

**REHABILITATION OF FRANCIS SCOTT KEY BRIDGE**

**FROM ROSSLYN, ARLINGTON, VIRGINIA TO GEORGETOWN, WASHINGTON, DC.**

**DC Contract No.: DCKA-2014-C-0074**

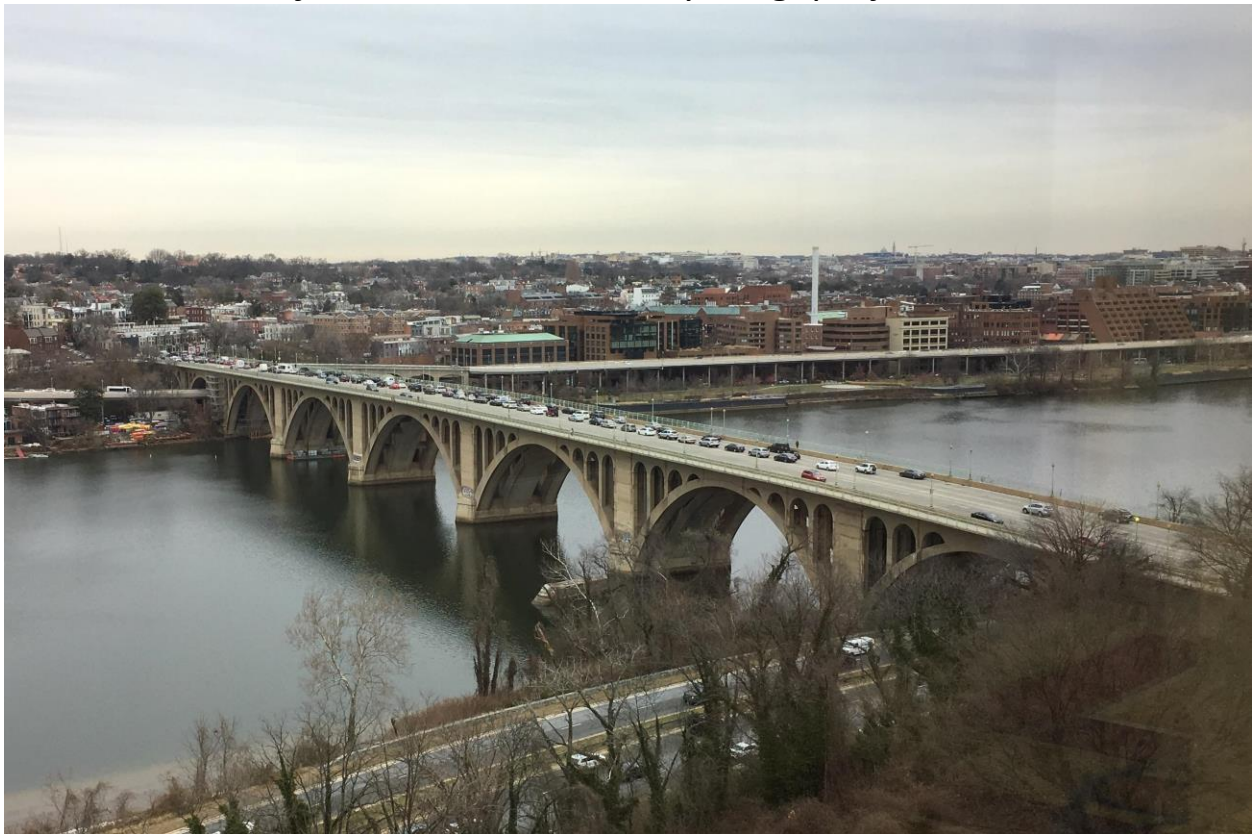
**FAP No.: BH-1104 (013)**

**CONSTRUCTION MANAGER'S**

**WEEKLY PROGRESS REPORT**

**From 09/30/2018 to 10/06/2018**

**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). 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 encasement 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.

## 2. STATUS OF CONSTRUCTION / PROGRESS SUMMARY

### Progress Summary:

1. Demolition work is still in progress for the concrete repairs at Pier 1, and Span G.
2. Contractor continued sandblasting for rebar cleaning, and surface preparation at Pier 1 and Span G.
3. Contractor placed concrete at East Ramp and Bent 16A, a part of PCO #4.
4. Contractor continued working on deck pedestals, floor beams, and deck soffit in Span G and Span F.
5. Contractor continued overnight deck work for Armored, Non-Armored joints repair and concrete barriers.
6. CM inspection team checked Navigation lights and confirmed that it was on.
7. Contractor corrected the ladder installation at North abutment
8. Contractor performed paint touch up for the pedestrian railing
9. Contractor continued inst and adjusting scaffold at Pier 5 and Span A.
10. Contractor performed samples for Anti-Graffiti application at North Abutment for review and color approval
11. Contractor continued mobilization and preparation for the Pier encapsulation at Pier 4. Also we conducted pre-activity meeting for the pier encapsulation work.

### 12. CM Community Outreach Activities

- 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:

- Technopref continues to be reminded of its obligations under the Contract. . DDOT issued unilateral Change Order No. 05 to Technopref.
- Technopref was notified on August 2, 2018 that the navigation light on the bridge were out. Electrical crew were on site same day and navigation light were back working on the same day August 2, 2018. Inspection team continued to monitor the Bridge Navigation lights on a daily basis.
- CM contacted FAA regarding the FAA conduits and lights on the bridge. It was observed that the FAA lighting system is dead and does not work. CM Team / DDOT are awaiting FAA response or a visit to determine the appropriate decision regarding Bridge FAA lights
- Technopref has been notified with the issue of transporting scaffolding materials with the SKYTRAK at the C and O Canal which while in process resulted in damaging C & O Canal South side trail leaving tire tracks that will need repair. NPS, Technopref and DDOT met to discuss the issue. Technopref claimed responsibility for the damage and requested to fix the damage after finishing with work over C&O Canal. NPS agreed and requested that the work with manlift would only be happening on night shift from 7Pm to 5Am. NPS also requested to be notified with the work schedule.
- Technopref has been notified about the safety hazard where scaffold at Pier 5 is very close to Pepco 60KWV High Power transmission line

### - Action Items: N/A

### - New Issues / Items: NA

## 4. MEETINGS / PROJECT COORDINATION

- Pier Encapsulation pre-activity meeting
- Meeting with NPS, Technopref and DDOT for the work over C&O Canal.

## 5. DAILY WORK PERFORMED

### Sunday 09/30/18

1. Technopref (General Contractor) was on-site. Continued Deck work for Joint repair at Sta Sta.10+10.1, Sta.10+80.1 Sta.12+91.9 and Sta.13 +15.2, Sta for Armored joints. And at Sta. 15+70.2 and Sta. 16+50.5 for Non- Armored joints.

### Monday 10/01/18

1. Technopref (General Contractor) was on-site. Continued concrete demolition and surface preparation on deck pedestals and floor beams on Span G. Contractor continued installing support for beams for scaffold over C&O canal.
2. Ribeiro (Sub) was on-site and continued concrete demolition, saw-cutting and surface preparation at Pier 1 to mid-Span G.
3. Brocks Services (Sub) was on site and continued Scaffold erection at Pier 5 and Span A.
4. Ward and Associates (Sub) was on site and prepared for resuming Shotcrete activities.

### Tuesday 10/02/18

1. Technopref (General Contractor) was on-site. Continued concrete demolition and surface preparation on deck pedestals and floor beams on Span F and Span G.
2. Ribeiro (Sub) was on-site and continued concrete demolition, saw-cutting and surface preparation at Pier 1 to mid-Span G.
3. Brocks Services (Sub) was on site and continued Scaffold erection at Pier 5 and Span A
4. Specialty Underwater Services (Sub) was on site and continued mobilization and preparation for the Fiber Reinforced Polymer Encapsulation for Pier.
5. Blastech (Sub) was on site and performed test samples for Anti-graffiti.
6. Ward and Associates (Sub) was on site and continued shotcrete operation at Bent 16A East Ramp.

### Wednesday 10/03/18

1. Technopref (General Contractor) was on-site. Continued concrete demolition and surface preparation on deck pedestals and floor beams on Span F and Span G. Continued Deck work for Joint repair at Sta .

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.5+78 and Sta.5 +97.5 for Armored joints. Continued pavement marking application for the 6" white line from Sta. 13+14 to Sta.18+89 and 6" dashed white from Sta. 11+08 to Sta. 13+30

2. Ribeiro (Sub) was on-site and continued concrete demolition, saw-cutting and surface preparation at Pier 1 to mid-Span G.
3. Brocks Services (Sub) was on site and continued Scaffold erection at Pier 5 and Span A
4. Specialty Underwater Services (Sub) was on site and continued mobilization and preparation for the Fiber Reinforced Polymer Encapsulation for Pier.
5. Blastech (Sub) was on site and performed test samples for Anti-graffiti color matching.
6. Ward and Associates (Sub) was on site and continued shotcrete operation at Span B

#### Thursday 10/04/18

1. Technopref (General Contractor) was on-site. Continued concrete demolition and surface preparation on deck pedestals and floor beams on Span F and Span G. Continued Deck work for Joint repair at Sta. Sta.5+87.4, Sta. 3+91.02 and Sta.3 +70.5 for Armored joints.
2. Ribeiro (Sub) was on-site and continued concrete demolition, saw-cutting and surface preparation at Pier 1 to mid-Span G.
3. Brocks Services (Sub) was on site and continued Scaffold erection at Pier 5 and Span A
4. Specialty Underwater Services (Sub) was on site and continued mobilization and preparation for the Fiber Reinforced Polymer Encapsulation for Pier.
5. Blastech (Sub) was on site and performed test samples for Anti-graffiti color matching.
6. Ward and Associates (Sub) was on site and continued shotcrete operation at Span B

#### Friday 10/05/18

1. Technopref (General Contractor) was on-site. Continued concrete demolition and surface preparation on deck pedestals and floor beams on Span F and Span G. Contractor continued installing support for beams for scaffold over C&O canal.
2. Ribeiro (Sub) was on-site and continued concrete demolition, saw-cutting and surface preparation at Pier 1 to mid-Span G.
3. Brocks Services (Sub) was on site and continued Scaffold erection at Pier 5 and Span A

4. Specialty Underwater Services (Sub) was on site and continued mobilization and preparation for the Fiber Reinforced Polymer Encapsulation for Pier.
5. Ward and Associates (Sub) was on site and continued shotcrete operation at Span B.

**Saturday 10/06/18**

1. Technopref (General Contractor) was on-site. Continued scaffold dismantling at Pier 3.
2. Ward and Associates (Sub) was on site and continued shotcrete operation at Pier 1.

**6. INSPECTION & MATERIAL TESTS PERFORMED**

- Performed sounding for concrete demo.
- Tested bag-mixed concrete and obtained the following results:

Date	Location	Material	Ambient Temp °F	Concrete Temp °F	Slump (Inches)	Air Content %	Concrete Specimens
10/02/18	East ramp bent 16 and Span B	USCP 7000-7001	72	72	.5	7.5	24*24*6
10/03/18	Span B	USCP 7000-7001	72	72	.5	8.5	24*24*6
10/04/18	Span B Row AA-A	USCP 7000-7001	75	74	.5	8	24*24*6

**7. RFIs / SUBMITTALS**

- **Requests for Information:**  
Except as noted below, there are no current unresolved/uncompleted RFIs or Submittals.
- **Submittals:**
  - Submittal No.196 - Additional Staging Area for the South Abutment Work
    - Forwarded to NPS
  - Submittal No.257 - Light Pole Base Plate Hardware
    - Forwarded to JMT

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- **RFIs:**

- RFI No.133A - FAA Light Conduit Repairs
  - Forwarded to JMT and awaiting FAA response
- RFI No.138 - Permanent Precast Barrier Repair
  - Forwarded to QAQC
- RFI No.140A - Damaged Armored Joints
  - Forwarded to JMT
- RFI No.141 - Pedestrian Camera and Flashers Mounting
  - Forwarded to JMT

### 8. CHANGE ORDERS/TASK ORDERS

- Change Order # 1 was executed on June 12, 2017.
- Change Order # 2 was executed on November 13, 2017.
- Change Order # 3 was executed on August 17, 2017.
- Change Order # 4 was executed on February 22, 2018.
- Change Order # 5 was executed on May 07, 2018.
- Change Order # 6 was executed on June 15, 2018.

### 9. DBE or CBE PARTICIPATION SUMMARIES

- AECOM DBE Activity:
  - CSMI (subcontractor for AECOM) activity on the project is to provide project public outreach.
  - CKI (subcontractor for AECOM) activity on the project is aide to construction management and inspection services.
- Technopref DBE Activity:
  - Ribero activity on the project is Concrete demolition and repairs
  - Sysnet America activity on the project is the installation of the light poles
  - 3D Building supply activity on the project is to supply all the concrete materials

### 10. ACCIDENTS / INCIDENTS

- No incident.

11. PHOTOS OF WORK PERFORMED THIS PERIOD



Working on span F FB 51 bay 3 surface preparation.



Span G DP 44/45 sandblasted and surf prep approved



Working on Pier 1, Level 6, Row D, Column 53-54, South Face surface preparation.



FB 51 bay 3 surf prep approved Span G DP C53 full demolished.





Installed 6" solid white line pavement marking at southbound



Erection of Scaffolding System at Pier 5



Installing of joint sealer for Non-armored joints repair



Specialty Underwater Services for Pier Encapsulation - mobilizing at Pier 4