided highway again (joined by State Route 1) before approaching and crossing the Golden Gate Bridge.

The Central Viaduct is within the Central Freeway segment. The project limits are from 17th Street to the south and South Van Ness Avenue to the west for a length of about 1 mile. The structure was constructed in 1955 of reinforced concrete deck on welded steel girders, steel bent caps on steel columns with U-shaped-seat type abutments founded on both pile and spread footings. The structure was seismically retrofitted in 1996. The available paint records show that some localized areas of the structure were repainted in 1959 and 1982.

I-80 is a transcontinental highway running from San Francisco to Teaneck, New Jersey. Designated in 1956 and named the "Dwight D. Eisenhower Highway," it was one of the original routes of the Interstate Highway System.

In the San Francisco Bay Area, I-80 is generally eight to ten lanes, urban in character, and serves as a major west-east connector between the San Francisco Peninsula and

the East Bay. I-80 begins at the interchange with US 101 near 17th Street in San Francisco, crosses the San Francisco–Oakland Bay Bridge into Oakland and the East Bay, and then heads northeast through Vallejo toward Sacramento and the Sierra Nevada mountains into Nevada.

The Bayshore Viaduct is along the segment of I-80 in San Francisco, beginning about a mile from the Bay Bridge at 4th Street and extending about 1 mile into the city. The project limits for this viaduct are from 4th Street to the north and 17th Street to the south. The structure was constructed in 1955 and is a similar structure type as the Central Viaduct except for the reinforced concrete box girder spans on reinforced concrete bents at 4th, 5th, 6th, and 7th Streets. It was seismically retrofitted in 1999. There is no paint record available.

A Project Scope Summary Report (Structure Rehabilitation) was approved on June 29, 2015, and serves as the Project Initiation Document for this project.

4. PURPOSE AND NEED

Purpose:

The purpose of this project is to preserve the existing steel structures of the Central Viaduct and the Bayshore Viaduct.

Need:

The project is needed because water leaks from the decks through the joints and expedites the deterioration of the paint on the superstructure steel members below the deck joints.

4A. Problem, Deficiencies, Justification

The paint has peeled off in numerous locations on the superstructure steel members. In addition, there has been active corrosion on the top and bottom flanges of most bent caps, the bearing assemblies, the girders, and some of the columns. The paint conditions of the steel girders are worse near the bent caps due to the drainage from the joints. Recommendations to remove and replace the deteriorated paint system after replacement of the joint seals have been documented in Bridge Inspection Reports since 2003 for the Central Viaduct and since 2005 for the Bayshore Viaduct. A joint seal replacement project for both structures was implemented in 2010 and completed in 2013.

4B. Regional and System Planning

Regional and system planning are not applicable to this project. A change is not anticipated in the use or operation of US 101 or I-80 as a result of the project.

4C. Traffic

Traffic data for SF 101 at Junction I-80 post mile (PM) 4.15 are as follows:

ADT (2015)	296,000
Construction year ADT (2019)	331,000
10-year ADT (2029)	417,000
20-year ADT (2039)	503,000
% Trucks	1.7%

Notes: ADT = Average Daily Traffic

Collision data are not applicable to this project.

5. ALTERNATIVES

5A. Viable Alternatives

The Build Alternative, referred to as "Repaint the Structures," will include cleaning and painting the bent caps, steel girders, stiffeners, steel columns, steel casing, cross bracing, horizontal stressing brackets, and appurtenances. In areas where the paint has peeled off and the steel shows rust stains, spot blast cleaning will be performed and a new undercoating will be applied before painting.

Nonstandard Mandatory and Advisory Design Features

There are no nonstandard design features proposed in this project. Since this project only involves painting underneath the structures and does not alter the roadway

geometry, it is acceptable that existing nonstandard features will remain. No further documentation is required.

5B. Rejected Alternatives

The No-Build Alternative would allow the structure to further deteriorate, possibly necessitating a partial or full structure replacement in the future.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

The contractor will be required to erect containment systems to perform structural steel painting work. These are scaffolding with platforms where the workers can safely accomplish the tasks of cleaning, blasting, and painting in a contained ventilated space. All water, resulting debris, and visible dust produced from the project must be contained. The existing paint is hazardous and needs to be contained when it is removed. The containment systems must meet design criteria such as clearance to the roadbed to allow trucks and other high vehicles space to drive underneath the system.

6B. Value Analysis

A Value Analysis (VA) study for this project was completed in November 2018. The VA study report, dated December 4, 2018, recommends that a pre-assessment of the viaducts be performed during design to determine the exact condition of the paint along the structure. Another recommendation is to use inorganic zinc primer in spot blasted areas and fluoropolymer finish coating on exterior and bottom areas for better resistance to sun damage.

6C. Resource Conservation

Resource conservation is not applicable to this project.

6D. Right of Way

General

A Right of Way Data Sheet (Attachment C) has been prepared based on the project scope of work and the maps provided by the Division of Design. Work will be completed in stages to minimize disruption to the parking lots under the structures. It is anticipated that the Contractor will close off a section underneath the structure, install the scaffolding and containment system, then reopen the area underneath. A small area will be reserved for the Contractor to store the heavy equipment, such as air compressor, waste water tanks, and debris bins. Once one section is completed, the Contractor will move his operation to the next section and fully open the area underneath for use.

Permanent right-of-way acquisitions are not required; however, temporary construction easements (TCEs) are required from six of the 40 parcels on this project.

Railroad

Project locations do not contain any railroad right-of-way, railroad involvement is not anticipated on this project.

Utilities

The overhead electrical lines for San Francisco Municipal Railway (Muni) will be de-energized as required during construction.

6E. Environmental Compliance

The project is Categorically Exempt under Class 1 of the State California Environmental Quality Act (CEQA) Guidelines. Also, the project is Categorically Excluded under the National Environmental Policy Act (NEPA). The Categorical Exemption/Categorical Exclusion Determination Form, dated August 1, 2018, is provided as Attachment D.

6F. Air Quality Conformity

Air quality conformity is not required.

Construction-Related Greenhouse Gas (GHG) emissions are as follows:

Build Alternative	Construction-Related GHG Emissions			
	Parameters			Total
	CO_2 (tons)	CH_4 (tons)	NO_2 (tons)	CO_2e (MT)[1]
TOTAL	1,490.08	0.28	0.04	1,362.28
Annual	372.52	0.07	0.01	340.57

1 - Gases are converted to CO_2e by multiplying by their GWP. Specifically, GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO_2.

Notes:
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
GWP = global warming potential
NO_2 = nitrogen dioxide

6G. Title VI Considerations

Title VI is not applicable to this project.

6H. Noise Abatement Decision Report

The proposed work is not considered Type 1 per Title 23 Code of Federal Regulations (CFR) § 772 and the California Department of Transportation (Caltrans) Noise Analysis Protocol. Neither a Noise Abatement Decision Report nor a Traffic Noise Study is required for the project.

6I. Stormwater / Water Quality Compliance

The project has a disturbed soil area (DSA) less than 1 acre. To comply with the conditions of the Caltrans NPDES Permit (NPDES No. CAS000003) and address the temporary water quality impacts resulting from the construction activities in this project, the construction activities need to comply with Standard Specifications 13-2 "Water Pollution Control Program". These Standard Specifications address the preparation of Water Pollution Control Program (WPCP) document and the implementation of WPCP during construction.

Best Management Practices (BMPs) need to be implemented to address the temporary water quality impacts resulting from the construction activities in the project. BMPs

will include the measures of soil stabilization, sediment control, wind erosion control, tracking control, non-storm water management, and waste management/materials pollution control. Appropriate BMPs and their quantities need to be developed during the PS & E phase. Permanent Erosion Control measures may also be implemented in the project to stabilize all the disturbed areas as a mean of source control. The approved Stormwater Data Report (SWDR) summarizes all the proposed measures for the project (see attachment E).

7. OTHER CONSIDERATIONS AS APPROPRIATE

7A. Transportation Management Plan

A Transportation Management Plan (TMP) will be prepared for the project. City streets and lane closures are expected during construction. The TMP is designed to be implemented during construction to assist and minimize impacts to the traveling public. The TMP will make available public information such as press releases and notifications to impacted groups (e.g., motorists, bicycle users, pedestrians). In addition, the TMP may discuss how lane closures, portable changeable message signs, flaggers, and the California Highway Patrol's Construction Zone Enhanced Enforcement Program (COZEEP) may be used to minimize delays to the traveling public. The cost estimate for the TMP is $401,600. The TMP will be developed and refined during the design phase. Refer to Attachment F for the Transportation Management Plan Data Sheet.

7B. Stage Construction

This project will impact the normal operations of the parking lots underneath the structures. Work will be done in stages to minimize impacts to the parking lots. Detailed plans will be developed during the design phase.

8. FUNDING, PROGRAMMING AND ESTIMATE

8A. Funding

This project is to be funded under SHOPP Bridge Rehabilitation Program (201.110). It is listed in the 2018 SHOPP project list for San Francisco County.

It has been determined that this project is eligible for Federal-aid funding.

8B. Programming

Fund Source	Fiscal Year Estimate								
20.XX.201.110	Prior	15/16	16/17	17/18	18/19	19/20	20/21	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support	—	—	—	1000	1,500	—	—	—	2,500
PS&E Support	—	—	—	—	9,200	—	—	—	9,200
Right-of-Way Support	—	—	—	—	300	—	—	—	300
Construction Support	—	—	—	—	—	13,000	—	—	13,000
Right-of-Way	—	—	—	—	—	62	—	—	62
Construction	—	—	—	—	—	100,793	—	—	100,793
Total	—	—	—	1,000	11,000	113,855	—	—	125,855

The support cost ratio is 24.8%.

In addition to regular PS&E work, the PS&E support cost will also address the following two items:

1. Pre-assessment effort will be spent to inspect the existing paint condition during design phase, as recommended in VA Study report and lessons learned from Richmond-San Rafael Bridge Paint project. Paint experts and crew will be hired through METS task order to conduct a full inspection including a paint pull and sheer test, which requires temporary scaffolding and lane closures. Pre-assessment will determine the actual condition of the paint and helps provide a more accurate cost estimate, reducing construction risks.

2. This project involves large amount of effort to coordinate with various businesses and local agencies along the Bay Shore and Central Viaducts, including City, County, and Hall of Justice.

The Right of Way capital cost increased from $62,000 to $229,000 due to additional parcels and temporary construction easements (TCEs) identified in the PAED phase for this project. A Project Change Request (PCR) will be processed to increase the Right of Way capital.

8C. Estimate

The estimated construction capital cost is $100,793,000. The cost estimate breakdown is provided as Attachment B.

9. DELIVERY SCHEDULE

Project Milestones		Milestone Date	Milestone Designation
PROGRAM PROJECT	M015	03/01/16	Actual
BEGIN ENVIRONMENTAL	M020	07/01/16	Actual
PA & ED	M200	12/14/18	Target
BEGIN STRUCTURE	M215	12/01/18	Target
PS&E TO DISTRICT OFFICE ENGINEER	M377	10/01/19	Target
DRAFT STRUCTURES PS&E	M378	11/01/19	Target
PROJECT PS&E	M380	12/01/19	Target
RIGHT OF WAY CERTIFICATION	M410	04/01/20	Target
READY TO LIST	M460	04/01/20	Target
AWARD	M495	11/15/20	Target
APPROVE CONTRACT	M500	12/15/20	Target
CONTRACT ACCEPTANCE	M600	10/01/25	Target
END PROJECT EXPENDITURES	M800	06/02/26	Target
FINAL PROJECT CLOSEOUT	M900	12/01/28	Target

10. RISKS

Since this project will impact city streets and parking lots owned by the State of California and others under the structures, there are possible risks as Caltrans carries the project forward into future phases. Effective communication with the City, the State's lessees, and other owners, will be crucial for successful coordination and timely execution of appropriate permits and agreements during construction.

Monitoring and exclusion plans for biological resources, such as nesting birds and bats, may be required before and during construction.

Currently identified risks correlated with the development and management of this project and mitigation measures are listed and described in Attachment G. These risks may affect the cost estimate and schedule of the proposed project.

11. EXTERNAL AGENCY COORDINATION

11A. Federal Highway Administration

The project is considered a Delegated Project in accordance with the current Joint Stewardship and Oversight Agreement between the Federal Highway Administration (FHWA) and Caltrans, dated May 28, 2015.

11B. Local Agencies

Caltrans will coordinate with the City and County of San Francisco during design and construction.

12. PROJECT REVIEWS

Review Topic	Assigned Reviewer	Completion Date
Scoping Team Field Review	Hung Do	12/1/18
District Program Advisor	John Hemiup	No Comments
Headquarters Program Advisor	Takako Jujioka	No Comments
District Maintenance	Leah Budu	No Comments
Project Manager	Rui (Ricky) Gao	11/21/18
Federal Highway Administration	Lanh Phan	No Comments
District Safety Review	Erwin Madlangbayan	12/4/18
Constructability Review	Mohinder Chahal	11/29/18

13. PROJECT PERSONNEL

Title	Name	Phone No.
Program Advisor	John Hemiup	(510) 286-5213
Project Manager	Rui (Ricky) Gao	(510) 286-6204
Design Office Chief	Lawrence A. Jones	(510) 286-5080
Design Manager	Richelle Perez	(510) 286-4998
Project Engineer	Hung Do	(510) 286-4745
Biologist	Gregory Pera	(510) 286-5617
Environmental Planner	Natalie Escoffier	(510) 587-7616
Environmental Senior Planner	Eric DeNardo	(510) 622-0803
Hazardous Waste Branch Chief	Christopher Wilson	(510) 286-5647
Right of Way Senior Agent	Sunnie Stanton	(510) 286-5476
Traffic Management Manager	Juliana Gum	(510) 286-4579
Traffic Management Senior	Cesar Pujol	(510) 286-4594
Traffic Safety Senior, SF	Katie Yim	(510) 286-4578
Water Pollution Control/Water Quality Branch Chief	Kamran Nakhjiri	(510) 286-5664

14. ATTACHMENTS (Number of Pages)

A. Location Map (1)

B. Project Cost Estimate (15)

C. Right of Way Data Sheet (5)

D. Categorical Exemption/Categorical Exclusion Determination (5)

E. Stormwater Data Report Signed Cover (1)

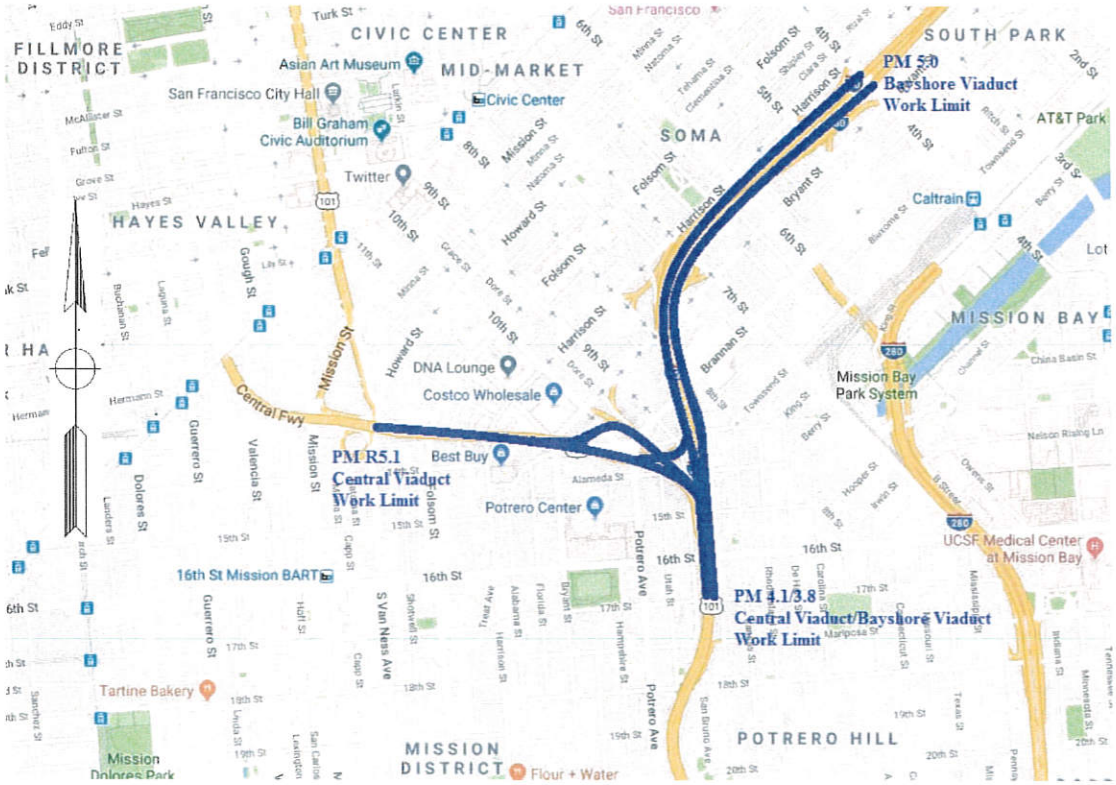
F. Transportation Management Plan Data Sheet (2)

G. Risk Register (5)

Attachment A

Location Map

Location Map



In the City and County of San Francisco on Route 80 From 17th Street to 4th Street and on Route 101 From 17th Street to South Van Ness Avenue.

Attachment B

Project Cost Estimate

PROJECT
PLANNING COST ESTIMATE

EA: 04-2J8000 PID: 04-1500-0034

EA: 04-2J8000

PID: 04-1500-0034

District-County-Route: 04-SF-80,101

PM: 3.8/5.0, 4.1/R5.

Type of Estimate : Project Report

Program Code : SHOPP-201.110

Project Limits : In The City and County of San Francisco on Route 80 From 17th Street to 4th Street and on Route 101 From 17th Street to South Van Ness Avenue

Project Description: Structure Painting

Scope : Clean and Paint two bridges in the city of San Francisco

Alternative : Preferred

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost	
TOTAL ROADWAY COST	$ 3,727,317	$ 4,578,623	
TOTAL STRUCTURES COST	$ 78,324,601	$ 96,213,671	
SUBTOTAL CONSTRUCTION COST	$ 82,051,918	$ 100,792,295	
TOTAL RIGHT OF WAY COST	$ 215,000	$ 229,000	
TOTAL CAPITAL OUTLAY COSTS	**$ 82,267,000**	**$ 101,022,000**	(*)
PA/ED SUPPORT	$ 2,500,000	$ 2,500,000	
PS&E SUPPORT	$ 9,200,000	$ 9,200,000	
RIGHT OF WAY SUPPORT	$ 300,000	$ 300,000	
CONSTRUCTION SUPPORT	$ 13,000,000	$ 13,000,000	
TOTAL SUPPORT COST	**$ 25,000,000**	**$ 25,000,000**	

(*) The escalation rate of 4.2% has been used to mid-year of construction

TOTAL PROJECT COST	**$ 107,267,000**	**$ 126,022,000**

Programmed Amount **$126,022,000**

	Month / Year
Date of Estimate (Month/Year)	1 / 2018
Estimated Construction Start (Month/Year)	12 / 2020
Number of Working Days =	**1148**
Estimated Mid-Point of Construction (Month/Year)	6 / 2023
Estimated Construction End (Month/Year)	6 / 2025
Number of Plant Establishment Days	0

Estimated Project Schedule

PID Approval	6/29/2015
MS 200 PA/ED Approval	12/14/2018
MS 380 PS&E	12/1/2019
MS 460 RTL	4/1/2020
Begin Construction	12/15/2020

Reviewed by District O.E. or Cost Estimate Certifier

Thanh Luu — 12/12/2018 — (510) 622-0747

Thanh Luu, Cost Estimate Certifier | **Date** | **Phone**

Approved by Project Manager

12/11/2018 — (510) 286-6204

Rui (Ricky) Gao, Project Manager | **Date** | **Phone**

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	$ -
2	Pavement Structural Section	$ -
3	Drainage	$ -
4	Specialty Items	$ 210,000
5	Environmental	$ 284,000
6	Traffic Items	$ 520,000
7	Detours	$ -
8	Minor Items	$ 101,400
9	Roadway Mobilization	$ 111,540
10	Supplemental Work	$ 505,847
11	State Furnished	$ 1,505,800.00
12	Time-Related Overhead	$ 111,540.00
13	Roadway Contingency	$ 377,190
	TOTAL ROADWAY ITEMS	**$ 3,727,317**

Estimate Prepared By :

Tim Le, Design Engineer — 12/11/2018 (Date) — 510-286-7224 (Phone)

Estimate Reviewed By :

Hung Do, Project Engineer — 12/11/18 (Date) — 510-286-4745 (Phone)

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

EA: 04-2J8000 PID: 04-1500-0034

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
190101	Roadway Excavation	CY	0	x		=	$	-
170103	Clearing & Grubbing	LS	0	x		=	$	-

TOTAL EARTHWORK SECTION ITEMS	$	-

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
250401	Class 4 Aggregate Subbase	CY	0	x		=	$	-
397005	Tack Coat	TON	0	x		=	$	-
731502	Minor Concrete (Miscellaneous Construction)	CY	0	x		=	$	-
731850	Remove Concrete (Curb, Gutter, and Sidewalk	CY	0	x		=	$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD	0	x		=	$	-
731627	Minor Concrete (Curb, Sidewalk And Curb Ram	CY	0	x		=	$	-
390136	Minor Hot Mix Asphalt	TON	0	x		=	$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	$	-

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
710182	Reconstruct Drainage Facility (LS)	LS		x		=	$	-

TOTAL DRAINAGE ITEMS	$	-

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
070030	Lead Compliance Plan	LS	1	x	110,000.00	=	$	110,000
080050	Progress Schedule (Critical Path Method)	LS	1	x	100,000.00	=	$	100,000

TOTAL SPECIALTY ITEMS	$	210,000

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)		Cost
	Biological Mitigation	LS		x		= $	-
130670	Temporary Reinforced Silt Fence	LF		x		= $	-
141000	Temporary Fence (Type ESA)	LF		x		= $	-
						Subtotal Environmental Mitigation	*$* -

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)		Cost
200052	Prune Existing Plants	LS		x		= $	-
200002	Roadside Clearing (Remove Trees)	LS		x		= $	-
						Subtotal Landscape and Irrigation	*$* -

5C - EROSION CONTROL

Item code		Unit	Quantity		Unit Price ($)		Cost
210010	Move In/Move Out (Erosion Control)	EA		x		= $	-
210350	Fiber Rolls	LF		x		= $	-
210360	Compost Sock	LF		x		= $	-
2102XX	Rolled Erosion Control Product (X)	SQFT		x		= $	-
21025X	Bonded Fiber Matrix	SQFT/ACRE		x		= $	-
210300	Hydromulch	SQFT		x		= $	-
210420	Straw	SQFT		x		= $	-
210430	Hydroseed	SQFT		x		= $	-
210600	Compost	SQFT		x		= $	-
210630	Incorporate Materials	SQFT		x		= $	-
						Subtotal Erosion Control	*$* -

5D - NPDES

Item code		Unit	Quantity		Unit Price ($)		Cost
130200	Prepare WPCP	LS	1	x	80,000.00	= $	80,000
130100	Job Site Management	LS	1	x	170,000.00	= $	170,000
130620	Temporary Drainage Inlet Protection	LS	1	x	34,000.00	= $	34,000
130730	Street Sweeping	LS	1	x		= $	-
						Subtotal NPDES	*$* *284,000*

TOTAL ENVIRONMENTAL	**$**	**284,000**

Supplemental Work for NPDES

066595	Water Pollution Control Maintenance Sharing*	LS	1	x	100,000.00	= $	100,000
066596	Additional Water Pollution Control**	LS	1	x	100,000.00	= $	100,000
066597	Storm Water Sampling and Analysis***	LS		x		= $	-
						Subtotal Supplemental Work for NDPS	*$* *200,000*

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)		Cost
860201	Signal and Lighting (APS and Countdown time	LS		x		= $	-
860090	Maintain Existing Traffic Management System Elements During Construction	LS		x		= $	-

Subtotal Traffic Electrical $ -

6B - Traffic Striping

Item code		Unit	Quantity		Unit Price ($)		Cost
150712	Remove Painted Pavement Marking	LS		x		= $	-
846012	Thermoplastic Crosswalk and Pavement Marking (Enhanced, Wet Night Visibility)	SQFT		x		= $	-
120090	Construction Area Signs	LS	1	x	100,000.00	= $	100,000

Subtotal Traffic Signing and Striping $ 100,000

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price ($)		Cost
128652	Portable Changeable Message Signs	LS	1	x	$ 60,000	= $	60,000

Subtotal Traffic Management Plan $ 60,000

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)		Cost
120100	Traffic Control System	LS	1	x	$ 360,000	= $	360,000
124000	Temporary Pedestrian Access Route	LS	0	x	$ -	= $	-

Subtotal Stage Construction and Traffic Handling $ 360,000

TOTAL TRAFFIC ITEMS $ 520,000

SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)		Cost
190101	Roadway Excavation	CY		x		= $	-
19801X	Imported Borrow	CY/TON		x		= $	-
390132	Hot Mix Asphalt (Type A)	TON		x		= $	-
26020X	Class 2 Aggregate Base	TON/CY		x		= $	-
250401	Class 4 Aggregate Subbase	CY		x		= $	-
130620	Temporary Drainage Inlet Protection	EA		x		= $	-
129000	Temporary Railing (Type K)	LF		x		= $	-
128601	Temporary Signal System	LS		x		= $	-
120149	Temporary Pavement Marking (Paint)	SQFT		x		= $	-
80010X	Temporary Fence (Type X)	LF		x		= $	-

TOTAL DETOURS	$	-

SUBTOTAL SECTIONS 1 through 7	$	1,014,000

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items							
ADA Items						$	-
8B - Bike Path Items							
Bike Path Items						$	-
8C - Other Minor Items							
Other Minor Items					10.0%	$	101,400
Total of Section 1-7		$	1,014,000	x	10.0%	= $	101,400

TOTAL MINOR ITEMS	$	101,400

SECTIONS 9: MOBILIZATION

Item code							
999990	Total Section 1-8	$	1,115,400	x	10%	= $	111,540

TOTAL MOBILIZATION	$	111,540

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)		Cost
066070	Maintain Traffic	LS	1	x	100,000.00	= $	100,000
066610	Partnering	LS	1	x	90,000.00	= $	90,000
066025	Explore For Underground Facilities	LS	1	x		= $	-
	Dispute Resolution Board	LS	1	x	45,000.00	= $	45,000
	Cost of NPDES Supplemental Work specified in Section 5D					= $	200,000
	Total Section 1-10	$	1,416,940		5%	= $	70,847

TOTAL SUPPLEMENTAL WORK	$	505,847

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066105	Resident Engineers Office	LS	1	x	1,000,000.00	=	$1,000,000
066063	Traffic Management Plan - Public Information	LS	1	x	100,000.00	=	$100,000
066062	COZEEP Contract	LS	1	x	350,000.00	=	$350,000

Total Section 1-8	$	1,115,400	5%	= $	55,770

TOTAL STATE FURNISHED	$1,505,800

SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway Contract Items excluding Mobilization	$1,115,400	(used to calculate TRO, Structure TRO is included in APS)
Total Construction Cost (excluding TRO and Contingency)	$81,563,188	(used to check if project is greater than $5 million excluding contingency)

Estimated Time-Releated Overhead (TRO) Percentage (0% to 10%) = **10%**

Item code		Unit	Quantity		Unit Price ($)		Cost
090105	Time-Related Overhead	LS	1	x	$111,540	=	$111,540

TOTAL TIME-RELATED OVERHEAD	$111,540

Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Roadway Additions	$	2,514,600	x	15%	=	$377,190
	$					

TOTAL CONTINGENCY	$377,190

II. STRUCTURE ITEMS

	Bridge 1		Bridge 2		
DATE OF ESTIMATE	12/21/17		12/21/17		00/00/00
Bridge Name	Bayshore Viaduct		Central Viaduct		xxxxxxxxxxxxxxxxxx
Bridge Number	34-0088		34-0077		57-XXX
Structure Type	Steel		Steel		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0		$0		$0
COST OF EACH	**$24,762,026**		**$26,504,986**		**$0**

DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Name	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$100		$0		$0
COST OF EACH	**$0**		**$0**		**$0**

TOTAL COST OF BRIDGES		**$51,267,012**
TOTAL COST OF BUILDINGS		**$0**
Structures TRO	10%	**$5,126,701**
Structures Mobilization Percentage	10%	**$6,265,968**

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	25%	**$15,664,920**

Structure Total	**$78,324,601**

See attached APS for Structure Cost

Estimate Prepared By: _____ _____

Simona Dollaga ------ Division of Structures — Date

EA: 04-2J8000 PID: 04-1500-0034

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	$	200,000
	A2)	SB-1210	$	0
B)		Acquisition of Offsite Mitigation	$	0
C)	C1)	Utility Relocation (State Share)	$	0
	C2)	Potholing (Design Phase)	$	0
D)		Railroad Acquisition	$	0
E)		Clearance / Demolition	$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	$	0
G)		Title and Escrow	$	15,000
H)		Environmental Review	$	0
I)		Condemnation Settlements 0%	$	0
J)		Design Appreciation Factor 0%	$	0
K)		Utility Relocation (Construction Cost)	$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	$215,000
M)	TOTAL R/W ESTIMATE: Escalated	$229,000
N)	RIGHT OF WAY SUPPORT	$300,000

Support Cost Estimate Prepared By	Sunnie Stanton	District Branch Chief - R/W Project Coordination	(510) 286-5476 Phone
Utility Estimate Prepared By		Utiliy Coordinator	Phone
R/W Acquistion Estimate Prepared By		Right of Way Estimator	Phone

Note: Items G & H applied to Items A + B

[1] When estimate has Support Costs only [2] When estimate has Utility Relocation [3] When R/W Acquisition is required

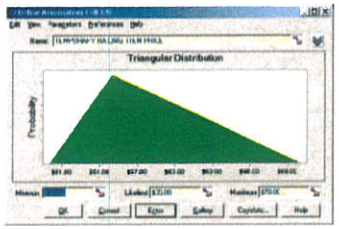
PROBABILISTIC STRUCTURE COST ESTIMATE

INPUT

[ ] GENERAL PLAN ESTIMATE [x] ADVANCE PLANNING ESTIMATE

Revised October 13, 2016

		IN EST:	12/14/2017
		OUT EST:	12/21/2017
BRIDGE NAME:	BAYSHORE VIADUCT		
BRIDGE NUMBER:	34-0088	**DISTRICT:**	04
TYPE:	BRIDGE PAINTING	**CO:**	SF
EA:	04-2J800	**RTE:**	80
PROJECT ID:	0415000034	**PM:**	3.8/4.8
ACCELERATED BRIDGE PROJECT	NO	**DEPTH**	
		LENGTH	
DESIGN SECTION:	BRANCH 4	**WIDTH**	
# OF STRUCTURES IN PROJECT :	2	**AREA**	
		EST. NO.	2
PRICES BY :	D. VORA	**COST INDEX:**	415
PRICES CHECKED BY :	S. DOLLAGA	**DATE:**	12/20/2017
QUANTITIES BY:	B. NGUYEN	**DATE:**	3/17/2015



The Assumption

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	ITEM PRICE RANGE MINIMUM	LIKELIEST	MAXIMUM	AMOUNT
1	CLEAN STRUCTURAL STEEL (EXISTING BRIDGE)		SQFT	1,317,824	$4.80	$5.75	$6.85	$7,577,488
2	PAINT STRUCTURAL STEEL (EXISTING BRIDGE)		SQFT	1,317,842	$4.50	$6.50	$8.35	$8,565,973
3	SPOT BLAST CLEAN AND PAINT UNDERCOAT		SQFT	395,347	$18.20	$21.80	$26.20	$8,618,565
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22								
23								
24								
25								
26								
27								
28								
29								
30								
							SUBTOTAL	$24,762,026

Comments

TIME RELATED OVERHEAD		10%	$2,476,203
MOBILIZATION		10%	$3,026,470
SUBTOTAL BRIDGE ITEMS			$30,264,698
CONTINGENCIES		25%	$7,566,174
		SUBTOTAL	$37,830,872

	TYPE	UNIT	QUANTITY	MINIMUM	LIKELIEST	MAXIMUM
BRIDGE REMOVAL		SF				

BRIDGE REMOVAL LUMP SUM PRICE INCLUDES TRO, MOBILIZATION AND CONTINGENCY

Notes

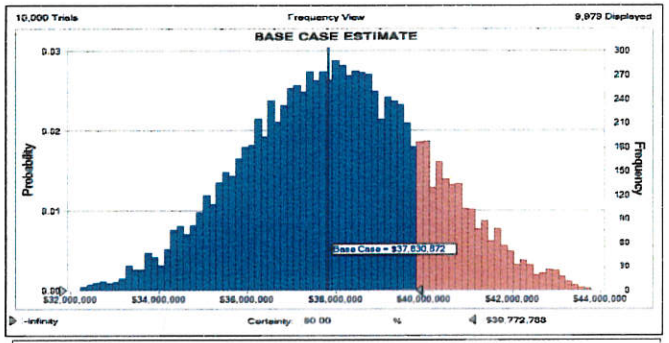
Highlighted cells represent the quantities and prices that are included in the model.
Base Case Estimate is the sum of the Quantity multiplied by "Likeliest" Item Price

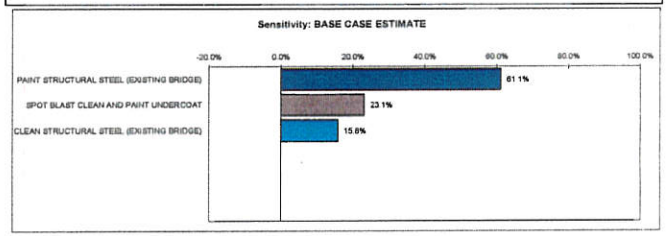
BASE CASE ESTIMATE TO ASSUMED MIDPOINT OF CONSTRUCTION

BASE CASE ESTIMATE: $37,830,872

OUTPUT

The estimate ranges generated below were prepared using Crystal Ball software. Crystal Ball software automatically calculates and records the results of thousands of different "what if" cases. Analysis of these scenarios reveals to you the range of possible outcomes, their probability of occurring, the inputs that most impact your model, and where you should focus your efforts.





Percentiles:	Forecast values	
0%	$30,784,340	
10%	$35,321,558	
20%	$36,218,041	
30%	$36,887,968	
40%	$37,456,504	
50%	$38,000,652	
60%	$38,524,327	
70%	$39,112,775	Recommended Range
80%	$39,772,788	
90%	$40,690,921	
100%	$45,202,570	

BASED ON THE ASSUMPTIONS USED TO CREATE THE MODEL, THE DES-STRUCTURE OFFICE ENGINEER RECOMMENDS THAT THE PROGRAMMING LEVEL BUDGET FOR THIS PROJECT BE DESIGNATED AT THE 80% FORECAST VALUE.

80% FORECAST VALUE = $39,773,000.00

***80% Forecast Value Escalated Budget Estimate to Assumed Midpoint of Construction**

Years Beyond Midpoint	Escalation Rate	Escalated Budget Est.
1	4.20%	$41,443,000
2	4.20%	$43,184,000
3	4.20%	$44,998,000
4	4.20%	$46,888,000
5	4.20%	$48,857,000

*Escalated structure cost is provided for information only, actual construction costs may vary. Escalated structure costs provided do not replace Departmental policy to update cost estimates annually. Escalation rates are based on current Caltrans Division of Budgets (DOB) recommendation that capital project costs shall be escalated at 4.2% annually.

80 % Forecast
BRIDGE COST PER SQUARE FOOT =
BRIDGE REMOVAL =

Bridge Cost per Square Foot and/or Bridge Removal costs modeled independently. Their 80% Forecast Values Provided for informational purposes only.

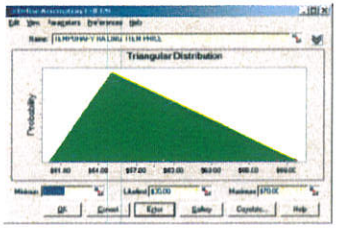
PROBABILISTIC STRUCTURE COST ESTIMATE

INPUT

[ ] GENERAL PLAN ESTIMATE [x] ADVANCE PLANNING ESTIMATE

Revised October 13, 2016

		IN EST:	12/14/2017
		OUT EST:	12/21/2017
BRIDGE NAME:	CENTRAL VIADUCT		
BRIDGE NUMBER:	34-0077	DISTRICT:	04
TYPE:	BRIDGE PAINTING	CO:	SF
EA:	04-2J800	RTE:	80
PROJECT ID:	0415000034	PM:	4.1 / R5.1
ACCELERATED BRIDGE PROJECT	NO	DEPTH	
		LENGTH	
DESIGN SECTION:	BRANCH 4	WIDTH	
# OF STRUCTURES IN PROJECT :	2	AREA	
		EST. NO.	2
PRICES BY :	D. VORA	COST INDEX:	415
PRICES CHECKED BY :	S. DOLLAGA	DATE:	12/20/2017
QUANTITIES BY:	B. NGUYEN	DATE:	3/17/2015



The Assumption

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	ITEM PRICE RANGE MINIMUM	LIKELIEST	MAXIMUM	AMOUNT
1	CLEAN STRUCTURAL STEEL (EXISTING BRIDGE)		SQFT	1,410,590	$4.80	$5.75	$6.85	$8,110,893
2	PAINT STRUCTURAL STEEL (EXISTING BRIDGE)		SQFT	1,410,590	$4.50	$6.50	$8.35	$9,168,835
3	SPOT BLAST CLEAN AND PAINT UNDERCOAT		SQFT	423,177	$18.20	$21.80	$26.20	$9,225,259
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27								
28								
29								
30								
							SUBTOTAL	$26,504,986

Comments

TIME RELATED OVERHEAD		10%	$2,650,499
MOBILIZATION		10%	$3,239,498
SUBTOTAL BRIDGE ITEMS			$32,394,983
CONTINGENCIES		25%	$8,098,746
		SUBTOTAL	$40,493,729

	TYPE	UNIT	QUANTITY	MINIMUM	LIKELIEST	MAXIMUM
BRIDGE REMOVAL		SF				

BRIDGE REMOVAL LUMP SUM PRICE INCLUDES TRO, MOBILIZATION AND CONTINGENCY

Notes

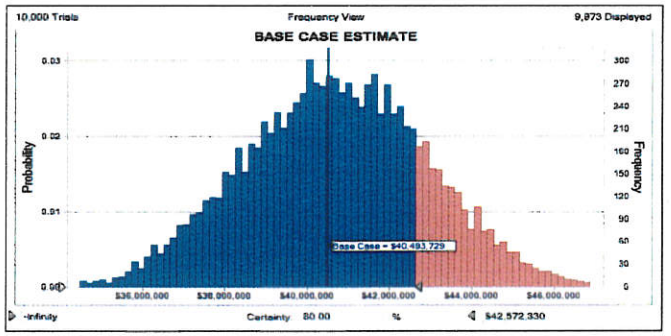
Highlighted cells represent the quantities and prices that are included in the model.
Base Case Estimate is the sum of the Quantity multiplied by "Likeliest" Item Price

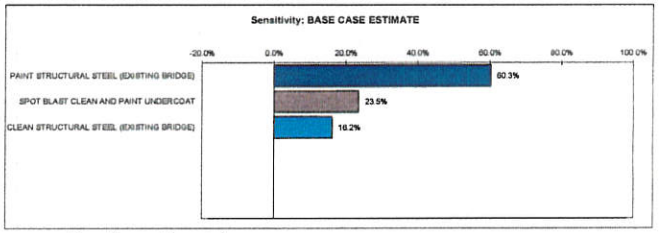
BASE CASE ESTIMATE TO ASSUMED MIDPOINT OF CONSTRUCTION

BASE CASE ESTIMATE $40,493,729

OUTPUT

The estimate ranges generated below were prepared using Crystal Ball software. Crystal Ball software automatically calculates and records the results of thousands of different "what if" cases. Analysis of these scenarios reveals to you the range of possible outcomes, their probability of occurring, the inputs that most impact your model, and where you should focus your efforts.





Percentiles:	Forecast values
0%	$33,218,169
10%	$37,761,567
20%	$38,753,528
30%	$39,494,660
40%	$40,108,297
50%	$40,673,473
60%	$41,276,127
70%	$41,889,284
80%	$42,572,330
90%	$43,519,831
100%	$47,833,100

Recommended Range

BASED ON THE ASSUMPTIONS USED TO CREATE THE MODEL, THE DES-STRUCTURE OFFICE ENGINEER RECOMMENDS THAT THE PROGRAMMING LEVEL BUDGET FOR THIS PROJECT BE DESIGNATED AT THE 80% FORECAST VALUE.

80% FORECAST VALUE = $42,572,000.00

***80% Forecast Value Escalated Budget Estimate to Assumed Midpoint of Construction**

Years Beyond Midpoint	Escalation Rate	Escalated Budget Est.
1	4.20%	$44,360,000
2	4.20%	$46,223,000
3	4.20%	$48,164,000
4	4.20%	$50,187,000
5	4.20%	$52,295,000

*Escalated structure cost is provided for information only, actual construction costs may vary. Escalated structure costs provided do not replace Departmental policy to update cost estimates annually. Escalation rates are based on current Caltrans Division of Budgets (DOB) recommendation that capital project costs shall be escalated at 4.2% annually.

80 % Forecast
BRIDGE COST PER SQUARE FOOT =
BRIDGE REMOVAL =

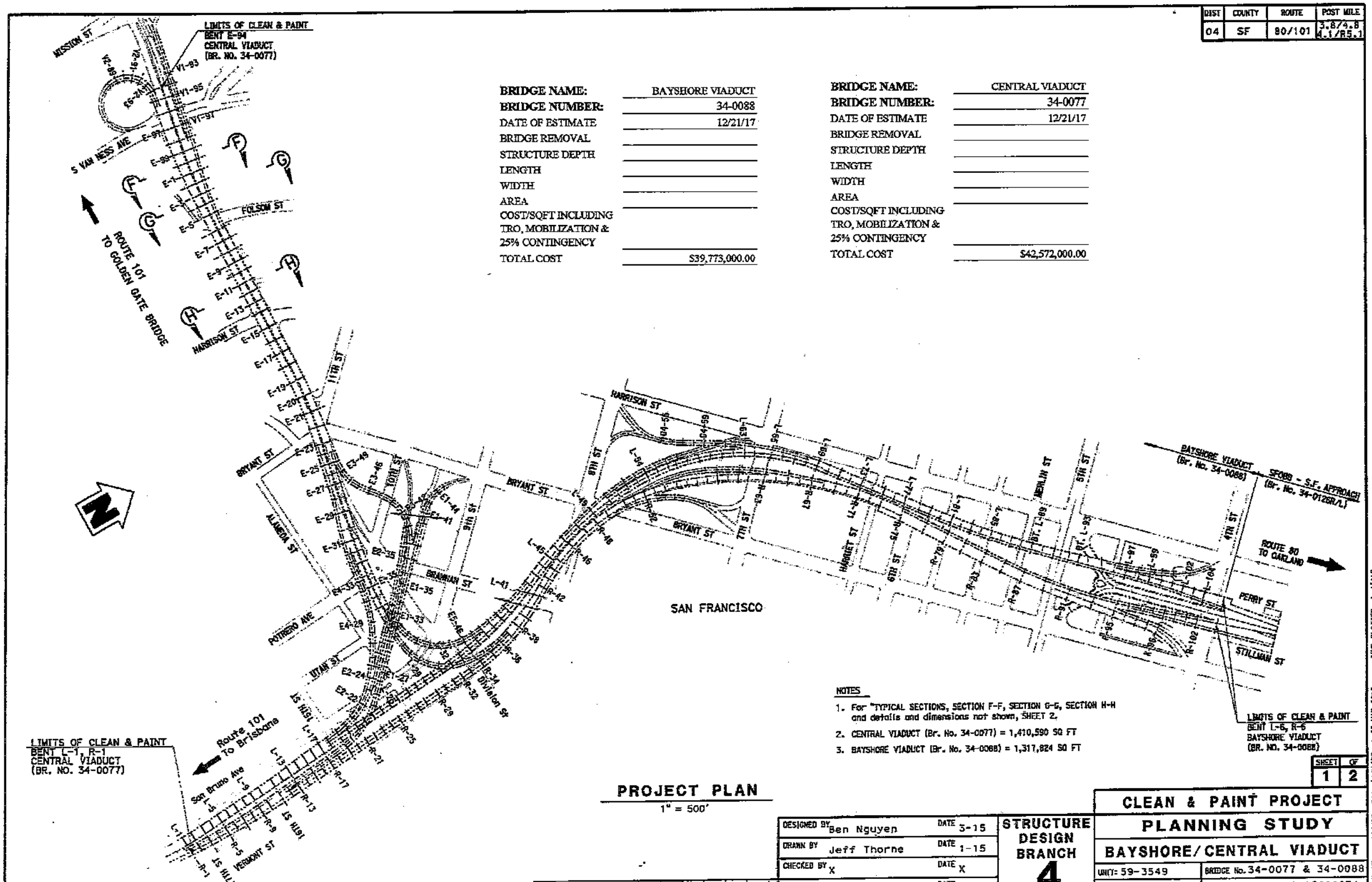
Bridge Cost per Square Foot and/or Bridge Removal costs modeled independently. Their 80% Forecast Values Provided for informational purposes only.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

DIST	COUNTY	ROUTE	POST MILE
04	SF	80/101	3.8/4.8 4.1/R5.1

BRIDGE NAME:	BAYSHORE VIADUCT
BRIDGE NUMBER:	34-0088
DATE OF ESTIMATE	12/21/17
BRIDGE REMOVAL	
STRUCTURE DEPTH	
LENGTH	
WIDTH	
AREA	
COST/SQFT INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY	
TOTAL COST	$39,773,000.00

BRIDGE NAME:	CENTRAL VIADUCT
BRIDGE NUMBER:	34-0077
DATE OF ESTIMATE	12/21/17
BRIDGE REMOVAL	
STRUCTURE DEPTH	
LENGTH	
WIDTH	
AREA	
COST/SQFT INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY	
TOTAL COST	$42,572,000.00



NOTES

1. For "TYPICAL SECTIONS, SECTION F-F, SECTION G-G, SECTION H-H and details and dimensions not shown, SHEET 2.
2. CENTRAL VIADUCT (Br. No. 34-0077) = 1,410,590 SQ FT
3. BAYSHORE VIADUCT (Br. No. 34-0088) = 1,317,824 SQ FT

PROJECT PLAN

1" = 500'

ORIGINAL SCALE IN INCHES 0 1 2 3

		STRUCTURE DESIGN BRANCH 4
DESIGNED BY Ben Nguyen	DATE 3-15	
DRAWN BY Jeff Thorne	DATE 1-15	
CHECKED BY X	DATE X	
APPROVED X	DATE X	

SHEET 1 OF 2

CLEAN & PAINT PROJECT

PLANNING STUDY

BAYSHORE/CENTRAL VIADUCT

UNIT: 59-3549	BRIDGE No. 34-0077 & 34-0088
SCALE: 1" = 500'	PROJECT No. & PHASE: 0415000034

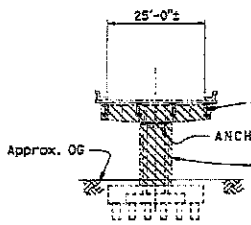
CONTRACT No.: 04-2J800X

FILE => 04-PUSOOK-cpsct.dgn

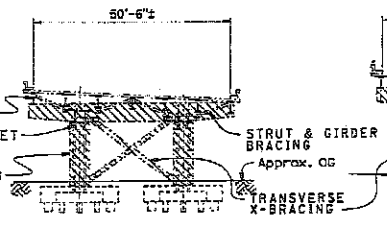
STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 06-05-10)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

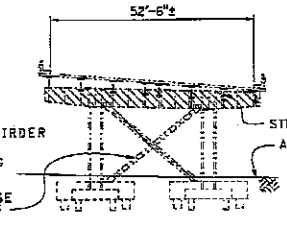
DIST	COUNTY	ROUTE	POST MILE
04	SF	80/101	5.8/4.8 4.1/R5.1



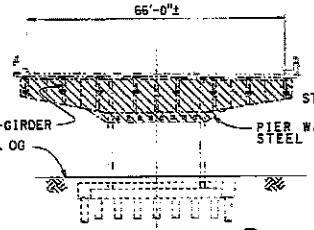
TYPICAL SECTION (A)
SINGLE CONCRETE - COLUMN BENTS



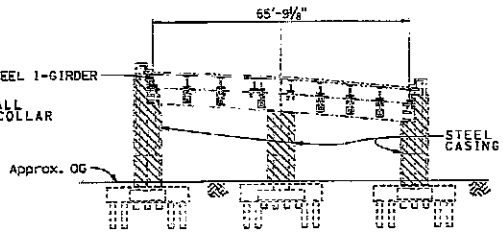
TYPICAL SECTION (B)
DOUBLE CONCRETE - COLUMN BENTS



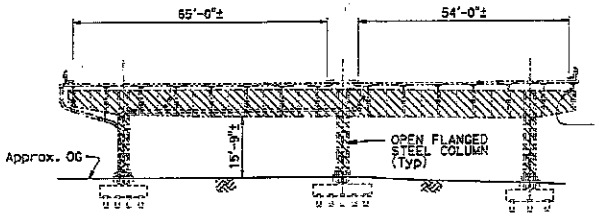
TYPICAL SECTION (C)
DOUBLE CONCRETE - COLUMN BENTS



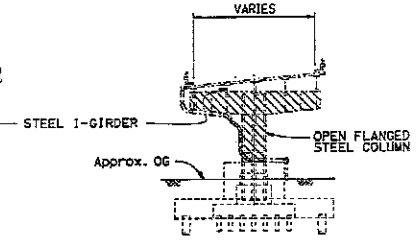
TYPICAL SECTION (D)
PIER WALL - COLUMN BENTS



TYPICAL SECTION (E)
MULTI-CONCRETE - COLUMN BENTS



SECTION F-F



TYPICAL SECTION
BENT E2-20 TO BENT E2-24
(Looking North)

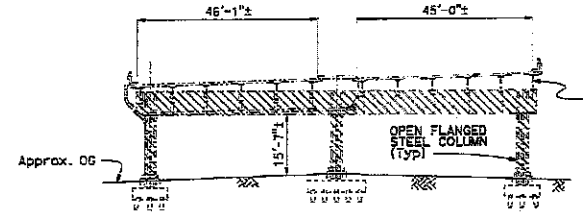
(A) BENTS X_1-96,K_1-97,K_1-98

(B) BENTS L-82,L-85,L-88,L-95,L-97
BENTS R-80,R-83,R-86,R-93,R-95

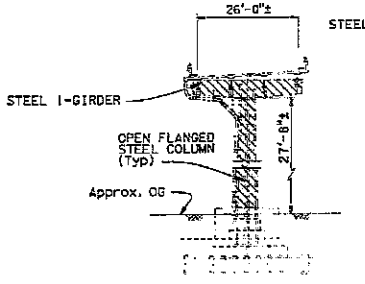
(C) BENTS L-79,L-80,L-81,L-83,L-84,L-86,L-87,L-89,L-90,L-93,L-94,L-96
BENTS R-77,R-78,R-79,R-81,R-82,R-84,R-85,R-87,R-88,R-91,R-92,R-94

(D) BENTS R-96,R-97,R-98,R-99,R-100,R-101

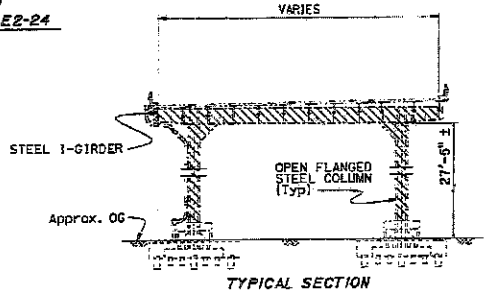
(E) BENTS L-91,L-92,R-89,R-90



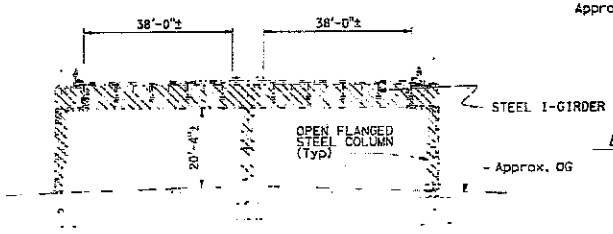
SECTION G-G



TYPICAL SECTION
BENT E5-41 TO BENT E5-47
(Looking North)



TYPICAL SECTION
BENT L-36 TO BENT L-39
(Looking North)



SECTION H-H

LEGEND

Indicates Clean and Paint Limits (Include Steel Girder, Bent Cap, Stiffener, Steel Columns, Steel Casing, Cross Bracing, horizontal stressing bracket and Appurtenance)

Indicates existing structure

SHEET	OF
2	2

DESIGNED BY Ben Nguyen	DATE 3-15	STRUCTURE DESIGN BRANCH 4
DRAWN BY Jeff Thorne	DATE 1-15	
CHECKED BY X	DATE X	
APPROVED X	DATE X	

ORIGINAL SCALE IN INCHES 0 1 2 3

CLEAN & PAINT PROJECT
PLANNING STUDY
BAYSHORE/CENTRAL VIADUCT

UNIT: 59-3549	BRIDGE No. 34-0077 & 34-0088
SCALE: 1" = 30'	PROJECT No. & PHASE: 0415000034

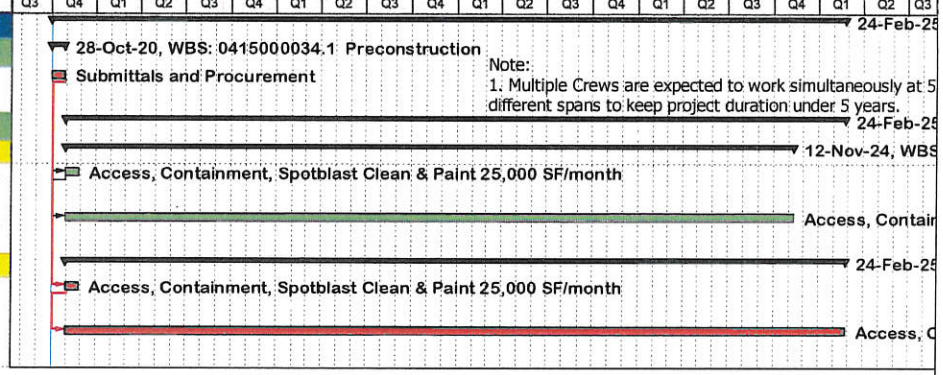
CONTRACT No.: 0 J800X

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) REV. 08 09 *1

TIME PLOTTED => 15:12
25-SEP-2015

Bayshore/Central Viaduct Clean Paint | Classic Schedule Layout | 21-Dec-17 08:34

#	Activity ID	Activity Name	Original Duration	Start	Finish
1		Project: 0415000034 Bayshore/Central Viaduct Clean & Paint	1148	01-Oct-20	24-Feb-25
2		WBS: 0415000034.1 Preconstruction	20	01-Oct-20	28-Oct-20
3	A1000	Submittals and Procurement	20	01-Oct-20	28-Oct-20
4		WBS: 0415000034.2 Construction	1128	29-Oct-20	24-Feb-25
5		WBS: 0415000034.2.1 Bayshore Viaduct	1054	29-Oct-20	12-Nov-24
6	A1010	Access, Containment, Spotblast Clean & Paint 25,000 SF/month	20	29-Oct-20	25-Nov-20
7	A1020	Access, Containment, Spotblast Clean & Paint 1,317,824 SF	1054	29-Oct-20	12-Nov-24
8		WBS: 0415000034.2.2 Central Viaduct	1128	29-Oct-20	24-Feb-25
9	A1030	Access, Containment, Spotblast Clean & Paint 25,000 SF/month	20	29-Oct-20	25-Nov-20
10	A1040	Access, Containment, Spotblast Clean & Paint 1,410,590 SF	1128	29-Oct-20	24-Feb-25



Actual Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work | summary

TASK filter: All Activities

Attachment C

Right of Way Data Sheet

RIGHT OF WAY DATA SHEET

TO: Special Projects

Date 8/7/2018 D.S. # 7029

Dist. 04 Co. SF Rte var PM var

EA 2J800K(0415000034)

ATTN: Gordon Jeong

Project Description: Bridge Painting

SUBJECT: Right of Way Data - Alternate No.

1. Right of Way Cost Estimate:

		Current Value (Future Use)	Escalation Rate	Escalated Value
A.	Acquisition, including Excess Lands, Damages, and Goodwill	$200,000.00	7 %/yr	$214,000.00
	Environmental Mitigation			$0.00
	Grantor's Appraisal Cost			$0.00
B.	Utility Relocation (State Share)	$0.00	%	$0.00
C.	Railroad (from page 6)			$0.00
D.	Relocation Assistance	$0.00	%	$0.00
E.	Clearance Demolition	$0.00	%	$0.00
F.	Title and Escrow Fees	$15,000.00	%	$15,000.00
G.	TOTAL ESCALATED VALUE			$229,000.00
H.	Construction Contract Work	$0.00		
I.	Railroad Phase 4 Costs	$0.00		

2. Anticipated Date of Right of Way Certification 5/1/2020

3. Parcel Data:

	Type	Dual/Appr	Utilities	RR Involvements	
X			U4-1	None	X
A	34		-2	C&M Agrmt	
B	6		-3	Svc Cont.	
C			-4	Design	
D			U5-7	Const.	
E	XXXX		-8	Lic/RE/Clauses	
F	XXXX		-9		
				Misc R/W Work	
				RAP Displ	0
				Clear Demo	0
Total	40			Const. Permits	0
				Condemnation	0

Areas: Right of Way Unknown No. Excess Parcels 0 Excess 0

Enter PMCS Screens By

4. Are there any major items of construction contract work?
Yes ☐ No ☑ (If yes, explain)

5. Provide a general description of the right of way and excess lands required(zoning, use, major improvements critical or sensitive parcels, etc.).
No right of way required. ☐
There are 40 parcels required for this project. 34 parcels are FLA's, one parcel is the Hall of Justice and the other parcels are Byer Properties. TCE's are required from the six parcels that are not FLA's.

6. Is there an effect on assessed valuation? (If yes explain)
Yes ☐ Not Significant ☐ No ☑

7. Are utility facilities or rights of way affected? Yes ☐ No ☑
If yes, attach Utility Information Sheet Exhibit 01-01-05)

8. Are railroad facilities or rights of way affected? Yes ☐ No ☑
If yes, attach Railroad Information Sheet Exhibit 01-01-06)

9. Were any previously unidentified sites with hazardous waste and/or material found?
Yes ☐ None evident ☑
(If yes, attach memorandum per Procedural Handbook Volume 1, Section 101.011)

10. Are RAP displacements required? Yes ☐ No ☑
(If yes, provide the following information)

No. of personal property relocations _____

No. of single family _____ No. of business/non profit _____

No. of multi-family _____ No. of farms _____

Based on Draft / Final Relocation Impact Statement / Study dated _____, it is anticipated that sufficient replacement housing will / will not be available without Last Resort Housing.

11. Are material borrow and / or disposal sites required? Yes ☐ No ☑
(If yes, expalin)

12. Are there potential relinquishments / abandonments? Yes ☐ No ☑
(If yes, expalin)

13. Are there any existing and/or potential Airspace sites? Yes ☑ No ☐
(If yes, expalin)
There 34 FLA's with in project limits. See attached exhibit 7.

14. Are there Environmental Mitigation costs? Yes ☐ No ☑.
(If yes, explain)

15. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if District proposes less that PMCS lead time and / or if significant pressures for project advancement are anticipated.)

PYPSCAN lead time (from Regular R/W to project certification) 18 months.

16. Is it anticipated that all Right of Way work be performed by CALTRANS staff?
Yes ☑ No ☐ (If no, discuss)

Assumptions and Limiting Conditions

- This data sheet was completed without a hazardous waste/materials report.
- Maps were not provided for this estimate
- Assuming that San Francisco will vacate the easement area upon notification
- Information on this data sheet was based on a memo provided by Gordon Jeong on 7/19/2018

Evaluation Prepared By: Suzette Musetti

Right of Way: Name _____ Date 12-5-2018

Railroad: Name _____ Date 12-5-18

Utilities: Name _____ Date 12/5/18

Recommended for Approval:

_____
Right of Way Capital Cost Coordinator

I have personally reviewed this Right of Way Data Sheet and all supporting information. It is my opinion that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set fourth, and find this Data Sheet complete and current.

_____
Chief, R/W Appraisal Services

12/6/18
Date

cc: Program Manager
Project Manger

UTILITY INFORMATION SHEET

1. Utility owners located within project limits:
None

2. Facilities potentially impacted by project (if known, include Owners(s) & facility type(s)):

3. Anticipated Workload:
_____ Utility Verification required
_____ Positive Identification
_____ Utility Relocation
_____ Other (Specify)

4. Additional information concerning anticipated utility involvements (include limiting conditions and a narative addressing likelihood that conflicts will occur);

_____ Involves possible relocation of electric transmission facilities
(If X'd, Data sheet should be forwarded to environmental)

5. PMCS input information

U4-1 _____ Owner Expense Involvements

U4-2 _____ State Expense Involvements
(Conventional, No Fed Aid)

U4-3 _____ State Expense Involvements
(Freeway, No Fed Aid)

U4-4 _____ State Expense Involvements
(Conventional or Freeway, Fed Aid)

U5-7 _____ Verifications - without involvements
U5-8 _____ Verifications - 50% involvements
U5-9 _____ Verifications resulting in involvements

NOTE: The sum of U-4's must equal the sum of ½ of the U5-8's and all of the U5-9's.

ESTIMATED STATE SHARE OF COSTS $ 0.00

Prepared by: Kuyik Akpan

KA
Right of Way Utility Coordinator

12/5/18
Date

Attachment D

Categorical Exemption/ Categorical Exclusion Determination

CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM

04-SF-101-80	4.1-5.1 and 3.8-4.8	2J800	415000034
Dist.-Co.-Rte. (or Local Agency)	P.M./P.M.	E. A/Project No.	Federal-Aid Project No. (Local Project)/Project No.

PROJECT DESCRIPTION: (Briefly describe project including need, purpose, location, limits, right-of-way requirements, and activities involved in this box. *Use Continuation Sheet, if necessary.*)

The purpose of this project is to preserve the existing steel structures of the Central and Bayshore Viaducts in San Francisco. The need for repainting occurred due to water leaking from the deck to the joints, expediting the deterioration of the paint on the superstructure steel members located below the deck points. The project is located in the City and County of San Francisco on State Routes (SR) 101 from PM 4.1-5.1 and 80 from PM 3.8-4.8. All construction and staging would be within Caltrans right-of-way. The project proposes to clean, and paint bent caps, steel girders, stiffeners, steel columns, steel casings, cross bracing, horizontal stressing brackets and appurtenances.

CALTRANS CEQA DETERMINATION (Check one)

☐ **Not Applicable – Caltrans is not the CEQA Lead Agency** ☐ **Not Applicable – Caltrans has prepared an Initial Study or Environmental Impact Report under CEQA**

Based on an examination of this proposal, supporting information, and the above statements, the project is:

☐ **Exempt by Statute.** (PRC 21080[b]; 14 CCR 15260 et seq.)

☒ **Categorically Exempt. Class 1c.** (PRC 21084; 14 CCR 15300 et seq.)
Based on an examination of this proposal and supporting information, the following statements are true and exceptions do not apply:

- If this project falls within exempt class 3, 4, 5, 6 or 11, it does not impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law.
- There will not be a significant cumulative effect by this project and successive projects of the same type in the same place, over time.
- There is not a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances.
- This project does not damage a scenic resource within an officially designated state scenic highway.
- This project is not located on a site included on any list compiled pursuant to Govt. Code § 65962.5 ("Cortese List").
- This project does not cause a substantial adverse change in the significance of a historical resource.

☐ **Exempt by General Rule.** [This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (14 CCR 15061[b][3].)

Eric DeNardo
Print Name: Senior Environmental Planner or Environmental Branch Chief

Signature 7/31/18 Date

Mo Pazooki
Print Name: Project Manager

Signature 8/1/18 Date

NEPA COMPLIANCE

In accordance with 23 CFR 771.117, and based on an examination of this proposal and supporting information, the State has determined that this project:

- does not individually or cumulatively have a significant impact on the environment as defined by NEPA, and is excluded from the requirements to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS), and
- has considered unusual circumstances pursuant to 23 CFR 771.117(b).

CALTRANS NEPA DETERMINATION (Check one)

☒ **23 USC 326:** The State has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). As such, the project is categorically excluded from the requirements to prepare an EA or EIS under the National Environmental Policy Act. The State has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to Chapter 3 of Title 23, United States Code, Section 326 and a Memorandum of Understanding dated May 31, 2016, executed between the FHWA and the State. The State has determined that the project is a Categorical Exclusion under:

- ☒ **23 CFR 771.117(c): activity (c)(_26__)**
- ☐ **23 CFR 771.117(d): activity (d)(___)**
- ☐ **Activity ___ listed in Appendix A of the MOU between FHWA and the State**

☐ **23 USC 327:** Based on an examination of this proposal and supporting information, the State has determined that the project is a Categorical Exclusion under 23 USC 327. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

Eric DeNardo
Print Name: Senior Environmental Planner or Environmental Branch Chief

Signature 7/31/18 Date

Mohsen Pazooki
Print Name: Project Manager/DLA Engineer

Signature 8/1/18 Date

Date of Categorical Exclusion Checklist completion: 7/26/18

Date of ECR or equivalent : 7/26/18

Briefly list environmental commitments on continuation sheet. Reference additional information, as appropriate (e.g., CE checklist, additional studies and design conditions).

CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM
Continuation Sheet

04-SF-101-80	4.1-5.1 and 3.8-4.8	2J800	415000034
Dist.-Co.-Rte. (or Local Agency)	P.M./P.M.	E.A/Project No.	Federal-Aid Project No. (Local Project)/Project No.

Continued from page 1:

Scaffolding will be required to clean and paint these areas. Peeling paint will be sand blasted off and pressure washed. To avoid debris from existing the scaffolding a containment system will be constructed. During work in areas where muni routes exist, electrical cables for buses will be temporarily depowered. Caltrans will coordinate with Muni. Caltrans owned parking lots will need to be evacuated of parked cars when painting will occur above these areas. Any vegetation removal will be completed outside of the nesting season (February 15 to September 1). If necessary, removal of homeless from the project site will be coordinated with the City of San Francisco.

See the attached Environmental Commitment Records for AMMs and project features.

Environmental Commitments Record for EA 04-2J800_ / ID 0415000034

Last updated 7/31/2018

04-2J800_SF 101 Bridge Painting PID

SF-101-4.100/R4.100

Current Project Phase: 0

EP:

CL:

RE:

Permit	Agency	Date Submitted	Date Received	Expiration	Requirements Name	Completed Date	Comments

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
Biology							
Feature: If vegetation removal is necessary, it shall be conducted during the bird non-nesting season October 1st to January 31st to comply with the MBTA.	SSP	SSP	Contractor and Biologist	The contractor will remove vegetation between October 1st to January 31st.			
Feature: Prior to construction, a qualified biologist will conduct inspections for nesting birds in trees, shrubs, and on the ground within the project area.	SSP	SSP	Biologist	The biologist will conduct nesting bird surveys prior to construction.			
Visual Resources							
AMM: The paint color chosen for the repainting work should consider the long-term maintenance and visual quality aspects of the steel viaduct structures.	Env Doc	n/a	Contractor	The contractor will chose a paint color that requires minimal maintenance.			
Water Quality							
Feature: A Water Pollution Control Program (WPCP) is required for the project. Prior to commencement of construction activities, a WPCP must be prepared by the Contractor and approved by the Department, pursuant to Department 2015 Standard Specification 13-2.	Std.Spec	Std. Spec	Contractor	The contractor will prepare a WPCP for approval prior to construction.			
Biology							
AMM: At all locations, removal of vegetation will be conducted in the areas specified in the layout plans.	Std.Spec	Std. Spec	Contractor and RE	The contractor and RE will stage and conduct vegetation removal as in the plans.			
AMM: Staging, work, parking, and all other activities should remain on the roadway and the shoulder of the roadway.	SSP	SSP	Contractor	The contractor will stage on existing paved areas.			

Environmental Commitments Record for EA 04-2J800_ / ID 0415000034

Last updated 7/31/2018

04-2J800_SF 101 Bridge Painting PID

SF-101-4.100/R4.100

Current Project Phase: 0

EP:

CL:

RE:

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
Feature: All additional work shall be completed between February 1st through September 30th to comply with the MBTA. If any work is to happen outside of this work window, the Caltrans biologist will require three days' notice prior to commencement of construction activities to perform a survey for ground/nesting birds.	SSP	SSP	Contractor, RE and Biologist	The RE will notify the biologist if work outside of February 1st to September 30th is required.			
Feature: In addition, the Standard Caltrans BMP's presented in the Caltrans Construction Site BMPs Manual (available online at http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm) will be implemented as protective measures to prevent and minimize pollutant discharges.	SSP	SSP	Contractor, RE and Biologist	All site staff will abide by BMPs to prevent pollutant discharges.			
Cultural Resources							
Feature: If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find.	SSP	SSP	Contractor and RE	The contractor will cease activity and notify the RE if cultural resources are unearthed.			
Hazardous Waste							
AMM: The existing paint is hazardous and needs to be contained when removed. Specification 14-11.08 addresses disturbance of existing paint systems.	Std.Spec	Std. Spec	Contractor and RE	The contractor and RE will insure paint removal is contained.			
Visual Resources							
AMM: Any existing trees or viaduct elements, that are damaged or removed, should be evaluated for replacement.	SSP	SSP	Contractor and RE	The contractor and RE should consider replacement of vegetation or infrastructure that is damages as a result of project activities.			
AMM: Construction staging and activities should avoid damage to existing paving, fencing, structures, and trees and shrubs.	SSP	SSP	Contractor	The contractor shall avoid damage to surrounding infrastructure during construction.			

Environmental Commitments Record for EA 04-2J800_ / ID 0415000034

Last updated 7/31/2018

04-2J800_SF 101 Bridge Painting PID

SF-101-4.100/R4.100

Current Project Phase: 0

EP:

CL:

RE:

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date

Eric DeNardo
Environmental Branch Chief

7/31/18
Date

Project Engineer

8/1/18
Date

Resident Engineer

Date

PAZOOKI, MOHSEN
Project Manager

8/1/18
Date

Attachment E

Stormwater Data Report
Signed Cover

Dist-County-Route: 04-SF/80, 101
Post Mile Limits: 3.8/4.8, 4.1/R5.1
Project Type: Bridge Painting
Project ID (EA): 0415000034/2J8000
Program Identification:
Phase: ☐ PID ☒ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): San Fransisco Bay Region and Central Valley Region

1.	Does the project disturb 5 or more acres of soil?	Yes ☐	No ☒
2.	Does the project disturb 1 or more acres of soil and not qualify for the Rainfall Erosivity Waiver?	Yes ☐	No ☒
3.	Is the project required to implement Treatment BMPs?	Yes ☐	No ☒
4.	Does the project impact existing Treatment BMPs?	Yes ☐	No ☒

If the answer to any of the preceding questions is "Yes", prepare a Long Form – Stormwater Data Report. Unless otherwise agreed upon by the District/Regional Design Stormwater Coordinator.

Total Disturbed Soil Area: 0 New Impervious Surface: 0.0
Estimated Const. Start Date: 04/01/2021 Estimated Const. Completion Date: 9/1/2021
Risk Level: RL 1 ☐ RL 2 ☐ RL 3 ☐ Not Applicable ☒
Is MWELO applicable? Yes ☐ No ☒

This Short Form – Stormwater Data Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E only.

10-4-18

[Jaingfan Chen], Registered SW Engineer *Date*

I have reviewed the stormwater quality design issues and find this report to be complete, current, and accurate:

10-4-18

[Kamran Nakhjiri], District/Regional Design SW Coordinator or Designee *Date*

Attachment F

Transportation Management Plan
Data Sheet

TRANSPORTATION MANAGEMENT PLAN DATA SHEET
(Preliminary TMP Elements and Costs)

Co/Rte/PM SF-101-4.1/R5.1 EA 2J8000 Project Engineer Hung Do

SF-80-3.8/4.8 ID 0415000034

Project Limit In the City and County of San Francisco at Central Viaduct & Bayshore Viaduct

Project Description To paint the steel structures of Central Viaduct (Br #34-0077) & Bayshore Viaduct (Br #34-0088). Activities will take place under the structures

1) Public Information

- ☐ a. Brochures and Mailers $
- ☒ b. Press Release
- ☐ c. Paid Advertising $5,000.00
- ☐ d. Public Information Center/Kiosk $
- ☐ e. Public Meeting/Speakers Bureau
- ☐ f. Telephone Hotline
- ☐ g. Internet, E-mail
- ☐ h. Notification to impacted groups (i.e. bicycle users, pedestrians with disabilities, others…)
- ☒ i. Others As determined by PIO $

2) Traveler Information Strategies

- ☐ a. Changeable Message Signs (Fixed) $
- ☒ b. Changeable Message Signs (Portable) $ 60,000.00
- ☐ c. Ground Mounted Signs $
- ☐ d. Highway Advisory Radio $
- ☐ e. Caltrans Highway Information Network (CHIN)
- ☐ f. Detour maps (i.e. bicycle, vehicle, pedestrian...etc)
- ☐ g. Revised Transit Schedules/maps
- ☐ h. Bicycle community information
- ☐ i. Others

_____ $

3) Incident Management

- ☒ a. Construction Zone Enhanced Enforcement Program (COZEEP) $ 286,600.00
- ☐ b. Freeway Service Patrol $
- ☐ c. Traffic Management Team
- ☐ d. Helicopter Surveillance $
- ☐ e. Traffic Surveillance Stations (Loop Detector and CCTV) $
- ☐ f. Others _____ $

TMP Data Sheet (cont.)

4) Construction Strategies

☒	a. Lane Closure Chart	
☐	b. Reversible Lanes	
☐	c. Total Facility Closure	
☐	d. Contra Flow	
☐	e. Truck Traffic Restrictions	$
☐	f. Reduced Speed Zone	$
☐	g. Connector and Ramp Closures	
☐	h. Incentive and Disincentive	$
☐	i. Moveable Barrier	$
☒	j. Maintain Traffic	$ 50,000.00
☐	k. Others _____	$

5) Demand Management

☐	a. HOV Lanes/Ramps (New or Convert)	$
☐	b. Park and Ride Lots	$
☐	c. Rideshare Incentives	$
☐	d. Variable Work Hours	
☐	e. Telecommute	
☐	f. Ramp Metering (Temporary Installation)	$
☐	g. Ramp Metering (Modify Existing)	$
☐	h. Others _____	$

6) Alternate Route Strategies

☐	a. Add Capacity to Freeway Connector	$
☐	b. Street Improvement (widening, traffic signal... etc)	$
☐	c. Traffic Control Officers	$
☐	d. Parking Restrictions	
☐	e. Others _____	$

7) Other Strategies

☐	a. Application of New Technology	$
☐	e. Others _____	$

TOTAL ESTIMATED COST OF TMP ELEMENTS = $ 401,600.00

*Please note that any change in project scope, schedule, or cost will require re-submittal of TMP Data Sheet request.

PREPARED BY Arsenio Escat DATE 11-06-2018

APPROVAL RECOMMENDED BY Chung Ly DATE 11-06-2018

Attachment G

Risk Register

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS) FORM

PPM-0001 (REV 03/2016)

The risk register is to be approved and signed-off by the District Deputies* listed below for all scalability levels. By signing this form, you are certifying that you have reviewed the risks documented in the register and agree that they have been managed to the extent possible by the PDT.

Project Information ☒ Capital Project ☐ Major Maintenance Project (Check One) Total Estimated Cost: $125,855,000.00

Project ID/District-EA	0415000034/04-2J800	Date:
Project Description	Structure Steel Painting- Central and Bayshore Viadu	Date:
Project Manager (PM)	"Ricky" Rui Gao	Date:
Project Risk Manager (For Risk Level 3 Projects)	Patrick Treacy/ Daniel Y. Chang	Date:

☐ No Risk Register Certification Required-Check box if project is less than $1 million in total cost and risk register not prepared. Sign below and submit this form with PID, PA&ED, PS&E submittal, and RE Handoff File (as applicable).

Project Manager Signature _____ Date: 10/15/2018

PID (Recommended for Capital Projects Only excluding Minor Projects)

Project Manager		Date:
Deputy District Director, Planning		Date:
Deputy District Director*, Design**		Date:
Deputy District Director, Project Management		Date:

PA&ED (Required for Capital Projects Only)

Project Manager		Date: 11/15/2018
Deputy District Director*, Environmental	Melanie Burt	Date: 11/16/18
Deputy District Director*, Design**	for Chief - Ca	Date: 11/29/18
Deputy District Director, Project Management		Date: 12/3/18

Prior to PS&E (Required for Capital Projects and Major Maintenance Projects

Project Manager		Date:
Deputy District Director*, Design**		Date:
Deputy District Director*, Construction		Date:
Deputy District Director*, Right of Way		Date:
Deputy District Director*, Environmental		Date:
Deputy District Director, Project Management**		Date:

RE File hand-off (Recommended for Capital Projects and Major Maintenance Projects

Project Manager		Date:
Deputy District Director*, Design**		Date:
Deputy District Director*, Construction		Date:
Deputy District Director, Project Management**		Date:

*or the respective Project Delivery Division Chief signatures in the North Region or Central Region

**or Deputy District Director, Maintenance signature for HM Projects designed by the District Maintenance Division

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS) FORM

PPM-0001 (REV 03/2016)

General Instructions

What's New

The Risk Register Certification Form (Accountability Checkpoints) was established by Project Delivery Directive 09 referencing Project Risk Management Manual: A Scalable Approach, effective July 1, 2012. The signing of the risk register form at the various accountability checkpoints certifies that the Deputies and Division Chiefs have reviewed the project and risks identified in the Risk Register and agree that they have been managed to the extent possible by the Project Development Team (PDT).

Requirements

Risk Register Certification Form is needed for all capital and major maintenance projects for which the Department has delivery responsibility. The minimum risk management requirements based solely on the total project cost are:

Level	Estimated Cost (Capital and Support)	Risk Management Requirements
	Minor A, Minor B and other projects less than $1 million	Risk register encouraged
1	<$5 million	Risk register
2	$5 million to $100 million	Risk register with qualitative analysis
3	>$100 million	Risk register with quantitative analysis

However, the project's overall complexity should determine the Risk Management Requirements for that project. Project-specific changes to the above minimum levels (1 through 3) must be approved by the Deputy District Director for Program/Project Management. The risk register shall be maintained throughout the project's lifecycle.

Risk Register Certification (Accountability Checkpoints)

The Risk Register Certification Form (PPM-0001 REV 03/2016) is to be signed off by the appropriate Deputy District Director, Project Delivery Division Chief, and Project Manager at the appropriate accountability checkpoints to ensure that risks identified on a project have been captured in the project risk register and communicated the next phase of project delivery.

The Risk Register Certification Form Accountability Checkpoints are:

- Project Initiation Document (PID) Phase: Sign-off is recommended prior to the approval of the PID for capital projects only, excluding minor projects.
- Project Approval and Environmental Document (PA&ED) Phase: Sign-off is required prior to the approval of the Project Report (PR) for capital projects only.
- Plans, Specifications, & Estimate (PS&E): Sign-off is required prior to submittal of PS&E to DES Office Engineers (Milestone 380) for capital and major maintenance projects. For Authority to Advertise District Delegation (AADD) projects, sign-off is required prior to the PS&E submittal to District Office Engineer (Milestone 377) for projects that are submitted to DES Office Engineers for advertisement.
- RE File Hand-off: Sign-off is recommended prior to the transmittal of the RE File to the Resident Engineer for capital and major maintenance projects.

General Instructions for Signing Form

Project Risk Register Certification Form is to be signed-off by the District Deputy Directors or Project Delivery Division Chiefs for capital and major maintenance projects as follows:

- For capital projects, sign-off from Project Manager and Deputy District Directors, Project Delivery Division Chiefs signatures are needed in the North Region or Central Region.
- For major maintenance projects designed by Division of Maintenance, sign-off by Maintenance Design Engineer as Project Manager if no project manager is assigned and signature by the Deputy District Director for Maintenance under Deputy District Director, Design and Project Management signature lines.
- Deputy District Directors or Division Chiefs not shown on the Risk Register Certification Form may be requested to be added to the form by the District with approval from the Division of Project Management.
- For projects less than $1 million in total cost with no risk register, check "No Risk Register Certification Required" with sign-off by the Project Manager or Maintenance Engineer for HM projects (if no Project Manager).

PROJECT RISKS REGISTER LEVEL 2 INFORMATION SUMMARY SHEET

Item	Cost	Schedule or Activity			EA: 2J800 (0415000034)
		Start Date	End Date	Total Days	Remarks
Project Construction Capital Costs	$100,793,000				Based on CTIPS
Project ROW Capital Costs	$62,000				Based on CTIPS
Project Capital Costs	$100,855,000				Based on CTIPS
PA&ED support costs (Total)	$2,500,000			0	Based on CTIPS, Total days is just working days.
PS&E support costs (Total)	$9,200,000			0	Based on CTIPS, Total days is just working days.
R/W support costs (Total)	$300,000				Based on CTIPS.
Construction Support (Total)	$13,000,000				Based on CTIPS.
Project Support Costs(Total)	$25,000,000				Based on CTIPS
Total Project Costs	$125,855,000				Based on CTIPS
Initial Review time (In days)	30				Based on common practices
Construction allocated time (days)	1148				Based on Engineers Estimate
Project Closeout (In days)	60				Based on common practices
Total Project days (Construction +Initial review+ Closeout)	1238				Based on Construction days+ Initial review of 30 days+ Project close out of 60 days
Design Actual Burn Rate/ Month	$50,000				Enter the actual burn rate/month. Provided by the PM

RISK REGISTER LEVEL COS COSTS

Design COS costs due to Delays / Day (Based on PM input)	$2,273				This is the actual design burn rate per month/22
Design COS costs due to Delays / Day (Based on PA&ED support allocation)	$0				This is the average design burn rate per day based on PA&ED allocation.
Design COS costs due to Delays / Day (Based on PS&E support allocation)	$0				This is the average design burn rate per day based on PS&E allocation.
Design COS costs (Greater of Actual or Average)	$2,273				This is greater of Actual or Programmed COS costs. This will change based on phase of the project.
Construction COS costs due to Delays /Day	$11,324				Total Construction allocated costs/ No. of Construction days

RISK REGISTER LEVEL 2 IMPACT FACTOR TABLE

PROBABILITY		COST IMPACT		TIME IMPACT	
IMPACT RATING	AVG PROB	RATING	WITH RESPECT TO CAPITAL	RATING	CONST
1-Very Low	0.045	01-Very Low	0.010	01-Very Low	0.010
2-Low	0.145	02-Low	0.025	02-Low	0.020
3-Moderate	0.295	04-Moderate	0.075	04-Moderate	0.040
4-High	0.495	08-High	0.150	08-High	0.080
5-Very High	0.795	16-Very High	0.200	16-Very High	0.125

RISK REGISTER LEVEL 2 QUANTIFYING THE QUALITATIVE RISKS

Total Risk (Capital + COS)	$26,559,102				Based On Impact Factor and Capital Cost
Total Capital Risk	$26,253,353				Its Subtracting Total COS Risk from Total Risk.
Delay days in P4	27				Delay days during Construction (P4) (use 2/3 factor)
Delay days in P1	0				Delay days during Design (P4) (use 2/3 factor)
Total Days of Delay From Risk	28				Based On Impact Factor and Construction Allocated Days (use a 2/3 factor- assuming 1/3 of risks to be concurrent)
COS costs due to delays in P4	$305,749				This is Total COS cost based in P4 based on P4 delays
COS costs due to delays in P1	$0				This is Total COS cost based in P4 based on P1 delays
COS costs increase due to Capital Cost Increase(Based on Risk based Estimating)	$0				The Support costs are based on Top down approach. CT uses a S/C ratio. This accounts for any Quantity changes and Cost increase by the Bid time.
Total COS Risk	$305,749				Total COS cost (P1+P4)
Total Capital Risk W.R.T Total Cost (%)	21%				Based Total Risk Cost / Total Project Cost (CO + COS)
Total Days of Delay (%)W.R.T Construction Allocated Time (%)	2%				Based Total Days of Delay / Construction Days

Impact Definitions

Rating -->	Very Low	Low	Moderate	High	Very High
Cost Impact of Threat (CO + COS)	0-2.5% cost increase	2.5-5% cost increase	5-10% cost increase	10-20% cost increase	>20% cost increase
Cost Impact of Opportunity (CO + COS)	0-2.5% cost increase	2.5-5% cost increase	5-10% cost increase	10-20% cost increase	>20% cost increase
Schedule Impact of Threat	0-2.5% of Construction time	2.5-5% of Construction time	5-10% of Construction time	10-20% of Construction time	>20% of Construction time
Schedule Impact of Opportunity	0-2.5% of Construction time	2.5-5% of Construction time	5-10% of Construction time	10-20% of Construction time	>20% of Construction time
Probability	0–19%	20–39%	40–59%	60-79%	80-100%

Risk Matrix

Probability Rating						
	5 – Very High	5	10	20	40	80
	4 – High	4	8	16	32	64
	3 – Moderate	3	6	12	24	48
	2 – Low	2	4	8	16	32
	1 – Very Low	1	2	4	8	16
		1	2	4	8	16
		Very Low	Low	Moderate	High	Very High
				Impact Rating		

Low Risk
Moderate Risk
High Risk

RISK REGISTER LEVEL	2	PROJECT NAME	SF - Route 101 /80 Central Viaduct Bayshore Viaduct Bridge Painting		DIST-EA	2J800 (0415000034)	Project Manager	PM	RISK MANAGER	Patrick Treacy / Amani Meligy / Kelly Ma / Daniel Y. Chang		TOTAL COST (Capital +Support)		$125,855,000.00	
PROJECT PHASE	PA&ED	PDT MEMBERS			RISK ASSESSMENT INFORMATION							TOTAL DAYS (Construction + Initial review (30 days)+ Closeout (60 days))		1,238	
Risk Identification					Probability	Cost Impact		Time Impact		Phase	Individual Risk	Risk Response			
Status	ID #	Category	Title	Risk Statement	Current Status/ Assumptions	Rating	Rating	Score	Rating	Score	DIS/ CON	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	1	TrafficOps.	Traffic Management Plan	Traffic Management Plan (TMP) may need to be revised due to significant traffic delays from project site leading to redesign of detour plans resulting in additional costs to the project.	The project will affect local arterial traffic below the Central and Bayshore Viaduct bridge during construction. Affected local traffic includes city bus, travelling public: Cars, bicyclist and pedestrian. The project requires full containment during the removal of the existing paint system and installation of the new paint, which may need traffic closure of the adjacent lanes. TMP will be developed during the early stage of the PS&E along with the City of San Francisco.	2-Low	02-Low	4	04-Moderate	8	DIS	Based on PDT's input and Department's experience with past projects of similar nature.	Mitigate	Design will work with TMP functional unit and City of San Francisco to provide a viable solution for managing local traffic during construction. TMP will be investigated early on in the PS&E phase.	TrafficOps.	10/16/2018
Active	2	TrafficOps.	Existing Parking Facilities	The project may require the temporary removal of parking spot for both street and Park N Ride lot leading to backlash from commuter resulting in additional cost and schedule delays to mitigate concerns.	The project footprint includes the paint system at the columns which may take up adjacent park on local streets. Park N Ride under the viaduct will likely be affected. PDT assume full containment system will be utilize above and around the viaduct for both locations which may lower this risk.	4-High	02-Low	8	04-Moderate	16	CON	Based on PDT's input and Department's experience with past projects of similar nature.	Accept	The project will use a full contamination system hanging below the bridge structure. However, since work will be above the parking facilities and street parking, temporary closure may be necessary and investigated during PS&E.	TrafficOps.	10/16/2018
Active	3	Environmental	Bird Nesting Season	Nesting birds, protected from harassment under the MBTA (Migratory Bird Treaty Act) and CFGC (California Fish and Game Code), may require additional construction activity work around during the bird nesting season resulting to additional project cost and schedule delays.	Birds have known to nest under and around the bridge structure. The project located is in the heart of San Francisco near the coastal area with a higher chance birds nesting. There are also nearby by trees below the viaduct where the area of work will be performed. The nature of the project require full contamination with the installation of minimum 15inch +/- deck installation below the viaduct. Active bird nesting season is between February 1 to September 30 in one construction season.	4-High	01-Very Low	4	04-Moderate	16	DIS	Based on PDT's input and Department's experience with past projects of similar nature.	Accept	Design will work with the office of Environmental during PS&E to determine the necessary mitigation efforts needed. Bird survey will be needed to identify any active bird nest in the surrounding areas.	Environmental	10/16/2018
Active	4	Construction	Unidentified Facilities Conflicts	Unanticipated existing facilities encountered on the project site may conflict with the construction activities leading to additional work around or repairs resulting in additional cost and potential delays.	The area of work has nearby traffic signal for cross street under the central viaduct. City of SF also have bus electric overhead lines mounted below the central viaduct on South Van Ness and 16th St. on Bayshore Viaduct. There is also existing powerlines that power existing streetlight mount under both viaduct location.	3-Moderate	04-Moderate	12	02-Low	6	DIS	Based on PDT's input and Department's experience with past projects of similar nature.	Mitigate	SFMTA will need to be contacted early on during PS&E as some Muni bus route will likely be affected by painting operation. City of San Francisco will also need to be contacted when TMP is being designed early on in the PS&E phase for the affect Bike Path and City signals and lighting under the central viaduct.	Construction	10/16/2018
Active	5	Construction	Inadequate Traffic Management	Due to existing project site conditions construction may need mitigate traffic congestion leading to additional traffic control / traffic measures / traffic devices during construction resulting in additional cost and schedule delays.	Traffic may need to be halted for a certain amount of time for the installation of the contamination system. This includes the installation of the temporary platform minimum 15" +/- below the bridge structure held by Beam clamps and chains system.	2-Low	04-Moderate	8	04-Moderate	8	CON	Based on PDT's input and Department's experience with past projects of similar nature.	Mitigate	City of San Francisco will also need to be contacted when TMP is being designed early on in the PS&E phase to determined the best route of local detours during construction. It is unlikely that traffic above the structure would be severely affected.	Construction	10/16/2018
Active	6	Structure	Unidentified Structural Defects	Unanticipated or unidentified structural defects may be discovered in construction leading to additional work not accounted for in the original project scope resulting in additional cost and possible schedule delays.	The project may uncover additional structure defects that was not found during programming. Safety related issues must be fixed and upgraded during construction. According to the BIRIS system there are many deficiency printed on 04/22/2013.	1-Very Low	01-Very Low	1	04-Moderate	4	CON	Based on PDT's input and Department's experience with past projects of similar nature.	Accept	This project is focused on repairing the paint system on the Central and Bayshore viaduct. Design will continue to work with other function unit to determine if any additional defects are found during field investigation and/or to program future projects to address the additional defects found outside the project scope.	Structure	10/16/2018
Active	7	Structure	Increase in Area of spot blast	Spot blast is usually 10-15% of total bridge area. However, there may be unanticipated areas that require additional spot blast leading to bid item cost overrun resulting in additional costs to the project.	The project will spot blast deficient areas of the paint system in the full contamination system. However there could be an increase in area of deterioration from the what was identified in the BIRIS system. Past maintenance project usually has a 10% to 15% increase of the total bridge structure.	3-Moderate	08-High	24	01-Very Low	3	CON	Based on input of PDT and Department's experience with past projects of similar nature.	Accept	Pull test should be conducted during PS&E to determine the blast area to be identified on the project plans. If the blast area is over 15% of the total bridge area, full blast is recommended.	Structure	10/16/2018

RISK REGISTER LEVEL	2	PROJECT NAME	SF - Route 101 /80 Central Viaduct Bayshore Viaduct Bridge Painting		DIST-EA	2J800 (0415000034)	Project Manager	PM	RISK MANAGER	Patrick Treacy / Amani Meligy / Kelly Ma / Daniel Y. Chang		TOTAL COST (Capital +Support)		$125,855,000.00	
PROJECT PHASE	PA&ED	PDT MEMBERS			RISK ASSESSMENT INFORMATION							TOTAL DAYS (Construction + Initial review (30 days)+ Closeout (60 days))		1,238	
Risk Identification					Probability	Cost Impact		Time Impact		Phase	Individual Risk	Risk Response			
Status	ID #	Category	Title	Risk Statement	Current Status/ Assumptions	Rating	Rating	Score	Rating	Score	DIS/ CON	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	8	Design	Outside Agency Restriction	Project may encounter outside agency restriction that was not accounted for in the previous phase leading to design change or scope reduction resulting in additional support cost and schedule delays for reengineering work.	Project occurs within the City of San Francisco where there is existing bicycle facilities and existing street parking. Traffic detour also plays an issue for area with lower vertical clearance on the Central viaduct. City of San Francisco has been vocal regarding traffic related issue on local street, include express bus route detours.	3-Moderate	04-Moderate	12	04-Moderate	12	DIS	Based on PDT's input and Department's experience with past projects of similar nature.	Mitigate	Design will need to contact all affect agency to coordinate and mitigate design issues and avoid delays during PS&E .	Design	10/16/2018
Active	9	Structure	Vertical Clearance Issues	The project may experience areas where there is vertical clearance issues, leading to constructability issues resulting in more costly work around option outside the programmed amount.	There are some areas in the central viaduct where installation of a deck platform may not be viable. This is due to the low vertical clearance and potential conflict with existing facilities including overhead lines for the City bus. Contractor may need to find other alternatives to perform the work under full contamination system.	4-High	04-Moderate	16	01-Very Low	4	DIS	Based on PDT's input and Department's experience with past projects of similar nature.	Accept	Design will need to contact all city of San Francisco and SFMTA for proposed work in low vertical clearance during PS&E.	Structure	10/16/2018
Active	10	Organization	Public Complaints / Concerns	The project may experience public concerns or complaints during the life of the project leading to delays or additional work to mitigate concerns or complaints resulting to additional cost and schedule delays.	Due to the footprint of the project. There will be complaints from the community and traveling public on the local street. The full contamination system would affect city bus perpendicular to Central and Bayshore Viaduct. Bicycle lanes and parking facilities will be affect under the bridge structure. Construction noise may become issue with the community from spot blast or pressure washing the existing paint system.	3-Moderate	02-Low	6	04-Moderate	12	DIS	Based on PDT's input and Department's experience with past projects of similar nature.	Mitigate	The state and city will need to present a positive image to the community regarding the scope of work. Design will work with stakeholders and PIO office to keep the public informed on the project progress.	Organization	10/16/2018
Active	11	Construction	Homeless Encampment	Presence of homeless encampments under the bridge may delay or stop construction activity during construction leading to additional mitigation effort not accounted for in the project resulting in additional cost and schedule delays.	There are various homeless encampment within the footprint of the project on local street (13th St. and South Van Ness, Division St., Bryant St., 16th St.). CHP and local enforcement will likely need to get involved to evict homeless encampment around bridge structure.	3-Moderate	02-Low	6	02-Low	6	CON	Based on PDT's input and Department's experience with past projects of similar nature.	Accept	Design will need to identify areas of homeless encampment around the project's footprint and determine an effect method in dealing with homeless encampment during PS&E. Caltrans and City of San Francisco will need to have a plan with the local enforcement to clear Homeless encampment around to work area prior to construction.	Construction	10/16/2018
Active	12	Construction	Coordination With Outside Agency	Project work may impact local streets leading to local agency to require enhancements or apply constraints on the project resulting in additional costs and schedule delays.	The complexity of the location along with surround community and local facility will make it challenging to coordinate for the work. Work that would have City involvement includes: TMP, and local street closure during construction. temporary deletion of parking and transit impact to the local community and local community concerns and complaint.	3-Moderate	01-Very Low	3	08-High	24	DIS	Based on PDT's input and Department's experience with past projects of similar nature.	Mitigate	The PM and Design will have the City involve early on in the PS&E to minimize the impact to local community.	Construction	10/16/2018
Active	13	PM	Project Funding Shortfall	The project may not account for the details need to complete the project scope leading to a funding shortfall in subsequent phase than originally programmed resulting in additional cost and schedule delays.	The project may experience a funding shortfall if the PDT determined the project requires full blast for the existing paint system. Coordination and additional scope from the local agency and justice department may require additional measure that was not accounted for.	2-Low	04-Moderate	8	01-Very Low	2	DIS	Based on PDT's input and Department's experience with past projects of similar nature.	Accept	The PM and Design will work with the City of San Francisco early on to see what are the City's concern when the project is in construction. City input is greatly needed to minimize the likelihood of a funding shortfall.	PM	10/16/2018
Active	14	PM	Support Cost Increase	The project may encounter unforeseen circumstance during design and/or construction that was not anticipated in the previous phase leading to spike in support cost consumption to complete the work resulting in additional support cost.	The project will need to coordination with SFMTA and City of San Francisco to mitigate temporary local street closure, Temporary closure of parking facilities and work with near by community in the surround project foot print. Traffic management issues would need to be resolve from the city.	3-Moderate	04-Moderate	12	01-Very Low	3	DIS	Based on PDT's input and Department's experience with past projects of similar nature.	Accept	The PM and Design will have to involve the City of San Francisco early on in the PS&E to minimize the impact to local community.	PM	10/16/2018