

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 01/22/2017 to 01/28/2017

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). 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 the south side of North abutment and at pier 4 for the non-suspended (ground bearing) portion. Also started installation of suspended scaffold system from North abutment to pier 4.
4. Completed PCO-01 package. Package has been reviewed by DDOT and been sent to Technopref for signature. Technopref requested language adjustment. Waiting for Technopref signature after receiving language adjustment response from DDOT.
5. Continued to update the project website.
6. Contractor continued loading scaffold on the barges and continued navigating the barges to pier 4
7. Performed a walkthrough on the scaffold deficiencies to ensure the progress of fixing all the deficiencies.
8. Contractor continued removing delaminated concrete.
9. Attended the Citizen's Association of Georgetown (CAG) meeting and answered questions regarding the progress on the project
10. Contractor invited OSHA for a site visit. OSHA inspectors visited the project for a site review on Tuesday January 24, 2017 at the invitation of the contractor.

11. 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.

Stakeholder Contact:

- Outreach team presented at the Citizen's Association of Georgetown (CAG) Crossing the Potomac meeting at Malmaison on 1/24. The team delivered the presentation used at the initial public meeting and displayed six presentation boards detailing the project. See meeting summary for additional details

Notes:

- The team finalized plans for CAG presentation on 1/24 including the production of new presentation boards and other project collateral
- Undeland Associates worked on FAQs document, provided content and design review on project rack card and presentation board and participated in CAG meeting and team calls

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.
- 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; Pepco confirmed the ownership of top overhead wire overhanging East Ramp piers as being theirs several weeks prior. DDOT continues to work with Pepco to determine the appropriate solutions to safely accommodate proposed work at the bent columns.

- Concerns raised by contractor regarding safety of personnel and public from concrete falling from overhead at pier 4 and elsewhere during 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 has been 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 in response, however contractor continued to perform his own investigation and removal.
- **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. The paperwork of the permit is still been awaited.
- **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, utility (Pepco) meetings and updates, project progress meeting with DDOT and the contractor.

5. DAILY WORK PERFORMED

Monday 01/23/17

1. Technopref was on-site and continued cleaning at the staging area. Minimum activities due to rain.
2. Handon services continued erecting scaffolding system at Pier 4. Continued loading scaffold to the sectional barges and relocated sectional barge next to pier 4.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment on the interior face. Continued sounding and marking areas of deteriorated concrete.

Tuesday 01/24/17

1. Technopref was on-site and continued cleaning at the staging area. Installed fire extinguisher/first aid box at North abutment. Sounding and scaling concrete with hammer using man lift from bent 15A (span 6) and bent 14A (span 5) East ramp.
2. Handon services continued erecting scaffolding system at North abutment

Wednesday 01/25/17

1. Technopref was on-site and continued cleaning at the staging area. Sounding and scaling concrete over East ramp and span C.
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.

Thursday 01/26/17

1. Technopref was on-site and continued cleaning at the staging area. Sounding and scaling concrete at span C.
2. Handon services continued erecting scaffolding system at Pier 4. 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.

Friday 01/27/17

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.

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. 033 – Rebar Coverage
 - Forwarded to JMT
- **Submittals:**
 - o Submittal No. 066B – MOT-Whitehurst Freeway
 - Forwarded to DDOT/MOT
 - 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

- Submittal No. 076 – Paint system for the support beams of the water main
 - Forwarded to DDOT/QAQC
- Submittal No. 077 – Cast Iron Light Poles
 - Forwarded to DDOT/Streetlight
- Submittal No. 078 – Key Bridge Security Fence
 - Forwarded to DDOT/QAQC
- Submittal No. 080 – Protection Shield - Debris Netting
 - Forwarded to DDOT/QAQC

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 been sent to Technopref for signature. Technopref requested language adjustment. Waiting for Technopref signature after receiving language adjustment response from DDOT.

9. DBE or CBE PARTICIPATION SUMMARIES

- AECOM DBE Activity:
 - CSMI
 - Project Public out Reach.
 - CKI
 - Aid to Construction Management and Inspection Services
- Technopref
 - Intellect Corporation
 - Scaffolding erection
 - Handon Diving Services Inc.
 - Capsulation of the piers

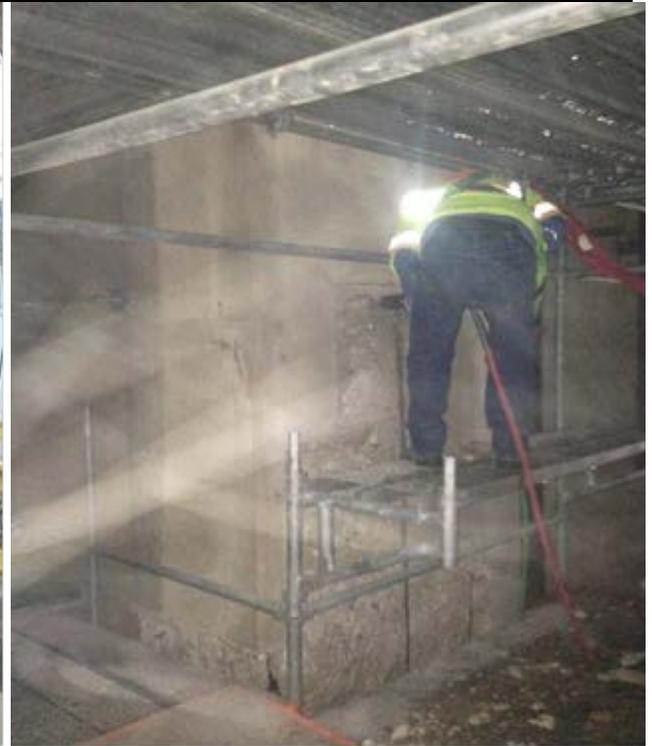
10. ACCIDENTS / INCIDENTS

There were no reported personnel or safety accidents within the limits of the project during this reporting period

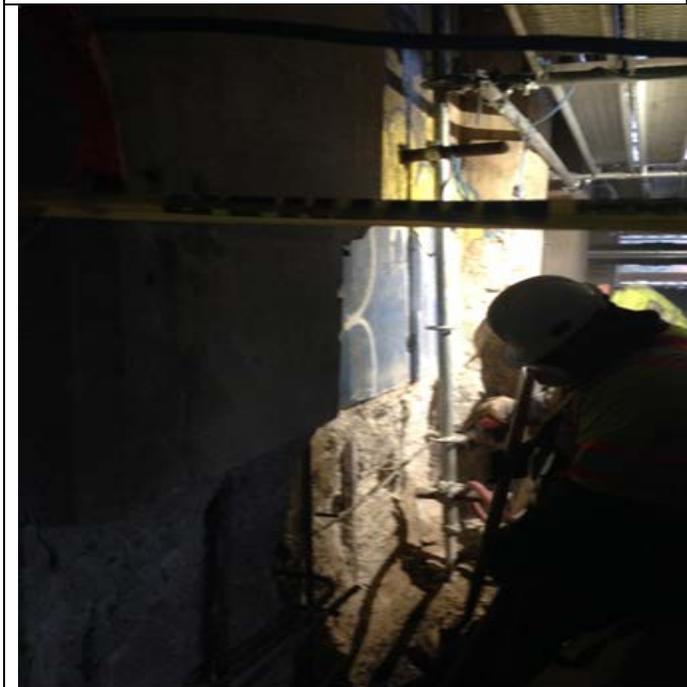
11. PHOTOS OF WORK PERFORMED THIS PERIOD



Loading /navigating stockpile of scaffolding to Pier 4



Concrete demolishing at North abutment, level 1



Concrete demolishing at North abutment, North side



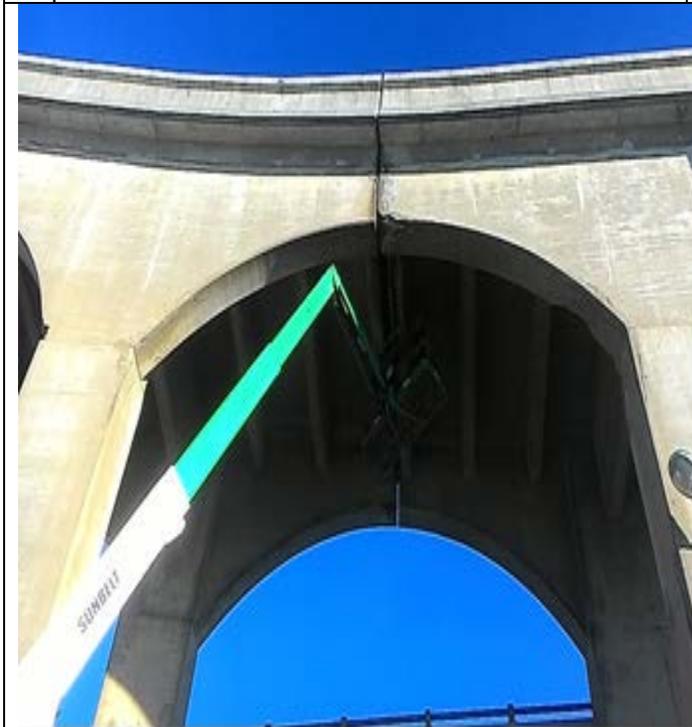
Scaffold and ladders installation inside North abutment chamber



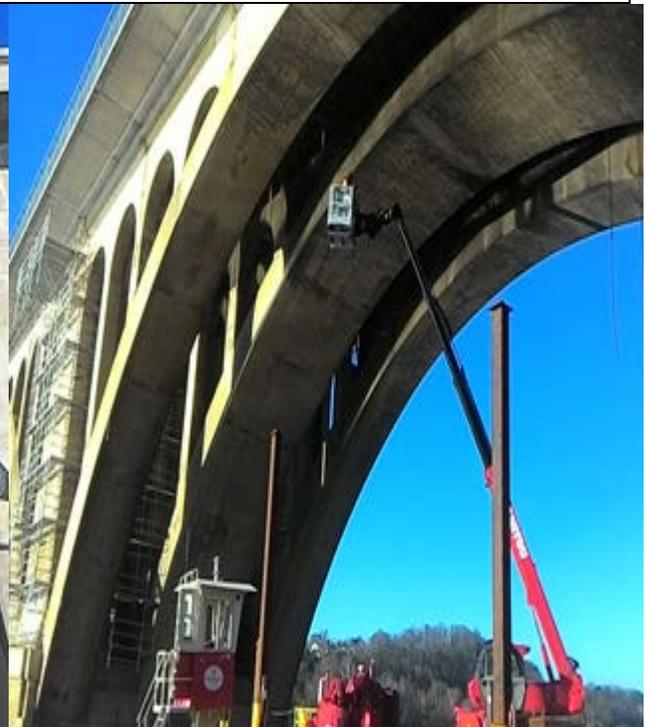
OSHA-Technopref and DDOT getting read for safety inspection



OSHA-Technopref and DDOT inspecting scaffold at North abutment



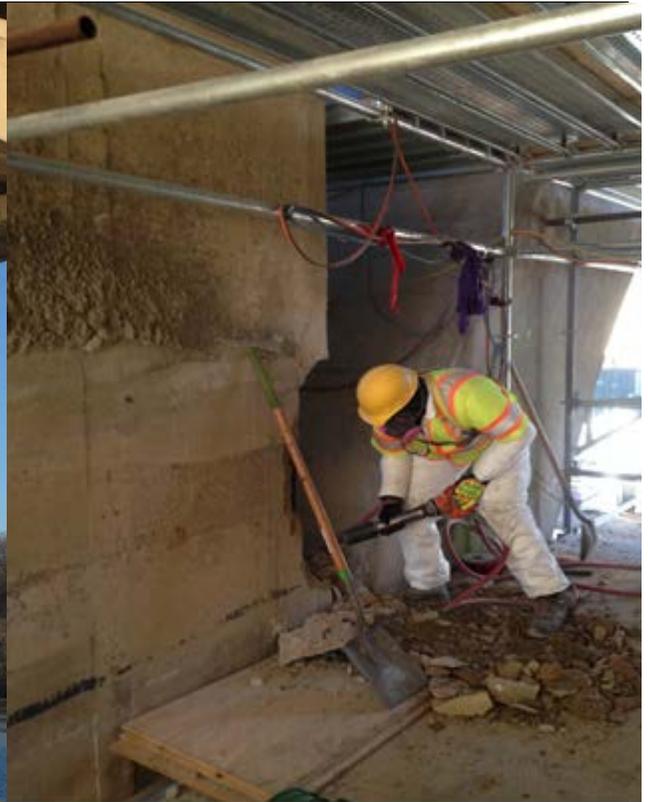
Sounding at East ramp



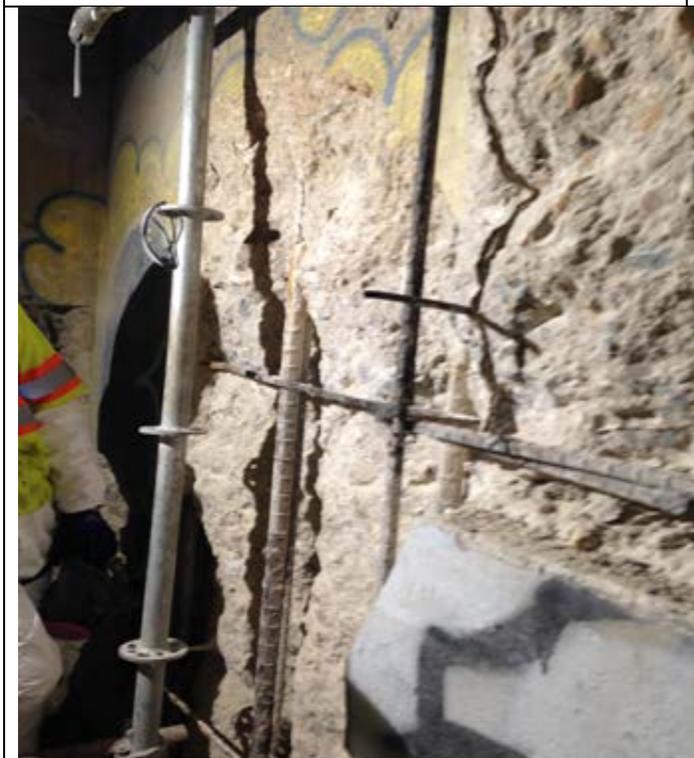
Sounding at span C



Sounding and concrete scalling at span C



Concrete demolishing at North abutment, North side



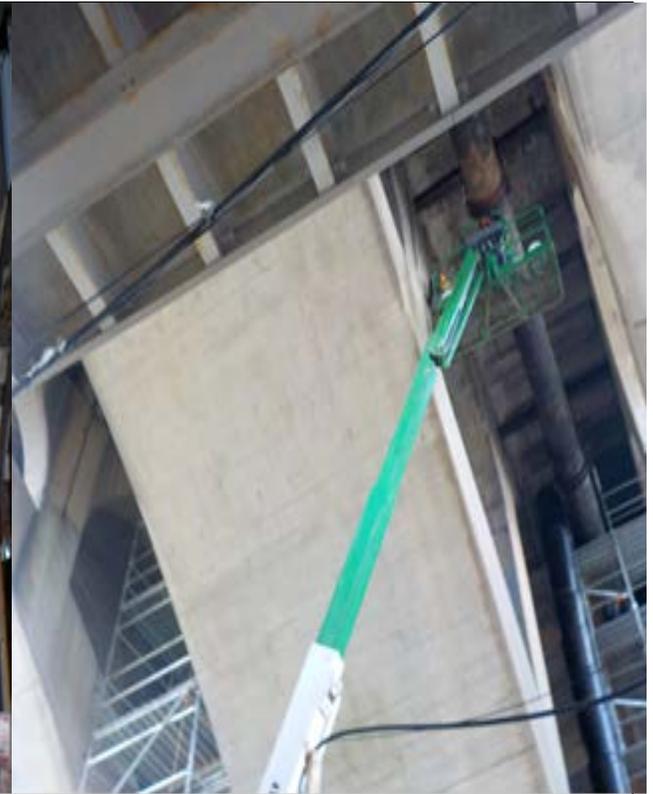
Concrete demolishing at North abutment



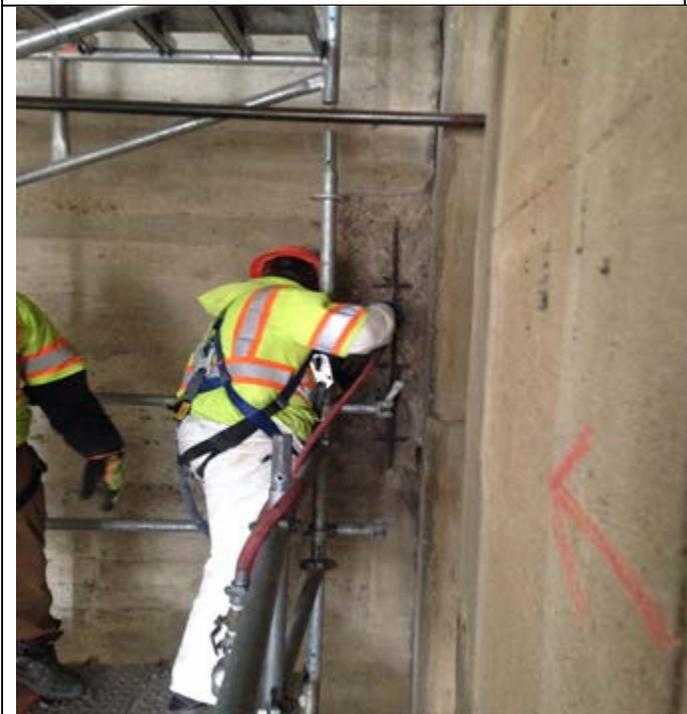
Concrete demolishing at North abutment



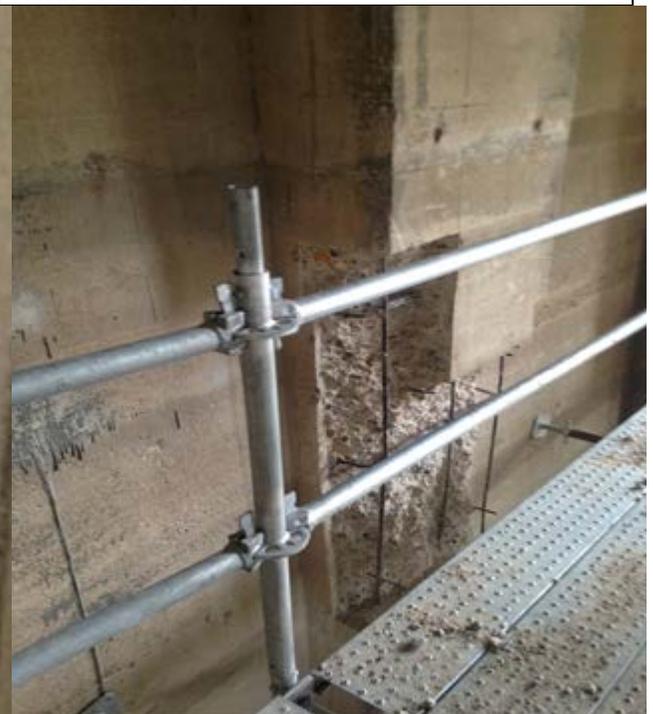
Sounding and concrete scalling at span B



Sounding and concrete scalling at span B and North abutment



Concrete demolishing at North abutment



Concrete demolishing at North abutment