

**REHABILITATION OF FRANCIS SCOTT KEY BRIDGE**

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

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

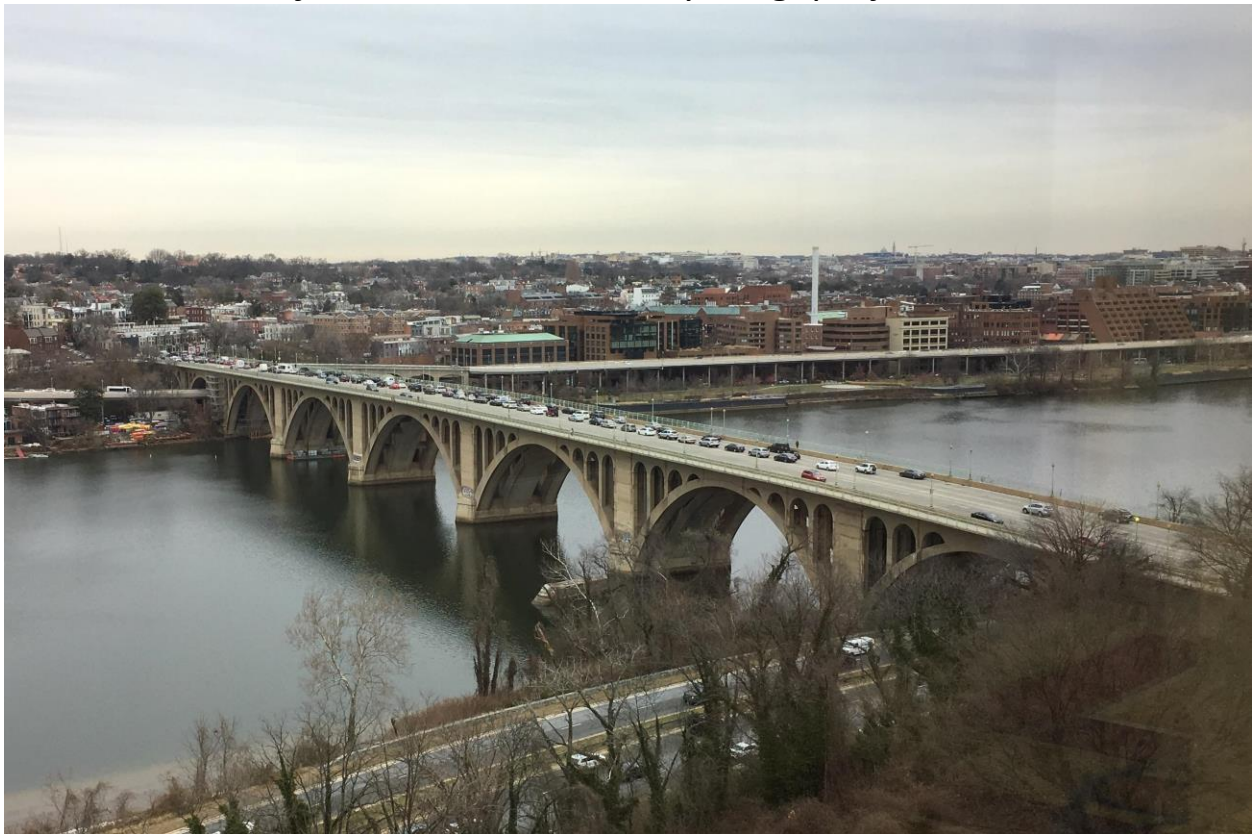
**FAP No.: BH-1104 (013)**

**CONSTRUCTION MANAGER'S**

**WEEKLY PROGRESS REPORT**

**From 06/30/2019 to 07/06/2019**

**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 was also 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 streetlight 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. Concrete repair work is still in progress at Pier 2 and East Ramp. (3 shifts a day from 7am to 3:30 pm, 3pm to 11pm and from 7pm to 5am)
2. CM inspection team checked Navigation lights and it was functional.
3. Contractor continued dismantling scaffold system at Rosslyn Approach.
4. Contractor continued installing the security fences at South Abutment.
5. Contractor continued Pier Encapsulation at Pier 1.
6. Contractor continued placing concrete at Pier 2

### 1. 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 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 daily.
- Technopref has been notified with the issue of transporting scaffolding materials with the SKYTRAK at the C & 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.

### - Action Items: N/A

### - New Issues / Items: N/A

## 4. MEETINGS / PROJECT COORDINATION

- Key Bridge progress meeting No 115.

## 5. DAILY WORK PERFORMED

### Sunday 06/30/19

1. No Work.

### Monday 07/01/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued the work for the bearing replacement at North Abutment. At Pier 2 continued concrete repairs at the base of the Pier and preparation for the form and pour operation, At East Ramp stripping forms. Also, provided support for their subcontractors on site.
2. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1
3. Brocks (Sub) was on site and continued dismantling scaffold system at Rosslyn Approach

**Tuesday 07/02/19**

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued the work for the bearing replacement at North Abutment. At Pier 2 continued concrete repairs at the base of the Pier and preparation for the form and pour operation. Placed concrete for form and pour operation, At East Ramp stripping forms and work on crack repair. Also, provided support for their subcontractors on site.
2. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1
3. Suburban (Sub) was on site and continued security fence installation at South Abutment.

**Wednesday 07/03/19**

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued the work for the bearing replacement at North Abutment. At Pier 2 continued concrete repairs at the base of the Pier and preparation for the form and pour operation. Placed concrete for form and pour operation, At East Ramp stripping forms and work on crack repair. Also, provided support for their subcontractors on site.
2. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1
3. Suburban (Sub) was on site and continued security fence installation at South Abutment.

**Thursday 07/04/19**

1. No work

**Friday 07/05/19**

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued the work for the bearing replacement at North Abutment. At Pier 2 continued concrete repairs at the base of the Pier and preparation for the form and pour operation. Placed concrete for form and pour operation, At East Ramp stripping forms and work on crack repair. Also, provided support for their subcontractors on site.
2. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1
3. Suburban (Sub) was on site and continued security fence installation at South Abutment.
4. Brocks (Sub) was on site and continued dismantling scaffold from Mid Span H to Rosslyn abutment

**Saturday 07/06/19**

1. No work.

**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
07-03-19	Pier 2 Base Form and Pour Patch 15	USCP Buff/Quickcrete All Purpose Gravel	82	84	N/A	N/A	6 (4"x8") Cylinders
07-03-19	North Abutment Bearing Replacement Spandrel Arch (Span B)	USCP Deck Mix AE	85	84	N/A	N/A	12 (4"x8") Cylinders

**7. RFIs / SUBMITTALS**

- **Requests for Information:**  
Except as noted below, there are no current unresolved/uncompleted RFIs or Submittals.
- **Submittals:**
  - o N/A
- **RFIs:**
  - o N/A

**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.
- Change Order # 7 was executed on April 17, 2019.

**9. DBE or CBE PARTICIPATION SUMMARIES**

- **AECOM DBE Activity:**
  - o CSMI (subcontractor for AECOM) activity on the project is to provide project public outreach.

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- CKI (subcontractor for AECOM) activity on the project is aide to construction management and inspection services.
  
  - **Technopref DBE Activity:**
    - Ribeiro activity on the project is Concrete demolition and repairs
    - 3D Building supply activity on the project is to supply all the concrete materials

## 10. ACCIDENTS / INCIDENTS

- No incidents

11. PHOTOS OF WORK PERFORMED THIS PERIOD



SUS at Pier 1 N & S Elev with Technopref stripping form and prep to inject grout

SUS at Pier 1 N Elev with Technopref prep to inject grout - Encapsulation

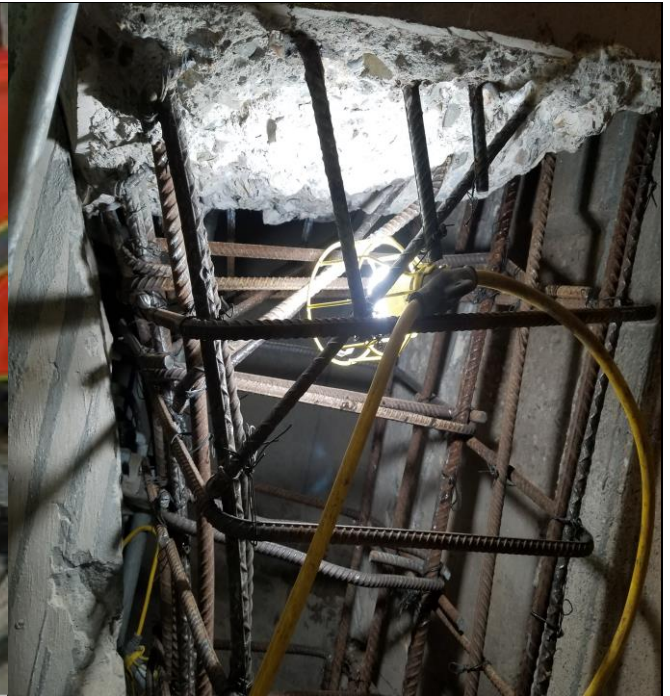


Brock Services at Rosslyn Abut dismantling scaffolding system

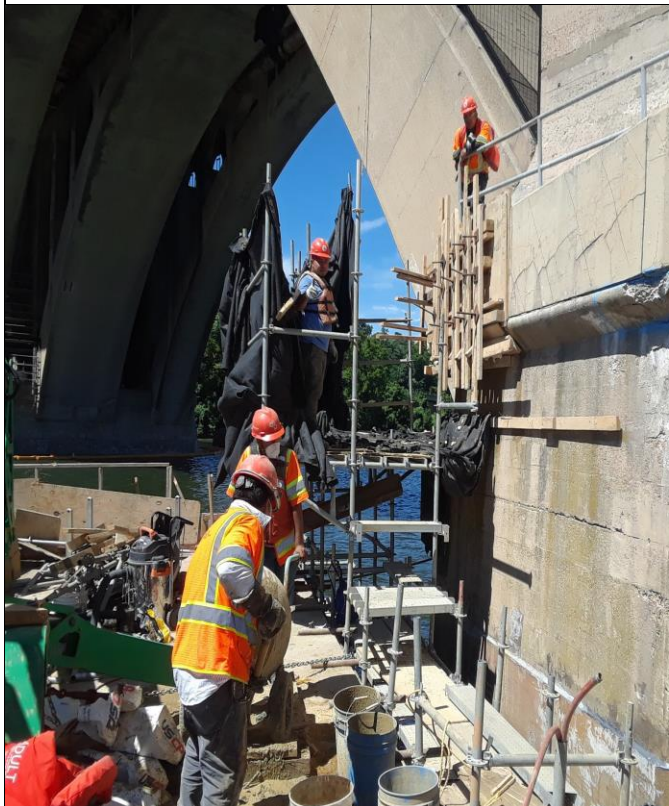
Technopref installing rebar to replace Bearing at N Abut, N Elev, Row EE, level 2-3 at Span B above plate



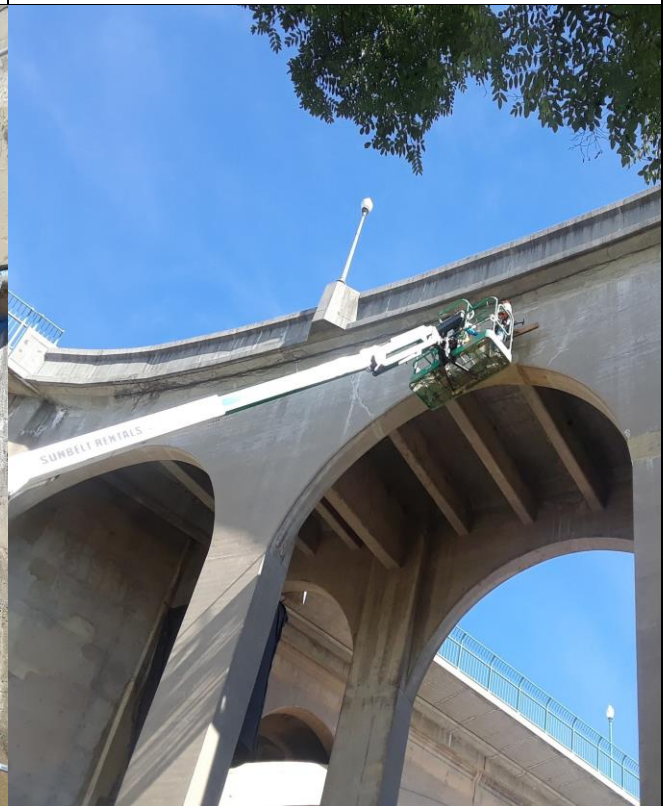
Rebar installation for bearing replacement at North Abutment



Concrete repair and saw cutting at Span H during night shift



Form and pour operation at East elevation of Pier 2.



crack operation at South elevation of East ramp