

**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)**

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**CONSTRUCTION MANAGER'S**  
**WEEKLY PROGRESS REPORT**  
**From 02/05/2017 to 02/11/2017**

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**Project Website:** [www.keybridgeproject.com](http://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 erection of the scaffolding system at pier 4 for the non-suspended (ground bearing) portion. Continued installation of suspended scaffold system from North abutment to pier 4. Also started the installation of access to side walk at pier 4 and North abutment.
4. Completed PCO-01 package. Package has been reviewed by DDOT and sent to Technopref for signature. Technopref requested language adjustment. DDOT rejects the request. Waiting for Technopref signature after receiving language adjustment response from DDOT.
5. Continued to update the project website.
6. Contractor continued the demolition process for the concrete repairs at North abutment.
7. Contractor continued removing imminent concrete spalls 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. In the process of starting scaffolding installation at Pier 3. Barge positioned in place ready for that operation.
9. Joy (Pepco's subcontractor's) work appear to be rapping up and nearing final stages. May require overlaying of the existing roadway.

### 10. 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. Interaction currently proceeding at a good pace with any issues.

#### Stakeholder Contact:

- Sean followed up with Greg King at Thompson Boat Center on 2/10 on planning for the meeting with key boating constituencies planned for March.

#### Notes:

- Undeland Associates(UA) finalized e-blast text and FAQs document, provided content and design review on project rack card
- Outreach team finalized rack card and FAQs document. Continued work on e-blast, content development and project collateral design review

#### Key Takeaways:

- PEPCO and DDOT coordination is still important as problems created by PEPCO's work may have negative repercussions for DDOT as opposed to PEPCO even though they may be at fault. Some stakeholders now appear to be having an understanding of who is doing the trenching work on site.
- 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.

- Concerns raised by contractor regarding safety of personnel and public from concrete falling freely from overhead at pier 4 and elsewhere during an impromptu meeting at the field office. At the advice of DDOT following that meeting, Technopref submitted a letter in follow up to their safety concerns, titled, "Serious Safety Issue and Differing Site Conditions". This letter was acknowledged by DDOT and has since been responded to by DDOT addressing any concerns raised that requires attention. It is noted that the CM team had prior to the letter visited the Pier 4 location at the request of the contractor for an assessment of the alleged safety condition. No new conditions other than what was documented in the contract documents was observed by the team during the group visit; imminent concrete spalls has been identified and removed over C&O canal and over GW pkwy, However contractor continued to perform his own investigation and removal. DDOT sent Technopref a letter and reminded 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. The CM team continues to monitor and work with the contractor consistent with the CO letter to the contractor.
- **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.
- On- site meeting with Pepco

#### 5. DAILY WORK PERFORMED

##### Monday 02/06/17

1. Technopref was on-site and continued cleaning at the staging area. Sounding and scaling concrete at span D. fixing electrical wire (for construction use) in the East gallery
2. Handon services continued erecting scaffolding system from North abutment to pier 4. Started the installation of access to side walk at pier 4 and North abutment.
3. Fibwrap was on-site and continued the demolition process for the concrete repairs at North abutment. Started knocking down the loose concrete and spall with hammer on the East structure level 1, 2, 3, 4 of pier 4.
4. Mistras Group was on-site and continued sounding and scaling loose concrete using hammer and crowbar on span E row B, C, and D

##### Tuesday 02/07/17

1. Technopref was on-site and continued cleaning at the staging area. Sounding and scaling concrete with hammer using man lift at pier 3. Continued fixing electrical wire (for construction use) in the East gallery

2. Handon services continued erecting scaffolding system from North abutment to pier 4. Continued the installation of access to side walk at pier 4 and North abutment.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment. Started demolition process for the concrete repairs at pier 4.
4. Mistras Group was on-site and started sounding and scaling loose concrete using hammer and at span E

**Wednesday 02/08/17**

1. Technopref was on-site and continued cleaning at the staging area. Sounding and scaling concrete with hammer using man lift at span F and E.
2. Handon services continued erecting scaffolding system from North abutment to pier 4. Continued the installation of access to side walk at pier 4 and North abutment.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment. Continued demolition process for the concrete repairs at pier 4.
4. Mistras Group was on-site and started sounding and scaling loose concrete using hammer and at span F

**Thursday 02/09/17**

1. Technopref was on-site and continued cleaning at the staging area. Inspecting loose concrete with at span A.
2. Handon services canceled work due to weather condition.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment. Continued demolition process for the concrete repairs at pier 4.
4. Mistras Group was on-site and started sounding and scaling loose concrete using hammer and at span F

**Friday 02/03/17**

1. Technopref was on-site and continued cleaning at the staging area. Sounding and scaling concrete at span B and pier 5.
2. Handon services continued erecting suspended scaffold system from North abutment to pier 4.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment.
4. Mistras Group was on-site and started sounding and scaling loose concrete using hammer and at span D.
- 5.

## 6. INSPECTION & MATERIAL TESTS PERFORMED

- Pay items worked this week are:
  - 000 003 Employee Training. We were on site to observe Employee Training.
- Contractor has been working on full schedule.

## 7. RFI's / SUBMITTALS

- **Requests For Information:**
  - o RFI No. 032 – Compressive Strength of Shotcrete
    - Forwarded to DDOT/QAQC
  - o RFI No. 034 – Area of Concern - East Ramp Bent 16A - Top of Wall deterioration
    - Forwarded to JMT
  - o RFI No. 035 – Area of Concern - North Abutment East Face - Column Corner Deterioration
    - Forwarded to JMT
  
- **Submittals:**
  - o Submittal No. 069 – Primavera Schedule Update (December 2016)
    - Forwarded to OC&L
  - o Submittal No. 070 – MOT - George Washington Parkway
    - Forwarded to DDOT/MOT
  - o Submittal No. 073 – Key Bridge MOT - Replacement of joints (2 lanes at the same time)
    - Forwarded to DDOT/MOT
  - o Submittal No. 074 – Key Bridge MOT - Right lane closure for concrete barrier, HMWM, and replacement of light poles
    - Forwarded to DDOT/MOT
  - o Submittal No. 075 – Key Bridge MOT - Right lane closure for the replacement of the existing railing
    - Forwarded to DDOT/MOT
  - o Submittal No. 076 – Paint system for the support beams of the water main
    - Forwarded to DDOT/QAQC
  - o Submittal No. 078 – Key Bridge Security Fence
    - Forwarded to DDOT/QAQC
  - o Submittal No. 080 – Protection Shield - Debris Netting
    - Forwarded to DDOT/QAQC
  - o Submittal No. 082 – #4 Mid Span Scaffolding
    - Forwarded to JMT
  - o Submittal No. 083 – Blastech Safety Plan
    - Forwarded to AECOM
  - o Submittal No. 084 – Blastech Quality Control and Work Plan
    - Forwarded to JMT
  - o Submittal No. 086 – Ionion Safety Plan
    - Forwarded to AECOM

## 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. Ball still in contractor's court; awaiting the signed document from Technopref.

## 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
    - Scaffolding erection
  - o Handon Diving Services Inc.
    - Capsulation of the piers

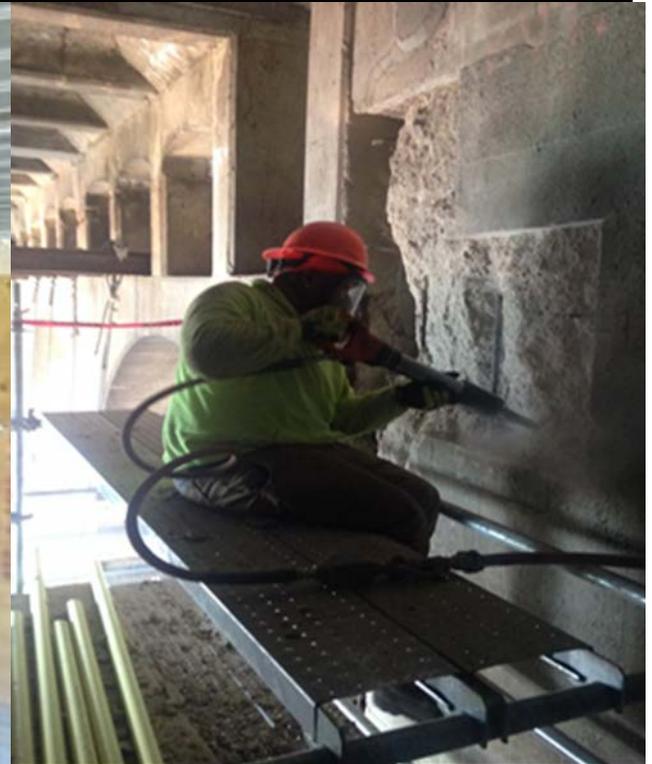
## 10. ACCIDENTS / INCIDENTS

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



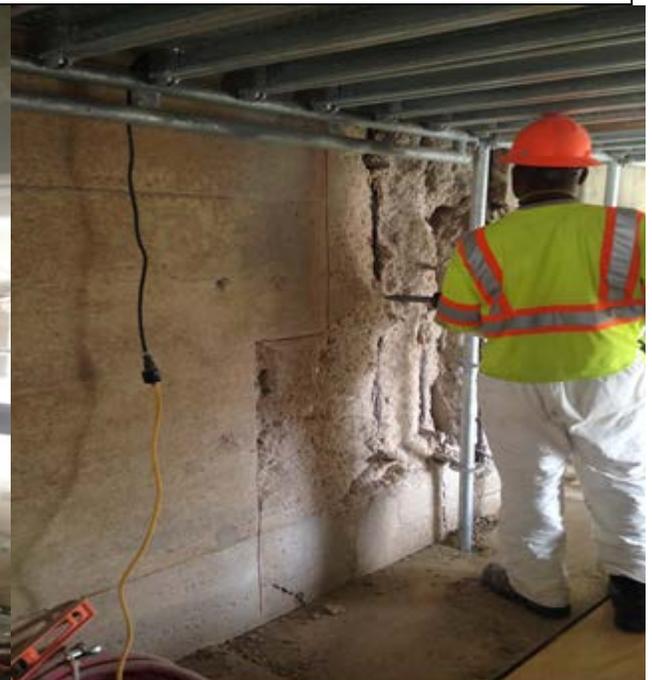
Inspection and sounding at North abutment



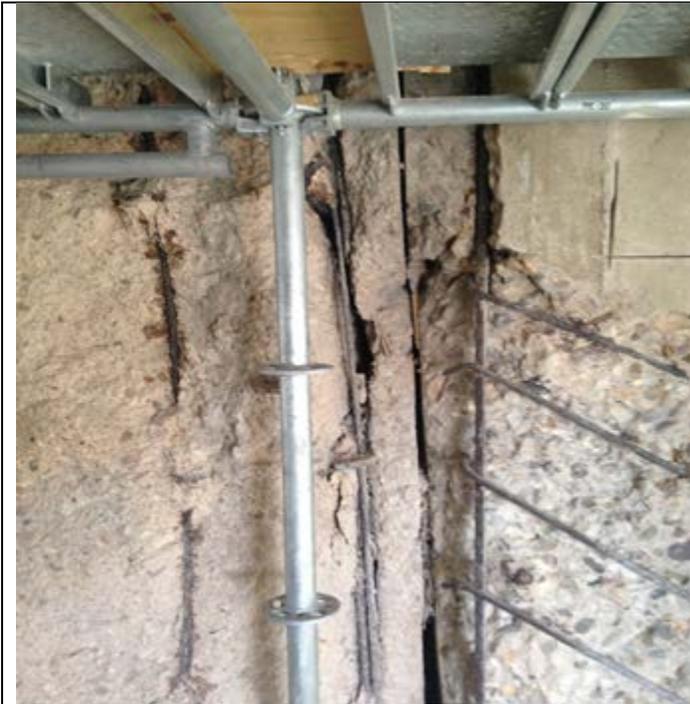
Concrete demolishing at North abutment.



Concrete demolishing and saw-cutting at North abutment



Concrete demolishing and saw-cutting at pier 4



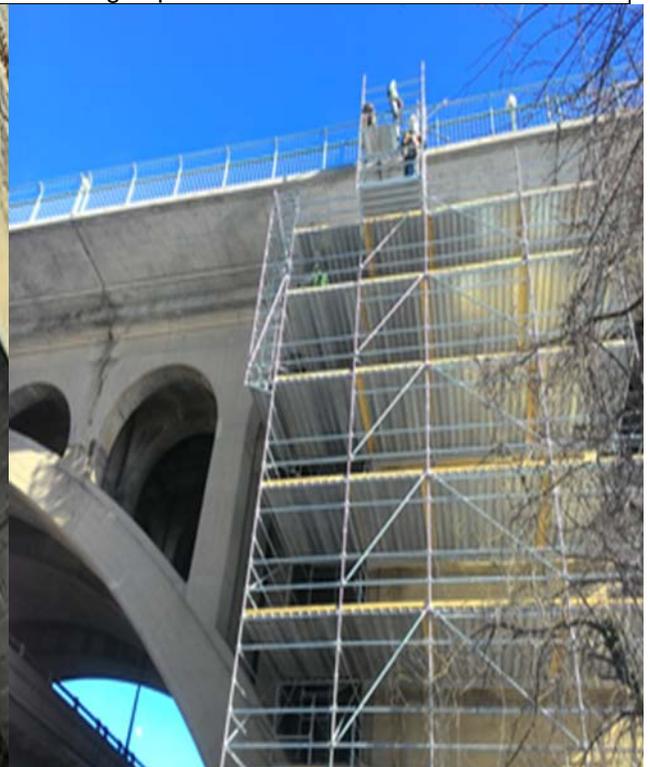
Concrete demolishing and saw-cutting at pier 4



Sounding at pier 4



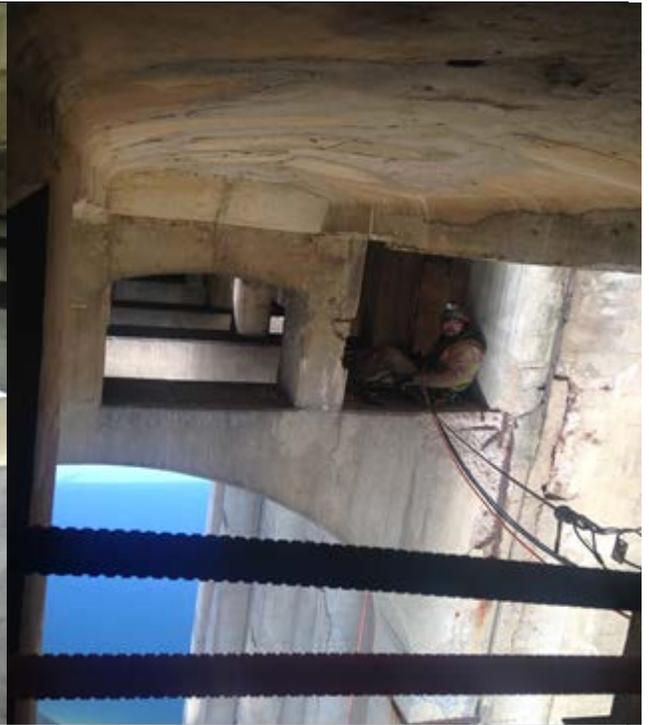
Erecting suspended scaffold system from North abutment to pier 4.



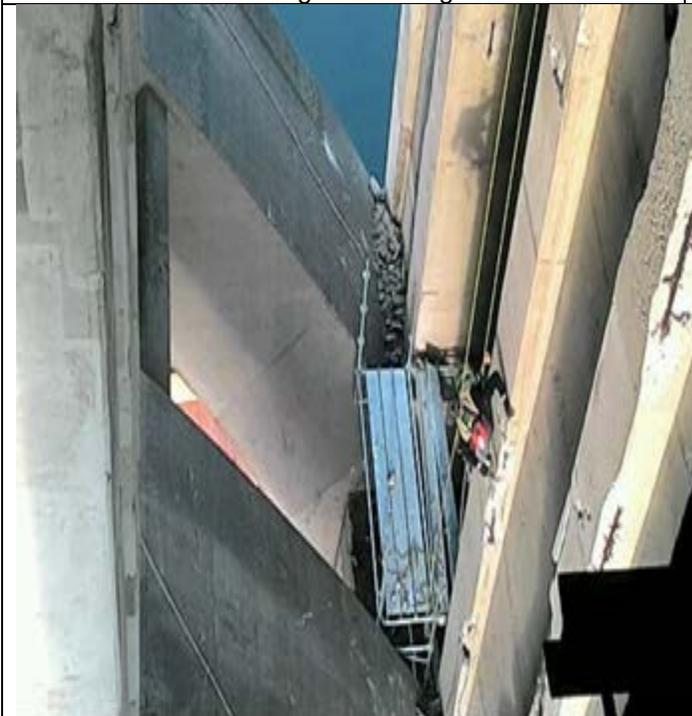
installation of access to side walk at pier 4 and North abutment.



Loose concrete sounding and scaling



Loose concrete sounding and scaling



Loose concrete sounding and scaling



Concrete demolishing at pier 4