

REHABILITATION OF FRANCIS SCOTT KEY BRIDGE
FROM ROSSLYN, ARLINGTON, VIRGINIA TO GEORGETOWN WASHINGTON, DC
DC Contract No.: DCKA-2014-C-0074

FAP No.: BH-1104 (013)

CONSTRUCTION MANAGER'S
WEEKLY PROGRESS REPORT
From 06/25/2017 to 07/01/2017

Project Website: www.keybridgeproject.com



1. EXECUTIVE SUMMARY

Project Description:

The AECOM Construction Management and Inspection team is providing construction and inspection services for the Rehabilitation of the Francis Scott Key Bridge over the Potomac River (Bridge No. 0007). Francis Scott Key Bridge, built in 1929, is a historic 1,781-foot long reinforced concrete, open-spandrel arch bridge consisting of eight spans over the George Washington Parkway, Potomac River, Whitehurst Freeway, and C&O Canal. The bridge not only served as a major commuter route into Washington, DC, but it also was listed on the National Register of Historic Places, which required coordination with the National Park Service since it spanned the C&O Canal and George Washington Parkway. This rehabilitation project is to restore the deteriorated portions of the structure, improving its structural integrity for another 30 years while maintaining those architectural features which contribute to its historical significance. The repair plans include conventional concrete patching repairs as well as strengthening with carbon fiber reinforced polymer reinforcing bars and sheeting materials. The construction cost is estimated to be approximately \$14.5 million.

The scope of the construction work includes the following:

1. Installing pedestrian/bicycle detection loops and warning flashers on the bridge at the ramp to eastbound Whitehurst Freeway.
2. Cleaning and painting the existing steel pedestrian railing on the bridge.
3. Removing the concrete bollards from the east sidewalk at the east ramp exit.
4. Removing and installing new street light poles on the bridge.
5. Removing and resetting a portion of the precast concrete traffic barrier on the bridge.
6. Repairing the precast concrete traffic barriers and grout pads and the northwest concrete traffic barrier end post.
7. Strengthening the deck overhangs with carbon fiber reinforced polymer bars.
8. Repairing the concrete wearing surface on the bridge.
9. Repairing grout pockets at the post-tensioned deck hold down bolts.
10. Replacing the non-armored expansion joint seal (B-0007 and East Ramp).
11. Replacing the armored expansion joint seals (B-0007 and East Ramp).
12. Overlaying the right lanes (inbound and outbound directions) on the bridge with a high molecular weight methacrylate resin (HMWM) overlay; milling and overlaying the Rosslyn approach structure with a very high early strength latex-modified concrete (LMC-VE).
13. Cleaning debris from all bridge deck drainage scuppers and pier chambers and removing and replacing the bridge deck drainage downspout.
14. Rehabilitating the support for a 30-inch Washington Aqueduct water main on the bridge.
15. Repairing portions of the concrete encased and the reinforced concrete floor beams; cleaning and painting the exposed end of the steel floor beams.
16. Replacing failed concrete deck pedestals and replacing portions of the utility gallery floor slabs full depth.
17. Repairing portions of the concrete superstructure, including but not limited to the following: deck soffit, deck pedestals, spandrel arches, spandrel columns, main arches, diaphragm walls, deck slab, and arch struts.
18. Repairing portions of the concrete substructure, including the piers, abutments, abutment chambers, and wing walls and encapsulating the pier footings with fiber reinforced polymer jackets at the waterline.
19. Removing and replacing the fixed steel access ladder at the North abutment and installing a new fixed steel access ladder at the South abutment.
20. Removing and replacing a portion of chain link fencing (bridge access deterrent) on the main arches.
21. Cleaning the bridge fascia with pressurized water and applying an anti-graffiti treatment to portions of the piers.
22. Removing and applying new pavement markings (B-0007 and East Ramp).
23. Maintenance of pedestrian and vehicular traffic during construction of the project, including temporary lane and sidewalk closures necessary to perform the work.

3. STATUS OF CONSTRUCTION / PROGRESS SUMMARY

Progress Summary:

1. Installation still in progress for the suspended scaffold and protection shield system at span D.
2. CO #1 has been completed and awaits execution by the Contracting Officer. Review continues for the processing of PCO-02 and PCO-03.
3. Demolition work still in progress for the concrete repairs at North abutment and from North abutment to mid span C.
4. Sandblasting of existing reinforcing steel and installation of anchors and wire mesh for concrete repairs continue in sections on North abutment and span C.
5. Contractor continued working on removal and resetting of permanent precast concrete traffic barriers on the deck.
6. Contractor continued working on deck pedestal repair and replacement activities in span C.
7. Continued coordination with Pepco regarding their work schedule on Water St.
8. Contractor continued working on sandblasting and painting water main support beams.
9. Contractor started installing anchor rods for the water main support system.
10. Ongoing coordination with Greg King of Thompson's Boat Center.

11. CM Community Outreach Activities

The team communicated with the key stakeholders during the week to give them project status updates and identify any concerns that they might have about the project.

Stakeholder Contact:

- Visited Key Bridge Boathouse on 6/27 to review safety signage and answer staff questions regarding the project
- Prepared and updated traffic advisories for Key Bridge lane closures
- Corresponded with Potomac Boat Club members on 6/28 including Chad Jungbluth, Erik Meyers, and Chuck Selden regarding safety concerns around the bridge and safety signage at the club
- Corresponded with Jim Ross at Washington Canoe Club on 6/29 regarding safety concerns around the bridge and placing safety signage at the club

Notes:

- Researched options for safety signage on the bridge and barges
- PEPCO and DDOT coordination is important to mitigate any community and Capitol Crescent Trail user concerns about construction as PEPCO's contractor (Joy Construction) is working on the west end of Water St.
- Updated website by posting weekly reports and updating two-week look-ahead schedule

Key Takeaways:

- Communications team will continue to develop relationships with key businesses near the bridge that can help us distribute project information to their customers

4. ISSUES / ACTION ITEMS

- **Ongoing Issues / Items:**
- Pepco Cable on the East Ramp concrete bent columns has now been resolved, but the actual work is yet to be completed. Pepco is to bury the overhead cable underground. The work to relocate the overhead cable underground continues and is in progress on Water St.

- Technopref continues to be reminded of its obligations under the Contract. Official DDOT action still pending on Technopref's claimed "additional" costs submitted based on DDOT's January 24, 2017 letter. A draft response is currently under review to close this issue with the contractor.
- **Action Items:** NPS issued Limited Special Use permit and verbally provided access to the river. Contractor has since had access and continues working on barges on the river unimpeded. A hardcopy permit is still awaited, although this does not impact progress of the contractor's operations on site. No new actions on this item at this time.
- **New Issues / Items:** None

5. MEETINGS / PROJECT COORDINATION

- Conference call continues to be utilized to communicate with the contractor and engineer of record when a physical meeting is not possible.
- Coordination meetings continue with the DDOT team and bi-weekly project progress meetings continue to be held with DDOT and the contractor.
- Considerations and meetings currently underway for the additional DC Water MOU (with DDOT) work for the 30" water mainline repair; CM team participation is minimal. DC Water will directly oversee this work.

6. DAILY WORK PERFORMED

Sunday 06/25/17

1. Technopref was on-site and continued working on removal and resetting of permanent precast concrete traffic barriers. Installing protection shield at spans C and D.

Monday 06/26/17

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work around the staging area. Continued working on removal and resetting of permanent precast concrete traffic barriers. Continued installing protection shield and protective net.
2. Fibrwrap (Sub) was on-site and continued the demolition process and sandblasting rebars at span C for the concrete repairs. Replaced deteriorated rebars.

Tuesday 06/27/17

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work around the staging area. Continued working on removal and resetting of permanent precast concrete traffic barriers. Continued installing protection shield and protective net.
2. Fibrwrap (Sub) was on-site and continued the demolition process and sandblasting rebars at span C for the concrete repairs. Replaced deteriorated rebars.
3. Ionion (Sub) was on-site and continued working on shot-blasting the water main.

Wednesday 06/28/17

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work around the staging area. Continued installing protection shield and protective net. Started installing anchor rods for the water main support beams.
2. Fibrwrap (Sub) was on-site and continued the demolition process and sandblasting rebars at span C for the concrete repairs. Replaced deteriorated rebars and installed wire mesh.
3. Ionion (Sub) was on-site and continued working on shot-blasting the water main.

Thursday 06/29/17

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work around the staging area. Continued working on removal and resetting of permanent precast concrete traffic barriers. Continued installing protection shield and protective net.
2. Fibrwrap (Sub) was on-site and continued the demolition process and sandblasting rebars at span C for the concrete repairs. Replaced deteriorated rebars and installed wire mesh.
3. Ionion (Sub) was on-site and continued working on shot-blasting the water main.

Friday 06/30/17

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work around the staging area. Traffic barrier. Miscellaneous work supporting scaffold crew.
2. Fibrwrap (Sub) was on-site and continued the demolition process and sandblasting rebars at span C for the concrete repairs. Replaced deteriorated rebars and installed wire mesh.
3. Ionion (Sub) was on-site and continued working on shot-blasting the water main.

7. INSPECTION & MATERIAL TESTS PERFORMED

- The anchor profile was tested before the application of Amercoat primer paint for the water main.
- DFT was performed for the primer application of the water main beams.

8. RFI's / SUBMITTALS**- Requests For Information:**

Except as noted below, there are no current unresolved/uncompleted RFI's or Submittals:

- Submittals:

- Submittal No.134 – Supplement Submittal 74A – MOT Right Lane Closure
 - Forwarded to DDOT/QAQC
- Submittal No.142 – NJ 2 HMWMA healer-sealer
 - Forwarded to JMT
- Submittal No.146 – MOT Plans - GW Parkway MOT - Rosslyn Approach - Narrow Ramp
 - Forwarded to NPS
- Submittal No.147 – MasterKure CC 200 WB (concrete barriers)
 - Forwarded to DDOT/QAQC

- Submittal No.148 – Sikacrete 211 - Rosslyn Underpinning
 - Forwarded to JMT
- Submittal No.149 – Means and Methods - Rosslyn Approach Underpinning
 - Forwarded to JMT
- **RFI:**
 - RFI No.060 – Water main support beams cleaning
 - Forwarded to JMT
 - RFI No.061 – Dow Corning 902 RCS Joint Sealant - Sealant Bead Thickness
 - Forwarded to QAQC
 - RFI No.062 – Existing railing with electrical box
 - Forwarded to JMT
 - RFI No.063 – Existing railing with electrical box
 - Forwarded to JMT
 - RFI No.064 – Precast Concrete Barriers - New Type
 - Forwarded to JMT
 - RFI No.065 – Rebars #6
 - Forwarded to JMT
 - RFI No.066 – Steel beam for water main
 - Forwarded to JMT

9. CHANGE ORDERS / TASK ORDERS

- Change Order #1 only processed to date. Package completed on the field level and currently awaits final execution by the Contracting Office.
- Review in progress by DDOT for possible processing of a change order relating to 'eminent spalls' cost and also the additional DC Water work on the 30" water main repair.
- Change Order #2 in process.
- Change Order #3 (additional work for DC Water) in process.

10. DBE or CBE PARTICIPATION SUMMARIES

- AECOM DBE Activity:
 - CSMI
 - Project Public Outreach.
 - CKI
 - Aid to Construction Management and Inspection Services
- Technopref
 - Handon Diving Services, Inc.

11. ACCIDENTS / INCIDENTS

There were no reported personnel or safety accidents within the limits of the project during this reporting period.

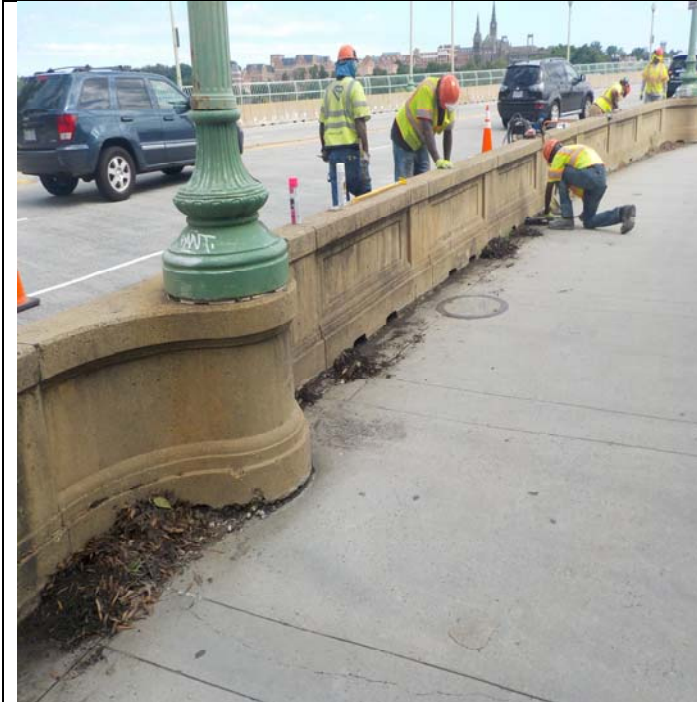
12. PHOTOS OF WORK PERFORMED THIS PERIOD



Remove and reset permanent precast concrete traffic barrier



Remove and reset permanent precast concrete traffic barrier



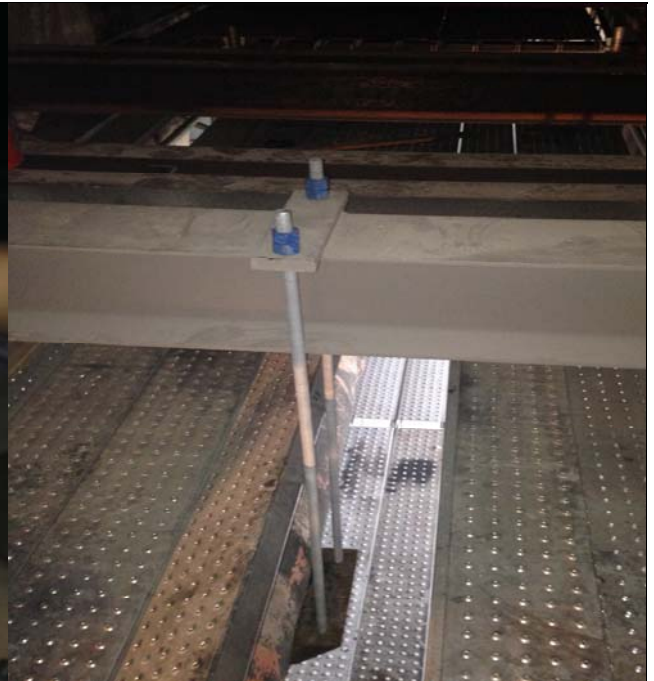
Remove and reset permanent precast concrete traffic barrier



Remove and reset permanent precast concrete traffic barrier



Installing anchor rods for the water main support beam



Installing anchor rods for the water main support beam



Painting operation for the water main beams



Painting operation for the water main beams



Chipping and saw-cutting for concrete repairs



Chipping and saw-cutting for concrete repairs



Chipping and saw-cutting for concrete repairs



Sounding and marking locations for concrete repair