

**REHABILITATION OF FRANCIS SCOTT KEY BRIDGE**

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

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

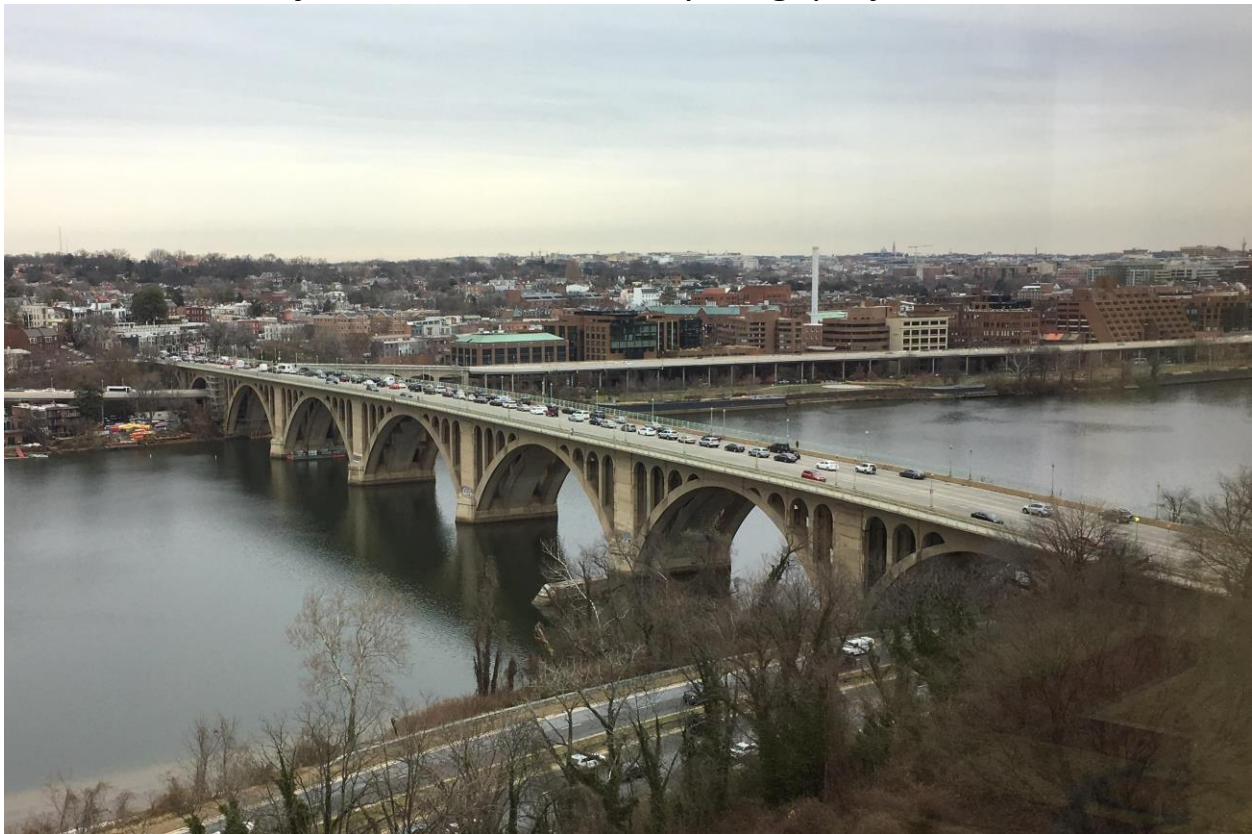
**FAP No.: BH-1104 (013)**

**CONSTRUCTION MANAGER'S**

**WEEKLY PROGRESS REPORT**

**From 06/16/2019 to 06/22/2019**

**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 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. Concrete repair work is still in progress at Span H, Pier 2, Pier 1 and East Ramp. (3 shifts a day from 7am to 3:30 pm, 3pm to 11pm and from 7pm to 6am)
2. CM inspection team checked Navigation lights and it was functional.
3. Contractor continued dismantling scaffold system at South Abutment and Rosslyn Approach.
4. Contractor continued installing the security fences at Pier 1 and 2.
5. Contractor continued remedy work for PCC traffic barriers over the Key Bridge deck, work done at night shift.
6. Contractor continued Pier Encapsulation at Pier 1.
7. Contractor continued shotcrete operation at East Ramp.
8. Contractor continued the deficiency work correction at Rosslyn Approach.

### 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 on a daily basis.
- 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 113.

## 5. DAILY WORK PERFORMED

### Sunday 06/16/19

1. Technopref (General Contractor) was on-site and continued concrete repairs at South Abutment to mid Span H during night shift

### Monday 06/17/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued scaffold dismantling at Pier 1. Continued removing scaffold and cleaning at South Abutment. At Pier 2 constructing containment and scaffold for shotcrete operation. Worked on deficiency list at Rosslyn Abutment Also, provided support for their subcontractors on site. At night work continued concrete repairs at Pier 1 / Span H.
2. Suburban (Sub) was on site and continued the security fence installation at Pier 1.
3. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 2
4. Brocks (Sub) was on site and continued dismantling scaffold system at Rosslyn Approach
5. Ward and Associate (Sub) was on site and performed a placing test at East ramp to test the containment. Containment was inadequate and will be revised again.

### Tuesday 06/18/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued modifying Containment at East ramp. Continued scaffold dismantling at Pier 1. Continued removing scaffold and cleaning at South Abutment. At Pier 2 constructing containment and scaffold for concrete repairs and shotcrete operation, provided support for their subcontractors on site.
2. Suburban (Sub) was on site and continued the security fence installation at Pier 1.
3. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 2
4. Brocks (Sub) was on site and continued dismantling scaffold system at Rosslyn Approach
5. Ward and Associate (Sub) was on site and continued shotcrete operation at East Ramp.

### Wednesday 06/19/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued modifying contaminant at East ramp. Continued scaffold dismantling at Pier 1. Continued removing scaffold and cleaning at South Abutment. At Pier 2 constructing containment and scaffold for concrete repairs and shotcrete operation. Worked on deficiency list at Rosslyn Abutment Also, provided support for their subcontractors on site. At night work continued concrete repairs at Pier 1 / Span H.
2. Suburban (Sub) was on site and continued the security fence installation at Pier 1.
3. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 2
4. Brocks (Sub) was on site and continued dismantling scaffold system at Rosslyn Approach
5. Ward and Associate (Sub) was on site and continued shotcrete operation at East Ramp.

**Thursday 06/20/19**

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued the work for the bearing replacement at North Abutment. Continued removing scaffold and cleaning at South Abutment. At Pier 2 constructing containment and scaffold for concrete repairs and shotcrete operation. Continued concrete repair at Pier 2. Also, provided support for their subcontractors on site. At night work continued concrete repairs at Pier 1 / Span H. Also erecting scaffold system at Span H to reach some of the concrete repairs.
2. Suburban (Sub) was on site and continued the security fence installation at Pier 2.
3. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1
4. Brocks (Sub) was on site and continued dismantling scaffold system at Rosslyn Approach
5. Ward and Associate (Sub) was on site and continued shotcrete operation at East Ramp.

**Friday 06/21/19**

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 constructing containment and scaffold for concrete repairs and shotcrete operation. Continued concrete repair at Pier 2. Also, provided support for their subcontractors on site.
2. Suburban (Sub) was on site and continued the security fence installation at Pier 2.
3. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1
4. Brocks (Sub) was on site and continued dismantling scaffold system at Rosslyn Approach
5. Ward and Associate (Sub) was on site and continued shotcrete operation at East Ramp.

**Saturday 06/22/19**

2. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Contractor set up right lane closure over the North bound lane and resumed the deficiency work remedial for PCC concrete barriers over the Key Bridge. provided support for their subcontractors on site.
3. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1.
4. Ward and Associate (Sub) was on site and continued shotcrete operation at East Ramp

**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
06/18/2019	East ramp bent 12: patch # 14, 16, 19	USCP 7000-7001	80	80	1	8.2	24*24*6

06/19/2019	East ramp bent 12-13: patch # 7, 12, 13, 18A and 30	USCP 7000-7001	75	75	.5	7.8	24*24*6
06/20/2019	East ramp bent 12-13: patch # 5, 6, 8, 9, 10 and 11	USCP 7000-7001	80	80	2.5	7.6	24*24*6
06/21/2019	East ramp between bent 13-16 patches # 1 and 3	USCP 7000-7001	76	76	1.5	7.8	24*24*6
6/22/2019	East Ramp, Bent #9	Gunite 7401	68	76	1/4	8	24*24*6

### 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.
  - o CKI (subcontractor for AECOM) activity on the project is aide to construction management and inspection services.
  
- **Technopref DBE Activity:**
  - o Ribero activity on the project is Concrete demolition and repairs
  - o 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



Temporary support for the bearing replacement at the North Abutment.



Installing containment at East Ramp for shotcrete operation



Pier Encapsulation at Pier 1



Pier Encapsulation at Pier 1





Security fences installation at Pier 2



Concrete repair and saw cutting at South Abutment during night shift



Concrete repair and saw cutting at Pier 2 base and the use of vacuum to clean debris.



Concrete repair and saw cutting at Pier 2