

REHABILITATION OF FRANCIS SCOTT KEY BRIDGE

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

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

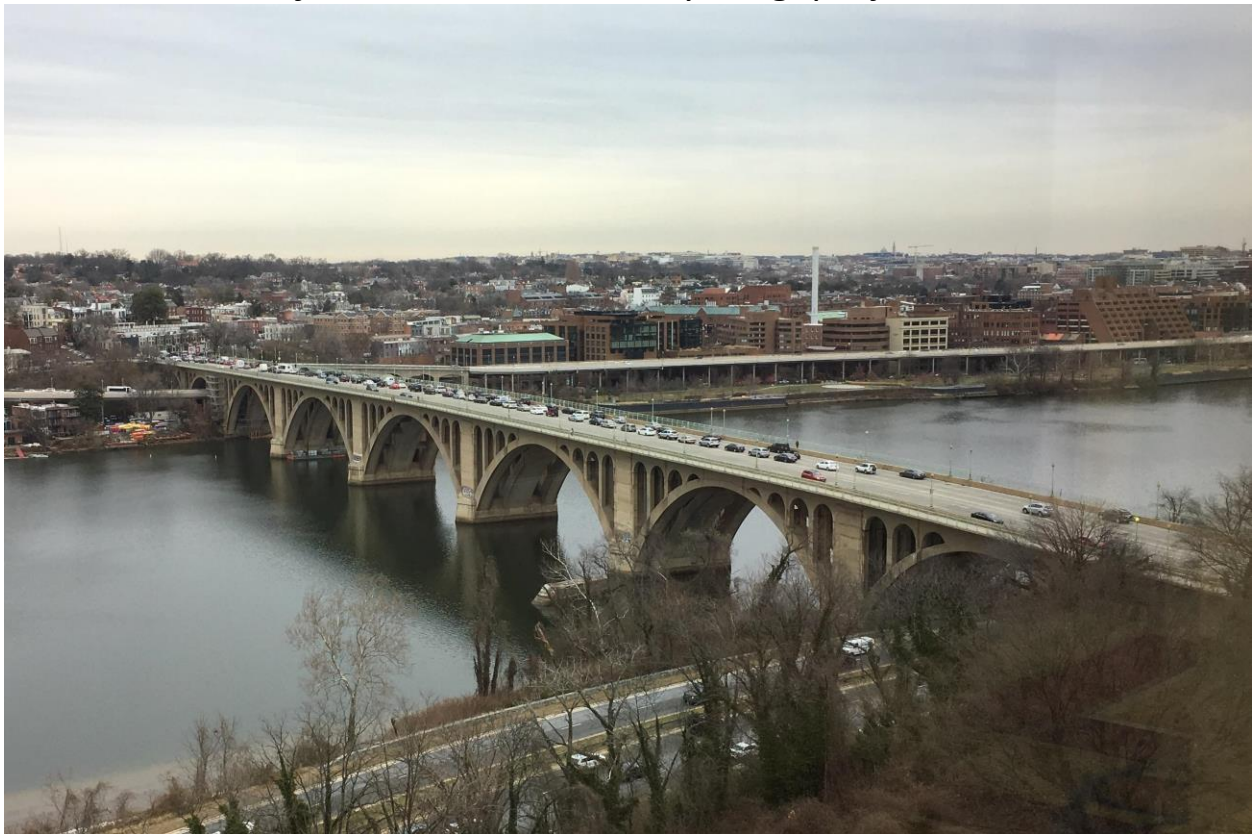
FAP No.: BH-1104 (013)

CONSTRUCTION MANAGER'S

WEEKLY PROGRESS REPORT

From 06/09/2019 to 06/15/2019

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). 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 E, Pier 1, Pier 2, Pier 4, 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 Span H, South Abutment and Rosslyn Approach.
4. Contractor continued installing the security fences at South Abutment.
5. Contractor continued remedy work for Pavement Markings, work done at night shift.
6. Contractor continued Pier Encapsulation at Pier 1, Pier 2 and for deficiency work at Pier 4.
7. Contractor continued shotcrete operation at Pier 1 and Pier 4.
8. Coordinated with Washington gas for maintenance work for gas pipes at North Abutment and under Whitehurst FWY.

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

- No meeting

5. DAILY WORK PERFORMED

Sunday 06/09/19

1. No Work

Monday 06/10/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued concrete repairs at East Ramp. Constructed containment at Pier 1 for the shotcrete operation. Also, provided support for their subcontractors on site. At night work continued concrete repairs at Pier 2 / Span E. Continued crack repairs at East Ramp.
2. Suburban (Sub) was on site and continued the security fence installation at South Abutment.
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 and South Abutment.
5. Ward and Associate (Sub) was on site and continued shotcrete operation at Pier 1 base.

Tuesday 06/11/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued concrete repairs at East Ramp. Placed concrete for form and pour material at Rosslyn Approach. Constructed containment at Pier 1 for the shotcrete operation. Also, provided support for their subcontractors on site. At night work continued concrete repairs at Pier 2 / Span E and Span H. Continued crack repairs at East Ramp. Continued working on deficiency list for remedial work for pavement marking.
2. Suburban (Sub) was on site and continued the security fence installation at South Abutment.
3. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1 and at Pier 4 for deficiency work remedial.
4. Brocks (Sub) was on site and continued dismantling scaffold system at Rosslyn Approach and South Abutment.
5. Ward and Associate (Sub) was on site and continued shotcrete operation at Pier 1 base.

Wednesday 06/12/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued concrete repairs at East Ramp. Placed concrete by form and pour method at Rosslyn Approach. Also, provided support for their subcontractors on site. At night work continued concrete repairs at Pier 2 / Span E.
2. Suburban (Sub) was on site and continued the security fence installation at South Abutment.
3. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1 and at Pier 4 for deficiency work remedial.
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 Pier 1 base.

Thursday 06/13/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued concrete repairs at East Ramp. Installing scaffold and containment system at Pier 4 for concrete repairs at base. Also, provided support for their subcontractors on site. At night work continued concrete repairs at Pier 2 / Span E and at Span H arches and fascia.
2. Suburban (Sub) was on site and continued the security fence installation at South Abutment.
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 Pier 4 base.

Friday 06/14/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Worked on deficiency list at Rosslyn Approach. Also, provided support for their subcontractors on site. At night work continued concrete repairs at Pier 2 / Span E.
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 1.
4. Brocks (Sub) was on site and continued dismantling scaffold system at South Approach.
5. Ward and Associate (Sub) was on site and continued shotcrete operation at Pier 4 base.

Saturday 06/15/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Constructed scaffold and containment system at Pier 2 and East Ramp bent 12. provided support for their subcontractors on site. Containemnt at East Ramp was inadequate
2. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation at Pier 1.
3. Ward and Associate (Sub) was on site and continued shotcrete operation at East Ramp bent 12.

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
06/10/2019	North elevation of Pier 1 base	USCP 7000-7001	73	73	2	8.2	24*24*6

06/10/2019	Rosslyn Abutment Arch Fascia/ patch C11	USCP Gunite/Quick crete all-purpose gravel	74	74	N/A	N/A	6 (4"x8") Cylinders
06/12/2019	South elevation of Pier 3 base	USCP 7000-7001	69	69	1	8	24*24*6
06/13/2019	North elevation of Pier 4 base	USCP 7000-7001	71	71	2.5	9	24*24*6
06/14/2019	South elevation of Pier 4 base	USCP 7000-7001	71	71	2.5	9	24*24*6
06/14/2019	Mid Span H – Rosslyn Abut & Rosslyn Abut Deficiency	USCP Gunite/Quick crete all-purpose gravel	66	68	N/A	N/A	6 (4"x8") Cylinders
06/15/2019	South elevation of Pier 4 base	USCP 7000-7001	72	72	1	9	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



Preparing the test panel for the shotcrete sample



Installing containment at East Ramp



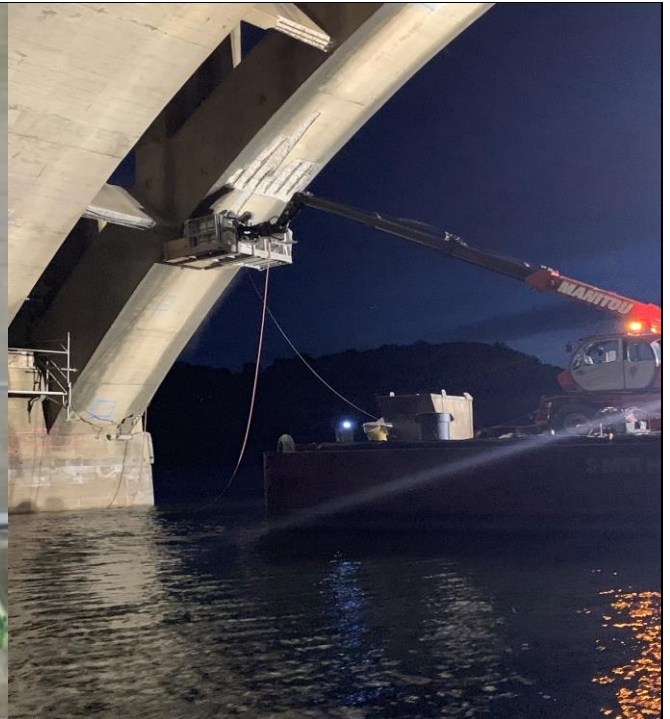
Pier Encapsulation at Pier 4 working on remedial work



Fabricating jacket panels on Floating Dock for Pier Encapsulation



Dismantling scaffold system at South Abutment



Concrete repair and saw cutting at Span E during night shift



Concrete repair and saw cutting at Span E



Form and pour for architectural fascia located at Rosslyn Abutment West Level 1