

Highway Bridge Replacement and Rehabilitation Program (HBRRP)

**Application for HBRRP funds to  
Rehabilitate Third Street Bridge (34C0025)  
In San Francisco**



Prepared for:

**California Department of Transportation  
District 04 Local Assistance**

Submitted by:

**City and County of San Francisco  
Department of Public Works  
Infrastructure Design and Construction Division  
30 Van Ness Avenue, San Francisco, CA 94102**

Contact: Rinaldi Wibowo

Local Agency Project Manager

Telephone: (415) 558-4551 / Fax: (415) 558-4093

E-mail: [Rinaldi.Wibowo@sfdpw.org](mailto:Rinaldi.Wibowo@sfdpw.org)

March 6, 2015



March 6, 2015

Mr. Teppitak (Jimmy)  
Panmai  
Caltrans, Office of Local Assistance  
P.O. Box 23660  
Oakland, CA 94623-0660

Edwin M. Lee  
Mayor

Mohammed Nuru  
Director

**Patrick Rivera**  
Manager

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[twitter.com/sfpublicworks](https://twitter.com/sfpublicworks)

Re: Application for Highway Bridge Replacement and Rehabilitation Program  
Third Street Bridge (34C0025) Rehabilitation Project

Dear Mr. Panmai,

With submission of this funding application for the Highway Bridge Replacement and Rehabilitation Program (HBRRP) funds, the City and County of San Francisco Department of Public Works (CCSF-DPW) respectfully requests the Third Street Bridge Rehabilitation Project be programmed in the HBRRP Plan. The proposed project will rehabilitate the deficient locally owned movable bridge, which is an eligible candidate of the HBRRP.

The Third Street Bridge is located on Third Street crossing over Mission Creek Channel that has been identified as an important gateway to a new redeveloped Mission Bay in San Francisco. The area has rapidly evolved into a wealthy neighborhood of luxury condominiums, hospitals, biotechnology research and development, and a future Warrior stadium.

The Third Street Bridge carries five lanes of traffic. During normal conditions, the two easternmost lanes carry northbound traffic, the two westernmost lanes carry southbound traffic, and the center lane is reversible. Before, during, and after events at neighboring AT&T Ballpark, the two easternmost lanes are closed to vehicles, and used exclusively by pedestrians, while the remaining two easternmost lanes are reversible. Mission Bay is served by the San Francisco's Muni Metro and several Muni bus and trolley bus lines link the area to neighborhoods to the north, west, and south. The Caltrain commuter rail system connects Mission Bay with San Jose and Gilroy and the current Central Subway project will make the link between Mission Bay, AT&T Ballpark, Market Street-Union Square and Chinatown even faster.

The Third Street Bridge is also designated as a major corridor through developing neighborhood; providing a vital connection from Third Street to low-income and minority populations and to the future residential and commercial developments at the former Hunters Point Naval Shipyard and the India Basin Shoreline.

The Third Street Bridge is in poor condition and requires a significant amount of deferred repair and upgrade to bring it into compliance with current standards. Enhancing the reliability of the bridge and linkage to transit will not only address basic access issues, but will also connect communities.

With the findings discussed in this HBRRP funding application, we request Caltrans Local Assistance to program this project and obligate HBRRP funds. With local funds, the preliminary engineering will be completed by consultant prior the use of Caltrans funds. The City will have adequate resources to begin the environmental assessment and construction phase upon your completion of programming and your authorization to proceed. The City will make every effort to accelerate the project with repair and upgrade works estimated to occur in 2016. We understand that reimbursable work shall not commence until an authorization to proceed (E-76) has been issued to the City by Caltrans.

Enclosed with this cover letter are the following documents:

- Request for Authorization to Proceed with Preliminary Engineering Phase (Exhibit 3-A)
- Request for Authorization to Proceed Data Sheets (Exhibit 3-E)
- Finance Letter (Exhibit 3-O)
- HBRRP Application/Scope Definition Form (Exhibit 6-A)
- HBRRP Special Cost Approval Checklist (Exhibit 6-B)
- Field Review Form (Exhibit 7-B)
- Roadway Data (Exhibit 7-C)
- Major Structure Data (Exhibit 7-D)
- Preliminary Environmental Study (PES) (Exhibit 6-A) and supplementary information

We thank you for the opportunity to submit this HBRRP funding application and look forward to your timely review and approval of HBRRP funds. If you have any questions, please feel free to contact me at (415) 558-4551 or by email at [Rinaldi.Wibowo@sfdpw.org](mailto:Rinaldi.Wibowo@sfdpw.org).

Sincerely,



Rinaldi Wibowo,  
Local Agency Project Manager

City and County of San Francisco

San Francisco Department of Public Works

Infrastructure Design and Construction  
30 Van Ness, 5th Floor  
San Francisco, CA 94102  
(415) 558-4000 ■ www.sfdpw.org



Edwin M. Lee, Mayor  
Mohammed Nuru, Director



Patrick Rivera, Division Manager

**EXHIBIT 3-A REQUEST FOR AUTHORIZATION  
TO PROCEED WITH PRELIMINARY ENGINEERING**

To: Ms. Sylvia Fung  
District Local Assistance Engineer  
Caltrans, Office of Local Assistance  
P.O. Box 23660  
Oakland, CA 94623-0660

Date: March 4, 2015  
FTIP/FSTIP ID: \_\_\_\_\_  
Federal Project No: TBD  
Project ID: \_\_\_\_\_  
PPNO (For STIP Projects): \_\_\_\_\_  
High-Risk ITS: \_\_\_\_\_  
Project Description: Third Creek Bridge  
Rehabilitation Project

Dear Ms. Fung:

In order to begin federally reimbursable preliminary engineering work for the above-referenced project, we request Federal Authorization to Proceed and Obligation of Funds. The federal funds requested will not exceed those provided to this agency in the federally approved Federal Transportation Improvement Program (FTIP)/Federal Statewide Transportation Improvement Program (FSTIP).

Attached are the following documents required to authorize this phase of work:

Request for Authorization Package

- Completed Request for PE Authorization Data Sheet (Exhibit 3-E)
- Copy of FTIP/FSTIP Reference
- Completed Finance Letter (Exhibit 3-O)
- For High-Risk ITS Projects: FHWA approved Systems Engineering Management Plan (SEMP). (Federal approval of the SEMP is contingent on prior federal approval of the Systems Engineering Review Form [SERF])
- Copy of Executed Cooperative Agreement (only for projects on State Highway System)
- Request for Capital Subvention Reimbursement Allocation (Exhibit 3-H) (only for projects on State Highway System)

Toll Credit Usage

- This project will use Toll Credit. It is fully funded.
- This project will NOT use Toll Credit.

Field Review Form (Exhibit 7-B)

- Completed Field Review Form (Exhibit 7-B), or
- A Field Review Form will be submitted within four (4) months of the Federal Authorization date, otherwise, it is understood the authorization to proceed will be canceled automatically. It is further understood that a Program Supplement Agreement will NOT be prepared until after the Field Review Form is submitted.

Environmental Document

- Type of NEPA Document. Approval Date: \_\_\_\_\_.



- Categorical Exclusion (CE)
- Findings of No Significant Impact (FONSI)
- Record of Decision (ROD)
- Revalidation

This agency has not completed the environmental process. The NEPA Document will be submitted at a later date, prior to beginning of final design (PS&E).

Disadvantaged Business Enterprise (DBE)

- All work for this phase of the project will be performed by local agency staff.
- For consultant contracts a Disadvantaged Business Enterprise (DBE) goal will be established for each contract, and the Local Agency Proposer DBE Commitment (Consultant Contracts) (Exhibit 10-O1) will be submitted with the proposal. Within 15 days of contract execution, the Local Agency Proposer DBE Information (Consultant Contracts) (Exhibit 10-O2) shall be forwarded to the DLAE.

California Transportation Commission (CTC) Allocation

- A CTC allocation is not required, or
- A CTC allocation of \$ \_\_\_\_\_ (federal/state) funds for the PA/ED and/or PS&E component(s) of work was made at the \_\_\_\_\_ meeting of the CTC, or
- A CTC allocation of funds has been scheduled for the \_\_\_\_\_ meeting of the CTC. It is understood that the authorization/obligation of any federal STIP funds will not be made until after the CTC allocation.

Project Agreement and Liquidation of Funds

Upon FHWA issuance of the “Authorization to Proceed” and Agency submittal of the “Field Review” form (Exhibit 7-B), a “Program Supplement Agreement” will be prepared to encumber the federal and/or state funds for the project. This Agency understands that any federal and/or state funds encumbered for the project are available for disbursement for limited period(s) of time. For each fund encumbrance the limited period is from the start of the fiscal year that the specific fund was appropriated within the State Budget Act, to the applicable Fund Reversion date shown on the State approved project finance letter (unless an extension is granted by the Department of Finance). It is anticipated that this phase of work will be completed by March 2015.

Invoice Submittal

This Agency understands that only relocation work performed after federal “Authorization to Proceed” (E-76) is eligible for reimbursement. Invoices for reimbursement will not be submitted until after the federal and state (if applicable) funds are encumbered via an executed “Program Supplement Agreement” and/or State approval Finance Letter. In addition, it is also understood that an invoice must be submitted at least once every six (6) months for each project phase until all funds are expended. If there are no eligible expenses, then a written explanation will be provided for that six (6) month period along with the target amount and date for the next invoice submittal.

**CERTIFICATION**

I certify that the facts and statements in this Request for Authorization Package are accurate and correct. This Agency agrees to comply with the applicable terms and conditions set forth in Title 23, U.S. Code, Highways, and the policies and procedures promulgated by the Federal Highway Administration and California Department of Transportation relative to the above-designated project.

I understand that this Agency is responsible for all costs in excess of the federal and/or state funds obligated /encumbered as well as for all costs it incurred prior to receiving the FHWA issued “Authorization to Proceed.” I further understand that all subsequent phases of the project will require a separate “Federal Authorization to Proceed.”

For High-Risk and Low-Risk ITS projects, I understand that our project shall be consistent with the Regional ITS Architecture, adhere to ITS Standards, and undergo Systems Engineering analysis. A SERF will be included in the Field Review Package. For High-Risk ITS projects, I understand that this Agency shall not proceed with component detailed design until after FHWA approval of the SEMP and receipt of "Authorization to Proceed."

Please advise us as soon as the "Federal Authorization to Proceed" has been issued. You may direct any questions to:

Rinaldi Wibowo at 415-558-4551 or Rinaldi.Wibowo@sfdpw.org



*Signature of Local Agency Representative*

Rinaldi Wibowo  
*Print Name*

Project Manager  
*Title*

City and County of San Francisco, Department of Public Works  
*Agency*



**FTIP / FSTIP DATA**

MPO/RTPA NAME: Metropolitan Transportation Commission (MTC) FTIP / FSTIP YEAR: FY 15/16  
 FED. FUNDED PHASES: Preliminary Engineering and Construction SHEET OR AMD. NO.: \_\_\_\_\_  
 APPROVAL DATE: \_\_\_\_\_  
 FED FUND TYPES/TOTALS: FTIP - HBRRP APPRV'D EPSP (Y or N): \_\_\_\_\_

**DISADVANTAGED BUSINESS ENTERPRISE (DBE) SUBMITTALS:**

Race Conscious Implementation Agreement (Exhibit 9-A) CT APPROVAL DATE: \_\_\_\_\_  
 Local Agency DBE Annual Submittal Form (Exhibit 9-B):  
 FED FISCAL YEAR: 14/15 CT APPROVAL DATE: 9/9/14

**INITIAL AUTHORIZATION & ESTIMATED COMPLETION DATES**

<u>PHASE OF WORK</u>	<u>INITIAL FEDERAL AUTHORIZATION DATE</u>	<u>ESTIMATED COMPLETION DATE</u>
PE	<u>July 2015</u>	<u>June 2016</u>
RW	<u>Not applicable</u>	<u>Not Applicable</u>
CON	<u>July 2016</u>	<u>Dec 2017</u>

**ENVIRONMENTAL DATA**

NEPA DOCUMENT TYPE:

CE \_\_\_\_\_ Date Caltrans SEP/DLAE signed CE Form (use the latest date)  
 EA / FONSI \_\_\_\_\_ Date Caltrans DD (DDD or designee) signed the FONSI  
 EIS / ROD \_\_\_\_\_ Date Caltrans signed the ROD  
 EIS Number \_\_\_\_\_ Year of Public Release of EIS and EIS number (assigned by FHWA)  
 AIR BASIN \_\_\_\_\_ (For CMAQ Program Funds)

**R/W ESTIMATE**

R/W ACQ PARCELS: \_\_\_\_\_ \$ \_\_\_\_\_  
 RAP (FAMILY): \_\_\_\_\_ \$ \_\_\_\_\_  
 (BUSINESS): \_\_\_\_\_ \$ \_\_\_\_\_  
 LRH/HRDSHP: \_\_\_\_\_ \$ \_\_\_\_\_  
 UTILITIES: \_\_\_\_\_ \$ \_\_\_\_\_  
 SUPPORT: \_\_\_\_\_ \$ \_\_\_\_\_  
 TOTAL: \_\_\_\_\_ \$ Not Applicable

**UTILITY RELOCATION / ADJUSTMENTS**

<u>UTILITY OWNER</u>	<u>UTILITY TYPE</u>	<u>COST TO RELOCATE</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
TOTAL UTILITY RELOCATION COSTS		<u>Not Applicable</u>

**DESCRIPTION OF R/W PARCELS BY TYPE OF ACQUISITION/ACTIVITY**

<u># PARCELS</u>	<u>ACQUISITION TYPE AND/OR ACTIVITY</u>	<u># ACRES</u>	<u>EST. COST</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**R/W CERTIFICATION**

R/W CERT. NO. \_\_\_\_\_ Date Approved by Caltrans: \_\_\_\_\_

**LOCAL AGENCY COMMENTS**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**THIS REQUEST PREPARED BY:**

NAME: Rinaldi Wibowo  
 TITLE: Project Manager  
 PHONE NO.: 415-558-4551  
 E-MAIL: Rinaldi.Wibowo@sfdpw.org

**AGENCY CONTACT FOR PROGRAM SUPPLEMENT AGREEMENT**

NAME: Ananda Hirsch  
 TITLE: Transportation Finance Analyst  
 PHONE NO.: 415-558-4034  
 E-MAIL: Ananda.Hirsch@sfdpw.org

**Distribution:** DLAE





**EXHIBIT 6-A HBRRP APPLICATION/SCOPE DEFINITION FORM**

See Section 6.6, Chapter 6 of the LAPG for information about this form.

**This form shall replace Exhibit 7-D, “Major Structure Data,” from Chapter 7, “Field Review,” of the LAPM.** Wherever the LAPM requires Exhibit 7-D for other programs, Exhibit 6-A may be substituted. Bridge projects funded entirely through other programs should continue to use Exhibit 7-D.

**(One bridge per application, separate applications are required for multiple bridges at same location. Multiple bridges may be combined into one federal aid project later.)**

State Bridge No. 34C0025 Local Bridge No. CCSF 74  
 Project Number TBD (Caltrans to provide project number for new projects)  
 Responsible Agency City and County of San Francisco, Department of Public Works  
 Caltrans District 04  
 County San Francisco  
 Project Manager Rinaldi Wibowo  
 Title Project Manager  
 Phone 415-558-4551 Fax (415) 558-4093  
 E Mail Rinaldi.Wibowo@sfdpw.org  
 Project Location Third Street Bridge on Third Street over Mission Creek Channel  
 Project Limits Third Street Bridge on Third Street crossing over Mission Creek Channel in between Berry Street and Terry A Francois Boulevard in San Francisco.  
 Type of Work Rehabilitation  
 Work Description Rehabilitation work includes bridge deck and structural member corrosion repair; bridge painting; counterweight and fender pile repairs; other damage repairs.

HBRRP Category:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Rehabilitation                   | <input type="checkbox"/> Scour Countermeasure                     |
| <input type="checkbox"/> Replacement                                 | <input type="checkbox"/> Replacement Due to Flood Control Project |
| <input checked="" type="checkbox"/> Painting                         | <input type="checkbox"/> New Bridge to Replace Ferry Service      |
| <input type="checkbox"/> Bridge/Railing/Approach Barrier Replacement | <input type="checkbox"/> Historic Bridge                          |
| <input type="checkbox"/> Low Water Crossing Replacement              | <input type="checkbox"/> High Cost Bridge                         |
- Minimal Application: Only questions 1,2,3, 4, cost data and signoff will be completed. Other information will be submitted at a later time after PE has been federally authorized to scope the project. See Section 6.6.2 “Minimum Application Requirements” for additional information.

The field review process enables the proper scoping of projects. Some field reviews are mandatory, most are optional. Field reviews are critically important to identify difficult environmental, Right of Way, and bridge type selection issues early in the project development phase. Please see Chapter 7 of the LAPM for further discussion.

1. Do you request that Caltrans initiate a field review?  Yes  No
2. Do you need help with consultant selection/oversight?  Yes  No
3. Do you need help with the federal process?  Yes  No
4. Caltrans engineers are available to provide an optional cursory review of the PS&E. The review looks at constructability, standard details and specifications, foundation/hydraulic design, and HBRRP funding eligibility. Do you request Caltrans perform a cursory PS&E review for this project? (If yes, please also request a field review.)  Yes  No

Federal Congressional District(s) 8

State Senate District(s) 3

State Assembly District(s) 13

Preliminary Engineering by:  Local Agency Staff  Consultant  Other...

Design by:  Local Agency Staff  Consultant  Other...

Foundation Investigation by:  Local Agency Staff  Consultant  Other...

Hydrology Study by:  Local Agency Staff  Consultant  Other...

Detour, stage construction, or close road? Yes

Length of detour: TBD – depending on how the contractor accesses the bridge. Fourth Street Bridge (200 meters away) can be used as detour during construction of Third Street bridge.

Resident Engineer for Bridge Work:  Local Agency Staff  Consultant  Other...

For painting & scour scopes of work, skip this page.

**NBI data is from the Bridge Inspections Report (SI&A sheet)  
Contact the DLAE/SLA for assistance, if needed**

Date Constructed (NBI Item 27): 1932      Historical Bridge Category (NBI Item 37) 2

Structure Data	Existing	Proposed	Minimum AASHTO Standards
Structure type	Movable - Bascule Steel	No changes proposed	
Structure length (specify units)	89.9 m (295feet)	No changes proposed	
Spans (No. and length)	7 spans (1@56.5ft, 1@142.25ft, 1@20.54ft, 3@19ft, 1@18.17ft)	No changes proposed	
Curb to Curb width (See NBI Item 51 definition)	21.8 m (71.5 feet)	No changes proposed	
Number of lanes	5	No changes proposed	
Lane widths	3.5 m (11.5 feet)	No changes proposed	
Shoulder widths	____ Lt    ____ Rt	____ Lt    ____ Rt	
Bike lanes (identify only if <u>not</u> included in the shoulder dimensions)	____ Lt    ____ Rt	____ Lt    ____ Rt	
Sidewalks/separated bikeways	<u>1.3 m (4.3ft)</u> Lt <u>1.6 m (5.2ft)</u> Rt	No changes proposed	
Approach roadway width (traveled way + paved shoulders, tapered approaches should be measured at the touchdown points not the abutments)	19.8 m (65 feet)	No changes proposed	

Approach road length (from each abutment)	_____ abt1 _____ abt2	_____ abt1 _____ abt2	
Total bridge deck width	30.5 m (100ft)	No changes proposed	

**Summary of Major Deficiencies of Existing Bridge (See Section 6.12 for information)  
(Contact the DLAE/SLA for assistance, if needed)**

Data is from SI&A Sheet (Last page of Bridge Inspection Report)

SD = Structurally Deficient  
FO = Functionally Obsolete  
Blank = Not SD or FO  
NG = Not Good (Deficiency)

Sufficiency Rating (SR) = 33.3      Status  SD    FO    Blank

Description of Data Item	NBI Data Item	Deficient Criteria	Results	What are the Deficiencies?
Deck	Item 58 = 6	≤ 4 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG-SD	See separate pages attached to end of this form for information regarding the deficiencies in bridge deck.
Superstructure	Item 59 = 3	≤ 4 is problem	<input type="checkbox"/> OK <input checked="" type="checkbox"/> NG-SD	See separate pages attached to end of this form for information regarding the deficiencies in superstructure.
Substructures	Item 60 = 7	≤ 4 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG-SD	See separate pages attached to end of this form for information regarding the deficiencies in substructures.
[Item 62 applies only if the last digits of Item 43 are coded 19.]				Not Applicable. Item 43 are coded 316.
Culvert and Retaining Walls	Item 62 = N	≤ 4 is problem	<input type="checkbox"/> OK <input type="checkbox"/> NG-SD	
Structural Condition	Item 67 = 3	≤ 3 is problem	<input type="checkbox"/> OK <input checked="" type="checkbox"/> NG	See separate pages attached to end of this form for information regarding the deficiencies in structural condition.
[Item 71 applies only if the last digit of Item 43 is coded 0, 5, 6, 7, 8, or 9.]				
Waterway Adequacy	Item 71 = 8	≤ 3 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG	
Deck Geometry	Item 68 = 9	≤ 3 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG-FO	



Description of Data Item	NBI Data Item	Deficient Criteria	Results	What are the Deficiencies?
[Item 69 applies only if the last digit of Item 42 is coded 0, 1, 2, 4, 6, 7 or 8.]				
Under-clearances	Item 69 = N	≤ 3 is problem	<input type="checkbox"/> OK <input type="checkbox"/> NG-FO	Not Applicable. Item 42 is coded 5.
Approach Roadway Alignment	Item 72 = 6	≤ 3 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG-FO	
Scour Criticality	Item 113 = 5	≤ 3 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG	
Bridge Railing	Item 36A = 0	= 0 Review	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG	
Guardrail Transition, Approaches, Guardrail Ends	Item 36B = 0 Item 36C = 0 Item 36D = 0	= 0 Review	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG	
Other deficiencies not identified in Bridge Inspection Report	<p>Discuss in detail, attach additional pages and photographs as needed to justify HBRRP funds to correct problem:</p> <p>See separate pages attached to the end of this form for information regarding the deficiencies.</p>			

5. If this application is for rehabilitation or replacement scope, will all deficiencies be resolved by the project? If no, please discuss below or attach discussion on separate pages to application.

Yes    No    Not Applicable

6. Discuss any special condition or proposed design exceptions:

The proposed rehabilitation work is significant. Because the bridge forms a part of the Thrid Street, a major transportation corridor in San Francisco, repairs must be scheduled to limit interruption to daily commute traffic.

7. Identify and justify “betterments” that are HBRRP participating but are not related to the major deficiencies. Attach additional pages as needed.

8. Refer to Exhibit 6-B. Identify and justify specific items requiring Caltrans funding approval. Attach additional pages as needed.

9. Other comments: (identify non-HBRRP participating work)

Estimated Construction Costs:

Exclude Contingencies, Supplementary Work, and Construction Engineering

	HBRRP Participating	NOT HBRRP Participating*
Construct Bridge	\$12,500,000	
Bridge Removal		
Slope Protection		
Channel Work		
Detour – Stage Construction	\$2,500,000	
Approach Roadway		
Utility Relocation		
Mobilization	\$1,000,000	
Total	\$16,000,000	

Total Cost \$16,000,000

\* Items that are not HBRRP participating could be participating through other federal programs. See the LAPG for other eligibility requirements of other programs. Local agencies that are unsure which project costs are HBRRP participating should contact the DLAE/SLA for resolution.

Note that the total of the HBRRP participating costs should carry over into the construction line (direct costs) on the next page.

**Summary of HBRRP Participating Costs**

Please indicate the HBRRP total participating (eligible for reimbursement) costs for this project. Based on the amounts below and the federal reimbursement rate, Caltrans will program (reserve) the HBRRP funds needed for this project. Other federal funds (RSTP, TEA, etc.) needed for this project should be shown in the Field Review form Exhibit 7-B from Chapter 7 of the LAPM.

Target dates represent a commitment by the local agency when the project will need HBRRP funding. Failure to meet target dates may cause funds to be reprogrammed to other projects by other local agencies. The reprogramming of HBRRP funds is at the discretion of Caltrans.

- PE = Preliminary Engineering (Total not to exceed the greater of \$75 K or 25% of CON and consultant contract management and quality assurance not to exceed 15% of consultant costs).
- R/W = Right of Way
- CE = Construction Engineering (Not to exceed 15% of CON).
- CON = Construction
- Cont = Contingency (including supplement work) not to exceed 25% (preliminary estimate) nor 10% of CON for final design \$5 K min.

Enter CE Rate:

Enter Contingency Rate:

	Direct Costs		Indirect Costs*	=	HBRRP Participating \$**	Target Dates
PE	\$750,000	+	NA	=	\$750,000	July 2015
R/W					NA	NA
CON	\$16,000,000					
CE	\$2,400,000	<input type="text" value="NA"/>				
Cont	\$1,600,000					
Subtotal	\$20,000,000	+	NA	=	\$20,000,000	July 2016
Total Participating Cost					\$20,750,000	
Enter Fed. Match Rate:	<input type="text" value="88.53%"/>	HBRRP Requested			\$18,369,975	

\* See Chapter 5, "Accounting/Invoices," of the LAPM for approval of indirect costs.

\*\* Participating costs exclude ineligible work items. Please review the HBRR Program Guidelines for reimbursable scopes of work and program cost limits. Other federal funds will be shown in the Field Review form, Exhibit 7-B, Chapter 7, "Field Review," of the LAPM.

Caltrans, please notify this agency to confirm this project has been programmed in the HBRRP Multi-Year Plan. I understand that reimbursable work shall not commence until a request for authorization (E76) has been processed by Caltrans and a notice to proceed has been received by this agency.

I certify that this project is in compliance with Chapter 6 (HBRRP) of the *Local Assistance Program Guidelines*. I understand that changes to the project scope/cost/schedule impacting the information in Exhibit 6-A and Exhibit 6-B require the processing of Exhibit 6-D (HBRRP Scope/Cost/Schedule Change Request).

Two (2) copies plus one original of this application (with attachments) will be included in the transmittal package to the DLAE.

Rinaldi Wibowo 03/04/2015  
Local Agency Project Manager Date

**Attachments:**

- 1) Exhibit 6-B, LAPG, HBRRP Special Cost Approval Checklist
- 2) Bridge Inspection Report with SI&A Sheet
- 3) Sketch of General Plan or marked up as-built
- 4) Sketch of typical section
- 5) Photographs: 4 corners looking at the bridge & 2 elevation views, & views of each approach, for a total of 8 photographs (minimum).
- 6) Exhibit 7-B, Field Review Form, Chapter 7, LAPM
- 7) Exhibit 7-C, Roadway Data Sheet, Chapter 7, LAPM
- 8)  Exhibit 6-C, PIN for Barrier Rail Replacement Projects (include only if applying for Bridge Railing Replacement funds.)
- 9)  Other: \_\_\_\_\_
- 10) Request for Authorization is included in this application package for expedited processing?  
 Yes  No

**Thank you for assembling the application package. Please send this package to your District Local Assistance Engineer to start the programming process.** Please e-mail your suggestions to improve this form to [eric.bost@dot.ca.gov](mailto:eric.bost@dot.ca.gov) or [shannon.mlcoch@dot.ca.gov](mailto:shannon.mlcoch@dot.ca.gov).

**For Caltrans use only:**

I have reviewed this application for completeness and have forwarded copies to the Office of Program Management and SLA.

- I recommend approval. (Attach comments as needed.)
- I do not recommend approval for the following reasons: See attached memo/e-mail to the Office of Program Management.
- I request SLA review of this application for the following reasons: (Attach memo/e-mail justifying increased Caltrans oversight).

\_\_\_\_\_  
DLAE or authorized staff Date



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**SEPARATE PAGES FOR LAPG EXHIBIT 6-A**

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**Summary of major deficiencies based on the latest available Caltrans's Bridge Inspection Reports (Routine Inspection 12/19/2012; Fracture Critical Inspection 11/26/2013; Underwater Inspection 11/14/2013; and Other (Hydraulic) Inspection 05/10/2010).**

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**Deck:**

The deck on the lift span of this structure is a steel open grid on the right western inland side and a steel open grid with steel cover plates on the left eastern bay side. The steel plates on the left side were added for pedestrian foot traffic tied to the Giants baseball stadium and crowds. The open grid deck has distress and deterioration with repaired welds and patched areas totaling less than 10% of the open grid deck area. The open grid deck with steel cover plates has similar distress to the open grid visible during lift operations and observed while under the structure. There is some distress to the skid course on the steel plates. The concrete curb areas on the bridge deck have a history of spalling. Many of these spalls have been repaired since the last inspection but there are still some areas of curb that are spalled.

**Superstructure:**

On all the painted steel superstructure elements there is active corrosion. Surface or freckled rust has formed and is prevalent at the connections. The paint system is generally chalking, peeling, curling, and showing other early evidence of paint system distress. There is pack rust in the built up sections and connections which is distorting the members. There is some loss of section detailed below. All painted steel elements are in condition state 2 to 4 at this time.

The concrete counterweights are cracking with efflorescent staining in areas and have areas with spalls with exposed corroded reinforcement up to 3 square feet in surface size. The cracked and delaminated areas easily spalled off with a light rock hammer. An estimated area of 10% of the surface area of the 2 counterweights is cracked and spalling.

The top surface of the trunion portion of the truss is corroding with surface rust and surface pitting. The lift portion of the deck has a vertical offset of ½ of an inch as measured along the centerline of the two way traffic lanes. The underside of the superstructure in the lift span exhibits corrosion, pack rust and general distress along the bottom flanges of the bottom cord of the truss, the floor beams and the girders. The end bearing area of the bottom cord of the lift span along the left bay side has significant corrosion and pack rust for an area approximately 5 square yards at pier 3. There is a loss of section for an estimated area at 4 square feet along the built up bottom flange of the bottom cord of the truss along the bay side at this location.

**Substructures:**

The abutment face exhibits rock pockets, scaliness, and staining. The timber fender protection system was only visible above the waterline. Those portions above the waterline appeared in good condition, but previous reports indicate those portions below the waterline to be in poor condition.

**Paint Condition:**

In general, regarding the painted steel elements, some corrosion is present but any section loss due to active corrosion does not yet warrant structural analysis of either the element or the bridge. The painted steel elements are all in condition state 66.6.

At left truss members, left truss member has dents in the bottom and top flanges. Member has minor pitting of the top plate up to 1/8" deep. Member has up to 3/16" pack rust at the side plate and bent lacing bars. At left truss joints, there is surface corrosion, and section loss at the vertical gussets and rivets at joint joining bottom chord member to diagonal member. There are areas of complete section loss of the gusset plate where it extends below the bottom chord. At right truss members, right truss member has corrosion at the interior spreaders. At right truss joints, there is surface corrosion, pack rust and section loss at the vertical gusset joining right truss bottom cord to diagonal member at joint. A column of 4 rivets have broken off due to pack rust between the gusset and the member. There are areas of complete section loss in the gusset plate below the bottom chord and partial section loss of approximately 1/4" at the north side of the gusset. At right operation strut, standing water present inside the right operating strut with surface corrosion on the bottom flange and bottom and side rivet heads. At floor beam, pack rust at gussets joining floor beam to intermediate diagonal braces up to 3/8" typical.

At pier 2, generally, the columns of pier 2 were in fair to poor condition with various structural defects observed that could adversely affect structural integrity. Reinforcing steel bars were exposed at some areas, exhibiting section loss due corrosion.

**Structural Condition:**

This bridge has seen a large increase in live loading from adjacent developed areas. This increase in live loading may add fatigue issues to the fatigue prone details.

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**Other deficiencies were not identified in Caltrans's Bridge Inspection Reports:**

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Parsons Brincherhoff was retained by the City and County of San Francisco Department of Public Works to perform a Structural Steel Damage Assessment and Repair for the Third Street Bridget. The findings based on a study conducted in 2014. Based on their assessments, the bridge's structural member in general appears to be in fair condition with the need for some repairs. Repair is required to improve the maintainability, the reliability and to extend the useful life of the bridge.

**Deficiency of Structural:**

The deck coating repair is in poor condition in the areas which are occasionally submerged during high tide in certain months of the year. There are several areas above this level where the coating is in poor condition. The coating on the deck is approximately 15 years old. After all steel repairs are made on the deck, the existing coating should be removed and new coating applied.

There are a few boxed beams where water can enter but the weep holes are either inadequate or non-existent. As a repair, weep holes should be cut in such areas to allow proper drainage of water.

The recommended repairs for concrete support piles consist of utilizing a repair system such as Simpson FX-50 pile cladding. All spalled concrete should be removed and any rebars that are found with more than 25% loss of cross section should be reinforced with additional rebars.

Repair work for corroded members depend on the degree of loss of section and include replacement of the existing member with similar new member or repair damaged existing flange or exiting web with new cover plates of equal or larger thickness.

Possible voids shall be filled with epoxy resin to preclude the ingress of air and moisture.

Corroded bolts and rivets are to be blasted cleaned, recoated, and caulked/scaled.

Corroded welds and existing paint at surrounding area are to be removed to determine the existing corrosion stage. Depending of the existing condition, the weld is to be re-coated or replaced.

Damaged/buckling members of the bridge that were identified for replacement and paint at the existing steel receiving the new member are to be removed after adequate bracing/shoring/framework has been provided. Portions of the existing member or the entire member are to be replaced. The damaged member and new repair work are to be painted and sealed.

High strength bolts matching the existing rivets size are to be installed at the locations where rivets are missing.

## EXHIBIT 6-B HBRRP SPECIAL COST APPROVAL CHECKLIST

The purpose of this form is to help local agencies identify project costs that require Caltrans funding approval. Local agencies are responsible for contacting the DLAE to resolve any items requiring Caltrans review. This form is not a substitute for reading Chapter 6 of the LAPG or the LAPM. Local agencies are still financially accountable for meeting all the requirements of the LAPG and the LAPM.

Project Number TBD

State Bridge No. 34C0025 (one bridge per application) Local Bridge No. CCSF 74

Project Location Third Street Bridge over Islais Creek Channel in San Francisco

Chapter 6 LAPG Section #'s	Topic	Status
6.2.1 – Rehab 6.2.2 - Replace	Adding Additional Lanes (including turn lanes)	<input type="checkbox"/> Requires Caltrans/MPO Approval <input type="checkbox"/> Caltrans has Approved Costs <input type="checkbox"/> MPO has Approved Scope in FTSIP <input checked="" type="checkbox"/> Not Applicable
6.2.1 – Rehab	Scope is Bridge Replacement, but SR>50	<input type="checkbox"/> Requires Caltrans Approval <input type="checkbox"/> Caltrans has Approved Costs <input checked="" type="checkbox"/> Not Applicable
6.2.4 – Rail	No bridge railing work to be done, but other safety work related to bridge is needed.	<input type="checkbox"/> Requires Caltrans Approval <input type="checkbox"/> Caltrans has Approved Costs <input checked="" type="checkbox"/> Not Applicable
6.2.4 – Rail (applies to all scopes of work)	New sidewalks to be installed where none existed before. Please identify as “betterment” in Exhibit 6-A.	<input type="checkbox"/> Requires Caltrans Approval <input type="checkbox"/> Caltrans has Approved Costs <input checked="" type="checkbox"/> Not Applicable
6.2.1 – Rehab 6.2.2 – Replace 6.2.10 – Historic 6.3 – Standards	Rehabilitation/Replacement will not address all major bridge deficiencies	<input type="checkbox"/> Requires Caltrans Approval <input type="checkbox"/> Caltrans has Approved Costs <input checked="" type="checkbox"/> Not Applicable
6.5.11 – Replace	“Replaced” bridges to remain in place. Applies to work beyond specified examples in Section 6.5.12	<input type="checkbox"/> Requires Caltrans Approval <input type="checkbox"/> Caltrans has Approved Costs <input checked="" type="checkbox"/> Not Applicable



EXHIBIT 7-B FIELD REVIEW FORM

Local Agency City and County of San Francisco, Field Review Date TBD  
Department of Public Works  
 Project Number TBD Locator 04-SF-0-CR  
 (Dst/Co/Rte/PM/Agency)  
 Project Name Third Street Bridge Rehabilitation Bridge No.(s) 34C0025  
Project

1. PROJECT LIMITS (see attached list for various locations) The Third Street Bridge is on 3<sup>rd</sup> Street crossing over the Mission Creek channel in between Berry Street and Terry A Francois Boulevard in San Francisco, California.

Net Length 0.056 (mile)

2. WORK DESCRIPTION Rehabilitation work includes bridge deck and structural member corrosion repair; bridge painting; counterweight and fender pile repairs; and other damage repairs.

ITS project or ITS element: Yes  No

If yes, choose: High-Risk (formerly "Major") ITS , Low-Risk (formerly "Minor") ITS , Exempt ITS

3. PROGRAMMING DATA FTIP (MPO/RTPA) \_\_\_\_\_ FY 15/16 Page \_\_\_\_\_

Amendment No. \_\_\_\_\_ FTIP PPNO \_\_\_\_\_ FHWA/FTA Approval Date \_\_\_\_\_

Federal Funds \$ \_\_\_\_\_ Phases PE \_\_\_\_\_ R/W \_\_\_\_\_ Const

Air Basin: \_\_\_\_\_ (CMAQ only)

4. FUNCTIONAL CLASSIFICATION:

URBAN

RURAL

Principal Arterial:

Principal Arterial:

Minor Arterial:

Minor Arterial:

Collector:

Major Collector:

Local:

Minor Collector:

Rural Local:

5. STEWARDSHIP CATEGORY

High Profile (Stewardship): Yes  No

Delegated (Stewardship): Yes  No  (a) DLAE oversight: Yes  No

(b) District Construction Yes  No

ITS High-Risk project or element requiring FHWA oversight per stewardship: Yes  No

6. CALTRANS ENCROACHMENT PERMIT Is it required? Yes  No

7. COST ESTIMATE BREAKDOWN

\$1,000's

Fed. Participation

(Including Structures)

PE	Environmental Process	<u>\$750,000</u>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
	Design	_____	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
	ITS System Manager or Integrator	_____	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
CONST	Const. Contract	<u>\$16,000,000</u>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
	Const. Engineering	<u>\$2,400,000</u>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
	Contingency	<u>\$1,600,000</u>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
R/W	Preliminary R/W Work	_____	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
	Acquisition:		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
	(No. of Parcels _____)		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
	(Easements _____)		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
	(Right of Entry _____)		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
	RAP (No. Families _____)		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
	RAP (No. Bus. _____)		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

Utilities (Exclude if included in contract items)

TOTAL COST \$ 20,750,000 Yes  No

7a. Value Engineering Analysis Required? Yes  No  X  
(Yes, if total project costs are \$25M or more on the Federal-aid System, or \$20M or more for bridges)

8. PROPOSED FUNDING

Grand Total	Total Cost		Cost Share		
	\$ <u>20,750,000</u>				
Federal Program #1 <u>HBRRP</u>	\$ <u>20,750,000</u>	Fed.	\$ <u>18,369,975</u>	Reimb. Ratio	<u>88.53%</u>
(Name/App. Code) #2 _____	\$ _____	Fed.	\$ _____	Reimb. Ratio	_____
Matching Funds Breakdown	Local:		\$ <u>2,380,025</u>	<u>11.47%</u>	
	State:		\$ _____	%	
	Other:		\$ _____	%	


State Highway Funds? Yes  Source \_\_\_\_\_ No   
 State CMAQ/RSTP Match Eligible Yes  No  Partial   
 Is the Project Underfunded? (Fed \$ < Allowed Reimb.) Yes  No

9. PROJECT ADMINISTRATION

		Agency	Consultant	State
PE	Environ Process	<u>CCSF</u>	<u>X</u>	_____
	Design	<u>CCSF</u>	<u>X</u>	_____
	System Man./Integ.	_____	_____	_____
R/W	All Work	_____	_____	_____
CONST ENGR	Contract	<u>CCSF</u>	_____	_____
CONSTRUCTION	Contract	<u>CCSF</u>	_____	_____
MAINTENANCE		<u>CCSF</u>	_____	_____

Will Caltrans be requested to review PS&E? Yes  No  X  
 10. SCHEDULES: PROPOSED ADVERTISEMENT DATE 2016  
 Other critical dates: \_\_\_\_\_

11. PROJECT MANAGER'S CONCURRENCE

Local Entity Representative: San Francisco Public Works / City and County of San Francisco Date: 03/04/2015  
 Signature & Title: Project Manager  Phone No. 415-558-4551

Is field review required? Yes  X No

Caltrans (District) Representative: \_\_\_\_\_ Date: \_\_\_\_\_  
 (if attended Field Review)

Signature & Title: \_\_\_\_\_

FHWA Representative: \_\_\_\_\_  
(if attended Field Review)

Date: \_\_\_\_\_

Signature & Title: \_\_\_\_\_

**12. LIST OF ATTACHMENTS** (Include all appropriate attachments if field review is required. See the “[ ]” notation for minimum required attachments for non-NHS projects)

- Field Review Attendance Roster or Contacts Roster
- Vicinity Map (Required for Construction Type Projects)

**IF APPLICABLE** ( Complete as required depending on type of work involved)

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Roadway Data Sheets [Req'd for Roadway projects]                  |   |
| <input checked="" type="checkbox"/> Typical Roadway Geometric Section(s) [Req'd for Roadway projects] |   |
| <input checked="" type="checkbox"/> Major Structure Data Sheet [Req'd for HBP]                        | _____ Signal Warrants   |
| _____ Railroad Grade Crossing Data Sheet  | _____ Collision Diagram   |
| _____ Sketch of Each Proposed Alternate Improvement   | _____ CMAQ/RSTP State STIP Match  |
| _____ TE Application Document   | _____ Systems Engineering Review Form (SERF)  |
| _____ Existing federal, state, and local ADA deficiencies not included on other Attachments           | _____ Req'd for High-Risk (formerly “Major”) and Low-Risk (formerly “Minor”) ITS projects |

**13. DLAE FIELD REVIEW NOTES:**

**A. MINUTES OF FIELD REVIEWS**

**B. ISSUES OR UNUSUAL ASPECTS OF PROJECT**

(Attachment to Field Review Form)

**Distribution:** Original with attachments – Local Agency  
 \_\_\_\_\_ Copy with attachments (2 copies if HBP) - DLAE



## ROADWAY DATA

1. TRAFFIC DATA

Current ADT 25000    Year 2012    Future ADT 36064    Year 2034    DHV 1700    Trucks 30%  
 Terrain (Check One)     Flat     Rolling     Mountainous  
 Design Speed    15mph  
 Proposed Speed Zone     Yes    mph \_\_\_\_\_     No

2. GEOMETRIC INFORMATION

### ROADWAY SECTION

Facility	Year Constr.	Min. Curve Radius	Thru Traffic Lanes			Shoulders		Median Width
			No. of Lanes	Total Width	Type	Each Width Lt/Rt	Type	
Exist.	1932	NA	5	21.6m	Bridge	1.3m/1.6m	Sidewalk	2.03m
Prop.	No changes proposed to existing roadway and shoulder alignment							
Min. Stds. selected:								
AASHTO _____								
3R _____								
Local _____								
	N/E Contig. Sect.		2	8.64m	Bridge	0m/1.6m	Sidewalk	0.61m (Northbound)
	S/W Contig Sect.		3	12.96m	Bridge	0m/1.3m	Sidewalk	1.42m (Southbound)

Remarks (If design standard exception is being sought, cite standard and explain fully how it varies):

\_\_\_\_\_

\_\_\_\_\_

3. DEFICIENCIES OF EXISTING FACILITY (Mark appropriate one(s))

- |  |   |
|--|---|
| <input type="checkbox"/> Pavement Surface<br><input type="checkbox"/> Alignment<br><input type="checkbox"/> Crossfall<br><input type="checkbox"/> Pavement Structure | <input type="checkbox"/> Drainage<br><input checked="" type="checkbox"/> Bridge<br><input type="checkbox"/> Safety (Attach collision diagram or other documentation)<br><input type="checkbox"/> Federal Americans w/ Disabilities Act (ADA), State or Local accessibility requirements<br><input checked="" type="checkbox"/> Other (describe below) |
|--|---|

Remarks: Rehabilitation work includes bridge deck and structural member corrosion repair; bridge painting; bridge counterweight and fender pile repairs; and other damage repairs.

4. TRAFFIC SIGNALS     Yes     New (attach warrants)     Modified     No

5. MAJOR STRUCTURES    Structure No.(s) \_\_\_\_\_ (attach structure data sheet)

6. OTHER TRANSPORTATION FACILITIES (Name)

- |   |                               |                              |
|---|-------------------------------|------------------------------|
| <input type="checkbox"/> None                       | <input type="text"/>          |                              |
| <input type="checkbox"/> Railroad                   | <input type="text"/>          | (attach railroad data sheet) |
| <input type="checkbox"/> Airports                   | <input type="text"/>          | (attach airport data sheet)  |
| <input checked="" type="checkbox"/> Bicycle Transit | <u>Bicycle friendly roads</u> |                              |

7. AGENCIES AFFECTED

Utilities [mark appropriate one(s)]     Telephone     Electrical     Gas  
   Water             Irrigation  
   Other              Sanitary

Major Utility Adjustment: \_\_\_\_\_  
  \_\_\_\_\_

High Risk Facilities: \_\_\_\_\_  
  \_\_\_\_\_

Other: \_\_\_\_\_  
  \_\_\_\_\_

Remarks: \_\_\_\_\_  
  \_\_\_\_\_

**EXHIBIT 7-D MAJOR STRUCTURE DATA**

(Attach a separate sheet for each structure)

Project Number TBD  
 Bridge Name (facility crossed) Third Street Bridge  
 State Br.No. 34C0025 Date Constructed 1932 Historical Bridge Inv. Category 5  
 Road Name Third Street Location San Francisco

**STRUCTURE DATA**

	Existing	Proposed
Structure Type:	Movable Steel Bridge	No changes proposed
Structure Length:	89.9m (295 feet)	No changes proposed
Spans (No. & Length):	1 @ 17.2m (56 ft 6 in)	No changes proposed
	1 @ 43.4m (142ft 3in)	No changes proposed
	1 @ 6.3m (20 ft 6½ in)	No changes proposed
	3 @ 5.8m (19 ft)	No changes proposed
	1 @ 5.5m (18 ft 2 in)	No changes proposed
	Clear Width (curb to curb):	21.8 m (71.5 feet)
Shoulder Width:	Lt _____ Rt _____	Lt _____ Rt _____
Sidewalk or bikeway width:	1.3m Lt _____ 1.6m Rt _____	Lt _____ Lt _____
Total Br. Width:	24.7 m (81 feet)	No changes proposed
Total Appr. Rdwy. Width:	19.8 m (65 feet)	No changes proposed
1. Preliminary Engineering by:	CCSF with aid of Consultants	
2. Design by:	CCSF with aid of Consultants	
3. Foundation Investigation by:	Not Applicable	
4. Hydrology Study by:	Not Applicable	
Detour, Stage construction, or Close Road:	CCSF and SFMTA with aid of Consultants	
	<u>TBD – depending on how the contractor accesses the bridge.</u>	
	<u>4<sup>th</sup> Street Bridge (200 m away) can be used as detour during</u>	
Length of Detour:	<u>construction</u>	

Resident Engineer for Bridge Work:  Agency  Consultant (On Retainer as City/County Engineer)  
 Responsible Local Official: City and County of San Francisco – Department of Public Works

Discuss any special conditions; for example, federal ADA, state or local accessibility requirements, or proposed design exceptions:

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**ESTIMATED STRUCTURE AND RELATED COSTS**

		Federally Participating?	
		Yes	No
<b>Bridge Cost:</b>			
Construct Bridge:	\$12,500,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bridge Removal:	_____	<input type="checkbox"/>	<input type="checkbox"/>
Slope Protection:	_____	<input type="checkbox"/>	<input type="checkbox"/>
Channel Work:	_____	<input type="checkbox"/>	<input type="checkbox"/>
Detour- Stage Construction:	\$2,500,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Approach Roadway:	_____	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Engineering:	\$750,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction Engineering + Contingency:	\$4,000,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Right of Way Costs:	_____	<input type="checkbox"/>	<input type="checkbox"/>
Utility Relocation:	_____	<input type="checkbox"/>	<input type="checkbox"/>
Mobilization:	\$1,000,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construct Bridge:	_____	<input type="checkbox"/>	<input type="checkbox"/>
<b>Total:</b>	<b>\$20,750,000</b>		

Type of HBP funds; Check one:  
(Major type if more than one)

<input type="checkbox"/> Seismic/Voluntary	<input checked="" type="checkbox"/> Painting (88.53%)
<input checked="" type="checkbox"/> (88.53% Fed. Share)	<input type="checkbox"/> Painting (80%)
<input type="checkbox"/> Rehabilitation (80%)	<input type="checkbox"/> Special (80%)
<input type="checkbox"/> Replacement (80%)	<input type="checkbox"/> Low Water Xing (80%)
<input type="checkbox"/> Railing (88.53%)	

Summarize HBP funded costs of above estimate  
(HBP Federal-aid + local match for HBP only):

Prelim. Engr.:                   \$ 750,000  
Right of Way:                   \$ \_\_\_\_\_  
Construction:                   \$ 20,000,000  
**Total:**                         \$ 20,750,000

Indicate the estimated date for Federal-aid  
Authorization & Obligation or Check the box:

**Date:**  
July 2015                    Not needed for this project  
    Not needed for this project  
July 2016                    Not needed for this project

**VALUE ENGINEERING ANALYSIS**

**Required** (Yes, if on the NHS and total project costs  
for bridges are \$40M or more)

Yes                    No

Remarks: \_\_\_\_\_  
\_\_\_\_\_

**\*\*\*\*\* The following must be attached if the project is funded by the HBP:**

1. Plan view of proposed improvements.
2. Typical Section.

**\*\*\*\*\* The following is recommended:**

1. Right of way map to determine whether right of way acquisition or construction easements are necessary.

**Distribution:** Attach to Field Review Form

EXHIBIT 6-A PRELIMINARY ENVIRONMENTAL STUDY (PES)

<b>Federal Project No.:</b> <u>TBD</u> <small>(Federal Program Prefix-Project No., Agreement No.)</small>	<b>Final Design:</b> <u>July 2015</u> <small>(Expected Start Date)</small>
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<b>To:</b> <u>Mr. Teppitak (Jimmy) Panmai</u> <small>(District Local Assistance Engineer)</small> <u>District 4, Office of Local Assistance</u> <small>(District)</small> <u>P.O. Box 23660 Oakland, CA 94623-0660</u> <small>(Address)</small> <u>Jimmy_Panmai@dot.ca.gov</u> <small>(Email Address)</small>	<b>From:</b> <u>City and County of San Francisco</u> <small>(Local Agency)</small> <u>Rinaldi Wibowo, 415-558-4551</u> <small>(Project Manager's Name and Telephone No.)</small> <u>30 Van Ness, 5<sup>th</sup> Floor San Francisco, CA 94012</u> <small>(Address)</small> <u>Rinaldi.Wibowo@sfdpw.org</u> <small>(Email Address)</small>
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**Is this Project “ON” the State Highway System?**     Yes     No    **IF YES, STOP HERE** and contact the District Local Assistance Engineer regarding the completion of other environmental documentation.

**Federal State Transportation Improvement Program (FSTIP)** <http://www.dot.ca.gov/hq/transprog/fedpgm.htm>    \_\_\_\_\_ (Currently Adopted Plan Date)    \_\_\_\_\_ (Page No. \_\_\_ attach to this form)  
<http://www.dot.ca.gov/hq/transprog/oftmp.htm>

Programming for FSTIP:	Preliminary Engineering	Right of Way		Construction
<small>(Fiscal Year)</small>	<small>(Dollars)</small>	<small>(Fiscal Year)</small>	<small>(Dollars)</small>	<small>(Fiscal Year)</small> <small>(Dollars)</small>

**Project Description as Shown in RTP and FSTIP:** Rehabilitation work includes bridge deck and structural member corrosion repair; bridge painting; bridge counterweight and fender pile repairs; and other damage repairs.

**Detailed Project Description:** *(Describe the following, as applicable: purpose and need, project location and limits, required right of way acquisition, proposed facilities, staging areas, disposal and borrow sites, construction activities, and construction access.)*

See separate page attached to end of this Exhibit for detailed project description.  
(Continue description on “Notes” sheet, last page of this Exhibit, if necessary)

**Preliminary Design Information:**  
Does the project involve any of the following? Please check the appropriate boxes and delineate on an attached map, plan, or layout including any additional pertinent information.

Yes	No	Yes	No	Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Required Attachments:**

- Regional map                       Project location map                       Project footprint map (existing/proposed right of way)  
 Engineering drawings (existing and proposed cross sections), if available    Borrow/disposal site location map, if applicable  
*(Note: all maps (except project location map and regional maps) should be consistent with the project description (minimum scale: 1" = 200').)*  
 Notes to support the conclusions of this checklist/project description continuation page (attached)

Examine the project for potential effects on the environment, direct or indirect and answer the following questions. The "construction area," as specified below, includes all areas of ground disturbance associated with the project, including staging and stockpiling areas and temporary access roads.

Each answer must be briefly documented on the "Notes" pages at the end of the PES Form.

A. Potential Environmental Effects	Yes	To Be Determined	No
<b>General</b>			
1. Will the project require future construction to fully utilize the design capabilities included in the proposed project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Will the project generate public controversy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Noise</b>			
3. Is the project a Type I project as defined in 23 CFR 772.5(h); "construction on new location or the physical alteration of an existing highway, which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes"?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Does the project have the potential for adverse construction-related noise impact (such as related to pile driving)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Air Quality</b>			
5. Is the project in a NAAQS non-attainment or maintenance area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is the project exempt from the requirement that a conformity determination be made? (If "Yes," state which conformity exemption in 40 CFR 93.126, Table 2 applies): <u>Safety – Widening narrow pavements or reconstructing bridges (no additional travel lanes)</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is the project exempt from regional conformity? (If "Yes," state which conformity exemption in 40 CFR 93.127, Table 3 applies): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. If project is not exempt from regional conformity, (If "No" on Question #7) Is project in a metropolitan non-attainment/maintenance area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is project in an isolated rural non-attainment area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is project in a CO, PM10 and/or PM2.5 non-attainment/maintenance area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Hazardous Materials/Hazardous Waste</b>			
9. Is there potential for hazardous materials (including underground or aboveground tanks, etc.) or hazardous waste (including oil/water separators, waste oil, asbestos-containing material, lead-based paint, ADL, etc.) within or immediately adjacent to the construction area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Water Quality/Resources</b>			
10. Does the project have the potential to impact water resources (rivers, streams, bays, inlets, lakes, drainage sloughs) within or immediately adjacent to the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is the project within a designated sole-source aquifer?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Coastal Zone</b>			
12. Is the project within the State Coastal Zone, San Francisco Bay, or Suisun Marsh?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Floodplain</b>			
13. Is the construction area located within a regulatory floodway or within the base floodplain (100-year elevation of a watercourse or lake)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Wild and Scenic Rivers</b>			
14. Is the project within or immediately adjacent to a Wild and Scenic River System?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Biological Resources</b>			
15. Is there a potential for federally listed threatened or endangered species, or their critical habitat or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

essential fish habitat to occur within or adjacent to the construction area?

- 16. Does the project have the potential to directly or indirectly affect migratory birds, or their nests or eggs (such as vegetation removal, box culvert replacement/repair, bridge work, etc.)?
- 17. Is there a potential for wetlands to occur within or adjacent to the construction area?
- 18. Is there a potential for agricultural wetlands to occur within or adjacent to the construction area?
- 19. Is there a potential for the introduction or spread of invasive plant species?

**Sections 4(f) and 6(f)**

- 20. Are there any historic sites or publicly owned public parks, recreation areas, wildlife or waterfowl refuges (Section 4[f]) within or immediately adjacent to the construction area?
- 21. Does the project have the potential to affect properties acquired or improved with Land and Water Conservation Fund Act (Section 6[f]) funds?

**Visual Resources**

- 22. Does the project have the potential to affect any visual or scenic resources?

**Relocation Impacts**

- 23. Will the project require the relocation of residential or business properties?

**Land Use, Community, and Farmland Impacts**

- 24. Will the project require any right of way, including partial or full takes? Consider construction easements and utility relocations.
- 25. Is the project inconsistent with plans and goals adopted by the community?
- 26. Does the project have the potential to divide or disrupt neighborhoods/communities?
- 27. Does the project have the potential to disproportionately affect low-income and minority populations?
- 28. Will the project require the relocation of public utilities?
- 29. Will the project affect access to properties or roadways?
- 30. Will the project involve changes in access control to the State Highway System (SHS)?
- 31. Will the project involve the use of a temporary road, detour, or ramp closure?
- 32. Will the project reduce available parking?
- 33. Will the project construction encroach on state or federal lands?
- 34. Will the project convert any farmland to a different use or impact any farmlands?

**Cultural Resources**

- 35. Is there National Register listed, or potentially eligible historic properties, or archaeological resources within or immediately adjacent to the construction area?  
*(Note: Caltrans PQS answers question #35 )*
- 36. Is the project adjacent to, or would it encroach on Tribal land?

For Sections B, C, and D, check appropriate box to indicate required technical studies, coordination, permits, or approvals.

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/Approvals
<input checked="" type="checkbox"/> <b>Traffic</b> <i>Check one:</i>		
<input checked="" type="checkbox"/> Traffic Study	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Technical Memorandum	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Discussion in ED Only	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input checked="" type="checkbox"/> <b>Noise</b> <i>Check as applicable:</i>		
<input type="checkbox"/> Traffic Related		
<input checked="" type="checkbox"/> Construction Related		



<i>Check one:</i>		
<input type="checkbox"/> Noise Study Report	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> NADR	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Technical Memorandum	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Discussion in ED Only	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> <b>Air Quality</b>		
<i>Check as applicable:</i>		
<input type="checkbox"/> Traffic Related		
<input type="checkbox"/> Construction Related		
<i>Check one:</i>		
<input type="checkbox"/> Air Quality Report	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Technical Memorandum	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Discussion in ED Only	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
	<input type="checkbox"/> FHWA	<input type="checkbox"/> Conformity Finding (23 USC 327 CEs, EAs, EISs)
	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Conformity Finding ( 23 USC 326 CEs)
	<input type="checkbox"/> Regional Agency	<input type="checkbox"/> PM10/PM2.5 Interagency Consultation
<input checked="" type="checkbox"/> <b>Hazardous Materials/ Hazardous Waste</b>		
<i>Check as applicable:</i>		
<input checked="" type="checkbox"/> Initial Site Assessment (Phase 1)	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input checked="" type="checkbox"/> Preliminary Site Assessment (Phase 2)	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Discussion in ED Only	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
	<input type="checkbox"/> Cal EPA DTSC	<input type="checkbox"/> Review Database
	<input type="checkbox"/> Local Agency	<input type="checkbox"/> Review Database
<input checked="" type="checkbox"/> <b>Water Quality/Resources</b>		
<i>Check as applicable:</i>		
<input checked="" type="checkbox"/> Water Quality Assess. Report	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Technical Memorandum	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Discussion in ED Only	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> <b>Sole-Source Aquifer (Districts 5, 6 and 11)</b>		
	<input type="checkbox"/> EPA (S.F. Regional Office)	<input type="checkbox"/> Approval of Analysis in ED
<input checked="" type="checkbox"/> <b>Coastal Zone</b>		
	<input type="checkbox"/> CCC	<input type="checkbox"/> Coastal Zone Consistency Determination

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/Approvals
<input checked="" type="checkbox"/> <b>Floodplain</b>		
<i>Check as applicable:</i>		
<input checked="" type="checkbox"/> Location Hydraulic Study	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Floodplain Evaluation Report	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Summary Floodplain Encroachment Report	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Only Practicable Alternative Finding
	<input type="checkbox"/> FHWA	<input type="checkbox"/> Approves significant encroachments and concurs in Only Practicable Alternative Findings
<input type="checkbox"/> <b>Wild and Scenic Rivers</b>		
	<input type="checkbox"/> River Managing Agency	<input type="checkbox"/> Wild and Scenic Rivers Determination
<input checked="" type="checkbox"/> <b>Biological Resources</b>		
<i>Check as applicable:</i>		
<input checked="" type="checkbox"/> NES, Minimal Impact	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> NES		
<input type="checkbox"/> BA	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approves for Consultation
	<input type="checkbox"/> USFWS	<input type="checkbox"/> Section 7 Informal/Formal Consultation
	<input type="checkbox"/> NOAA Fisheries	
<input checked="" type="checkbox"/> EFH Evaluation	<input type="checkbox"/> NOAA Fisheries	<input type="checkbox"/> MSA Consultation
<input checked="" type="checkbox"/> Bio-Acoustic Evaluation	<input type="checkbox"/> NOAA Fisheries	<input type="checkbox"/> Approval
<input type="checkbox"/> Technical Memorandum	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> <b>Wetlands</b>		
<i>Check as applicable:</i>		
<input type="checkbox"/> WD and Assessment	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
	<input type="checkbox"/> ACOE	<input type="checkbox"/> Wetland Verification
	<input type="checkbox"/> NRCS	<input type="checkbox"/> Agricultural Wetland Verification
	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Wetlands Only Practicable Alternative Finding
<input type="checkbox"/> <b>Invasive Plants</b>		
<input type="checkbox"/> Discussion in ED Only	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> <b>Section 4(f)</b>		
<i>Check as applicable:</i>		
	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Determine Temporary Occupancy
<input type="checkbox"/> De minimis	<input type="checkbox"/> Caltrans	<input type="checkbox"/> De minimis finding
<input type="checkbox"/> Programmatic 4(f) Evaluation Type: _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
<input type="checkbox"/> Individual 4(f) Evaluation	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval
	<input type="checkbox"/> Agency with Jurisdiction	
	<input type="checkbox"/> SHPO	
	<input type="checkbox"/> DOI	
	<input type="checkbox"/> HUD	
	<input type="checkbox"/> USDA	

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/Approvals
<input type="checkbox"/> <b>Section 6(f)</b>	<input type="checkbox"/> Agency with Jurisdiction <input type="checkbox"/> NPS	<input type="checkbox"/> Determines Consistency with Long-Term Management Plan
	<input type="checkbox"/> NPS	<input type="checkbox"/> Approves Conversion
<input checked="" type="checkbox"/> <b>Visual Resources</b> <input checked="" type="checkbox"/> Technical Memorandum <input type="checkbox"/> Minor VIA <input type="checkbox"/> Moderate VIA <input type="checkbox"/> Advance/Complex VIA	<input type="checkbox"/> Caltrans <input type="checkbox"/> Caltrans <input type="checkbox"/> Caltrans <input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval <input type="checkbox"/> Approval <input type="checkbox"/> Approval <input type="checkbox"/> Approval
<input type="checkbox"/> <b>Relocation Impacts</b> <i>Check one:</i> <input type="checkbox"/> Relocation Impact Memo <input type="checkbox"/> Relocation Impact Study <input type="checkbox"/> Relocation Impact Report	<input type="checkbox"/> Caltrans <input type="checkbox"/> Caltrans <input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval <input type="checkbox"/> Approval <input type="checkbox"/> Approval
<input type="checkbox"/> <b>Land Use and Community Impacts</b> <i>Check one:</i> <input type="checkbox"/> CIA <input type="checkbox"/> Technical Memorandum <input type="checkbox"/> Discussion in ED Only	<input type="checkbox"/> Caltrans <input type="checkbox"/> Caltrans <input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval <input type="checkbox"/> Approval <input type="checkbox"/> Approval
<input type="checkbox"/> <b>Construction/Encroachment on State Lands</b> <i>Check as applicable:</i> <input type="checkbox"/> SLC Jurisdiction <input type="checkbox"/> Caltrans Jurisdiction <input type="checkbox"/> SP Jurisdiction	<input checked="" type="checkbox"/> SLC <input type="checkbox"/> Caltrans <input type="checkbox"/> SP	<input type="checkbox"/> SLC Lease <input type="checkbox"/> Encroachment Permit <input type="checkbox"/> Encroachment Permit
<input type="checkbox"/> <b>Construction/Encroachment on Federal Lands</b>	<input type="checkbox"/> Federal Agency with Jurisdiction	<input type="checkbox"/> Encroachment Permit
<input type="checkbox"/> <b>Construction/Encroachment On Indian Trust Lands</b>	<input type="checkbox"/> Bureau of Indian Affairs	<input type="checkbox"/> Right of Way Permit
<input type="checkbox"/> <b>Farmlands</b> <i>Check one:</i> <input type="checkbox"/> CIA <input type="checkbox"/> Technical Memorandum <input type="checkbox"/> Discussion in ED Only	<input type="checkbox"/> Caltrans <input type="checkbox"/> Caltrans <input type="checkbox"/> Caltrans	<input type="checkbox"/> Approval <input type="checkbox"/> Approval <input type="checkbox"/> Approval
<input type="checkbox"/> <i>Check as applicable:</i> <input type="checkbox"/> Form AD 1006 <input type="checkbox"/> Conversion to Non-Agri Use	<input type="checkbox"/> NRCS <input type="checkbox"/> CDOC <input type="checkbox"/> ACOE	<input type="checkbox"/> Approves Conversion <input type="checkbox"/> Approves Conversion

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/ Approvals
<input checked="" type="checkbox"/> <b>Cultural Resources</b> (PQS completes this section) <i>Check as applicable:</i>		
<input checked="" type="checkbox"/> APE Map	<input type="checkbox"/> Caltrans PQS	<input type="checkbox"/> Screened Undertaking
	<input type="checkbox"/> Caltrans PQS and DLAE	<input type="checkbox"/> Approves APE Map
<input checked="" type="checkbox"/> HPSR <input checked="" type="checkbox"/> ASR <input checked="" type="checkbox"/> HRER	<input type="checkbox"/> Local Preservation Groups and/or Native American Tribes  <input type="checkbox"/> Caltrans	<input type="checkbox"/> Provides Comments Regarding Concerns with Project  <input type="checkbox"/> Approves for Consultation
<input checked="" type="checkbox"/> Finding of Effect Report	<input type="checkbox"/> Caltrans	<input type="checkbox"/> Concurs on No Effect, No Adverse Effect with Standard Conditions
	<input type="checkbox"/> SHPO	<input type="checkbox"/> Letter of Concurrence on Eligibility, No Adverse Effect without Standard
<input type="checkbox"/> MOA	<input type="checkbox"/> Caltrans <input type="checkbox"/> SHPO <input type="checkbox"/> ACHP (if requested)	<input type="checkbox"/> Approves MOA <input type="checkbox"/> Approves MOA <input type="checkbox"/> Approves MOA
<input checked="" type="checkbox"/> <b>Permits</b> Copies of permits and a list of mitigation commitments are mandatory submittals following NEPA approval.	<input type="checkbox"/> ACOE <input type="checkbox"/> ACOE <input type="checkbox"/> Caltrans/ACOE/EPA <input type="checkbox"/> USFWS <input type="checkbox"/> NOAA Fisheries <input checked="" type="checkbox"/> ACOE <input type="checkbox"/> USCG <input checked="" type="checkbox"/> RWQCB <input checked="" type="checkbox"/> CDFG <input checked="" type="checkbox"/> RWQCB <input type="checkbox"/> CCC <input checked="" type="checkbox"/> Local Agency <input checked="" type="checkbox"/> BCDC	<input checked="" type="checkbox"/> Section 404 Nationwide Permit <input type="checkbox"/> Section 404 Individual Permit <input type="checkbox"/> NEPA/404 Integration MOU <input checked="" type="checkbox"/> Rivers and Harbors Act Section 10 Permit <input type="checkbox"/> USCG Bridge Permit <input checked="" type="checkbox"/> Section 401 Water Quality Certification <input type="checkbox"/> Section 1602 Streambed Alteration Agreement <input type="checkbox"/> NPDES Permit <input type="checkbox"/> Coastal Zone Permit <input checked="" type="checkbox"/> BCDC Permit

Notes: Additional studies may be required for other federal agencies.

U.S. Coast Guard and the San Francisco Bay Conservation and Development Commission (BCDC) environmental considerations extend beyond the bridge to include the causally related environmental impacts of the proposed bridge project. DPW will obtain the necessary permits for the rehabilitation work from the required agencies including the US Coast Guard and BCDC. In addition, DPW will also obtain the necessary permits for construction staging from the State and the Port Commission; the staging areas are within the project site along the city's waterfront which belong to the State and are managed by the Port Commission as determined by the state law.

ACHP	=	Advisory Council on Historic Preservation	HRER	=	Historical Resources Evaluation Report
ACOE	=	U.S. Army Corps of Engineers	HUD	=	U.S. Housing and Urban Development
ADL	=	Aerially Deposited Lead	MOA	=	Memorandum of Agreement
APE	=	Area of Potential Effect	MSA	=	Magnuson-Stevens Fishery Conservation and Management Act
APN	=	Assessor Parcel Number	NEPA	=	National Environmental Policy Act
ASR	=	Archaeological Survey Report	NADR	=	Noise Abatement Decision Report
BA	=	Biological Assessment	NES	=	Natural Environment Study
BCDC	=	Bay Conservation and Development Commission	NHPA	=	National Historic Preservation Act
BE	=	Biological Evaluation	NOAA	=	National Oceanic and Atmospheric Administration
BO	=	Biological Opinion	NMFS	=	National Marine Fisheries Service
Cal EPA	=	California Environmental Protection Agency	NPDES	=	National Pollutant Discharge Elimination System
CCC	=	California Coastal Commission	NPS	=	National Park Service
CDFG	=	California Department of Fish and Game	NRCS	=	Natural Resources Conservation Service
CDOC	=	California Department of Conservation	PM10	=	Particulate Matter 10 Microns in Diameter or Less
CE	=	Categorical Exclusion	PM2.5	=	Particulate Matter 2.5 Microns in Diameter or Less
CIA	=	Community Impact Assessment	PMP	=	Project Management Plan
CWA	=	Clean Water Act	PQS	=	Professionally Qualified Staff
DLAE	=	District Local Assistance Engineer	ROD	=	Record of Decision
DOI	=	U.S. Department of Interior	RTIP	=	Regional Transportation Improvement Program
DTSC	=	Department of Toxic Substances Control	RTP	=	Regional Transportation Plan
EA	=	Environmental Assessment	RWQCB	=	Regional Water Quality Control Board
ED	=	Environmental Document	SER	=	Standard Environmental Reference
EFH	=	Essential Fish Habitat	SEP	=	Senior Environmental Planner
EIS	=	Environmental Impact Statement	SHPO	=	State Historic Preservation Officer
EPA	=	U.S. Environmental Protection Agency	SLC	=	State Lands Commission
FEMA	=	Federal Emergency Management Agency	SP	=	State Parks
FHWA	=	Federal Highway Administration	TIP	=	Transportation Improvement Program
FONSI	=	Finding of No Significant Impacted	USCG	=	U.S. Coast Guard
FTIP	=	Federal Transportation Improvement Program	USDA	=	U.S. Department of Agriculture
HPSR	=	Historic Property Survey Report	USFWS	=	U.S. Fish and Wildlife Service
			WD	=	Wetland Delineation

**E. Preliminary Environmental Document Classification (NEPA)**

Based on the evaluation of the project, the environmental document to be developed should be:

Check one:

- Environmental Impact Statement (*Note: Engagement with participating agencies in accordance with 23 USC 139 required*)
  - Compliance with 23 USC 139 regarding Participating Agencies required
- Complex Environmental Assessment
- Routine Environmental Assessment
- Categorical Exclusion without required technical studies.
- Categorical Exclusion with required technical studies

(if Categorical Exclusion is selected, check one of the following):

- Section 23 USC 326
  - 23 CFR 771 activity (c) (\_\_\_\_)
  - 23 CFR 771 activity (d) (\_\_\_\_)
  - Activity \_\_\_\_ listed in the Section 23 USC 326
- Section 23 USC 327

**F. Public Availability and Public Hearing**

Check as applicable:

- Not Required
- Notice of Availability of Environmental Document
- Public Meeting
- Notice of Opportunity for a Public Hearing
- Public Hearing Required

**G. Signatures**

**Local Agency Staff and/or Consultant Signature**



(Signature of Preparer)

3/6/2015

(Date)

(415) 558-4011

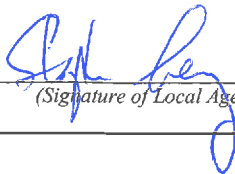
(Telephone No.)

Frank Filice

(Name)

**Local Agency Project Engineer Signature**

This document was prepared under my supervision, according to the *Local Assistance Procedures Manual*, Exhibit 6-B, "Instructions for Completing the Preliminary Environmental Study Form."



(Signature of Local Agency)

3/6/2015

(Date)

(415) 558-4056

(Telephone No.)

**Caltrans District Professionally Qualified Staff (PQS) Signature**

- Project does not meet definition of an “undertaking”; no further review is necessary under Section 106 (“No” Section A, #35).
- Project is limited to the type of activity listed in Attachment 2 of the Section 106 PA and based on the information provided in the PES Form, the project does not have the potential to affect historic properties (“No” Section A, #35).
- Project is limited to the type of activity listed in Attachment 2 of the Section 106 PA, but the following additional procedures or information is needed to determine the potential for effect (“To Be Determined” Section A, #35):
  - Records Search       \_\_\_\_\_       \_\_\_\_\_       \_\_\_\_\_
- Project meets the definition of an “undertaking”; all properties in the project area are exempt from evaluation per Attachment 4 of the Section 106 PA (“No” Section A, #35).
- The proposed undertaking is considered to have the potential to affect historic properties; further studies for 106 compliance are indicated in Sections B, C, and D of this PES Form (“Yes” Section A, #35).

\_\_\_\_\_  
*(Signature of Professionally Qualified Staff)*      \_\_\_\_\_ *(Date)*      \_\_\_\_\_ *(Telephone No.)*

**The following signatures are required for all CEs, routine and complex EAs, and EISs:**

**Caltrans District Senior Environmental Planner (or Designee) and DLAE Signatures**

I have reviewed this Preliminary Environmental Study (PES) Form and determined that the submittal is complete and sufficient. I concur with the studies to be performed and the recommended NEPA Class of Action.

\_\_\_\_\_  
*(Signature of Senior Environmental Planner or Designee)*      \_\_\_\_\_ *(Date)*      \_\_\_\_\_ *(Telephone No.)*

\_\_\_\_\_  
*(Name)*

\_\_\_\_\_  
*(Signature of District Local Assistance Engineer or Designee)*      \_\_\_\_\_ *(Date)*      \_\_\_\_\_ *(Telephone No.)*

\_\_\_\_\_  
*(Name)*

HQ DEA Environmental Coordinator concurrence \_\_\_\_\_ . Email concurrence attached.  
*(date)*

**Preliminary Environmental Investigation**  
**Notes to Support the Conclusions of the PES Form**  
**(May Also Include Continuation of Detailed Project Description)**

**Brief Explanation of How Project Complies, or Will Comply with Applicable Federal Mandate (Part A):**

1. No. This project will be complete and not require future construction to fully utilize design capabilities include in the proposed project.
2. To be determined. This project may generate public controversy due to temporary traffic detours. This detour would only last during project construction. Measures will be taken to keep community members abreast of project
3. No. The project is a seismic upgrades and rehabilitation project. It is not on a highway, on a new location, and no lanes will be added.
4. No. The project will not require pile driving. Any noise associated with construction activities will be regulated under the City of San Francisco Article 29 of the Police Code, which regulates construction noise and hours of construction.
5. Yes. The project is within San Francisco County, which is listed in the Bay Area Air Quality Management District (AQMD) conformity area, but is exempt as noted below.
6. Yes. The project is exempt from the requirement that a conformity determination be made, under the following exemptions in 40 CFR 93.126, Table 2: *Safety – Pavement Resurfacing and/or Rehabilitation*, and *Safety – Widening narrow pavements or reconstructing bridges (no additional travel lanes)*.
7. N/A due to “yes” in response to question 6.
8. N/A due to “yes” in response to question 6.
9. Yes. Project scope includes removing corrosion by repainting the major structural steel elements of the bridge with inorganic primer and topcoats to meet air quality. This process involves remove most of the existing paint and thoroughly cleaning the metal surfaces. There are also underground storage tanks adjacent to the project site, all of which have been cleaned-up and are closed. See attached Geotracker Map.
10. Yes. There is potential to impact water resources. Project work, including fender pile repair, will occur within the Mission Creek.
11. No. See project location/regional map. The project is located in San Francisco County and there are no EPA identified sole-aquifers in the county.
12. Yes. The project is within the San Francisco Bay.
13. No. San Francisco is not located within a floodplain, and no FEMA flood maps exist for this area. See attached for FEMA map.
14. No. There are no “Wild and Scenic” rivers in San Francisco. See attached National Wild and Scenic Rivers Map.
15. Yes. The project may affect federally listed threatened or endangered species, or essential fish habitat within or adjacent to the construction area. See attached list of Federal Endangered & Threatened Species for the San Francisco quadrant.
16. Yes. The project has the potential to directly or indirectly affect migratory birds, or their nests or eggs present in the project area.



17. No. There are no wetlands within or adjacent to the construction area. Mission Creek occupies a three-quarter mile stretch from AT&T Ballpark to Seventh Street. There are waterfront parks and open spaces being developed along the Mission Creek. Mission Creek Park is divided into north and south areas by the Mission Creek. The park is located just southwest of the AT&T Ballpark. The area located on the south side of the creek is comprised of 3 acres of rolling green grass, trees, pathways, benches and a small outdoor amphitheatre. The northern portion of Mission Creek Park runs parallel to Mission Creek between Fourth and Seventh Streets. Further down the creek is a community of houseboats along the creek's south bank. Toward the end of the Creek is a fenced dog park and a sewer outfall structure and pump station. Along the banks, riprap is in place for soil erosion prevention. The project site is located in a fully developed area. Land uses immediate to the project site include residential and industrial districts. The construction area is within the public right-of-way.
18. No. The project site is located in a fully developed area. Land uses immediate to the project site include residential and industrial districts. The construction area is within the public right-of-way. There are no agricultural wetlands in San Francisco.
19. No. There is no potential for the introduction or spread of invasive plant species.
20. Yes. There are publicly owned parks Mission Bay Park and China Basin Park, immediately adjacent to the project area. All of these parks are owned by the San Francisco Port Department. The project does not propose any changes to any of these parks, and access to these parks will be maintained during construction.
21. No. All work will be conducted within the existing right-of-way. The project does not have the potential to affect properties acquired or improved with Land and Water Conservation Fund Act funds.
22. No. The project does not have the potential to affect a visual or scenic resource. The project will focus on seismic upgrades and rehabilitation, and will not alter the visual resources of the project area or the visual character of the bridge. There will be temporary impacts during construction in the immediate area of the project, however, these will not require mitigation. The rehabilitated and retrofitted bridge will appear substantially similar to the existing bridge.
23. No. The project will not require the relocation of residential or business properties.
24. No. All work will be conducted within the existing right of way. The project will not require any right-of-way, including partial or full takes.
25. No. The project is consistent with plans and goals adopted by the community.
26. No. This project does not have the potential to disrupt neighborhoods/communities. All work will be done on an existing bridge and right-of-way.
27. No. The project does not have the potential to disproportionately affect low-income and minority populations. All work will be done on an existing bridge.
28. No. The project will not require relocation of public utilities.
29. No. The project will not permanently affect access to properties or roadways. Access to sidewalks and roadways will be affected during construction. The contractor will be required to maintain safe access and provide detours.
30. No. The project will not change access to the State Highway System.
31. No. The project will not involve the use of a new temporary road or ramp closure. During construction, vehicular traffic will be directed to take a detour on an existing street adjacent to the project area.
32. No. The project will not permanently reduce the amount of available parking. Parking lots adjacent to the project area will be used as staging during construction.
33. No. The project does not encroach on or is adjacent to state or federal lands.
34. No. The project site is located in a fully developed area. Land uses immediate to the project site include industrial and production, distribution, and repair districts. The construction area is within the public right-of-way. There are no adjacent farmlands.

35. Yes. According to the Department of Parks and Recreation 523 A and B Forms (DPR 523 Forms A and B), the Third Street Bridge is an example of the Art Moderne style for its “detailing of the ends of the bascule leaves, with their quarter-circle gear housings, the control tower, and the sidewalk railings.” For these reasons, the bridge meets National Register Criterion C, at the local level of significance, for its distinctive design qualities. See DPR 523 A and B Forms for further details.
36. No. The project does not encroach on or is adjacent to tribal lands.

**Distribution** 1) Original - DLAE, 2) Local Agency Project Manager, 3) DLA Environmental Coordinator

4) Senior Environmental Planner (or designee), 5) District PQS

Updated: 05/15/08

**Third Street Bridge Rehabilitation Project**  
**Federal Project No.: TBD**  
**Exhibit 6-A Preliminary Environmental Study (PES)**

***Project Description as Shown in RTP and FSTIP:***

Rehabilitation work includes bridge deck and structural member corrosion repair; bridge painting; bridge counterweight and fender pile repairs; and other damage repairs.

***Detailed Project Description:***

**Project Purpose and Need:**

The Third Street Bridge is now more than 80 years old and in poor condition and requires a significant amount of deferred repair and upgrade to bring it into compliance with current bridge standards. The purpose of the rehabilitation work is to maintain continued use of the bridge. Rehabilitation of the bridge will not only enhance the reliability of the bridge and linkage to transit, but will also ensure user's safety.

**Project Location and Limits:**

The Third Street Bridge is located on Third Street crossing over Mission Creek Channel in between Berry Street and Terry A Francois Boulevard that has been identified as an important gateway to a new redeveloped Mission Bay in San Francisco. The area has rapidly evolved into a wealthy neighborhood of luxury condominiums, hospitals, biotechnology research and development, and a future Warrior stadium. The Third Street Bridge is also designated as a major corridor through developing neighborhood; providing a vital connection from Third Street to low-income and minority populations and to the future residential and commercial developments at the former Hunters Point Naval Shipyard and the India Basin Shoreline.

The Third Creek Bridge was constructed in 1932 and the total structure length of the bridge is approximately 295 feet and width of the bridge is approximately 80 feet. The bridge includes five lanes of traffic and sidewalks in the shoulders. The bridge is a single-leaf bascule structure with concrete abutments. The bascule arm, which open to allow boats to pass on Mission Creek, consist of riveted steel girders supporting an open, steel-grate roadway. No change in alignment or widening the existing bridge is anticipated.

**Right of Way Acquisitions:**

The project limit will be within the public right-of-way and will not alter the existing alignment of the bridge and adjacent streets. No right-of-way acquisition or temporary or permanent easements will be required.

**Construction Staging Areas:**

The construction staging area will not occur in environmentally or culturally sensitive areas and/or impact water resources. The city will identify location of construction staging areas for material storage and equipment parking and the staging areas shall occur in the public right-of-way within the project vicinity. The City will insure that at a minimum, the following requirements are met when approving the contractor's construction staging area:

- The staging area will be located on existing asphalt and/or concrete surfaces. No staging area will be allowed on undeveloped lots.
- The staging area will be included in the contractor's Storm Water Pollution Prevention Plan (SWPPP).
- The staging area will not be located in an environmentally or culturally sensitive area and/or impact water resources.
- The staging area will not be located in a regulatory floodway or within the base floodplain (100-year).
- The staging area will not affect access to properties or roadways.

**Third Street Bridge Rehabilitation Project**  
**Federal Project No.: TBD**  
**Exhibit 6-A Preliminary Environmental Study (PES)**

**Construction Traffic Controls:**

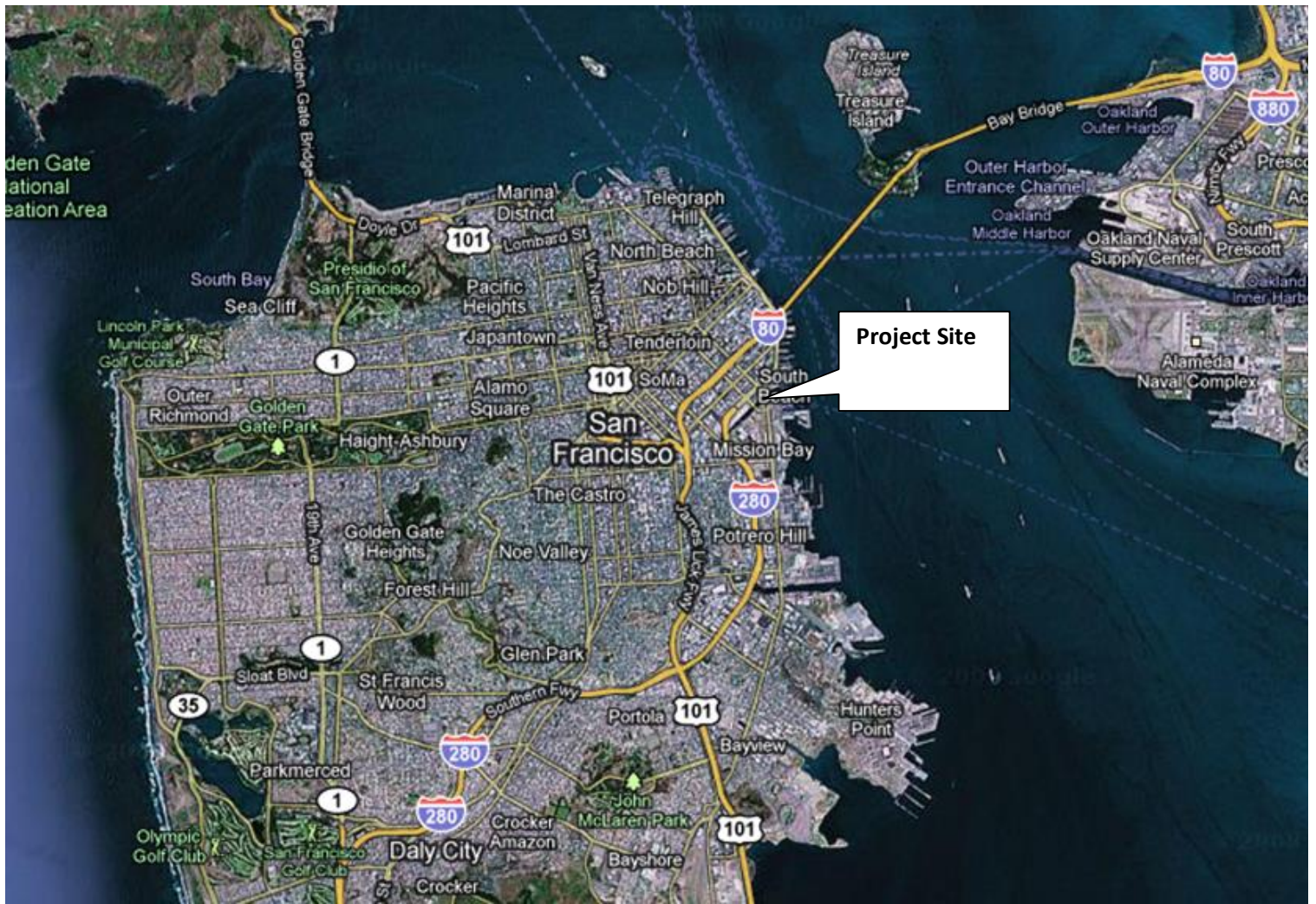
Because the bridge forms a part of the Third Street, a major transportation corridor in San Francisco, rehabilitation works must be scheduled to limit interruption of traffic. Measures will be taken to keep community members abreast of project updates and detours prior and during construction to minimize any impacts. The City has a transit first policy. The contractor shall not impede the operation of mass transit vehicles at any time.

The contractor is required to conduct construction operations to cause the least possible obstruction and inconvenience to the community, and provide routing of vehicular and pedestrian in a manner that will be safe and will minimize traffic congestion and delays during construction.

The contractor is required to submit a Traffic Control Plan to the City's Traffic Engineer for review and approval before any major work is allowed. The Traffic Control Plan shall be prepared, signed and stamped by a Civil Engineer or a Traffic Engineer Registered in the State of California) with the assistance and input of the Traffic Supervisor and the Contractor's Superintendent. Contractor shall not commence site work prior to receiving the Engineer's approval of the construction schedule. No work shall commence prior to approval of applicable traffic control plan.

**Historic Properties:**

The defined construction area is within the public right-of-way. All work will be performed within the public right-of-way and will not affect any historic districts, buildings, or cultural resources.



Source: Google Map data 2009 Tele Atlas

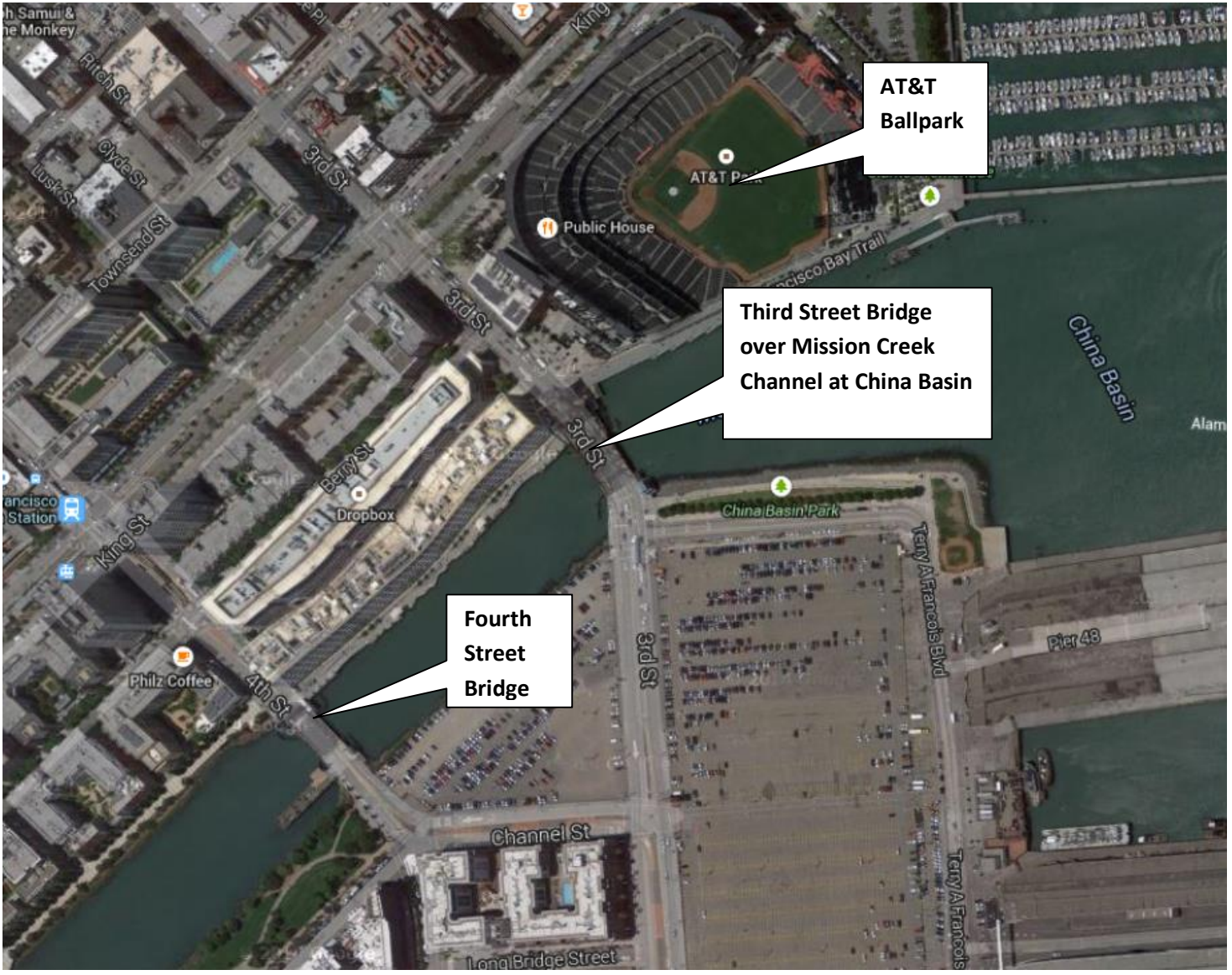
## Site Location Map

Application for HBRRP Funds  
Third Street Bridge Rehabilitation Project  
San Francisco, California

February 2015

Figure 1





**Site Vicinity Map**

Application for HBRRP Funds  
Third Street Bridge Rehabilitation Project  
San Francisco, California

February 2015



**North West Corner**



**North East Corner**

**North Corners Looking at the Bridge**

Application for HBRRP Funds  
Third Street Bridge Rehabilitation Project  
San Francisco, California  
February 2015





**South West Corner**



**South East Corner**

**South Corners Looking at the Bridge**

Application for HBRRP Funds  
Third Street Bridge Rehabilitation Project  
San Francisco, California  
February 2015





**North Approach**



**South Approach**

**Views of Each Approach**

Application for HBRRP Funds  
Third Street Bridge Rehabilitation Project  
San Francisco, California

February 2015



**Elevation View (Looking East)**

Application for HBRRP Funds  
Third Street Bridge Rehabilitation Project  
San Francisco, California

February 2015

Figure 6





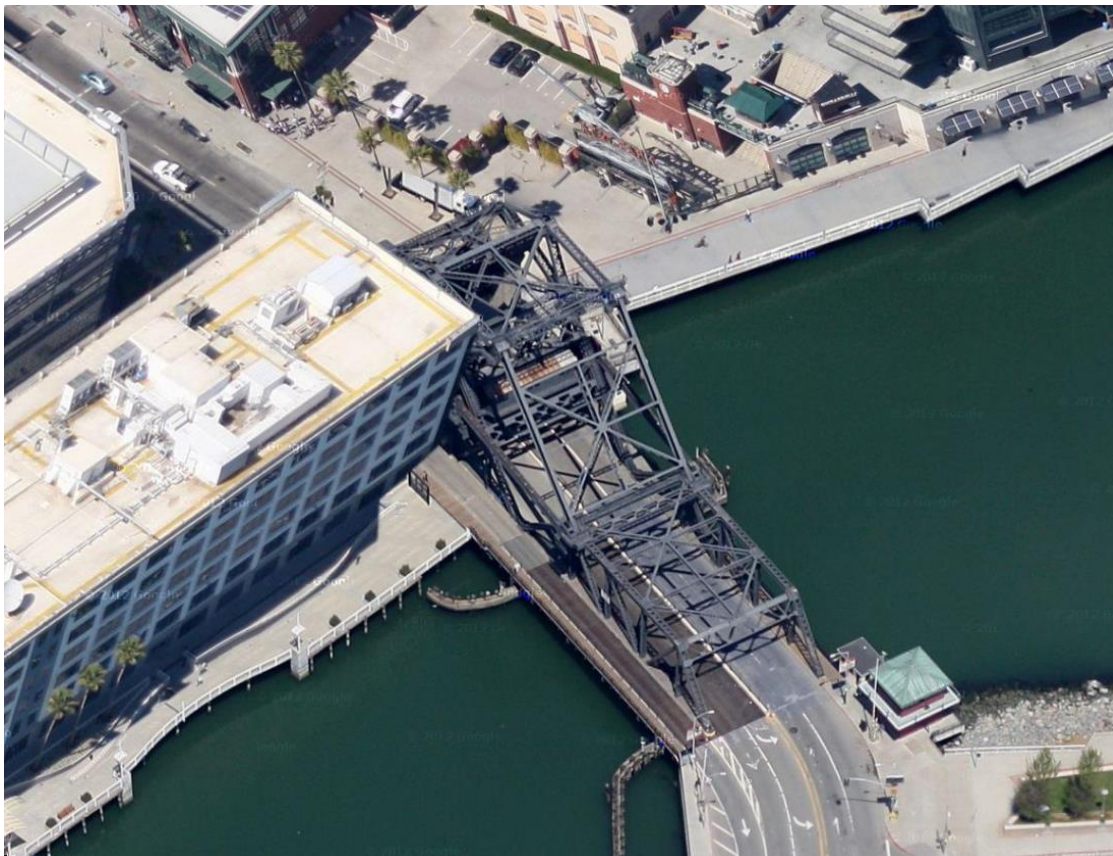
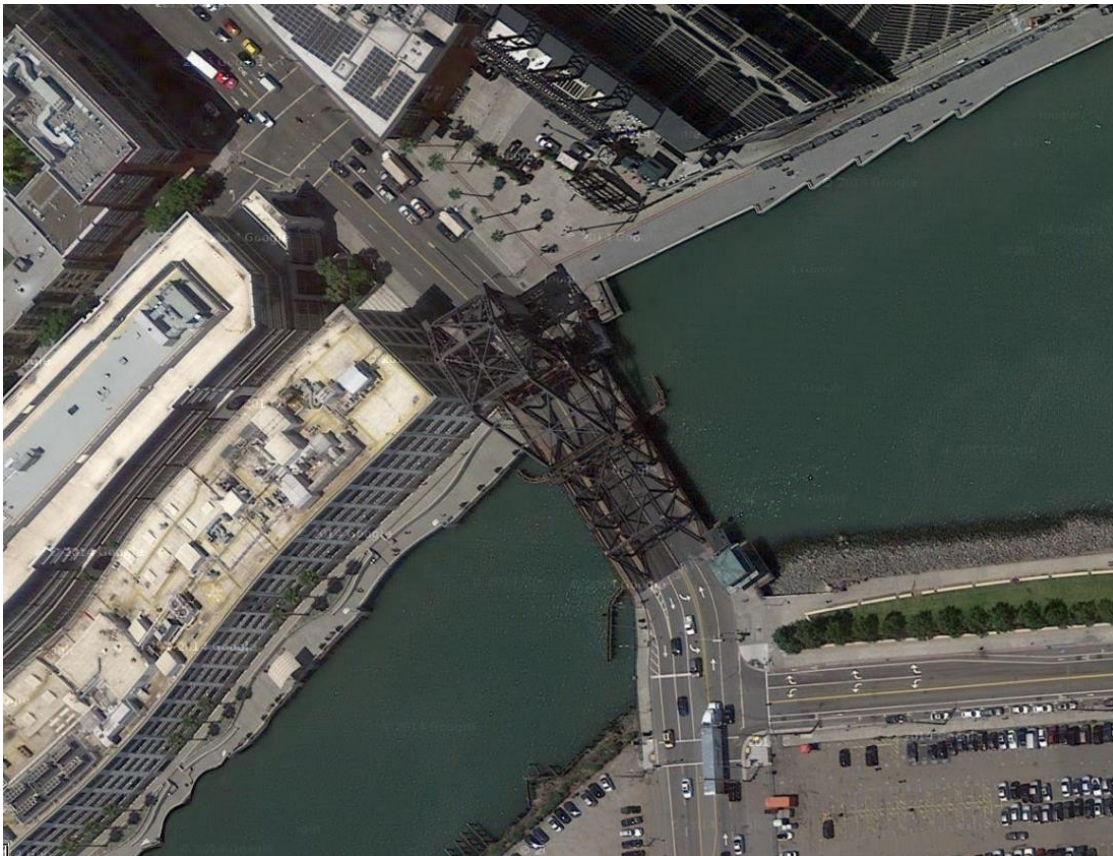
**Elevation View (Looking West)**

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Application for HBRRP Funds  
Third Street Bridge Rehabilitation Project  
San Francisco, California

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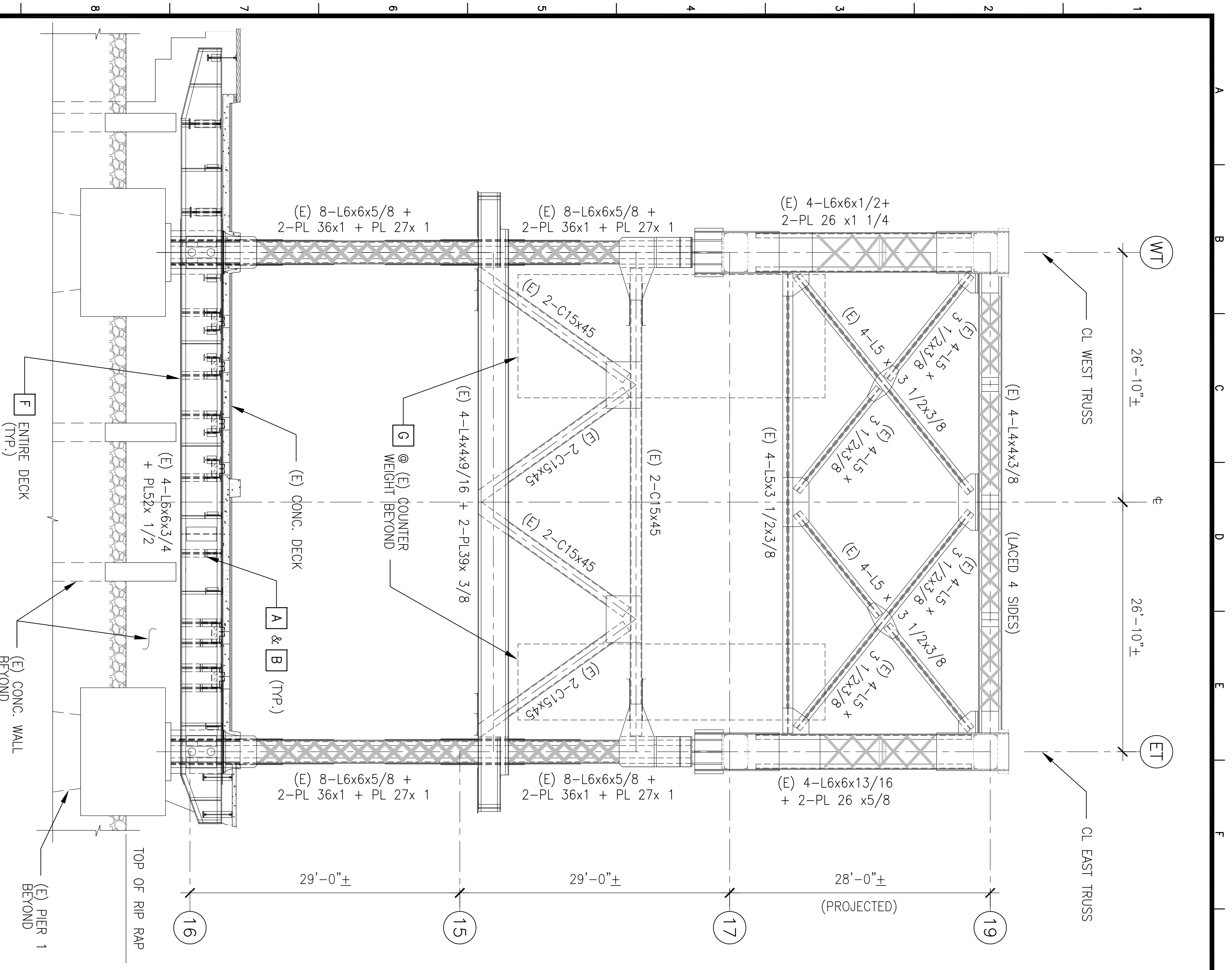


**Aerial Views**

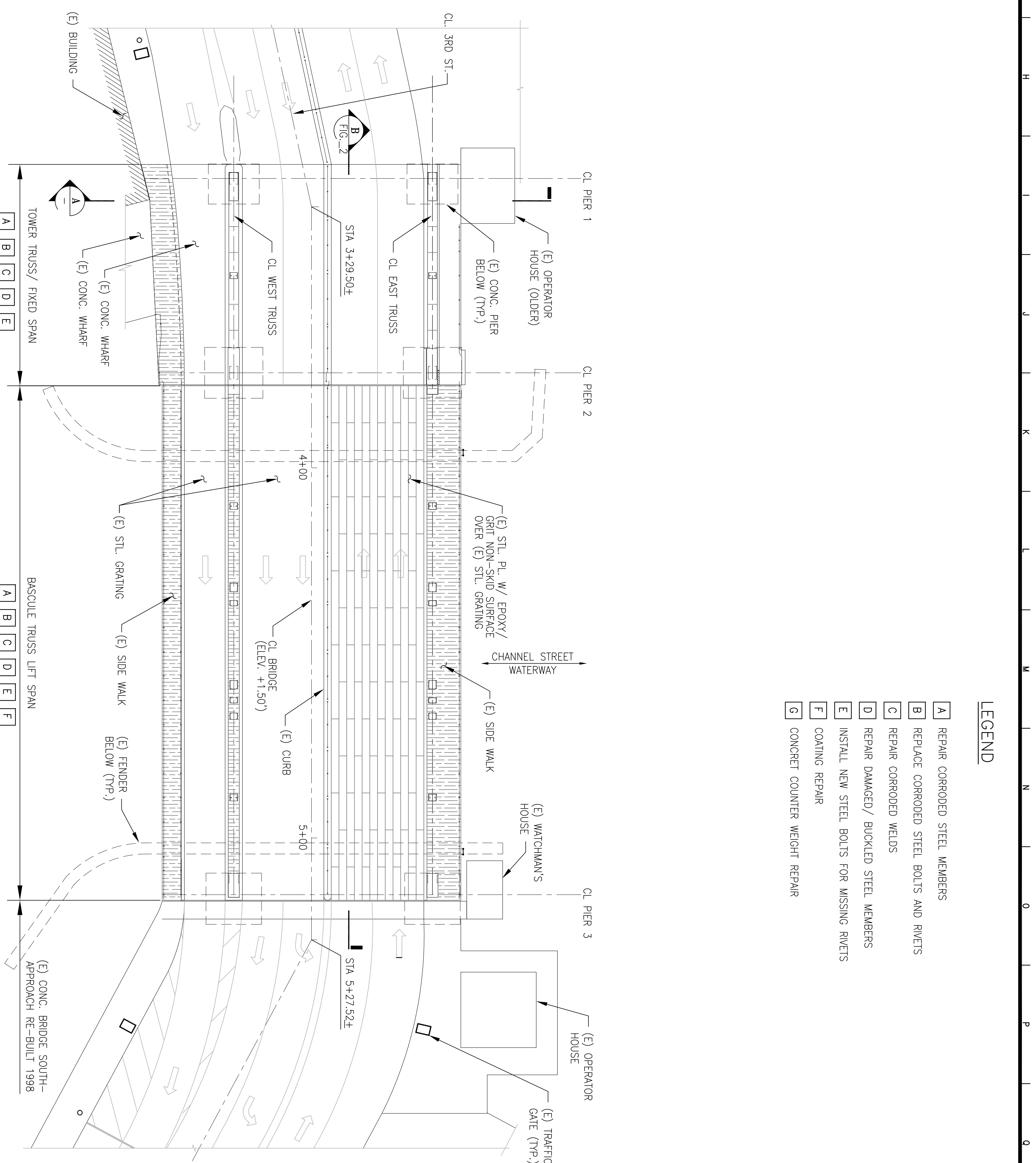
Application for HBRRP Funds  
Third Street Bridge Rehabilitation Project  
San Francisco, California

February 2015

Figure 8



**SECTION**  
SCALE: 1/8"=1'-0"



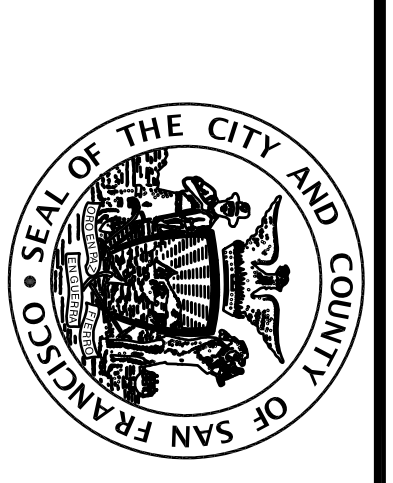
**PLAN**  
SCALE: 1/16"=1'-0"

- LEGEND**
- A REPAIR CORRODED STEEL MEMBERS
  - B REPLACE CORRODED STEEL BOLTS AND RIVETS
  - C REPAIR CORRODED WELDS
  - D REPAIR DAMAGED/BUCKLED STEEL MEMBERS
  - E INSTALL NEW STEEL BOLTS FOR MISSING RIVETS
  - F COATING REPAIR
  - G CONCRETE COUNTER WEIGHT REPAIR

**FIGURE 1**

NO.	DATE	DESCRIPTION	BY	APP.
0	7/7/14	95% DESIGN		

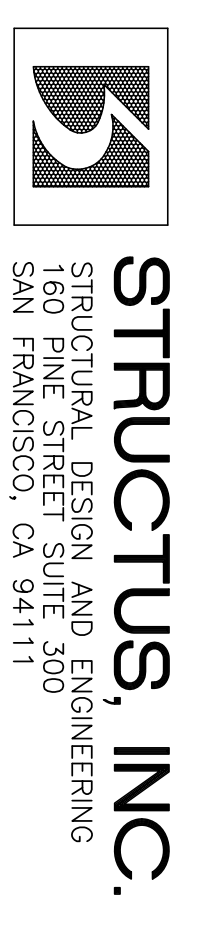
THIS DRAWING WAS LAST MODIFIED: 02/25/15 10:30, BY: Burhans



**INFRASTRUCTURE DIVISION**  
DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF SAN FRANCISCO

DESIGNED:	DATE:	APPROVED:	SCALE:
XX	--/--		1/8"=1'-0"
DRWN:	DATE:	SECTION MANAGER	DATE:
XX	--/--		
CHECKED:	DATE:	DEPUTY DIVISION MANAGER	DATE:
XX	--/--		
		DIVISION MANAGER	DATE:

**THIRD STREET BRIDGE**  
**CORROSION AND DAMAGE REPAIR PROJECT**  
**GENERAL REPAIR WORKS**  
**PLAN AND SECTION**





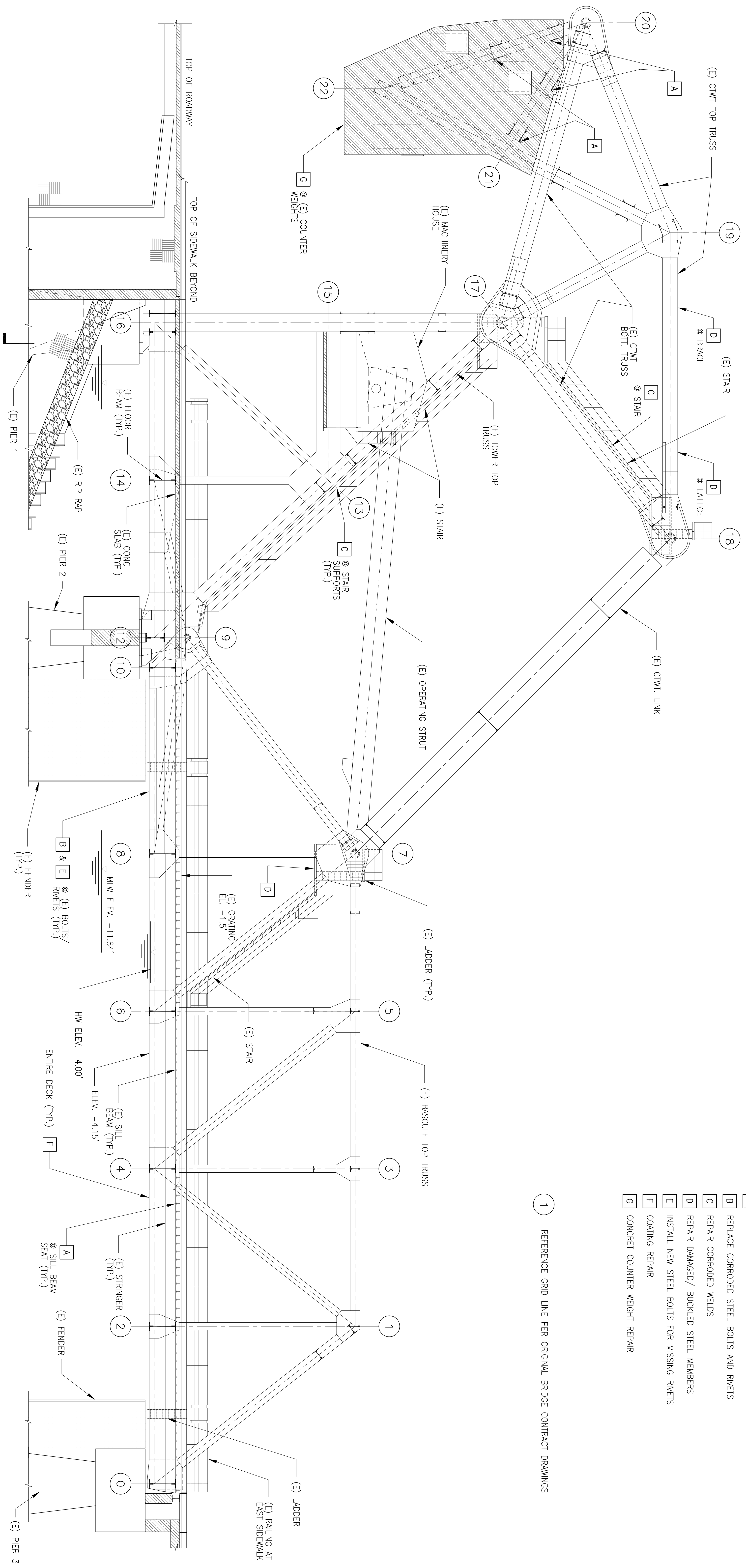


FIGURE 2

**INFRASTRUCTURE DIVISION**  
DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF SAN FRANCISCO

DESIGNED:	DATE:	APPROVED:	SCALE:
XX	--/--		1/8"=1'-0"
DRWN:	DATE:	SECTION MANAGER	SHEET OF SHEETS
XX	--/--		XX OF XX
CHECKED:	DATE:	DEPUTY DIVISION MANAGER	
XX	--/--		
		DIVISION MANAGER	

**THIRD STREET BRIDGE**  
CORROSION AND DAMAGE REPAIR PROJECT  
GENERAL REPAIR WORKS  
LONGITUDINAL SECTION





DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 34C0025  
Facility Carried: THIRD ST  
Location : S OF BERRY ST  
City : SAN FRANCISCO  
Inspection Date : 12/19/2012

## Bridge Inspection Report

Inspection Type  
Routine FC Underwater Special Other

**STRUCTURE NAME:** CHANNEL STREET WATERWAY-3RD ST

### CONSTRUCTION INFORMATION

Year Built : 1932 Skew (degrees): 0  
Year Widened: N/A No. of Joints : 2  
Length (m) : 89.9 No. of Hinges : 0

Structure Description: 7 Spans

Main spans (1&2):

Single leaf Bascule riveted steel through truss with a RC deck (Span 1) and a steel grid deck (Span 2). The bents (Piers 1-3) are RC (2) columns on RC caps on timber piles.

Approach spans (3-7): RC deck on RC caps, steel seismic piles (P4-9, P5-11, P6-8, P7-8), RC abutment founded on timber piles.

Span Configuration : 1 @ 56 ft 6 in, 1 @ 142 ft 3 in, 1 @ 20 ft 6-1/2 in, 3 @ 19 ft, 1 @ 18 ft 2 in

### SAFE LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN  
Inventory Rating: 16.3 metric tons Calculation Method: LOAD FACTOR  
Operating Rating: 24.5 metric tons Calculation Method: LOAD FACTOR  
Permit Rating : XXXXX  
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

### DESCRIPTION ON STRUCTURE

Deck X-Section: 1.28 m sw, 0.46 m cu, 6.77 m rdwy, 1.4 m med, 15.06 m rdwy, 1.59 m sw  
Total Width: 24.7 m Net Width: 21.8 m No. of Lanes: 4 Speed: 25 mph  
Min. Vertical Clearance: 5.69 m

Rail Code: 0000

Rail Type	Location	Length (ft)	Rail Modifications
Pedestrian	Right/Left	590	

### DESCRIPTION UNDER STRUCTURE

Channel Description: Fender protection. Channel bottom silty clay.

### INSPECTION COMMENTARY

#### SCOPE AND ACCESS

This bridge was inspected by foot on and around the deck and in the channel at low tide around Abutment 8. The steel superstructure elements above the roadway were visually inspected from the bridge deck and when the bridge was in lift operation. The steel superstructure elements are regularly inspected by the fracture critical climb team. The bridge was also inspected with the use of a kayak in the channel for portions of the superstructure and the substructure investigation. This inspection used a kayak during low tide near noon on 12/19/2012 to have the most visual access to the substructure elements above the waterline as well as the superstructure.

The city arranged for openings of the bridge on 12/19/2012. The bridge tender and various city and county employees were on site for several openings of the bridge and to allow for full inspection access to the bridge.

The former operator house, as no longer structurally part of this bridge, is not included

INSPECTION COMMENTARY

as part of this inspection.

With the exception of the submerged elements inspected by the underwater team, the steel elements inspected by the fracture critical team and the mechanical & electrical elements inspected by the mechanical & electrical team, all elements were inspected.

Water was in all spans at low tide with rip rap slope protection along Abutment 8.

## NUMBERING CONVENTION

Due the complexity of this structure, the nomenclature used in this report and all routine Bridge Inspection Reports will be according to the As-Built Plans dated 11/1/1998. This differs from the normal Caltrans numbering convention.

The bridge begins with the northwest Pier 1 adjacent to the concrete wharf (there is no abutment). The Bascule trunion pier is Pier 2 with the Bascule landing at Pier 3. The bridge ends with approach Spans 3 through 7 and Abutment 8 at the southeast end which were all rebuilt in 1998.

## REVISIONS

ELI Element No. 13 was replaced with ELI 39 in condition state 1. NBI items 44 a and 44 b were modified to continuous slab.

ELI Element No. 31 was placed in condition state 2.

## DECK AND ROADWAY

The deck on the lift span of this structure is a steel open grid on the right western inland side and a steel open grid with steel cover plates on the left eastern bay side. (The steel plates on the left side were added for pedestrian foot traffic tied to the Giants baseball stadium and crowds). The open grid deck has distress and deterioration with repaired welds and patched areas totaling less than 10% of the open grid deck area. The open grid deck with steel cover plates has similar distress to the open grid visible during lift operations and observed while under the structure. The cover plates exhibit little to no structural distress. There is some distress to the skid course on the steel plates. There is dirt and debris accumulated in the open grid deck in several locations. See photographs No. 2 to 5 from the 2011 report for more details of the roadway deck.

The approach spans have a concrete deck with an AC wearing surface that has recently been replaced and is in generally good condition.

The timber sidewalks have some decay, insect infestation, abrasion, splitting, cracking, and some crushing but none is sufficiently advanced to affect the strength or serviceability. See photograph No. 7 from the 2011 report for more details on the timber sidewalk.

The concrete curb areas on the bridge deck have a history of spalling. Many of these spalls have been repaired since the last inspection but there are still some areas of curb that are spalled. See photographs No. 1 to 3 for more details.

## SUPERSTRUCTURE

On all the painted steel superstructure elements there is active corrosion. Surface or freckled rust has formed and is prevalent at the connections. The paint system is generally chalking, peeling, curling, and showing other early evidence of paint system distress. There is pack rust in the built up sections and connections which is distorting the members. There is some loss of section detailed below. All painted steel elements are in condition state 2 to 4 at this time.

The concrete counterweights are cracking with efflorescent staining in areas and have areas with spalls with exposed corroded reinforcement up to 3 square feet in surface



INSPECTION COMMENTARY

size. The cracked and delaminated areas easily spalled off with a light rock hammer. An estimated area of 10% of the surface area of the 2 counterweights are cracked and spalling. See photograph No. 4 to 10 for more details.

The top surface of the trunion portion of the truss is corroding with surface rust and surface pitting. See photograph No. 11 and 12 for more details.

The lift portion of the deck has a vertical offset of 1/2 of an inch as measured along the centerline of the two way traffic lanes. See photographs No. 13 to 14 for more details.

The underside of the superstructure in the lift span exhibits corrosion, pack rust and general distress along the bottom flanges of the bottom cord of the truss, the floor beams and the girders. See photographs No 15 to 18 with this report or photographs No. 14 to 15 from the 2011 report for more details.

The end bearing area of the bottom cord of the lift span along the left bay side has significant corrosion and pack rust for an area approximately 5 square yards at Pier 3. There is a loss of section for an estimated area at 4 square feet along the built up bottom flange of the bottom cord of the truss along the bay side at this location. See photographs No. 19 and 20 with this report or photograph No. 13 from the 2011 report as well as the report and photographs from the Fracture Critical Inspection in 2011 and again in 2013 for more details.

The southern approach slabs have occasional randomly oriented soffit cracks with efflorescence.

SUBSTRUCTURE

The abutment face at Abutment 8 exhibits rock pockets, scaliness, and staining. See photograph No. 16 from the 2011 report for more details.

The timber fender protection system was only visible above the waterline. Those portions above the waterline appeared in good condition, but previous reports indicate those portions below the waterline to be in poor condition.

SAFE LOAD CAPACITY

The Load Rating for this structure is currently under review by the Load Ratings Branch under Work Request No. 2200.

STEEL INVESTIGATIONS

This structure qualifies for an in-depth Steel investigation because it possesses the following fracture critical or fatigue prone details :

Floor Beams: FC Members,

Truss: FC Members

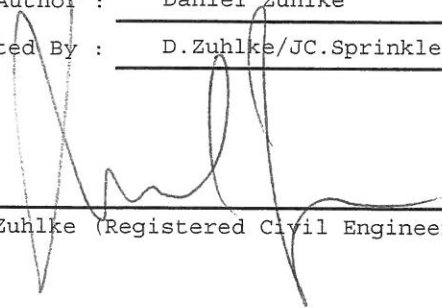
Fracture Critical: Yes

Inspection Freq.: 24

Next Inspection: 10/18/2013



Team Leader : Daniel Zuhlke  
Report Author : Daniel Zuhlke  
Inspected By : D.Zuhlke/JC.Sprinkle

  
Daniel Zuhlke (Registered Civil Engineer) (Date) 8/9/2013



STRUCTURE INVENTORY AND APPRAISAL REPORT

## \*\*\*\*\* IDENTIFICATION \*\*\*\*\*

(1) STATE NAME- CALIFORNIA 069  
 (8) STRUCTURE NUMBER 34C0025  
 (5) INVENTORY ROUTE (ON/UNDER) - ON 150000000  
 (2) HIGHWAY AGENCY DISTRICT 04  
 (3) COUNTY CODE 075 (4) PLACE CODE 67000  
 (6) FEATURE INTERSECTED- CHINA BASIN  
 (7) FACILITY CARRIED- THIRD ST  
 (9) LOCATION- S OF BERRY ST  
 (11) MILEPOINT/KILOMETERPOINT 0  
 (12) BASE HIGHWAY NETWORK- PART OF NET 1  
 (13) LRS INVENTORY ROUTE & SUBROUTE 000000000000  
 (16) LATITUDE 37 DEG 46 MIN 34.87 SEC  
 (17) LONGITUDE 122 DEG 23 MIN 24 SEC  
 (98) BORDER BRIDGE STATE CODE % SHARE %  
 (99) BORDER BRIDGE STRUCTURE NUMBER

## \*\*\*\*\* STRUCTURE TYPE AND MATERIAL \*\*\*\*\*

(43) STRUCTURE TYPE MAIN:MATERIAL- STEEL  
 TYPE- MOVABLE - BASCULE CODE 316  
 (44) STRUCTURE TYPE APPR:MATERIAL- CONCRETE CONT  
 TYPE- SLAB CODE 201  
 (45) NUMBER OF SPANS IN MAIN UNIT 1  
 (46) NUMBER OF APPROACH SPANS 5  
 (107) DECK STRUCTURE TYPE- OPEN GRATING CODE 3  
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:  
 A) TYPE OF WEARING SURFACE- OTHER CODE 9  
 B) TYPE OF MEMBRANE- NONE CODE 0  
 C) TYPE OF DECK PROTECTION- NONE CODE 0

## \*\*\*\*\* AGE AND SERVICE \*\*\*\*\*

(27) YEAR BUILT 1932  
 (106) YEAR RECONSTRUCTED 0000  
 (42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5  
 UNDER- WATERWAY 5  
 (28) LANES:ON STRUCTURE 04 UNDER STRUCTURE 00  
 (29) AVERAGE DAILY TRAFFIC 25000  
 (30) YEAR OF ADT 2012 (109) TRUCK ADT 30 %  
 (19) BYPASS, DETOUR LENGTH 2 KM

## \*\*\*\*\* GEOMETRIC DATA \*\*\*\*\*

(48) LENGTH OF MAXIMUM SPAN 43.6 M  
 (49) STRUCTURE LENGTH 89.9 M  
 (50) CURB OR SIDEWALK: LEFT 1.3 M RIGHT 1.6 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 21.8 M  
 (52) DECK WIDTH OUT TO OUT 24.7 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 19.8 M  
 (33) BRIDGE MEDIAN- CLOSED NON-MOUNTABLE 3  
 (34) SKEW 0 DEG (35) STRUCTURE FLARED NO  
 (10) INVENTORY ROUTE MIN VERT CLEAR 5.69 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 15.1 M  
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 5.69 M  
 (54) MIN VERT UNDERCLEAR REF- NOT H/RR 0.0 M  
 (55) MIN LAT UNDERCLEAR RT REF- NOT H/RR 0.0 M  
 (56) MIN LAT UNDERCLEAR LT 0.0 M

## \*\*\*\*\* NAVIGATION DATA \*\*\*\*\*

(38) NAVIGATION CONTROL- BR PERMIT REQ CODE 1  
 (111) PIER PROTECTION- FUNCTIONING CODE 2  
 (39) NAVIGATION VERTICAL CLEARANCE 0.1 M  
 (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M  
 (40) NAVIGATION HORIZONTAL CLEARANCE 31.4 M

## \*\*\*\*\* SUFFICIENCY RATING \*\*\*\*\*

SUFFICIENCY RATING = 33.3  
 STATUS STRUCTURALLY DEFICIENT  
 HEALTH INDEX 77.0  
 PAINT CONDITION INDEX = 66.6

## \*\*\*\*\* CLASSIFICATION \*\*\*\*\* CODE

(112) NBIS BRIDGE LENGTH- YES Y  
 (104) HIGHWAY SYSTEM- ROUTE ON NHS 1  
 (26) FUNCTIONAL CLASS- OTHER PRIN ART URBAN 14  
 (100) DEFENSE HIGHWAY- NOT STRAHNET 0  
 (101) PARALLEL STRUCTURE- NONE EXISTS N  
 (102) DIRECTION OF TRAFFIC- 2 WAY 2  
 (103) TEMPORARY STRUCTURE-  
 (105) FED.LANDS HWY- NOT APPLICABLE 0  
 (110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0  
 (20) TOLL- ON FREE ROAD 3  
 (21) MAINTAIN- COUNTY HIGHWAY AGENCY 02  
 (22) OWNER- COUNTY HIGHWAY AGENCY 02  
 (37) HISTORICAL SIGNIFICANCE- ELIGIBLE 2

## \*\*\*\*\* CONDITION \*\*\*\*\* CODE

(58) DECK 6  
 (59) SUPERSTRUCTURE 3  
 (60) SUBSTRUCTURE 7  
 (61) CHANNEL & CHANNEL PROTECTION 8  
 (62) CULVERTS N

## \*\*\*\*\* LOAD RATING AND POSTING \*\*\*\*\* CODE

(31) DESIGN LOAD- UNKNOWN 0  
 (63) OPERATING RATING METHOD- LOAD FACTOR 1  
 (64) OPERATING RATING- 24.5  
 (65) INVENTORY RATING METHOD- LOAD FACTOR 1  
 (66) INVENTORY RATING- 16.3  
 (70) BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS 5  
 (41) STRUCTURE OPEN, POSTED OR CLOSED- A  
 DESCRIPTION- OPEN, NO RESTRICTION

## \*\*\*\*\* APPRAISAL \*\*\*\*\* CODE

(67) STRUCTURAL EVALUATION 3  
 (68) DECK GEOMETRY 9  
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N  
 (71) WATER ADEQUACY 8  
 (72) APPROACH ROADWAY ALIGNMENT 6  
 (36) TRAFFIC SAFETY FEATURES 0000  
 (113) SCOUR CRITICAL BRIDGES 5

## \*\*\*\*\* PROPOSED IMPROVEMENTS \*\*\*\*\*

(75) TYPE OF WORK- REPLACE FOR DEFICIENC' CODE 31  
 (76) LENGTH OF STRUCTURE IMPROVEMENT 89.9 M  
 (94) BRIDGE IMPROVEMENT COST \$5,094,500  
 (95) ROADWAY IMPROVEMENT COST \$1,018,900  
 (96) TOTAL PROJECT COST \$8,558,760  
 (97) YEAR OF IMPROVEMENT COST ESTIMATE 2010  
 (114) FUTURE ADT 36064  
 (115) YEAR OF FUTURE ADT 2034

## \*\*\*\*\* INSPECTIONS \*\*\*\*\*

(90) INSPECTION DATE 12/12 (91) FREQUENCY 24 MO  
 (92) CRITICAL FEATURE INSPECTION: (93) CFI DATE  
 A) FRACTURE CRIT DETAIL- YES 24 MO A) 10/11  
 B) UNDERWATER INSP- YES 60 MO B) 06/10  
 C) OTHER SPECIAL INSP- NO MO C)



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

102 - PHOTO-Deck-Damage/Deterioration



Photo No. 1

Spalling curb areas, typical

102 - PHOTO-Deck-Damage/Deterioration



Photo No. 2

Spalling curb areas, typical



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

103 - PHOTO-Deck-Details



Photo No. 3

Repaired spalled curb areas, typical

107 - PHOTO-Super-Damage/Deterioration



Photo No. 4

Cracking and spalling on the above ground counterweights, typical



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

107 - PHOTO-Super-Damage/Deteroration



Photo No. 5

Cracking and spalling on the above ground counterweights, typical

107 - PHOTO-Super-Damage/Deteroration



Photo No. 6

Cracking and spalling on the above ground counterweights, typical



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

107 - PHOTO-Super-Damage/Deteroration



Photo No. 7

Cracking and spalling on the above ground counterweights, typical

107 - PHOTO-Super-Damage/Deteroration



Photo No. 8

Cracking and spalling on the above ground counterweights, typical



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

107 - PHOTO-Super-Damage/Deterioration



Photo No. 9

Cracking and spalling on the above ground counterweights, typical

107 - PHOTO-Super-Damage/Deterioration



Photo No. 10

Cracking and spalling on the above ground counterweights, typical



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

107 - PHOTO-Super-Damage/Deteroration

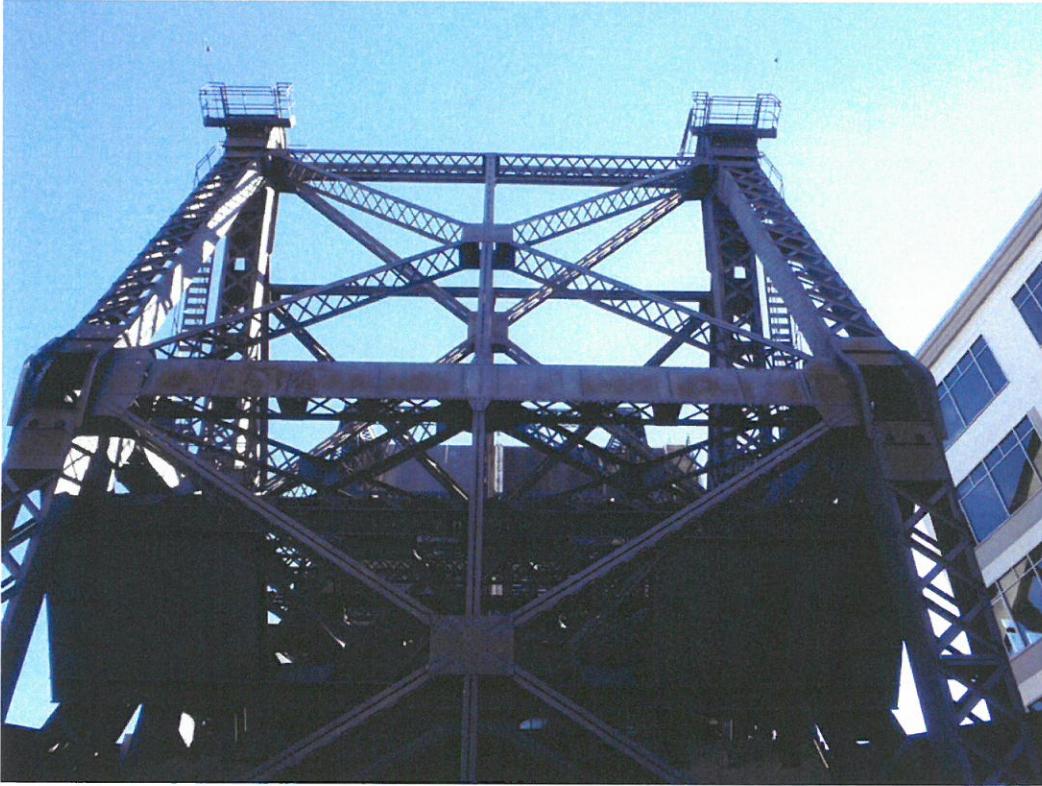


Photo No. 11

Top corroding surface of the counterweight trunion portion of the truss, typical

107 - PHOTO-Super-Damage/Deteroration



Photo No. 12

Top corroding surface of the counterweight trunion portion of the truss, typical



**CHANNEL STREET WATERWAY-3RD ST**

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

104 - PHOTO-Deck-Unusual Conditions



Photo No. 13

Vertical offset at Pier 2

104 - PHOTO-Deck-Unusual Conditions

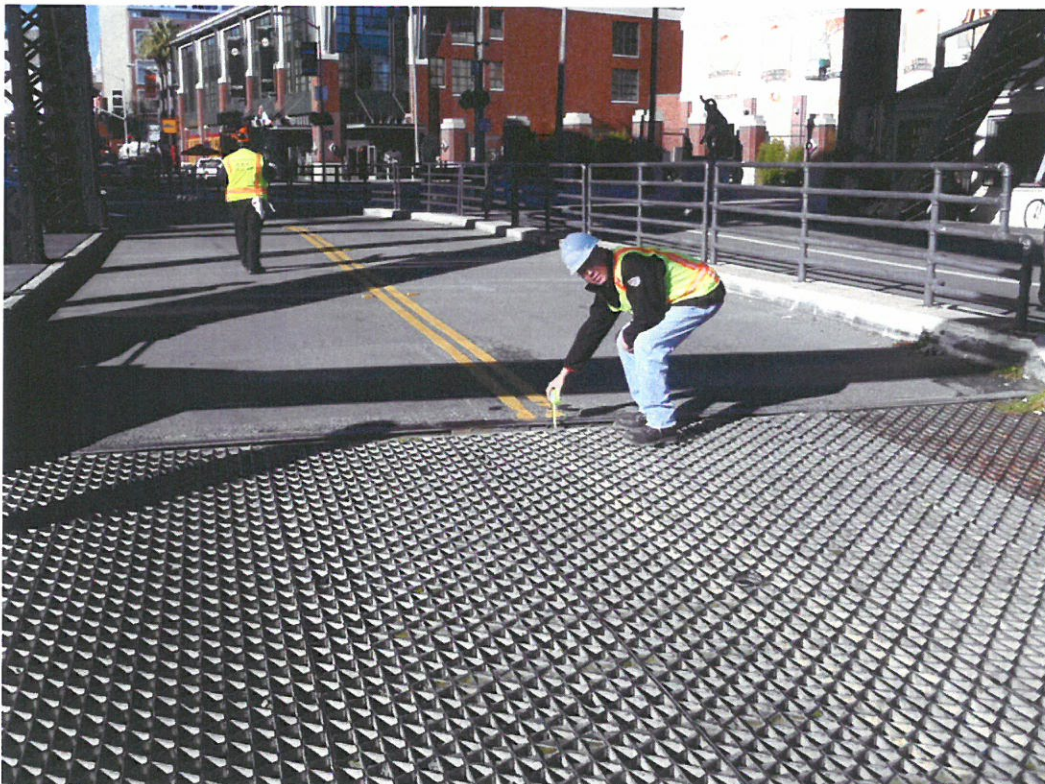


Photo No. 14

Vertical offset at Pier 2



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

107 - PHOTO-Super-Damage/Deteroration



Photo No. 15

General distress to the underside of the superstructure lift span, typical

107 - PHOTO-Super-Damage/Deteroration



Photo No. 16

General distress to the underside of the superstructure lift span, typical



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

107 - PHOTO-Super-Damage/Deteroration

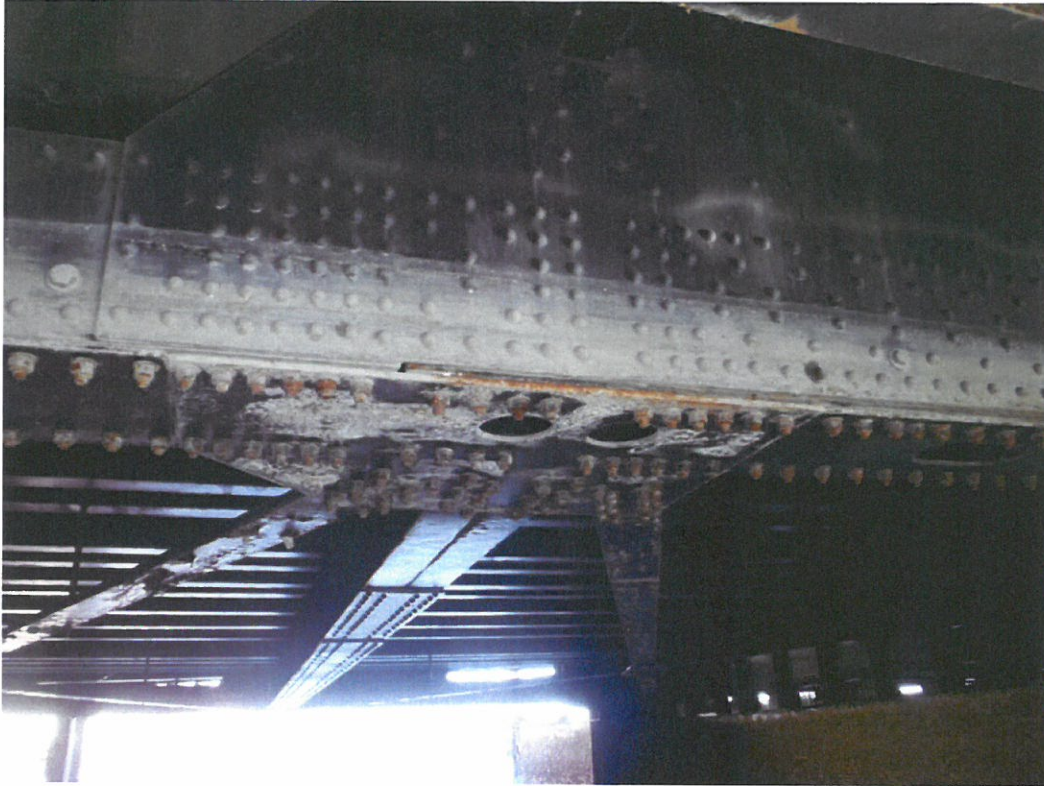


Photo No. 17

General distress to the underside of the superstructure lift span, typical

107 - PHOTO-Super-Damage/Deteroration



Photo No. 18

General distress to the underside of the superstructure lift span, typical



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

12/19/2012 [AAAR]

34C0025

107 - PHOTO-Super-Damage/Deterioration



Photo No. 19

Distress and deterioration to the left bottom flange at Pier 3

107 - PHOTO-Super-Damage/Deterioration



Photo No. 20

Distress and deterioration to the left bottom flange at Pier 3



DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 34C0025  
Facility Carried: THIRD ST  
Location : S OF BERRY ST  
City : SAN FRANCISCO  
Inspection Date : 11/26/2013

## Bridge Inspection Report

Inspection Type

Routine  FC  Underwater  Special  Other

**STRUCTURE NAME:** CHANNEL STREET WATERWAY-3RD ST

### CONSTRUCTION INFORMATION

Year Built : 1932 Skew (degrees): 0  
Year Widened: N/A No. of Joints : 2  
Length (m) : 89.9 No. of Hinges : 0

Structure Description: 7 Spans

Main spans (1&2):

Single leaf Bascule riveted steel through truss with a RC deck (Span 1) and a steel grid deck (Span 2). The bents (Piers 1-3) are RC (2) columns on RC caps on timber piles.

Approach spans (3-7): RC deck on RC caps, steel seismic piles (P4-9, P5-11, P6-8, P7-8), RC abutment founded on timber piles.

Span Configuration : 1 @ 56 ft 6 in, 1 @ 142 ft 3 in, 1 @ 20 ft 6-1/2 in, 3 @ 19 ft, 1 @ 18 ft 2 in

### SAFE LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN  
Inventory Rating: 16.3 metric tons Calculation Method: LOAD FACTOR  
Operating Rating: 24.5 metric tons Calculation Method: LOAD FACTOR  
Permit Rating : XXXXX  
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

### DESCRIPTION ON STRUCTURE

Deck X-Section: 1.28 m sw, 0.46 m cu, 6.77 m rdwy, 1.4 m med, 15.06 m rdwy, 1.59 m sw  
Total Width: 24.7 m Net Width: 21.8 m No. of Lanes: 4 Speed: 25 mph  
Min. Vertical Clearance: 5.69 m  
Rail Code: 0000

Rail Type	Location	Length (ft)	Rail Modifications
Pedestrian	Right/Left	590	

### DESCRIPTION UNDER STRUCTURE

Channel Description: Fender protection. Channel bottom silty clay.

### INSPECTION COMMENTARY

#### NOMENCLATURE

The support identification and numbering system used on the 1998 as-built plans is reversed from the statewide convention employed by Caltrans Structure Maintenance and Investigations. This report uses the statewide convention identification system. For local agency bridges, the supports are numbered from south to north, Thus, the beginning of the bridge is at the south abutment, designated as Abutment 1. The right or left truss is designated while facing north.

#### SCOPE AND ACCESS

A fracture critical inspection was performed on 10/18/2011 and 11/26/2011 by Chaz Kussoy, Jason Crispi and Allan Lee from the Office of Specialty Investigations and Bridge

INSPECTION COMMENTARY

Management.

Access was provided by a rented 80 foot aerial lift for the upper chords and other truss members. A kayak provided the access for the lower chords and floor beams. Lane closures were provided by the San Francisco County bridge maintenance workers.

The investigation was conducted according to the Fracture Critical Member Inspection Plan, dated 11/07/2007.

## SUPERSTRUCTURE

A hands-on visual inspection in Spans 6 & 7 was performed on: (i) the upper and lower chord, diagonal and vertical tension members of the left and right truss, (ii) the end connections of the floor beams and the tension stress areas of the floor beams and (iii) the pins. No fractures or cracks were found.

Previously reported pack rust including popped rivets, and section loss found at the east and west vertical gussets joining Bottom Chord Member 0-2 to Diagonal Member 0-1 at Joint 0 in Span 6 were still present.

More details are listed in the Steel Element NDT Inspection table below.

## MISCELLANEOUS

Many of the stair tread support brackets going up to joint 18 on the left truss are cracked, broken or missing and presents an unsafe condition.

## RECOMMENDATIONS

Use needle gun to remove pack rust between the plates at Joint 0 on the right truss. Remove fragments of the 4 broken rivets, clean hole edges and replace broken rivets with equal diameter galvanized bolts washers and nuts. Paint exposed edges of bolts, washers and nuts.

Replace deficient and missing stair support brackets at the left truss between Joint 17 to Joint 18. Use galvanized steel and paint all exposed surfaces.

STEEL INVESTIGATIONS

This structure qualifies for an in-depth Steel investigation because it possesses the following fracture critical or fatigue prone details :

Floor Beams: FC Members,

Truss: FC Members

Fracture Critical: Yes

Inspection Freq.: 24

Next Inspection: 11/26/2015

**Steel Element NDT Inspection**

Span	Girder	Bay	Element	Method	Inspection Result
6 & 7			LTM	VT	Previously reported left truss member 0-1 has dents in the bottom and top flange. Member 1-3 has minor pitting of the top plate up to 1/8" deep. Member 19-20 has up to 3/16" pack rust at the side plate. Member 18-19 has bent lacing bars.
6 & 7			LOS	VT	Previously reported light surface corrosion on top



Span	Girder	Bay	Element	Method	Inspection Result
					of left operating strut
6 & 7			LTJ	VT	There is surface corrosion, and section loss at the vertical gussets and rivets at Joint 0 joining Bottom Chord Member 0-2 to Diagonal Member 0-1. There are areas of complete section loss of the gusset plate where it extends below the bottom chord.
6 & 7			RTM	VT	Previously reported right truss member 18-19 has corrosion at the interior spreaders
6 & 7			RTJ	VT	There is surface corrosion, pack rust and section loss at the vertical gusset joining Right Truss Bottom Cord Member 0-2 to Diagonal Member 0-1 at Joint 0. A column of 4 rivets have broken off due to pack rust between the gusset and the member. There are areas of complete section loss in the gusset plate below the bottom chord and partial section loss of approximately 1/4" (6 mm) at the north side of the gusset. Previously reported pack rust and corrosion at interior spreaders of joint 19
6 & 7			ROS	VT	Previously reported standing water present inside the right operating strut with surface corrosion on the bottom flange and bottom and side rivet heads.
6 & 7			FB	VT	Pack rust at gussets joining Floor Beam 6 to intermediate diagonal braces up to 3/8" (9 mm) typical.

LTM = Left Truss Members, LTJ = Left Truss Joints, RTM = Right Truss Members, RTJ = Right Truss Joints, FB = Floor Beam, LOS = Left Operating Strut, ROS = Right Operating Strut, VT = Visual Testing

Team Leader : Allan K. Lee  
 Report Author : Allan K. Lee  
 Inspected By : AK.Lee/J.Crispi

Chaz Kussoy (Registered Civil Engineer) 5/12/2014 (Date)



# CHANNEL STREET WATERWAY-3RD ST

S OF BERRY ST

11/26/2013 [AAAS]

34C0025

110 - PHOTO-Super-Misc.



Photo No. 1

Photo 1 (Batch 27675) General picture of the bridge

107 - PHOTO-Super-Damage/Deterioration



Photo No. 2

Photo 2 (Batch 27675) Pack rust on the right bottom chord



DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 34C0025  
Facility Carried: THIRD ST  
Location : S OF BERRY ST  
City : SAN FRANCISCO  
Inspection Date : 05/10/2010

## Bridge Inspection Report

### Inspection Type

Routine	FC	Underwater	Special	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**STRUCTURE NAME:** CHANNEL STREET WATERWAY-3RD ST

### CONSTRUCTION INFORMATION

Year Built : 1932	Skew (degrees): 0
Year Widened: N/A	No. of Joints : 0
Length (m) : 89.9	No. of Hinges : 0

#### Structure Description: 7 Spans:

Approach spans (1 to 5): RC slab on CISS pile bents and a RC abutment on timber piles.

Main spans (6 and 7): Single leaf bascule riveted steel through truss with a steel grid deck. The substructures are RC piers on timber piles.

Span Configuration : 5.54 m, 3 @ 5.79 m, 6.26 m, 43.36 m, 16.00 m

### LOAD CAPACITY AND RATINGS

Design Live Load: OTHER OR UNKNOWN		
Inventory Rating: 16.3 metric tonnes	Calculation Method: LOAD FACTOR	
Operating Rating: 24.5 metric tonnes	Calculation Method: LOAD FACTOR	
Permit Rating : XXXXX		
Posting Load : Type 3: Legal	Type 3S2: Legal	Type 3-3: Legal

### DESCRIPTION ON STRUCTURE

Deck X-Section: 1.28 m sw, 0.46 m cu, 6.77 m rdwy, 1.4 m med, 15.06 m rdwy, 1.59 m sw		
Total Width: 24.7 m	Net Width: 21.8 m	No. of Lanes: 4
Rail Description: Metal Pipe		Rail Code : 0000
Min. Vertical Clearance: 5.690		

### DESCRIPTION UNDER STRUCTURE

Channel Description: Timber fender piles protect main channel otherwise unlined.

### CONDITION TEXT

#### HISTORY

No major hydraulic problems pertaining to scour have been noted in previous bridge reports.

#### REVISION

The National Bridge Inventory (NBI) Item 113 Code is revised from U to 5.

#### SCOUR

This report addresses hydraulic issues only. The structure's scour potential has been assessed in accordance with the FHWA Technical Advisory T5140.23, "Evaluating Scour at Bridges". The NBI Item 113 Code, "Vulnerability to Scour", is changed to 5: "Bridge foundations determined to be stable for assessed or calculated scour conditions; Scour is determined to be within the limits of footing or piles by calculations or assessment".

Structures Hydraulics conducted a field review on the subject bridge on 5-10-2010 in a response from the local agency who supplied this office with foundation retrofit as-built

CONDITION TEXT

plans in the Fall of 2009.

During the field investigation there was stagnant water that measured approximately 4.6 meters in maximum depth. An upstream (westerly side of bridge) channel cross section was taken (attached). Comparison of this cross section with a documented as-built plan for fender repairs from 1973 indicate that the channel may have aggraded by as much 3.3 meters.

The channel banks appeared to be in good condition and the channel was well aligned with the bridge opening. No apparent scour was noted however, due to the constant water level, a complete investigation of the substructure was limited.

The retrofit as-builts indicate that extensive foundation work was recently completed at the site. Given this information and the relative stability at the site, the bridge is seen as having very little scour potential.

MISCELLANEOUS

The stationing used to identify the bridge piers in this report was taken from the 1998 Seismic Retrofit plans - Pier 1 was the north abutment.

CHANNEL X-SECTION

Side : Upstream

X-Section Date: 05/10/2010

Measured From : top of sidewalk

Location	Horiz(m)	Vert(m)	Comments
Pier 2 (north)	0.00	6.00	CL P2 - (Abut 1 obstructed by sidewalk)
		7.40	north side of north fender
		7.90	south side of north fender
		8.70	14.4m (47ft) from CL P2
		9.45	21.5m (71ft) from CL P2
		9.45	28.8m (94ft) from CL P2
		7.70	north side of south fender
		7.30	south side of south fender
		6.40	CL Pier 3
		6.00	CL Pier 4
		4.70	CL Pier 5
		3.60	CL Pier 6
		1.50	CL Pier 7 (Abut 8 obstructed by sidewalk)
			upstream considered west side.

Inspected By : Charles Ineichen

Registered Civil Engineer



Printed on: Thursday 05/20/2010 11:25 AM

34C0025/AAAN/18574



DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 34C0025  
Facility Carried: THIRD ST  
Location : S OF BERRY ST  
City : SAN FRANCISCO  
Inspection Date : 11/14/2013

## Bridge Inspection Report

Inspection Type  
Routine FC Underwater Special Other

**STRUCTURE NAME:** CHANNEL STREET WATERWAY-3RD ST

### CONSTRUCTION INFORMATION

Year Built : 1932 Skew (degrees): 0  
Year Widened: N/A No. of Joints : 2  
Length (m) : 89.9 No. of Hinges : 0

Structure Description: 7 Spans

Main spans (1&2):

Single leaf Bascule riveted steel through truss with a RC deck (Span 1) and a steel grid deck (Span 2). The bents (Piers 1-3) are RC (2) columns on RC caps on timber piles.

Approach spans (3-7): RC deck on RC caps, steel seismic piles (P4-9, P5-11, P6-8, P7-8), RC abutment founded on timber piles.

Span Configuration : 1 @ 56 ft 6 in, 1 @ 142 ft 3 in, 1 @ 20 ft 6-1/2 in, 3 @ 19 ft, 1 @ 18 ft 2 in

### SAFE LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN  
Inventory Rating: 16.3 metric tons Calculation Method: LOAD FACTOR  
Operating Rating: 24.5 metric tons Calculation Method: LOAD FACTOR  
Permit Rating : XXXXX  
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

### DESCRIPTION ON STRUCTURE

Deck X-Section: 1.28 m sw, 0.46 m cu, 6.77 m rdwy, 1.4 m med, 15.06 m rdwy, 1.59 m sw  
Total Width: 24.7 m Net Width: 21.8 m No. of Lanes: 4 Speed: 25 mph  
Min. Vertical Clearance: 5.69 m

Rail Code: 0000

Rail Type	Location	Length (ft)	Rail Modifications
Pedestrian	Right/Left	590	

### DESCRIPTION UNDER STRUCTURE

Channel Description: Fender protection. Channel bottom silty clay.

### INSPECTION COMMENTARY

#### SCOPE AND ACCESS

On November 14, 2013, Collins Engineers, Inc. (Collins) performed an underwater inspection of the submerged portions of the 3rd Street Bridge (China Basin), which is Bridge No. 34C0025. The underwater inspection consisted of 100 percent Level I and 10 percent Level II inspections. Above-water elements were inspected only if identified in prior or current project documentation, or if requested by the onsite Caltrans representative. This report details the findings from the inspection. The inspection was performed under the direct supervision of the Dive Supervisor and a registered Professional Engineer in the State of California. The inspection was completed by ADC certified divers. All dive operations were conducted in accordance with Collins' Safe Dive Practices and Decontamination Procedures for Underwater Investigations manuals. Refer to these manuals for details of procedures and equipment used. As per State of California Contract Agreement 56A0197, Mitch Miller, a California Department of Transportation representative, was on-site and performed oversight of the contract dive

INSPECTION COMMENTARY

operations.

Access to the bridge was obtained via a boat launch from a public boat ramp located at the intersection of Mission Bay Boulevard North and Terry A. Francois Boulevard. The ramp is approximately 1.6 km (0.5 mi) southeast of the structure. The bridge's substructure units were completely accessible from the down-channel side of the bridge, thus raising the bridge's movable span was not necessary. If it were to be necessary to raise the bridge, however, the bridge tender can be reached at 415-597-7998. The inspection as conducted using a surface-supplied air (SSA) diving setup operated out of a 27-foot Boston Whaler boat. The boat was positioned near the particular unit to be inspected and typically tied-off to the nearest fender system construction during dive operations. The primary diver was able to access all surfaces of the pier with a 300-foot-long umbilical. The backup diver was also equipped with a 300-foot-long umbilical, as well as with all the other SSA equipment to match that of the inspection diver. Prior to the inspection, the on-site Caltrans representative notified the appropriate local agencies (USCG VTC and Caltrans TMC) of Collins' dive inspection presence at the bridge.

Due to the influence of tides, the water elevation, and direction and velocity of flow varied throughout the underwater inspection operation. The bridge is supported by eight substructure units, consisting of Piers 1, 2 and 3, Bents 4 through 7, and Abutment 8. At the time of inspection, Piers 1, 2, 3 and Bents 4 through 6 were located in the water, while Bent 7 and Abutment 8 were located on dry portions of the waterway and were not subject to underwater inspection. Piers 1 through 3 are composed of two rectangular concrete columns, with a buttress wall in between the columns that are founded on timber piles. Bent 4 is composed of a single row of nine steel shell piles filled with concrete, Bent 5 is composed of a single row of 11 steel shell piles filled with concrete, and Bents 6 and 7 are composed of a single row of eight steel shell piles filled with concrete.

The Collins UWI plan for this structure is dated 11/01/2013.

## NUMBERING CONVENTION

The substructure units are numbered in increasing order from north to south, not following standard numbering convention. It follows that Pier 1 is the northern-most substructure unit. The column/pile numbering progresses in increasing order from west to east.

## REVISIONS

Element 254, Steel Seismic Column Shell (Full Height), was deleted and replaced with Element 251, Steel Shell Foundation Pile Filled with Concrete, to accurately represent the structure type.

## CONDITION:

## SUBSTRUCTURE

The submerged surfaces of the substructure units were typically 100 percent covered with a light layer of marine growth, which primarily consisted of small barnacles and algae up to 6-millimeter (1/4-inch) thick. The maximum water depth encountered in the vicinity of the substructure units of the bridge was approximately 5 meters (15 feet) located at the southeast corner of Pier 2.

Based on the National Oceanic and Atmospheric Administration (NOAA) tidal station 9414317 in Rincon Point, Pier 22 1/2, California, the waterline elevation at the time of inspection was approximately 1.2 meters (4 feet) above Mean Lower Low Water (MLLW), the range of water depths at Piers 1, 2 and 3 were as follows. The water depths at the bents are discussed later. The max water depth at Pier 1, at the time of inspection, was approximately 2.4 meter (8 feet), and the minimum water depth was approximately 2.1 meters (7 feet). The max water depth at Pier 2, at the time of inspection, was

INSPECTION COMMENTARY

approximately 4.5 meter (15 feet), and the minimum water depth was approximately 2.4 meters (8 feet). The max water depth at Pier 3, at the time of inspection, was approximately 3.7 meter (12 feet), and the minimum water depth was approximately 3 meters (10 feet).

**ELEMENT 205: Reinforced Concrete Column or Pile Extension**

In general, the concrete of the pier columns was relatively smooth and sound from the waterline to the channel bottom with minor random areas of section loss along the vertical corners of the columns having typical penetrations of up to 25 millimeters (1 inch). Random 25-millimeter (1-inch) to 76-millimeter (3-inch) horizontal seams (mostly at cold construction joints) were also noted throughout the columns and buttress wall with penetrations into the concrete of up to 152 millimeters (6 inches). Descriptions of specific conditions beyond the typical condition are detailed in the following.

Pier 1: Generally, the columns of Pier 1 were in fair condition, ELI CS 2, with no significant structural defects observed that could adversely affect the bridge. A small cavity in the concrete was encountered, measuring approximately 152 millimeters (6 inches) high, 203 millimeters (8 inches) wide with a max penetration of up to 0.31 meters (12 inches). The buttress wall between the columns was found to exhibit random minor pop-outs (area of poor consolidation) with up to 76 millimeters (3 inches) of penetration.

Pier 2: Generally, the columns of Pier 2 were in fair to poor condition, ELI CS 3, with various structural defects observed that could adversely affect structural integrity. Numerous, random seams were noted along the south and west faces of Column 1 with penetrations of up to 152 millimeters (6 inches), but with no reinforcing steel bars exposed. At the southwest corner of Column 1, an area of greater section loss was noted just off the channel bottom, measuring 0.5 meters (1.5 feet) wide on each side of the corner, up to 0.3 meters (1 foot) high, with a maximum penetration of 0.3 meters (1 foot). This area again exhibited exposed no reinforcing steel bars. Above this area of section loss, between the waterline and 1.2 meters (4 feet) below the waterline, another large area of section loss was encountered measuring approximately 0.31 meters (12 inches) wide by 0.3 meters (12 inches) high with a maximum penetration of up to 152 millimeters (6 inches). Again, no reinforcing steel bars were exposed in this area. There was a horizontal 0.3-meter-high (1-foot) strut that runs north to south, at the north interface between the buttress and Column 1, as well as a small step out from the east face of the column. In and around both of these items and Column 1, there were various horizontal seams of section loss, which varied in size from 0.6 meters (2 feet) to 0.9 meters (3 feet) horizontally, and 152 millimeters (6 inches) to 0.3 meters (12 inches) vertically, with penetrations of up to 0.3 meters (12 inches). One exposed, heavily corroded reinforcing steel bar was noted at the largest seam in this region of the column, which measured approximately 1.2 meters (4 feet) wide and was located approximately 1.8 meters (6 feet) below the waterline.

At the northeast corner of Column 2, random areas of section loss were noted from 1.5 meters (5 feet) below the waterline to 4.3 meters (14 feet) below the waterline, with typical penetrations of up to 152 millimeters (6 inches). The largest void was noted at approximately 2.4 meters (8 feet) below the waterline and measured approximately 0.5 meters (18 inches) high, with a maximum penetration of up to 0.5 meters (18 inches) and with one horizontal reinforcing steel bar exposed. In addition, the concrete inside the void was noted to be softer and could be broken apart at this time with the diver's gloved hand. A 3.6-meter-long (12-foot) horizontal seam of section loss was noted, at a depth of approximately 2.1 meters (7 feet) below the waterline, along the east face of Column 2, that wrapped around the southeast corner and extended approximately 0.3 meters (12 inches) into the south face of the column. This seam measured approximately 0.3 meter (12 inches) high with a maximum penetration of 0.5 meters (18 inches). This area did not have any exposed reinforcing steel bars. The concrete face of Column 2 was found to be delaminating at the southeast corner, with delaminations extending onto the west

INSPECTION COMMENTARY

face approximately 0.9 meters (3 feet), and from the channel bottom up 1.5 meters (5 feet), with the delaminations typically measuring 76 millimeters (3 inches) to 102 millimeters (4 inches) thick. The southwest corner of Column 2 exhibited an area of section loss from the channel bottom up 2.7 meters (9 feet), extending approximately 0.3 meters (12 inches) onto each face from the corner, with a maximum penetration of up to 152 millimeters (6 inches). This area did not have any exposed reinforcing steel bars.

Minor areas of section loss were also noted along the north face of the buttress wall, with penetrations of up to 51 millimeters (2 inches) and with no reinforcing steel bars exposed. Random cracking was noted in the middle third (of overall east/west length) of the south face of the buttress wall, along with a previously repaired crack which appeared to have reopened. Together, all of the cracking had a maximum width of approximately 3 millimeters (1/8 inch), with associated edge spalls having penetrations of 50 millimeters (2 inches) to 76 millimeters (3 inches).

Pier 3: Generally, the columns of Pier 3 were in satisfactory condition, ELI CS 2, with no significant structural defects observed that could adversely affect the Bridge. The concrete of the Pier column, buttress wall and other related construction typically exhibited general concrete conditions similar to Pier 2, but to a less extensive degree with numerous seams of section loss varying with height and penetrations typically ranging from 76 millimeters (3 inches) to 152 millimeters (6 inches). In all instances, there were no reinforcing steel bars exposed in association with the areas of section loss.

**ELEMENT 228: Timber Submerged Piles**

The timber foundation piles were completely embedded in the channel bottom at the time of inspection and not accessible for inspection.

**ELEMENT 251: Steel Shell Foundation Pile Filled with Concrete**

Typically, the steel of the steel shell piles filled with concrete were mostly smooth and always sound from the high waterline to the channel bottom with minor random areas of surface corrosion. Descriptions of conditions which deviated from the typical condition are detailed below. Descriptions of specific conditions beyond the typical condition are detailed in the following. No scour was observed at any of the bent piles during the course of the inspection.

**Bent 4**

Generally, the piles of Bent 4 were in satisfactory condition, ELI CS 2, with no significant structural defects observed that could adversely affect the bridge. The maximum water depth encountered in the vicinity of Bent 4 was approximately 2.4 meters (8 feet) at Pile 1 and the minimum depth was 1.2 meters (4 feet) at Pile 5. These depths are based on a waterline elevation of 3 feet above MLLW from the National Oceanic and Atmospheric Administration (NOAA) tidal station 9414317 in Rincon Point, Pier 22 1/2, California

Bent 5: Generally, the piles of Bent 5 were in satisfactory condition, ELI CS 2, with no significant structural defects observed that could adversely affect the Bridge. The maximum water depth encountered in the vicinity of Bent 5 was approximately 1.5 meters (5 feet) at Pile 1 and the minimum depth was 0.3 meters (1 foot) at Pile 7. These depths are based on a waterline elevation of 3 feet above MLLW from the National Oceanic and Atmospheric Administration (NOAA) tidal station 9414317 in Rincon Point, Pier 22 1/2, California

Bent 6: Generally, the piles of Bent 6 were in satisfactory condition, ELI CS 2, with no significant structural defects observed that could adversely affect the bridge. The maximum water depth encountered in the vicinity of Bent 5 was approximately .3 meters (1 foot) at Pile 1 and the minimum depth was 0.1 meters (0.5 feet) at Pile 6, with Piles 7 and 8 dry at this time. These depth are based on a waterline elevation of 3 feet above



INSPECTION COMMENTARY

MLLW from the National Oceanic and Atmospheric Administration (NOAA) tidal station 9414317 in Rincon Point, Pier 22 1/2, California

Bent 7: Generally, the piles of Bent 6 were in satisfactory condition, ELI CS 2, with no significant structural defects observed that could adversely affect the bridge. All piles of Bent 7 were located on dry land at the time of their inspection, which was at low a low tide condition. The piles of Bent 7 do, however, become submerged during the periods of high tide.

The 5/10/2013 scour investigation for this bridge determined the structure to be stable for assessed or calculated scour conditions. The bridge foundations were determined to be stable for calculated scour, scour within the limits of the piles, and the NBI Item 113 coding, Scour Critical Bridges, was 5. The underwater investigation performed on this date did not find any conditions which contradict that determination.

## OTHER:

## WATERWAY

The channel bottom in the vicinity of the piers and bents was primarily composed of 0.3-meter -diameter (12-inch) and smaller rocks and coarse gravel, with random scattered timber and steel formwork at times, allowing minimal probe rod penetrations. Along the north side of Bent 3, however, silty sand was the primary composition of the channel bottom, which allowed probe rod penetrations of up to 76 millimeters (3 inches). The shorelines under the bridge were both armored with riprap measuring up to 0.9 meters (3 feet) in diameter and appear stable.

Prior to this inspection the NBI Item 61, Channel and Channel Protection, rating was 8. The conditions present on the date of this inspection were consistent with that coding.

## RECOMMENDATIONS

Overall, Piers 1 through 3 and Bents 4 through 7 were found to be in mostly satisfactory condition, with no defects of structural significance at this time or with any conditions that could adversely affect the bridge. At Pier 2, the overall prevalence and extent of the deterioration was greater, and the pier is only considered to be in poor condition although there is still no major adverse affect on structural integrity. Mostly minor section loss was noted on all of the pier concrete columns, and since no exposed reinforcing steel was typically observed, these defects do not require any corrective action. At Pier 2, however, reinforcing steel bars were exposed at some areas, exhibiting section loss due corrosion. It is recommended that all the areas with exposed reinforcing steel be addressed and repaired to inhibit those areas from progressing and getting worse. In light of the overall size of the pier columns (compared to that of the deterioration) if should not be necessary to fully restore the areas, but rather to just insure that the exposed reinforcing steel bars are covered (patched) and protected from further deterioration. The repair should include thoroughly cleaning each area, in order to remove all unsound concrete and corrosion on the reinforcing steel, and then completely patching each area with epoxy grout, fiber-reinforced concrete, or other suitable marine concrete patch material.

Underwater inspections of the bridge should continue at intervals not to exceed 48 months unless a significant high water/high flow event is experienced, after which, an interim underwater inspection should be conducted if any damage or other detrimental conditions are suspected.

UNDERWATER INVESTIGATION

Next Inspection : 14-NOV-2018

Water Type : 2 - Salt

Printed on: Tuesday 05/13/2014 09:00 AM

34C0025/AAAT/28081

Inspection Freq. :	60 months	Max. Water Velocity:	0 mps
Dive Type :	B - Routine UW	Max. Water Depth :	5 m
Dive Mode :	D - Surface supplied	Max. Visibility :	.3 m
Contractor :	Collins Engineers, Inc.	Water Surface Elev. #	m
Contract No. :	56A0197		
Supervisor :	Dan Stromberg	Diver :	Dan Stromberg
Tender :	Josue Ramirez-Diaz	Backup Diver :	Kurt Lingo

**SUBSTRUCTURE INVESTIGATED**

Location	Depth(m)	Vel (mps)	Channel	Substructure Description
Pier 1	2.4	0.0	Rock and Gravel	RC Pier Wall
Pier 2	4.6	0.0	Rock and Gravel	RC Pier Wall
Pier 3	3.7	0.0	Silty Sand	RC Pier Wall
Bent 4	2.4	0.0	Silty Sand	8 Steel Piles
Bent 5	1.5	0.0	Rock	11 Steel Piles
Bent 6	0.3	0.0	Rock	8 Steel Piles

**ELEMENT INSPECTION RATINGS**

Elem No.	Element Description	Env	Total Qty Units	Qty in each Condition State				
				St. 1	St. 2	St. 3	St. 4	St. 5
28	Steel Deck - Open Grid	3	1080 sq.m.	0	1080	0	0	0
31	Timber Deck - Bare	3	123 sq.m.	0	123	0	0	0
39	Concrete Slab - Unprotected w/ AC Overlay	2	1110 sq.m.	1110	0	0	0	0
107	Painted Steel Open Girder/Beam	3	998 m.	0	998	0	0	0
121	Painted Steel Bottom Chord Thru Truss	3	88 m.	0	0	82	6	0
126	Painted Steel Thru Truss (excl. bottom chord)	3	88 m.	0	0	88	0	0
152	Painted Steel Floor Beam	3	123 m.	0	0	123	0	0
205	Reinforced Conc Column or Pile Extension	3	6 ea.	6	0	0	0	0
215	Reinforced Conc Abutment	3	58 m.	0	58	0	0	0
228	Timber Submerged Pile	3	1 ea.	1	0	0	0	0
234	Reinforced Conc Cap	3	350 m.	350	0	0	0	0
254	Steel Seismic Column Shell (Full Height)	3	36 ea.	36	0	0	0	0
256	Slope Protection	2	1 ea.	1	0	0	0	0
304	Open Expansion Joint	2	44 m.	44	0	0	0	0
310	Elastomeric Bearing	2	6 ea.	6	0	0	0	0
330	Metal Bridge Railing - coated or uncoated	3	152 m.	152	0	0	0	0
357	Pack Rust	2	1 ea.	0	0	0	1	0
363	Section Loss	2	1 ea.	0	1	0	0	0

**WORK RECOMMENDATIONS**

RecDate: 12/19/2012  
Action : Paint-Spot Prep  
Work By: LOCAL AGENCY  
Status : PROPOSED

EstCost:  
StrTarget: 2 YEARS  
DistTarget:  
EA:

Clean and paint all areas with failed paint on the superstructure. Up to 20% is estimated to be full paint removal. Then full paint of the bridge.

WORK RECOMMENDATIONS

RecDate: 12/19/2012	EstCost:	Chip out all unsound areas and clean and
Action : Super-Patch spalls	StrTarget: 2 YEARS	patch all spalled areas on the concrete
Work By: LOCAL AGENCY	DistTarget:	counter weights.
Status : PROPOSED	EA:	

RecDate: 10/18/2011	EstCost:	Replace deficient and missing stair
Action : Super-Misc.	StrTarget: 1 YEAR	support brackets at the left truss
Work By: LOCAL AGENCY	DistTarget:	between Joint 17 to Joint 18. Use
Status : PROPOSED	EA:	galvanized steel and paint all exposed
		surfaces.

RecDate: 10/18/2011	EstCost:	Use needle gun to remove pack rust
Action : Super-Misc.	StrTarget: 2 YEARS	between the plates at Joint 0 on the
Work By: LOCAL AGENCY	DistTarget:	right truss. Remove fragments of the 4
Status : PROPOSED	EA:	broken rivets, clean hole edges and
		replace broken rivets with equal diameter
		galvanized bolts washers and nuts. Paint
		exposed edges of bolts, washers and nuts.

Team Leader : Daniel Stromberg

Report Author : Daniel Stromberg

Inspected By : D.Stromberg/D.Stromberg

5.14.14

Richard M. Hunt (Registered Civil Engineer) (Date)



**STRUCTURE INVENTORY AND APPRAISAL REPORT**

\*\*\*\*\* IDENTIFICATION \*\*\*\*\*

(1) STATE NAME- CALIFORNIA 069  
 (8) STRUCTURE NUMBER 34C0025  
 (5) INVENTORY ROUTE (ON/UNDER) - ON 150000000  
 (2) HIGHWAY AGENCY DISTRICT 04  
 (3) COUNTY CODE 075 (4) PLACE CODE 67000  
 (6) FEATURE INTERSECTED- CHINA BASIN  
 (7) FACILITY CARRIED- THIRD ST  
 (9) LOCATION- S OF BERRY ST  
 (11) MILEPOINT/KILOMETERPOINT 0  
 (12) BASE HIGHWAY NETWORK- PART OF NET 1  
 (13) LRS INVENTORY ROUTE & SUBROUTE 000000000000  
 (16) LATITUDE 37 DEG 46 MIN 34.87 SEC  
 (17) LONGITUDE 122 DEG 23 MIN 24 SEC  
 (98) BORDER BRIDGE STATE CODE % SHARE %  
 (99) BORDER BRIDGE STRUCTURE NUMBER

\*\*\*\*\* STRUCTURE TYPE AND MATERIAL \*\*\*\*\*

(43) STRUCTURE TYPE MAIN:MATERIAL- STEEL  
 TYPE- MOVABLE - BASCULE CODE 316  
 (44) STRUCTURE TYPE APPR:MATERIAL- CONCRETE CONT  
 TYPE- SLAB CODE 201  
 (45) NUMBER OF SPANS IN MAIN UNIT 1  
 (46) NUMBER OF APPROACH SPANS 5  
 (107) DECK STRUCTURE TYPE- OPEN GRATING CODE 3  
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:  
 A) TYPE OF WEARING SURFACE- OTHER CODE 9  
 B) TYPE OF MEMBRANE- NONE CODE 0  
 C) TYPE OF DECK PROTECTION- NONE CODE 0

\*\*\*\*\* AGE AND SERVICE \*\*\*\*\*

(27) YEAR BUILT 1932  
 (106) YEAR RECONSTRUCTED 0000  
 (42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5  
 UNDER- WATERWAY 5  
 (28) LANES:ON STRUCTURE 04 UNDER STRUCTURE 00  
 (29) AVERAGE DAILY TRAFFIC 25000  
 (30) YEAR OF ADT 2012 (109) TRUCK ADT 30 %  
 (19) BYPASS, DETOUR LENGTH 2 KM

\*\*\*\*\* GEOMETRIC DATA \*\*\*\*\*

(48) LENGTH OF MAXIMUM SPAN 43.6 M  
 (49) STRUCTURE LENGTH 89.9 M  
 (50) CURB OR SIDEWALK: LEFT 1.3 M RIGHT 1.6 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 21.8 M  
 (52) DECK WIDTH OUT TO OUT 24.7 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 19.8 M  
 (33) BRIDGE MEDIAN- CLOSED NON-MOUNTABLE 3  
 (34) SKEW 0 DEG (35) STRUCTURE FLARED NO  
 (10) INVENTORY ROUTE MIN VERT CLEAR 5.69 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 15.1 M  
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 5.69 M  
 (54) MIN VERT UNDERCLEAR REF- NOT H/RR 0.00 M  
 (55) MIN LAT UNDERCLEAR RT REF- NOT H/RR 0.0 M  
 (56) MIN LAT UNDERCLEAR LT 0.0 M

\*\*\*\*\* NAVIGATION DATA \*\*\*\*\*

(38) NAVIGATION CONTROL- BR PERMIT REQ CODE 1  
 (111) PIER PROTECTION- FUNCTIONING CODE 2  
 (39) NAVIGATION VERTICAL CLEARANCE 0.1 M  
 (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M  
 (40) NAVIGATION HORIZONTAL CLEARANCE 31.4 M

\*\*\*\*\* SUFFICIENCY RATING \*\*\*\*\*

SUFFICIENCY RATING = 33.3  
 STATUS STRUCTURALLY DEFICIENT  
 HEALTH INDEX 76.5  
 PAINT CONDITION INDEX = 66.6

\*\*\*\*\* CLASSIFICATION \*\*\*\*\*

(112) NBIS BRIDGE LENGTH- YES Y  
 (104) HIGHWAY SYSTEM- NOT ON NHS 0  
 (26) FUNCTIONAL CLASS- OTHER PRIN ART URBAN 14  
 (100) DEFENSE HIGHWAY- NOT STRAHNET 0  
 (101) PARALLEL STRUCTURE- NONE EXISTS N  
 (102) DIRECTION OF TRAFFIC- 2 WAY 2  
 (103) TEMPORARY STRUCTURE-  
 (105) FED.LANDS HWY- NOT APPLICABLE 0  
 (110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0  
 (20) TOLL- ON FREE ROAD 3  
 (21) MAINTAIN- COUNTY HIGHWAY AGENCY 02  
 (22) OWNER- COUNTY HIGHWAY AGENCY 02  
 (37) HISTORICAL SIGNIFICANCE- ELIGIBLE 2

\*\*\*\*\* CONDITION \*\*\*\*\*

(58) DECK 6  
 (59) SUPERSTRUCTURE 3  
 (60) SUBSTRUCTURE 7  
 (61) CHANNEL & CHANNEL PROTECTION 8  
 (62) CULVERTS N

\*\*\*\*\* LOAD RATING AND POSTING \*\*\*\*\*

(31) DESIGN LOAD- UNKNOWN 0  
 (63) OPERATING RATING METHOD- LOAD FACTOR 1  
 (64) OPERATING RATING- 24.5  
 (65) INVENTORY RATING METHOD- LOAD FACTOR 1  
 (66) INVENTORY RATING- 16.3  
 (70) BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS 5  
 (41) STRUCTURE OPEN, POSTED OR CLOSED- A  
 DESCRIPTION- OPEN, NO RESTRICTION

\*\*\*\*\* APPRAISAL \*\*\*\*\*

(67) STRUCTURAL EVALUATION 3  
 (68) DECK GEOMETRY 9  
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N  
 (71) WATER ADEQUACY 8  
 (72) APPROACH ROADWAY ALIGNMENT 6  
 (36) TRAFFIC SAFETY FEATURES 0000  
 (113) SCOUR CRITICAL BRIDGES 5

\*\*\*\*\* PROPOSED IMPROVEMENTS \*\*\*\*\*

(75) TYPE OF WORK- REPLACE FOR DEFICIENC CODE 31  
 (76) LENGTH OF STRUCTURE IMPROVEMENT 89.9 M  
 (94) BRIDGE IMPROVEMENT COST \$5,094,500  
 (95) ROADWAY IMPROVEMENT COST \$1,018,900  
 (96) TOTAL PROJECT COST \$8,558,760  
 (97) YEAR OF IMPROVEMENT COST ESTIMATE 2010  
 (114) FUTURE ADT 36064  
 (115) YEAR OF FUTURE ADT 2034

\*\*\*\*\* INSPECTIONS \*\*\*\*\*

(90) INSPECTION DATE 12/12 (91) FREQUENCY 24 MO  
 (92) CRITICAL FEATURE INSPECTION: (93) CFI DATE  
 A) FRACTURE CRIT DETAIL- YES 24 MO A) 10/11  
 B) UNDERWATER INSP- YES 60 MO B) 11/13  
 C) OTHER SPECIAL INSP- NO MO C)