

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 07/02/2017 to 07/08/2017

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 barrier 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 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 continues 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:

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:

- Prepared and updated traffic advisories for Key Bridge Lane closures

Notes:

- PEPCO and DDOT coordination is important as PEPCO's contractor Joy Construction is working on the west end of Water St in order to mitigate any community and Capitol Crescent Trail user concerns about construction.
- Updated website including posting weekly reports and updated 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 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 to continue working on barges on the river unimpeded. Hardcopy permit

still awaited although does not impact progress of contractor's operations on site. No new actions on this item at this time.

- **New Issues / Items:** None

5. MEETINGS / PROJECT COORDINATION

- Conference call continued 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.

6. DAILY WORK PERFORMED

Monday 07/03/17

1. No work observing Independence day holiday

Tuesday 07/04/17

1. No work observing Independence day holiday

Wednesday 07/05/17

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work around staging area. Continued installing protection shield and protective net. Continued 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. Handon (Sub) was on-site and continued working on deck pedestals between pier 4 and mid span C

Thursday 07/06/17

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work around staging area. Continued installing protection shield and protective net. Continued installing anchor rods for the water main support beams. Started installing support beam for scaffold system.
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. Handon (Sub) was on-site and continued working on deck pedestals between pier 4 and mid span C
4. Ward (Sub) was on-site and continued the shotcrete operation for the concrete repair type 1 and type 2

Friday 07/07/17

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work around staging area. Continued installing protection shield and protective net. Continued installing anchor rods for the water main support beams. Started installing support beam for scaffold system.
2. Fibwrap (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. Handon (Sub) was on-site and continued working on deck pedestals between pier 4 and mid span C
4. Ward (Sub) was on-site and continued the shotcrete operation for the concrete repair type 1 and type 2

7. INSPECTION & MATERIAL TESTS PERFORMED

- Performed air and slump test for concrete shotcrete

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.146A – MOT Plans -GW Parkway MOT - Rosslyn Approach - Narrow Ramp
 - Forwarded to NPS
- Submittal No.148 – Sikacrete 211 - Rosslyn Underpinning
 - Forwarded to JMT
- Submittal No.149 – Means and Methods - Rosslyn Approach Underpinning
 - Forwarded to JMT
- Submittal No.150 – 13MM 22MM Rebar
 - Forwarded to QAQC
- Submittal No.151 – Sikacrete 211 - Gallery floor replacement
 - Forwarded to QAQC
- Submittal No.152 – Individual High Chair - HC
 - Forwarded to QAQC
- Submittal No.159 – Primavera Update Schedule (May 2017)
 - Forwarded to OCL
- Submittal No.161 – MOT Key Bridge [Right Lane Closure + Detour of Pedestrians + East ramp closure]
 - Forwarded to MOT

- Submittal No.163 – Temporary Concrete Barrier
 - Forwarded to JMT
- Submittal No.164 – WWF (insteel)
 - 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 'eminent spalls' cost and also the additional DC Water work on the 30" Water main repair.
- Change Order # 2 in process.
- Change Order # 3 (addition work for DC Water) in process.

10. DBE or CBE PARTICIPATION SUMMARIES

- AECOM DBE Activity:
 - CSMI
 - Project Public out Reach.
 - 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



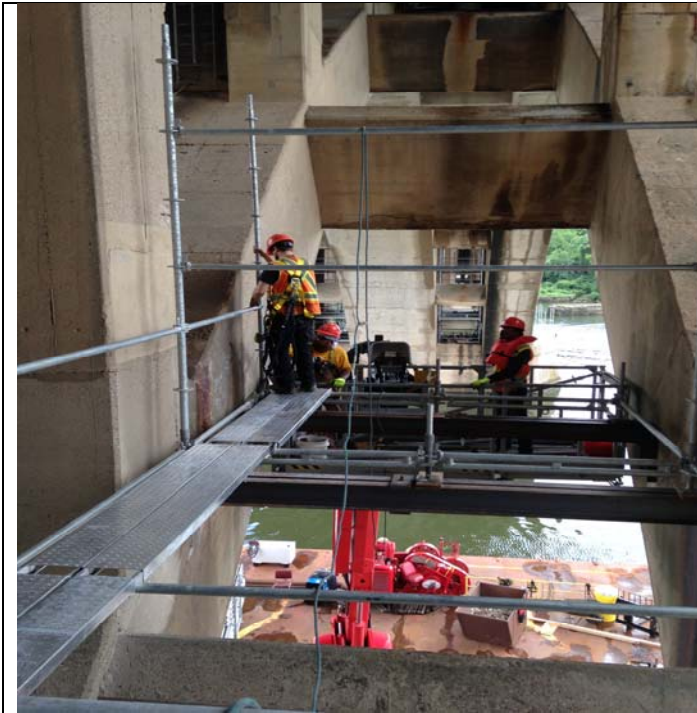
Installing scaffold system



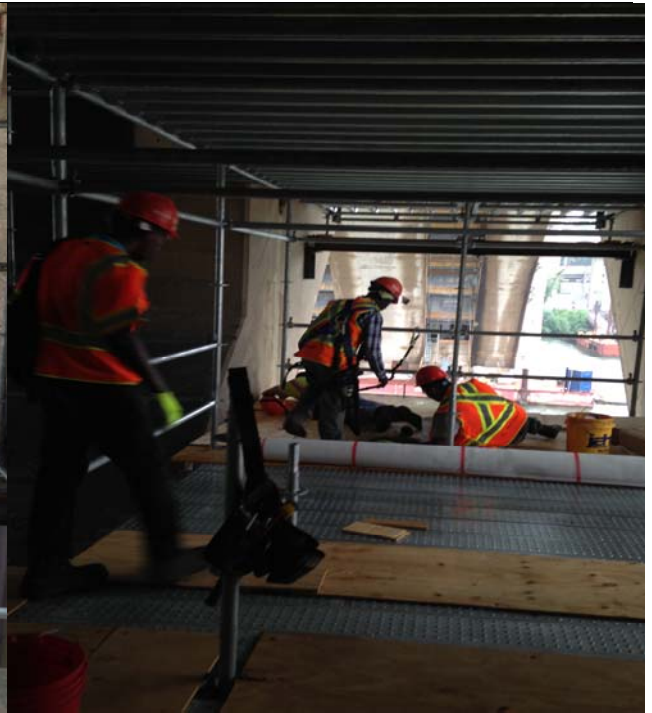
Remove and reset permanent precast concrete traffic barrier



Casting panels for shot crete compressive strenght test



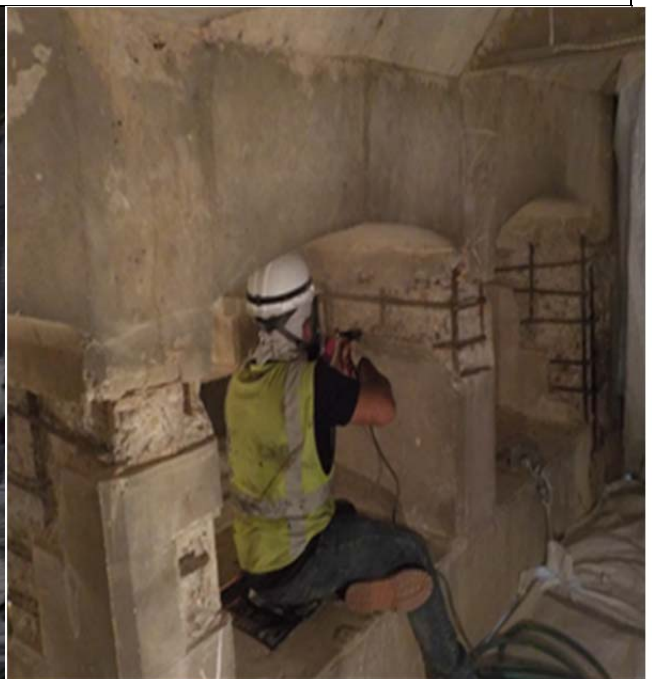
Installing support beams for scaffold system



Installing protection shield



Repair deck pedestal operation



Repair deck pedestal operation



Installing rebars and wire mesh for concrete repair



Chipping and saw cutting for concrete repairs



Chipping and sawcutting for concrete repairs



Sounding and marking locations for concrete repair