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DELDOT UTILITIES SECTION
POST-COORDINATION & CONSTRUCTION REVIEW MEETING: FINAL

STATE CONTRACT: T201207101 Br. 1-159 on James Street over the Christina River
REVIEW MEETING DATE: January 28, 2025
PREPARED BY: Alan K. Marteney, P.E.
Century Engineering, LLC, a Kleinfelder Company

INVITEE	ORGANIZATION	E-mail	ATTENDED
Alan Marteney	Century-Meeting Organizer	amarteney@kleinfelder.com	Y
Eric Cimo	DelDOT Utilities Engineer	Eric.Cimo@delaware.gov	Y
Debbie Kukulich	DelDOT Utilities Coordinator	Deborah.Kukulich@delaware.gov	Y
Jason Hastings	DelDOT Project Manager, Bridge	Jason.Hastings@delaware.gov	Y
Paul C Huhn	DelDOT Project Engineer, Bridge	Paul.Huhn@delaware.gov	Y
Catherine Schwander	DelDOT Group 1 Construction Engineer	Catherine.Schwander@delaware.gov	Y
Rajiv N. Sinha	DelDOT Area Engineer	Rajiv.Sinha@delaware.gov	Y
Kevin Sieben	McCormick Taylor, Project Engineer	kpsieben@mccormicktaylor.com	Y
Bryan Healy	McCormick Taylor, Project Engineer	bjhealy@mccormicktaylor.com	Y
Tom Smith	DP-L Electric	thomas.smith1@delmarva.com	Y
Kristin Stanfill	DP-Gas	Kristin.stanfil@delmarva.com	Y
Catherine Chiacalabria	McCormick Taylor, Project Manager	cchiacalabria@mccormicktaylor.com	N
Kenneth Murphy	McCormick Taylor, Project Engineer	kpmurphy@mccormicktaylor.com	N
David Clark	New Castle County Dept of Public Works, Sewer	dclark@nccde.org	N
Matt Murray	Americomm LLC rep. Comcast	mattm@americomm-llc.com	N
Bill Muehlberger	Crown Castle	bill.muehlberger@crowncastle.com	N
John Licht	Suez Water	John.licht@suez-na.com	N
George Zang	Verizon	George.w.zang@verizon.com	N
Chris Rubino	KCI, Construction Inspection	Christopher.Rubino@kci.com	N

BRIEF PROJECT DESCRIPTION: The project included the construction of a new bridge to the east of the existing bridge, adjacent to SR141, and relocated approach roads on the north and south side of the Christina River (see Google Earth snapshot picture below from June 2024 showing the new bridge and approaches in between the old bridge to the west and southbound SR141 to the east). This bridge is the only access road that does not have a height restriction in the region of Newport between the Amtrak line and Christina River and is a road which the local industrial and commercial businesses rely on. Construction Phasing required James Street to

remain open while the majority of the bridge was being constructed. Demolition of the existing bridge is to occur after opening of the new bridge.

In addition to being in a constrained urban industrial area, there is a hazardous materials waste site in the southeast quadrant of the project that had been capped and which now includes solar panels.



UTILITIES INVOLVED:

- Comcast Cable-Communication
- Crown Castle (Lightower/Fiber Tech)-Communications
- DelMarVa Power-Electric Distribution
- DelMarVa Power-Gas Distribution
- New Castle County Department of Special Services-Sanitary Sewer Force Main
- Suez-Water
- USGS-United States Geological Survey
- Verizon Delaware-Communication

ADVANCE UTILITY RELOCATIONS: Yes- DelMarVa Power-Gas only.

ADVANCE CLEARING CONTRACTS: None

PROJECT CONTRACTOR: Mumford & Miller Concrete, Inc.

PROJECT CONSTRUCTION START DATE: December 2019: 632 Calendar Days Contract Duration.

PROJECT CONSTRUCTION END DATE: On-going as of the date of these notes. Experienced 16± month delay due to concerns with the 72-inch Christina River Force Main (CRFM) as described below.

DELDOT PROJECT DEVELOPMENT SECTION/PROJECT MANAGER: Bridge; Mike Gettings

ENGINEER OF RECORD FIRM: McCormick Taylor

DELDOT CONSTRUCTION REPRESENTATIVES: Katie Schwander; Rajiv Sinha.

CONSTRUCTION INSPECTION FIRM:

- KCI.

DELDOT UTILITY COORDINATOR: Debbie Kukulich

MAJOR PROJECT CHALLENGES: Project is located within a congested industrial/commercial area and a Superfund hazardous material site is immediately adjacent to the project site to the east which has been capped and now includes a solar panel site. Several utility companies needed to access the haz-mat site for aerial work on a pole that is inside of the site's security fence.

None of the utility services could be interrupted during construction.

- Several utility companies needed to access the haz-mat site for aerial work on a pole that is inside of the site's security fence. Staff required additional Personal Protection Equipment (PPE) and any materials generated had to be properly handled and disposed of. The informational Special Provision Item 202560-Contanimated Material was included in the contract to address these issues and inform all who worked on site.

- The New Castle County Department of Special Services has a 72-inch Sanitary Sewer Force Main along the south side of the Christina River. It is referred to as the CRFM and carries most of the flow that goes to the NCCo treatment plant. There isn't redundancy to this pipe and considering its age and the consequences of any sewage spills, there were many concerns regarding the impact of the project's construction. Discussions with NCCo resulted in: design revisions from driven piles to drilled shaft pile to minimize potential vibration affects (which was identified and done late in the Project Development process after Semi-Final Plans); a protection plan and a monitoring plan to be implemented during construction by the DelDOT contractor. It was noted that determining these plans required substantial effort and time and involvement of upper level management at NCCo & DelDOT.

  The monitoring plan included measurements of settlement and vibrations in the area of the CRFM during construction and included thresholds for these measurements which, if exceeded, would require construction to stop. The thresholds established in the monitoring plan were exceeded which resulted in a 16± month work stoppage while the implications of these exceeded thresholds were being evaluated. The concerns were addressed by DelDOT employing national geotechnical experts and having revised thresholds established that would not affect the integrity of the CRFM. It was noted that no leaks from the CRFM occurred and no other affects to the CRFM were detected.

- The United States Geological Survey (USGS) maintains a stream monitoring station within the project limits which was noted in the contract to be moved by the USGS. During construction, it was determined that the station would need to be attached to the bridge. This required time to develop details, reach concurrence amongst stakeholders and negotiate the change with the contractor.

- DelMarVa Power-Electric Distribution (DP-E) has a 12-kV aerial line along the east side of the project limits between the new bridge and southbound SR141. The line was relocated further east but the distance from the project was limited by SR141. During construction, the distance from the line to construction equipment was less than the industry requirements and became a safety concern. To meet requirements, changes to the abutment alignment were developed to move it approximately 3-feet along with subsequent changes to other project elements.

- The relocation of the DP-E 12kV line was performed during construction and required the DelDOT Contractor to build a temporary stone road for DP-E's contractor to access the relocation area. Lightweight aggregate and mats had to be used to minimize settlement and impacts to other underground utilities. The contract documents included this information in details and sequencing. It was noted that this area of the project went well, including having the DelDOT Contractor and DP-E staff on site during construction of the temporary road.

- Trenching needed to be performed adjacent to DP-E poles. During construction, it was determined that measures were needed to protect the poles from falling or being damaged. It was noted that DP-E responded quickly to this issue.

- Many retired and otherwise unknown underground facilities were encountered during construction.

ADVANCE RELOCATIONS:

- DelMarVa Power-Gas Distribution (DP-G) has 8-inch line and 4-inch high-pressure lines thru the project limits. The impacts and sequencing of the project construction required a Temporary 4-in line to be placed on the existing bridge on the sidewalk in advance of construction. A new permanent 8-in line was to then be attached to the new bridge thru the abutments. Details were developed for attaching the Temporary line to the existing bridge, having it protected from traffic and having pedestrians detoured. Details for attaching the permanent line to the new bridge were also included in the contract plans along with protocols for having the permanent line installed and the Temporary line removed. It was noted that this coordination went well with all parties.

Lessons Learned from this project included:

- *As early as possible*, identify, understand and address sensitive or unique issues including their potential effect to the project design, constructability, schedule and budget.
- Develop strategies and reach stakeholder concurrence for addressing issues with design details, design adjustments and contract requirements. Include in the contract documentation as possible.
- Utilize expertise when needed.
- Have contingency plans in place and agreed to by stakeholders when needed.
- Account for constructability issues when designing and incorporating the utility relocations into the contract documents.
- Responsiveness to issues as they arise from all stakeholders is critical to minimizing the effects to the project.
- Open and complete communication is also critical during all phases of the project.
- When in a congested urban industrial area, expect to encounter retired utility and other underground features that may not be identified during the typical Utility Coordination process. For projects in these type of environments, consider expanding research during project development into non-typical sources, such as historic site plans, adjacent owners, etc.