

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 02/26/2017 to 03/04/2017

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). This 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 Place, 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 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: 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 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.

2. STATUS OF CONSTRUCTION / PROGRESS SUMMARY

Progress Summary:

1. Continued efforts to setup coordination meetings with Pepco relating to ongoing utility issues with their existing facilities.
2. Continued to maintain and manage the Project SharePoint.
3. Contractor continued installation of suspended scaffold system from pier 4 to North abutment.
4. Completed PCO-01 package. Package has been reviewed by DDOT, signed by Technopref and uploaded to DDOT package tracker.
5. Continued to update the project website.
6. Contractor continued the demolition work for the concrete repairs at pier 4 and has not performed any work North abutment for weeks now.
7. Contractor continued removing delaminated cracked concrete and the CM team continues to monitor and work with the contractor in accordance with the CO letter to the contractor on this issue.
8. Continue to follow up on the concrete color matching efforts with the contractor.
9. Contractor prepared/casted test panels for dry mix shotcrete samples.
10. Contractor cored test panels for specimen samples for concrete compressive testing.

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:

- Sean spoke with Greg King, Thompson's Boat Center on 2/27 to discuss plans for the 3/1 meeting
- Sean spoke with Tim Staples, Marine Solutions on 2/27 to follow up on his conversations with Ali regarding crew season and its impact on the bridge. Additionally, we discussed plans for the 3/1 meeting
- Sean hosted a meeting on 3/1 regarding spring rowing season on the Potomac. Meeting attendees included Greg King, Thompson's Boat Center; Tim Staples, Marine Solutions; Kevin Burns, DDOT; Sean Moore, CSMI; Joseph Chukwueke, AECOM; Bemen Amin, CKI; Ali Soltani, Technopref; Mathieu Delanoe, Technopref
- The team discussed the Potomac River access requirements specifically around regattas and other special events on the river. It was noted that the race teams travel upstream and through Span D to access the racecourse. The racecourse proceeds downstream through Span F. This is the traditional course for races as it leaves Span E open to boat traffic and avoids the Aqueduct Bridge pier under Span
- G. Racecourses are either 1500 or 2000 meters. The majority of races do not require installation of equipment that may hinder navigation with the George Washington Invitational being the exception. Regattas and races are expected to run every weekend beginning from March 25 – May 13. It was noted that Span F should remain open to racing traffic every weekend during the racing season. Coordination to continue between the contraction team and the boating/racing representatives.

Notes:

- Project collateral submitted to DDOT on 2/24 is awaiting review by DDOT. Items including e-blast text and FAQs document, provided content and project track card
- Reminded Technopref that any inquiries from the public need to be directed through Sean
- PEPCO work on Water Street has moved east toward 32nd Street.

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

3. ISSUES / ACTION ITEMS

- **Ongoing Issues / Items:**
- Pepco Cable on the East Ramp Concrete Bent Columns still unresolved although Pepco confirmed the ownership of overhead wires overhanging East Ramp piers as being theirs for some weeks now. DDOT continues to work with Pepco to determine the appropriate solutions to safely accommodate proposed work at the bent columns. On-site meeting on Monday February 06, 2017 and Pepco indicated that cables cannot be relocated until the new underground cables are in place.
- Technopref of its obligations under the Contract and asked to summarize and submit its "additional" costs, in an amount not to exceed \$35,000 as stipulated in the January 24, 2017 letter.
- **Action Items:** NPS issued Limited Special Use permit, and verbally provided access to the river. Contractor has since had access and been working on barges on the river unimpeded. Hardcopy permit still awaited although does not impact progress of contractor's operations on site.
- **New Issues / Items:** None, except as noted elsewhere in this report.

4. MEETINGS / PROJECT COORDINATION

- Conference call continued to be utilized to communicate with the contractor when a physical meeting is not possible.
- Weekly coordination meeting continues with DDOT team, project progress meeting with DDOT and the contractor.

5. DAILY WORK PERFORMED**Monday 02/27/17**

1. Technopref was on-site and continued cleaning at the staging area. Continued sounding at East, West and Center arch of span D. Continued working on air and water lines (for construction purposes). Continued installing beams for pedestal temporary support.
2. Handon services continued erecting scaffolding system from pier 4 to North abutment.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at pier 4.

Tuesday 02/28/17

1. Technopref was on-site and continued cleaning at the staging area. Continued and concluded sounding at span C. Started sounding at span E Continued working on air and water lines (for construction purposes).
2. Handon services continued erecting scaffolding system from pier 4 to North abutment.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at pier 4.

Wednesday 03/01/17

1. Technopref was on-site and continued cleaning at the staging area. Continued and concluded sounding at span C. Started sounding at span E Continued working on air and water lines (for construction purposes).
2. Handon services continued erecting scaffolding system from pier 4 to North abutment.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at pier 4.

Thursday 03/02/17

1. Technopref was on-site and continued cleaning at the staging area. Performed miscellaneous work around the staging area and on the barges
2. Handon services continued erecting scaffolding system from pier 4 to North abutment.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at pier 4.

Friday 02/24/17

1. Technopref was on-site and continued cleaning at the staging area. Performed miscellaneous work around the staging area and on the barges
2. Handon services continued erecting scaffolding system from pier 4 to North abutment.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at pier 4.

6. INSPECTION & MATERIAL TESTS PERFORMED

- Pay items worked this week are:
 - 000 003 Employee Training. We were on site to observe Employee Training.

7. RFI's / SUBMITTALS

- **Requests For Information:**
 - o RFI No. 034 – Area of Concern - East Ramp Bent 16A - Top of Wall deterioration
 - Forwarded to JMT
 - o RFI No. 039 – Exterior chamber wall
 - Forwarded to JMT
 - o RFI No. 040 – Deterioration Between Faces
 - Forwarded to JMT
 - o RFI No. 041 – Pier 2 Encapsulation
 - Forwarded to JMT

- **Submittals:**
 - o Submittal No. 070A – MOT - George Washington Parkway
 - Forwarded to NPS
 - o Submittal No. 087 / 087 Supplement – Alternative design for scaffolding
 - Forwarded to JMT
 - o Submittal No. 088 – Temporary fence for existing railing
 - Forwarded to JMT
 - o Submittal No. 089 – Alternative design for scaffolding at mid-span
 - Forwarded to JMT
 - o Submittal No. 090 – Water main support - Threaded rods
 - Forwarded to Washington Aqueduct and DC Water

8. CHANGE ORDERS/TASK ORDERS

- Negotiations were completed as of November 02, 2016 with contractor for CO #1 items. Completed PCO-01 package. Package has been reviewed by DDOT and sent to Technopref for signature. Technopref objects to the standard language and requested language adjustment. DDOT responded and rejected the request for language change/revision from the standard. Contractor however, proceeded and submitted a signed document and included a hand-written non-standard language contrary to DDOT's directive which DDOT again rejected and asked the contractor to remove and submit. DDOT informed the contractor that it was willing to proceed with a unilateral change should they refuse to comply. Contractor signed PCO and it been uploaded to DDOT package tracker.

9. DBE or CBE PARTICIPATION SUMMARIES

- AECOM DBE Activity:
 - o CSMI
 - Project Public out Reach.
 - o CKI
 - Aid to Construction Management and Inspection Services
- Technopref
 - o Intellect Corporation
 - o Handon Diving Services Inc.

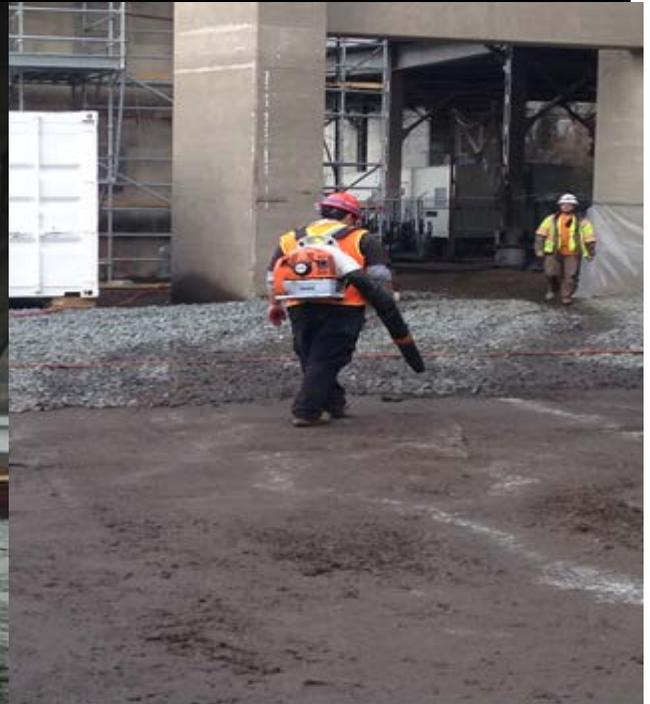
10. ACCIDENTS / INCIDENTS

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

11. PHOTOS OF WORK PERFORMED THIS PERIOD



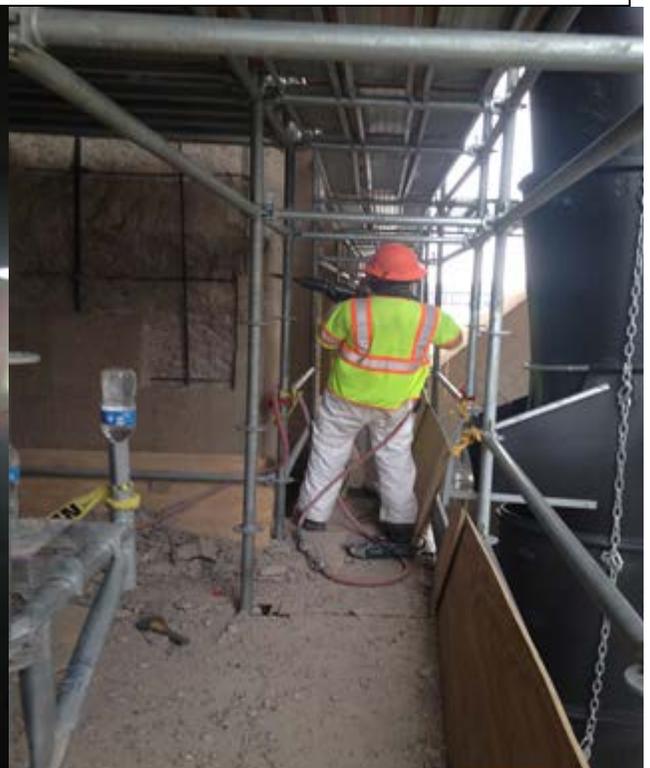
Navigating scaffold and equipment to pier 4



Cleaning at staging area



Water and air pipe instalation



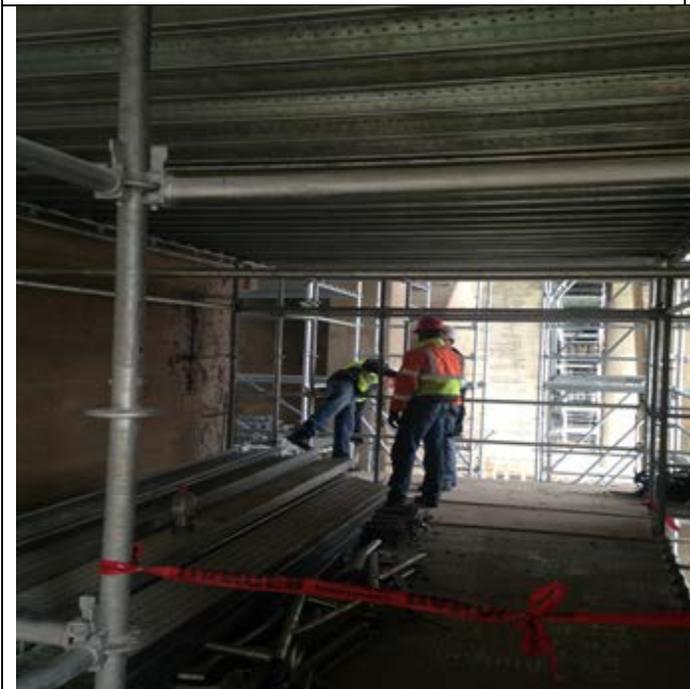
Concrete demolishing and saw-cutting at pier 4



Concrete demolishing and saw-cutting at pier 4



Concrete demolishing and saw-cutting at pier 4



Installation of suspended scaffolding



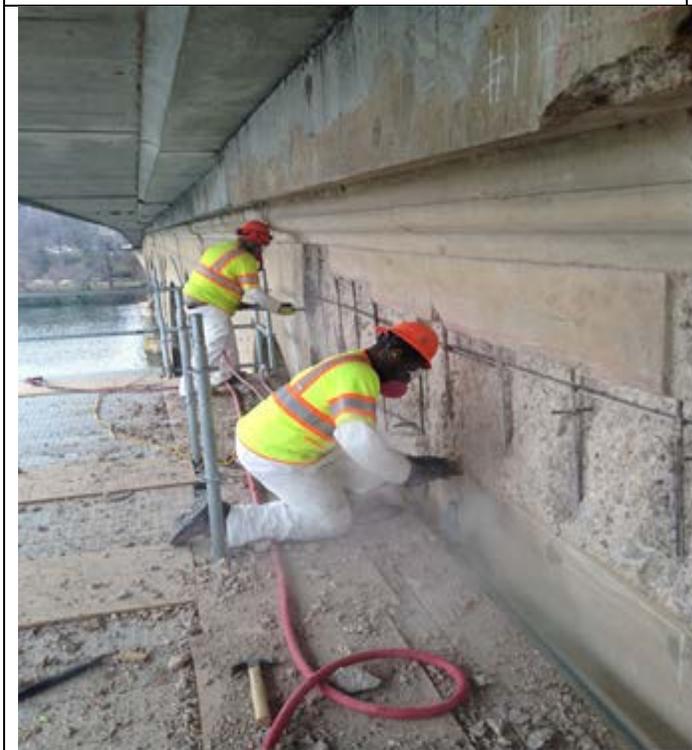
Installation of suspended scaffolding



Coring and marking concrete samples from shotcrete panels



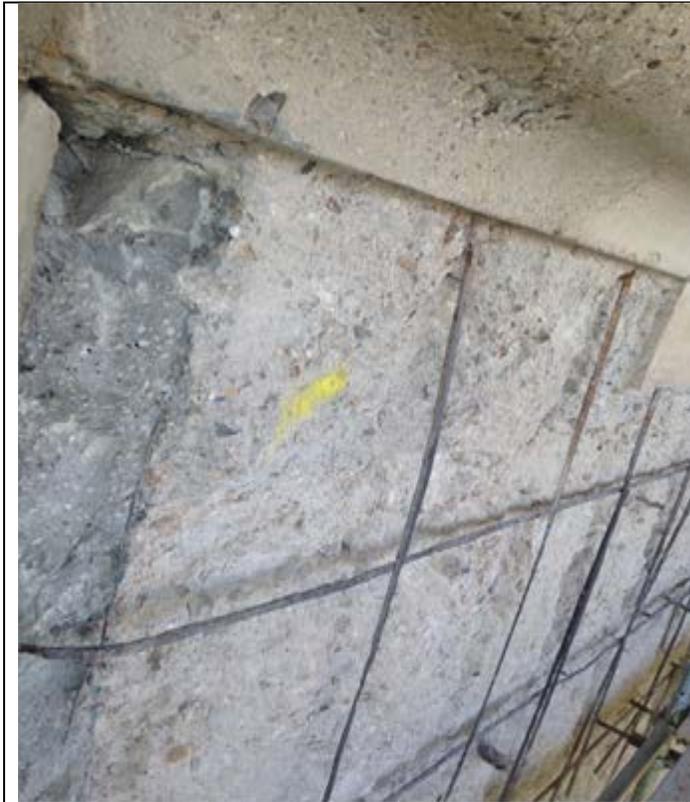
Coring concrete samples from shotcrete panels



Concrete demolishing and saw-cutting at pier 4



Sounding and marking at pier 4



Concrete demolishing and saw-cutting at pier 4



Miscellaneous work around the staging area



Temporary pedestal support beams



Temporary pedestal support beams