Response to Request for Proposals

I-95 NORTHBOUND RAPPAHANNOCK RIVER CROSSING

City of Fredericksburg and Stafford County, Virginia

State Project No.: 0095-111-270 Federal Project No.: NHP-095-2(545) Contract ID Number: C00105510DB106

February 25, 2020

VOLUME I TECHNICAL PROPOSAL



4.1 - Letter of Submittal



February 25, 2020

Mr. Suril R. Shah, PE, DBIA Alternative Project Delivery Division Virginia Department of Transportation 1401 East Broad Street, Annex Building, 5th Floor Richmond, Virginia 23219 Re: I-95 NB Rappahannock River Crossing

City of Fredericksburg and Stafford County, Virginia

Contract ID Number: C00105510DB106

4.1 Letter of Submittal

Dear Mr. Shah:

Shirley Contracting Company, LLC (Shirley), as the Offeror, and Dewberry Engineers Inc. (Dewberry), as the Lead Designer, are pleased to submit our Team's Technical Proposal for the I-95 Northbound Rappahannock River Crossing Project (the Project). Our Team will provide VDOT and the traveling public with an unequaled level of assurance that the Project is completed successfully and exceeds the priorities established while limiting risk to all stakeholders.

4.1.2 - 4.1.3 - Declarations: Should Shirley be selected, it is our intent to enter into a contract with VDOT for the Project in accordance with the terms of the Request for Proposal (RFP). Further, the offer represented by our Technical and Price Proposals will remain in full force and effect for one hundred twenty (120) days from the date the Price Proposal is submitted to VDOT.

4.1.4 - Point of Contact: Garry A. Palleschi, Vice President, Shirley Contracting Company, LLC,

8435 Backlick Road, Lorton, VA 22079, 703.550.3579 (P), 703.550.9346 (F)

gpalleschi@shirleycontracting.com.

4.1.5 - Principal Officer: Michael E. Post, Chief Executive Officer, Shirley Contracting Company, LLC,

8435 Backlick Road, Lorton, VA 22079, 703.550.8100 (P).

4.1.6 - Final Completion Date: June 30, 2024

4.1.7 - Unique Milestone Date: February 4, 2022

4.1.8 - Proposal Payment Agreement: An executed Attachment 9.3.1 Proposal Payment Agreement is included in the Appendix.

4.1.9 - Certification Regarding Debarment: Signed Certification Regarding Debarment Forms from all team members are included as attachments in the Appendix.

4.1.10 - DBE Participation Goal: Shirley commits that we will achieve a 12% DBE participation goal for the entire value of the contract.

On behalf of the entire Shirley/Dewberry Team, we thank VDOT for the opportunity to submit this Technical Proposal and look forward to your favorable review.

Phone: 703-550-8100

Sincerely,

Garry A. Palleschi Vice President

4.2 - Offeror's Qualifications



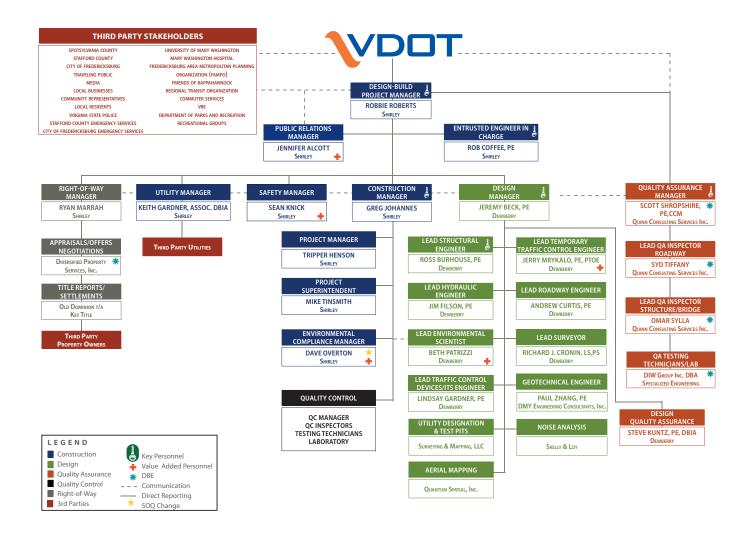
◆ 4.2 Offeror's Qualifications

4.2.1 Confirmation

We confirm that the information contained in our Statement of Qualifications (SOQ) remains true and accurate in accordance with Part 1, Section 11.4., with the exception of Dave Overton who has been assigned to the Project as the Environmental Compliance Manager. Dave is replacing Chris Monahan, as he is no longer with Shirley Contracting Company, LLC. This change was approved by VDOT on January 29, 2020.

4.2.2 Organizational Chart

The Project Organizational Chart below identifies the "chain of command" and major functions to be performed and their reporting relationships in managing, designing and constructing the Project, including quality control/quality assurance. The Organizational Chart has been updated to reflect the name change for the Environmental Compliance Manager, as described in Section 4.2.1. As there are no changes to the functional relationships among the participants, an updated narrative is not required.





Introduction

The I-95 Northbound Rappahannock River Crossing Project (Project) provides a unique and exciting opportunity for our Team to demonstrate our design-build experience while focusing on critical Project

risks and achieving VDOT defined Project Priorities, as summarized in Figure 4.3.1. To address these challenges, our Team thoroughly reviewed the Request for Proposal s(RFP), including all addenda, conducted numerous site visits, explored multiple design concepts, interacted with VDOT at our Proprietary Meetings, and developed risk mitigating solutions.

Throughout the preparation of this Technical Proposal, our Team held weekly meetings with all disciplines to review and integrate all scope elements. We focused considerable effort identifying, categorizing, and mitigating risk items, exploring Alternative Technical Concepts (ATC's), discussing approaches to minimize impacts and reduce costs, all while enhancing safety, mobility, and constructability.

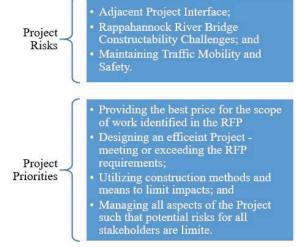


Figure 4.3.1 - Project Risks and Priorities

As a result, our Team formulated numerous Design Enhancements to the RFP Conceptual Plans which are depicted on Figure 4.3.2 at the end of this section and shown in detail within our Technical Proposal Volume II – Design Concept (Volume II Design Concept). Our Team confirms that our Technical Proposal:

- Meets or exceeds all requirements listed in the Design Criteria Table;
- Ensures that the limits of construction, including all potential SWM facilities, are within the existing/proposed right-of-way limits shown in the RFP Conceptual Plans with the exception of permanent and temporary easements; and
- Incorporates design elements that do not require Design Exceptions and/or Waivers unless they are identified or included in the RFP or Addendum.

4.3.1 Conceptual Roadway Plans

(a) General Geometry

Our proposed geometry, including that of Options #1, #2 and #3, have been prepared in accordance with the criteria identified in the Geometric Design Criteria Table (Attachment 2.2) of the RFP. Our Volume II Design Concept is similar to the RFP Conceptual Plans, except that geometric enhancements are implemented to benefit end users, particularly in terms of safety, operations, schedule, construction, and public acceptance. Table 1 provides a summary of our provided geometric design.

Roadway	Classification	Design Speed (mph)	Min. Curve Radius (ft)	. Thru Lanes	idth of Thru Lanes (ft)	Vidth/Paved eft Shoulder (ft)*	Vidth/Paved ght Shoulder (ft)*
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NB I-95 GP Lanes (on new alignment, south of Route 17)	Interstate	75	2,215	3	12	10	10

Table 1 - General Geometry Summary

Roadway	Classification	Design Speed (mph)	Min. Curve Radius (ft)	No. Thru Lanes	Width of Thru Lanes (ft)	Width/Paved Left Shoulder (ft)*	Width/Paved Right Shoulder (ft)*
NB I-95 GP Lanes (north of Route 17)	Rural Principal Arterial (Interstate)	75	2,215	3	12	10	10
NB I-95 Slip Lanes	Interstate	75 **	2,215	2	12	10	10
NB I-95 CD Lanes (on new alignment or on existing CD Lanes)	Interstate	70	1,821	3	12	10	10
NB I-95 CD Lanes (on existing I-95 GP Lanes south of Route 17)	Rural Principal Arterial (Interstate)	75	2,215	3	12	10	10
Warrenton Road (Route 17)	Urban Principal Arterial (Other with Shoulder Design)	45	713	6 ***	12 ^	Raised Median	8
NB Route 3 Ramp C	Interchange Ramps	60	1,204	2	12	4	10
Route 17 Ramp B	Interchange Ramps	45	589	2	12^^	4	8
Route 17 Ramp D	Interchange Ramps	50	760	3	12^^	4	8
Route 17 Loop B	Interchange Ramps	35	316	1	18	4	8
Route 17 Loop D	Interchange Ramps	30	215	1	18	4	8
Route 17 Ramp C1	Interchange Ramps	25	135	1	18	4	8
Route 17 Ramp C2	Interchange Ramps	50	760	1	16	4	8
FredEx Ramp HWN Extension to NBCD	Interchange Ramps	55	960	1	16	4	8
NB I-95 GP Lanes (Option #1)	Rural Principal Arterial (Interstate)	75	2,215	3	12	10	12
NB I-95 CD Lanes (Option #2)	Interstate	70	1,821	3	12	10	10

^{*} When guardrail (or barrier) is required, shoulder widths and limits of paving shall be increased in accordance with Standard GR-MGS-INS and Standard MC-4. See Typical Sections.

(b) Horizontal Alignments

Proposed horizontal alignments, including curve data and associated design speeds, and the number and widths of travel lanes and shoulders for each Project roadway, have been presented within our Volume II Design Concept. Existing conditions and information about barrier locations and types, retaining wall locations, existing and proposed soundwalls, bridges, drainage elements, pavement information, provision for the Future 4th Lane on I-95, and other relevant data are also depicted. Appropriate notes and other call-outs have been provided along with information describing and depicting Options #1, #2 and #3. The horizontal alignments meet or exceed the Project envisioned scope and benefit VDOT and the public by reducing overall impacts, enhancing construction productivity and maximizing safety and operations. This is accomplished by providing enhancements that exceed the RFP requirements, as presented in Figure 4.3.2.

To provide benefits to VDOT and the public, our Team optimized horizontal alignments in six distinct locations as discussed in detail below. The adjustments made to the RFP Conceptual Plans are seen in the

^{**} Enhancement provided by our Team.

^{***} Three lanes in each direction.

Eleven foot lanes through Sanford Drive/South Gateway Drive intersection.

^{^^} Pavement widths widened for horizontal curvature.

Layered PDF files provided which depict plan views of our Volume II Design Concept overlaid with the RFP Conceptual Design.

1. Northbound Route 3 Ramp C

Between the existing Route 3 On-Ramp to Northbound (NB) I-95 and the Cowan Boulevard overpass, the proposed NB Route 3 Ramp C horizontal alignment is shifted towards the existing NB I-95 travel lanes by as much as nine feet to maximize the reuse of pavement recently installed with the I-95 Safety Improvements

at Route 3 Project. This allows our Team to minimize earthwork and reduce right-of-way impacts along the outside of NB I-95 as shown in Figure 4.3.1.1 (*Enhancement 001*). This adjustment accounts for the Future 4th Lane on NB I-95 while establishing full-width shoulders, a traversable ditch section that facilitates surface and subsurface runoff and a 34' Clear Zone between the ramp and the Future 4th Lane on NB I-95.

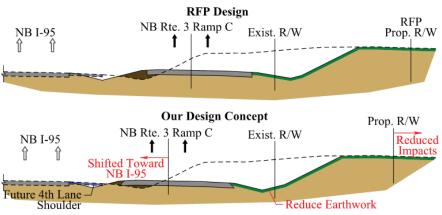


Figure 4.3.1.1 - NB Route 3 Ramp C Horizontal Shift Towards NB I-95

2. Northbound I-95 Slip Lanes

Beginning approximately 700 feet south of the existing Fall Hill Avenue overpass, the NB Route 3 Ramp C horizontal alignment is optimized in conjunction with the configuration of the NB I-95 Slip Lanes and associated NB I-95 General Purpose (GP) and Collector-Distributor (CD) alignments. North of the

Fall Hill Avenue overpass, the NB I-95 GP Lanes are shifted towards the Southbound (SB) I-95 GP Lanes currently under construction as part of the I-95 SB CD Lanes - Rappahannock River Crossing Project (I-95 SB RRC), such that the two barrels of roadway become concentric to and immediately adjacent to one another.

The horizontal adjustment of the NB I-95 GP Lanes facilitates the reconfiguration of the NB I-95 Slip

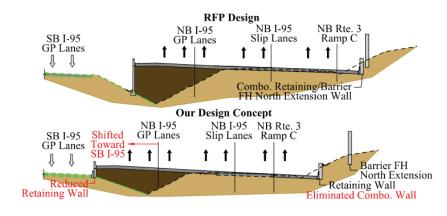


Figure 4.3.1.2 - NB I-95 GP Lane, Slip Lane, and NB Route 3 Ramp Optimization

Lanes, providing a 75 mph design speed, while simultaneously enabling NB Route 3 Ramp C to converge with the existing traveled way much further south when compared to the RFP Conceptual Design. These geometric adjustments facilitate *Enhancements 004, 005 and 006* as shown in our Volume II Design Concept while providing the same number of travel lanes and merge lengths as the RFP Conceptual Plans.

As shown in Figure 4.3.1.2, these modifications eliminate a combination retaining/soundwall that would have been necessary to implement in the RFP Conceptual Design for Barrier FH North Extension and reduce the retaining wall between the NB and SB barrels of I-95 north of Fall Hill Avenue by over 22,000 square feet. Additionally, the horizontal adjustments facilitate a depressed median between the NB I-95 GP and CD Lanes approaching the Rappahannock River - the advantages of which are discussed in

the sections below.

As shown in Figure 4.3.1.3, *Enhancement 003* provides future median barrier and drainage elements between NB Route 3 Ramp C and NB I-95 in their ultimate locations for the Future 4th Lane on NB I-95. Specifically, approaching the existing Fall Hill Avenue overpass from the south, our Volume II Design

Concept retains the NB Route 3 Ramp C horizontal geometry, but replaces two separate runs of guardrail between the ramp and NB I-95, as shown in the RFP Conceptual Plans, with concrete median barrier. In addition to constructing median barrier in its ultimate location, our enhancement eliminates a median ditch and locates drop inlets and storm sewer where required for the Future 4th Lane improvement. This *reduces VDOT's future construction costs and traffic impacts*.

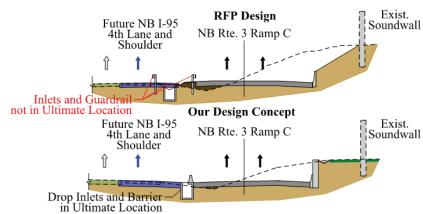


Figure 4.3.1.3 - Enhanced Median Condition Between NB Route 3 Ramp C and NB I-95

3. Northbound I-95 GP/CD Lanes South of the Rappahannock River

Between the NB I-95 Slip Lanes and the Rappahannock River, the NB I-95 GP Lanes are shifted to be directly adjacent to, concentric with and generally at the same elevation as the SB I-95 GP Lanes currently under construction as part of the I-95 SB RRC Project as shown in Figure 4.3.1.4 (*Enhancement 007*). At the same time, we also shifted the four-lane section of the NB I-95 Slip Lanes to the south to minimize

impacts outside of NB I-95. Not only do these horizontal adjustments reduce the necessary retaining wall between the NB and SB I-95 barrels, they also reduce the vertical bifurcation between the SB and NB I-95 GP Lanes and facilitate a depressed median between the NB I-95 GP and CD Lanes.

The depressed median considerably reduces the overall drainage infrastructure necessary to collect and route runoff by implementing open channel flow in lieu of closed drainage systems along NB I-95, *reducing*

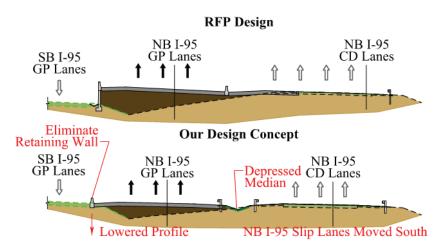


Figure 4.3.1.4 - NBI-95 GP/CD Lanes Configuration South of the Rappahannock River

future VDOT inspection, maintenance, and construction costs. The depressed median also reduces the overall impervious area, decreasing the amount and velocity of water at certain outfalls. Because the median within this area varies between MB-7F just north of the NB I-95 Slip Lanes, to depressed median, and then back to MB-7E just south of the Rappahannock River, opportunity to further reduce impervious area within the MB-7E exists by eliminating the concrete cap and replacing it with pervious material.

As the NB I-95 GP alignment approaches the Rappahannock River, it is located to center the proposed bridge (B609) between the existing NB I-95 Bridge and the SB I-95 GP Lanes Bridge currently being constructed as part of the I-95 SB RRC Project (Enhancement 013). Centering bridge B609 enhances constructability and ensures VDOT inspection and maintenance operations can easily reach the underside of the superstructure from the deck without the need to purchase or rent specialized equipment.

4. Northbound I-95 GP/CD Lanes North of the Rappahannock River

During our review of the RFP Conceptual Plans, we noticed that the median widths on either side of the NB I-95 GP Lanes, north of the Rappahannock River, would not be wide enough nor deep enough to outfall the SB I-95 drainage elements currently being constructed. Moreover, to achieve proper freeboard, the narrow median ditches would require concrete lining and multiple drop inlets. These would have increased the

construction cost and VDOT's longterm maintenance responsibilities.

To address these concerns, our Team shifted the NB I-95 GP Lanes to be directly adjacent to, concentric with and generally at the same elevation as the NB I-95 CD Lanes (existing NB I-95) as shown in Figure 4.3.1.5 (*Enhancements 007 and 012*). This adjustment retains as much of the depressed median between the NB and SB I-95 barrels as possible and minimizes impacts to drainage

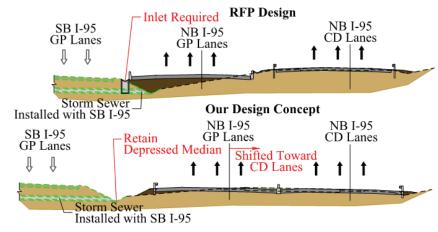


Figure 4.3.1.5 - NB I-95 GP/CD Lanes Configuration North of the Rappahannock River

elements associated with the I-95 SB RRC Project. This optimization considerably reduces the overall drainage infrastructure necessary to collect and route runoff (open channel flow versus closed system), reduces the overall impervious area, decreases the volume and velocity of water at certain outfalls, and minimizes water quality treatment requirements.

5. Route 17 Interchange

At the Route 17 Interchange, our Concept implements two different geometric adjustments that increase safety and operations while minimizing right-of-way impacts along Ramp D.

The first adjustment shifts the NB I-95 CD Lanes towards the GP Lanes just south of the Route 17 Ramp D diverge as shown in Figure 4.3.1.6 (*Enhancement 008*). This shift provides more width to the outside of the CD Lanes such that three full-width through lanes and a full-width deceleration lane are implemented on the CD roadway approaching the ramp diverge. Similar to the RFP Conceptual Plan,

two lanes will diverge towards Route 17 and two lanes will continue on the CD lanes; however, the choice lane configuration associated with the RFP Conceptual Plans will be eliminated. The proposed configuration allows for deceleration prior to the diverge without impacting through traffic on the CD lanes, while offering a 15-20% reduction in density during the peak hour in year 2042. Existing pavement already exists in this area and will be milled and overlaid as required to provide the auxiliary lane.

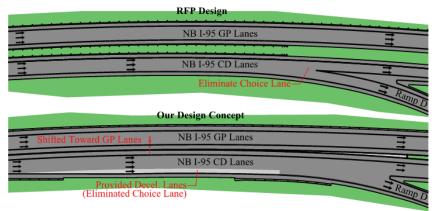


Figure 4.3.1.6 - Deceleration Lane on NB I-95 CD Lanes at Route 17 Ramp D

The second horizontal modification (*Enhancement 009*) shifts Route 17 Ramp D towards existing Loop D by as much as 17' when compared to the RFP Conceptual Plans and *eliminates right-of-way impacts*

to six parcels. When combined, these two changes facilitate a flatter Ramp D diverge curve with a 1,210 foot radius in lieu of the compound curves of 954 and 814 foot radii envisioned within the RFP Conceptual Plans. The lane configuration of Ramp D continues to provide triple lefts and a single right at Route 17 and are widened in accordance with AASHTO Green Book Tables 3-26b and 3-27. These improvements will provide benefits to the public in terms of safety, operations and right-of-way impacts.

6. Route 17

Along Route 17, our Team implemented horizontal adjustments to the Ramp D and Ramp B terminals. Specifically, the intersection turning radii at each ramp terminal are increased to better accommodate the Design Vehicle and the anticipated vehicle speeds approaching the intersections during free-flow conditions. These are highlighted in *Enhancements 015 and 016* within our Volume II Design Concept, and allow partial Z Recovery Areas to be implemented on Route 17 at ramp gore areas while still achieving the desired lane configuration.

For Option #3, our Team is providing curb and gutter and sidewalk immediately adjacent to Route 17 between Ramp B and the existing box culvert beneath Route 17, along with a small retaining wall over the box culvert as shown in Figure 4.3.1.7 (Enhancement 011). This eliminates a box culvert extension, two stream impacts, and impacts to an existing 12 inch sanitary force main.

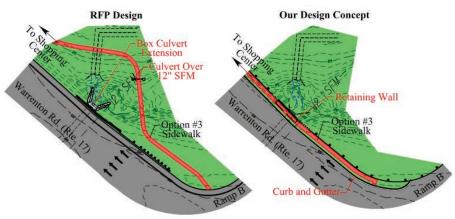


Figure 4.3.1.7 - Option #3 Enhancement 011

(c) Maximum Grades

Since nearly all of the existing roadways within the Project Limits are being utilized again, spline graded vertical profiles have been implemented for a large portion of the Project. These vertical alignments not only facilitate the establishment of appropriate superelevation and ensure proper pavement drainage, they will maximize the reuse of existing pavement, minimize pavement build-up and facilitate construction sequencing. Many of the maximum grades established for the Project are the same as the existing grades, which are in accordance with the established Project criteria.

Where portions of new roadways depart from the existing travel way, vertical profiles are established in accordance with the applicable criteria that will maximize safety and sight distance, accommodate drainage requirements, ensure bridge clearances, reduce adjacent impacts and facilitate construction. Three new vertical profiles locations will be established to include NB Route 3 Ramp C between the Route 3 interchange and the proposed NB I-95 Slip Lanes, NB I-95 GP Lanes between the NB I-95 Slip Lanes and the Rappahannock River, and should VDOT implement Option #2, a portion of the NB I-95 CD Lanes over Route 17 and Route 17 Loop D.

Maximum grades are summarized in Table 2 on the following page. These grades have been closely coordinated with existing and proposed conditions to maximize design efficiency and safety while minimizing asphalt build-up and facilitating construction activities.

Table 2 - Maximum Grades

Roadway	Maximum Grade	Maximum Allowable Grade	Location
NB I-95 GP Lanes	4.0	4.0	Sta. 4516+00.00 to Sta. 4524+80.18
NB Route 3 Ramp C	2.2	5.0	Sta. 5469+75.00 to Sta. 5473+75.00
NB I-95 Slip Lanes	1.7	4.0	Sta. 7005+40.35 to Sta. 7006+40.80
NB I-95 CD Lanes	3.5	4.0	Sta. 5610+00.00 to Sta. 5635+00.00
Route 17 (Warrenton Road)	1.4	7.0	Sta. 8027+00.00 to Sta. 8033+00.00
Route 17 Ramp B	2.3	5.0	Sta. 603+08.03 to Sta. 609+00.72
Route 17 Ramp D	1.0	5.0	Sta. 703+85.23 to Sta. 711+23.83
Route 17 Loop B	2.1	7.0	Sta. 11+00.00 to Sta. 12+00.00
Route 17 Loop D	2.6	7.0	Sta. 309+75.00 to Sta. 312+00.00
Route 17 Ramp C1	2.0	7.0	Sta. 202+09.58 to Sta. 203+68.96
Route 17 Ramp C2	2.4	5.0	Sta. 105+00.00 to Sta. 106+00.00
FredEx Ramp HWN Extension to NBCD	2.4	4.0	Sta. 6011+00.00 to Sta. 6021+00.00
NB I-95 GP Lanes (Option #1)	1.0	4.0	Sta. 4716+00.00 to Sta. 4726+00.00
NB I-95 CD Lanes (Option #2)	3.3	4.0	Sta. 5608+50.00 to Sta. 5617+00.00

(d) Typical Sections

Typical Sections for each Project roadway, including those of Options #1, #2 and #3, are provided within our Volume II Design Concept. The Typical Sections detail existing and proposed conditions including the number and width of lanes and shoulders, barrier locations and types, retaining wall locations and configurations, ditch geometry, underdrain locations, pavement information, rumble strip locations, the Future 4th Lane on NB I-95, and bridge structures. The Typical Sections meet or exceed the Project scope and benefit the public by providing safe and efficient travel corridors while minimizing impacts. For example, as shown in *Enhancement 002 and 010*, our Team provides Rumble Strips on both sides of Route 3 Ramp C for enhanced safety. In addition, our Team provides wider separation between Route 17 and the pedestrian facility (Option #3) for improved drainage and safety.

Standard Flexible Pavement (**Alternative 1**) is implemented by our Team for new and widened pavement. Mainline pavement designs extends through the shoulder areas and the demarcation marking the location of the FredEx pavement section has been provided.

(e) Conceptual Hydraulic and Stormwater Management Design

Our Team performed preliminary Hydrologic and Hydraulic Analysis (H&HA) for the I-95 GP Lanes over the Rappahannock River Bridge (B609), the associated causeway, and the extension of the triple box culvert conveying Falls Run just north of the Route 17 interchange. We also reviewed the Pipe Inspection and Assessment Report provided by VDOT to identify and categorize the conditions of existing pipes to be used as functional elements of the final design. Our effort ensures that practical solutions are provided that limit upstream and downstream impacts and address our construction sequence. We also focused

on optimal conveyance systems which efficiently utilize I-95 SB RRC Project culverts and storm sewer systems in combination with existing and proposed pipe networks.

I-95 GP Lanes over the Rappahannock River Bridge (B609)

Rappahannock River Bridge (B609) piers align with the existing NB bridge to ensure hydraulic conveyance is not impeded. During final design, our Team will complete a H&HA and scour analysis for B609 to account for the existing upstream and downstream bridges and Bridge (B609). Based on our review of available information, scour resistant hard gneiss and granite are anticipated to be encountered at the

foundation locations.

Rappahannock River Causeway

The causeway currently in place for the I-95 SB RRC Project will be utilized to the greatest extent possible when constructing B609 to minimize impacts to the Rappahannock River. However, based on the location of B609 between the existing bridges, the causeway must be modified to facilitate construction. The modification will begin with the installation of a downstream causeway finger, shown as dark riprap in Figure 4.3.1.8, just north of the North Channel. It will be installed outside the Time of Year Restriction (TOYR) to access construction of Pier 6 and other "on-land" construction elements of B609.

After I-95 SB RRC bridge construction is complete and B609 Piers 6 and 7, Abutment B, and the associated girders are in place, the portion of the existing and modified causeway on the north side of the North Channel will be removed. This will allow unimpeded fish passage and recreational use within the North Channel for the remainder of construction.



Figure 4.3.1.8 - First Causeway Modification Looking South, North Channel in the Middle

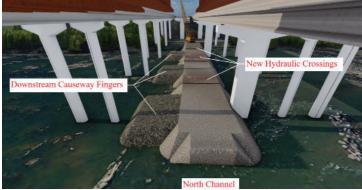


Figure 4.3.1.9 - Second Causeway Modification Looking South, North Channel in the Forefront

Simultaneously, the existing upstream causeway fingers, south of the North Channel, will be relocated to the downstream side of the causeway to access construction of B609 Piers 3, 4 and 5. New hydraulic

crossings will be added to the causeway as shown in Figure 4.3.1.9 (dark riprap and new hydraulic crossings). Once construction of B609 is completed, the causeway will be removed in its entirety.

Box Culverts

The triple box culvert conveying Falls Run, just north of the Route 17 interchange, is extended at its current skew for approximately 18'-24'. As shown in Figure 4.3.1.10, the southern wingwall angle is modified to avoid directly impacting or impeding future access to the existing 30 inch sanitary line similarly to what was shown in RFP Conceptual Plans, but without including a complicated bend within the box culvert. During final design our Team will complete a H&HA of the triple box and catalog the repairs as required by the RFP.

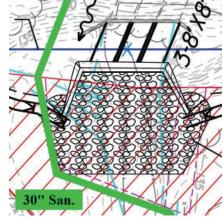


Figure 4.3.1.10 - Triple Box Culvert Wingwall Modification

Option #1 widens NB I-95 over 6'x6' box culverts. *To avoid environmental impacts and limit disturbances*, our Team provides small retaining walls at the shoulder hinge point to avoid the box culvert extensions (*Enhancement 029*).

Storm Drainage and Underdrain

Roadway drainage infrastructure, inclusive of Options #1, #2 and #3, is provided to maximize safety and appropriately convey flow from existing and proposed roadway surfaces into closed storm sewer systems or open ditches. Runoff is then directed to treatment facilities and outfalls, ensuring water quality and quantity requirements are addressed. Computations demonstrating the adequacy of roadway and bridge deck drainage elements will be developed as part of the overall Project design and will be submitted for review and approval with each plan submission. Proposed drainage divides generally adhere to the existing divides and utilize exiting systems and ditches where possible, minimizing impacts and overall construction costs.

Our Team optimized various roadway alignments and features to minimize the use of closed drainage systems as much as possible. However, due to the scope of improvements, a combination of open and closed drainage systems, utilizing non-metal pipes for permanent installation, are implemented. We examined the drainage elements currently being installed with the I-95 SB RRC Project and made certain modifications to our concept to ensure drainage infrastructure along both barrels of I-95 work in combination with one another. Furthermore, pipe rehabilitation is accounted for to ensure the structural and hydraulic capacity of existing storm sewer and culverts that are utilized as part of functional drainage systems. Underdrain is implemented as required and our Team plans to utilize double-wall, smooth interior, HDPE underdrain (*Enhancement 030*) to resist crushing during construction.

Stormwater Management Facilities

Stormwater Management (SWM) facilities are designed in accordance with Virginia Department of Environmental Quality (DEQ) II-C Criteria. Our Team has optimized the SWM design to ensure that water quality and quantity requirements are met while reducing future maintenance requirements. Our stormwater design utilizes the FredEx and I-95 SB RRC projects as "existing conditions."

Our SWM approach focuses on locations which receive large amounts of runoff in order to support higher efficiency BMP's and reduces the overall number of BMP's. *Our concept reduces the number*

of proposed SWM facilities as identified in the RFP Conceptual Plans by nearly 75% by improving the type and placement of each SWM facility and by retrofitting existing basins to provide increased treatment (Enhancement 017).

All stormwater facilities are located within the Route 3 and Route 17 interchanges. By locating facilities within interchanges, *our approach eliminates right-of-way acquisition associated with stormwater management*. This also allows for safe ingress/egress for maintenance. The treatment achieved by the proposed facility in the northeast quadrant of Route 17 interchange is optimized, as shown in Figure 4.3.1.11, by reversing the flow of an existing drainage crossing in order to collect and treat more runoff from I-95. This reduces

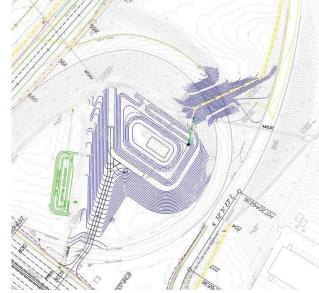


Figure 4.3.1.11 - Plan View of Pond in Route 17 Interchange Loop

long-term maintenance and right-of-way requirements.

Our methodology facilitates the *elimination of all dry swales and bioretention facilities* proposed in the RFP Conceptual Plans, which would have been costly to build, inspect, and maintain due to the filter media. Our Team's design also implements minor retrofits to two existing stormwater basins which provide several pounds of treatment without increasing maintenance requirements for VDOT, takes advantage of available nutrient credits and overtreatment from adjacent projects and provides enough water quality treatment to address Options #1, #2 and #3.

There are approximately 20 locations where concentrated flow leaves the Project site which will be analyzed using MS-19 outfall criteria. Our proposed SWM facilities provide additional detention to achieve water quantity requirements. Option #1, if implemented by VDOT, adds an additional five outfalls which will be analyzed during final design.

(f) Proposed Right-of-Way Limits

As described throughout our Technical Proposal, our enhancements minimize right-of-way impacts in several locations. In fact, as shown in Table 3, *our Team reduces the overall fee simple right-of-way acquisition area by over one acre and eliminated impacts to eight parcels*. Table 3 does not include the right-of-way areas to be acquired by VDOT for the FredEx overlap area.

Limited Access (L/A) adjustments are in accordance with the RFP Conceptual Plans and as shown in our Volume II Design Concept. The L/A adjustment shown in the southeast quadrant of the I-95/Route 3 interchange is not needed by our Team based on our stormwater management approach. Our Team will be responsible for the Commonwealth Transportation Board (CTB) approval for changes in the L/A, including those associated with Option #1.

Table 3 - Right-of-Way Reduction Summary

Parcel	VDOT Assigned Parcel Number	Fee Simple ROW Required (acre)	Fee Simple ROW Eliminated (acre)	Justification
Village of Idlewild Homeowner's Association, Inc. (GPIN 7768-87-0632)	004	1.23	N/A	N/A
Village of Idlewild Homeowner's Association, Inc. (GPIN 7768-87-0632)	005	0.41	N/A	N/A
Hylton Venture LLC GPIN 7769-94-7825)	012	2.34	0.69	Shift Route 3 Ramp C Towards NB I-95 (<i>Enhancement 001</i>)
Bragg Hill Community Corporation (GPIN 7769-99-0343)	036	0	0.13	Optimize NB I-95 Slip Lane Configuration (<i>Enhancement 004</i>)
Ronald Reginald Watts (PIN 27526)	047	0	0.03	Optimize NB I-95 GP/CD Lanes Configuration (<i>Enhancement 012</i>)
Canyon Development Company, Inc. (PIN 27543)	049	0	0.25	Optimize Route 17 Ramp D Configuration (<i>Enhancement 009</i>)
Degen, Camille J. (PIN 28062)	052	0	0.01	Optimize Route 17 Ramp D Configuration (<i>Enhancement 009</i>)
Degen, Camille J. (PIN 28061)	053	0	0.07	Optimize Route 17 Ramp D Configuration (<i>Enhancement 009</i>)

Parcel	VDOT Assigned Parcel Number	Fee Simple ROW Required (acre)	Fee Simple ROW Eliminated (acre)	Justification
Ganeshji Inc. (PIN 28095)	057	0.06	N/A	N/A
SAI Group LLC (PIN 27566)	076	0.08	N/A	N/A
I-95 Route 17 Properties LLC (PIN 27561)	078	0	0.03	Design Optimization
Boutchyard Clayton Douglas & Boutchyard Harry Daniel JR (PIN 27959)	091	.02	0	N/A
	Totals	4.12	1.23	

(g) Proposed Utility Impacts

During preparation of this Technical Proposal, our Team focused considerable effort towards minimizing and/or avoiding utility impacts. Not only are Project costs minimized by these efforts, but risk of schedule impacts as well. Specific details of our approach to utility conflicts, avoidance efforts and unavoidable impacts are described in Section 4.4.2.

(h) Soundwall Locations

Our Team considered two separate soundwalls, Barrier C and Barrier FH North Extension, when preparing our Design Concept. We understand that according to Table 6 of the Draft Final Design Noise Analysis, a total of 30,606 square feet of soundwall is to be assumed for Barriers C and FH North Extension to include drystack relief architectural treatment on both sides.

Upon advancement of Project design through the Final Design Noise Analysis, our Team, in conjunction with VDOT, will determine the final soundwall locations and dimensions following applicable criteria and procedures. Upon approval of the Final Design Noise Analysis, VDOT will prepare concurrence letters outlining the results of the analysis for the VDOT Chief Engineer and FHWA. Once concurrence is achieved, our Team will prepare and mail letters to benefitted receptors to ascertain the desire to have soundwalls constructed as part of the Project. Upon completion of the survey, VDOT will prepare a second concurrence letter documenting the results, if necessary.

Based on our optimization efforts, we do not anticipate utilizing soundwalls mounted on retaining walls and/or bridges. Where possible, we will eliminate the need for access doors by providing access via gaps in the walls. We will work to enhance aesthetics and minimize future maintenance by eliminating and/or reducing infrastructure directly adjacent to the soundwalls. In fact, based on the horizontal adjustment our Team made to the NB I-95 Slip Lanes area, we are able to ground mount the Barrier FH North Extension soundwall and eliminate the need for combination retaining/soundwall (due to the offset dimension) as required by the RFP Conceptual Plans (*Enhancement 004*).

(i) Lighting

Roadway lighting is an important safety feature, especially at high conflict point areas such as uncontrolled pedestrian crossings of intersections (Option #3). Recognizing this, we will design and install roadway lighting systems in accordance with Section 2.9.5 of Part 2 of the RFP. Lighting systems will be installed in accordance with VDOT's IIM-TE-390 and IES RP-8 lighting design criteria utilizing AGI32 software.

Preliminary locations have been shown within our Volume II Design Concept.

(j) Guardrail/Barrier

Guardrail, barrier, Bridge Pier Protection Systems (BPPS) and their associated terminals proposed by our Team will meet Manual for Assessing Safety Hardware (MASH) requirements. These elements are provided, as shown on the Typical Sections and Roadway Plans within our Volume II Design Concept, where the result of striking a fixed object hazard or leaving the roadway would be more severe than the consequence of striking the barrier. Our Design Concept has been optimized to minimize the need for guardrail, barrier and BPPS, maximizing public safety and reducing VDOT's future maintenance requirements.

In accordance with the RFP Conceptual Plans, the existing concrete median barrier along Route 17 is removed and replaced with variable width raised concrete median between Sanford Drive/South Gateway Drive and Short Street. Because the hazards associated with the I-95 overpass piers within the Route 17 median cannot be eliminated, transitions

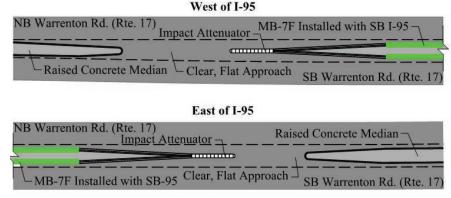


Figure 4.3.1.12 - Transition from BPPS to Raised Concrete Median on Route 17

from the MB-7F and BPPS to the proposed raised concrete median will be implemented as shown in Figure 4.3.1.12. This is accomplished by first tapering the BPPS to a standard concrete median barrier and installing an appropriate impact attenuator. Then, the proposed raised concrete median is terminated upstream of the impact attenuator to provide a clear, flat approach to the impact attenuator optimizing safety.

Should VDOT implement Option #3, our Team will extend the run-on protection along the outside of NB Route 17 necessary to shield elements of the NB I-95 CD Lanes bridge over Route 17, from what was envisioned within the RFP Conceptual Plans, ensuring the safety of vehicles and pedestrians beneath the overpass.

(k) Locations of Mill and Overlay/Build-up of Existing Pavement/New Pavement

Locations of mill and overlay/build-up of existing pavement and that of new full depth pavement have been depicted in detail within our Volume II Design Concept. For clarity, full depth asphalt pavement has been shown in dark grey while asphalt mill and overlay/build-up has been shown in tan. As a large portion of existing pavement is reutilized, spline vertical profiles are implemented, maximizing the reuse of existing pavement while minimizing asphalt build-ups and facilitating traffic switches and safety during construction.

Limits of mill and overlay on the existing NB I-95 GP Lanes begin at the southern limit of the NB I-95 Slip Lanes, proceed through the areas where the GP Lanes are converted to CD Lanes, and terminate with the new pavement currently being constructed for NB I-95 as part of the I-95 SB RRC Project, just south of Route 17. North of Route 17, mill and overlay on the existing NB I-95 GP Lanes begins again where the new pavement currently being constructed for NB I-95, as part of the I-95 SB RRC Project, ends and terminates at the northern limit of the Project, which may include Option #1.

Limits of mill and overlay on the existing NB I-95 CD Lanes, Route 17 and the existing Route 17

interchange ramps are generally in accordance with the RFP Conceptual Plans - as shown in our Volume II Design Concept. To accommodate the removal of the existing median barrier and replacement with raised median along Route 17, and to be compliant with Standard WP-1, our Team incorporates mill and overlay of a significant portion of the inside lane of Eastbound Route 17 which is not currently shown in the RFP Conceptual Plans.

As a result of our Team's enhancement to Route 17 Ramp D, Route 17 Loop D is milled and overlaid in its entirety, (*Enhancement 014*), regardless of Option #2 being implemented by VDOT.

(l) Signage

A Conceptual Signing Plan, in accordance with the RFP requirements, has been developed and presented within our Volume II Design Concept. The signs shown reflect proposed guide signs, DMS signs, and specific service signs. Advance and Exit Direction interchange guide signs along I-95 are mounted on overhead structures. Final design of all signs will follow the principles and requirements of the MUTCD, 2011 Virginia Supplement to the MUTCD, the VDOT Traffic Design Manual, and all other applicable criteria. Our Team will closely coordinate the design of Express Lanes signs with the FredEx Project to ensure all signing is in place prior to Express Lanes opening and to allow for the continuous maintenance of Express Lanes signs.

(m) Provision for Future 4th Lane on Northbound I-95

Our Team's Design Concept has been developed to ensure that the Future 4th Lane on NB I-95 could easily be installed between Exit 126 and the proposed NB I-95 Slip Lanes. We have ensured that the Future 4th Lane improvement will accommodate a 12 foot wide travel lane and a 12 foot wide shoulder and that it will not require adjustments to NB Route 3 Ramp C installed with this Project nor the established right-of-way limits. For clarity, the Future 4th Lane on NB I-95 has been shown in blue within our Volume II Design Concept.

At the entrance to the proposed NB I-95 Slip Lanes, the Future 4th Lane improvements would become the rightmost travel lane of the Slip Lane entrance. This entrance lane will be provided as part of the current Project between the Slip Lanes and the Fall Hill Avenue overpass. From the Fall Hill Avenue overpass to approximately 1,500' to the south, a concrete barrier will be provided as part of the current Project between the existing NB I-95 travel lanes and proposed NB Route 3 Ramp C (*Enhancement 003*). This barrier, and associated drainage elements, facilitate the current and future conditions associated with the implementation of the Future 4th Lane. *This Design Enhancement reduces current impacts, facilitates Future 4th Lane construction, and minimizes future costs ensuring long-term asset performance and durability*.

(n) Other Key Project Features

Intelligent Transportation System (ITS)

While ITS systems are critical to operational and incident management features of any interstate project, they are especially important for this Project given that FredEx Express Lane ITS systems extend to within the limits. This includes features such as existing overheight detection system, CCTV cameras, fiber optic cable in conduit, DMS signs, Toll Rates Signs (TRS), and access gate systems. We recognize that some of these systems are VDOT owned and operated, while some will be Express Lanes operated. Maintenance of continuous operations of these ITS devices are critical, as the FredEx Express Lanes are planned to open mid-way through construction of this Project. We fully understand the need to coordinate device design, installation, testing, and commissioning early in the development process in order to provide and maintain this full operability, and avoid relocation of existing devices to the extent possible. The final design of these devices will follow the RFP requirements, the VDOT Road & Bridge Standards and Specifications,

and all other required Standards and Specifications listed in sections 1.7.1 and 2.9.6 of RFP.

4.3.2 Conceptual Structural Plans

Both Bridge B609 over the Rappahannock River, shown in Figure 4.3.2.1, and Bridge B608 over Route

17 (Option #2) will be erected in close proximity to existing infrastructure and/or the bridges currently under construction for the I-95 SB RRC Project. Therefore, constructability and functionality in terms of future inspection and maintenance were major factors in the design of our bridge configurations. Our Team evaluated multiple configurations and alternatives for each bridge, including various span arrangements, abutment locations, superstructure types, and means and methods of construction. Our bridge designs will benefit VDOT and the public by reducing costs, minimizing traffic and environmental impacts during construction, reducing schedule risk, and minimizing VDOT's future inspection and maintenance cost. A description of the two bridges is provided in the narrative below.



Figure 4.3.2.1 - Rappahannock River Crossings at the completion of all Projects Looking North

Northbound I-95 General Purpose (GP) Lanes Over the Rappahannock River (B609)

Constructability was a major driver of our Team's proposed configuration for the Rappahannock River Bridge (B609). Given the extremely limited work area that will be available between the existing NB bridge and the newly constructed southbound bridge, we found that the span configuration depicted in the RFP Conceptual Plans would pose significant structural steel erection challenges. Following detailed analysis of multiple span configurations, our optimized configuration, (*Enhancement 024*), provides a span arrangement which will improve constructability and future maintenance, reduce the overall length and minimize the time and environmental impacts within the main channel of the Rappahannock River. Table 4 summarizes our Team's configuration of B609.

Roadway Section	Total Out-to-Out Width	Span Arrangement & Total Length	Abutment Type	Pier Type
12' Left Shoulder 3 - 12' Travel Lanes 12' Right Shoulder	63'-4''	1 Span at 129'-8" 6 Spans at 135'-0" 1 Span at 129'-8" Total Length 1,083'-4"	Virginia Abutment on H-Piles behind MSE Walls	Hammerhead on Spread Footings

Table 4 - B609 Proposed Configuration

Superstructure

The RFP Conceptual Plans propose a 5-span bridge over the Rappahannock with maximum spans of 270 feet, matching those of the adjacent southbound bridge currently under construction. Our Team considered this arrangement but concluded it to be impractical given the logistical constraints. First, the full range of crane movement needed to erect the tall, heavy structural steel girders is prevented by the proximity of the adjacent NB and SB bridges. Second, the overlapping use of the causeway by both projects, and the environmental impacts to the river, proved expansive and problematic. To address these constructability challenges, our Team developed an approach that utilizes eight shorter spans and significantly lighter structural steel girders that allows using cranes small enough to work within the constrained area.

The general construction sequence for B609 is presented in detail within Section 4.5.1, and highlights our approach to address constructability and scheduling concerns. Our approach takes advantage of the existing NB bridge. Through detailed analysis, we have determined that the structure will have adequate capacity to support cranes, positioned over the piers, to erect these lightweight girder pieces from the bridge deck. The ability to set girders from the existing bridge affords greater flexibility to work around the constraints inherent with the causeway below.

As shown in our Volume II Design Concept, our Team's proposed superstructure for B609 consists of eight continuous plate girder spans with a maximum span length of 135'. The bridge deck provides a 60' wide roadway between two 42" tall F-shape parapets, supported on seven girder lines spaced at 9'-8" with 2'-8" overhangs. These shorter span lengths and closer girder spacing, in conjunction with the use of lightweight concrete in the deck slab, permit the individual girder weights to be reduced significantly. Our total bridge length (back to back of abutment backwalls) is 1,083'- 4" compared to the RFP Conceptual Design of 1,200'-10". Our concept eliminates 117'- 6" of bridge length and over 7,400 square feet of bridge deck (Enhancement 024), a substantial savings to VDOT's long-tern inspection and maintenance costs.

Enhancement 013 locates B609 to provide 13' of horizontal clearance between the existing NB bridge and the SB bridge currently under construction to assist with constructability, and to ensure VDOT inspection and maintenance operations can easily reach the underside of the superstructure from the deck without the need to purchase or rent specialized equipment. Our profile of NB I-95 maintains a constant grade along the full length of B609 while keeping the elevations close to the adjacent bridges and locating the low point off the bridge to the north. Scuppers will provide for bridge deck runoff, ensuring the design year storm spread does not encroach upon the travel way.

Our design of the superstructure utilizes lightweight concrete and corrosion resistant reinforcing steel to reduce long-term. Bearings will be low-maintenance VDOT standard Laminated Elastomeric Pads with PTFE sliding surfaces added where needed for additional expansion. Utilizing weathering steel plate girders and providing a jointless structure further reduces future maintenance and inspection costs.

Substructure

As shown in Figure 4.3.2.2 on the following page, seven piers and two abutments are aligned with the adjacent existing NB I-95 Bridge, resulting in maximum spans of 135 feet. The proposed pier locations minimize scour and will not introduce additional impacts to boat traffic nor will they increase potential for debris accumulation. The proposed substructure locations also avoid impacts to the Rappahannock Navigation Canal, the Rappahannock Canal Lock #1 / Minor's Lock and will not encroach into the North Channel of the river.

The hammerhead piers will be founded on spread footings on competent rock. Access via the causeway to the foundation locations for exploratory borings will be limited by TOYR and adjacent construction activities. Therefore, to accelerate design, immediately upon NTP, our Team is prepared to coordinate with the I-95 SB RRC Design-Builder to gain access on the causeway for our geotechnical subsurface explorations for Piers 1-5. For Piers 6 and 7, where the northern portion of the causeway will not be available until after October 15, 2020 due to TYOR, our Team will utilize available subsurface geotechnical information to conservatively design these foundations. *Confirmatory borings (Enhancement 026)* for these foundations will then be completed at risk following the Scope Validation Period when the causeway needed for the NB I-95 Bridge is in place, as discussed in Section 4.4.3.

Virginia Abutments with buried approach slabs, supported on H-piles behind MSE Walls are utilized. The MSE walls feature architectural treatment, matching the adjacent newly constructed SB I-95 Bridge,

enhancing the aesthetics (*Enhancement 025*).



Figure 4.3.2.2 - Elevation View of the Rappahannock River Crossings Depicting Pier Alignment

I-95 Collector-Distributor (CD) Lanes Over Route 17 (Option #2) (B608)

Option #2 requires replacement of the existing NB I-95 CD Lanes bridge over Route 17. Should VDOT implement this option, our Team will improve the vertical clearance while maintaining the span arrangements of the three bridges currently under construction as part of the I-95 SB RRC Project. Table 5 summarizes our Team's configuration of B608.

Total Span Roadway Out-to-Out Arrangement & Pier Type **Abutment Type** Section Width Total Length 12' Left Shoulder 63'-4" 1 Span at 69'-10" Full Integral on H-Piles Multi-Column on Pile 3 - 12' Travel Lanes 1 Span at 73'-10" behind MSE Walls **Footings** Total Length 145'-0" 12' Right Shoulder

Table 5 - B608 Proposed Configuration

Superstructure

Given the span requirements of the RFP, our Team determined that prestressed concrete Bulb-T beam spans continuous for live load would be the most cost-effective alternative for B608. The bridge deck will provide a 60' wide roadway between two 42" tall F-shape parapets, supported on eight girder lines spaced at 8'- 4" with 2'-6" overhangs. To obtain the required clearance above Route 17 of 16'- 6", the NB I-95 CD Lanes profile will be raised and the shallowest Bulb-T section possible (29") will be utilized to minimize the grade change.

Material selections were made with consideration toward reducing future inspection and maintenance needs, including the use of low permeability concrete, corrosion resistant reinforcing, prestressed concrete beams, and VDOT Standard Laminated Elastomeric Bearings.

Substructure

One pier and two abutments are aligned with the three adjacent bridges currently under construction as part of the I-95 SB RRC Project. The proposed substructure locations accommodate clearance below the bridge (16'- 6") a total of eight, 12' travel lanes and shoulders, BPPS, and pedestrian facilities on Route 17.

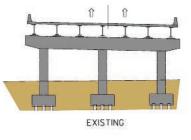
The pier consists of a multi-column bent with H-pile foundations. The abutments are Full Integral supported on H-piles behind MSE Walls (featuring drystack relief architectural treatment). Per the RFP, the MSE

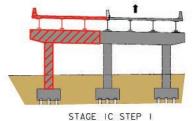
4.3 Design Concept

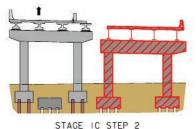
walls do not need to provide for future widening on or below the bridge. B608 will be built within the footprint of the existing bridge, requiring staged construction to accommodate traffic as shown in Figure 4.3.2.3. As discussed with VDOT in our Proprietary Meetings, the existing bridge was constructed with partial-depth prestressed deck panels, which can only be removed in full-bay increments. This induces limits on the amount by which the bridge can be partially demolished while remaining open to traffic during construction.

Therefore, the proposed superstructure and substructure configurations were selected with partial consideration of the temporary staging to accommodate demolition and erection. As discussed in Section 4.5.1, early opening of the new left turn lanes on Route 17 Ramp D and the closure of Route 17 Ramp C allows traffic across the bridge to be reduced to a single lane during construction, enhancing safety as well as constructability. Load ratings will be performed for the final configuration and for all construction stages of the new and existing bridges before placing into service.

The proposed pier for B608 within the median of Route 17 is in the same location as the existing pier. Although the RFP allows the reuse of the existing piles and footings in the proposed structure pending verification by non-destructive testing, uncertainty over their capacity introduces risk if the testing reveals lower resistance than assumed for design. To mitigate this risk, the pier is designed to be supported entirely on new piles driven outside the existing foundation. The pier for the first step of construction can be fully built without the need to remove any existing foundations. In the second step of construction, two existing pile caps will need to be demolished where in conflict with the new foundations, but all existing piles may be left in place below grade and will be isolated from the new structure.







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Figure 4.3.2.3 - Bridge B608 Construction Staging

Retaining Walls

Due to the immediate adjacent infrastructure, and to minimize impacts, retaining walls are required in several locations. Our Team worked diligently to limit the scope of these walls and provided several geometric optimizations. Table 6 summarizes the retaining walls that are shown in our Volume II Design Concept. Following Table 6, a narrative regarding our proposed configuration for Retaining Walls #1A, #1B, and #1C is provided.

Table 6 - Retaining Walls

Retaining Wall	Roadway	Location	Length (feet)	Cut/ Fill	Туре	Benefit
Retaining Wall #1A	NB Route 3 Ramp C	Sta. 5484+60.00 RT to Sta. 5493+50.00 RT	890	Cut	Post and Panel	Eliminate Impact to Existing Soundwall
Retaining Wall #1B	NB Route 3 Ramp C	Sta. 5495+55.00 RT to Sta. 5501+00.00 RT	600	Cut	Post and Panel	Eliminate Impact to Existing Soundwall
Retaining Wall #1C	NB Route 3 Ramp C	Sta. 5501+92.41 RT to Sta. 5506+45.00 RT	453	Cut	Post and Panel	Eliminate Impact to Existing Soundwall

Retaining Wall	Roadway	Location	Length (feet)	Cut/ Fill	Туре	Benefit
Retaining Wall #2	NB I-95 GP Lanes	Sta. 4506+34.80 LT to Sta. 4519+45.00 LT	1,310	Fill	MSE w/ Concrete (F-Shape) Moment Slab	Facilitate NB I-95 GP Lanes
Retaining Wall #3	Route 17 (Warrenton Road)	Sta. 8204+34.00 RT to Sta. 8204+94.70 RT	61	Fill	Modified RW-3	Eliminate Box Culvert Extension
Retaining Wall #4 (Option #3)	Route 17 (Warrenton Road)	Sta. 8204+33.79 RT to Sta. 8204+94.27 RT	61	Fill	Modified RW-3	Eliminate Box Culvert Extension
Retaining Wall #5 (Option #1)	NB I-95 GP Lanes	Sta. 4689+00.00 RT to Sta. 4690+00.00 RT	100	Fill	Modified RW-3	Eliminate Box Culvert Extension and Wetland/Stream Impact
Retaining Wall #6 (Option #1)	NB I-95 GP Lanes	Sta. 4710+00.00 RT to Sta. 4711+25.00 RT	125	Fill	Modified RW-3	Eliminate Box Culvert Extension and Wetland/Stream Impact
Retaining Wall #7 (Option #1)	NB I-95 GP Lanes	Sta. 4721+50.00 RT to Sta. 4722+50.00 RT	100	Fill	Modified RW-3	Eliminate Box Culvert Extension and Wetland/Stream Impact

Retaining Walls #1A, #1B, and #1C

As shown in our Volume II Design Concept and presented in Figure 4.3.2.4, Retaining Walls #1A, #1B, and #1C located outside of NB Route 3 Ramp C, adjacent to Fall Hill Avenue and in front of existing soundwalls, are configured to ensure the soundwalls remain serviceable after construction of Ramp C. Specifically, the retaining wall extends from the finished grade of the Ramp C shoulder towards the existing ground line to minimize excavation adjacent to the soundwall. Specifically, a 4' bench and 2:1 slope is implemented.

In this location, the RFP Conceptual Plans depict a short barrier/retaining wall with a cut slope leading up to the soundwall. From our review and analysis of the existing soundwall and associated geotechnical information, we know that the design of the soundwall assumed a relatively flat grade adjacent to the

foundations and that excavation within 6 times the shaft diameter (36") of the soundwall may adversely impact the lateral capacity of the existing foundation shafts. Therefore, to avoid having to reinforce the lateral capacity of the soundwall foundations or otherwise impact the soundwalls, our Concept provides post and panel retaining walls adjacent to the Ramp C shoulder that avoid impacting the functionality of the existing soundwall.

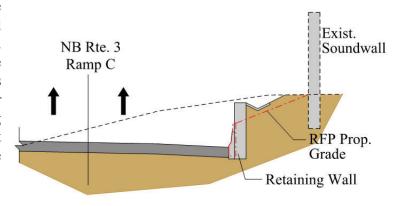


Figure 4.3.2.4 - Retaining Walls #1A ,#1B, and #1C Configuration

Figure 4.3.2 4.3 Design Concept STATE DESIGN ENHANCEMENTS AND BENEFITS 0095-111-270 P101, R201, C501 95 VA. ENHANCEMENT 005 ENHANCEMENT 023 PROVIDE 75 MPH DESIGN SPEED ON NB I-95 SLIP LANES MINIMIZE TOTAL PROPOSED RIGHT-OF-WAY ACQUISITION BY OVER ONE ACRE ENHANCEMENT 006 OPTIMIZE NB I-95 SLIP LANE AND I-95 NB GP/CD LANES CONFIGURATIONS BENEFIT: ENHANCE OPERATIONS BENEFIT: REDUCE IMPACTS AND RIGHT-OF-WAY ACOUISITION AND ENHANCE PUBLIC ACCEPTANCE ENHANCEMENT 004 BENEFIT: REDUCE RETAINING WALL AND FUTURE MAINTENANCE BETWEEN NB AND SB I-95 CONTRACTING COMPANY, LLC OPTIMIZE NB I-95 SLIP LANE CONFIGURATION ENHANCEMENT 013 BENEFIT: ELIMINATE RETAINING/SOUNDWALL COMBO., REDUCE FUTURE MAINTEANCE AND MINIMIZE IMPACTS SB I-95 GP Lanes BENEFIT: ENHANCE CONSTRUCTABILITY AND FUTURE MAINTENANCE ACTIVITIES, REDUCE TRAFFIC IMPACTS AND ENHANCE SAFETY NB 1-95 GP Lanes ENHANCEMENT 003 ENHANCEMENT: PROVIDE FUTURE CONCRETE MEDIAN BARRIER BETWEEN RTE. 3 RAMP C AND NB I-95 GP LANES ENHANCEMENT 017 BENEFIT: REDUCE FUTURE COSTS I-95 SBRRC NB I-95 CD Lanes REDUCE NEW SWM FACILITIES (UPC 101595) BENEFIT: REDUCE CONSTRUCTION.
RIGHT-OF-WAY ACQUISITION. AND FUTURE MAINTENANCE ENHANCEMENT 024 OPTIMZE CONFIGURATION AND REDUCE B609 LENGTH Sound Wall (Barrier FH BENEFIT: ENHANCE CONSTRUCTION. North Extension) REDUCE FUTURE MAINTENANCE AND ELIMINATE DESIGN WAIVER NO. 2 I-95 SBRRC ENHANCEMENT 007 ENHANCEMENT 025 (UPC 101595) OPTIMIZE MEDIAN CONFIGURATION BENEFIT: REDUCE RUNOFF. DRAINAGE INFRASTRUCTURE AND FUTURE MAINTENANCE BENEFIT: ENHANCE AESTHETICS AND MATCH I-95 SB ABUTMENT NB 1-95 GP Lanes ENHANCEMENT 001 ENHANCEMENT 002 ENHANCEMENT 026 SHIFT RTE. 3 RAMP C TOWARDS NB I-95 GP LANES PROVIDE RUMBLE STRIPS ON RTE, 3 RAMP C Sound Wall Future 4th Lane (By Others) (Barrier C) NB Rte. 3 Ramp C BENEFIT: MINIMIZE IMPACTS BENEFIT: ENHANCE SAFETY BENEFIT: ACCELERATE CONSTRUCTION ENHANCEMENT 007 ENHANCEMENT 018 ENHANCEMENT 021 ENHANCEMENT 027 ENHANCEMENT 011 UTILIZE TIGHTER THAN
REQUIRED CHANNELIZING DEVICE SPACING SELF-LIMIT LANE CLOSURE HOURS TO SMALLER TIME PERIODS THAN RFP REQUIREMENT OPTIMIZE MEDIAN CONFIGURATION PROVIDE TEMP. RAISED
PAVEMENT MARKERS PROVIDE CURB AND GUTTER (OPTION #3) BENEFIT: REDUCE RUNDFF, DRAINAGE INFRASTRUCTURE AND FUTURE MAINTENANCE BENEFIT: ENHANCE SAFETY DURING CONSTRUCTION BENEFIT: ENHANCE SAFETY DURING CONSTRUCTION BENEFIT: LIMIT IMPACTS TO THE PUBLIC BENEFIT: ENHANCE SAFETY AND MINIMIZE UTILITY CONFLICTS ENHANCEMENT 019 ENHANCEMENT 022 ENHANCEMENT 030 ENHANCEMENT 012 IMPLEMENT WIDER THAN
REQUIRED TEMP. LANE LINES PROVIDE SPEED DISPLAY TRAILER IN THE WORK ZONE ENHANCEMENT 016 UTILIZE DOUBLE-WALL Option *3-OPTIMIZE
NB I-95 GP/CD LANES CONFIGURATION INCREASE TURNING RADII AT RTE. 17 RAMP B TERMINAL BENEFIT: RESIST CRUSHING DURING CONSTRUCTION BENEFIT: ENHANCE SAFETY DURING CONSTRUCTION BENEFIT: ENHANCE SAFETY DURING CONSTRUCTION Option *2 BENEFIT: REDUCE RUNOFF, DRAINAGE INFRASTRUCTURE AND FUTURE MAINTENANCE BETWEEN NB AND SB I-95 BENEFIT: ENHANCE OPERATIONS ENHANCEMENT 020 Rte. 17 Ramp B I-95 SBRRC UTILIZE TEMP. LANE SHIFTS 2 TIMES LONGER THAN REQUIRED FredEx (UPCII0527) Rte. 17 Loop B (UPC_101595) BENEFIT: ENHANCE SAFETY DURING CONSTRUCTION Rte. 17 SB I-95 GP Lanes Ramp D Option */ Rte. 17 ENHANCEMENT 008 Ramp C2 Loop D ENHANCEMENT 010 PROVIDE WIDER SEPARATION (OPTION #3) ENHANCEMENT 029 BENEFIT: ENHANCE SAFETY AND OPERATIONS NB I-95 GP Lanes PROVIDE FILL RETAINING WALL (OPTION #1) BENEFIT: ENHANCE DRAINAGE AND PEDESTRIAN SAFETY ENHANCEMENT 009 Overlap Area BENEFIT: ELIMINATE IMPACTS TO WETLANDS AND W.O.U.S OPTIMIZE RTE. 17 RAMP D CONFIGURATION ENHANCEMENT 015 FredEx Ramp HWN Rte. 17 INCREASE TURNING RADII AT RTE. 17 RAMP D TERMINAL BENEFIT: REDUCE IMPACTS AND ELIMINATE RIGHT-OF-WAY ACQUISITION Extension to NBCD Ramp CI Denotes Future Fourth Lane (By Others) Denotes Option *I BENEFIT: ENHANCE OPERATIONS ENHANCEMENT 014 Denotes Option *2 Denotes 95 SBRRC (UPC IOI595) MILL AND OVERLAY ENTIRE RTE: 17 LOOP D Denotes Option *3 Denotes FredEx (UPC 110527) BENEFIT: ENHANCE OPERATIONS AND REDUCE FUTURE MAINTENANCE Note: Enhancement 028 Not Used 0095-111-270

4.4 - Project Approach



4.4.1 Environmental Management Approach

A comprehensive environmental risk management approach will be implemented by our Team to carry out the environmental commitments during design and construction to ensure the Project's success. Our Team's approach begins with the commitment to create a culture of proactive and innovative environmental stewardship. To enact this approach, an Environmental Compliance and Management Team (ECMT) is assembled, which is a collaboration of the following:

- Roadway, drainage, and stormwater management engineers that can evaluate, anticipate, and protect environmental resources through phased erosion and sediment control and utilization of an Environmental Constraints Map (ECM) updated in real-time;
- Dedicated and committed construction personnel that are diligent and adaptable in the installation, inspection, and maintenance of erosion and sediment controls (ESC) on the Project site; and
- A full contingent of environmental scientists, Professional Wetland Delineators (PWDs), and certified arborists with extensive knowledge of the permitting process and the subtle nuances of each regulatory agency.

In fact, the ECMT has held preliminary discussions with several regulatory agencies during the preparation of this Technical Proposal geared towards identifying, avoiding, and minimizing Project impacts to environmental resources. Table 7 below outlines our approach and methods to mitigate potential delays due to recognized environmental conditions within the Project footprint.

Table 7 - Environmental Concerns and Potential Solutions

Recognized Environmental Condition	Method to Mitigate Potential Delay
Threatened and Endangered Species	 No impacts to T&E anticipated and TOYR implemented for all in stream work. Bat Inventory conducted 14 days prior to work below bridge deck and after expiration of existing bat inventory. Conduct mussel relocation survey prior to expiration of Fall 2018 survey.
Cultural Resources & Section 4(f) Resources	 Utilize ECM overlay of cultural resources and on-call subconsultant to avoid impacts. Utilize existing access to 4(f) Resources, Rappahannock Navigation Canal, and Rappahannock Canal Lock to avoid adverse effects and adhere to de minimis impact findings. Utilize, maintain, and/or improve existing protection measures to 4(f) and cultural resources as needed. No alterations of the characteristics of Railroad properties. Assist VDOT with expedited submission of design plans and documentation required for VDHR and FHWA review and approval. Cemetery 44ST1226, at the southern end of the Project will be demarcated with orange safety fence.
Hazardous Materials	 Reduced ROW acquisition to avoid known preexisting hazardous materials. Begin coordination for access to Phase I ESA and Phase II ESA properties at NTP.

Recognized Environmental Condition	Method to Mitigate Potential Delay
Wetlands/Streams/Water Quality Permitting	 Facilitate Pre-Application Meeting with VDOT and regulatory agencies to ensure complete application submission and expedited permitting. Complete and submit CZMA consistency determination to DEQ at NTP. Preliminary coordination with regulatory agencies to facilitate expedited permitting of causeway impacts. Utilize existing causeway with limited modifications to avoid additional impacts.
Noise	 Avoid significant changes in horizontal alignment or vertical profiles which would change the results of the Preliminary Noise Analysis. Shifted noise wall to prevent alterations of the characteristics of Railroad properties.

Environmental Risk Management During Design

One of the largest challenges facing the design is to ensure that recognized environmental conditions are addressed, impacts to environmental resources are minimized, all necessary environmental permits are obtained on-time, and that compliance with the plans and permits is maintained. These risks are managed by the use an Environmental Constraints Map (ECM), formal and informal coordination meetings and phased erosion and sediment control design matching construction design.

Environmental Constraints Map

As a tool to address environmental concerns and ensure avoidance and minimization practices will be implemented, our Team has developed an Environmental Constraints Map (ECM) – a Microstation file containing all known environmental elements within and adjacent to the Project. Creating, providing and maintaining the ECM during procurement, through design and into construction ensures that our Team identifies, avoids and minimizes environmental impacts - reducing risk and the potential for delay. By utilizing our Team's ECM during the procurement phase, we have reduced impacts to wetlands and W.O.U.S. compared to the RFP Conceptual Design.

Formal and Informal Meetings

To further guarantee avoidance and minimization strategies are implemented during design and ensure environmental conditions have been integrated into the Project Schedule, the ECMT facilitates open communication between all stakeholders through a series of formal and informal environmental meetings

presented in Figure 4.4.1.1. This communication identifies predecessor and successor activities including realistic timeframes for preparing documents and third-party reviews.

After the ECMT has fully vetted the draft permit and impact limits, a meeting with VDOT and the regulatory agencies will be scheduled. During this meeting, impact limits based on

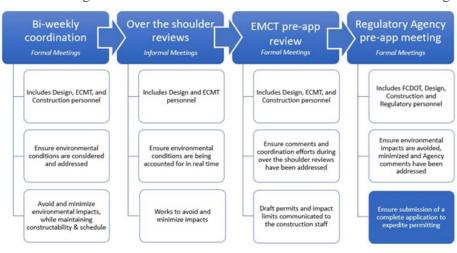


Figure 4.4.1.1- Formal and Information Environmental Meetings and Activities

design plans will be reviewed and comments regarding the design will be addressed. This will reduce the potential for delay of permit approvals caused by design adjustments, omission of data, additional information requests, and/or permit modifications.

Erosion and Sediment Control Design

Phased Erosion and Sediment (E&S) Control Plans, which mirror construction staging, will be developed in conjunction with the post-construction Stormwater Management (SWM) Plan, Pollution Prevention (P2) Plan, and Stormwater Pollution Prevention Plan (SWPPP). A DEQ certified Combined Administrator will perform an independent plan review and certify that the SWPPP prepared for the Project is in accordance with the applicable criteria. Utilizing this approach, our Team can ensure each control is installed and maintained for the specific stage of construction. In addition, this will be used to determine which phase of ESC measure will need to be installed. Due to the increased scrutiny on ESC measures and the nature of some underlying soils within the Project area, the use of more robust devices, such as super silt fence instead of silt fence, will ensure sediment laden runoff is controlled within the Project limits and undesired downstream impacts are avoided.

Environmental Risk Management During Construction

During construction, our EMT will coordinate closely with the permitting agencies to ensure permit requirements are met, construction monitoring is completed efficiently and effectively, and all documentation is up-to-date. Our EMT affirms our commitment to work together to achieve the following objectives:

- 100% environmental protection and compliance while building and maintaining environmental protection measures;
- Ensure the utilization and maintenance of appropriate environmental protection measures, using sound judgment and teamwork;
- Maintain a "green" status for the NPDES/ECI permit inspections throughout the duration of the Project; and
- Recognize, report, and quickly resolve any issues that may arise.

Pre-Construction Coordination

Prior to the start of construction activities, our ECMT returns to the Project site and properly demarcates all wetlands and Waters of the United States (WOUS) to ensure limits are easily identifiable by construction personnel. Our ECMT ensures that the wetland and WOUS are protected by silt fence and orange safety fence, as shown in the approved Erosion and Sediment Control (ESC) Plans, to avoid impacts to non-permitted areas. Permit impact plates, detailing the temporary and permanent impact limits, will also be shared with construction personnel to avoid impacts to non-permitted areas. Additionally, a preconstruction Environmental Constraints and Commitments Meeting will be held to educate all parties on the allowable limits of work specific to the Project.

Installation, Maintenance and Inspection of Erosion and Sediment Controls

Our Team takes a proactive approach towards environmental compliance and our crews have extensive experience and are knowledgeable of the standards for all types of E&S controls. We familiarize personnel with the Project site, topography and existing drainage patterns in order to provide thorough constructability reviews of the design plans. Upon mobilizing, issuance of land disturbance permits and Released for Construction Plans, Shirley and its subcontractors proceed with installation of E&S controls before any land disturbance takes place. While it is common to dedicate a crew to installation and maintenance of E&S controls, all crews participate in these critical activities and review the areas in which they are working daily, prioritizing environmental compliance equally with safe work practices.

To support our construction teams, *Shirley has established an Environmental Department consisting of an Environmental Program Manager and full-time Environmental Inspectors*. The Environmental Inspectors primary functions are to perform the bi-weekly C-107 inspections, update the Stormwater Pollution Prevention Plan (SWPPP), and ensure compliance with all applicable environmental permits and regulations. The Inspectors participate in inspections performed by VDOT NPDES and Environmental Compliance Inspectors, and DEQ. They provide updates to VDOT on the status of any action items identified during the inspections, fostering communication and providing assurance to VDOT that corrective action is performed in a timely manner. The Inspectors also perform routine audits to ensure that the SWPPP and all other documentation is properly maintained.

C-107 Compliance Checks

Field inspections, completed on a twice-weekly basis, are to be completed by construction staff to identify deficiencies in E&S Control measures and areas where additional controls may be necessary. The C-107 Compliance Checks will be combined with the monthly construction compliance inspections as necessary to ensure adherence to the recently updated regulations released in the 2019 Construction General Permit (CGP).

Virginia Water Protection (VWP) Permit Inspections

Due to additional scrutiny being placed on environmental permit compliance, our ECMT will perform monthly site visits. They will confirm that permit requirements are being met, E&S Control measures are properly installed and maintained, and areas where additional attention may be required are identified and addressed before they become a deficiency on a formal log or C-107 Compliance Check. During these site visits, our ECMT utilizes tablets, paired with GIS software and KMZ files to display the Project area and jurisdictional impact limits on Google Earth. By pinpointing the location of both the Inspector and impacted area in real time, potential deviations from the permitted impacts are able to be assessed accurately and immediately. Additionally, these site visits provide opportunities for permitting and construction staff to evaluate upcoming field activities, which has proven to be effective in mitigating potential issues before they become problematic.

VWP Compliance Reporting

To assure permit compliance, our ECMT will complete the monthly VWP Permit Inspection Checklist and Biannual Construction Status Update Forms to document construction progress along with the timing of impacts for all permitted areas. In the event that an undesired sediment release or non-permitted impact occurs during construction, due to an unforeseen event such as an excessive rain event or ESC failure, our ECMT will quickly contact VDOT and applicable regulatory agencies to identify and implement appropriate corrective action measures.

On-Call Assistance

Inevitably, during construction, conditions may arise that will require immediate attention. Our ECMT will be available to meet on-site to address these potential concerns, providing information that will properly account for commitments and restrictions, previously identified during design. Should field conditions occur that necessitate additional impacts, our ECMT will work with regulatory agencies to quickly expedite and implement permit modifications.

4.4.2 Utilities

Our Team views the utility scope as a critical element of any successful design-build project delivery. Led by our Utility Manager, we have established a group of experienced, dedicated, in-house resources that focus solely on overseeing and managing this scope. Over the years, our Team has developed strong working relationships with each of the utility owners in the region that is vital to ensure positive and

efficient coordination. Our past design-build projects have required coordination with many of the same utility companies that are present on this Project including Dominion Energy, Verizon, Comcast, Summit IG, Columbia Gas, Washington Gas, and Stafford County Service Authority. Our focus, experience, and close working relationships with each of these utility owners has already benefited and positively affected our design concept and approach by allowing for ideas and solutions that minimize risk and promote schedule certainty.

Approach To Utility Coordination, Adjustments, and Relocations

Our Team's approach to successful management of the utility scope of work encompasses the following goals:

- Accurate and timely identification of existing utilities;
- Investigation of potential conflicts within the Project footprint;
- Integration with design to determine conflicts and possible solutions;
- Coordination with utility owners to develop conflict resolution strategies/options;
- Primary focus of conflict resolution through final design to minimize relocations;
- Precise identification of easements needed for required relocations;
- Thorough integration with the Project Schedule and sequence of work; and
- Constant monitoring and tracking of the relocation progress.

Our Team's first and highest priority throughout the design-build process is to completely avoid utility impacts through design. If conflicts cannot be completely avoided by design, we will work diligently with each utility owner to minimize relocations needed through a combination of design and work sequencing, and/or utility protection measures during construction. It is our Team's position that relocating existing utilities to eliminate conflicts with new construction should only be performed as a last resort.

During the preparation of this Technical Proposal, our Team's early coordination began by meeting with various utility owners to better understand their existing facilities, review both the conceptual and proposed design, discuss schedule, and address potential conflicts and risk. For example, we met with Summit IG to determine areas where we could "lift and lay" their facilities to reduce impacts to their facilities, the Project Schedule, and their customers.

Upon Award, these efforts will continue in earnest during final development of the design, right-ofway, permitting, scheduling, and construction sequence of work. Close coordination and



Figure 4.4.2.1 - Approach to Utility Coordination

early involvement will enable the utility companies to generate reasonable, clear and concise plans and estimates, best coordinate their crew availability, and maximize their production for needed relocations.

In addition, continued coordination will benefit both the utility owners and our Team as we work to develop solutions that are integrated into our final design and Project schedule. Figure 4.4.2.1 outlines the steps and activities we will perform to continue coordinating with each utility owner once the Project is underway.

Utility Conflicts and Solutions

After our design efforts, there are multiple utilities located within the Project footprint that are unavoidable and our strategies and solutions to mitigate them are identified in Table 8.

Table 8 - Unavoidable Utility Conflicts and Mitigation Strategies

Utility/Owner Description	Approximate Location	Potential Conflict	Relocation Plan/ Mitigation Strategy
	POWER I	LINES	3,
3 Phase Overhead Dominion Energy	Route 17 Station 8003+00 to 8005+50	Conflict with Roadway	Relocate in kind
	COMMUNICAT	ION LINES	:
Underground Fiber Summit IG	I-95 Station 4444+00 to 4457+00	Conflict with Ditch and Roadway I	
Underground Fiber Summit IG	I-95 Station 4472+50 to 4474+00	Conflict with Ditch	Relocate in kind
Underground Fiber Summit IG	I-95 Station 4481+00 to 4515+00	Conflict with Ditch and Roadway	Relocate in kind
Underground Fiber Summit IG	I-95 Station 4576+00 to 4578+00	Conflict with Roadway	Relocate in kind
Underground Fiber Summit IG	I-95 Station 4592+00 to 4606+00	Conflict with Ramp	Relocate in kind
Underground Fiber Summit IG	I-95 Station 4616+00 to 4675+00	Conflict with Storm and Roadway	Relocate in kind
Underground Fiber Summit IG	I-95 Station 4692+00 to 4707+00	Conflict with Storm and Barrier	Relocate in kind
Underground Copper Verizon	I-95 Station 4502+00	Conflict with Grading and Storm	Relocate in kind
Overhead Copper and Fiber Verizon	Route 17 Station 8001+00 to 8005+00	Conflict with Roadway	Relocate in kind
Overhead Coax	Route 17 Station 8001+00 to 8005+00	Conflict with Roadway	Relocate in kind
	WATE	C R	
6" Water City of Fredericksburg	Route 60, STA 401+65 RT, STA 410+80 RT	Conflict with widening	Adjust In-Place
12" Water in 36" Casing Stafford County	I-95 Station 4501+00	Conflict with Cut	Relocate in kind
12" Water Stafford County	Route 17 Station 8002+00 to 8005+00	Conflict with Storm	Relocate in kind
6" Water Stafford County	Route 17 Station 8022+00	Conflict with Storm	Relocate in kind
	SANITARY	SEWER	
8" Gravity Stafford County	Route 17 Station 8002+00 to 8005+00	Conflict with Storm	Relocate in kind
4" Sanitary Force Main Stafford County	Route 17 Station 8022+00	Conflict with Storm	Relocate in kind

Utility/Owner Description	Approximate Location	Potential Conflict	Relocation Plan/ Mitigation Strategy				
GAS							
4" Gas Washington Gas	Route 17 Station 8001+50 to 8005+00	Conflict with Storm	Relocate in kind				

Schedule Integration, Mitigation of Delays

Our Team has a fully integrated approach to manage the risk of utility conflicts impacting the schedule. As a first step, all information collected and reviewed from utility designations, test pits, as-builts, and coordination with utility owners is utilized to avoid conflicts and schedule delays. Team members are fully engaged with all aspects of the design-build process from design, to construction, to final completion. Our Team assists with the right-of-way acquisition process, prior rights research and easement determinations, conflict analysis, utility relocation construction coordination, and Project Scheduling. This integrated approach to the utility scope provides our Team greater insight and perspective which enables us to mitigate any unexpected schedule delays.

The key to this effort is the integration of utilities into our Weekly Design Progress Meetings beginning in the procurement phase. Conflicts are discussed and the entire team has input into the development of cost effective and efficient solutions.

During preparation of this Technical Proposal, our Team coordinated with the utility companies to develop design avoidance measures, relocation design, relocation phasing, and schedules for each impacted utility. This information, coupled with historical data captured from our past design-build experience, is integrated into our overall construction sequence and is reflected in our Proposal Schedule included in Section 4.6. We have sequenced the utility scope so that all activities are non-critical.

During construction, our Utility Manager constantly monitors progress of the relocations to quickly identify schedule concerns. If encountered, the schedule is reviewed for resequencing opportunities and the utility company is tasked with taking measures to mitigate the delay impact.

As we monitor the progress of relocations, schedule slippages will become readily apparent. If encountered, our Utility Manager will consult with the utility company to determine the nature of the delay and review options for the utility to correct. Simultaneously, the Utility Manager will review the issue with the Project's Construction Manager to identify opportunities for resequencing of the work, providing additional lane closures, extending work hours, supplementing resources, or any combination thereof. Additional scrutiny will be placed on the utility's performance and progress until our Team is satisfied that the schedule has been recovered.

Mitigation of Unexpected Utilities

Encountering unexpected and unknown utilities is a risk that can cause many challenges, including added cost and schedule delays. The following are strategies our Team has utilized on past projects that successfully limited these risks:

Early Coordination: As a "Step 1" activity, our Team has already begun early coordination with each utility owner to acquire a comprehensive understanding of existing facilities. We have obtained previous design plans, as-built drawings, and GIS mapping for review. Further, our Team has coordinated site visits and performed field surveys to ensure the utility designations are complete and accurate. This coordination and review of the existing facilities limits the risk of discovering an unidentified utility during construction.

4.4 Project Approach

Redesign of Project Features: Once an unknown utility is identified, we will immediately perform an asbuilt survey of its location and overlay with the design to determine the extent of the conflict. Options will then be reviewed with affected disciplines to redesign elements that minimize and/or avoid the conflicts. If redesign is feasible, the Design Team will issue a formal Plan Revision to the Team.

Adjust in Place: If an unidentified utility is discovered during construction, our Team has successfully raised, lowered, or performed a "lift and lay" operation to eliminate the conflict. Self-performing in-place relocations is a key component to minimizing risk of schedule delay, reducing cost, and reducing the impact to the utility company's facility. For example, in areas where existing conduit and cable has slack, we can perform a lift and lay to avoid the time and cost of placing new conduit, cable and splicing.

Assisting in Construction of the Relocation: Another method to handle unidentified utility conflicts is assisting the utility companies with the utility relocation work. In the past, we have assisted with the construction of duct banks, performed directional drilling, and drilled / installed utility poles to expedite relocations in the field. Assisting utility owners with relocations allows our Team to better control the schedule of a portion of the relocation, thereby reducing the risk of schedule delay.

Resequencing the Work: Upon evaluation of conflict resolution for unknown utilities, the Team will review the sequence of work and Project Schedule to mitigate this risk for delays and other schedule impacts.

4.4.3 Geotechnical Approach

Our Team thoroughly reviewed geotechnical data provided in the RFP, available geologic maps and historic data from nearby projects. With this information, we prepared a combined boring location, profile, and cross section plan which was utilized by our designers to detect, avoid or otherwise mitigate potential subsurface concerns as we developed our Design Concept. Based on our efforts, we expect to encounter several complex soil and rock layers consisting of, from deepest to shallowest, rock and rock outcrops, Coastal Plain deposits and fluvial deposits predominantly located near streams and wetlands, which are briefly described below.

Rock

Within the Project Limits, I-95 passes through several thrust faults and generally straddles the Fall Line which separates the Coastal Province with the Piedmont Province. The boring and rock core data indicates the rock will predominantly consist of granite and gneiss. The presence of nearby thrust faults will sometimes make the parent rock types interlayered with occasional conglomerates. Steeply sloping rock and rock outcrops are currently visible within and near the Rappahannock River which will be problematic to excavate. Where Route 17 crosses I-95, the rock has weathered significantly and this residuum layer can be over 100 feet thick.

Coastal Plain Deposits

Above the rock and residual soils, Coastal Plain deposits were encountered in the borings. The oldest Coastal Plain deposits locally are the Potomac Formation. The soils of this formation perform well for axial and lateral loading. However, the fine grained soils of the Potomac Formation are considered problematic per VDOT's Manual of Instructions due to the presence of historic failure surfaces (Slickensides) that are not easily detected during the field exploration.

Above the Potomac Formation, younger Tertiary Age deposits consisting of various layers of sands, gravels, and fine grained soils are anticipated. The settlement and strength behavior are typically characterized based on the geologic origin and laboratory testing. Many of the provided borings do not characterize the

detailed geologic origin of the soils and simply identify the overall origin as "fluvial." However, our Team has experience identifying the various geologies to accurately characterize the geologic origin of the soil samples and will appropriately identify and address problematic soils as may be encountered.

Fluvial Deposits

Above the Coastal Plain deposits, predominantly located near streams and wetlands, fluvial deposits will most likely be encountered. Soils of this geology tend to be normally consolidated with lower shear strength and may contain organic material. Where fill will be required to establish proposed grades, these fluvial soils will most likely require some additional wait time to ensure the fine-grained soils have consolidated. Our geotechnical program will include laboratory and in-situ testing to better model and address the settlement behavior.

Given the complex geologies noted above, our Team will implement a subsurface exploration and laboratory program that will characterize the soils and rock based on the geologic origin such that appropriate mitigation strategies can be implemented for the design and construction of bridges, slopes, roadways, structures, and fill embankments. Based on our work during preparation of this Technical Proposal, the following summarizes potential geological risks and our proposed mitigation strategy.

Project Geotechnical Risks and Mitigation

We have analyzed the provided geotechnical data based on our Teams proposed design. In addition to the evaluating proposed structures, we have also evaluated the risk to existing structures. Table 9 below summarizes the potential geotechnical risks and our mitigation strategies.

Table 9 - Geotechnical Risks and Mitigation Strategies		
Risk Factor	Potential Risk	Mitigation Strategy
ROADWAY		
Roadway Subgrade	 High moisture, unsuitable for support of roadway without treatment. Shallow groundwater table may cause temporary rise of groundwater during construction which will further soften and loosen existing subgrade. High Plasticity fine grained soils (Liquid limit greater 50) at subgrade will cause shrink/swell. Low CBR provides inadequate support for the RFP pavement section. RFP lab data suggests that all fine grained and most of the clayey and silty sand soils will be unsuitable. Low SPT N-value will provide poor support. Many of the RFP CBR tests were not performed in accordance with VTM-8 with regards to compaction. GDR data does not appear to correctly characterize locations of fill soils. Existing fill soils behave differently than natural soils. Complex geology and site history will result. 	 Mechanically manipulate high moisture soils to dry them. Use drying additive such as Lime may mixed to reduce the moisture of the soil. Install temporary groundwater monitoring wells outside the roadway in shallow groundwater areas to accurately get the groundwater elevation. Install temporary and permanent drains or a drainage layer during construction to relieve any water pressures and allow roadway construction. Perform additional CBR to better delineate poor CBR soils. Undercut low CBR, high plasticity fine grained soils, and low SPT N-value soils and replace with suitable material. Evaluate existing soil samples from the RFP reports and develop a better method to identify low CBR soils. Overlay the current project topography with historic data to better understand where man placed fill soils will be present. Our Geotechnical report for embankments and roadway will provide mitigation options for each unsuitable soils and specific project remediation methods. The GER or his representative will be present during pavement subgrade evaluations to better delineate unsuitable soils and additional detail on location specific mitigation based on approved mitigation strategy.

4.4 Project Approach

Risk Factor	Potential Risk	Mitigation Strategy
Problematic Geologic Descriptions on Boring Logs	Several of the borings drilled for the RFP identify the geologic origin as "fluvial;" Our review of the geologic maps and historic data indicate that the soils mapped as man placed fill soils, Coastal Deposits, Intermediate Geo Materials, or residual soils should be present.	 Review the RFP soil samples were possible and recharacterize the soil borings based on geology and on construction history and available geologic maps. Also evaluate where unsuitable soils may be present. Identify where problematic soils such as Potomac group soils may be present based on available geologic map and soil data.
Fill Embankments 10 feet in height	 Long term settlement behavior of embankment. Soft compressible fine grained soils at toe of median widening will cause consolidation (slow) settlement. Shallow groundwater present of median embankment. Complex stress history due to recent construction. Unsatisfactory slope stability using standard 2:1 slope. Restricted right of way conditions require fill slopes to be designed as reinforced slope or require the use of retaining walls. 	 Perform dilatometer testing to better characterize the settlement and in-situ stresses. Perform borings and field investigations at toe of median widening. Continuous SPT testing to accurately measure the thickness of compressible soil layers. Perform in-situ pressure-meter testing and 1-D Consolidation testing on undisturbed samples to better characterize the deformation behavior of the underlying soils. Install temporary groundwater monitoring wells where shallow groundwater may be present. Use 3-D (Settle3D) software to model settlement of embankments. Overlaying adjacent projects and historic grading to model the stress history of the soils and model anticipated future settlement. Prior to placement of any fill, shallow soft and loosesoils will be undercut if present near the ground surface. Monitor settlement during construction if required using piezometers and settlement plates; placement of pavement layers will be held until the settlement is within allowable thresholds. Use staged construction and drainage blankets as appropriate to accelerate settlement fine grained soils in a controlled manner. Use drainage blankets to control the ground water during construction of fill placement.
Slope Stability for Cut and Fill Slopes greater than 10 feet and at proposed pond locations	 Limited soil strength test data provided within project areas where slopes are a concern. Soil geology is not clear on some of the boring logs and difficult to determine were problem soils such as Potomac Group are present. Shallow groundwater or perched groundwater is present at various locations and will require dewatering. Complex stress history due to recent adjacent construction. 	 Perform additional subsurface exploration and evaluate existing soil samples. Perform in-situ testing including CPTu, Dilatometer, and pressure meter testing. Perform additional laboratory testing on undisturbed samples including Direct Shear testing and Tri-axial Testing. Where problematic soils such as the Potomac Group, use residual strength parameters and identify slickensides (existing failure planes) during field exploration in slope stability analysis. Install temporary groundwater monitoring wells as noted above. Provide horizontal drains to alleviate perched and permanent groundwater. Perform slope stability and reliability analysis for slope stability using Slide computer program. Design slopes to meet VDOT slope stability and right of way requirements. Adjust proposed grades, provide anchors, or retaining walls to meet this requirement.

Risk Factor	Potential Risk	Mitigation Strategy
Existing Pavement	 Limited pavement core data provided from the RFP. Most of the pavement core data was drilled in the shoulders. Very limited pavement cores of the existing travel lane were provided. Very little pavement core data on Route 17. Tie-ins to existing pavement will need to match the existing OGDL layers. 	 Perform additional pavement cores where existing mainline pavement is to remain. Drill pavement cores and design new pavement to either match existing pavement or RFP minimum pavement section. Perform additional pavement cores on Route 17 during scope validation. Document depth and thickness of existing OGDL layers to ensure new pavement will match and provide continuous drainage.
	IMPACTS TO EXIS	STING STRUCTURES
Route 17 Bridge Foundations	 Existing Route 17 bridge will be demolished and existing pile foundations will remain in place. Existing battered and vertical piles are in close proximity to proposed piles. Existing pile caps located at new pile cap location. New piles will induce ground vibrations on existing structures. 	 Use analytical software to evaluate vibration risks onto existing structures. Monitor existing structures for vibration based on RFP threshold values. Existing piles will need to be accurately located prior to construction of new piles based on as-built data and field exploration. New foundations will be located to not be influenced by existing piles. Any existing concrete pile caps will need to be to avoid conflicts with the proposed footings. Gap between new footing and existing footing will be filled with loose stone to avoid "hard spots." Evaluate if vibrations will affect existing nearby structures using analytical software. Provide monitoring plan if required. Pre-drill piles as require where vibrations are a concern.
Box Culverts	Fill placement above existing culverts will induce settlement of existing culverts.	 Preliminary analysis indicates minimal anticipated settlement. We will perform additional exploration and settlement analysis to validate our current analysis. The culvert will be modified if required to accommodate the possible change in grade due to the fill settlement. If required, a light weight fill will be used to reduce anticipated settlement.
New I-95 SB RRC Abutments MSE and foundation	 Grades will change significantly due to adjacent I-95 SB RRC construction. Proposed abutments and MSE wall are in very close proximity to I-95 SB RRC abutments. 	 Evaluate final grading from the I-95 SB RRC and final structure as-built elevations in relation to proposed abutments. Either adjust proposed abutment MSE wall footing elevations or design underpinning and sheeting and shoring to avoid impacting adjacent structures and roadway.
	(NON-ABUTMENT)	
Retaining Wall at Cut between Station 5484 and 5506 on CD lanes	 Existing noise walls in this area are supported on drilled shafts. Existing adjacent Fall Hill Avenue noise wall foundations were not designed to accommodate a sloped condition for the cut. 	 The walls will be designed as post and panel walls to avoid excavations impacting the lateral capacity of the existing shafts. Enhancement 010, will consider a wall at the location of the Falls Hill sound wall to maintain the current grades. Post and Panel walls will be supported on deep foundations consisting of 36- to 42-inch diameter drilled shafts with a continuous steel member and designed for anticipated lateral loading.

4.4 Project Approach

Risk Factor	Potential Risk	Mitigation Strategy
MSE Wall planned Station 4506 to 4519 on GP lane	The wall spans over an existing drainage ditch and soft compressible soils are present.	 Additional borings will be focused at these low points better define the anticipated soils below the MSE wall and embankment fill at this location. Undercut any shallow soft soils that are present at the bearing of the MSE wall. Both settlement of the MSE and embankment will be evaluated concurrently. Design of the MSE will accommodate the settlement.
Short Modified RW-3 at multiple locations	 Minimal boring data at Wall locations. High Plasticity fine grained soils (Liquid limit greater 50) that will cause shrink/swell. 	 Perform borings at all wall locations in Accordance with VDOT's Manual of Instruction (MOI). Determine where highly plastic shrink swell soils are present at footing locations. Proposed footings at these locations will be bear below the anticipated seasonal moisture or subgrade will be undercut. All soft soils encountered at bearing elevation will be undercut and replaced with suitable fill.
	ROUTE	17 BRIDGE
Piles	 Lateral loading at abutments and piers may induce significant stresses in piles. Both geotechnical and PDA testing is available but subsurface conditions can vary in short ranges. 	 Pile axial capacity will be calculated using in-situ data in conjunction with the SPT data. We have reviewed the existing PDA for the nearby I-95 SB RRC and will develop a better correlation for design of the piles. Lateral capacity will be based SPT, CPTu, pressure meter, and Dilatometer testing (where available) to better characterize the soils.
RAPPAHANNOCK BRIDGE		NOCK BRIDGE
Abutments	 RFP borings are located over 50 feet from Abutments. Rock and soil elevations vary significantly along short horizontal distances. Very high and steep slopes are present at toe of proposed Abutment MSE walls. Proposed slope at this location is steeper than 2H:1V Existing rock outcrops visible, but not mapped. 	 Perform additional boring testing at the bridge abutments; if shallow rock is encountered, rock will be cored. In the case of dense IGM soils, perform pressuremeter testing to better model settlement. In-situ and undisturbed samples will be used to model settlement behavior of soils. The Abutment approach will be modeled using analytical software (Settle3D). Where possible, map rock outcrops at the toe of the abutments and across the abutment. Perform additional subsurface investigation in conjunction with geophysical exploration (ReMi or MASW) to map rock profile.

Risk Factor	Potential Risk	Mitigation Strategy
Piers	 Top of competent rock is variable, low RQD was observed at several locations, and low recovery of rock occurred during drilling. Nearby borings to Piers 1, 2, and 7 on land show significant variation of top of rock elevation. Piers 3 - 7 will require access through the causeway. 	 Core the rock using NQ triple core barrels. This type of coring results in much higher recovery and better rock samples. Ensure that footings are bearing on competent rock. GER or his representative will be present during footing excavations to evaluate exposed rock. Sloping rock will require additional excavation for a relatively flat foundation. We propose <i>Enhancement 026</i> to perform borings prior to after scope validation of footings at Pier 6 and 7. At all other pier locations, the boring will be drilled during the Scope Validation Period. Where possible we will map the rock with geophysical methods as they will reduce impact to the I-95 SB RRC construction activities. At Piers 6 and 7 prepare a conservative design of the pier based on nearby data and perform confirmatory borings once access is available.
	ACID-SUL	FATE SOILS
Bridge Substructure and Areas of Cut & Fill	 Current data suggests that corrosive soils are present that will impact bridge piles, although in limited locations. Current Acid-base accounting data suggests sporadic areas of deficient soils. 	 Some of the acidic soils are considered extremely aggressive per VDOT's Bridge Design Manual and identification of aggressive soils at the proposed bridge piles will be required. Perform additional corrosion testing at structures and delineate corrosive soils. If corrosion is a risk for bridge piles, we will increase the pile size to allow for adequate sacrificial steel. Perform additional acid-base accounting in accordance with EP-600/ 2-78-054 in cut and at-grade sections of the project during design. Treat deficient areas by either replacement of existing soils or mixing lime into the existing soils. Add lime using either the greater of 4 tons per acre or 1.25 times the deficiency.

Unsuitable Soils for Pavement

We have evaluated the anticipated unsuitable subgrade soils as defined in the RFP based on the provided geologic data, and we anticipate encountering unsuitable soils due to high moisture content, highly plastic soils, low strength based on SPT, or potentially low CBR values. Several of the borings indicate shallow groundwater less than 2 feet below proposed grades. The on-site soils are anticipated to be moisture sensitive and shallow groundwater will soften and loosen existing soils when exposed during excavations. During final design, our Team will evaluate the appropriate measures to further mitigate the unsuitable materials. Examples of these measures include undercut and replacement or in-place soil stabilization and treatment.



4.5.1 Sequence of Construction

The design and sequence of construction developed by our Team and presented in this Technical Proposal emphasize both safety and efficiency through all stages of construction. Our Team's approach described below and in our Proposal Schedule in Section 4.6 is focused on the following objectives:

- Obtaining Early Work packages in order to achieve:
 - Interim Milestone Date Completion of the FredEx Overlap Area
 - Compliance with Time of Year Restrictions (TOYR) for B609 Rappahannock River Crossing causeway work
 - Maximum duration for the work not impacted by right-of-way acquisitions or utility relocations.
- Ensuring the safety of the traveling public and workers;
- Maintaining mobility and minimizing impacts to the traveling public on I-95, Interchange Ramps, and Route 17;
- Protecting environmentally sensitive areas during construction;
- Ensuring proper coordination with adjacent Projects;
- Committing to *Unique Milestone #1* to provide benefits to traffic mobility and congestion relief during construction; and
- Committing to an Early Completion date in advance of the RFP by sixty (60) days (June 30, 2024).

Our Team's Proposal Schedule, presented in Section 4.6.1, was developed with input from all Project disciplines including design and engineering, permitting, utilities, right-of-way, QA/QC, and construction. The strategies above will enable us to achieve the enhancements shown in Table 10 below:

Table 10 - Construction Enhancements and Benefits

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Enhancements	Benefits	
Early design package for causeway modifications and permitting.	Allows schedule to advance on the Critical Path I-95 NB RRC outside the TOYR from October 2020 to February 2021.	
Roadway geometry improvements on the I-95 Slip Lanes, GP Lanes and CD Lanes south of the RRC.	Reduces size of Wall C and impacts to existing sound walls from construction of new retaining Wall #1.	
Early design package for E&S, MOT, drainage and grading for the FredEx Overlap Area.	Allows maximum duration for construction activities to achieve the Interim Milestone Completion Date of October 29, 2021.	
B609 Sequencing Constructs Piers 6 and 7 early in the schedule. Sharing minimal causeway access with the adjacent Project.	Allows the northern Piers 6 and 7 to be constructed in the 2020-2021 season and requires only two 1-day closures of the north river channel. No other portage or closures required in our sequence.	
Opening the Ramp D triple left turn lanes to Route. 17 NB including the new traffic signal early in the Project sequencing – <i>Unique Milestone #1 (February 4, 2022)</i> .	Relieves congestion for the heavy NB I-95 to NB Route 17 traffic movement and allows early start for the replacement of the I-95 NB CD Bridge over Route 17. (Option #2)	
Complete Project on June 30, 2024.	Final Completion <i>sixty (60) days earlier</i> than the RFP requirement.	

Project Work Areas

Our Sequence of Work has been developed to allow efficient execution of the Project Schedule. To facilitate this effort, the Project is split into five major Work Areas and several sub-work Zones. The natural dividing line of work is split between south and north of the Rappahannock River. Within each Area/Zone, the sequencing is then organized by Stage, as shown in Exhibits 4.5.2.1 - 4.5.2.4. By establishing distinct Work Areas and Stages, our construction management teams can effectively oversee and manage

construction operations. This allows for the most efficient use of resources and ensures the utmost quality is achieved, while maintaining the highest levels of safety. Additionally, the Work Breakdown Structure (WBS) in our Proposal Schedule isolates the Route 17 Interchange and the work North of Route 17 inclusive of the widened CD lanes and planned FredEx Ramp HWN shown as part of the requirements for the Interim Milestone. Our Work Areas, Construction Sequencing and Staging, and Proposal Schedule include the Base Scope of Work as well as all three Scope Options. Figure 4.5.1.1 and Table 11 below detail each Project Work Area and the major scope elements included in each.



Figure 4.5.1.1 - Work Area Map

Table 11 - Work Areas and Major Elements of Work

Table 11 - Work Areas and Major Elements of Work			
Work Area	Sub Area	Major Elements	
1. South of Ra	1. South of Rappahannock River		
Zone 1	South of Route 3 Interchange	Noise Barrier CSWM Basin Construction	
Zone 2	I-95 NB GP Lanes Sta 4493+00 to 4543+00	 45,000 CY of Embankment New Grading / Drainage /Roadway MSE Retaining Wall #2 	
Zone 3	Route 3 Ramp C Construction	 58,000 CY Excavation New Grading / Drainage / Roadway Retaining Walls #1A, #1B, and #1C Modify SWM Pond 9C-1 	
Zone 4	I-95 NB CD Lanes 5511+00 to 5543+50	 Shoulder Widening / Replacement to Existing I-95 NB Replacement of Guardrail Extension of Noise Barrier FH 	
2. Rappahann	ock River Bridge Crossing (B609)		
	Causeway	 Reconfiguration and Removal of Causeway System for Bridge Pier Access 	
	Substructure	Abutment and Pier Construction	
	Superstructure	Structural Girder and Bridge Decks	
3. North of Ra	ppahannock River		
Zone 1	I-95 NB GP Lanes 4555+00 to 4606+00 (Route 17)	 17,000 CY Excavation / 15,000 CY Fill New Grading / Drainage / Roadway 	
Zone 2	I-95 NB CD Lanes 5554+50 to 5606+00 (Route 17)	 Additional Lanes and Approach to Route 17 Ramp D Shoulder Widening / Replacement of Guardrail 	
4. I-95/Route	17 Interchange		
Zone 1	Ramp D - NB CD Lanes to Route 17	Ramp Widening / Triple Left Turn Lanes	
Zone 2	Ramp B - SB CD Lanes to NB Route 17	 Ramp Widening / Triple Right Turn Lanes 	

Work Area	Sub Area	Major Elements
Zone 3	Route 17 Work	 Widening and Signal Work up to Gateway Drive and Sanford Drive
	Option #2 – Replacement of Existing I-95 NB CD Lanes Bridge (B608)	 Phased Demolition and Reconstruction of the Existing I-95 CD Lane Bridge over Route 17
	Option #3 – Sidewalk Connection through Route 17 Interchange	Sidewalk Installation with Pedestrian Crossings
5. Work North	of Route 17 Interchange	
Zone 1*	I-95 NB CD Lanes 4619+00 to Tie-In to GP Lanes 4681+25	New Grading / Drainage / Roadway
Zone 2*	FRED-EX Ramp HWN	 60,000 CY Excavation / 40,000 CY Fill New Grading / Drainage /Roadway
Zone 3	I-95 NB CD Lanes to Sta 4619+00	New Grading / Drainage / Roadway
OPT 1	Option #1 – Auxiliary Lane Extension	 Additional Lane to GP Lanes of I-95 NB

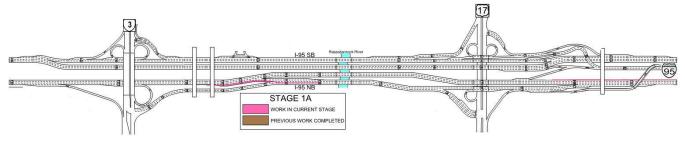
^{*} Work Associated with Interim Milestone Overlap Area

Construction Sequence

From a macro level, the sequencing, staging, and flow of work between the Work Areas defined above is depicted in Exhibit 4.5.1.1 labeled "Sequence of Construction and Summary Schedule." The narrative below details our Maintenance of Traffic Staging along with associated construction work. Exhibit 4.5.1.1 and the narrative below are color coded to easily show the progression of work in each Work Area. Additionally, Exhibits 4.5.2.1 through 4.5.2.4 provide detailed MOT staging with the same color coding scheme.

A benefit our sequence of work is it allows many portions of the Project to be constructed out of traffic and behind temporary concrete barrier service (TCBS) with limited dependence on daily/nightly lane closures for access or material deliveries.

Stage 1A - Temporary Shoulder Widenings (Nov 2020 - Feb 2021)



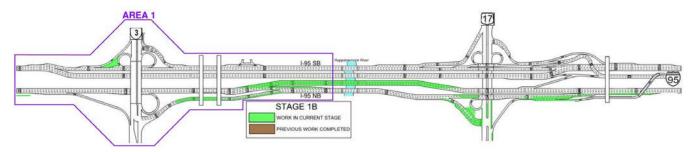
Our Team is committed to maximizing shoulder widths during all stages of construction. In order to accomplish this, certain areas of the Project will require temporary widening and subsequent lane shifts so that a 10' paved shoulder can be maintained at all times. In our Early Works Package, temporary TTC plans will be developed to incorporate all areas requiring adjustment. This work will be performed during allowable single or double lane closure periods. In these areas, existing rumble strips will be milled and re-paved prior to placement of new pavement markings.

Stage 1B - Construction of Major Portions of Work

Work Area 1 (Zone 2): I-95 NB GP Lanes (Mar 2021-May 2022)

Stage 1B construction begins with the installation of perimeter erosion control devices and sediment basins in this Work Area. This Area will require the construction of MSE Retaining Wall #2 for 1,310 linear feet to support the embankment for the NB I-95 GP Lanes. During the early stages, work may still

be active on the I-95 SB RRC Project; we will therefore plan construction access from the left shoulder of existing NB I-95 GP Lanes in order to receive trucked embankment and drainage materials. Following the completion of the I-95 SB RRC Project, it will be necessary to close the left shoulder of the new SB I-95 GP Lanes and place TCBS for the installation of the MSE Wall #2 leveling pad and MB-7F placed at the base of the new wall. Earthwork required for the fills will be generated from the new Route 3 Ramp C Work Area and SWM Basin excavation located in the Route 3 Interchange.



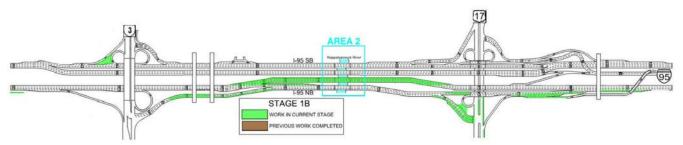
Work Area 1 (Zone 3): Route 3 Ramp C (Sept 2021-July 2022)

Construction of Route 3 Ramp C requires the installation of three cut retaining walls #1A, #1B, and #1C to support the existing sound barrier walls. Crews will be constructing these walls and generating excavated soils to be hauled to Work Area 1, Zone 2. Access to this area is behind TCBS that will be placed along the existing right shoulder of the NB I-95 GP Lanes. The southern portion of Route 3 Ramp C will require right-of-way acquisition, ITS utility relocations and clearing and grubbing prior to construction of the permanent roadway. This Work Area will extend north of the Fall Hill Avenue overpass in this Early Stage. This Work Area will be opened at the end of Stage 2B when the NB I-95 CD Lanes are complete and ready to receive traffic.

Work Area 1 (Zone 1): South of Route 3 Interchange (Aug 2022-Nov 2022)

This Work Area sits outside of the majority of the major construction activities and will carry float in our overall sequencing. The major element of work in this area is the construction of Noise Barrier C which is located adjacent to the Idlewild Community along existing NB I-95 Lanes. Following acquisition of right-of-way and design and procurement of noise barrier materials, construction crews will access this area only from the NB I-95 right shoulder. *Our Team will restrict any work vehicles from entering the neighborhood streets for construction access or deliveries*. Noise barrier foundations will be designed with this access in mind which may preclude larger construction equipment and wheeled vehicles from close access to the foundation locations. The other work element in this area is construction of SWM Basin(s).

Work Area 2: I-95 NB Rappahannock River Crossing (Feb 2021-Apr 2023)



The NB I-95 GP lane bridge over the Rappahannock River, B609, presents unique constructability challenges due to access, height, length, water features, and the proximity of the existing NB I-95 Bridge and the new SB I-95 GP lane bridge currently under construction. The narrative below describes the phases and steps that our Team will perform in order to successfully deliver this critical element to the Project.

Phase 1 – Modification to Existing Causeway

By necessity primary access to the work area will be from the I-95 SB RRC Project causeway. Our Early Works Permitting Package, will allow us to make modifications to the causeway during the October 15, 2020 to February 15, 2021 TOY window for work in the Rappahannock River. These modifications will not affect the I-95 SB RRC Project in any way. To maintain ongoing river traffic with only intermittent

interruptions, a removable temporary causeway will be utilized for one day to walk our crane to the northern shore area in the vicinity of Piers 6 to 7. Once the crane is staged properly, the temporary causeway will be removed and the open channel restored. As described in Section 4.3.1(e), the existing causeway will be modified in this region to gain access to the Pier 6 foundation, as shown in Figure 4.5.1.2. With the crane in place, Piers 6 and 7 and Abutment B will be constructed. A temporary access road for light vehicles and small equipment will also be constructed to the Abutment B side of the bridge.



Figure 4.5.1.2 Phase 1 Modification to Existing Causeway for Piers 6 and 7

Phase 2 – Construction of Piers 1, 6, and 7, Abutment B, and Abutment A

To access the river bed for footing construction a cofferdam system will be used. Access to the individual Pier locations will be via rip-rap fingers from the main causeway. A temporary access ramp traversing the footprint of Abutment B to Piers 6 and 7 will allow routine deliveries, such as fuel, and worker access.

With construction of Piers 6 and 7 complete, this access ramp will be removed and Abutment B built. Access for Abutment A construction will be from the median area of I-95, as shown in Figure 4.5.1.3.

As the substructure elements are completed in the northern side of the river, we will begin removal of the causeway, fingers and cofferdams. All equipment and supplies will be removed with the large crane being walked out of the area via a temporary 1-day obstruction of the main channel as described in Phase 1. This represents the final blockage of the main channel as any subsequent superstructure work will be accessed from above. The schedule presented in Section 4.6.1 depicts this causeway removal and temporary causeway work occurring in the October 15, 2021 to February 15, 2022 Time of Year window.



Figure 4.5.1.3 Construction of Piers 6 and 7, Abutment B to North and Pier 1 and Abutment A to South

Phase 3 – Erection of Structural Steel at Spans G and H

As discussed in Section 4.3.2, in order to facilitate the use of the existing NB Bridge for material deliveries

and steel erection, traffic will be shifted to the east (right) bridge parapet leaving a 2' shoulder. The shifted three lanes and a left shoulder shall be maintained throughout construction cordoned off by Group II Channelizing Devices. Temporary shoulder and/or lane closures of these lanes will be performed as necessary and within the time frames and parameters allowed.

With the completion of all substructure elements from Pier 6 to the North, superstructure work will begin with the erection of structural steel girders on Spans G and H.



Figure 4.5.1.4 Phase 3 Erection of Structural Steel Girders at Spans ${\bf G}$ and ${\bf H}$

As depicted in Figure 4.5.1.4, steel erection will occur at night during allowable lane closures on I-95 NB. A tandem crane pick method will be used to safely erect the girders.



Figure 4.5.1.5 Phase 4 Modifications to Existing Causeway

Phase 4 – Modification to Existing Causeway

Within the October 15, 2021 to February 15, 2022 TOY window, our Team will modify of the existing causeway constructed by the I-95 SB RRC Project. To account for the substructure layout of B609 Causeway fingers and cofferdams will be constructed to access construction for Piers 2, 3, 4, and 5, as shown in Figure 4.5.1.5.

Phase 5 - Substructure Construction Piers 2 through 5

Following completion of the in-river work in Phase 4, the balance of the Piers for B609 Bridge will be constructed, as shown in Figure 4.5.1.6. This final Phase of substructure construction is on the critical path of our Project Schedule. We are planning to have one pier stem form capable of construction of ½ of the pier height and one pier cap form. The stem form shall progress uninterrupted during substructure construction with the cap form following shortly thereafter. With the last four substructure elements in place, the temporary causeway will be modified in order to set the remaining structural Figure 4.5.1.6 Phase 5 Substructure Construction of Piers 2-5 steel for the Bridge.



Phase 6 - Erection of Structural Steel – Spans A through F

Depicted in Figure 4.5.1.7, structural steel erection will occur in two steps for Spans A through F in Phase 6. Step 1 work will entail the erection of the 3 outside (east) girders of the spans utilizing the crane from the causeway below. An assist crane will remain on top of the existing NB I-95 bridge. Steel deliveries will also be received from atop the existing bridge. Step 2 erection for the remaining girders will occur similar to Phase 3 described earlier.

Upon completion of structural steel erection, the causeway will be removed. While decking and substructure work is occurring, crews will remove the causeway starting in the Fall 2023 TOY window.





Figure 4.5.1.7 Phase 6 Erection of Structural Steel – Spans A through F (Left: Step 1, Right: Step 2)

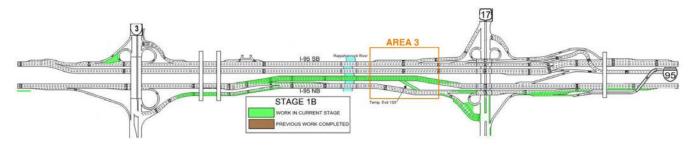
Phase 7 - Final Decking and Bridge Finishes

Phase 7 work will be timed with the progression of the substructure and structural steel erection in order to achieve efficient production in the SIP and reinforcing steel placement. As shown in Figure 4.5.1.8, the lightweight concrete deck will be installed with approach and finishes following shortly thereafter. Subsequent to the bridge safety inspection, any remaining temporary access shall be removed and the northern shoreline restored. With the roadway tie-ins complete to the approach slabs, the new NB I-95 GP Lanes will be ready to open to traffic.



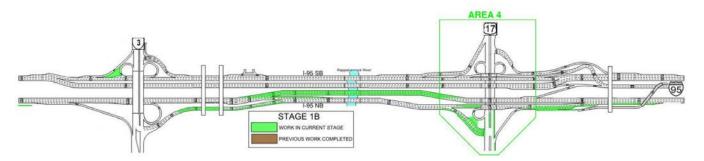
Figure 4.5.1.8 Phase 7 Final Decking and Bridge Finishes

Work Area 3 (ZONE 1): NB I-95 NB LANES (Sept 2021 – Apr 2022)



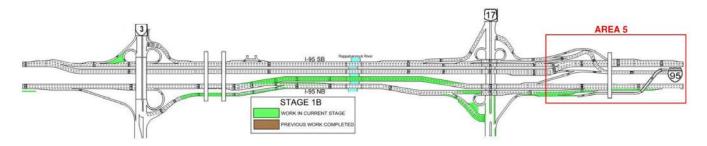
Early in the beginning of Stage 1B of this Work Area, access will be gained from the left shoulder of existing NB I-95 GP Lanes. This Area is nearly balanced from an earthwork perspective, and the challenge is that our work must capture and control the drainage run-off from the newly constructed I-95 SB RRC Project during construction. As the roadway and drainage elements are being installed crews will construct a temporary connection to Route 17 Ramp D. This connection will serve the Route 17 interchange for NB I-95 traffic in the next Stage 2A.

Work Area 4 (Zone 1): Ramp D - NB CD Lanes to Route 17 Work Area 4 (Zone 3A): Widening of Route 17 South of I-95 (May 2021 – Feb 2022)



Early work will continue with the reconstruction and widening of existing Ramp D from the existing I-95 NB CD Lanes to the intersection of Route. 17. The widening of Route 17 will occur concurrently south of I-95 to Short Street with the goal of constructing the new triple left turn lanes on Ramp D and the new receiving lanes on NB Route 17. The new traffic signal will be activated to allow the removal of traffic movements from existing Loop C. This is represented as our Team's *Unique Milestone #1* scheduled for February 4, 2022. This Milestone creates a benefit to the traveling public by improving congestion of the heavy I-95 NB to Route 17 NB traffic movement. It also eliminates a travel lane across the existing NB I-95 CD Bridge over Route 17, increasing safety and greatly improving the traffic movements for the phased demolition and reconstruction of the bridge.

WORK AREA 5 (ZONE 1): I-95 NB CD LANES WORK AREA 5 (ZONE 2): FRED-EX RAMP HWN (Jan 2021 – Oct 2021)



These areas will be constructed concurrently and require major earthwork operations. With the Interim Milestone Completion of the FredEx Overlap Area, this work will occur early in our schedule sequence. Upon receipt of ROW and environmental permits from VDOT and completion of Plans, crews will start with the extension of the triple box culvert at Falls Run. Earthwork cut at the northern portion of this Work Area will be brought to the deeper fills surrounding the completed box culvert area. Upon completion of the major earthwork, electrical and sign crews will begin installation of the ITS infrastructure necessary for the Overlap Area. Median barrier will be installed separating the CD Lanes from future Ramp HWN. Work is scheduled in our 4.6.1 Proposal Schedule to be complete and accepted by the October 29, 2021 Interim Milestone Date.

End of Stage 1B - Major Traffic Shifts

The end of Stage 1B is highlighted by two major traffic switches:

1. Unique Milestone #1 - Opening of New Ramp D and Triple Left Turn Movement to Route 17 NB

The first major traffic shift for motorists will be the opening of the new Route 17 Ramp D triple left turn lanes to NB Route 17 and the subsequent closing of existing Route 17 Loop C. This change will greatly enhance the safety and mobility of drivers during the demolition and reconstruction of the NB I-95 CD Lane bridge over Route 17 (Option #2). We commit to opening the new triple left turn by February 4, 2022.

2. Opening of new NB I-95 Rappahannock River Crossing (B609)

The most significant traffic shift for the Project will be the opening of the new NB I-95 Rappahannock River Crossing and the associated portions of the NB I-95 GP Lanes. Following bridge and road construction, NB I-95 traffic will be diverted to the new roadway in an overnight traffic shift. At the time of the initial shift to the new GP Lanes, Route 3 Ramp C will not open. It will remain closed in order to fully construct the new NB I-95 Slip Ramp into the NB I-95 CD Lanes south of the Rappahannock.

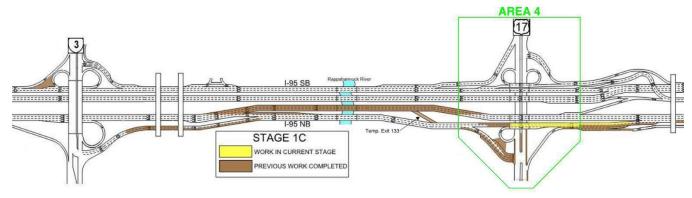
North of the Rappahannock, in order to maintain traffic to Exit 133- Route 17, the Team will construct a temporary ramp to connect the new I-95 NB GP Lanes to the existing NB I-95 CD Lanes and Route 17 Ramp D.

Stage 1C - I-95 CD Lane Bridge Over Route 17 (Option #2)

Work Area 4 (Option #2): Replacement of Existing I-95 NB CD Lanes Bridge (B608) (Feb 2022- Oct 2023)

The NB I-95 CD lanes bridge over Route 17 presents unique constructability challenges due to the fact that the footprint of the new bridge is nearly identical to that of the existing bridge. Furthermore, Pier work in the median of Route 17 is constrained by traffic on both sides and by the proximity of existing bridge structures. In order to mitigate these challenges, our schedule focuses on a detailed and well planned

sequence of construction.



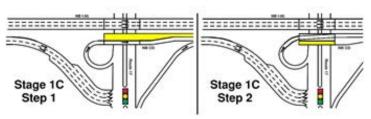
Prior to beginning work on Bridge B608, traffic will be shifted along Route 17 and the NB I-95 CD Lanes. To facilitate abutment demolition, support of excavation will be installed at each abutment. Prior to deck demolition, a timber demolition shield shall be installed over Route 17. Our plan is to saw cut the existing deck and remove slab sections, followed by girder removal. The existing structure is classified as "Type B" and provisions to protect the environment and workers will be utilized and disposal methods/locations documented.

Pier construction will be accessed via the median area of Route 17 and support of excavation will be required. Disturbance of the existing footing will be kept to a minimum and piles located to avoid the existing structural footing. Furthermore, the new pier will be stand alone and not designed nor constructed to utilize the existing footing for structural loads. Conventional MSE walls will be constructed for Abutments A and B; however, wire walls will be required along the staging line during Stage 1. These wire walls will remain in place with Stage 2.

Bulb-T girder erection will be performed with intermittent stoppages of Route 17. Debris shielding shall be installed between girder lines over the roadways to allow uninterrupted installation of SIP forms.

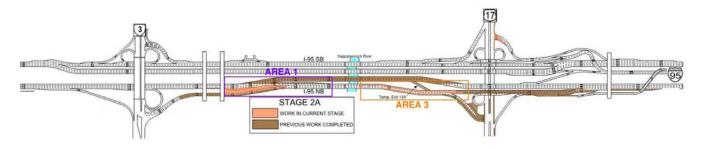
Reinforcing will be installed, concrete decks placed, parapets constructed, and approaches completed.

With Step 1 complete, traffic will be shifted to the newly constructed bridge and Step 2 construction completed in similar fashion to Stage 1.



Stage 2A - NB I-95 CD Lane Completion and Ramp B

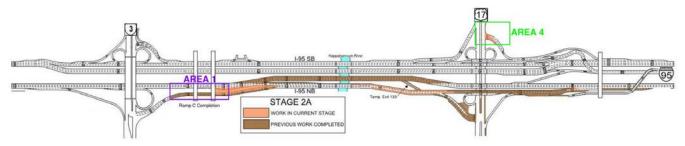
Work Area 1 (Zone 4): I-95 NB CD Lanes 5511+00 to 5543+50 Work Area 3 (Zone 2): I-95 NB CD Lanes 5554+50 to 5606+00 (May 2023-Nov 2023)



These two Work Areas will be constructed concurrently following the opening of the new I-95 NB GP

Lanes. The work will involve the widening or replacement of existing shoulders, drainage, installation of concrete median barriers to isolate the GP and CD Lanes, and the removal and installation of new guard-rail to meet current standards. Noise barrier FH will also be constructed in this Stage. With the majority of the work occurring out of traffic, all asphalt milling and final surface pavement overlays will be performed prior to opening the CD lanes to traffic.

Work Area 1 (Zone 3) Route 3 Ramp C (May 2023 – July 2023) Work Area 4 (Zone 2) Route 17 Ramp B (July 2022-Nov 2022)



Completion of the Route 3 Ramp C will occur in this Stage including the final installation of all median barrier and BPPS elements. All final surface asphalt pavement and pavement markings will be installed prior to opening of traffic.

Area 4, Stage 2A will begin the reconfiguration of Route 17 Ramp B. Work will begin with the inside widening of the existing Ramp and traffic will be shifted to the new pavement. Concurrently, crews will be widening the NB Route 17 lanes from north of the I-95 overpass to Gateway Drive. The new traffic signal infrastructure will be installed for the future triple right turn lanes from SB I-95 CD Lanes to NB Route 17.

End of Stage 2A - Major Traffic Shift

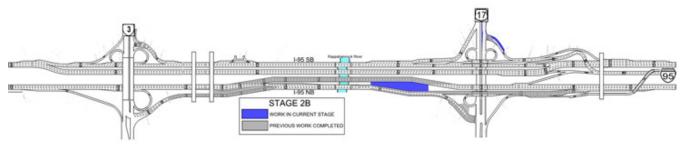
The end of Stage 2A is highlighted by the following major traffic switch:

• Opening of the new I-95 NB CD Lanes from Route 3 Ramp C to Route 17.

The new I-95 NB CD Lanes will be opened in one night-time operation. This switch will also include the opening of new Route 3 Ramp C. All openings are intended to occur with final surface asphalt and permanent pavement markings in place. A benefit to our Sequence of Construction is that the Bridge B608 I-95 NB CD Lane replacement will be complete prior to the opening of the CD Lanes. Drivers will have full access to all new lanes, mitigating driver confusion as no permanent lane closures or major construction work will occur at the time of the shift.

Stage 2B - Ramp B Completion and Removal of Temp Ramp D

Work Area 4 (Zone 2/3): Route 17 Ramp B (May 2023 - Nov 2023) Work Area 3 (Zone 1): Remove Temporary Route 17 Ramp D (Nov 2023 - Jan 2024)



In Stage 2B, Ramp B and the northern portion of the Route 17 Widening will be completed. The new

traffic signal at the Route 17 and Ramp B and the modifications to the traffic signal at Sanford Drive/Gateway Drive intersection will be completed. Additionally, in this Stage, the final portions of the Option #3 - Route 17 Sidewalk will be completed, should the Department move forward with the work. The timing of the completion of the Ramp B and Route 17 work is coinciding with the opening of the I-95 NB CD Lanes as the intent is to complete all Route 17 major construction by the November 2023 opening date.

Following the opening of the I-95 NB CD Lanes, crews will quickly remove the temporary Route 17 Ramp D and replace the opening with the permanent median barrier. All shoulders will be restored and final surface asphalt placed in this area.

Work Area 5 (Option #1): Auxiliary Lane Extension to Exit 136 (Nov 2021 - Sept 2022)

Should the Department exercise Option #1, the work will be constructed following the completion of the FredEx overlap area north of Ramp HWN. The sequencing for this work will begin with improvements to the left shoulder of NB I-95 that will occur similar to that in Stage 1A. Following the shift of NB I-95 traffic to the left, traffic barrier will be placed along the right shoulder and access to the area will be gained via one opening in the barrier and at either end.

Earthwork for the Auxiliary Lane extension consists of sliver cuts and fills for the length of the work area and extensions to existing minor drainage crossings and new ditchlines will be established. In order to eliminate impacts to existing streams and wetland areas, our Team will use retaining walls to avoid the extension of 3 box culverts along the Auxiliary Lane alignment. Opening of the new Auxiliary Lane will be coordinated with the FredEx Project and VDOT and available by the Spring of 2023.

Safety and Operations

At the top of our list of Shirley's Core Values is the safety of our people, our subcontractor partners, the client, and the public. The design and the means and methods of construction are developed with the safety of the workers and the traveling public as the highest priority. Our motto "Safety Starts with Me" reflects the company's policy and position that every individual must be involved, empowered and accountable for Project safety. The construction team will implement safety on site through the following standard practices:

- Training on construction safety, fall protection, first aid, rigging, trenching, and excavation;
- A Safety Manager assigned to the Project and support from the Safety Department;
- Safety Orientation for all Shirley and subcontractor employees;
- Daily safety talks and review of the Safe Plan of Action (SPA) for each day's activities;
- Daily safety inspections performed by members of the Project Team;
- Monthly Team safety meetings to review incidents and new safety topics;
- Issuance of a Shirley "Dig Permit" prior to any excavation activity;
- 100% Glove Policy to mitigate hand injuries; and
- Recognition of employees who consistently display a good safety attitude, follow safe work practices, and achieve safety performance goals.

For the safety of the traveling public, our Team's Transportation Management Plan (TMP), presented in Section 4.5.2, provides the baseline for maintaining mobility throughout the Project. Construction access has been well thought out to limit impacts to the public and will be coordinated with the adjacent construction projects. For the work zone setup, or any temporary lane closures, the VDOT Work Zone Safety Checklist will serve as the minimum standard for conformance with the Project's safety requirements, and checks will be performed daily. In the case of any incidents on or adjacent to the site, our Team will work closely with first responders, VDOT's Traffic Operations Center (TOC) and Incident Management staff to make the scene safe and restore traffic as soon as possible.

Staging and Storage Areas

Our Team understands the importance of a smart site logistics plan and good housekeeping, as both improve public perception and safety for all involved. Storage of materials will be isolated to areas where safe delivery access can be provided while ensuring that no material is stored in a location which would introduce a hazard (such as obscuring line of sight) to the travelling public, construction, or inspection staff. Material staging areas will be defined for both roadway and bridge elements.

The Project contains large portions of construction work which are able to be constructed out of traffic and lend themselves well to create efficient staging and storage yards. In Section 4.5.2, per the Sequence of Construction and MOT Staging Exhibits 4.5.2.1 - 4.5.2.4, our Team's proposed construction entrances and staging/storage yard locations are depicted. As work progresses, the staging areas will be removed and relocated upon the major traffic movements and opening of new Work Areas. We also recognize that construction entrance locations may need to be adjusted during construction and will work with the Department, QA, and our Safety Manager to assure that we have the optimized location for truck traffic that is entering and exiting work areas.

4.5.2 Transportation Management Plan

Our Team is dedicated to delivering this Project in a way that exceeds expectations for the minimization of public impacts for all stakeholders during construction. Above all, our TMP and TTC Plans will be developed with a focus on maximizing safety for the traveling public and construction personnel while minimizing travel delays. To accomplish these safety and mobility enhancements, we have committed to several mitigation and communication strategies that exceed the requirements of the RFP, including:

- Where work does not encroach into the right shoulder, we will set temporary barrier 10' back from the edge line, to retain a 10' right shoulder in addition to a 10' left shoulder;
- Where work is required in the right shoulder area, staggering work to provide emergency pull-offs along the right shoulder;
- Opening Ramp D improvements early (*Unique Milestone #1*) to allow the NB CD bridge over Route 17 to be reconstructed without a temporary weave lane on the bridge (Option #2);
- Utilization of enhanced safety devices targeted to address specific conditions on I-95, such as wider than required pavement markings and longer than required lane shift lengths;
- Opening the NB CD in one single traffic switch at the end of Stage 2A, avoiding an interim opening of the exit from NB I-95 to Route 17 (Exit 133);
- Enhancing public communication outreach; such as building a scale model walk-through of the new Exit 133 configuration complete with overhead signs for a "pre-opening" public meeting, and "drive through open houses" at the SB I-95 welcome center; and
- Committing to regular work zone traffic control reviews by design engineers, to ensure design is implemented as intended, and to suggest safety enhancements.

TMP Philosophy

Our TMP and Construction Sequencing is focused on reducing the Project's anticipated impacts to the traveling public and exceeding the safety requirements of the RFP. Our TMP and TTC plans will place a particularly heavy emphasis on eliminating the need for temporary lane closures to the extent possible, as we thoroughly understand the impact that lane closures can have on this heavily congested section of I-95. To meet our high safety and mobility standards, the TTC and TMP plan development will be led by our Maintenance of Traffic Engineer, Jerry Mrykalo, who is a Professional Traffic Operations Engineer (PTOE) and a certified VDOT Work Zone Traffic Control Training Instructor. Jerry has served in this role for four previous interstate widening projects, as well as the I-95/Route 630 Reconstruction and Widening Project allowing him to understand the unique safety and mobility considerations of this Project. Furthermore, our

Team commits to additional field reviews by our traffic engineering staff during construction is in addition to the Work Zone Safety Inspections completed by our QA and QC Team. These regular reviews will verify that traffic controls have been implemented correctly and provide recommendations for further enhancements. An example of a TTC Engineer Monitoring Report can be seen in Figure 4.5.2.1.

Sequence of Construction/Phasing

As introduced in Section 4.5.1, the Project will be segmented into five Areas (Area 1-5), each of which has unique construction and temporary traffic control features. For each of these Work Areas, we have developed area-specific Sequence of Construction and MOT Phasing strategies as highlighted on Exhibits

to safely maintain all lanes during construction.

4.5.2.1 through 4.5.2.4 located at the end of this section. Color coded shading is applied to each work element to show the sequencing of construction. Additionally,

Dewberry Temporary Traffic Control - Engineer Monitoring Report Project: Route 7 Corridor Improvements Location: Fairfax County, VA Roadway: Route 7 Review Date & Time: August 28th, 2010, 11:00 AM Report Date: September 9th, 2019 Report Number: 02 Review Performed By: Gerard (Jerry) Mrykalo, PE, PTOE General Findings Regarding Temporary Traffic Control: The work area was observed to be in general good condition. The vast majority of pavement markings were highly visible, and temporary raised pavement markers were in place. Modifications to address observations and recommendations included in Report #01 did not appear to be implemented yet. Comments Regarding Temporary Traffic Control: It was observed the lane shift markings along westbound Route 7 from Sta. 209+75 to Sta. 200+65 did not appear to be 12° wide as denoted on plan sheet 1L(4). Ensure all pavement marking widths are the widths specified in the plans. The edge line markings and drum placement around the median of Route 7 at Reston Av do not appear to be per plan sheet IL(1). Ensure markings and drum placement are instr per plan sheet IL(1).

Figure 4.5.2.1 Example TTC Engineering Report

This sequencing allows our Team to efficiently construct the Project while minimizing impacts to traffic. We carefully studied numerous options when developing this staging, resulting in a plan that minimizes the need for temporary lane closures and maximizes the maintenance of shoulder areas. Sequencing highlights detailed in the exhibits include:

critical typical sections for each Stage of work are included to detail the MOT (TTC) phasing we will use

- Use of a pre-stage (Stage 1A) for off-peak shoulder operations necessary to begin Stage 1B permanent widening. This includes rumble strip removal where traffic will be shifted onto this shoulder, temporary shoulder widening to achieve a 10' remaining shoulder width, and shoulder strengthening where required;
- Staging work to maintain full 10' left and right shoulders in Area 1, exceeding the requirements of the RFP:
- Constructing and opening Ramp D (*Unique Milestone #1*) prior to Stage 1C Option #2 NB CD over Route 17 bridge reconstruction, improving safety by eliminating a weave condition on this bridge during reconstruction exceeding the requirements of the RFP;
- Opening the new Exit 133 and NB CD in one single traffic switch at the end of Stage 2A, avoiding the need for drivers to learn multiple travel pattern changes and avoiding multiple public outreach campaigns, exceeding the requirements of the RFP; and
- Utilization of a sequencing that allows Interim Milestone work north of Route 17 to be accomplished with independent phasing, with staging that is not dependent on progress of other Project construction activities.

Traffic Control Details for Maintaining Traffic During All Phases

In addition to the sequencing of construction and TTC typical sections shown on Exhibits 4.5.2.1 through 4.5.2.4, this section includes the traffic control details to be implemented. Upon Project Award, we will begin the design of the Type C, Category V TMP and will develop site-specific Temporary Traffic Control (TTC) plans for each Stage of construction, with corresponding Erosion and Sediment Control (E&S) plans for each Stage. The TTC plans will detail all controls required for construction, such as work areas, temporary barrier, attenuators, channelizing devices, signs, PCMS, temporary markings, temporary drainage elements, construction access points, and all other requirements per VDOT's I&IM 241.7, the

Virginia Work Area Protection Manual, and the Manual on Uniform Traffic Control Devices (MUTCD). Our Team also recognizes common shortfalls with TTC in work zones, and we are committed to avoiding these conditions with carefully designed site specific TTC plans. For example, we will ensure that barrier ends, and impact attenuators are flared as far away from traffic as possible to reduce the likelihood of a high severity crash into an attenuator. Additional details are as follows:

I-95, Interchange Ramps, and Route 17 (Including Options #1, #2, and #3)

- All thru lanes and ramp lanes will be continuously maintained during all Stages, with the exception of temporary lane closures (time of day restrictions) following the hours defined in Part 2, Section 2.10.3 of the RFP. Temporary lane closures are anticipated for activities such as night time paving, placement of traffic barriers, delivery of materials, and bridge work;
- No detours are planned. 30-minute maximum full stoppages are only expected for overhead work (such as sign structure erection) and opening of new alignments;
- Flagging operations are only anticipated for overhead signal work along Route 17; and
- Minimum lane widths will be 11' (wider lanes to be maintained on ramps).

Work Zone Speed Reductions

Our Team has taken the proactive step of already completing an analysis utilizing VDOT's TE-350 process to determine a preliminary recommendation for the posted speed limit during construction. Based on this analysis, we recommend reducing the existing posted speed limit of 65 mph to 60 mph on I-95 for the following reasons:

- There were 2,511 crashes within the Project limits between 2013 to 2017 including eight fatality crashes; and
- The combination of high traffic volumes and high existing speed limit presents increased risk for both the traveling public and workers.

While our Team recommends this reduction, our temporary geometry and lane shifts will meet the standards for the existing speed limit of 65 mph to enhance safety, *exceeding the requirements of the RFP*. This speed reduction recommendation will be discussed with VDOT post-Award, and the final determination will be made in coordination with the District Traffic Engineer. Upon implementation, our Team also commits to the utilization of a Speed Display Trailer / Radar Speed Trailer as an additional enhancement.

Unique Project Challenges and Solutions

In addition to the minimum requirements of the RFP, specific attention has been given to the unique challenges of the Project, with focus on mitigation and communication strategies that maximize safety, minimize public impacts, and minimize schedule risk. By carefully studying these elements, our Team has identified the following challenges and devised unique solutions to address each:

1. Crash Avoidance and Incident Management

While the entire length of I-95 in Virginia is a vital roadway, the section within the Project limits is further critical given the higher volumes between Exit 130 and Exit 133 and it is one of the number of crossings of the Rappahannock River in the region. Furthermore, the planned temporary closure of the Chatham Bridge in Fredericksburg puts even more emphasis on the need to avoid crashes and to quickly clear incidents when they do occur. Given this understanding, our Team commits to the following crash avoidance and incident management techniques:

■ Maintaining Shoulders: Wherever possible, we commit to maintain both 10' left and 10' right shoulders during construction, *exceeding the requirements of the RFP*. This will be primarily

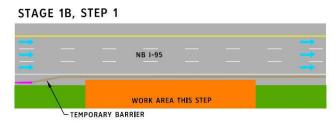
implemented in Work Areas 1 and 5, where temporary barrier will be set 10' back from the edge of the travel lane in areas where excavation does not encroach into this right shoulder area. These additional shoulders provide an "escape route" to help avoid right lane rear-end crashes, and will provide important refuge for vehicle breakdown, crash cleanup, or police enforcement without blocking the right lane. Furthermore, the additional shoulders facilitate EMS to more quickly navigate thru stopped traffic when responding to incidents.

- Forgiving Geometry and Enhanced Safety Devices: Crash avoidance thru targeted safety enhancements are the best way to reduce the number of incidents. We have proactively studied the existing crash trends, and commit to the utilization of the following enhanced safety devices that all exceed the requirements of the RFP:
 - Full continuous temporary raised pavement markers with installation of all temporary markings, as shown in Figure 4.5.2.2 for increased lane visibility especially at night and during wet pavement conditions (only required at lane shifts per the Work Area Protection Manual);
 - Use of wider than required lane lines for increased delineation of lane shifts;
 - Use of full "L" length for lane shifts (not ½ L as allowed) to provide "forgiving geometry" and reduce potential sideswipe and run-off-road crashes; and



Figure 4.5.2.2 Enhanced Safety Devices

- The use of tighter than required channelizing device spacing for increase work zone delineation and improved safety.
- Use of Emergency Pull-Offs: For areas where excavation is required in the existing right shoulder area, work operations will be staggered in order to provide emergency pull-offs along the right shoulder, in addition to the required continuous 10' left shoulder. These pull-offs (depicted in Figure 4.5.2.3) will be provided at ½ mile maximum intervals, *exceeding the requirements of the RFP*, to enhance incident management.



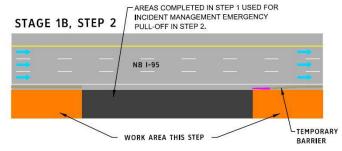


Figure 4.5.2.3 Emergency Pull-Offs

2. Route 17 Interchange Sequencing

With Exit 133 (Route 17) being a major regional interchange for both local and long-distance traffic, our Team understands the importance of minimizing impacts during both base construction operations and Option #2 NB CD bridge reconstruction. One of the undesirable conditions that we focused on was the presence of the back-to-back loop ramp weave movement along the NB CD across the NB CD bridge over Route 17. With Option #2 B608 bridge reconstruction, lane shifts required for phased bridge construction would complicate this weave area, requiring navigation of lane shifts and narrower shoulder widths, and likely less weaving distance through this high complexity weave.

In recognition of this, our Team will advance the construction of Ramp D (NB CD to Route 17) widening as a Stage 1B activity. This allows the early opening of the permanent triple left movement, and the closure of the existing Loop C from the NB CD to NB Route 17 prior to Option #2 bridge reconstruction. With this sequencing, the NB CD weave is removed prior to the weave being impacted by bridge work,

resulting in the need to only maintain a single lane on the bridge reconstruction (SB Route 17 to NB I-95 movement). This sequencing enhancement results in numerous benefits including the early opening of added Ramp D capacity, and safety improvements to both vehicular traffic and construction personnel by eliminating the weave and providing wider shoulders on the bridge during reconstruction. Additionally, the over height vehicle detection system along the NB CD will be maintained and adjusted as necessary until the point at which the existing bridge is completely removed as the need for the system is eliminated. This unique sequencing is depicted in Figure 4.5.2.4 below, with bridge reconstruction typical sections included on Exhibit 4.5.2.3.

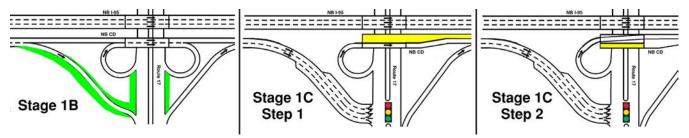


Figure 4.5.2.4 Sequence of Construction (Option#2)

3. Adjacent Project Coordination (I-95 SB RRC and Fred-Ex Projects)

Our Team recognizes the importance of coordination with adjacent projects, as both the I-95 SB RRC Project and the FredEx Project are expected to have concurrent work zones along I-95 with overlapping construction activities. If not fully coordinated, the possibility of conflicting traffic control can arise, potentially leading to a public safety risk. Furthermore, incomplete coordination can lead to potential schedule and project completion delays. To ensure activities are fully coordinated, our Team commits to establishing and maintaining regular coordination between projects. For example, if both projects require a lane closure for work in the same lane, work will be coordinated to determine if it can be accomplished during a single closure as opposed to two separate closures, having a recognizable benefit to the traveling public.

4. Lane Closure Optimization

When full construction starts, lane closure impact minimization will be critical when working along I-95. Our temporary traffic control strategy puts an emphasis on eliminating the need for temporary lane closures to the greatest extent possible. To minimize the impact of lane closures that are necessary, we will exceed the requirements of the RFP by collecting updated 24-hour volume information along I-95 as an initial design activity. We recognize that the lane closure restriction times listed in Section 2.10.3 of Part 2 of the RFP are to be followed, but given our Team's experience, we also recognize the impact that lane closures can have on the already congested I-95 and that constantly changing traffic volumes may now be different than previously collected volumes.

Next, these updated traffic volumes will be analyzed to determine which hours may cause traffic backups and delays during the allowed temporary lane closure window, in order to validate the RFP lane closure schedule. Seasonal variations will also be considered, such as the impact of summer travel. We can also utilize this data in development of the TMP to ensure construction activities that require lane closures occur during the hours of lowest volume. For example, this hour-by-hour analysis will allow activities of a short duration, such as overhead sign erection, to occur during the hours of lowest volume within the longer allowable overnight lane closure window, providing a safety and travel time benefit that *exceeds* the requirements of the RFP. Furthermore, our Team commits to recounting traffic and revalidating lane closure hours mid-way through construction as traffic volumes may shift after the Chatham Bridge over the Rappahannock River reopens.

Stakeholder Communication and Mitigation Strategies

Our Team recognizes that proactive communication with all project stakeholders is essential to a successful TMP. As with any large-scale transportation improvement project, some inconvenience is unavoidable, but our Team's goal is to minimize these impacts. As detailed in Table 12, we have proactively identified project stakeholders, determined how they will be impacted, and we have devised targeted communication and mitigation strategies to reduce these impacts. While Section 2.11 of Part 2 of the RFP defines the components of a robust Public Involvement/Public Relations scope for the project, below are major enhancements to these minimum requirements that exceed the requirements of the RFP:

The reconfiguration and relocation of Exit 133 from NB I-95 to Route 17 is a major traffic pattern change, as the exit point is relocated to south of the Rappahannock River, it will consist of different lane assignments, and it requires a weave maneuver along the NB CD. Robust public outreach and driver education is key for this opening, as drivers will need to be alert at the southern shift of the exit point in order to not miss the exit or to not make a last second lane change to exit. As a public outreach enhancement, our Team commits to hosting a pre-opening public



Figure 4.5.2.5 Public Outreach Meeting with Scale Model of Traffic Shift

meeting where we will build a scale model of the new dual shared-lane exit, complete with overhead signing that drivers will encounter. This technique was recently utilized for our I-95/Route 630 Reconstruction and Widening-Diverging Diamond Interchange (Exit 140) opening, as shown in Figure 4.5.2.5.

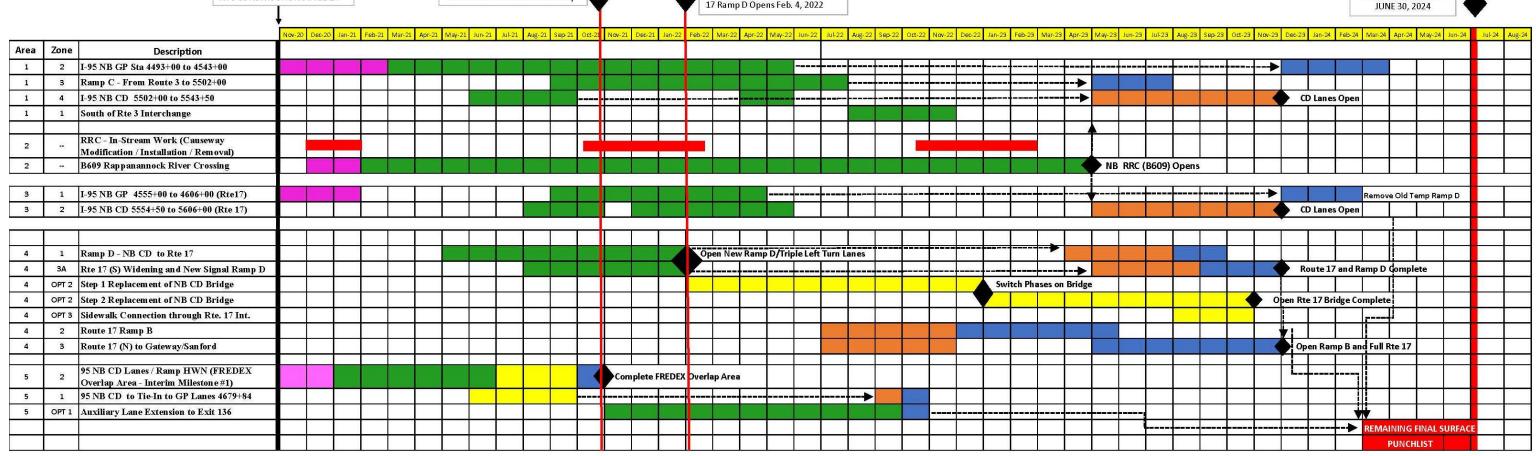
- **SB I-95 Welcome Center Open House:** In addition to the "Pardon Our Dust" and Pre-Opening meeting, the presence of the Welcome Center along SB I-95 provides an opportunity for continual 24/7 public outreach for drivers who cross the Rappahannock River on I-95. Our Team will coordinate with VDOT to establish a station at the Welcome Center that distributes Project information and upcoming work activities to the general public. Handouts will also contain references to the project web site where interested drivers can find additional information.
- Limiting Community Impacts Associated with Noise Barrier Construction: Our Team commits to constructing the proposed noise barrier adjacent to the Village of Idlewild south of Route 3 with all access from I-95, eliminating construction traffic and disturbance to the residential community.

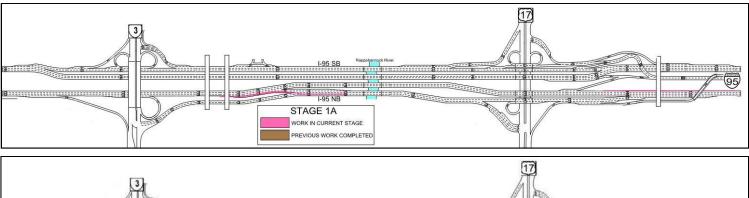
Table 12 - Stakeholder Communication and Mitigation Strategies

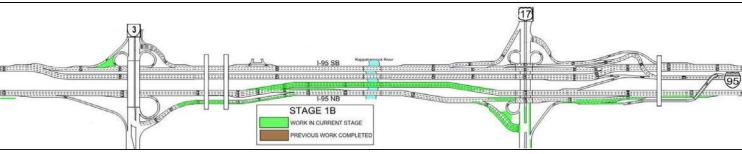
Stakeholders	Impacts	Communication/Mitigation Strategies
Traveling Public	Base & Option #1,2,3: Minimal travel time delays along I-95 and Route 17.	 Hold "Pre-Opening Meeting" and Welcome Center "Open House" and "Pardon Our Dust" meetings for the general public, public safety officials, and other stakeholders throughout design and construction. Additional shoulders, wider lane lines, longer lane shift lengths, and reduced number of lane closures. PCMS will be utilized for public notices. Robust outreach campaign in accordance with Part 2.11 of RFP.
Friends of the Rappahannock & Water Traffic	Base: Minimal water route restriction in the vicinity of I-95 bridges.	 Enhanced signs and warning devices for water traffic. Water Causeways and Water Crossing Route clearly delineated/defined and communicated.

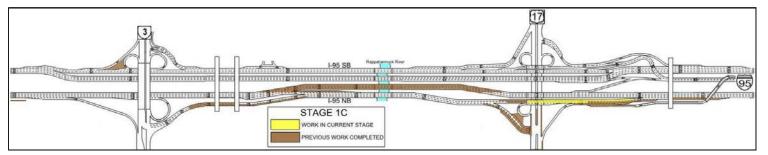
Stakeholders	Impacts	Communication/Mitigation Strategies
Local Residents	Base & Option #1,2,3: Possible construction noise and construction activities close to their property	 Coordination of construction activities with residential groups via notification via public meetings and targeted outreach. Noise barriers to be constructed with access from I-95 only, not from neighborhood streets. Access to all properties maintained at all times. Encouragement for residents to follow Project related social media. Establishment of Welcome Center "Open House".
Schools Stafford County City of Fredericksburg Mary Washington Univ. Strayer University	Base & Option #1,2,3: Potential delays to school buses / transportation services.	 Coordination of construction activities directly with school staff. No lane closures during school bus operating hours when possible. Advance notification of traffic pattern changes.
Police, Fire & Rescue Stafford Fire-Rescue Stafford County Sheriff Fredericksburg Fire Fredericksburg Police	Base & Option #1,2,3: Potential response time impact.	 Additional shoulders provided for incident management, police enforcement, and quicker response to incidents. Advance notification of temporary lane restrictions, changes to traffic patterns, and ingress/egress points. Representatives will be notified of approved lane closure requests. Pre-switch emergency responder meetings for response planning. 24/7 Emergency Contact information.
Elected Officials	Base & Option #1,2,3: Constituent questions and inquiries.	 Our Team will inform elected officials of project status and upcoming events to help them answer direct inquiries they may receive from public. Elected officials will be given contact information for our Team, either for their use or constituent use.
Bus Transit Services	Base & Option 1,2,3: Potential impacts to bus transit routes.	Notifications of work will be sent to transit operators in advance of traffic switches.
Mary Washington Hospital	Base & Option 1,2,3: Potential delays accessing hospital or confusion in route to hospital	 No Long-term lane closures on hospital access routes. Full blue "H" signing for hospital maintained at all times.
Adjacent Projects (SB RRC & Fred Ex)	Base & Option 1,2,3: Possible conflicting I-95 construction operations.	 Coordinate construction activities and avoid conflicts. Coordination of lane closures to minimize public impacts. Coordinating public outreach to deliver a uniform, consistent message to drivers along I-95.

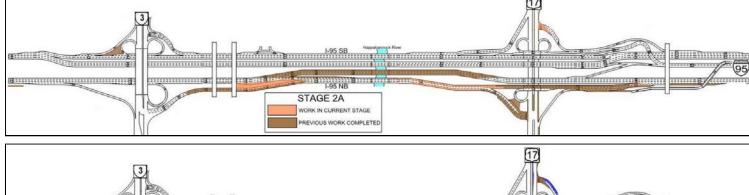
Exhibit 4.5.1.1 - Sequence of Construction and Summary Schedule Shirley Unique Milestione Route NTC CONSTRUCTION STAGE 1A Interim Milestone FredEx Overlap 17 Ramp D Opens Feb. 4, 2022 Description

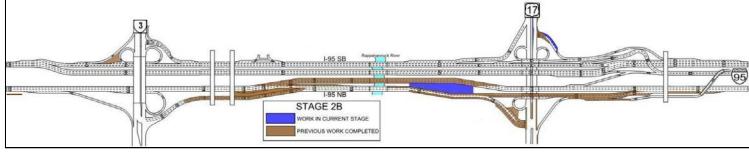


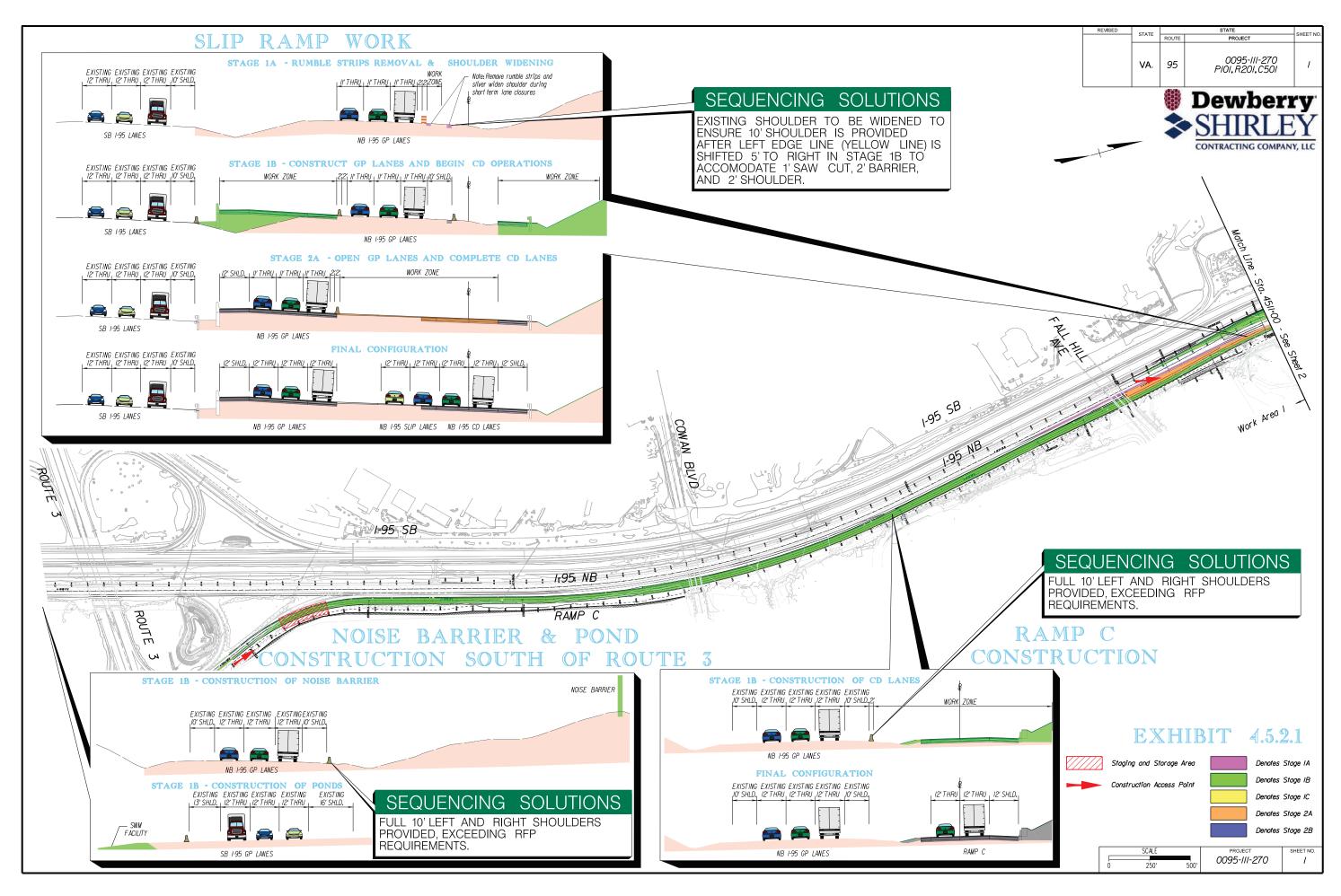


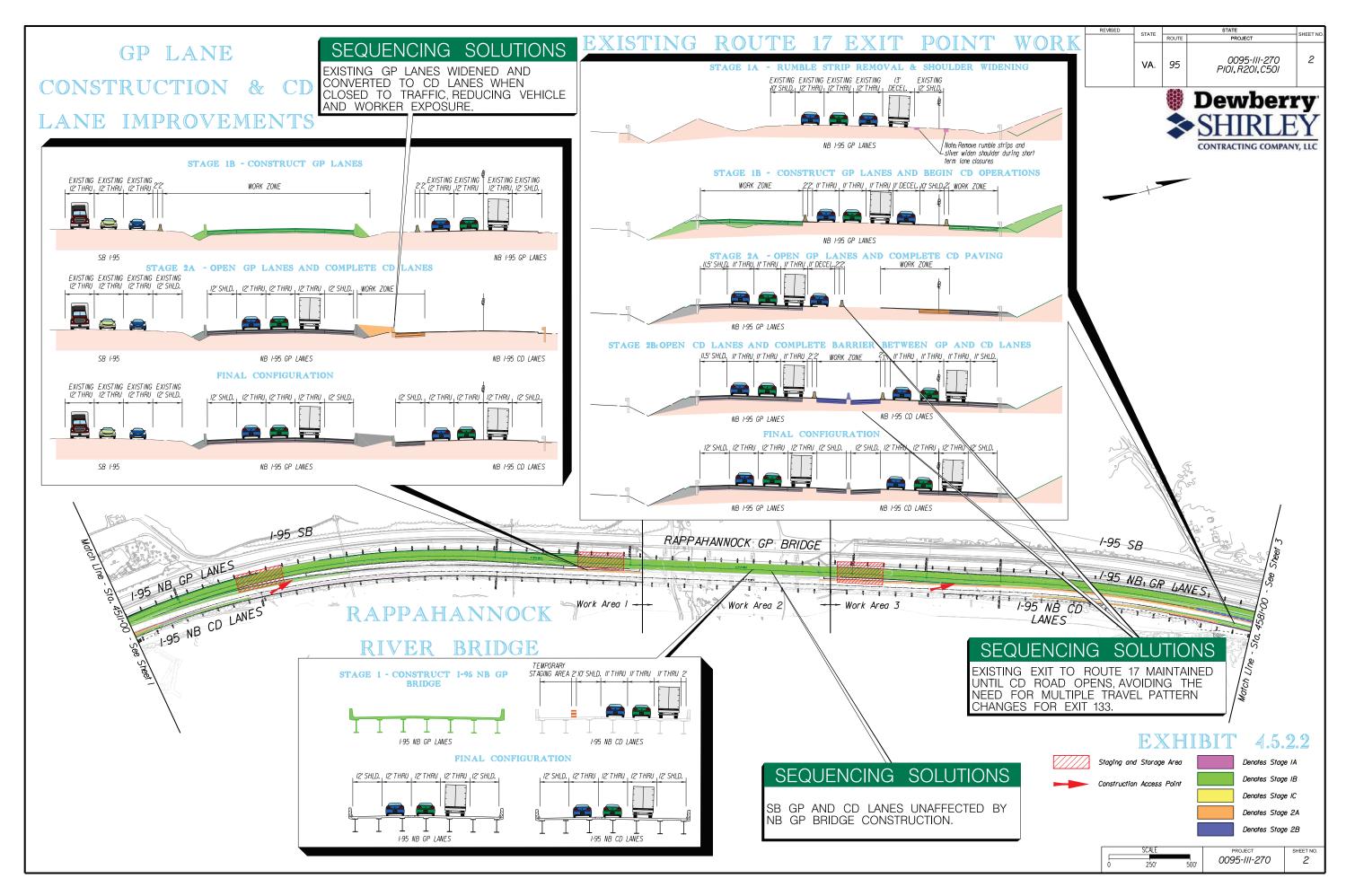


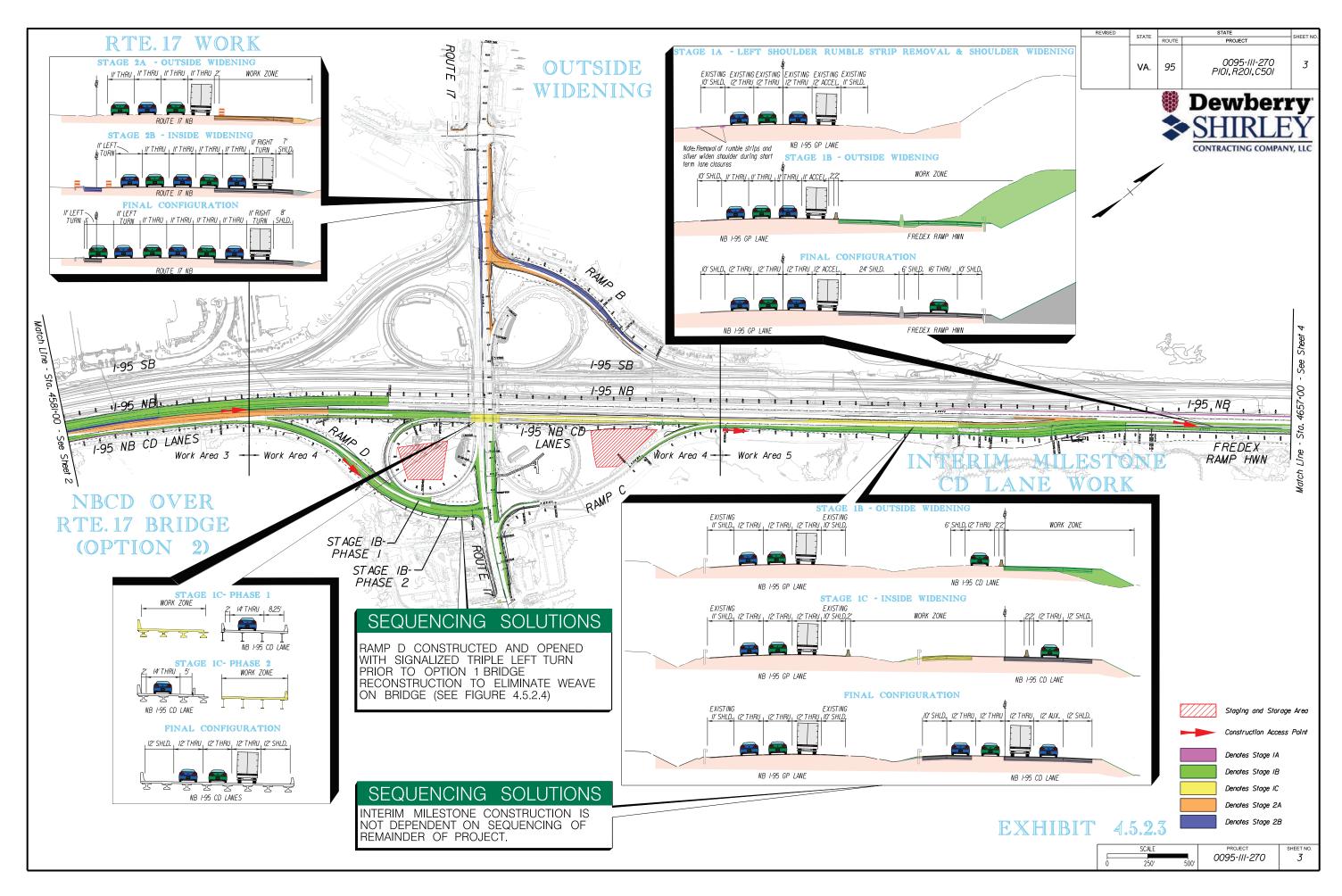


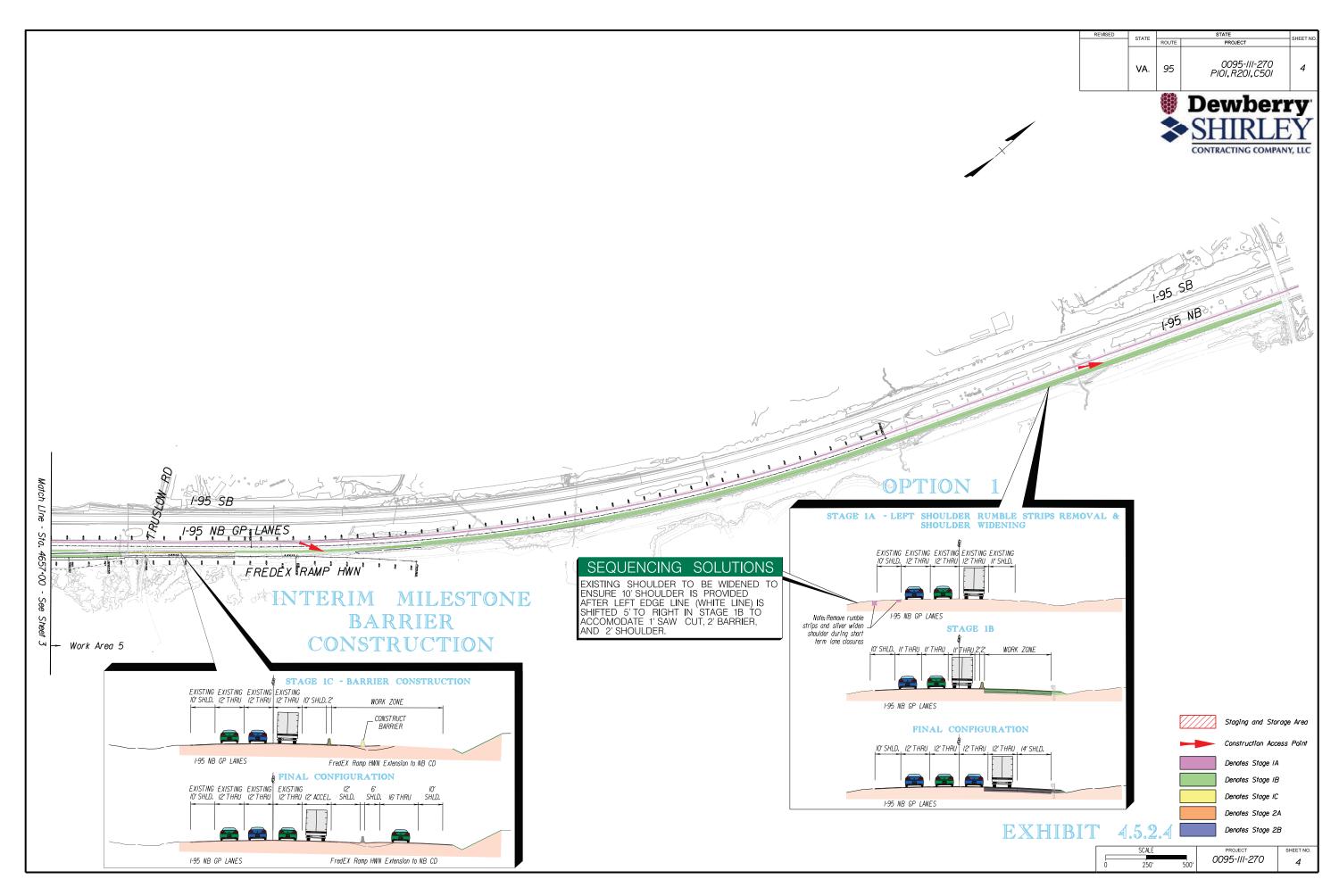
















The Shirley Team's Proposal Schedule is provided in our Volume II - Design Concept.

4.6.2 Proposal Schedule Narrative

Shirley has reviewed in detail the Project and schedule requirements in the RFP and has developed a Proposal Schedule outlining our plan to successfully manage all phases of the work. This schedule has been optimized to deliver the Project *ahead of schedule* while also *exceeding the requirements of the RFP*, minimizing impacts to the traveling public and other stakeholders, protecting the environment, coordinating with the utility companies, and ensuring motorist's and worker's safety. We commit to meeting the Interim Milestone Date for the completion of the FredEx Overlap Area. Finally, we commit to *Unique Milestone #1 by opening Ramp D triple left turn lanes onto NB Route 17* to improve traffic operations during construction. A summary of these Contract and Schedule Milestones are shown in Table 13.

Contract and Schedule Milestones Date Notice of Intent to Award April 06, 2020 Design-Build Contract Execution May 26, 2020 Notice to Proceed May 28, 2020 Begin Early Work for FredEx Overlap Area / Stage 1A Construction November 16, 2020 January 20, 2021 Begin Early Work for RRC Crossing / Causeway Modifications Begin Stage 1B Construction May 14, 2021 Interim Milestone #1 October 29, 2021 Unique Milestone #1 – Open Ramp D / Triple Left onto NB Route 17 February 4, 2022 Complete Rappahannock River Bridge (B609) April 21, 2023 Open Traffic to I-I-95 NB GP Lanes April 28, 2023 Open Permanent I-I-95 NB CD Lanes from Route 3 to Route 17 November 22, 2023 Project Ready to Start Final Inspections / Punchlist May 1, 2024 June 30, 2024 Final (Early) Completion

Table 13 - Contract and Schedule Milestones

Work Breakdown Structure

Our Team has developed a detailed Proposal Schedule in accordance with the RFP requirements. The Team has organized the schedule into a hierarchical Work Breakdown Structure (WBS) in order to demonstrate the relationships and activity durations amongst the milestones, scope validation period, design, public involvement, environmental permitting, ROW acquisition, utility relocation, construction, and project management disciplines. All elements of the design-build process are captured under these Level 1 tasks and are described below:

- **A. Schedule Milestones:** Area reserved for easy review of the Project status. The Scope Validation Period has also been included in this section.
- **B. Design Phase:** Includes preliminary engineering services, geotechnical work, plan development, design QA/QC reviews, submittal milestones, and VDOT and FHWA reviews and approvals. This section includes a second level WBS structure to group design activities for early design packages, roadway design elements and each bridge structure.

- **C. Public Involvement:** This section of the schedule includes activities and milestones for developing the planned public involvement process including communication plans, public information meetings, first responder meetings and updates to VDOT and the Public for major traffic shifts and the VDOT website.
- **D.** Environmental: Includes wetland and stream delineations, jurisdictional determinations, permit management and preparation, mitigation, permit submissions, and reviews from the authorities having jurisdiction. Also included are hazardous material surveys and threatened and endangered species identification and assessment.
- **E.** Right-of-Way Acquisition: This section of the schedule is used to outline and monitor the acquisition of ROW and easements for the Project including title searches, appraisals and reviews, offers, negotiations, and settlements.
- **F.** Utility Relocations: Includes activities for utility relocations such as UFI meetings, preparation of plans and estimates (P&E), approval of plans and estimates, utility relocation design by the utility owner and DB Team, approval of the utility design, and utility relocation, installations and adjustments needed for construction of the new facilities. The utility relocations are separated into second level WBS groups based on utility owner and Project areas.
- **G.** Construction: Includes all components of roadway and bridge construction including Project Management and the Quality Assurance/Quality Control processes. The Construction section of the schedule is segmented by additional levels of WBS structure to divide the construction activities into Area, Zone, Stages, and major portions of work such as roadway, bridge, culvert or retaining wall activities. This strategy and grouping of work packages has proven to allow for easy and clear tracking of activity progress to ensure on-time completion of the Interim and Unique Milestones, and early Final Completion.

Table 14 is a complete outline of the WBS Structure for the Project:

Table 14 - WBS Structure

WBS Path	WBS Name
C00105510DB106_PS-1.I-I-95 NB RRC.A	SCHEDULE MILESTONES
C00105510DB106_PS-1.I-I-95 NB RRC.A.A	I-I-95 NB RRC MILESTONES
C00105510DB106_PS-1.I-I-95 NB RRC.A.B	ADJACENT PROJECT KEY DATES / MILESTONES
C00105510DB106_PS-1.I-I-95 NB RRC.B	DESIGN PHASE
C00105510DB106_PS-1.I-I-95 NB RRC.B.A	PRELIMINARY DESIGN WORK
C00105510DB106_PS-1.I-I-95 NB RRC.B.A.A	DESIGN QA/QC PLAN
C00105510DB106_PS-1.I-I-95 NB RRC.B.A.B	SCHEDULE DEVELOPMENT and UPDATES
C00105510DB106_PS-1.I-I-95 NB RRC.B.A.C	SURVEY and MAPPING
C00105510DB106_PS-1.I-I-95 NB RRC.B.A.D	GEOTECHNICAL INVESTIGATIONS and REPORTING
C00105510DB106_PS-1.I-I-95 NB RRC.B.A.D.1	ROADWAY GER
C00105510DB106_PS-1.I-I-95 NB RRC.B.A.D.2	BRIDGE GER
C00105510DB106_PS-1.I-I-95 NB RRC.B.A.E	UTILITY DESIGNATIONS and TEST-PITS
C00105510DB106_PS-1.I-I-95 NB RRC.B.B	EARLY START PACKAGE- INTERIM MILESTONE AREA/
	FREDEX OVERLAP / STAGE 1A
C00105510DB106_PS-1.I-I-95 NB RRC.B.C	ROADWAY / ROW DESIGN
C00105510DB106_PS-1.I-I-95 NB RRC.B.D	BRIDGE DESIGN

WBS Path	WBS Name
C00105510DB106 PS-1.I-I-95 NB RRC.B.D.A	BRIDGE B609 RRC - EARLY PACKAGE FOR
	SUBSTRUCTURE WORK
C00105510DB106 PS-1.I-I-95 NB RRC.B.D.B	BRIDGE B609 RAPPAHNNOCK RIVER CROSSING
C00105510DB106 PS-1.I-I-95 NB RRC.B.D.C	BID OPTION #2 - BRIDGE B608 I-95 NB CD LANES
_	OVER ROUTE 17
C00105510DB106_PS-1.I-I-95 NB RRC.C	PUBLIC INVOLVEMENT
C00105510DB106_PS-1.I-I-95 NB RRC.D	ENVIRONMENTAL PERMITTING
C00105510DB106_PS-1.I-I-95 NB RRC.D.A	JOINT WETLANDS and WATERS PERMITTING
C00105510DB106_PS-1.I-I-95 NB RRC.D.A.A	THREATENED & ENDANGERED SPECIES / CULTURAL RESOURCES
C00105510DB106_PS-1.I-I-95 NB RRC.D.B	HAZMAT and ENVIRONMENTAL SITE ASSESSMENTS
C00105510DB106_PS-1.I-I-95 NB RRC.D.C	LD 445 / VPDES / STORMWATER PERMIT
C00105510DB106_PS-1.I-I-95 NB RRC.D.C.A	PROJECT WIDE LAND DISTURBANCE PERMIT
C00105510DB106_PS-1.I-I-95 NB RRC.D.D	NOISE ANALYSIS
C00105510DB106_PS-1.I-I-95 NB RRC.E	RIGHT OF WAY ACQUISITION/EASEMENTS
C00105510DB106_PS-1.I-I-95 NB RRC.E.A	RIGHT OF WAY PLANS
C00105510DB106_PS-1.I-I-95 NB RRC.E.A.A	R/W PLANS
C00105510DB106_PS-1.I-I-95 NB RRC.E.A.B	PROJECT SPECIFIC ACQUISITION and RELOCATION PLAN
C00105510DB106_PS-1.I-I-95 NB RRC.E.B	ROW ACQUISITIONS
C00105510DB106_PS-1.I-I-95 NB RRC.E.B.A	R/W GROUP 1 ACQUISITIONS
C00105510DB106_PS-1.I-I-95 NB RRC.E.B.B	R/W GROUP 2 ACQUISITIONS
C00105510DB106_PS-1.I-I-95 NB RRC.F	UTILITY RELOCATIONS
C00105510DB106_PS-1.I-I-95 NB RRC.F.A	I-I-95
C00105510DB106_PS-1.I-I-95 NB RRC.F.A.A	SUMMIT IG TRUNK LINE
C00105510DB106_PS-1.I-I-95 NB RRC.F.A.B	VDOT ITS / VERIZON
C00105510DB106_PS-1.I-I-95 NB RRC.F.A.C	WATERMAIN (I-I-95 CROSSINGS)
C00105510DB106_PS-1.I-I-95 NB RRC.F.B	ROUTE 17
C00105510DB106_PS-1.I-I-95 NB RRC.F.B.A	WATERMAIN
C00105510DB106_PS-1.I-I-95 NB RRC.F.B.B	SANITARY SEWER
C00105510DB106_PS-1.I-I-95 NB RRC.F.B.C	GAS LINE
C00105510DB106_PS-1.I-I-95 NB RRC.F.B.D	OH POWER& COMM
C00105510DB106_PS-1.I-I-95 NB RRC.G	CONSTRUCTION
C00105510DB106_PS-1.I-I-95 NB RRC.G.A	PRE-CONSTRUCTION, SUBMITTALS and MATERIAL PROCUREMENT
C00105510DB106_PS-1.I-I-95 NB RRC.G.A.A	MONTHLY PROJECT ADMINISTRATION TASKS
C00105510DB106_PS-1.I-I-95 NB RRC.G.A.B	SUBMITTALS ROADWAY
C00105510DB106_PS-1.I-I-95 NB RRC.G.A.C	BRIDGE B609 (NB RAPPAHANNOCK CROSSING)
C00105510DB106_PS-1.I-I-95 NB RRC.G.A.D	BRIDGE B608 (NB CD LANE BRIDGE REPLACEMENT)
C00105510DB106_PS-1.I-I-95 NB RRC.G.A.E	CONSTRUCTION QUALITY ASSURANCE / QUALITY CONTROL PROCESS
C00105510DB106_PS-1.I-I-95 NB RRC.G.B	AREA 1 - WORK SOUTH OF RAPPAHANNOCK RIVER BRIDGE
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.A	AREA 1 – GENERAL

WPS Poth	WRS Name
WBS Path	WBS Name
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.B	Area 1 - Zone 1 - SOUTH OF Route 3 INTERCHANGE (SWM / SOUNDWALL)
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.B.1	Area 1 - Zone 1 - SOUNDWALL C
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.B.2	Area 1 - Zone 1 - Route 3 SWM
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.C	Area 1 - Zone 3 - RAMP C - FROM Route 3 TO 5502+00
C00105510DB106 PS-1.I-I-95 NB RRC.G.B.C.1	Area 1 - Zone 3 - Ramp C from Route 3 to 5502 - MOT Stage
_	1B
C00105510DB106_PS-1.I-I-95 NB	RETAINING WALL #1 - 5485 to 5496
RRC.G.B.C.1.1	
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.C.1.2	RETAINING WALL #2 - 5496 to 5505
C00105510DB106_PS-1.I-I-95 NB	Area 1 - Zone 3 - Route 3 - SWM (Modify Existing Ponds)
RRC.G.B.C.1.3	
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.C.2	Area 1 - Zone 3 - Ramp C from Route 3 to 5502 - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.D	Area 1 - Zone 2 - I-95 NB GP LANES 4493+00 TO 4543 +00 (RRC)
C00105510DB106 PS-1.I-I-95 NB RRC.G.B.D.1	Area 1 - Zone 2 - GP Lanes Route 3 to RRC - MOT Stage 1A
C00105510DB106 PS-1.I-I-95 NB RRC.G.B.D.2	Area 1 - Zone 2 - GP Lanes Route 3 to RRC - MOT Stage 1B
C00105510DB106 PS-1.I-I-95 NB RRC.G.B.D.3	Area 1 - Zone 2 - GP Lanes Route 3 to RRC - MOT Stage 2B
C00105510DB106 PS-1.I-I-95 NB RRC.G.B.E	Area 1 - Zone 4 - I-I-95 NB CD LANES 5502+00 TO 5543+50
_	(RRC)
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.E.1	Area 1 - Zone 4 - CD Lanes 5502 to RRC - MOT Stage 1B
C00105510DB106_PS-1.I-I-95 NB	Area 1 - Zone 4 - FALL HILL SOUNDWALL
RRC.G.B.E.1.1	
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.E.2	Area 1 - Zone 4 - CD Lanes 5502 to RRC - MOT Stage 2A
C00105510DB106_PS-1.I-I-95 NB RRC.G.B.E.3	Area 1 - Zone 4 - CD Lanes 5502 to RRC - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.C	AREA 2 - RAPPAHANNOCK RIVER BRIDGE B609
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.A	AREA 2 – GENERAL
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.B	RAPPAHANNOCK RIVER CAUSEWAY
	RE-CONFIGURATION / CONSTRUCTION
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C	B609 – SUBSTRUCTURE
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C.9	B609 - ABUTMENT B
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C.8	B609 - PIER 7
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C.7	B609 - PIER 6
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C.6	B609 - PIER 5
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C.5	B609 - PIER 4
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C.4	B609 - PIER 3
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C.3	B609 - PIER 2
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C.2	B609 - PIER 1
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.C.1	B609 - ABUTMENT A
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.D	B609 - SUPERSTRUCTURE
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.D.9	B609 - STRUCTURAL STEEL
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.D.8	B609 - SPAN H DECK
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.D.7	B609 - SPAN G DECK
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.D.6	B609 - SPAN F DECK
C00105510DB106_PS-1.I-I-95 NB RRC.G.C.D.5	B609 - SPAN E DECK

WBS Path	WBS Name
C00105510DB106 PS-1.I-I-95 NB RRC.G.C.D.4	B609 - SPAN D DECK
C00105510DB106 PS-1.I-I-95 NB RRC.G.C.D.3	B609 - SPAN C DECK
C00105510DB106 PS-1.I-I-95 NB RRC.G.C.D.2	B609 - SPAN B DECK
C00105510DB106 PS-1.I-I-95 NB RRC.G.C.D.1	B609 - SPAN A DECK
C00105510DB106 PS-1.I-I-95 NB RRC.G.C.E	B609 - PARAPETS / APPROACH SLABS / FINISH ES
C00105510DB106 PS-1.I-I-95 NB RRC.G.D	AREA 3 - WORK FROM RAPPAHANNOCK RIVER
	BRIDGE TO Route 17
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.A	AREA 3 – GENERAL
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.B	Area 3 - Zone 1 - I-I-95 NB GP LANES 4555+00 TO 46
	06+00 (Route 17)
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.B.1	Area 3 - Zone 1 - GP Lanes RRC to Route 17 - MOT Stage 1A
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.B.2	Area 3 - Zone 1 - GP Lanes RRC to Route 17 - MOT Stage 1B
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.B.3	Area 3 - Zone 1 - GP Lanes RRC to Route 17 - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.C	Area 3 - Zone 2 - I-I-95 NB CD LANES 5554+50 TO 5606+00 (Route 17)
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.C.1	Area 3 - Zone 2 - CD Lanes RRC to Route 17 - MOT Stage 1B
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.C.2	Area 3 - Zone 2 - CD Lanes RRC to Route 17 - MOT Stage 2A
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.C.3	Area 3 - Zone 2 - CD Lanes RRC to Route 17 - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.D.C.4	Area 3 - Zone 2 - CD Lanes RRC to Route 17 - MOT Stage 3
C00105510DB106_PS-1.I-I-95 NB RRC.G.E	AREA 4 - Route 17 INTERCHANGE
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.A	AREA 4 – GENERAL
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.B	Area 4 - Zone 1 - RAMP D - NB CD LANES TO Route 17
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.B.1	Area 4 - Zone 1 - Ramp D - MOT Stage 1B - Step 1
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.B.2	Area 4 - Zone 1 - Ramp D - MOT Stage 1B - Step 2
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.B.3	Area 4 - Zone 1 - Ramp D - MOT Stage 2A
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.B.4	Area 4 - Zone 1 - Ramp D - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.C	Area 4 - Zone 3A - Route 17 MAINLINE WORK SOUTH OF I-95
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.C.1	Area 4 - Zone 3A - Route 17 - MOT Stage 1B
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.C.2	Area 4 - Zone 3A - Route 17 - MOT Stage 2A
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.C.3	Area 4 - Zone 3A - Route 17 - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.D	Area 4 - LOOP D
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.D.1	Area 4 - Loop D - MOT Stage 1B
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.D.2	Area 4 - Loop D - MOT Stage 1C
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.E	Area 4 - Zone 2 - RAMP B - SB CD LANES TO NB ROUTE 17
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.E.1	Area 4 - Zone 2 - Ramp B - MOT Stage 2A
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.E.2	Area 4 - Zone 2 - Ramp B - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.E.3	Area 4 - Zone 2 - Ramp B - MOT Stage 3
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.F	Area 4 - Zone 3B - Route 17 MAINLINE WORK NORTH OF I-95
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.F.1	Area 4 - Zone 3B - Route 17 - MOT Stage 2A
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.F.2	Area 4 - Zone 3B - Route 17 - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.E.F.3	Area 4 - Zone 3B - Route 17 - MOT Stage 3

WBS Path	WBS Name
C00105510DB106 PS-1.I-I-95 NB RRC.G.F	BID OPTION #2 - REPLACEMENT OF EXISTING CD
_	LANES BRIDGE
C00105510DB106 PS-1.I-I-95 NB RRC.G.F.A	BO #2 - MOT Stage 1C - PHASE 1 B608
C00105510DB106 PS-1.I-I-95 NB RRC.G.F.A.1	B608 – DEMOLITION
C00105510DB106 PS-1.I-I-95 NB RRC.G.F.A.2	B608 - SUBSTRUCTURE
C00105510DB106_PS-1.I-I-95 NB RRC.G.F.A.3	B608 – SUPERSTRUCTURE
C00105510DB106_PS-1.I-I-95 NB RRC.G.F.A.4	B608 - PARAPETS / APPROACH SLABS / FINISH ES
C00105510DB106_PS-1.I-I-95 NB RRC.G.F.B	BO #2 - MOT Stage 1C - PHASE 2 B608
C00105510DB106_PS-1.I-I-95 NB RRC.G.F.B.1	B608 – DEMOLITION
C00105510DB106_PS-1.I-I-95 NB RRC.G.F.B.2	B608 - SUBSTRUCTURE
C00105510DB106 PS-1.I-I-95 NB RRC.G.F.B.3	B608 – SUPERSTRUCTURE
C00105510DB106_PS-1.I-I-95 NB RRC.G.F.B.4	B608 - PARAPETS / APPROACH SLABS / FINISH ES
C00105510DB106_PS-1.I-I-95 NB RRC.G.G	BID OPTION #3 - SIDEWALK CONNECTION THRU I-I-95/
	Route 17 INTERCHANGE
C00105510DB106_PS-1.I-I-95 NB RRC.G.H	AREA 5 - WORK NORTH OF Route 17 INTERCHANGE TO
	NORTHERN TERMINUS
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.A	AREA 5 – GENERAL
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.B	Area 5 - Zone 1 - I-I-95 NB GP LANES
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.B.1	Area 5 - Zone 1 - Route 17 to Truslow GP Lanes - MOT Stage 1C
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.B.2	Area 5 - Zone 1 - Route 17 to Truslow GP Lanes - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.C	Area 5 - Zone 2 - I-I-95 NB CD LANES / RAMP HWN TO NORTHERN LIMITS (FREDEX OVERLAP AREA)
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.C.1	Area 5 - Zone 2 - Route 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1A
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.C.2	Area 5 - Route 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1B
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.C.2.1	Area 5 - Route 17 to Trulsow - BOX CULVERT EXTENSION
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.C.3	Area 5 - Route 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1C
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.C.4	Area 5 - Route 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 2B
C00105510DB106_PS-1.I-I-95 NB RRC.G.H.C.5	Area 5 - Route 17 to Truslow - SWM
C00105510DB106_PS-1.I-I-95 NB RRC.G.I	BID OPTION #1 - AUXILIARY LANE EXTENSION TO EXIT 136
C00105510DB106_PS-1.I-I-95 NB RRC.G.I.A	Area 5 - BO #1 AUXILIARY LANE EXT TO EXIT 136 - MOT Stage 1A
C00105510DB106_PS-1.I-I-95 NB RRC.G.I.B	Area 5 - BO #1 AUXILIARY LANE EXT TO EXIT 136 - MOT Stage 1B
C00105510DB106_PS-1.I-I-95 NB RRC.G.I.B.1	Area 5 - BO #1 AUXILIARY LANE EXT TO EXIT 136 - RETAINING WALLS (At Existing Box Culverts)
C00105510DB106_PS-1.I-I-95 NB RRC.G.I.C	Area 5 - BO #1 AUXILIARY LANE EXT TO EXIT 136 - MOT Stage 2B

Geography and Construction Staging

Our Schedule is organized by 5 major geographical Areas, as shown in Figure 4.6.2.1, and minor Zones within each Area. The limits of these coincide with the elements that will drive the Project schedule and critical path. This will give us the ability to manage and track the overall progress and communicate with all workers, subcontractors, VDOT, and other stakeholders. The Schedule is further defined by individual Stages to coincide with the traffic management plans and planned sequence of work. Although each geographic Area can be constructed independently, we have scheduled our MOT Stages to provide the safest and most productive sequence of construction possible.



Figure 4.6.2.1 - Construction Areas and Geographic Phasing of Work

The five Areas of construction are defined as follows:

- AREA1 Work south Rappahannock River. This includes Soundwall C and Storm Water Management construction south of the Route 3 Interchange, although these do not drive the Schedule and therefore are not tied to any major MOT Staging. The more critical work will be from the Route 3 Interchange to the Rappahannock River which will include widening and construction of Route 3 Ramp C, new I-95 NB General Purpose Lanes to tie into the new Rappahannock River Bridge and widening and modification of the existing I-95 NB Lanes to become the new I-95 NB Collector Distributor Lanes.
- AREA 2 This area of the Schedule is dedicated to the construction of the new Rappahannock River Bridge (B609) to carry the new I-95 NB General Purpose Lanes over the Rappahannock River. This includes construction and modification of the causeway in the Rappahannock River and coordination with the on-going I-I-95 SB RRC Project. The work has been scheduled to occur within allowable TOY restrictions without impact to the other on-going projects. Work in this Area is on the Project's Critical Path.
- AREA 3 Work between the Rappahannock River and Route 17 Interchange. This area has the most complex MOT Phasing on the Project as it constructs the new I-I-95 NB GP lanes and modifies the existing I-I-95 NB Lanes to become the new I-I-95 NB CD Lanes. Multiple phases are utilized to construct the required Project elements while maintaining traffic flow with as minimal impacts to the traveling public as possible. Because of the multiple phasing and ties to construction of B609, this Area is also critical to the success of the overall schedule.
- AREA 4 Route 17 Interchange Work. This Area is dedicated to tracking and coordinating construction at the Route 17 Interchange and includes the widening and modifications of Ramp D and Ramp B along with the widening of Route 17 mainline. This Area also includes Option #2 for replacement of B608. This work will occur in two phases in order to maintain traffic flow for vehicles accessing I-I-95 NB from Route 17. Finally, this Area will include Option #3 for construction of new

pedestrian facilities along the Route 17 corridor. We have committed to Unique Milestone #1 to open Ramp D and the triple=left turn lanes onto NB Route 17, which will increase traffic flow and overall operations of this interchange. This will also facilitate re-construction of B608 safely and more efficiently by reducing the number of lanes crossing over the bridge during the construction.

■ AREA 5 – Work north of the Route 17 Interchange to the northern terminus of the Project. This Area includes some minor modifications to the I-I-95 NB GP Lanes. However, the major portion of this work will be construction of the new I-I-95 NB CD Lanes from Route 17 to tie in with FredEx Ramp HWN and merging back to the I-I-95 NB GP Lanes. This work has been scheduled to be completed by Interim Milestone #1 and will be closely monitored and coordinated with the FredEx Project. Finally, this Area includes Option #1 for the widening of I-I-95 NB from the current northern limits to Centreport Parkway.

The major Stages of work are defined as follows:

- STAGE 1A This Stage is primarily for early temporary widening, lane shifts and preliminary signage, MOT and erosion and sediment control installation in order to shift or modify existing traffic lanes to prepare for subsequent stages.
- STAGE 1B/1C This Stage is for the first major construction areas of work. During this Stage, new traffic lanes and widenings will be constructed for I-I-95 NB GP Lanes, CD Lanes and widening and modification of ramps at Route 3, Route 17 and mainline of Route 17. Work for Interim Milestone #1 will be completed in this Stage. The work primarily consists of all work leading up to the major traffic switch to move I-95 NB traffic to the newly constructed I-95 NB GP Lanes and Rappahannock Bridge Crossing. Unique Milestone #1 for Ramp D to Route 17 triple left turn lanes will also be completed in this Stage of work.
- STAGE 2A This Stage typically begins in each Area after traffic is switched to the new I-95 NB GP Lanes and Rappahannock River Bridge Crossing. This work consists of the second major stage to finish widenings and re-construction of existing lanes which were occupied by traffic during previous stages. Major focus in this Stage will be completion of the new I-95 NB CD Lanes, reconstruction of the Bridge B608 over Route 17 (Option #2) and associated ramps, and Route 17 mainline construction. The major milestone in this Stage will be the opening of the new I-95 NB CD Lanes from Route 3 to Route 17.
- STAGE 2B/3 The final Stage of construction for most areas will consist of completing work on I-95 NB CD Lanes, final surface asphalt, pavement markings, grading and stabilization, and signage. This stage will end with final inspections, punchlist and the acceptance process, and Final Completion.

Schedule Calendars

The following is a description of the calendars used for this Project.

5 HOL: "5-Day Workweek with Holidays" – This calendar is based on five working days per week with the Holidays inseRouted as non-workdays. This calendar is used for all design and administrative activities in the CPM network. This calendar is also used for the majority of the construction activities. Durations for construction activities include anticipated production rates for major elements of work as well as regularly anticipated loss time due to weather.

4.6 Proposal Schedule

- 5 HOL_LC: "5-Day with Holidays and Lane Closure Restrictions" This calendar is used for construction activities that are typically impacted by lane closure restrictions. It includes holidays as inseRouted in the '5 HOL' calendar as well as 'block-out' days for the anticipated days with lane closure restrictions.
- 5 HOL_WINTER SLDWN: "Winter Slowdown Calendar" Assigned to activities that are typically impacted during winter months but are still able to be performed. Activities such as asphalt paving, finish grading and sub-base aggregates and concrete deck pours are included in this restricted calendar.
- **5 HOL_WINTER SHDWN: "Winter Shutdown Calendar"** Assigned to activities that are typically unable to be performed during mid-December through mid-March due to cold weather. Activities such as surface paving and permanent striping are included in this restricted calendar.
- 5 HOL_In Stream Work: "Rappahannock River Time of Year Restriction" This calendar has been developed for the work to be completed within the footprint of the Rappahannock River as it is impacted by environmental time of year (TOY) restrictions. This includes construction of and modifications to the causeway for access and construction of the new bridge substructure elements.
- **7 DAY:** "7-Day Calendar" Assigned to activities that have durations based on calendar days instead of workdays. Activities such as VDOT's 21 calendar day submittal review, concrete curing activities and monthly maintenance items are included in this calendar.

Plan to Accomplish the Work/Means and Methods

The narrative below describes our Team's overall plan and sequence of operations grouped by the Level I WBS Project disciplines. These include design, public involvement, environmental permitting, ROW acquisition, utility relocation, construction, and project management. The sequencing of each discipline was developed by considering the construction phasing and determining the longest path to Project completion. All factors were considered including manpower, subcontractors, materials, design, environmental constraints, coordination with other on-going projects, and most importantly, public safety and safety of the workforce. The Project staging was developed to address the full scope of work, and was further refined based on plan approvals, anticipated receipt of environmental permits, utility relocations and access to ROW parcels for new roadway and bridge work. We divided the Project into logical and manageable areas. The Areas can be tracked and managed by dedicated supervision during construction to best manage the work.

Design

This section of the schedule includes those activities necessary for preliminary design, geotechnical work, early MOT plans, roadway design, bridge design and third-party coordination including engineering plan preparation and approvals. It also includes time for the necessary Design QA/QC reviews at the multiple steps in the design process. We have included a 21-calendar day activity for VDOT/FHWA review after each submission. The design phase also includes activities for the completion of surveys, test pits, H&HA studies, and geotechnical investigations, including a 90-calendar day activity for VDOT's review of the geotechnical report prior to submission of the final roadway and bridge plans.

Our Team begins the design phase immediately upon execution of the Contract. To address the overall Project duration included in the RFP, design disciplines will prepare roadway and bridge packages concurrently, along with the early design packages for the FredEx Overlap Area and B609 Substructure Elements to start construction in both locations early in the Project schedule. The FredEx Overlay Area plans are shown to be completed by November of 2020 and the B609 Preliminary Substructure Plans are shown to be completed by January of 2021. The remaining packages for B609, B608 and Final Roadway

Plans are shown to be completed in May of 2021.

Critical Path activities in the design phase of the Proposal Schedule include initial field investigations and surveys and the preparation of the Rappahannock River Crossing Bridge (B609) design packages for both early work for the causeway construction and the overall construction packages. This design work is critical to the construction of the Rappahannock River Crossing Bridge (B609) which is on the critical path of the overall Project Schedule.

Public Involvement/Public Relations

The Public Involvement section includes submitting our Emergency Contact List upon NTP, scheduling the Public Hearing Meeting, assisting VDOT with development of the Public Information and Communication Plan (PICP) and holding Public Information Meetings in incremental stages during construction. This section also includes providing regular updates to the Office of Public Affairs. The schedule includes the major milestone activities for the Design Public Information Meetings which will include local businesses, homeowner's associations, government representatives, community groups, and other stakeholders. We will also provide information for regular weekly lane closure schedules to VDOT for use on its website.

Environmental Permitting

The Environmental Permitting process will begin at NTP with gaining access to affected property owners along the Project's corridor to begin the required Phase I environmental surveys. Our Team immediately performs wetland delineations, obtains jurisdictional determinations and prepares the Joint Wetlands and Water Permit Application (JPA). Following completion and submission of the 60% roadway plans, we will submit the necessary permit applications to the authorities having jurisdiction (AHJ). We anticipate that the Individual Permit for USACE as well as the Virginia Water Protection Permit from DEQ will require 90 days for review and approval. Our Team will also complete the requisite VPDES, Stormwater Pollution Prevention Plans (SWPPP) and related information for inclusion on the VDOT SWPPP General Information sheets. As VDOT is providing environmental permitting for the FredEx Overlap area, early permitting activities for this work will not be required. However, while we will pursue the full Land Disturbance Permit (LDP) prior to Stage 1 Early Package work activities, the Proposal Schedule allows for issuance of a limited LDP to ensure early construction activities may proceed as planned. In addition, we will pursue an early permitting package for work in and around the Rappahannock River for early construction activities associated with the causeway construction and modification.

Right-of-Way Acquisition

The acquisition of property rights is required to obtain permanent ROW as well as permanent and temporary easements. The acquisitions have been divided into two sections. One for the more critical areas and second one for the less critical areas of the Project. As VDOT is obtaining ROW for the construction needed for Interim Milestone #1, ROW is currently not on the critical path.

Our Team is very familiar with the ROW process and have included detailed activities on the Proposal Schedule. We have used the historical average timeframes that we anticipate for acquisition of property rights either by agreed negotiation or by certificate of take. Preparation of ROW plans will closely follow the completion of the 60% plans. The appraisal process will start after the 60% plans have been reviewed by VDOT and after the limits of ROW are confirmed. After VDOT review of the appraisals, offers are prepared and the negotiation process continues. Upon agreement with the landowner(s), the settlement package is prepared for VDOT review, the acquisition goes to settlement and entry is granted following Notice to Commence Construction by VDOT.

Utility Relocations

Our Technical Proposal identifies the unavoidable utility impacts expected. To simplify and accurately track each utility relocation, we created a WBS that groups the utility relocation activities by utility owner and Project Area. This allows us to coordinate the work with construction sequencing. Within each utility owner group, we have included activities for holding the Utility Field Inspection (UFI) meeting, preparation of the plans and estimates by the utility owner, approval of the plans and estimates, design of the utility relocation, and relocation of the utility by Area. The utility relocation schedule starts with formal UFI meetings following completion of all utility test pits and progression of design documents to roughly 60%. This enables our Team to confirm and adjust our list of utility conflicts based on the field test pit data obtained prior to holding the formal UFI meetings. We continue this early coordination of utilities throughout the design phase of the Project to ensure that right-of-way and roadway plans are coordinated with the utility relocation plans.

Currently, we are projecting that the Summit IG Trunk Line, VDOT ITS and Verizon facilities along I-I-95 NB corridor will need to be adjusted, moved or relocated. Additionally, there are existing watermains crossing I-95 that will need to be modified to accommodate construction.

Additional utilities along the Route 17 corridor will also have to be adjusted, modified or relocated for the widening work and Option #2 bridge reconstruction which include existing watermains, sanitary sewers, gas lines, and overhead/underground electrical and communication services.

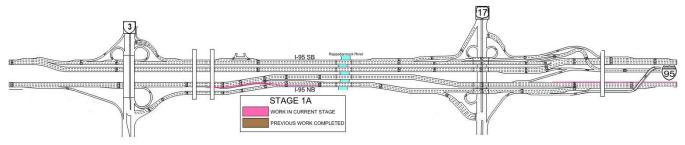
Since the wet utility relocations are the total responsibility of the Design-Build Team, we have not included UFI meetings in the Schedule as these relocations will be part of the roadway design package. Design packages and field work will still be coordinated with the utility owners. The timeframes for utility relocations are identified in our Proposal Schedule and linked to the appropriate construction activities. Utility relocations are not anticipated to be critical activities on this Project.

Construction

From a macro level, the sequencing, staging, and flow of work between the Work Areas defined above is depicted in Exhibit 4.5.1.1 labeled "Sequence of Construction and Summary Schedule." The narrative below details our Maintenance of Traffic Staging along with associated construction work. Exhibit 4.5.1.1 and the narrative below are color coded to easily show the progression of work in each Work Area. Additionally, Exhibits 4.5.2.1 through 4.5.2.4 provide detailed MOT staging with the same color coding scheme.

A benefit our sequence of work is it allows many portions of the Project to be constructed out of traffic and behind temporary concrete barrier service (TCBS) with limited dependence on daily/nightly lane closures for access or material deliveries.

Stage 1A - Temporary Shoulder Widenings (Nov 2020 - Feb 2021)

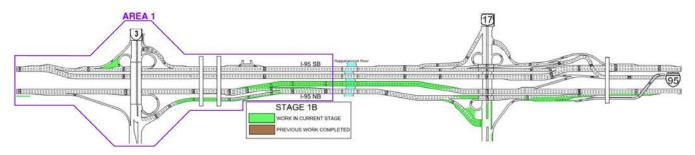


Our Team is committed to maximizing shoulder widths during all stages of construction. In order to accomplish this, certain areas of the Project will require temporary widening and subsequent lane shifts

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so that a 10' paved shoulder can be maintained at all times. In our Early Works Package, temporary TTC plans will be developed to incorporate all areas requiring adjustment. This work will be performed during allowable single or double lane closure periods. In these areas, existing rumble strips will be milled and re-paved prior to placement of new pavement markings.

Stage 1B - Construction of Major Portions of Work Work Area 1 (Zone 2): I-95 NB GP Lanes (Mar 2021-May 2022)



Stage 1B construction begins with the installation of perimeter erosion control devices and sediment basins in this Work Area. This Area will require the construction of MSE Retaining Wall #2 for 1,310 linear feet to support the embankment for the NB I-95 GP Lanes. During the early stages, work may still be active on the I-95 SB RRC Project; we will therefore plan construction access from the left shoulder of existing NB I-95 GP Lanes in order to receive trucked embankment and drainage materials. Following the completion of the I-95 SB RRC Project, it will be necessary to close the left shoulder of the new SB I-95 GP Lanes and place TCBS for the installation of the MSE Wall #2 leveling pad and MB-7F placed at the base of the new wall. Earthwork required for the fills will be generated from the new Route 3 Ramp C Work Area and SWM Basin excavation located in the Route 3 Interchange.

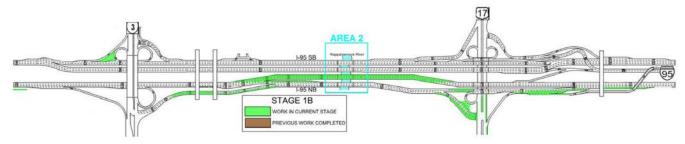
Work Area 1 (Zone 3): Route 3 Ramp C (Sept 2021-July 2022)

Construction of Route 3 Ramp C requires the installation of three cut retaining walls #1A, #1B, and #1C to support the existing sound barrier walls. Crews will be constructing these walls and generating excavated soils to be hauled to Work Area 1, Zone 2. Access to this area is behind TCBS that will be placed along the existing right shoulder of the NB I-95 GP Lanes. The southern portion of Route 3 Ramp C will require right-of-way acquisition, ITS utility relocations and clearing and grubbing prior to construction of the permanent roadway. This Work Area will extend north of the Fall Hill Avenue overpass in this Early Stage. This Work Area will be opened at the end of Stage 2B when the NB I-95 CD Lanes are complete and ready to receive traffic.

Work Area 1 (Zone 1): South of Route 3 Interchange (Aug 2022-Nov 2022)

This Work Area sits outside of the majority of the major construction activities and will carry float in our overall sequencing. The major element of work in this area is the construction of Noise Barrier C which is located adjacent to the Idlewild Community along existing NB I-95 Lanes. Following acquisition of right-of-way and design and procurement of noise barrier materials, construction crews will access this area only from the NB I-95 right shoulder. *Our Team will restrict any work vehicles from entering the neighborhood streets for construction access or deliveries*. Noise barrier foundations will be designed with this access in mind which may preclude larger construction equipment and wheeled vehicles from close access to the foundation locations. The other work element in this area is construction of SWM Basin(s).

Work Area 2: I-95 NB Rappahannock River Crossing (Feb 2021-Apr 2023)



The NB I-95 GP lane bridge over the Rappahannock River, B609, presents unique constructability challenges due to access, height, length, water features, and the proximity of the existing NB I-95 Bridge and the new SB I-95 GP lane bridge currently under construction. The narrative below describes the phases and steps that our Team will perform in order to successfully deliver this critical element to the Project.

Phase 1 – Modification to Existing Causeway

By necessity primary access to the work area will be from the I-95 SB RRC Project causeway. Our Early Works Permitting Package, will allow us to make modifications to the causeway during the October 15, 2020 to February 15, 2021 TOY window for work in the Rappahannock River. These modifications will not affect the I-95 SB RRC Project in any way. To maintain ongoing river traffic with only intermittent

interruptions, a removable temporary causeway will be utilized for one day to walk our crane to the northern shore area in the vicinity of Piers 6 to 7. Once the crane is staged properly, the temporary causeway will be removed and the open channel restored. As described in Section 4.3.1(e), the existing causeway will be modified in this region to gain access to the Pier 6 foundation, as shown in Figure 4.6.2.2. With the crane in place, Piers 6 and 7 and Abutment B will be constructed. A temporary access road for light vehicles and small equipment will also be constructed to the Abutment B side of the bridge.



Figure 4.6.2.2 Phase 1 Modification to Existing Causeway for Piers 6 and 7 $\,$

Phase 2 – Construction of Piers 1, 6, and 7, Abutment B, and Abutment A

To access the river bed for footing construction a cofferdam system will be used. Access to the individual Pier locations will be via rip-rap fingers from the main causeway. A temporary access ramp traversing the footprint of Abutment B to Piers 6 and 7 will allow routine deliveries, such as fuel, and worker access.

With construction of Piers 6 and 7 complete, this access ramp will be removed and Abutment B built. Access for Abutment A construction will be from the median area of I-95, as shown in Figure 4.6.2.3.

As the substructure elements are completed in the northern side of the river, we will begin removal of the causeway, fingers and cofferdams. All equipment and supplies will be removed with the large crane being walked out of the area via a temporary 1-day obstruction of the main channel as described in Phase 1. This represents the final blockage of the main channel as any subsequent superstructure work will be accessed from above. The schedule presented in Section 4.6.1 depicts this causeway removal and temporary causeway work occurring in the October 15, 2021 to February 15, 2022 Time of Year window.



Figure 4.6.2.3 Construction of Piers 6 and 7, Abutment B to North and Pier 1 and Abutment A to South

Phase 3 – Erection of Structural Steel at Spans G and H

As discussed in Section 4.3.2, in order to facilitate the use of the existing NB Bridge for material deliveries

and steel erection, traffic will be shifted to the east (right) bridge parapet leaving a 2' shoulder. The shifted three lanes and a left shoulder shall be maintained throughout construction cordoned off by Group II Channelizing Devices. Temporary shoulder and/or lane closures of these lanes will be performed as necessary and within the time frames and parameters allowed.

With the completion of all substructure elements from Pier 6 to the North, superstructure work will begin with the erection of structural steel girders on Spans G and H.



Figure 4.6.2.4 Phase 3 Erection of Structural Steel Girders at Spans G and H

As depicted in Figure 4.6.2.4, steel erection will occur at night during allowable lane closures on I-95 NB. A tandem crane pick method will be used to safely erect the girders.



Figure 4.6.2.5 Phase 4 Modifications to Existing Causeway

Phase 4 – Modification to Existing Causeway

Within the October 15, 2021 to February 15, 2022 TOY window, our Team will modify of the existing causeway constructed by the I-95 SB RRC Project. To account for the substructure layout of B609 Causeway fingers and cofferdams will be constructed to access construction for Piers 2, 3, 4, and 5, as shown in Figure 4.6.2.5.

Phase 5 - Substructure Construction Piers 2 through 5

Following completion of the in-river work in Phase 4, the balance of the Piers for B609 Bridge will be constructed, as shown in Figure 4.6.2.6. This final Phase of substructure construction is on the critical path of our Project Schedule. We are planning to have one pier stem form capable of construction of ½ of the pier height and one pier cap form. The stem form shall progress uninterrupted during substructure construction with the cap form following shortly thereafter. With the last four substructure elements in place, the temporary causeway will be modified in order to set the remaining structural Figure 4.6.2.6 Phase 5 Substructure Construction of Piers 2-5 steel for the Bridge.



Phase 6 - Erection of Structural Steel – Spans A through F

Depicted in Figure 4.6.2.7, structural steel erection will occur in two steps for Spans A through F in Phase 6. Step 1 work will entail the erection of the 3 outside (east) girders of the spans utilizing the crane from the causeway below. An assist crane will remain on top of the existing NB I-95 bridge. Steel deliveries will also be received from atop the existing bridge. Step 2 erection for the remaining girders will occur similar to Phase 3 described earlier.

Upon completion of structural steel erection, the causeway will be removed. While decking and substructure work is occurring, crews will remove the causeway starting in the Fall 2023 TOY window.





Figure 4.6.2.7 Phase 6 Erection of Structural Steel - Spans A through F (Left: Step 1, Right: Step 2)

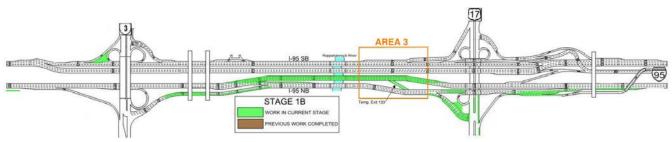
Phase 7 - Final Decking and Bridge Finishes

Phase 7 work will be timed with the progression of the substructure and structural steel erection in order to achieve efficient production in the SIP and reinforcing steel placement. As shown in Figure 4.6.2.8, the lightweight concrete deck will be installed with approach and finishes following shortly thereafter. Subsequent to the bridge safety inspection, any remaining temporary access shall be removed and the northern shoreline restored. With the roadway tie-ins complete to the approach slabs, the new NB I-95 GP Lanes will be ready to open to traffic.



Figure 4.6.2.8 Phase 7 Final Decking and Bridge Finishes

Work Area 3 (ZONE 1): NB I-95 NB LANES (Sept 2021 – Apr 2022)

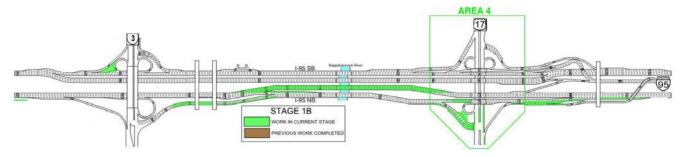


Early in the beginning of Stage 1B of this Work Area, access will be gained from the left shoulder of existing NB I-95 GP Lanes. This Area is nearly balanced from an earthwork perspective, and the challenge is that our work must capture and control the drainage run-off from the newly constructed I-95 SB RRC Project during construction. As the roadway and drainage elements are being installed crews will construct a temporary connection to Route 17 Ramp D. This connection will serve the Route 17 interchange for NB I-95 traffic in the next Stage 2A.

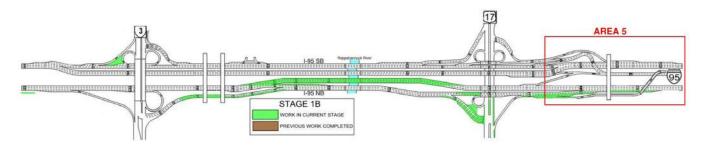
Work Area 4 (Zone 1): Ramp D - NB CD Lanes to Route 17 Work Area 4 (Zone 3A): Widening of Route 17 South of I-95 (May 2021 – Feb 2022)

Early work will continue with the reconstruction and widening of existing Ramp D from the existing I-95 NB CD Lanes to the intersection of Route. 17. The widening of Route 17 will occur concurrently south of I-95 to Short Street with the goal of constructing the new triple left turn lanes on Ramp D and the new receiving lanes on NB Route 17. The new traffic signal will be activated to allow the removal of traffic movements from existing Loop C. This is represented as our Team's *Unique Milestone #1* scheduled for February 4, 2022. This Milestone creates a benefit to the traveling public by improving congestion of the heavy I-95 NB to Route 17 NB traffic movement. It also eliminates a travel lane across the existing NB

I-95 CD Bridge over Route 17, increasing safety and greatly improving the traffic movements for the phased demolition and reconstruction of the bridge.



WORK AREA 5 (ZONE 1): I-95 NB CD LANES WORK AREA 5 (ZONE 2): FRED-EX RAMP HWN (Jan 2021 – Oct 2021)



These areas will be constructed concurrently and require major earthwork operations. With the Interim Milestone Completion of the FredEx Overlap Area, this work will occur early in our schedule sequence. Upon receipt of ROW and environmental permits from VDOT and completion of Plans, crews will start with the extension of the triple box culvert at Falls Run. Earthwork cut at the northern portion of this Work Area will be brought to the deeper fills surrounding the completed box culvert area. Upon completion of the major earthwork, electrical and sign crews will begin installation of the ITS infrastructure necessary for the Overlap Area. Median barrier will be installed separating the CD Lanes from future Ramp HWN. Work is scheduled in our 4.6.1 Proposal Schedule to be complete and accepted by the October 29, 2021 Interim Milestone Date.

End of Stage 1B - Major Traffic Shifts

The end of Stage 1B is highlighted by two major traffic switches:

1. Unique Milestone #1 - Opening of New Ramp D and Triple Left Turn Movement to Route 17 NB

The first major traffic shift for motorists will be the opening of the new Route 17 Ramp D triple left turn lanes to NB Route 17 and the subsequent closing of existing Route 17 Loop C. This change will greatly enhance the safety and mobility of drivers during the demolition and reconstruction of the NB I-95 CD Lane bridge over Route 17 (Option #2). We commit to opening the new triple left turn by February 4, 2022.

2. Opening of new NB I-95 Rappahannock River Crossing (B609)

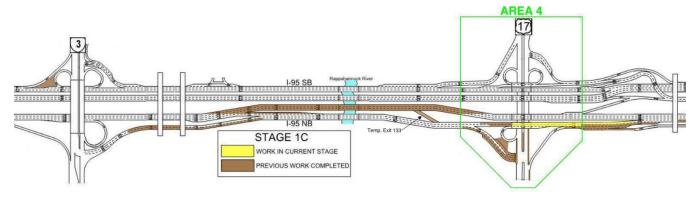
The most significant traffic shift for the Project will be the opening of the new NB I-95 Rappahannock River Crossing and the associated portions of the NB I-95 GP Lanes. Following bridge and road construction, NB I-95 traffic will be diveRouted to the new roadway in an overnight traffic shift. At the time of the initial shift to the new GP Lanes, Route 3 Ramp C will not open. It will remain closed in order to fully construct the new NB I-95 Slip Ramp into the NB I-95 CD Lanes south of the Rappahannock.

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North of the Rappahannock, in order to maintain traffic to Exit 133- Route 17, the Team will construct a temporary ramp to connect the new I-95 NB GP Lanes to the existing NB I-95 CD Lanes and Route 17 Ramp D.

Stage 1C - I-95 CD Lane Bridge Over Route 17 (Option #2)

Work Area 4 (Option #2): Replacement of Existing I-95 NB CD Lanes Bridge (B608) (Feb 2022- Oct 2023)



The NB I-95 CD lanes bridge over Route 17 presents unique constructability challenges due to the fact that the footprint of the new bridge is nearly identical to that of the existing bridge. Furthermore, Pier work in the median of Route 17 is constrained by traffic on both sides and by the proximity of existing bridge structures. In order to mitigate these challenges, our schedule focuses on a detailed and well planned sequence of construction.

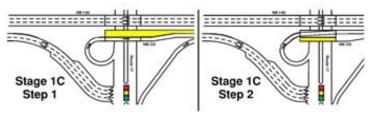
Prior to beginning work on Bridge B608, traffic will be shifted along Route 17 and the NB I-95 CD Lanes. To facilitate abutment demolition, support of excavation will be installed at each abutment. Prior to deck demolition, a timber demolition shield shall be installed over Route 17. Our plan is to saw cut the existing deck and remove slab sections, followed by girder removal. The existing structure is classified as "Type B" and provisions to protect the environment and workers will be utilized and disposal methods/locations documented.

Pier construction will be accessed via the median area of Route 17 and support of excavation will be required. Disturbance of the existing footing will be kept to a minimum and piles located to avoid the existing structural footing. Furthermore, the new pier will be stand alone and not designed nor constructed to utilize the existing footing for structural loads. Conventional MSE walls will be constructed for Abutments A and B; however, wire walls will be required along the staging line during Stage 1. These wire walls will remain in place with Stage 2.

Bulb-T girder erection will be performed with intermittent stoppages of Route 17. Debris shielding shall be installed between girder lines over the roadways to allow uninterrupted installation of SIP forms.

Reinforcing will be installed, concrete decks placed, parapets constructed, and approaches completed.

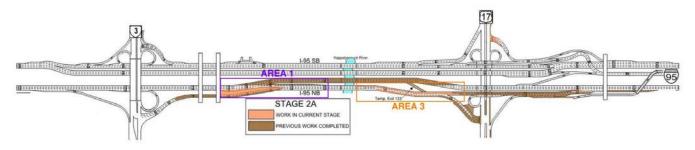
With Step 1 complete, traffic will be shifted to the newly constructed bridge and Step 2 construction completed in similar fashion to Stage 1.



Stage 2A - NB I-95 CD Lane Completion and Ramp B

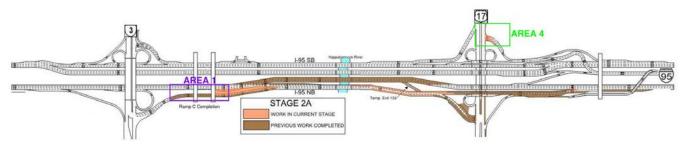
Work Area 1 (Zone 4): I-95 NB CD Lanes 5511+00 to 5543+50

Work Area 3 (Zone 2): I-95 NB CD Lanes 5554+50 to 5606+00 (May 2023-Nov 2023)



These two Work Areas will be constructed concurrently following the opening of the new I-95 NB GP Lanes. The work will involve the widening or replacement of existing shoulders, drainage, installation of concrete median barriers to isolate the GP and CD Lanes, and the removal and installation of new guardrail to meet current standards. Noise barrier FH will also be constructed in this Stage. With the majority of the work occurring out of traffic, all asphalt milling and final surface pavement overlays will be performed prior to opening the CD lanes to traffic.

Work Area 1 (Zone 3) Route 3 Ramp C (May 2023 – July 2023) Work Area 4 (Zone 2) Route 17 Ramp B (July 2022-Nov 2022)



Completion of the Route 3 Ramp C will occur in this Stage including the final installation of all median barrier and BPPS elements. All final surface asphalt pavement and pavement markings will be installed prior to opening of traffic.

Area 4, Stage 2A will begin the reconfiguration of Route 17 Ramp B. Work will begin with the inside widening of the existing Ramp and traffic will be shifted to the new pavement. Concurrently, crews will be widening the NB Route 17 lanes from north of the I-95 overpass to Gateway Drive. The new traffic signal infrastructure will be installed for the future triple right turn lanes from SB I-95 CD Lanes to NB Route 17.

End of Stage 2A - Major Traffic Shift

The end of Stage 2A is highlighted by the following major traffic switch:

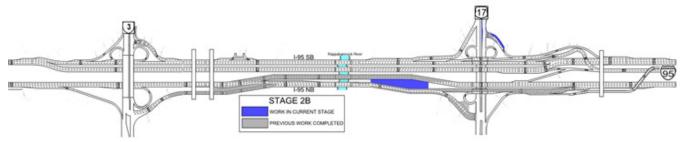
Opening of the new I-95 NB CD Lanes from Route 3 Ramp C to Route 17.

The new I-95 NB CD Lanes will be opened in one night-time operation. This switch will also include the opening of new Route 3 Ramp C. All openings are intended to occur with final surface asphalt and permanent pavement markings in place. A benefit to our Sequence of Construction is that the Bridge B608 I-95 NB CD Lane replacement will be complete prior to the opening of the CD Lanes. Drivers will have full access to all new lanes, mitigating driver confusion as no permanent lane closures or major construction work will occur at the time of the shift.

Stage 2B - Ramp B Completion and Removal of Temp Ramp D

Work Area 4 (Zone 2/3): Route 17 Ramp B (May 2023 - Nov 2023)

Work Area 3 (Zone 1): Remove Temporary Route 17 Ramp D (Nov 2023 - Jan 2024)



In Stage 2B, Ramp B and the northern portion of the Route 17 Widening will be completed. The new traffic signal at the Route 17 and Ramp B and the modifications to the traffic signal at Sanford Drive/Gateway Drive intersection will be completed. Additionally, in this Stage, the final portions of the Option #3 - Route 17 Sidewalk will be completed, should the Department move forward with the work. The timing of the completion of the Ramp B and Route 17 work is coinciding with the opening of the I-95 NB CD Lanes as the intent is to complete all Route 17 major construction by the November 2023 opening date.

Following the opening of the I-95 NB CD Lanes, crews will quickly remove the temporary Route 17 Ramp D and replace the opening with the permanent median barrier. All shoulders will be restored and final surface asphalt placed in this area.

Work Area 5 (Option #1): Auxiliary Lane Extension to Exit 136 (Nov 2021 - Sept 2022)

Should the Department exercise Option #1, the work will be constructed following the completion of the FredEx overlap area north of Ramp HWN. The sequencing for this work will begin with improvements to the left shoulder of NB I-95 that will occur similar to that in Stage 1A. Following the shift of NB I-95 traffic to the left, traffic barrier will be placed along the right shoulder and access to the area will be gained via one opening in the barrier and at either end.

Earthwork for the Auxiliary Lane extension consists of sliver cuts and fills for the length of the work area and extensions to existing minor drainage crossings and new ditchlines will be established. In order to eliminate impacts to existing streams and wetland areas, our Team will use retaining walls to avoid the extension of 3 box culverts along the Auxiliary Lane alignment. Opening of the new Auxiliary Lane will be coordinated with the FredEx Project and VDOT and available by the Spring of 2023.

Project Management

In this section of the schedule, we identified early construction activities such as schedule preparation, mobilization, submittals, subcontractor and major material procurement, production of shop drawings, and fabrication of critical long lead time items such as steel girders and signal equipment.

Quality Assurance and Quality Control

In a separate WBS group, we identified the QA/QC Activities for the Project. These include the submission and approval of the QA/QC plan and the Preparatory Meetings (Hold Points) that are required prior to commencing with associated construction activities. The overall Level of Effort for the QA/QC process is represented by a bar spanning all construction activities until Final Completion of the Project.

Critical Path

In summary, the Critical Path runs directly through the Pre-Construction activities, Design and Construction activities associated with the Rappahannock River Crossing Bridge (B609). As there are restrictions to

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when work can be done within the Rappahannock River, it is critical we have access to start initial design activities as well as causeway and cofferdam construction to access Abutment B, Pier 6 and Pier 7 work in the 2020/2021 allowable work times. We will construct our causeways and cofferdams in a manner so that once the initial causeway / cofferdam is constructed, we will be able to construct the pier footings, columns and caps without impacting the river or TOY restrictions. The modification of the existing causeway is the next critical activity in order to construct Piers 2 through 5. Abutment A and Pier 1 construction is outside the River footprint and will not require a causeway or cofferdam and therefore can be constructed during the earlier bridge substructure work.

The Critical Path continues through the completion of the B609 bridge structure including the final safety inspection which will be required in order to shift I-95 NB traffic onto the new bridge and I-95 NB General Purpose lanes. Roadways and bridge approaches will be constructed concurrently with the bridge, but those durations are not as long and therefore are not on the Critical Path.

Once traffic is shifted onto the newly constructed B609 Bridge and I-95 NB General Purpose Lanes, work will focus on the remaining construction activities for completing the remaining widenings, median areas, signage, ITS and other associated items for the new I-95 NB CD Lanes and interchanges at Route 3 and Route 17. The Critical Path during this next stage of work runs through the remaining work in Area 1-Zone 4 to complete the I-95 NB CD Lane construction between stations 5502 to the existing NB Rappahannock Bridge crossing. This includes work that could not be completed during previous stages while mainline I-95 NB traffic was occupying this corridor. This section of roadway will be the last section required to open traffic to the new permanent I-95 NB CD Lanes from Route 3 / Ramp C to the Route 17 Interchange.

Once the new permanent I-95 NB CD Lanes are opened in their permanent configuration to the Route 17 Interchange, work can begin on demolition of the temporary ramp from I-95 NB to Route 17 (Ramp D) and completion of the permanent median, drainage and pavement between the GP and CD lanes at this location. All permanent signage, ITS and other features will continue to be installed during this final stage of work.

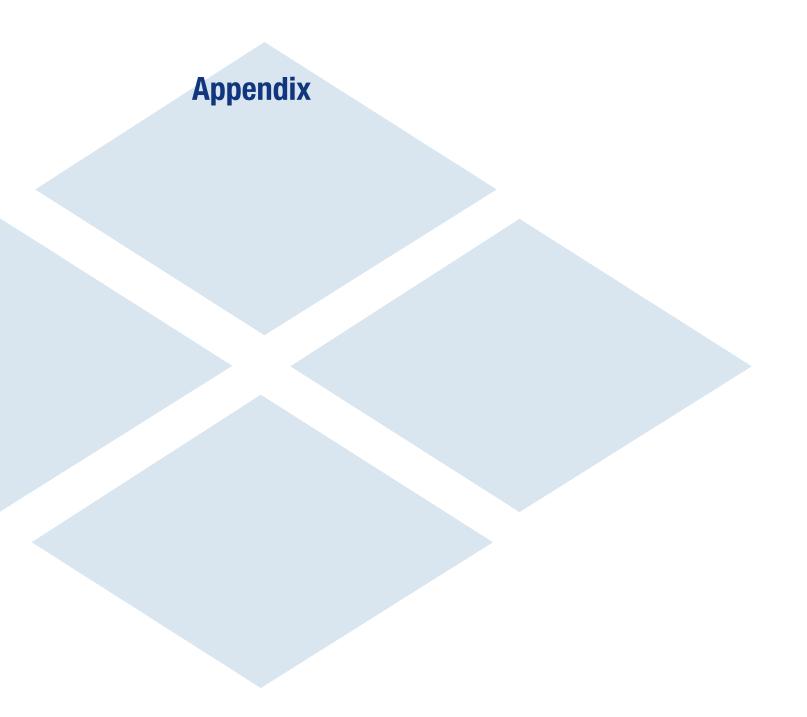
After this last section of permanent roadway is complete, all lanes will be in their final configuration and any remaining surface paving, striping, grading, guardrails and signage items will be completed. We anticipate starting final inspections and the punchlist process on or about May 1, 2024. We have included a 60-day period for final inspections and punchlist at which time we will achieve Final Completion on June 30, 2024, ahead of the RFP completion date.

Key Scheduling Assumptions

- Coordination with the I-95 SB RRC Project and FredEx Project will be critical to the overall success of the I-95 NB RRC Project and to maintain schedule certainty. Our schedule is based on the assumption that we will be able to access early work on B609 through their causeway on a limited basis as described elsewhere in this Proposal. The Schedule also assumes that VDOT meets its commitments for all right-of-way and permits in the FredEx Overlap Area.
- VDOT will review and approve Early Work packages as described.
- Utility companies will coordinate and perform their relocations in accordance with our Schedule.
- Environmental permitting agencies will accept VDOT's RFP avoidance and minimization efforts taken during the RFP phase as sufficient to process permits without delay.

4.6 Proposal Schedule

- There are no hazardous materials, threatened or endangered species, or unforeseen environmental constraints, other than those identified in the RFP, that could delay the Schedule.
- Crews are based on an 8-hour workday and 5-day workweek calendar. A detailed description of the calendars is included in this narrative.
- Generally, the schedule has been built with work in certain areas of the Project starting when access is available (either via work availability, property rights, or utility access) and/or at the completion of a prior stage of work. We have provided some crew flow predecessor relationships in several locations throughout the schedule mainly where adjacent work is available and crew flow is logical as to not 'stack' too many work areas on top of each other.
- Finish-Start relationships are used as much as possible to create a logical flow of work in each area. There is some overlapping of activities such as with earthwork and drainage activities performed by different crews, but it is limited due to the constraints of the established Project corridor.



Attachment 4.0.1.1 - Technical Proposal Checklist and Contents

ATTACHMENT 4.0.1.1

I-95 NORTHBOUND RAPPAHANNOCK RIVER CROSSING TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Offerors shall furnish a copy of this Technical Proposal Checklist, with the page references added, with the Technical Proposal.

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Technical Proposal Checklist and Contents	Attachment 4.0.1.1	Section 4.0.1.1	no	Appendix
Acknowledgement of RFP, Revisions, and/or Addenda	Attachment 3.6 (Form C-78-RFP)	Sections 3.6, 4.0.1.1	no	Appendix
Letter of Submittal	NA	Sections 4.1		
Letter of Submittal on Offeror's letterhead	NA	Section 4.1.1	yes	Page 1
Identify the full legal name and address of Offeror	NA	Section 4.1.1	yes	Page 1
Authorized representative's original signature	NA	Section 4.1.1	yes	Page 1
Declaration of intent	NA	Section 4.1.2	yes	Page 1
120 day declaration	NA	Section 4.1.3	yes	Page 1
Point of Contact information	NA	Section 4.1.4	yes	Page 1
Principal Officer information	NA	Section 4.1.5	yes	Page 1
Interim Milestone and Final Completion Date(s)	NA	Section 4.1.6	yes	Page 1
Any Unique Milestone dates introduced by the Offeror	NA	Section 4.1.7	yes	Page 1
Proposal Payment Agreement or Waiver of Proposal Payment	Attachment 9.3.1 or 9.3.2	Section 4.1.8	no	Appendix
Certification Regarding Debarment Forms	Attachment 11.8.6(a) Attachment 11.8.6(b)	Section 4.1.9	no	Appendix
Commitment to achieving a Twelve (12%) DBE	NA	Section 4.1.10	yes	Page 1

ATTACHMENT 4.0.1.1

I-95 NORTHBOUND RAPPAHANNOCK RIVER CROSSING TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
participation goal				
Offeror's Qualifications	NA	Section 4.2		Page 2
Confirmation that the information provided in the SOQ submittal remains true and accurate or indicates that any requested changes were previously approved by VDOT	NA	Section 4.2.1	yes	Page 2
Organizational chart with any updates since the SOQ submittal clearly identified	NA	Section 4.2.2	yes	Page 2
Revised narrative when organizational chart includes updates since the SOQ submittal	NA	Section 4.2.2	yes	Page 2
Design Concept	NA	Section 4.3		Page 3-21
Conceptual Roadway Plans and description	NA	Section 4.3.1.1	yes	Page 3-15
Conceptual Structural Plans and description	NA	Section 4.3.1.2	yes	Page 16-21
Project Approach	NA	Section 4.4		Page 22-34
Environmental Management	NA	Section 4.4.1	yes	Page 22-25
Utilities	NA	Section 4.4.2	yes	Page 25-29
Geotechnical	NA	Section 4.4.3	yes	Page 29-34
Quality Assurance/ Quality Control (QA/QC) (as an appendix to Vol. I)	NA	Section 4.4.4	no	Appendix

ATTACHMENT 4.0.1.1

I-95 NORTHBOUND RAPPAHANNOCK RIVER CROSSING TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
NA	Section 4.5		Page 35-57
NA	Section 4.5.1	yes	Page 35-46
NA	Section 4.5.2	yes	Page 46-57
NA	Section 4.76		Section 4.6
NA	Section 4.76	no	Section 4.6
NA	Section 4.76	no	Section 4.6
NA	Section 4.76	no	Section 4.6
	NA NA NA NA NA NA NA	NA Section 4.5 NA Section 4.5.1 NA Section 4.5.2 NA Section 4.76 NA Section 4.76 NA Section 4.76 NA Section 4.76	Form (if any) RFP Part 1 Cross Reference within page limit? NA Section 4.5 NA Section 4.5.1 yes NA Section 4.5.2 yes NA Section 4.76 no NA Section 4.76 no NA Section 4.76 no

ATTACHMENT 3.7

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION

C00105510DB106

0095-111-270

RFP NO.

Garry A. Palleschi

PRINTED NAME

PROJECT NO.:

	ACKNOWL	EDGEMENT OF RFP, REVISION AND/C	OR ADDENDA
revision to	ons and/or addenda _l o the Letter of Subm	e made of receipt of the Request for Proposa pertaining to the above designated project which a littal submission date shown herein. Failure to incl result in the rejection of your proposal.	are issued by the Department
and/o		t 3.7, the Offeror acknowledges receipt of the R P for the above designated project which were is	
1.	Cover letter of	RFP – September 19, 2019	
		(Date)	
2.	Cover letter of	RFP Addendum #1 – October 16, 2019	
		(Date)	
3.	Cover letter of	RFP Addendum #2 – November 8, 2019	
		(Date)	
4.	Cover letter of	RFP Addendum #3 – November 22, 2019	
		(Date)	
5.	Cover letter of	RFP Addendum #4 – December 20, 2019	
		(Date)	
6.	Cover letter of	RFP Addendum #5 – January 17, 2020	
7	Cover letter of	RFP Addendum #6 – February 6, 2020	
//	1 Da		
U	Jall		February 25, 2020
11		SIGNATURE	DATE

Vice President

TITLE

Attachment 9.3.1 - Proposal Payment Agreement

I-95 Northbound Rappahannock River Crossing City of Fredericksburg/Stafford County, Virginia Project No. 0095-111-270 Contract ID # C00105510DB106

ATTACHMENT 9.3.1 PROPOSAL PAYMENT AGREEMENT

THIS 1	PROPOSAL	PAYMENT	AGREEMENT	(this	"Agreement")	is	made	and
entered into as	of this d	ay of	, 20 <u>20</u> , by and	betwe	en the Virginia	Dep	partmei	nt of
Transportation	("VDOT"), ar	nd Shirley Contr	acting Company, LLC	C ('	'Offeror'').			

WITNESSETH:

WHEREAS, Offeror is one of the entities who submitted Statements of Qualifications ("SOQs") pursuant to VDOT's May 13, 2019 Request for Qualifications ("RFQ") and was invited to submit proposals in response to a Request for Proposals ("RFP") for the I-95 Northbound Rappahannock River Crossing, Project No. 0095-111-270 ("Project"), under a design-build contract with VDOT ("Design-Build Contract"); and

WHEREAS, as part of the procurement process for the Project, Offeror has already provided and/or furnished to VDOT, and may continue to provide and/or furnish to VDOT, certain intellectual property, materials, information and ideas, including, but not limited to, such matters that are: (a) conveyed verbally and in writing during proprietary meetings or interviews; and (b) contained in, related to or associated with Offeror's proposal, including, but not limited to, written correspondence, designs, drawings, plans, exhibits, photographs, reports, printed material, tapes, electronic disks, or other graphic and visual aids (collectively "Offeror's Intellectual Property"); and

WHEREAS, VDOT is willing to provide a payment to Offeror, subject to the express conditions stated in this Agreement, to obtain certain rights in Offeror's Intellectual Property, provided that Offeror submits a proposal that VDOT determines to be responsive to the RFP ("Offeror's Proposal"), and either (a) Offeror is not awarded the Design-Build Contract; or (b) VDOT cancels the procurement or decides not to award the Design-Build Contract to any Offeror; and

WHEREAS, Offeror wishes to receive the payment offered by VDOT, in exchange for granting VDOT the rights set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth in this Agreement and other good and valuable consideration, the receipt and adequacy of which are acknowledged by the parties, the parties agree as follows:

Request for Proposals Part 1 Instructions for Offerors September 19, 2019 I-95 Northbound Rappahannock River Crossing City of Fredericksburg/Stafford County, Virginia Project No. 0095-111-270 Contract ID # C00105510DB106

- VDOT's Rights in Offeror's Intellectual Property. Offeror hereby conveys to VDOT all rights, title and interest, free and clear of all liens, claims and encumbrances, in Offeror's Intellectual Property, which includes, without restriction or limitation, the right of VDOT, and anyone contracting with VDOT, to incorporate any ideas or information from Offeror's Intellectual Property into: (a) the Design-Build Contract and the Project; (b) any other contract awarded in reference to the Project; or (c) any subsequent procurement by VDOT. In receiving all rights, title and interest in Offeror's Intellectual Property, VDOT is deemed to own all intellectual property rights, copyrights, patents, trade secrets, trademarks, and service marks in Offeror's Intellectual Property, and Offeror agrees that it shall, at the request of VDOT, execute all papers and perform all other acts that may be necessary to ensure that VDOT's rights, title and interest in Offeror's Intellectual Property are protected. The rights conferred herein to VDOT include, without limitation, VDOT's ability to use Offeror's Intellectual Property without the obligation to notify or seek permission from Offeror.
- **2.** Exclusions from Offeror's Intellectual Property. Notwithstanding Section 1 above, it is understood and agreed that Offeror's Intellectual Property is not intended to include, and Offeror does not convey any rights to, the Escrow Proposal Documents submitted by Offeror in accordance with the RFP.
- 3. Proposal Payment. VDOT agrees to pay Offeror the lump sum amount of Hundred Thousand and 00/100 Dollars (\$100,000.00) ("Proposal Payment"), which payment constitutes payment in full to Offeror for the conveyance of Offeror's Intellectual Property to VDOT in accordance with this Agreement. Payment of the Proposal Payment is conditioned upon: (a) Offeror's Proposal being, in the sole discretion of VDOT, responsive to the RFP; (b) Offeror complying with all other terms and conditions of this Agreement; and (c) either (i) Offeror is not awarded the Design-Build Contract, or (ii) VDOT cancels the procurement or decides not to award the Design-Build Contract to any Offeror.
- 4. Payment Due Date. Subject to the conditions set forth in this Agreement, VDOT will make payment of the Proposal Payment to the Offeror within forty-five (45) days after the later of: (a) notice from VDOT that it has awarded the Design-Build Contract to another Offeror; or (b) notice from VDOT that the procurement for the Project has been cancelled and that there will be no Contract Award.
- 5. <u>Effective Date of this Agreement</u>. The rights and obligations of VDOT and Offeror under this Agreement, including VDOT's ownership rights in Offeror's Intellectual Property, vests upon the date that Offeror's Proposal is submitted to VDOT. Notwithstanding the above, if Offeror's Proposal is determined by VDOT, in its sole discretion, to be nonresponsive to the RFP, then Offeror is deemed to have waived its right to obtain the Proposal Payment, and VDOT shall have no obligations under this Agreement.

Request for Proposals Part 1 Instructions for Offerors September 19, 2019 I-95 Northbound Rappahannock River Crossing City of Fredericksburg/Stafford County, Virginia Project No. 0095-111-270 Contract ID # C00105510DB106

- **6.** <u>Indemnity</u>. Subject to the limitation contained below, Offeror shall, at its own expense, indemnify, protect and hold harmless VDOT and its agents, directors, officers, employees, representatives and contractors from all claims, costs, expenses, liabilities, demands, or suits at law or equity ("Claims") of, by or in favor of or awarded to any third party arising in whole or in part from: (a) the negligence or wilful misconduct of Offeror or any of its agents, officers, employees, representatives or subcontractors; or (b) breach of any of Offeror's obligations under this Agreement, including its representation and warranty under Section 8 hereof. This indemnity shall not apply with respect to any Claims caused by or resulting from the sole negligence or wilful misconduct of VDOT, or its agents, directors, officers, employees, representatives or contractors.
- 7. <u>Assignment</u>. Offeror shall not assign this Agreement, without VDOT's prior written consent, which consent may be given or withheld in VDOT's sole discretion. Any assignment of this Agreement without such consent shall be null and void.
- **8.** Authority to Enter into this Agreement. By executing this Agreement, Offeror specifically represents and warrants that it has the authority to convey to VDOT all rights, title, and interest in Offeror's Intellectual Property, including, but not limited to, those any rights that might have been vested in team members, subcontractors, consultants or anyone else who may have contributed to the development of Offeror's Intellectual Property, free and clear of all liens, claims and encumbrances.

9. Miscellaneous.

- a. Offeror and VDOT agree that Offeror, its team members, and their respective employees are not agents of VDOT as a result of this Agreement.
- b. Any capitalized term used herein but not otherwise defined shall have the meanings set forth in the RFP.
- c. This Agreement, together with the RFP, embodies the entire agreement of the parties with respect to the subject matter hereof. There are no promises, terms, conditions, or obligations other than those contained herein or in the RFP, and this Agreement shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties hereto.
- d. It is understood and agreed by the parties hereto that if any part, term, or provision of this Agreement is by the courts held to be illegal or in conflict with any law of the Commonwealth of Virginia, validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provisions to be invalid.

Request for Proposals Part 1 Instructions for Offerors September 19, 2019 I-95 Northbound Rappahannock River Crossing City of Fredericksburg/Stafford County, Virginia Project No. 0095-111-270 Contract ID # C00105510DB106

e. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

IN WITNESS WHEREOF, this Agreement has been executed and delivered as of the day and year first above written.

By:		
Name:		
Title:		
[Insert	Offeror's Name] Shirley Contracting Company,	, LLC
By:		
Name:	Garry A. Palleschi	
Title:	Vice President	

VIRGINIA DEPARTMENT OF TRANSPORTATION

Attachment 11.8.6 (a) & (b) - Debarment Forms

Project No.: 0095-11

- 1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.
- b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; and have not been convicted of any violations of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;
- c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1) b) of this certification; and
 - d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- 2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Signature	February 25, 2020 Date	Vice President Title	
Shirley Contracting (Company, LLC		
Name of Firm			

Project No.: 0095-111-270

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Deluberry Engineers Inc.

Name of Firm

Project No.: 0095-111-270

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Exchall Rim Vin	not 01/28/2020	President
Signature	Date	Title
Quinn Consulting Serv	rices, Inc.	
Name of Firm		

Project No.: 0095-111-270

- The prospective lower tier participant certifies, by submission of this proposal, that 1) neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

VP of Business Development 1/28/2020 Title Signature Date Jerry Ross Specialized Engineering Name of Firm

Project No.: 0095-111-270

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Signature	Date Date	Vice President Title
DMY Engineeri	ng Consultants Inc.	

Project No.: 0095-111-270

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

W. & Mc Keague 1/28/2020	Vice President
Signature Date	Title
Quantum Spatial, Inc.	
Name of Firm	

Project No.: 0095-111-270

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Signature

Date

Citle.

SURVEYING AND MAPPING, ZLC

Name of Firm

Project No.: 0095-111-270

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Jacce	lature	1/29/2020 Date	President, CEO, COO Title
-	elly and Loy, In	c,	

Project No.: 0095-111-270

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Lavelb Dall Signature	Port 1/28/20	President Title
	al.	
Diversified Prope	erty Services, Inc.	

Project No.: 0095-111-270

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Signature Date Title

OID Doning Settlements, Inc., T/A Key Title



4.4.4 QualityAssurance/Quality Control

4.4.4 Quality Assurance/Quality Control (QA/QC)

Our Team's approach to QA/QC during construction is established to conform to VDOT's Minimum Requirements for Quality Assurance and Quality Control on Design Build and Public-Private Transportation Act Projects, revised July 2018, (QA/QC Guide), as well as the resource requirements and level of effort mandated by the Team's Project Schedule and unique Scope of Work. Our approach encompasses procedures, detailed in our Project-specific QA/QC Plan, for construction Quality Assurance (QA), construction Quality Control (QC), materials testing, inspections, documentation, and auditing – all with the objective of minimizing VDOT's oversight role and resource requirements. The QA and QC Teams follow the approved QA/QC Plan that outlines the organization, roles and responsibilities, procedures, and is structured to ensure the independence of QA and QC functions. Schedule and coordination of QA/QC activities are addressed including Witness and Hold Points for inspection of work at critical stages.

4.4.4.1 Staffing Plan - Construction Quality Assurance

In Sections 4.5 and 4.6 of this Technical Proposal, our Team has presented the Sequence of Construction and Proposal Schedule, outlining our overall construction approach. After carefully reviewing the resource requirements necessary to meet this schedule, we planned our QA/QC staffing to align with the crew resources and subcontracts expected during each Project phase. Our QA/QC Staffing Plan is detailed in Exhibit 4.4.4.1, shown as an overlay to the Summary Schedule shown in Exhibit 4.5.1.2.

Using a Crew Loaded Analysis of the Summary Schedule, Exhibit 4.4.4.1 depicts the minimum number of anticipated self-perform and major subcontractor crews per month. A key indicator of the activity level of a large heavy-highway project is the staffing level of the self-perform grading and bridge crews. To determine the correct staffing for the QA effort, our Team is using the industry standard rule of thumb for the ratio of Quality Assurance inspection to grading crews which is approximately 4 to 5 crews per 1 roadway inspector. On the bridge side, the ratio is approximately 1 to 3 crews per 1 bridge inspector. The RFP requirements for the I-95 NB RRC Project ensure that 1 Lead QA Inspector - Roadway and 1 Lead QA Inspector – Structure/Bridge are onsite full-time during construction operations. Therefore, in order to determine the quantity of additional inspectors necessary, the above ratio has been applied to the anticipated number of crews as shown in Exhibit 4.4.4.1. Using this proven logic, it is anticipated that at the peak production of the Schedule, QA staffing will require 5 to 6 people, full-time, including the QAM, QA inspectors, and Support Staff.

Night work is always a factor when staffing for QA personnel. Fortunately, for our Sequence of Construction, many activities occur behind traffic barrier without the need for night-time lane closures. For safety and operational reasons, it is anticipated that night-time activities will only include activities such as:

- Early work such as Traffic Barrier Set and Shoulder Widening
- Structural Steel / Girder Erection
- Overhead Sign Installation
- Major Traffic Shifts
- Final Mill and Overlay of Mainline I-95

Since many of these activities are specialized in nature, it is not anticipated that additional night-time resources will be necessary for the QA effort.

As with any Project, there may be times when activities lull due to weather or other unanticipated issues; likewise, activities can also increase in volume based on availability of additional crews or subcontractors

as well as time-of-year work windows for grading, paving, and other weather sensitive activities. Our Team assures VDOT that the proper level of QA resources will be allocated at all times for the amount of work occurring. The QA Staffing Plan as presented is the baseline of the minimal effort and details the level of commitment from our Team to meet and exceed the requirements of the RFP. Our Team's anticipated QA Staffing level will assure that the construction will be carried out in accordance with the RFP requirements with minimal VDOT resource requirements.

The following describes the Quality Assurance Team, their roles, responsibilities and projected time commitment during construction as is depicted on Exhibit 4.4.4.1.

Quality Assurance Manager (QAM)

Scott Shropshire, P.E., DBIA, Quinn Consutting Services, Inc.

Time Commitment:

- Design Phase: Estimated at 5% 10%
- Construction Phase: 50% from Notice to Commence Construction until completion of the I-95 SB RRC Project; 100% from completion of the I-95 SB RRC Project to Final Completion.

Reporting directly to the Design Build Project Manager, (DBPM), the Quality Assurance Team is led by the Quality Assurance Manager, (QAM), Scott Shropshire, P.E., CCM with Quinn Consulting Services, Inc., (Quinn), and is a Key Personnel. Quinn is completely independent of the Designer and Contractor and is responsible for QA of all construction operations. Currently, Mr. Shropshire is serving as the QAM for both the I-95 SB RRC Project along with our Team's I-95 / Route 630 Reconstruction and Widening Project, currently scheduled for Final Completion in the Summer 2020. We are committing to VDOT that upon completion of the I-95 SB RRC Project, Scott will be dedicated full time to the Project in his role as QAM. This benefits VDOT and the Project by ensuring the continuity of this critical position as a Shirley

Team member and as someone with direct experience with the Project challenges.

In his role as QAM, Scott not only reports to the DBPM, but has the autonomy to report directly to VDOT. In

Our Team commits to 100% Full Time QAM participation on the I-95 NB RRC following completion of the I-95 SB RRC Project.

addition, he is tasked with the authority to unilaterally halt or suspend any work that is not in compliance with the Contract documents. Scott will review and approve monthly Applications for Payment and will report to VDOT if payments should be withheld for non-conformance or work that lacks the proper materials documentation. Further in this role as QAM, Scott and his designated QA Team are responsible for overseeing the performance of the required QC inspections and materials testing performed by Shirley's QC Team, including but not limited to: nuclear densities on soils and aggregates; concrete testing, and asphalt bulk specific gravities, as well as the other inspections and tests as prescribed in Appendix 2, Table A-2 of the QA/QC Guide.

The QAM will conduct Preparatory Inspection Meetings (PIM) in accordance with Section 5.7 of the QA/QC Guide prior to the start of any new type of work. This meeting will be scheduled within two weeks of the start of the pertinent activities and will be attended by the QAM, Construction Manager, Field Superintendents, safety personnel, subcontractors, and QA/QC personnel involved in the work. At these meetings, the QAM will facilitate a dialog between Project stakeholders where items such as the applicable contract drawings, specifications, special provisions, materials submittals, testing requirements, environmental concerns, public communications, and safety concerns. The contractor's schedule and sequence of work will be reviewed, and Witness and Hold Points confirmed based on the requirements in Sections 5.18 and 5.19 of the QA/QC Guide. The meeting will provide information enabling the adaptation of QA and QC processes to the contractor's work plan and identifying specific documentation

and verification requirements including the names and qualifications of the responsible QA and QC staff. Material quantities and frequency of testing will be reviewed to ensure compliance with the minimum standards, and the Inspection Checklist used for monitoring the specific work type will be distributed. Following the PIM, the QAM will prepare and distribute meeting minutes to all parties.

The QAM will also manage and oversee the Non-Compliance Report (NCR) process. Scott will work closely with both Shirley and VDOT personnel to promptly identify, prepare, and distribute NCR's and document agreeable resolutions to each. In addition, the QAM will work with the QC team to monitor and track deficiencies and their resolution. The QAM and the QA team, when notified by Shirley that the work is complete, will coordinate acceptance inspections and develop a final punchlist with the

Department and document completion of each punchlist item. Deficiencies, NCR's, and punchlist items will be tracked in the PlanGrid software system and recorded data will be reviewed by the Quality Team at each weekly Progress Meeting.

Our Team commits to quarterly audit and review of Materials Notebook for acceptance by VDOT, making an efficient Project Closeout Process.

The QAM and the QA Team will be responsible for oversight of the C-25 materials approval process and entering data provided by Shirley into the Materials Notebook. On a monthly basis, the QAM will audit the Material Notebook prior to approving the monthly Application for Payment for accuracy and completeness, (i.e. QA/QC IDR's materials testing reports), while attaching a list of any open NCR's for VDOT reference. Our Team is committed to providing quarterly VDOT reviews/audits of all materials documentation to ensure an expeditious and efficient Project closeout process.

Lead QA Inspectors

Lead QA Inspector - Structure/Bridge: Syd Tiffany, Quinn Consulting Services, Inc.

Time Commitment:

■ Construction Phase: 100% (40-50 hours/week) during structure/bridge construction activities.

Lead OA Inspector - Roadway: Omar Sylla, Quinn Consulting Services, Inc.

Time Commitment:

Construction Phase: 100% (40-50 hours/week) during roadway construction.

Our Team includes two Lead QA inspectors – one for Structure/Bridge and the second for Roadway - onsite full-time during their respective construction activities reporting directly to the QAM. This approach promotes a focused inspection process that allows the Lead Inspectors to spend more of their time physically monitoring and observing construction as it is being performed, and ensures that inspections, testing and corrections of deficiencies or non-conforming work is being performed in accordance with the contract requirements. Our selected Lead Inspectors have extensive experience working in the Fredericksburg District and are very familiar with VDOT and the District expectations for construction quality inspection. Each possess the Dual Inspector Certification in Erosion & Sediment Control and Stormwater Management, and are responsible for certifying the Project's compliance with the SWPPP and the VPDES Construction Permit on the Construction Runoff Control Inspection Form (C-107 Part 1). Working in coordination with the QAM, Construction Team and QC personnel, the Lead QA Inspectors will manage the detailed, day-to-day operations related to the Quality Assurance functions, including the following:

- Review the 3-week Look-Ahead Schedules to assure inspection coverage;
- Assign certified inspectors at appropriate coverage ratios to scheduled construction activities;
- Coordinate daily with the Contractor and the Department's Independent Assurance (OIA) personnel;

- Discuss sequence of construction with Superintendent and/or Foremen to ensure adherence to the approved plans and specifications;
- Monitor QC Program during field operations;
- Document and address concerns, issues, deficiencies, and non-conforming work; and
- Periodically verify that minimum test requirements are met relative to the scheduled construction activities.
- For the Mass Concrete Pours associated with B609 Rappahannock River Crossing, the bridge QA staff will assure that inspection of all aspects of the work are provided per the Special Provisions.

QA Office Engineer

Mark McMiller, Quinn Consulting Services, Inc.

Time Commitment:

■ Construction Phase: Estimated at 50% - 100%

A QA Office Engineer, reporting to the QAM, will be assigned and responsible for maintaining the Materials Book, which includes the Source of Materials, quantity entries, materials testing results, Buy America Certifications, and materials invoice and ticket compilations. In addition, the Office Engineer will assist with checking QA and QC IDR's and laboratory testing reports, and is available to assist with field inspections when needed due to high volume workdays or when night/weekend inspections are required. By dedicating an Office Engineer, the QA Inspection Team is able to spend more time in the field monitoring construction and QC activities.

QA Inspectors/Testing Technicians (Roadway annd Structures/Bridge) Specialized Engineering

Time Commitment:

■ Construction Phase: At peak, estimated 2 each at 100% (see Exhibit 4.4.4.1)

QA Inspectors and Testing Technicians will be utilized when the Lead QA - Structure/Bridge and Lead QA - Roadway Inspectors need support covering the volume of ongoing activities at any given time. These Inspectors and Testing Technicians hold applicable certifications for the materials they are inspecting and testing.

All QA inspectors will complete IDR's, QA Independent Assurance (QA IA) and QA VST reports for all quality assurance inspections. The QAM will compare QA IA and QA VST results to the QC, Owner Independent Assurance (OIA) and Owner VST (OVST) results for consistency and accuracy.

QA Laboratory

Specialized Engineering

Quinn will utilize Specialized Engineering, an accredited laboratory per the requirements of the *QA/QC Guide*, for the QA Laboratory. All laboratory results will be compared to the QC Laboratory results and any testing comparison discrepancies will be addressed and documented by the QAM and the Quality Team.

Staffing Plan - Construction Quality Assurance (QC)

The QC Team, led by the Construction Manager, has the training and experience required to properly execute the quality program. Our approach and commitment provide assurance to VDOT that quality will be addressed and allow the Department to minimize its oversight resources. Exhibit 4.4.4.1 also depicts the anticipated QC Staffing needs for the Project. Similar to the analysis performed with the QA staffing,

we have used a ratio of self-perform crews to roadway and structure/bridge QC inspector. This ratio is higher for the roadway work due to utility crews and other underground work that requires more intense inspector and technician oversight. The structure/bridge ratio for QC staffing is similar to the QA analysis. An outline of our QC resources and responsibilities is as follows:

Construction Manager (CM)

Greg Johannes, Shirley Contracting Company, LLC

Time Commitment:

■ Design Phase: Estimated at 25% - 50%

■ Construction Phase: 100% from Notice to Commence Construction completion to Final Completion

As a Key Personnel, Greg has overall responsibility for construction, safety and the QC Program. During the Design Phase he will focus his efforts on constructability review of the plans, planning means and methods of construction, and coordinating with the Design Team to ensure those means and methods are accommodated by the final design details. During Construction, he directs and manages day-to-day construction activities, monitors and updates the schedule, coordinates with the utility discipline, and oversees the QC Program. He ensures construction is in accordance with the Project requirements and will be on the Project site full-time for the duration of construction operations.

Quality Control Manager (QCM)

Name, Firm TBD

Time Commitment:

■ Construction Phase: 100% from Notice to Commence Construction completion to Final Completion

Reporting to the Construction Manager, the QCM is responsible for construction quality control and oversees quality control testing and inspection activities. The QCM assigns inspectors and testing technicians for each work package and monitors reporting documentation to ensure that the work is completed per Contract requirements. The QCM will assign two full-time QC inspectors – one for roadway and one for structures/bridges. Additional inspectors and testing technicians will be utilized when required by the schedule to ensure sufficient coverage is provided at all times during construction.

QC Inspectors/Testing Technicians

Name, Firm TBD

Time Commitment:

 Construction Phase: 3-4 Roadway Inspectors at peak of construction, 1 Full-Time Senior Structure/ Bridge Inspector during bridge construction, 1 support Structure/Bridge Inspector during peak periods as per Exhibit 4.4.4.1.

QC Inspectors and Testing Technicians will be utilized at ratios to support covering the volume of ongoing construction activities at any given time. These Inspectors and Testing Technicians hold applicable certifications for the materials they are inspecting and testing.

QC Office Engineer

Name, Firm TBD

Time Commitment:

■ Construction Phase: Estimated at 50% - 100%

A QC Office Engineer, reporting to the QCM, will be assigned and responsible for daily coordination with the Construction Manager to schedule the appropriate QC inspection and testing for the upcoming work.

Our Team utilizes an Expected Daily Activity (EDA) Form to communicate to QA, QC and VDOT the upcoming work for the next day. Details such as scheduled MOT setups, concrete pour times, aggregate base production rates, and subcontractor activities are provided. The QC Office Engineer will also collect and review all Inspector Daily Reports (IDR's) and organize the reports for concise and timely submission to the QAM. The use of the QC Office Engineer ensures that the Inspectors are in the field, reviewing and verifying the work in place.

4.4.4.2 Construction Quality Assurance Approach

A key element to effectively manage our QA approach includes the implementation of an adaptive, compassionate, and flexible leadership style. Each entity, active or passive, associated with the Project has their respective expectations. The Owner and other third-party stakeholders, especially the traveling public, expect timely project completion, but also demand a quality product. With all of the dynamic aspects associated with quality in the construction process, supervision, leadership and establishing expectations of the entire QA/QC Program are critical to the Project's overall success. Three key attributes to this success include: communication, empowerment, and oversight.

Beginning at Notice of Award, the QAM communicates closely with the DBPM, Design Manager and Construction Manager (CM) to craft a thorough and compliant QA/QC Plan that is then communicated to all Team members. Moreover, the QA/QC Plan clearly communicates the Team's commitment and approach to construction quality to VDOT. Prior to construction commencement, a meeting will be held with all personnel associated with QC and QA, the DBPM and CM. The purpose of the meeting is to review the QA/QC Plan, establish the expectations and review the fundamentals of the inspection program. During construction, QA/QC meetings will be held at a minimum of once per week to discuss look-ahead items, progress status, and deficient or non-conforming work. Continuing throughout the life of the Project, design and construction meetings will be held regularly with quality always as a topic of discussion.

A second key aspect of a successful QA/QC Program is empowerment and delegation of authority. While ultimately responsible for certifying the completed work, it is not practical for the QAM to oversee every aspect of the work every day. In fact, as outlined in the QA/QC Guide, the testing requirements for QA are 10% of the work. Because the testing expectation for QC is 100%, it is essential for the QAM to empower, and establish guidelines to do so, QA inspection staff and QC with the ability to stop or suspend work for a quality or safety concern. In such cases, the QC Inspector will immediately notify the Quality Control Manager (QCM) and partnered QA Inspector, who will notify the QAM. Depending on the severity of the issue, the CM and/or DBPM may be notified. The goal of the Program is to ensure that issues are resolved at the lowest level so that productive work can resume as quickly as practical. For situations involving the design or RFC plans, the Engineer of Record will also be consulted.

Finally, oversight plays an indispensable role in providing feedback to the performance of construction operations and inspections. The QAM, using layman's terms, serves as the "quality-face" for the entire Team and VDOT. Moreover, the QAM certifies to VDOT that all work completed is in accordance with the approved plans, specifications, and contract documents. Through communication, empowerment and oversight by the QAM, the QA inspection team will review and scrutinize work activities alongside their QC counterparts. QA Inspectors will report to the respective Lead QA Inspector (Structure/Bridge or Roadway), who in-turn report to the QAM. The Office Engineer, also a certified QA Inspector, may report to a Lead QA Inspector when working in the field, or may report to the QAM regarding Project documentation, such as the Materials Notebook. The QAM will coordinate with the CM and the QCM to ensure all upcoming construction activities receive adequate and thorough inspection coverage. Furthermore, the Lead QA Inspectors will detail the inspection coverage with QC Staff and assign QA

Inspectors as appropriate maintaining a minimum ratio of at least 1-QA Inspector to every 4-work crews. During construction operations, whether day or night work, QA staff will coordinate and monitor the execution of the QC Program, perform QA(IA) and/or QA(VST) testing as appropriate, and advise IA staff regarding the scheduled activities. Additionally, at the conclusion of the operation(s), QA and QC staff will discuss the operation(s) and resolve any discrepancies or notify the appropriate authority.

Construction Quality Control Approach

The Quality Control Team, led by our QCM and reporting to the CM, is responsible for daily QC inspections and material testing for all construction operations. In addition, the QCM and QC Team are responsible for all QC sampling, testing and analysis of materials and will verify quality at frequencies meeting or exceeding the VDOT Construction Manual, the Materials Manual of Instructions and the QA/QC Guide. The QCM participates in the preparation of the QA/QC Plan, including the checklists that will be utilized by QC inspectors during the inspection process. All QC Inspection Staff will hold the applicable certifications required by the QA/QC Guide for the work they are inspecting. The inspectors will be experienced in VDOT practices and methodology and will be responsible for monitoring all work activities.

All QC staff actively inspecting and/or testing components of the Project complete IDR's. The IDR's are electronic diaries and include, as an attachment, copies of all QC materials tests completed for the day's activities. Signed hard copies of the IDR's are submitted to the QCM daily for review and approval and saved to a shared drive for access and immediate review by the QAM. The QCM prepares and submits an electronic Quality Control Monthly Report which summarizes all work completed during the period, inspections, tests, materials placed, action taken for failing materials, and NCR's. The QC Team will coordinate daily with the construction staff to ensure adequate staffing, including testing technicians, are assigned for the scheduled activities. The contractor will provide both three-week look-ahead schedules and an Expected Daily Activities (EDA) report to the QC Team to facilitate scheduling and coordination of testing and inspections.

4.4.4.3 QA/QC Organizational Chart

Our Teams Organizational Chart for our QA/QC Program is shown in Exhibit 4.4.4.2 and indicates all intended QA and QC personnel to be utilized. Solid lines between participates represent direct reporting relationships. Dashed lines represent lines of communication.

Value-Added Personnel

Included in our QA/QC Program are the following Value-Added personnel:

Geotechnical Engineer

Paul Zhang, P.E., DMY Engineering Consultants, Inc.

Time Commitment:

■ Construction Phase: As required by Project Schedule

As required by the RFP, the Geotechnical Engineer of Record (GEOR) and designated inspection and testing personnel will be engaged throughout the construction phase to monitor and inspect deep foundation work, embankment work and pavement subgrades. The GEOR will be consulted as necessary to verify limits of unsuitable soils or when rock is encountered, which is known to exist at the location of new Bridge B609 over the Rappahannock River. The GEOR will also manage any monitoring for settlement, if required.

The GEOR will review all reports and tests associated with deep foundation work, such as pile installation,

and confirm that the QA and QC was performed by certified inspection and testing technicians. Furthermore, the GEOR shall certify that the QA/QC was adequate and acceptable and submit its summary report to the QAM as back-up to the monthly Application for Payment submitted by the Design-Builder. The QAM will confirm that the geotechnical certification addressed work completed in the period and note such in its monthly summary submitted to the Department.

QA Office Engineer

Mark McMiller, Quinn Consulting Services, Inc.

Time Commitment:

■ Construction Phase: Estimated at 50% - 100%

A QA Office Engineer, reporting to the QAM, will be assigned and responsible for maintaining the Materials Book, which includes the Source of Materials, quantity entries, materials testing results, Buy America Certifications, and materials invoice and ticket compilations. In addition, the Office Engineer will assist with checking QA and QC IDR's and laboratory testing reports, and is available to assist with field inspections when needed due to high volume workdays or when night/weekend inspections are required. By dedicating an Office Engineer, the QA Inspection Team is able to spend more time in the field monitoring construction and QC activities.

QA Office Engineer

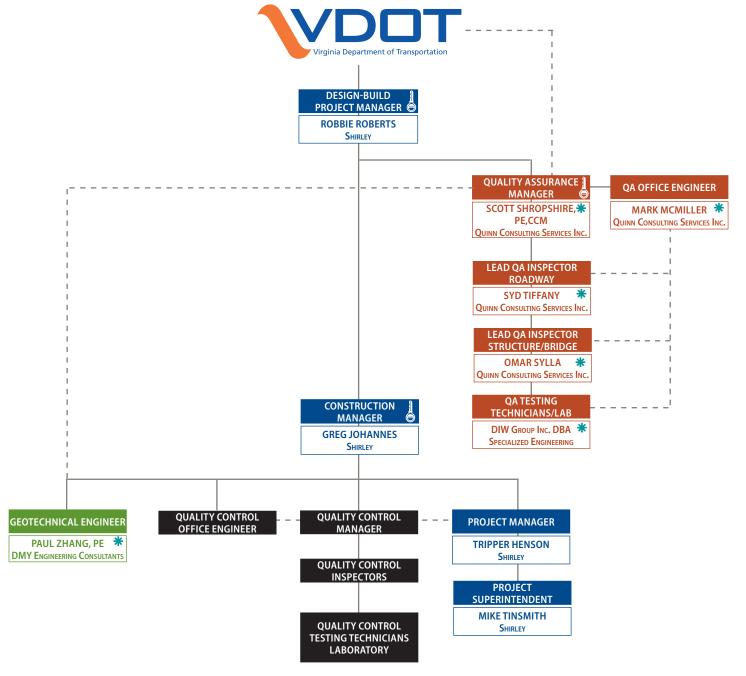
Name, Firm TBD

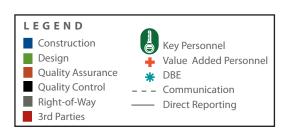
Time Commitment:

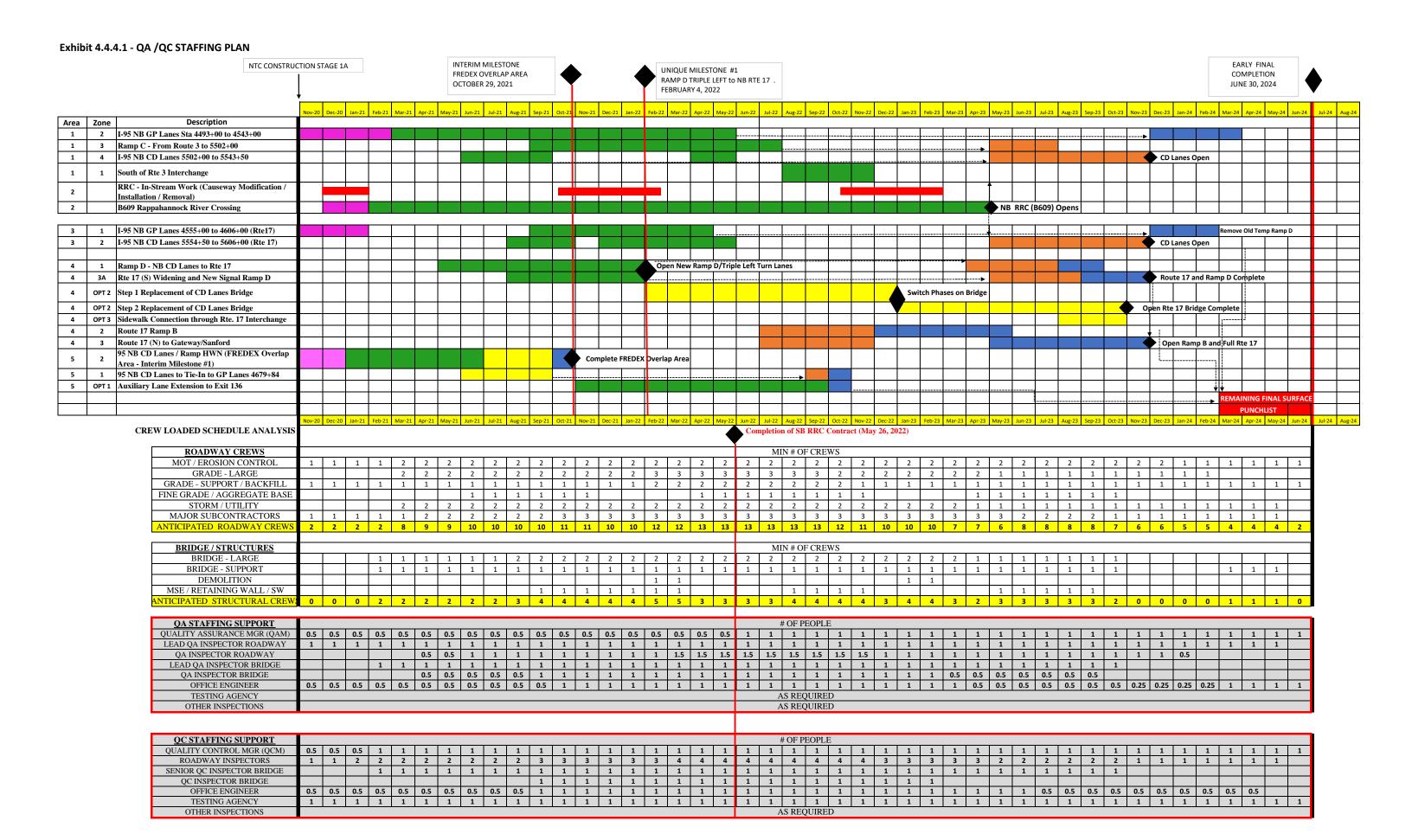
■ Construction Phase: Estimated at 50% - 100%

A QC Office Engineer, reporting to the QCM, will be assigned and responsible for daily coordination with the Construction Manager to schedule the appropriate QC inspection and testing for the upcoming work. Our Team utilizes an Expected Daily Activity (EDA) Form to communicate to both QA and QC as well as VDOT the upcoming work for the next day with details such as scheduled MOT setups, concrete pour times, aggregate base production rates, and subcontractor activities. The QC Office Engineer will also collect and review all Inspector Daily Reports and organize the reports for concise and timely submission to the QAM. The use of the QC Office Engineer ensures that the Inspectors are where they need to be... in the field, reviewing and verifying the work in place.

Exhibit 4.4.4.2 QA/QC Organizational Chart







Response to Request for Proposals

I-95 NORTHBOUND RAPPAHANNOCK RIVER CROSSING City of Fredericksburg and Stafford County, Virginia

State Project No.: 0095-111-270 Federal Project No.: NHP-095-2(545)
Contract ID Number: C00105510DB106

February 25, 2020

VOLUME II DESIGN CONCEPT



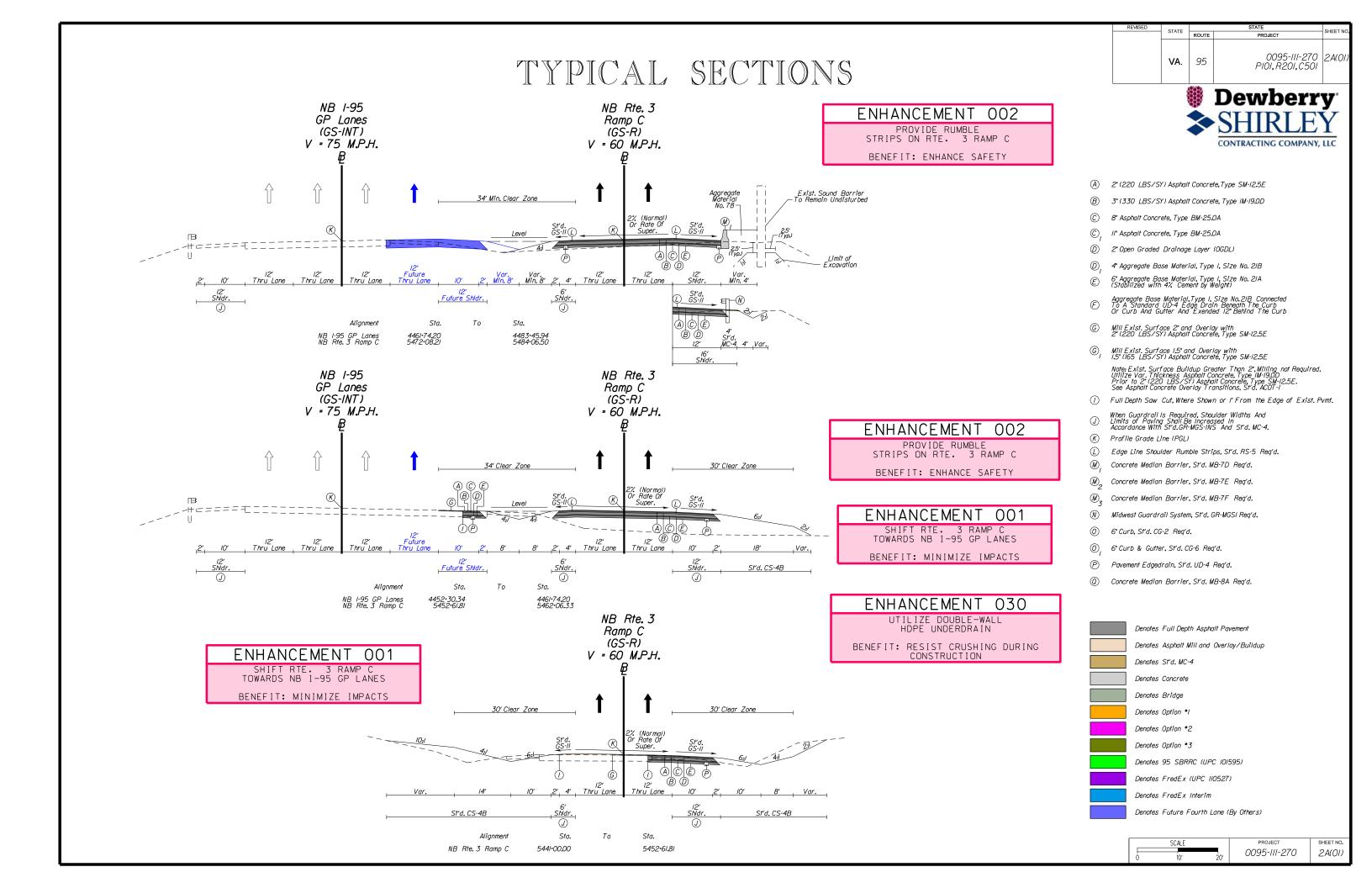
Submitted By:

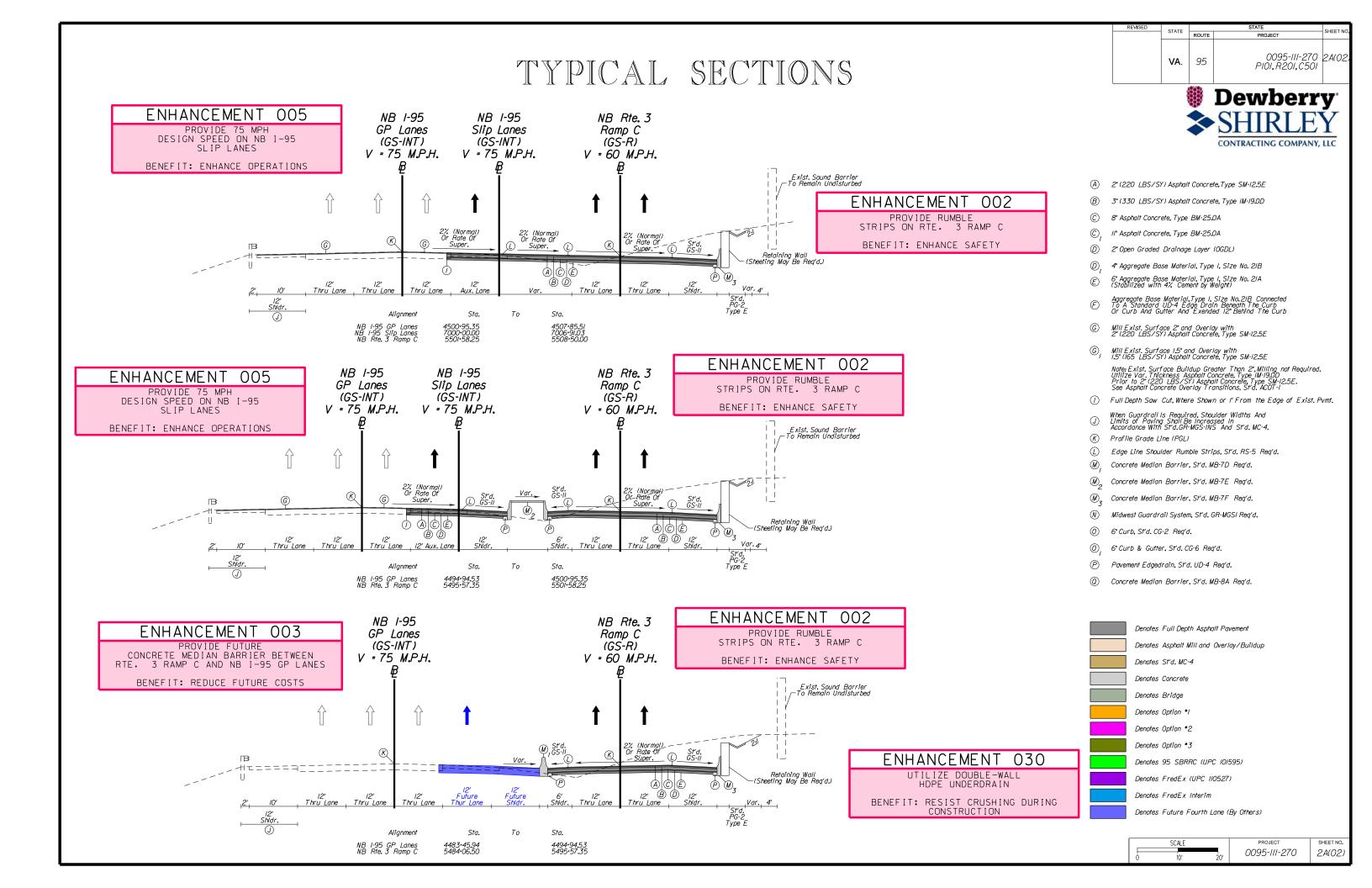


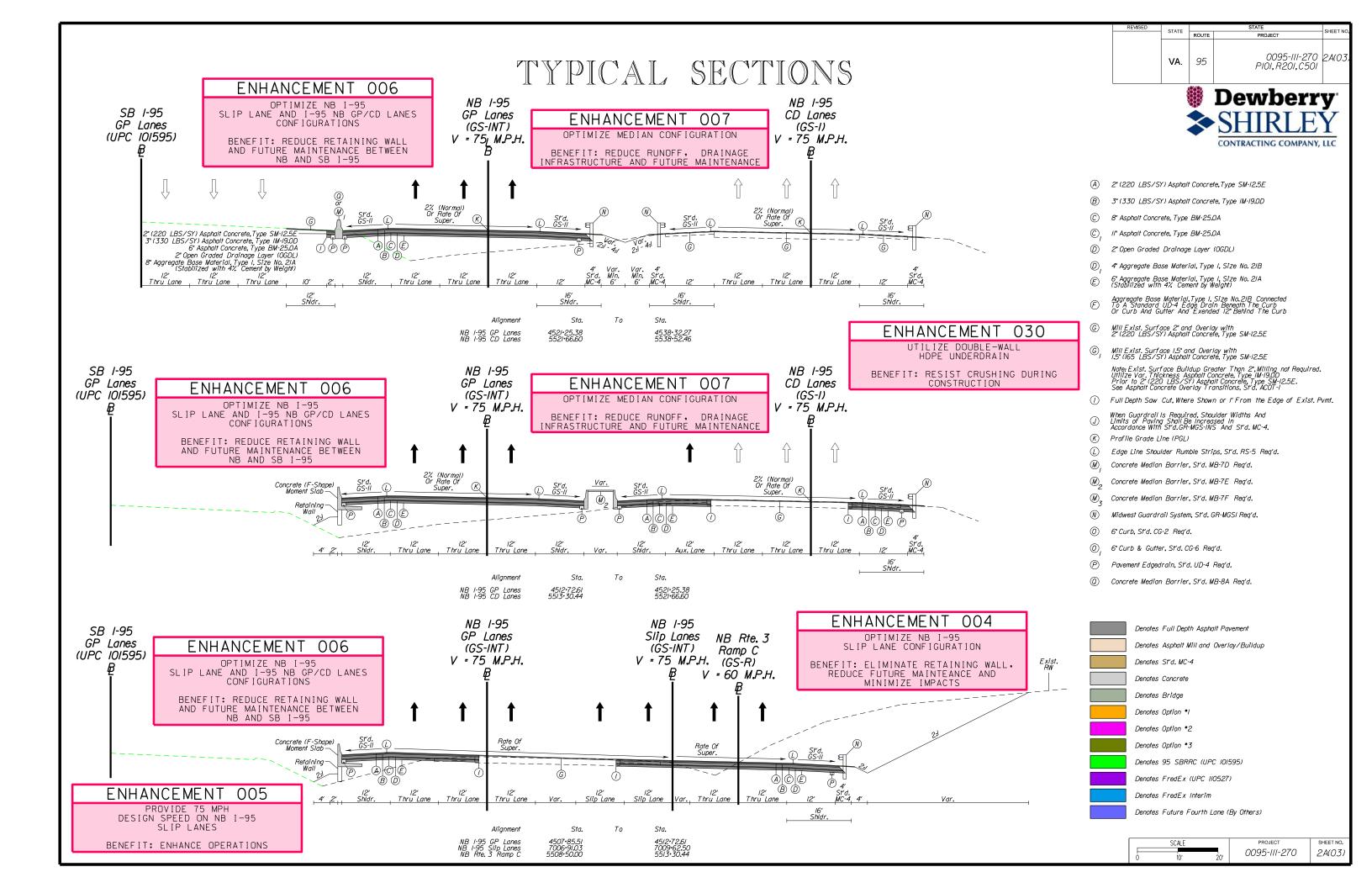
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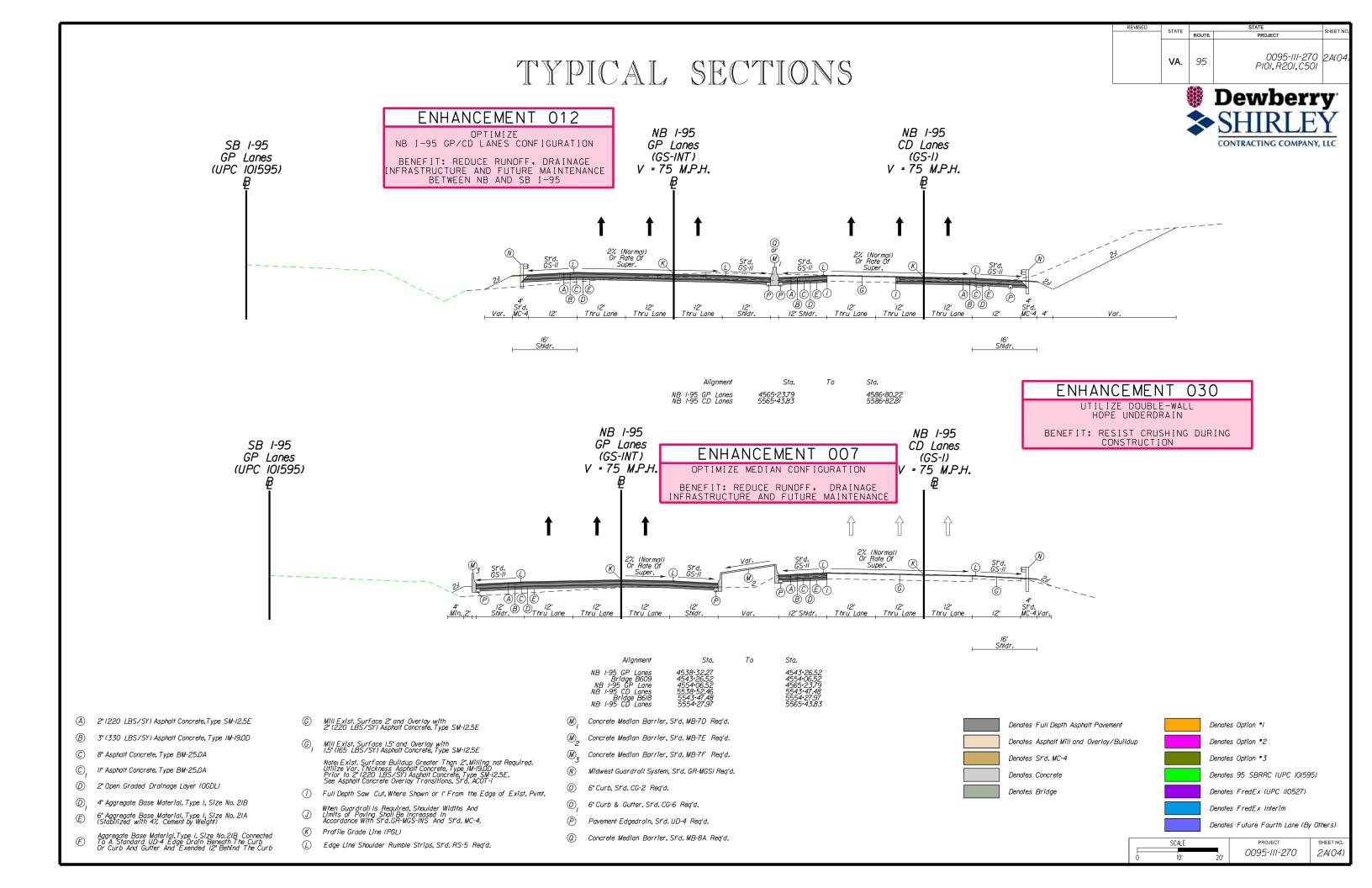


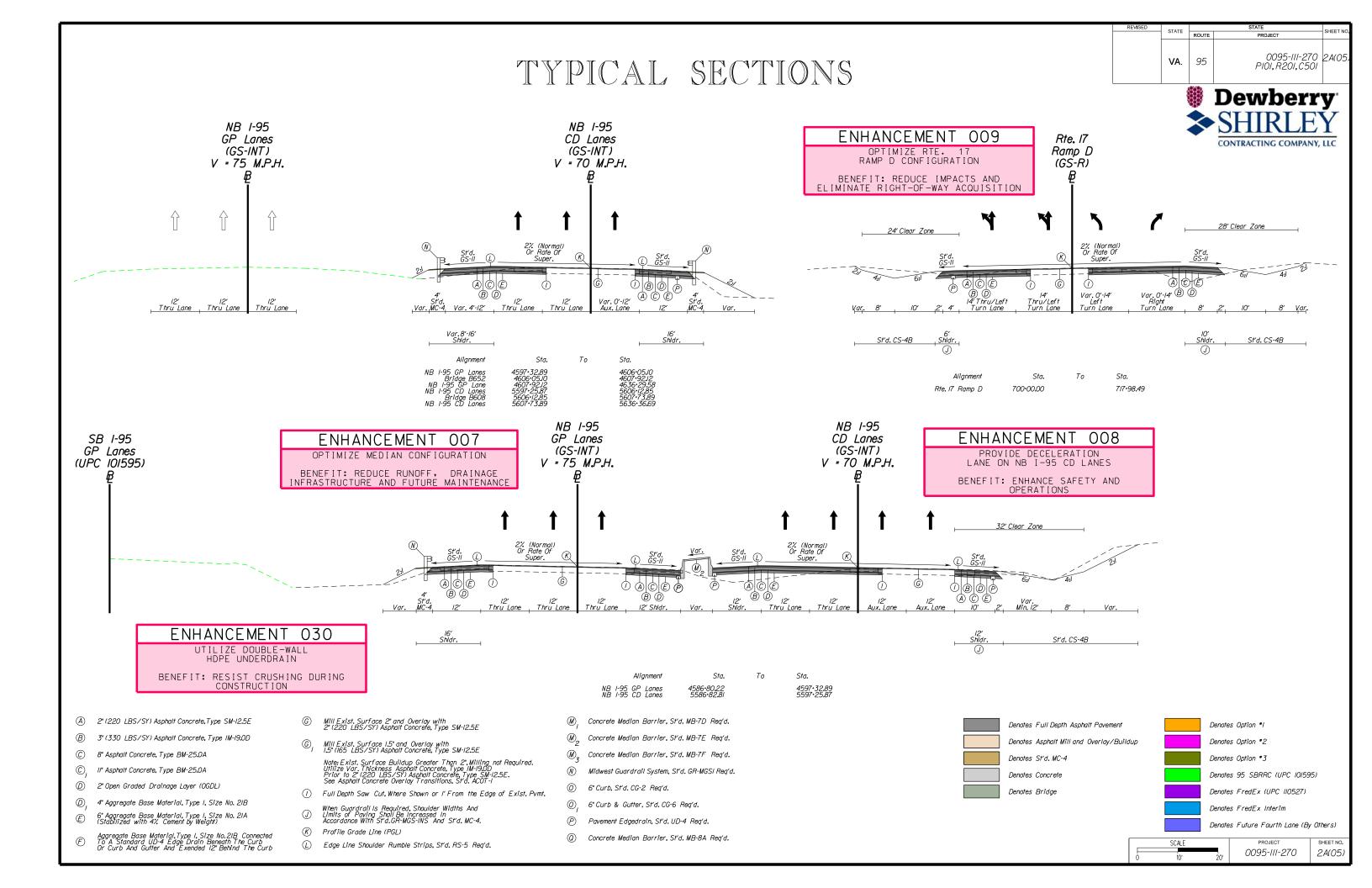
4.3.1 - Conceptual Roadway Plans

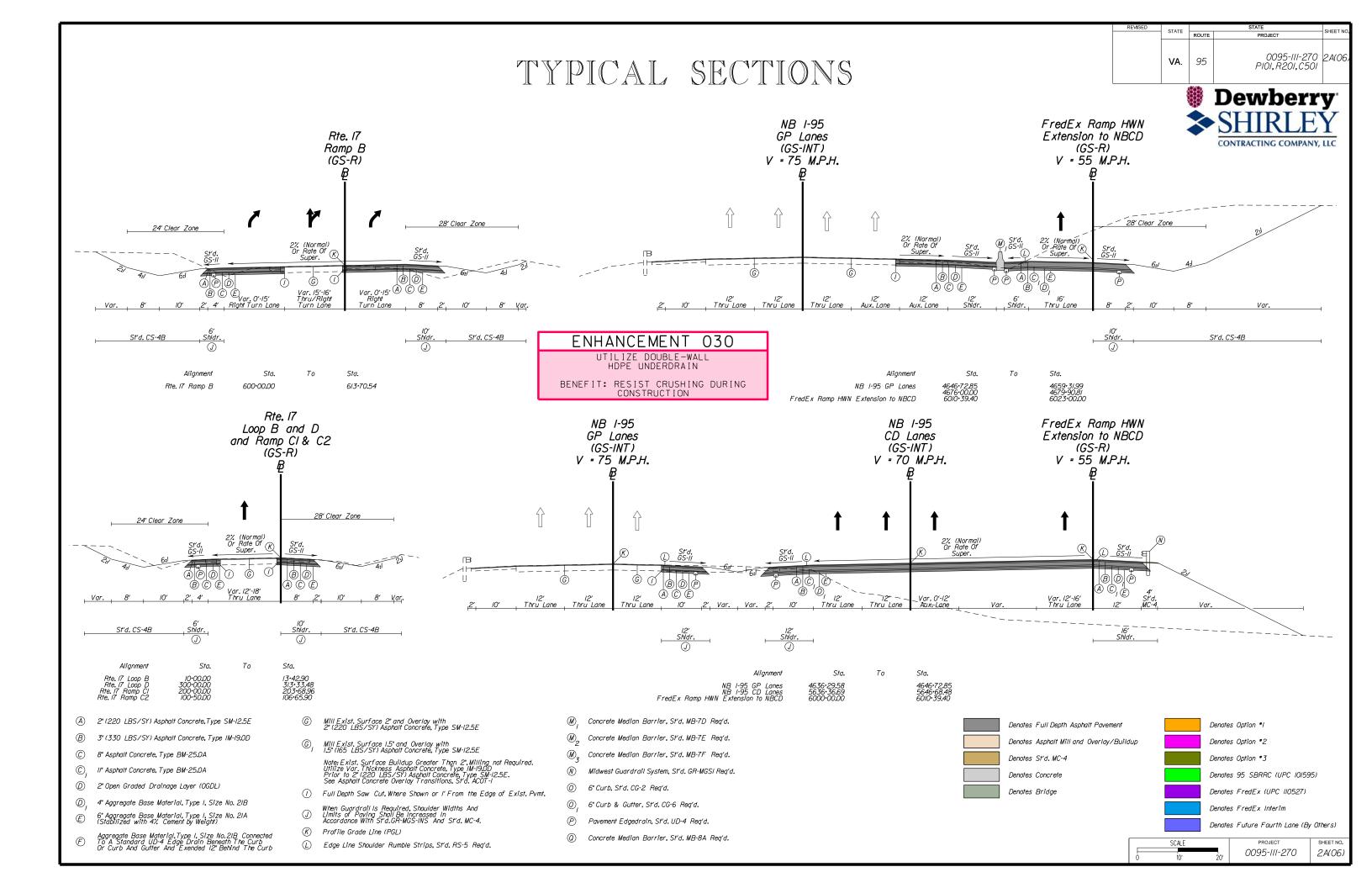


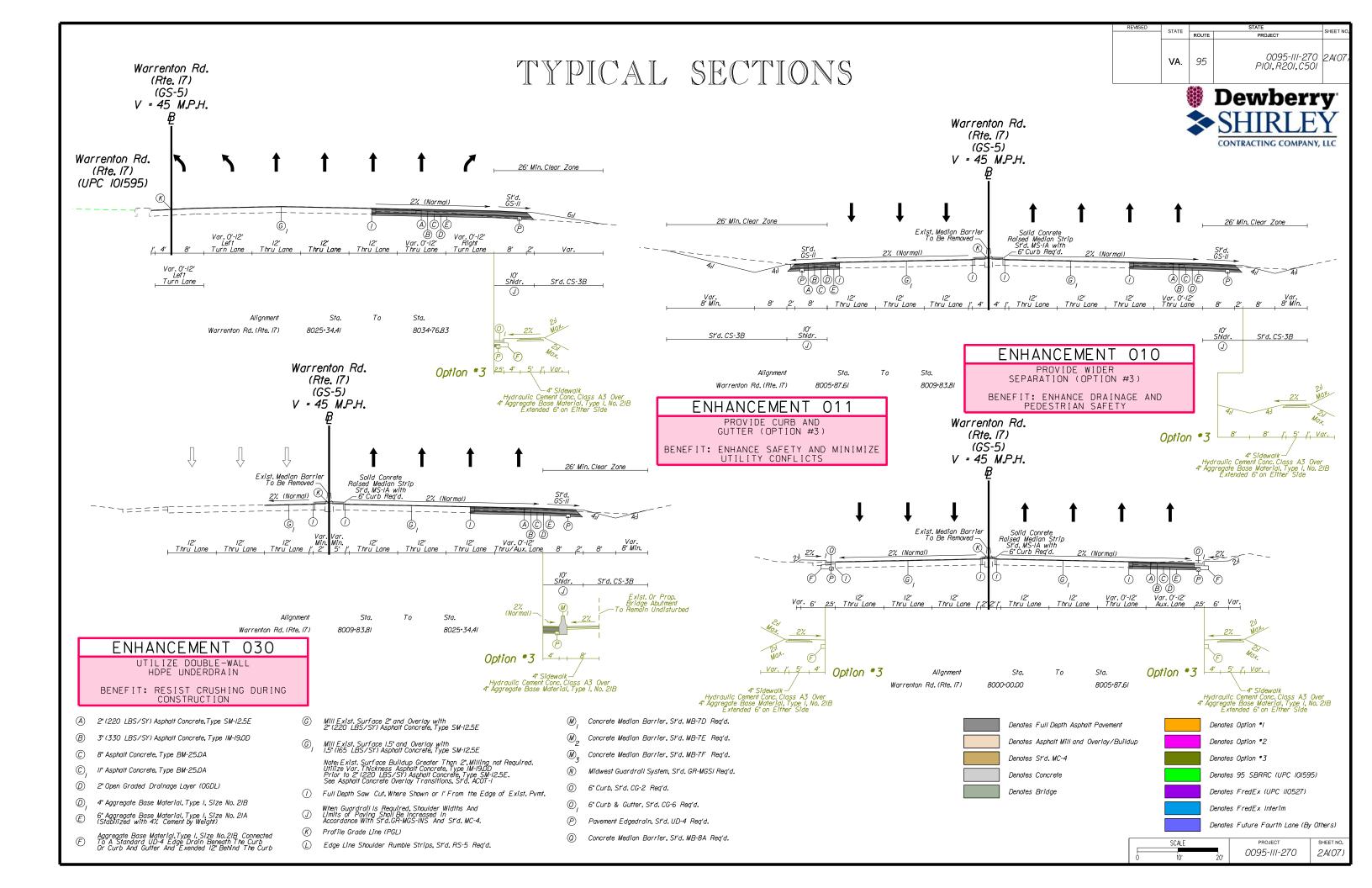


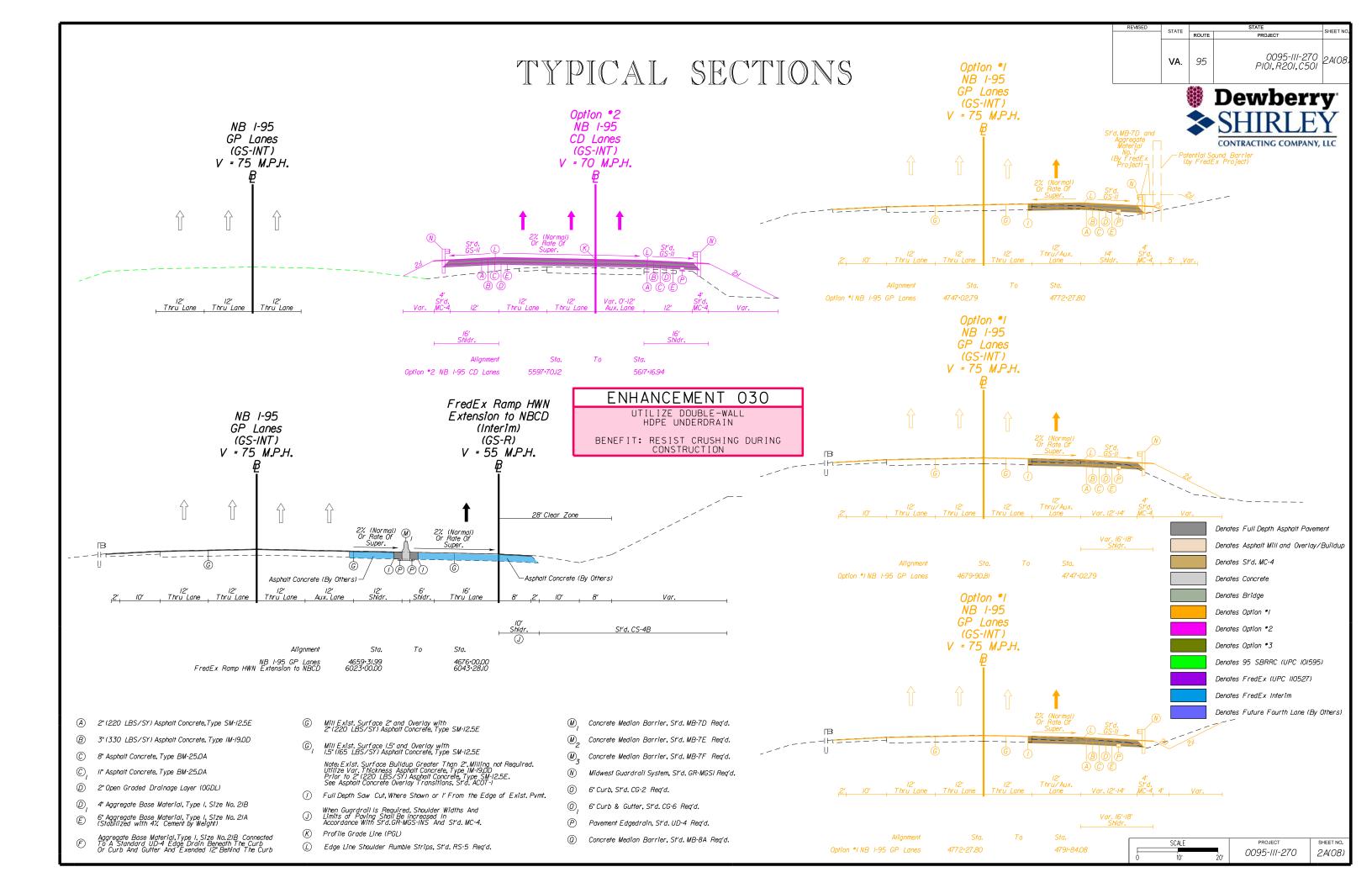


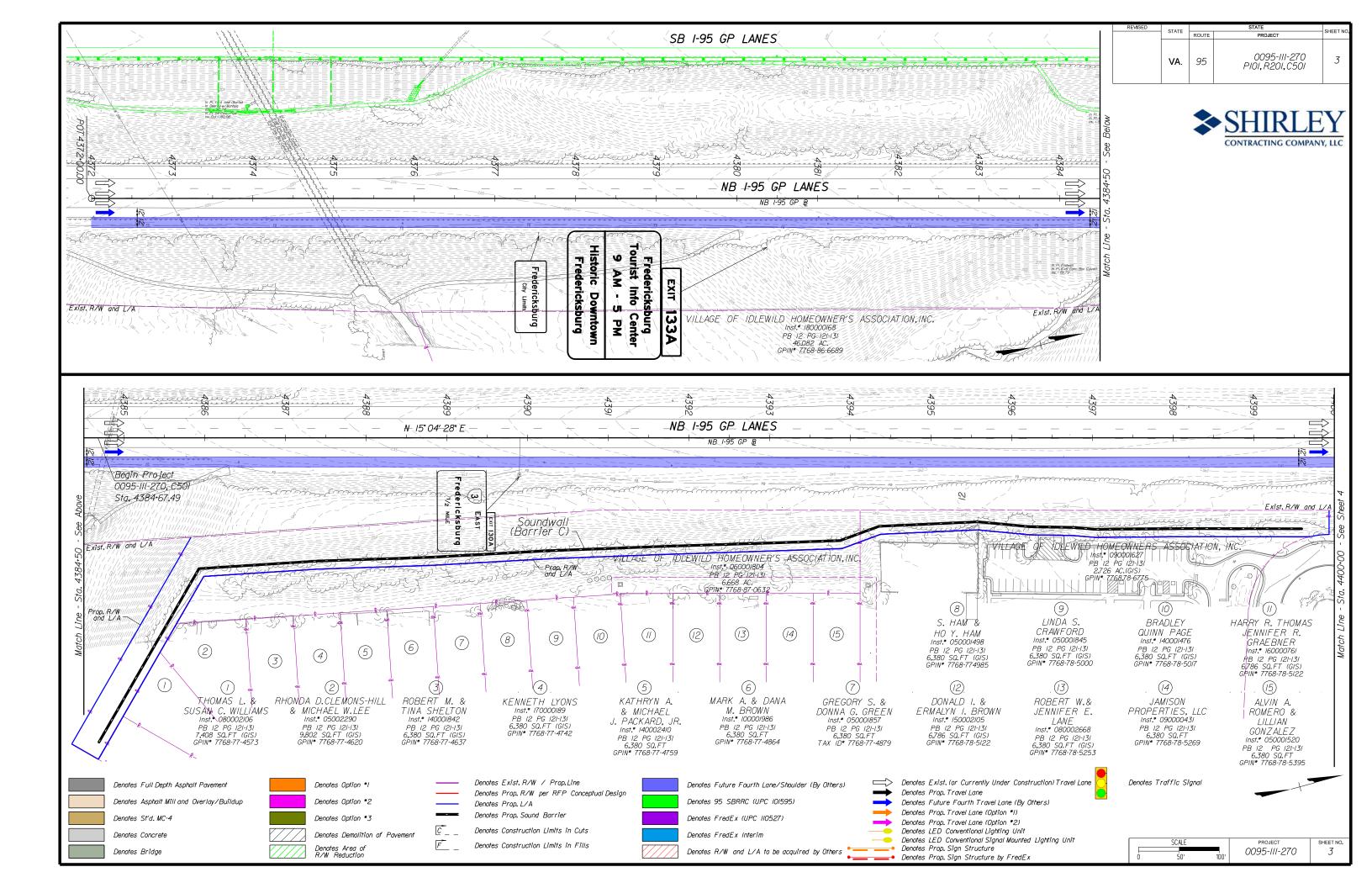


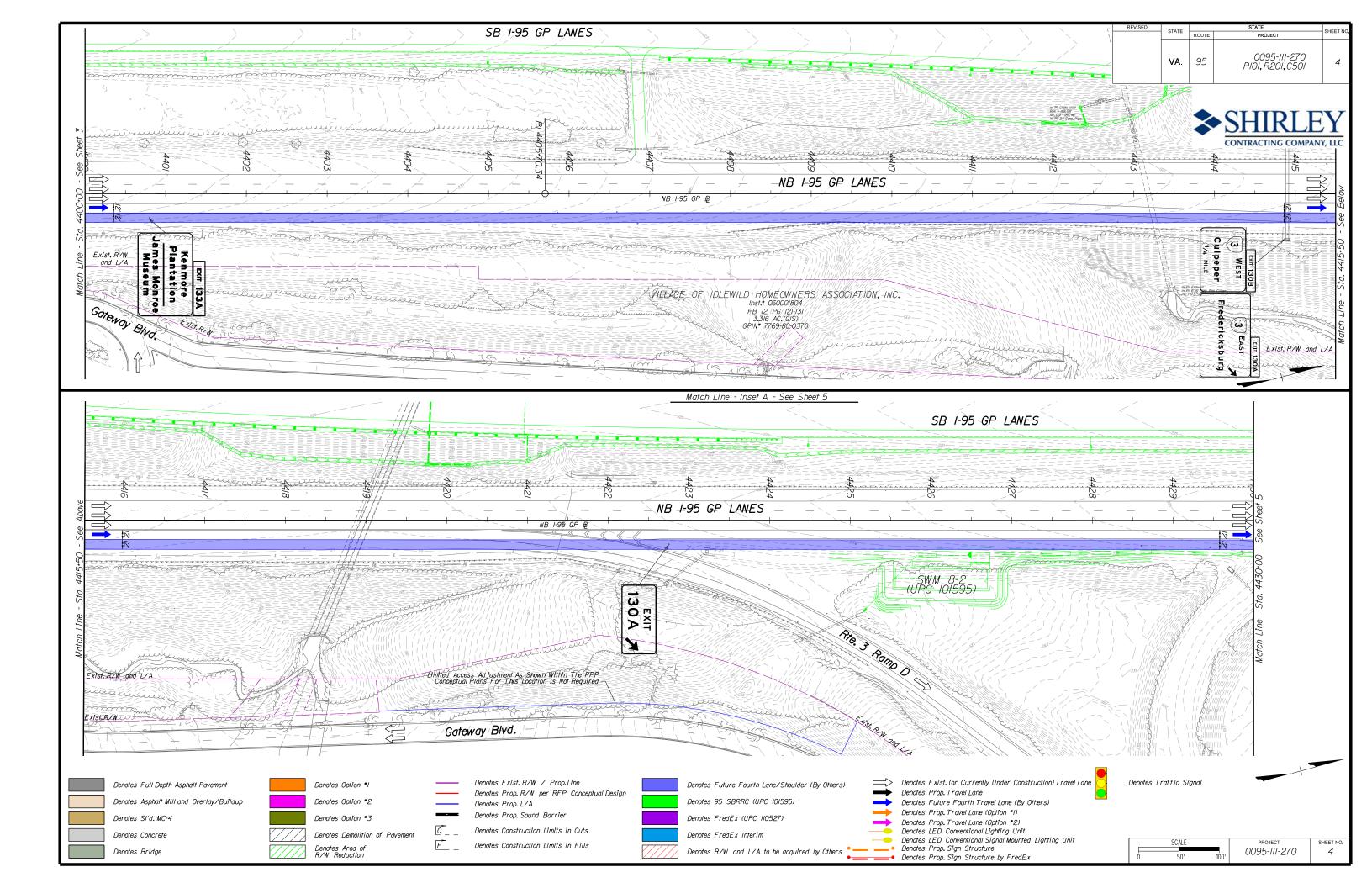


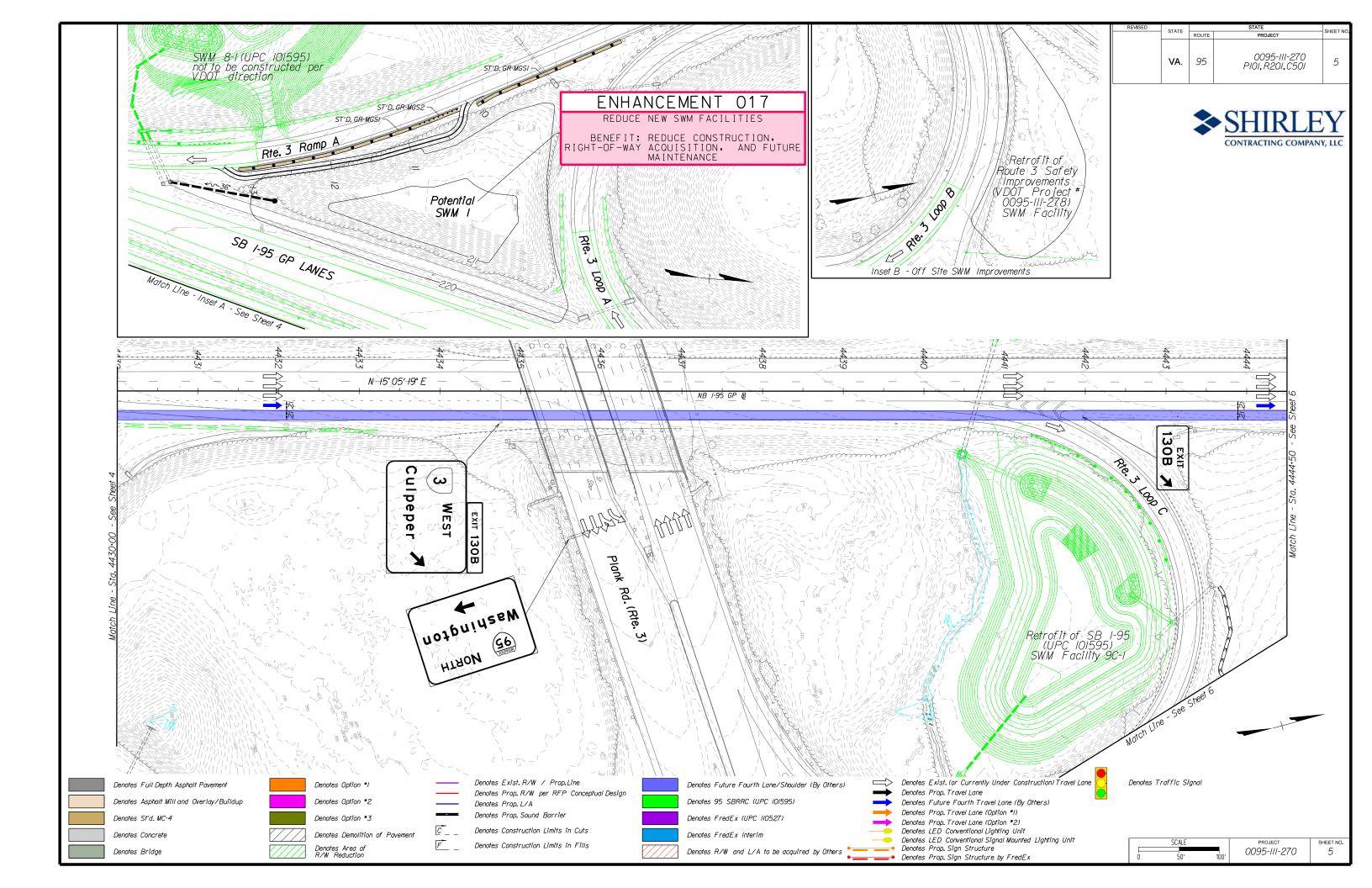


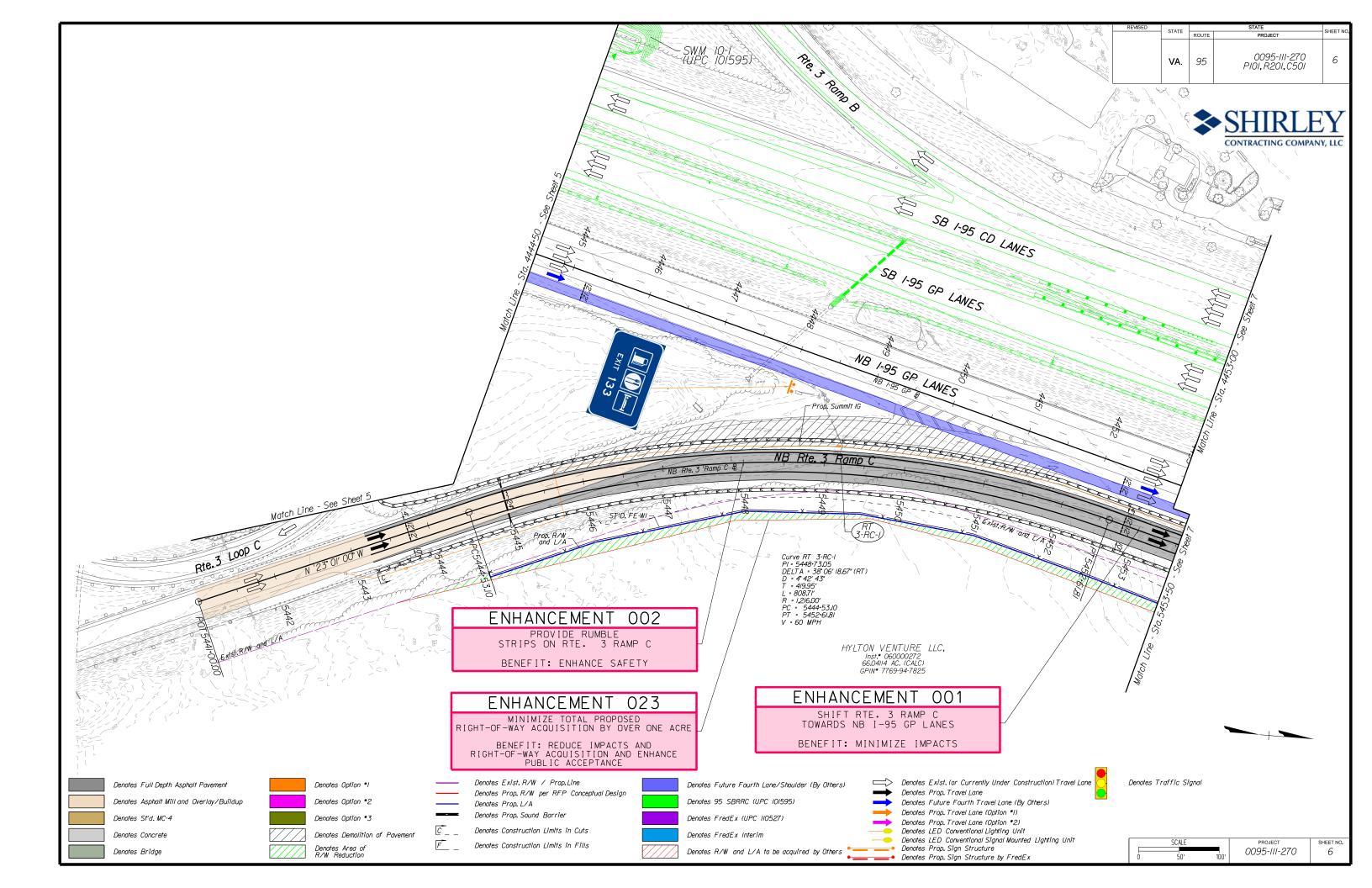


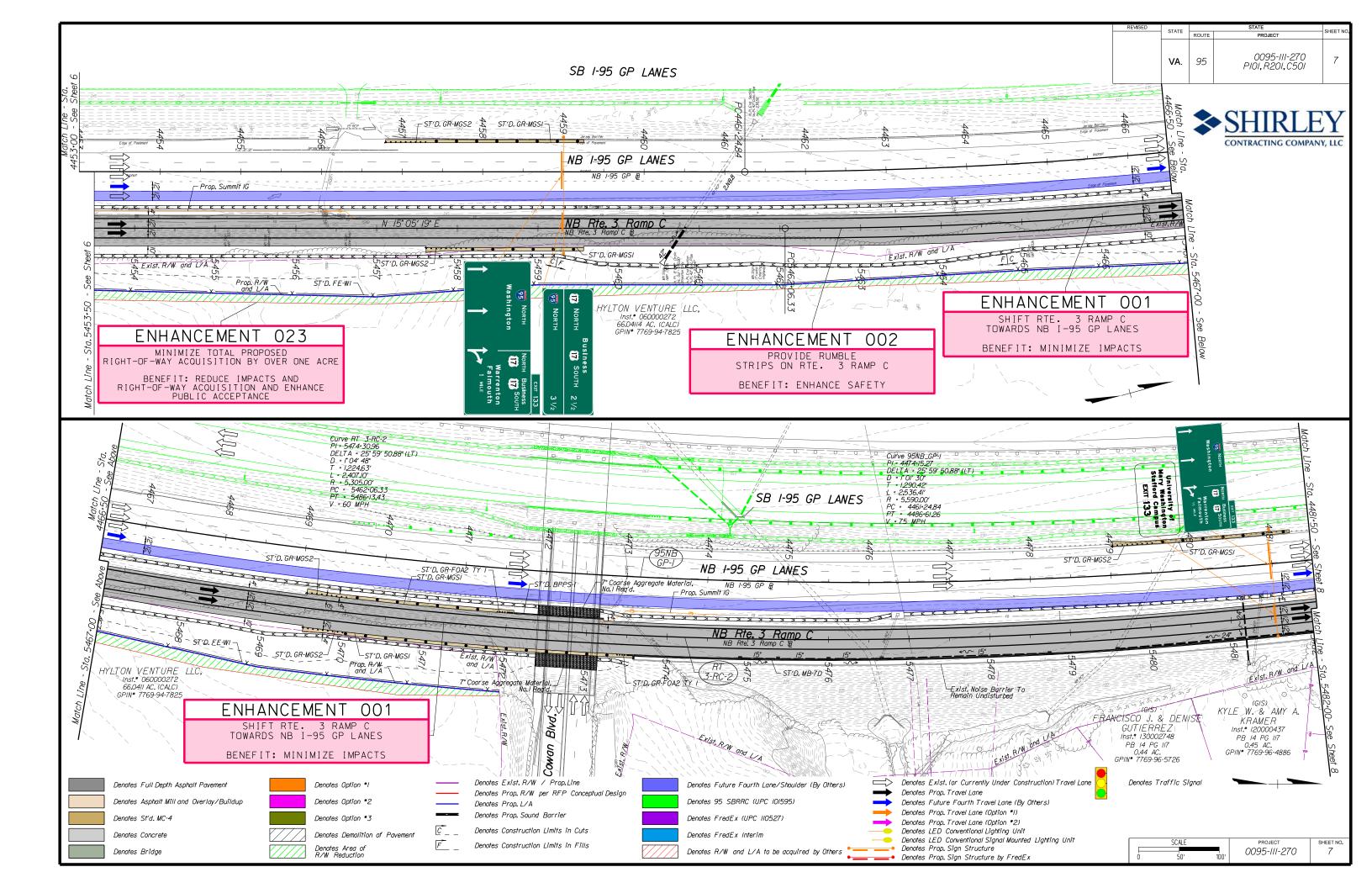


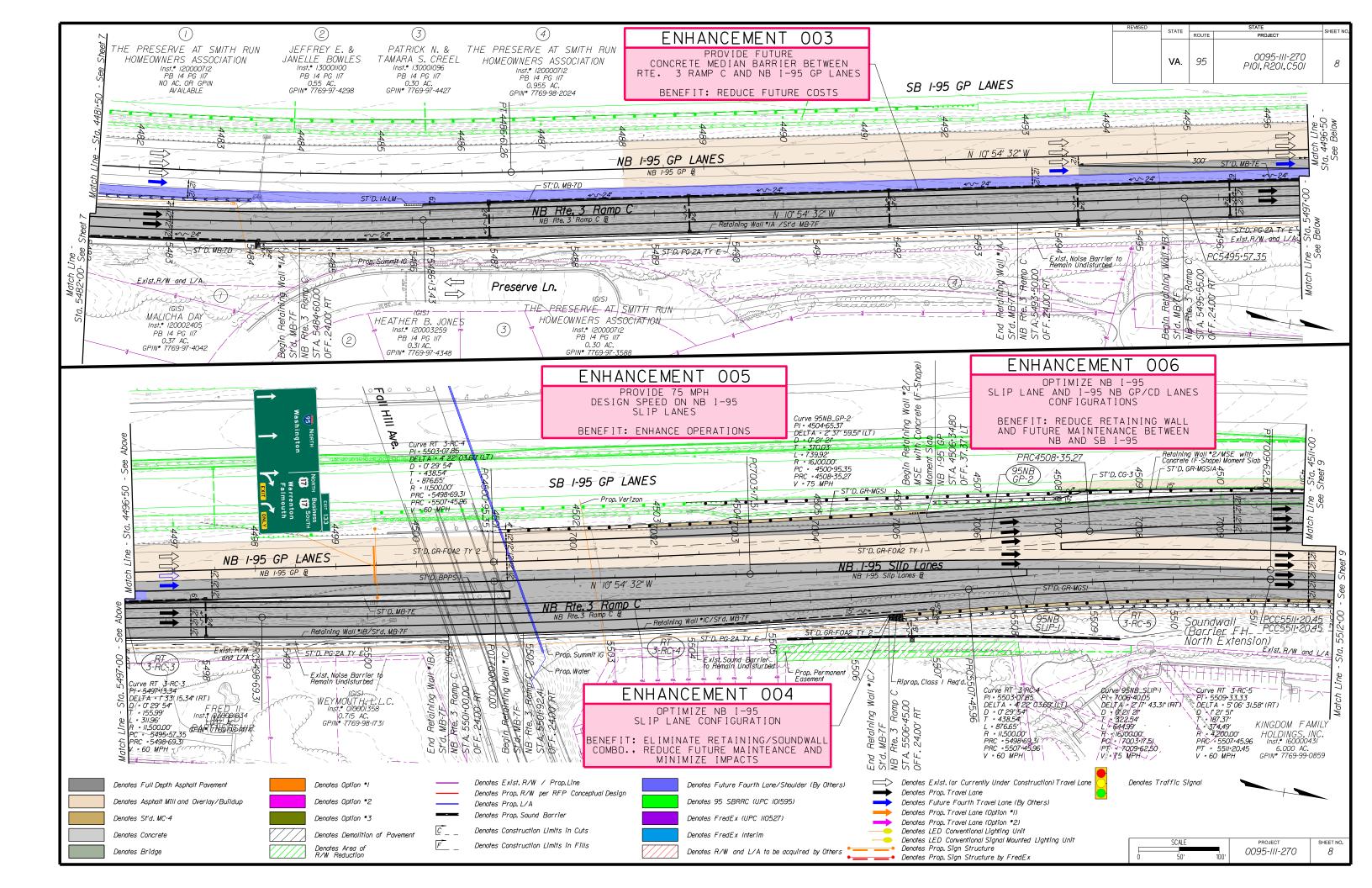


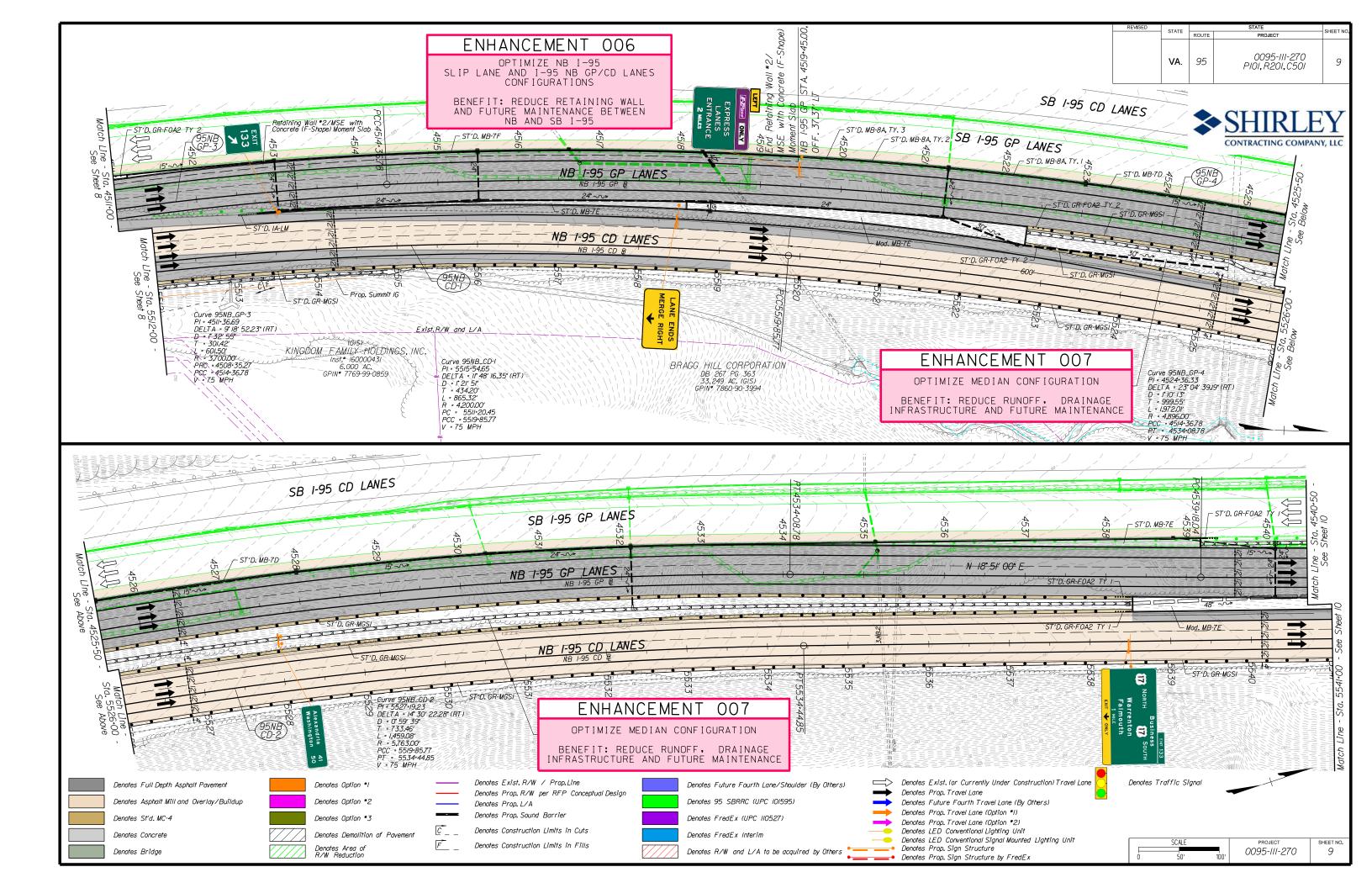


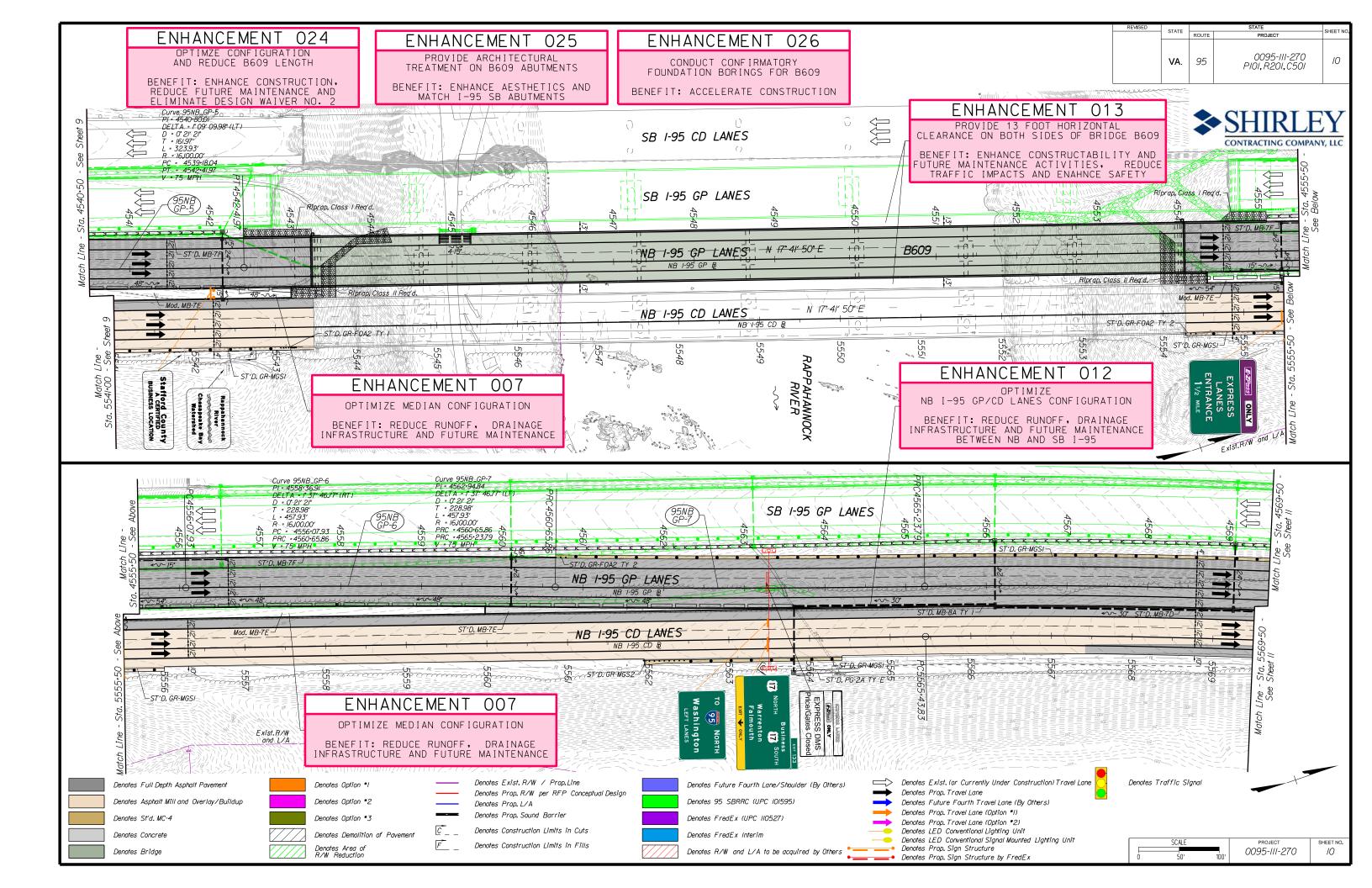


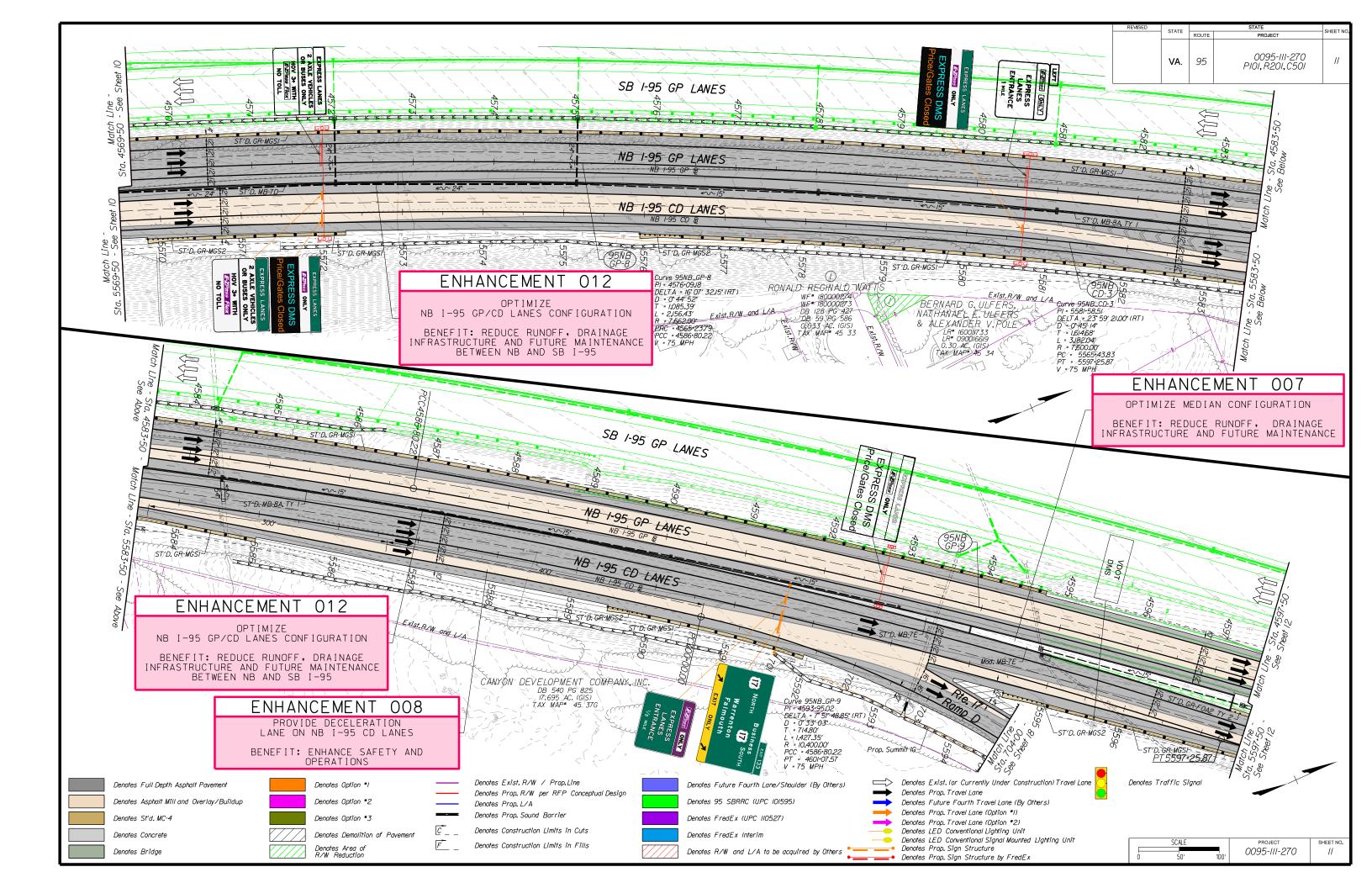


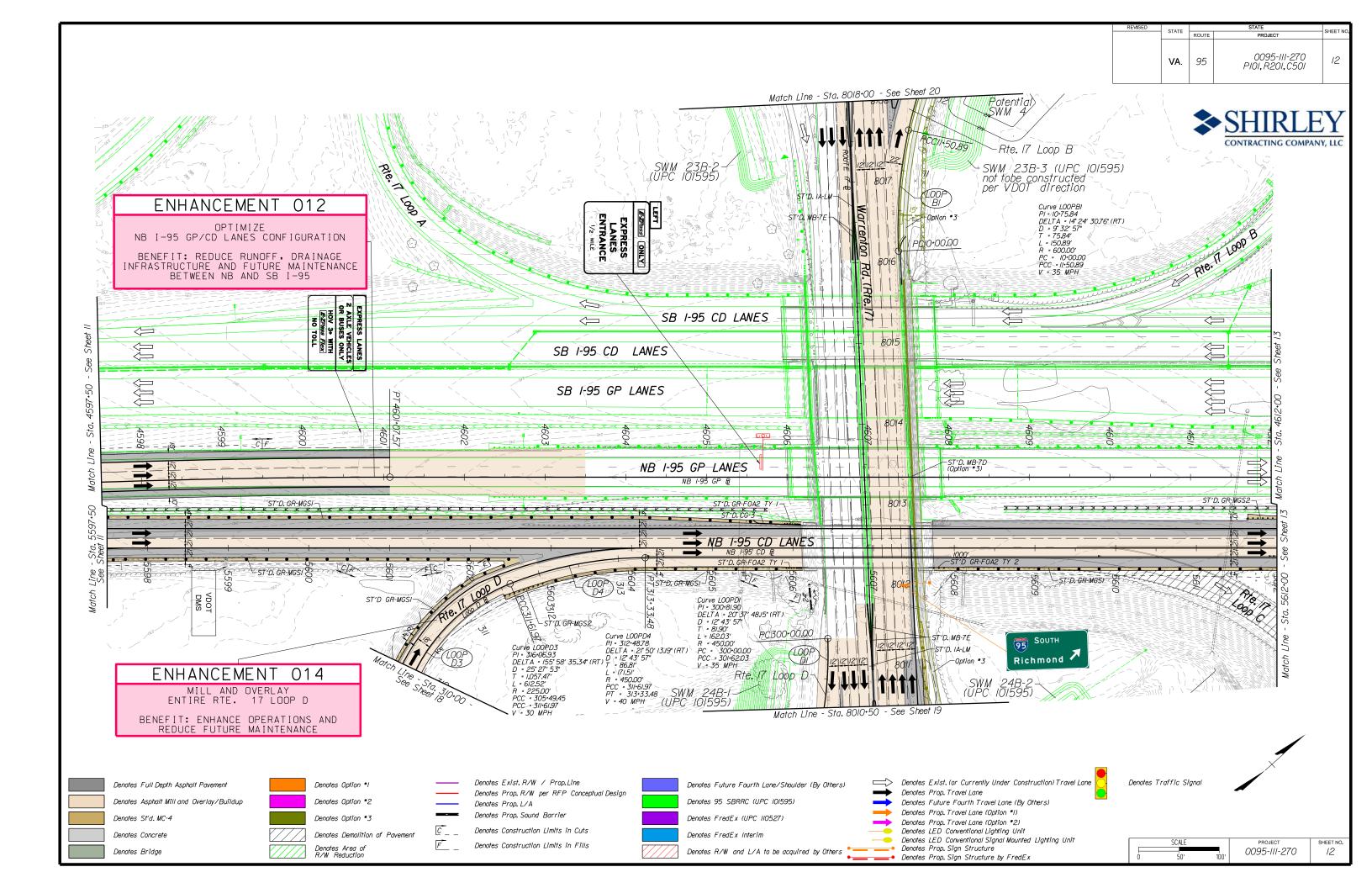


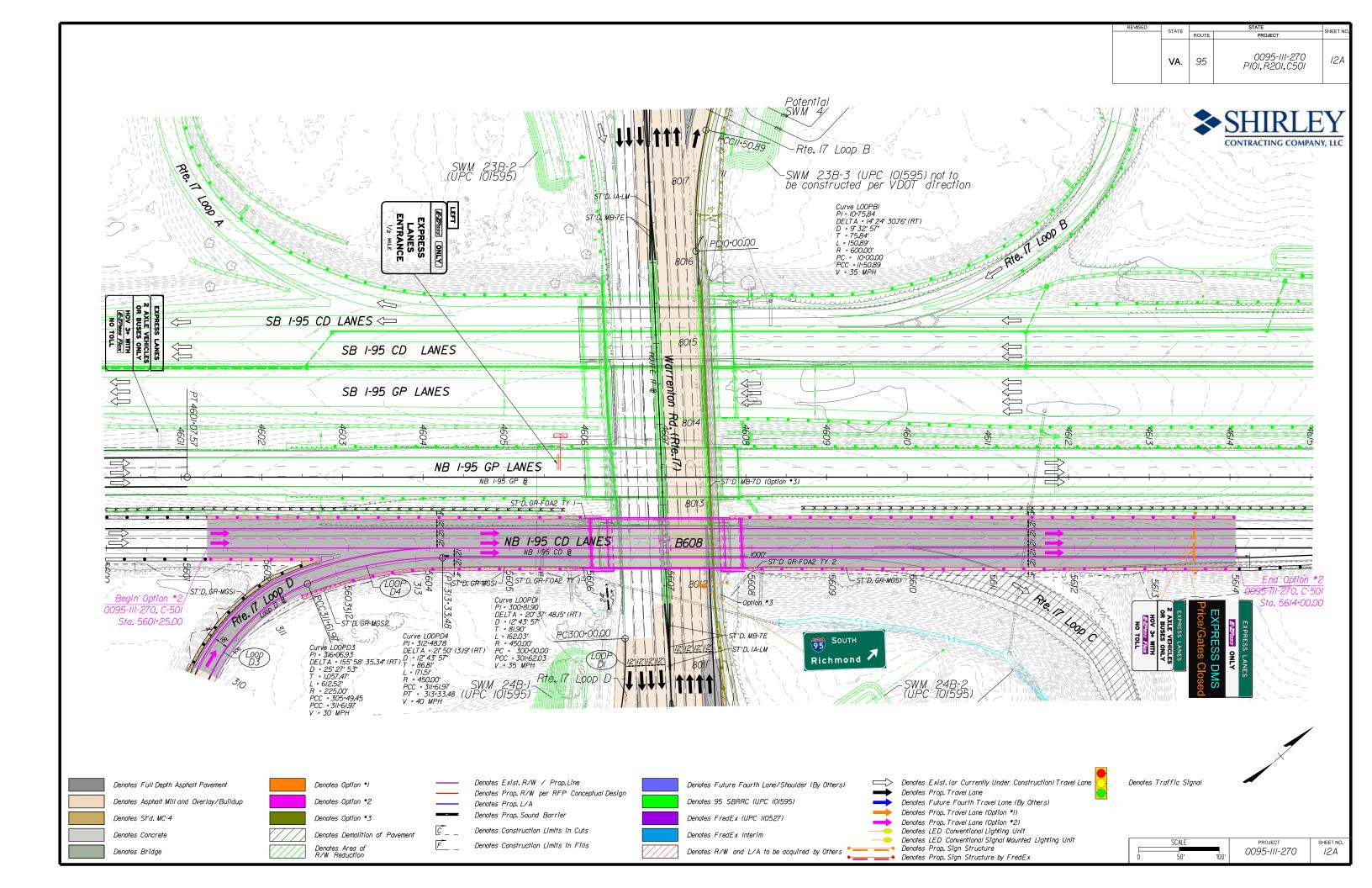


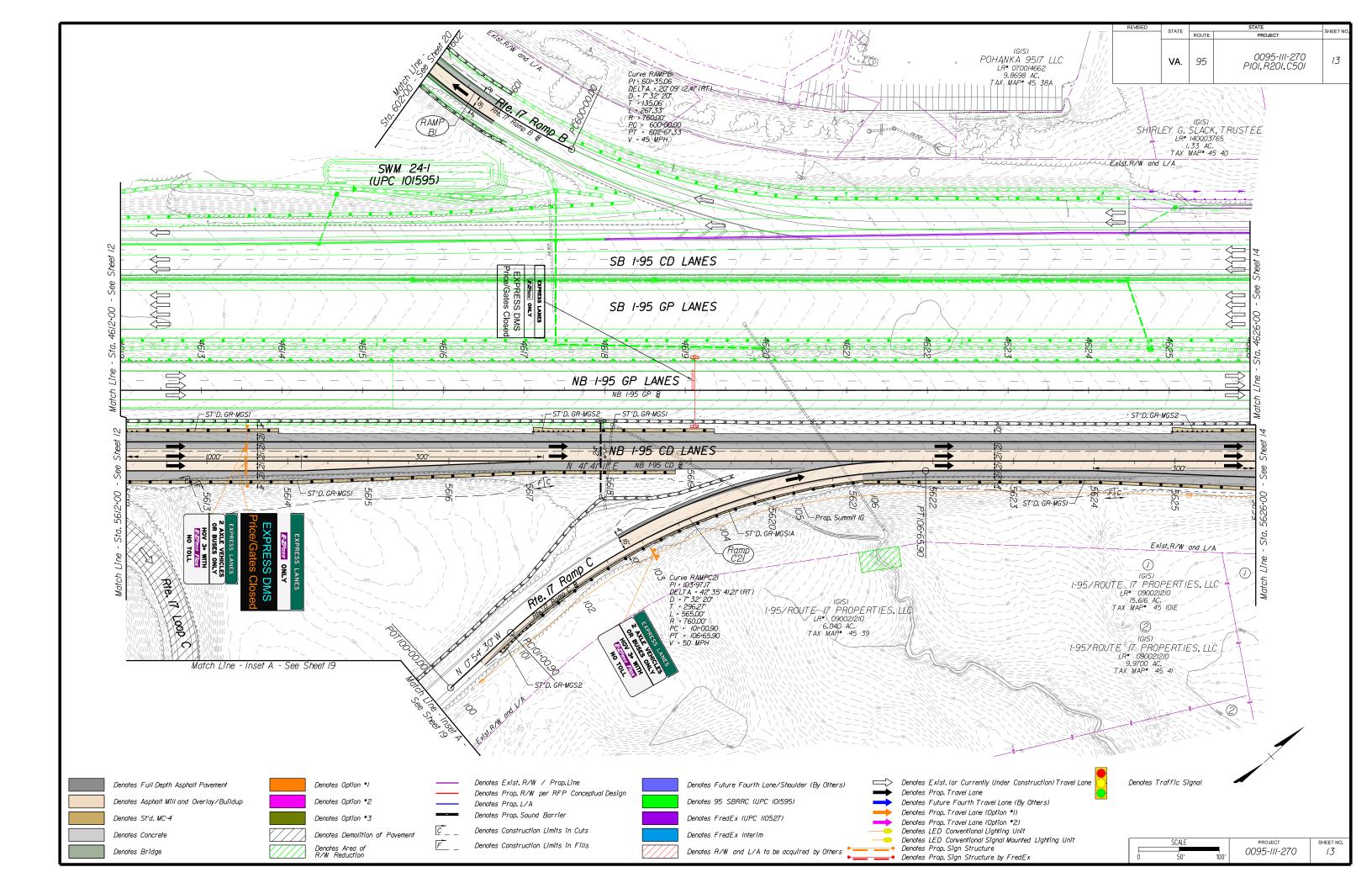


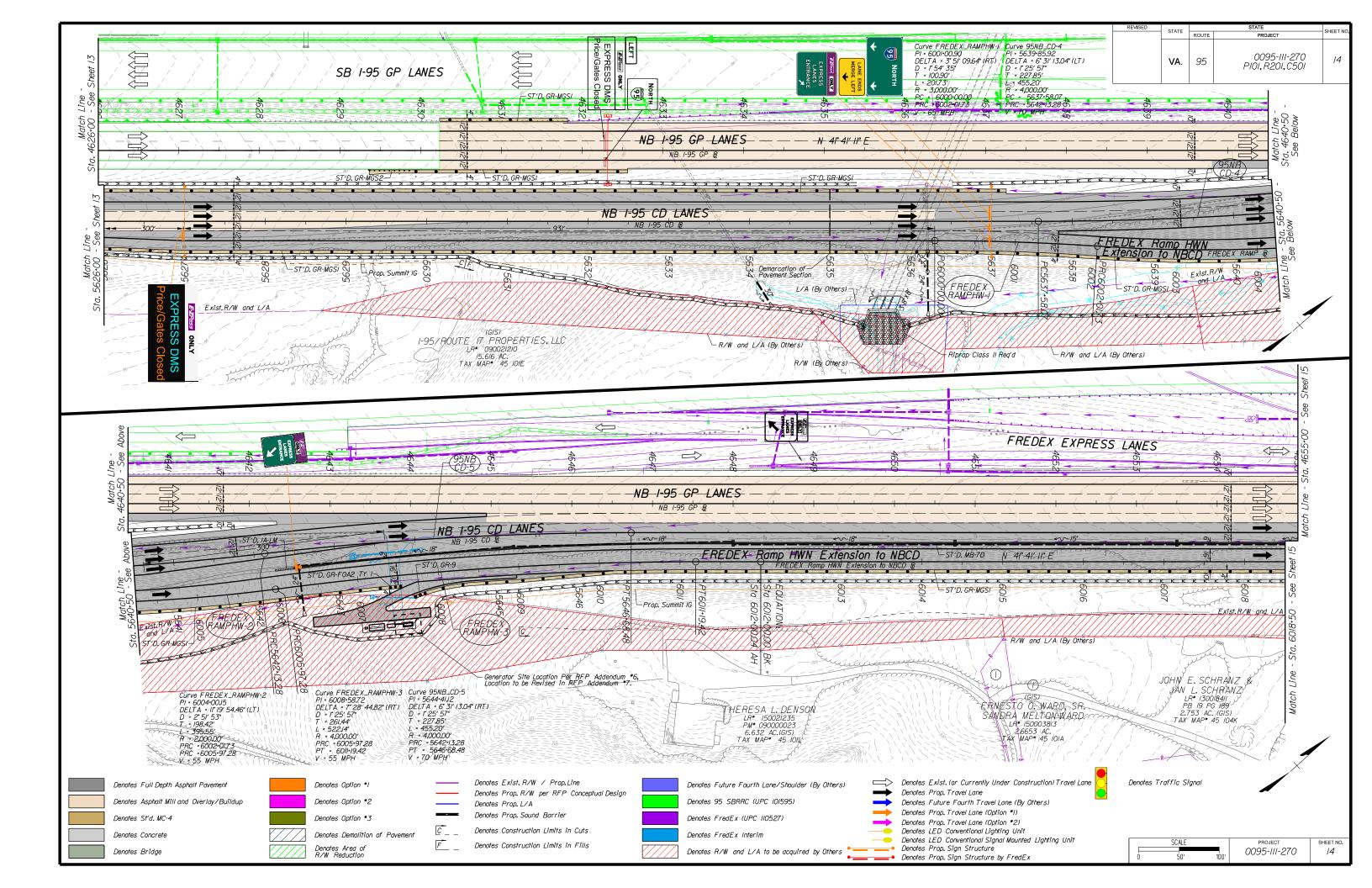


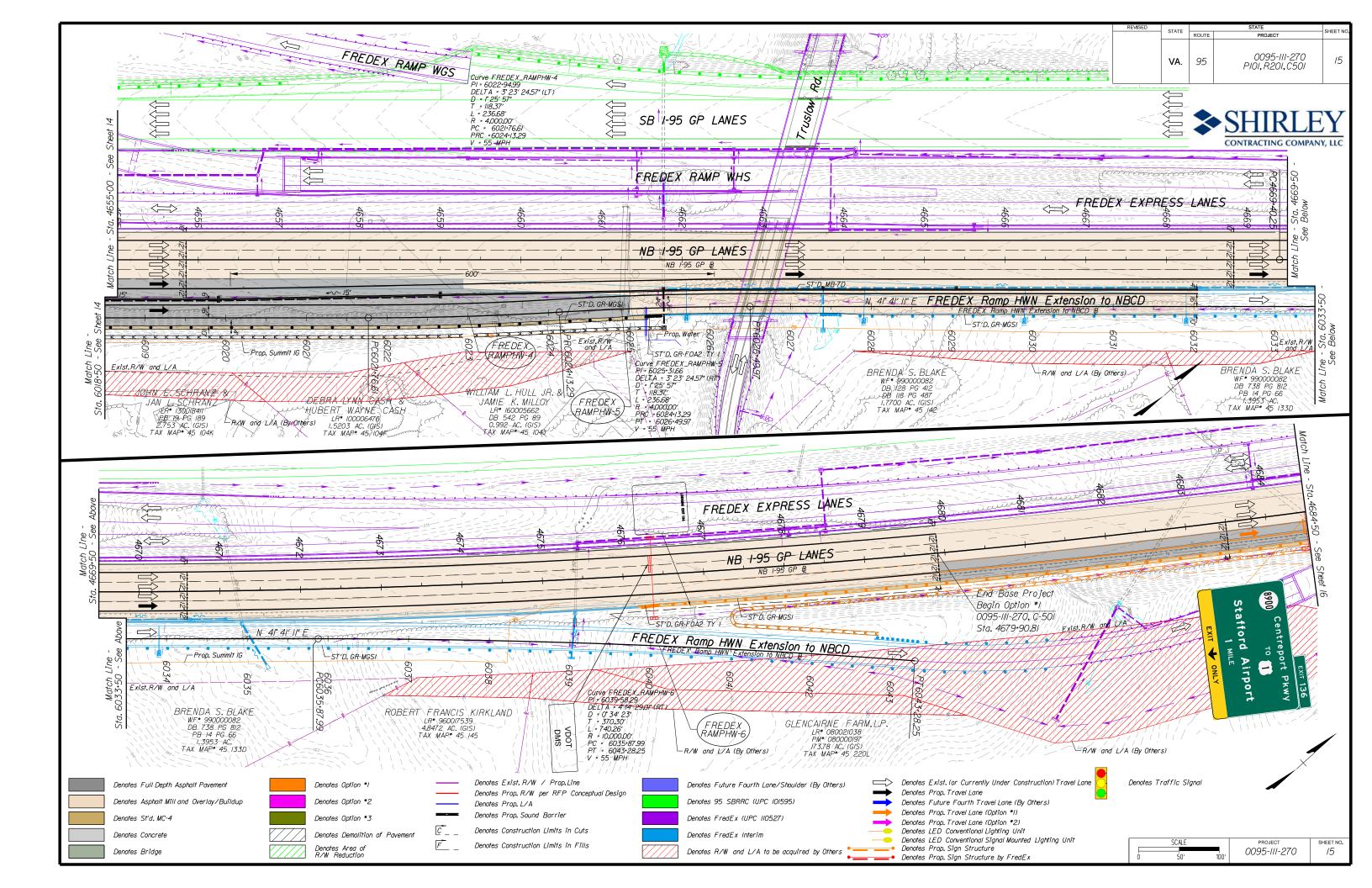


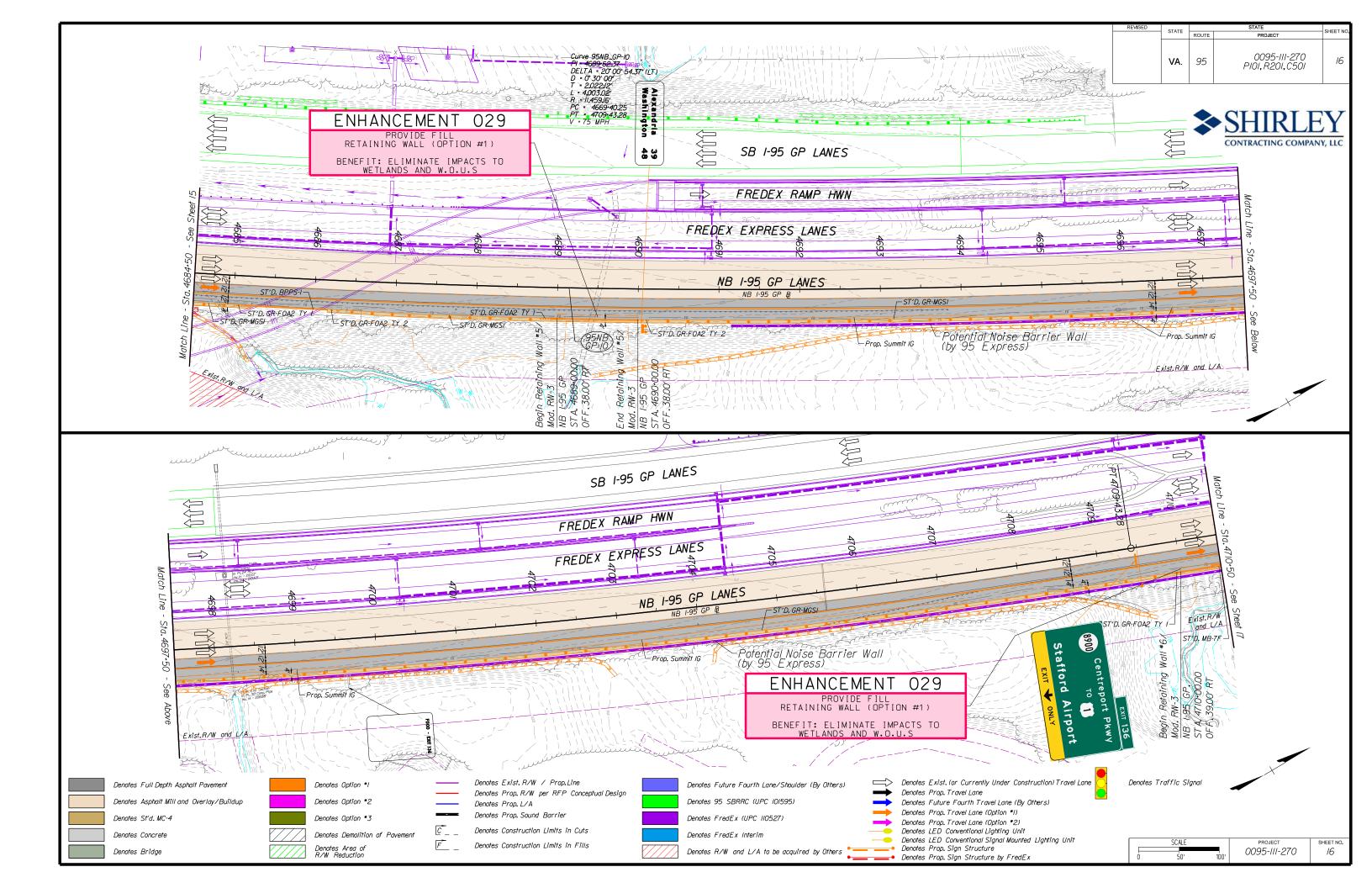


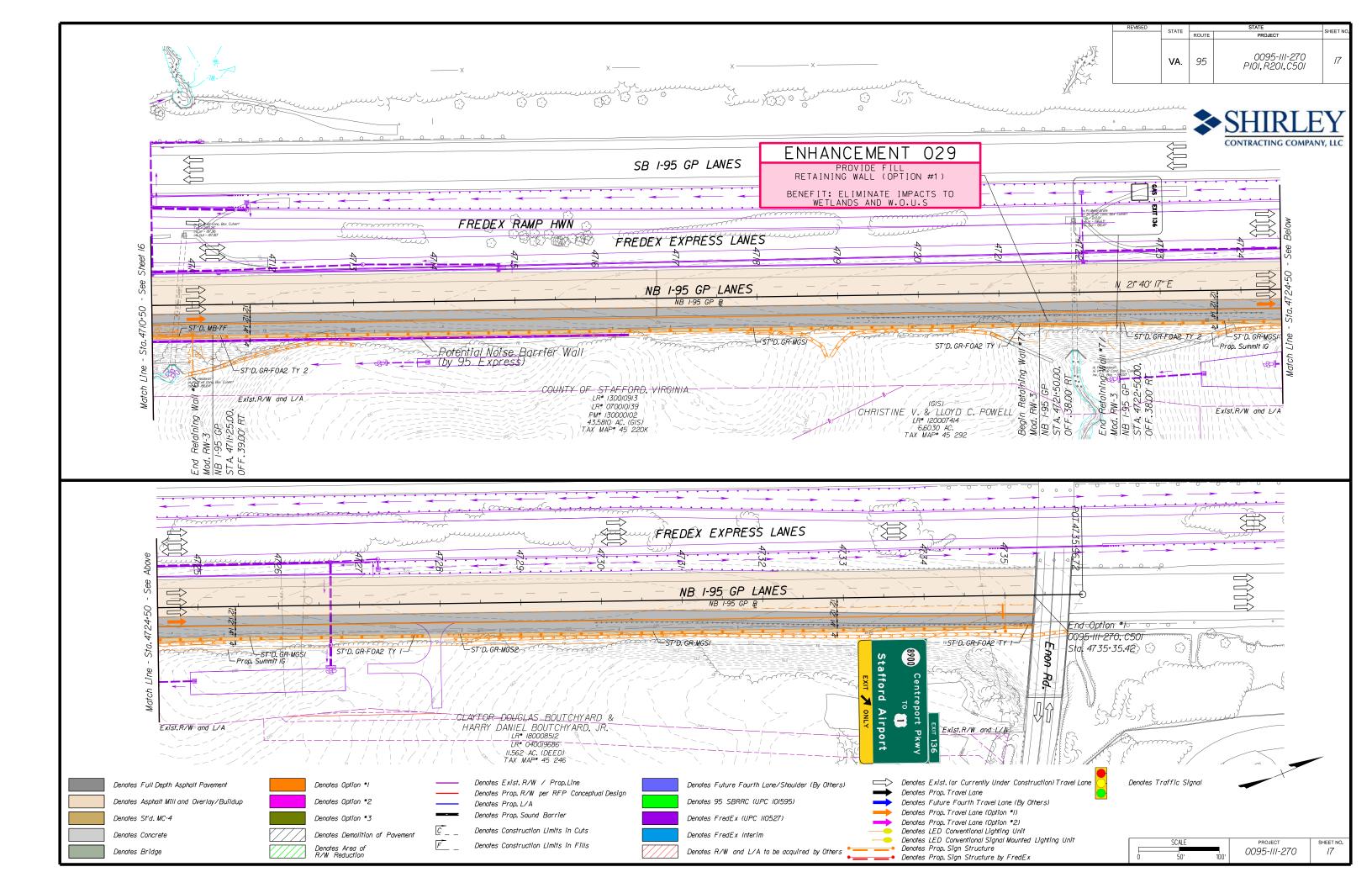


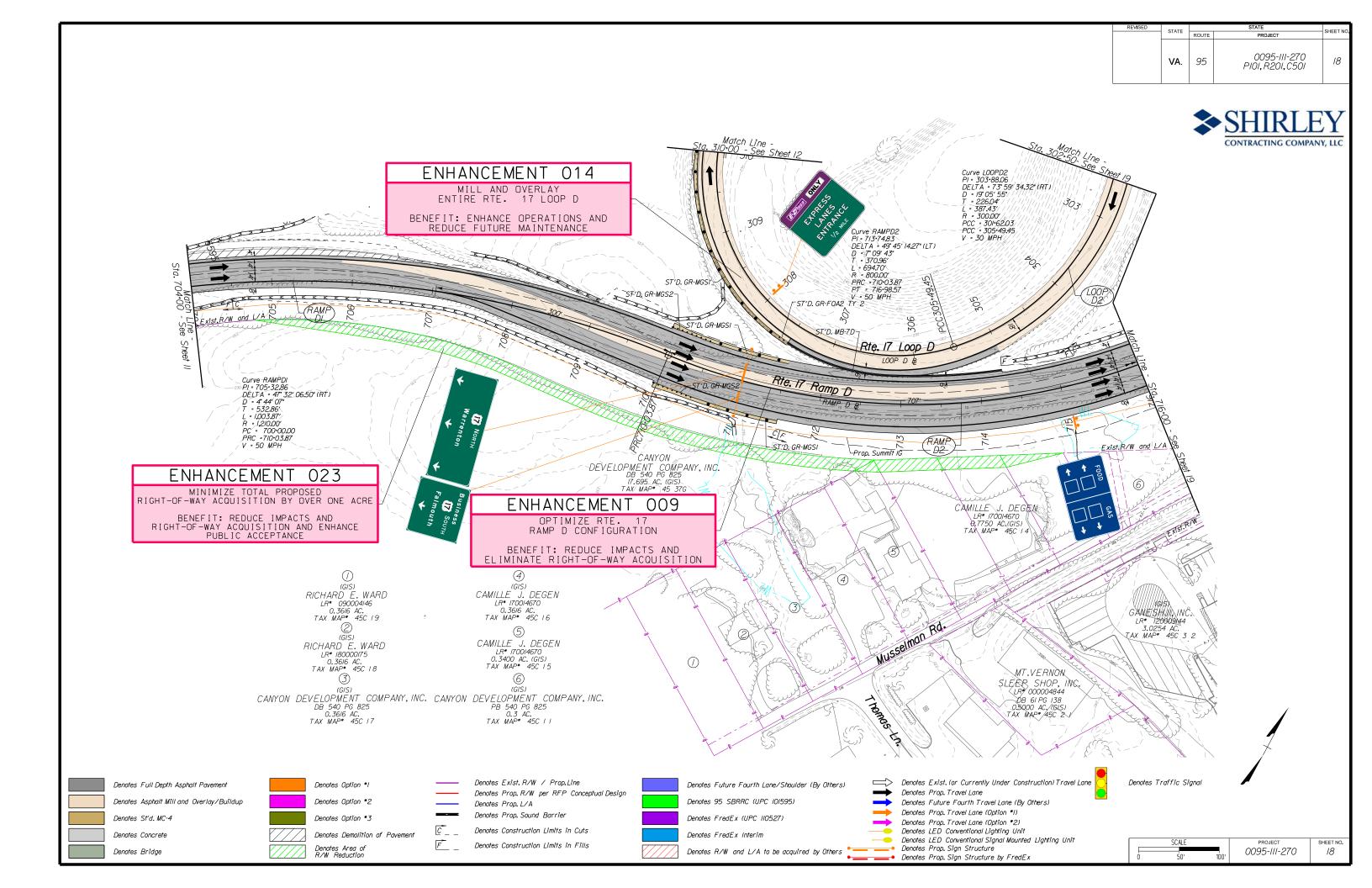


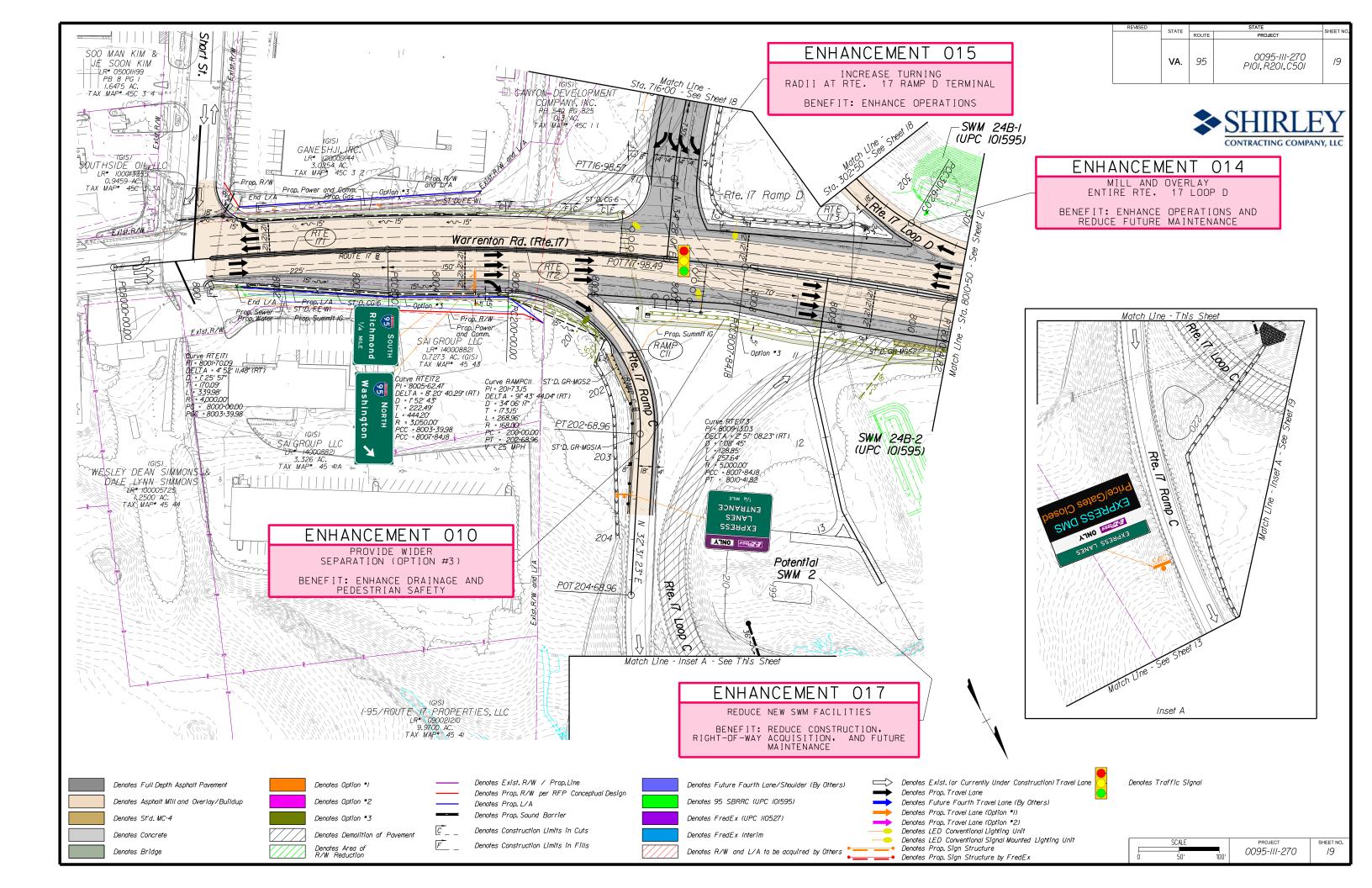


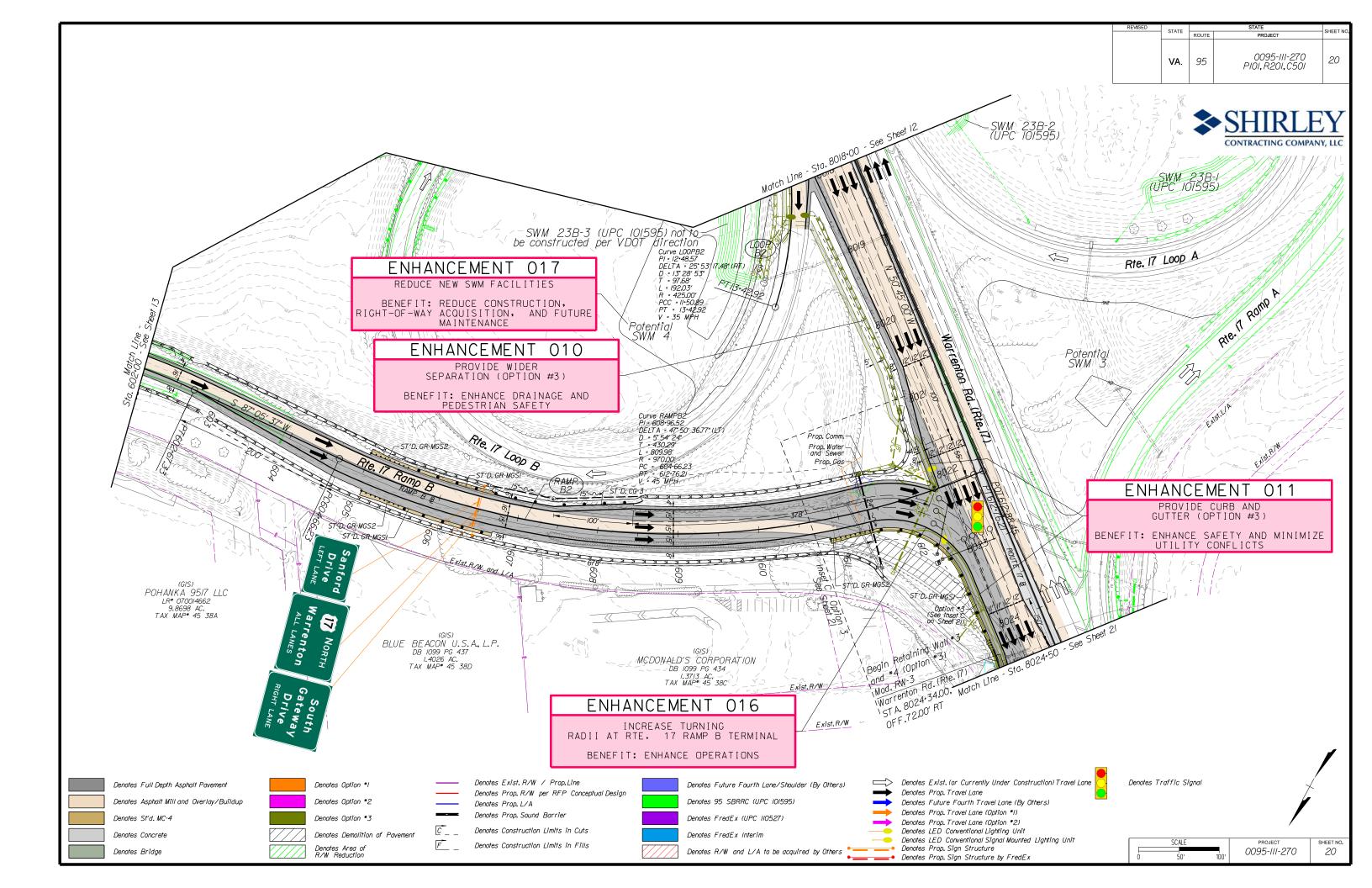


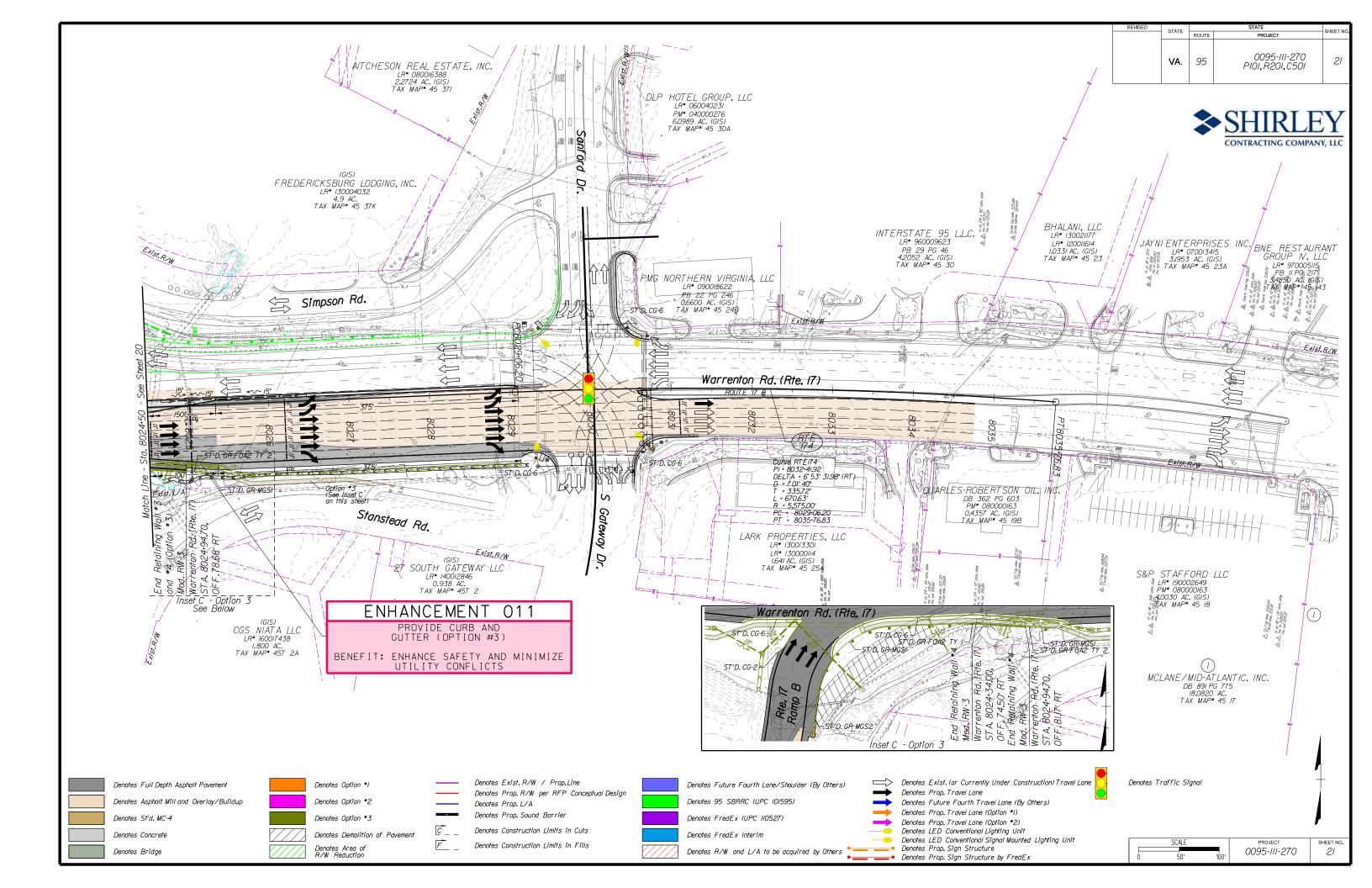




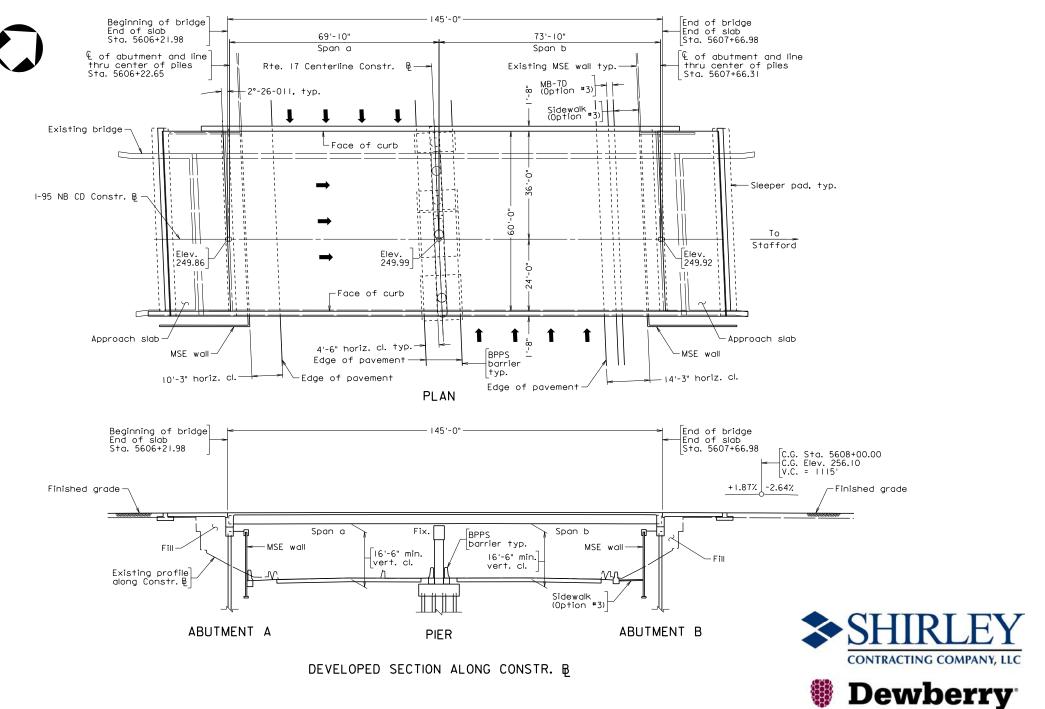








4.3.2 - Conceptual Structural Plans



FEDERAL AID STATE ROUTE SHEET NO. PROJECT PROJECT ROUTE VA. NHP-095-2(545) 95 0095-111-270, B608 NBIS Number: UPC No. 105510 000000000030729 FHWA Construction and Scour Code: X281-SN Federal Oversight Code:

DESIGN EXCEPTION(S):

GENERAL NOTES:

Width: 60'-0" face-to-face of curbs.

Span layout: 69'-10" - 73'-10" prestressed concrete 29" deep bulb-T beam spans continuous for live load

Capacity: HL-93 loading.

Specifications:

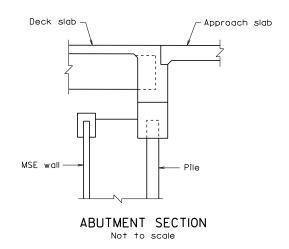
Construction: Virginia Department of Transportation Road and Bridge Specifications, 2016.

Design: AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2016; including all current revisions.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

Architectural treatment on MSE walls shall be drystack with 2" relief.

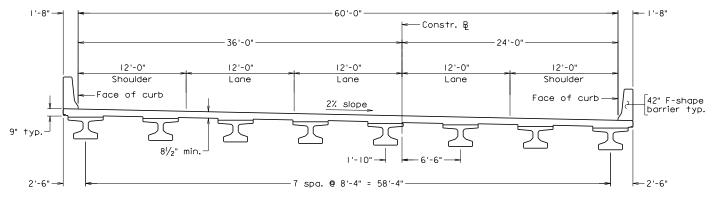




COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION PROPOSED BRIDGE ON

I-95 NB CD LANES OVER RTE. 17 (OPTION #2) STAFFORD CO. - 3.2 MI. N. OF RTE. 3 PROJ. 0095-111-270, B608





OORDINATED ESIGNED: RAWN

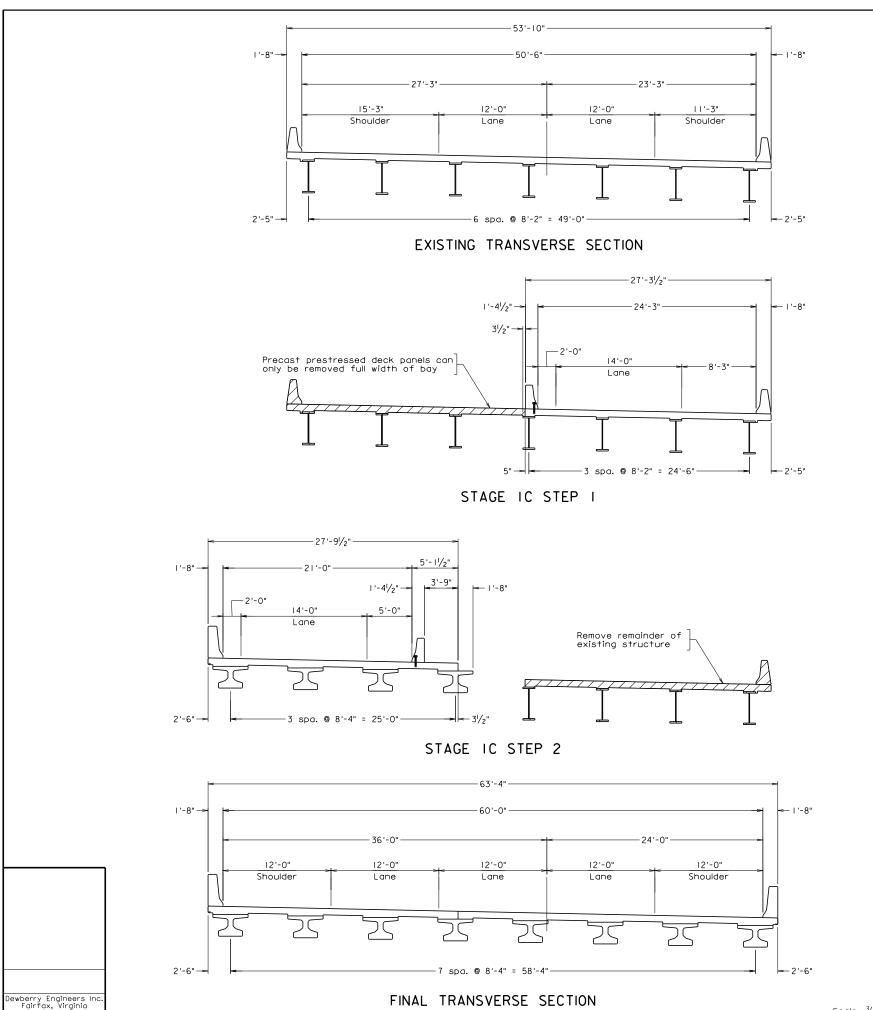
TRANSVERSE SECTION Scale $\frac{3}{16}$ " = 1'-0"

Scale: $\frac{1}{16}$ = 1'-0" unless otherwise noted

Description Date REVISIONS Table of Revisions

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION



FEDERAL AID SHEET NO. STATE ROUTE

VA. — PROJECT ROUTE PROJECT 95 0095-111-270, B608

Legend:

Denotes existing structure to be removed.





			COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION						
			STRUCTURE AND BRIDGE DIVISION						
			I-95 NB CD LANES OVER RTE. I7 (OPTION #2) SEQUENCE OF CONSTRUCTION						
No.	Description	Date	Designed: JRB	Date	Plan No.	Sheet No.			
	Revisions		Drawn: Checked:	Feb. 2020	×××-××	2 of 2			

PRELIMINARY PLANS THESE PLANS NOT TO BE USED FOR CONSTRUCTION

Scale: 3/16" = 1'-0"

© 2020, Commonwealth of Virginia

	CK RIVER CROSSING	4.6.1 PROPOSAL		FEBRUARY 1
ID	Activity Name	Original Start Duration	Finish	2020 2021 2022 2023 2024 AMJJJASONDJFMAMJJASONDJFMAMJJJASONDJFMAMJJJASONDJFMAMJJJASONDJFMAMJJJA
95 NB RRC - Tech Pro	oposal Schedule Final	1058 04-06-20	06-30-24	V : 1 : 1 : 1 : 1 : 1 : 1 : 1 : 1 : 1 :
CONTRACT: C0010551	I0DB106 I-95 NB RRC	1058 04-06-20	06-30-24	
SCHEDULE MILESTONES		1058 04-06-20	06-30-24	
I-95 NB RRC MILESTONE		1058 04-06-20	06-30-24	
MS00000-1000	Notice of Intent to Award (04/06/2020)	0 04-06-20*		♦ Notice of Intent to Award (04/06/2020)
MS00000-1100	CTB Award (05/20/2020)	0 05-20-20*		◆ CTB Award (05/20/2020)
MS00000-1200	Provide Payment & Performance Bonds/Insurance	1 05-22-20	05-22-20	I. Provide Payment & Performance Bonds/Insurance
MS00000-1300	Design-Build Contract Execution (5/26/2020)	0 05-26-20*		Design-Build Contract Execution (5/26/2020)
MS00000-1400	Notice to Proceed (05/28/2020)	0 05-28-20*		♦ Notice to Proceed (05/28/2020)
MS00000-1500	Scope Validation Period (120 Days)	120 05-28-20	09-24-20	\$cope Validation Period (120 Days)
MS00000-1600	VDOT Provide ROW / Evironmental Permits & Mitigation for FredEx Overlap Area	0 10-30-20*		♦ VDOT Provide ROW / Evironmental Permits & Mitigation for FredEx Overlap Area
MS00000-1700	Complete Early Design Package - Ramp C/Ramp HWN/95 CD Lanes in FredEx Overlap Area	0	11-13-20	► Complete Early Design Package - Ramp C/Ramp HWN/95 CD Lanes in FredEx Overlap Area
MS00000-1800	Complete RRC Permitting for Causeway Construction	0	11-03-20	◆ Complete RRC Permitting for Causeway Construction
MS00000-1900	Complete RRC Bridge Plans	0	05-05-21	◆ Complete RRC Bridge Plans
MS00000-2000	Complete Remaining Design Packages	0	05-14-21	◆ Complete Remaining Design Packages
MS00000-2050	Begin Stage 1A Construction	0 11-16-20		Begin Stage 1A Construction
MS00000-2100	Begin Stage 1B Construction	0 05-14-21		▶ Begin Stage 1/B Construction
MS00000-2200	CONTRACTUAL INTERIM MILESTONE #1 (10/29/2021)	0	10-29-21*	◆ CONTRACTUAL INT ER(M M)LESTONE #1 (10/29/2021)
MS00000-2300	Unique Milestone #1 - Open Ramp D / Traffic Signal at Rte. 17	0	02-04-22	→ Unique Milestone #1 - Open Ramp D / Traffic Signal at Rte. 17
MS00000-2400	Complete New Rappahannock Bridge	0	04-21-23	♦ Complete New Rappaharınock Bridg
MS00000-2500	Open Traffic to New 95 NB GP Lanes	0 04-28-23		◆ Open Traffic to New 95 NB GP Lane
MS00000-2600	Open Permanent Rte. 3 Ramp C / 95 NB CD Lanes To Rte. 17	0	11-22-23	Open:Permanent R
MS00000-2700	Project Ready to Start Final Inspections / Punchlist	0	05-01-24	♦ Prǫject
MS00000-2800	Final Inspections / Complete Punchlist	60 05-01-24	06-30-24] ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;
MS00000-2900	Administrative End of Contract	0	06-30-24	
MS00000-3000	Final Completion Date	0	06-30-24*] ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;
	EY DATES / MILESTONES	205 12-15-20	10-08-21	7 10-08-21, ADJACENT PROJECT KEY DATES / MILESTONES
MS10000-1000	95 SB RRC Project Substantially Complete at Rte. 3 Interchange	0 05-20-21*		
MS10000-1100	95 SB RRC Project Complete Rte. 17 Bridge Work	0 08-03-21*		◆ 95 SB RRC Project Complete Rte. 17 Bridge Work
MS10000-1200	95 SB RRC Project Remove Temporary Signal / Restore Ramp B / Rte. 17 Area	0 10-06-21*		♦ 95 SB RRC Project Remove Temporary Signal / Restore Ramp B / Rte. 17 Area
MS10000-1300	95 SB RRC Project Complete Structural Steel SB RRC Bridge	0 12-15-20*		◆ 95 SB RRC Project Complete Structural Steel SB RRC Bridge
MS10000-1400	95 SB RRC Project Demobilize from RRC Causeway	0	10-08-21*	♦ 95 SB RRC Project Demobilize from RRC Causeway
DESIGN PHASE		241 05-28-20	05-14-21	V
PRELIMINARY DESIGN V		161 05-28-20	01-21-21	07.23:20 PESICN DAYOC PLAN
DESIGN QA/QC PLAN DES0000-1000	Prepare/Submit Design QA/QC Plan	39 05-28-20 24 05-28-20	07-22-20 06-30-20	07-22+20, DESIGN QA/QC PLAN Prépáré/Submit Desigh QA/QC Plán
DES0000-1000	Present Design QA/QC Plan / Kick Off Meeting	1 07-01-20	07-01-20	I Present Design QA/QC Plan / Kick Off Meeting
DES0000-1100	VDOT Review Design QA/QC Plan	21 07-02-20	07-01-20	□ VDOT Review Design QA/QC Plan
DES0000-1300	QA/QC Plan Approved	0	07-22-20	◆ QA/QC Plan Approved
SCHEDULE DEVELOP		103 05-28-20	10-21-20	10-21-20, \$CHEDULE DEVELOPMENT and UPDATE\$
DES0000-1400	Develop Preliminary Schedule	14 05-28-20	06-10-20	Develop Preliminary Schedule
DES0000-1500	Submit Preliminary Schedule	1 06-11-20	06-11-20	I Submit Preliminary Sched⊎le
DES0000-1600	VDOT Review Peliminary Schedule	10 06-12-20	06-21-20	UDOT Review Reliminary Schedule
DES0000-1700	Comment Response and Resubmittal Preliminary Schedule	5 06-22-20	06-26-20	I Çomment Response and Resubmittal Preliminary Schedule
DES0000-1800	VDOT 2nd Review of Preliminary Schedule	5 06-29-20	07-06-20	NDOT 2nd Review of Preliminary Schedule
	Develop Baseline Schedule and Narrative	59 06-27-20	08-24-20	Develop Baseline Schedule and Narrative
DES0000-1900				

TOTALIBOOMB TO ILL TALIF	ANNOCK RIVER CROSSING	4.6.1	PROPOSAL	SCHEDULE	FEBRUARY 25, 20
ID	Activity Name	Origina Duration		Finish	2020 2021 2022 2023 2024 A M J J A S O N D J F M A M J J A S O N D J A S O N
DES0000-210			08-25-20	08-25-20	I Submit Başeline Schedule and Narrative
DES0000-220			08-26-20	09-15-20	UDOT Review Başeline Schedule
DES0000-230	·		09-16-20	09-30-20	☐ Comment Response and Re-submittal Baseline Schedule
DES0000-240		21	10-01-20	10-21-20	☐ VDOT 2nd Review Baseline Schedule
DES0000-250	00 Baseline Schedule Approved	0)	10-21-20	● Baseline Schedule Approved
SURVEY and M.			05-28-20	07-30-20	07-30-20, SURVEY and MAPPING
DES0000-260	, ,		05-28-20	07-09-20	Obtain;Right of Entry:
DES0000-270	, , ,		05-28-20	07-23-20	Perform Property Research / Field Surveys
DES0000-280	11 0		05-28-20	07-09-20	Perform Aerial Mapping
DES0000-290	00 Perform Utility Research and Locating	30	05-28-20	07-09-20	Perform Utility Research and Locating
DES0000-300	00 Perform Existing Storm Sewer Investigations	15	07-10-20	07-30-20	☐ Perform Existing \$torm Sewer Investigations
	AL INVESTIGATIONS and REPORTING	161	05-28-20	01-21-21	01-21-21, GEOTECHNICAL INVESTIGATIONS and REPORTING
ROADWAY G			05-28-20	01-21-21	V 01-21-21, ROADWAY GER
DES0000-3	, ,		05-28-20	06-24-20	Prepare Roadway Soil Boring Location Plan
DES0000-3	, ,		07-10-20	09-18-20	Roadway Geotechnical Field Investigation
DES0000-3	1 3		07-31-20	10-23-20	Lab Sampling and Field Data Compilation
DES0000-3	•		07-24-20	08-20-20	Rerform Pavement Analysis
DES0000-3	Prepare Roadway GER	45	08-21-20	10-23-20	Prepare Roadway GER
DES0000-3	Prepare & Submit Pavement Analysis Report	5	08-21-20	08-27-20	🖟 Prepare & Submit Pavement Analysis Report
DES0000-	3700 Submit Roadway GER	C)	10-23-20	Submit Roadway GER
DES0000-3	3800 VDOT Review Final Geotechnical (90 day Review for D/B Projects)	90	10-24-20	01-21-21	VDOT Review Final Geotechnical (90 day Review for D/B Projects)
BRIDGE GEF	R	161	05-28-20	01-21-21	01-21-21, BRIDGE GER
DES0000-	3900 Prepare Bridge Boring Location Plans	20	05-28-20	06-24-20	Prepare Bridge Boring Location Plans
DES0000-4	4000 Bridge Geotech Field Investigations	20	07-10-20	08-06-20	□ Bridge Geotech Field Investigations
DES0000-4	4100 Lab Sampling and Field Data Compilation	30	08-07-20	09-18-20	Lab Sampling and Field Data Compilation
DES0000-4	4200 PrepareBridge GER	25	09-21-20	10-23-20	PrepareBridge GER
DES0000-4	4300 Submit Bridge GER	C)	10-23-20	♦ Submit Bridge GER
DES0000-4	4400 VDOT Review/Approve Bridges GER (90 day)	90	10-24-20	01-21-21	VDOT Review/Approve Bridges GER (90 day)
UTILITY DESIG	NATIONS and TEST-PITS	101	07-10-20	12-02-20	12-02-20, UTILITY DESIGNATIONS and TEST-PITS
DES0000-450	00 Existing Drainage Inventory Survey	10	07-31-20	08-13-20	□ Existing Drainage Inventory Survey
DES0000-460	00 Utility Designations	15	07-10-20	07-30-20	☐ Utility, Designations
DES0000-470	00 Utility Test Pits	20	11-03-20	12-02-20	Utility Test Pits
EARLY START PAGE	CKAGE- INTERIM MILESTONE AREA/FREDEX OVERLAP / STAGE 1A	120	05-28-20	11-13-20	11-13-20, EARLY START PACKAGE- INTERIM MILESTONE AREA/FREDEX; OVERLAP/STAGE 1A
DES1000-1000	Perform Traffic Data Collection / Traffic Analysis	40	05-28-20	07-23-20	Rerform Traffic Data Collection / Traffic Analysis
DES1000-1100	Establish Geometry / Coordinate Utilities, ITS, TTC for Early Design Package	15	05-28-20	06-17-20	☐ Establish Geometry / Coordinate Utilities, ITS, TTC for Early Design Package
DES1000-1200	Prepare TTC / Geotechnical Memo for Early Design Package	15	05-28-20	06-17-20	☐ Prepare TTC / Geotechnical Memo for Early Design Package
DES1000-1300	Identify Project Wide Land Disturbance / Development Areas	20	05-28-20	06-24-20	Identify Project Wide Land Disturbance / Development Areas
DES1000-1400	Prepare SWPPP	10	06-25-20	07-09-20	□ Prepare \$WPPP
DES1000-1500	Prepare VPDES / LD-445	10	06-25-20	07-09-20	Prepare VPDES / LD-445
DES1000-1600	VDOT Reveiw VPDES / LD-445	75	07-10-20	10-23-20	VDOT Reveiw VPDES/ LD-445
DES1000-1700	Address Comments / Obtain VPDES	10	10-26-20	11-06-20	Address Comments / Obtain VPDES
DES1000-1800	Prepare Roadway Early Grading / Drainag Plans for Fredex Overlap Area	30	06-25-20	08-06-20	Prepare Roadway Early Grading / Drainag Plans for Fredex Overlap Area
DES1000-1900	Prepare E&S / Transportation Management Plan	30	06-25-20	08-06-20	Prepare E&\$ / Transportation Management Plan
DES1000-2000	Design QA/QC Early Design Package for Fredex Overlap Area	5	08-07-20	08-13-20	Design QA/QC Early Design Package for Fredex Overlap Area
DES1000-2100	Submit Early Design Package for Fredex Overlap Area (1st Submission))	08-13-20	◆ Submit Early Design Package for Fredex Overlap Area (1st Submission)
DES1000-2200		21	08-14-20	09-03-20	D VDOT Review E&S, TMP & Early MOT & Roadway Plans
DES1000-2300	Incorporate VDOT Comments To Early Design Package for Fredex Overlap Area		0 09-04-20	10-02-20	Incorporate VDOT Comments To Early Design Package for Fredex Overlap Area
- 1111 - 300	,		1		<u></u>
Actual Work	Critical Remaining Work Summary				▲ CHIDLEW
Remaining Work •	·				⇒ SHIRLEY
	▼ 1111301010				CONTRACTING COMPANY, LLC

X1111	BOUND RAPPAHANNO(Activity Name	4.6.1 PROPOSA Original Start	Finish	FEBRUAR 2020 2021 2022 2023 2024
		Activity Name	Duration	I IIIISII	TAIM JIJAISON DIJEMAM JIJAISON DIJEMAM JIJAISON DIJEMAM JIJAISON DIJEMAM JIJAISON DIJEMAM JIJ
	DES1000-2400	Design QA/QC Early E&S, MOT Grading and Drainage Plans (2nd Submission)	5 10-05-20	10-09-20	☐ Design QA/QC Early E&S, MOT Grading and Drainage Plans (2nd Submission)
	DES1000-2500	Submit Early Design Package for Fredex Overlap Area (2nd Submission)	0 10-12-20		◆ Submit Early Design Package for Fredex Overlap Area (2nd Submission)
	DES1000-2600	VDOT/FHWA Review Early Design Package for Fredex Overlap Area (2nd Submission)	21 10-12-20	11-01-20	☐ VDO:T/FHWA Review Early Design Package for Fredex Overlap Area (2nd Submission):
	DES1000-2700	Final Comment Resolution - Early Design Package for Fredex Overlap Area	10 11-02-20	11-13-20	🗓 Final Comment Resolution - Early Design Package for Fredex Overlap Area
	DES1000-2800	RFC - Early Start / E&S, MOT, Grading and Drainage Issued for Construction	0	11-13-20	♦ RFC - Early Start / E&S, MOT, Grading and Drainage Issued for Construction
F	ROADWAY / ROW DESIG	GN CONTRACTOR OF THE CONTRACTO	211 07-10-20	05-14-21	T
	DES2000-1000	Set Horizontal and Vertical Geometry	15 07-10-20	07-30-20	Set Horizontal and Vertical Geometry
	DES2000-1100	Roadway Drainage Design	25 07-10-20	08-13-20	Roadway Drainage Design
	DES2000-1200	Stormwater Management & Adequate Outfall	15 07-31-20	08-20-20	Stormwater Management & Adequate Outfall
	DES2000-1300	Perform H&HA Analysis - Stream Areas	15 07-31-20	08-20-20	□: Perform;H&HA Analysis - Stream Areas
	DES2000-1400	Complete Plan Details	40 08-21-20	10-16-20	Complete Plan Details
	DES2000-1500	Compile Roadway Plans (1st Submission)	6 10-19-20	10-26-20	Compile Roadway Plans (1st Submission)
	DES2000-1600	Design QA/QC (1st Submission)	5 10-27-20	11-02-20	Design QA/QC (1st Submission)
	DES2000-1700	Submit Roadway Plans (1st Submission)	0 11-03-20		♦ Submit Roadway Plans (1st Submission)
	DES2000-1800	VDOT/FHWA Review/Comment Roadway Plans (1st Submission)	21 11-03-20	11-23-20	☐ VDOT/FHWA Review/Comment Roadway Plans (1st Submission)
	DES2000-1900	Prepare Roadway Plans (2nd Submission)	35 11-24-20	01-21-21	Prepare Roadway Plans (2nd Submission)
	DES2000-2000	Design QA/QC (2nd Submission)	10 01-08-21	01-21-21	□ Design QA/QC ((2nd/Submission))
	DES2000-2100	Submit Roadway Plans (2nd Submission)	0 01-22-21		♦ Şubmit Roadway Plans (2nd Submission)
	DES2000-2200	VDOT/FHWA Review/Comment Roadway Plans (2nd Submission)	21 01-22-21	02-11-21	□ VDQT/FHWA'Review/Comment Roadway Plans (2nd Submission)
	DES2000-2300	Prepare Final Roadway Plans	25 02-12-21	03-18-21	Prepare Final Roadway Plans
	DES2000-2400	Design QA/QC (Final Submission)	5 03-19-21	03-16-21	Design QA/QC (Final Submission)
	DES2000-2500	Submit Final Roadway Plans	0 03-26-21	03-23-21	Submit Final Roadway Plans
	DES2000-2600	VDOT/FHWA Review/Comment Final Roadway Plans	21 03-26-21	04-15-21	□ VDQT/FHWA Review/Comment Final Roadway Plans
	DES2000-2700	Final Comment Resolution - Roadway Plans	20 04-16-21	05-13-21	Final Comment Resolution - Roadway Plans
	DES2000-2700 DES2000-2800	·	0 05-14-21	05-15-21	◆ RFC Plans Issued for Construction
<u> </u>		RFC Plans Issued for Construction		05.05.04	<u> </u>
	BRIDGE DESIGN	EARLY PACKAGE FOR SUBSTRUCTURE WORK	234 05-28-20 164 05-28-20		V 05-05-21, BRIDGE DESIGN V 01-27-21, BRIDGE B609 RR¢ - EARLY PACKAGE FOR SUBSTRUCTURE WORK
	DES3000-2700	Obtain Access to Causeway for Conformatory Borings	20 05-28-20		□ □ □ □ □ □ □
	DES3000-2800	Obtain Permits for RRC Substructure Work	90 06-25-20		Obtain Permits for RRC Substructure Work
	DES3000-2900	Perform Conformatory Borings / Report for Abut A to Pier 5	20 06-25-20		Perform Conformatory Borings / Report for Abut A to Pier 5
	DES3000-2900	Prepare Bridge Substructure Plans (1st Submission)	30 07-10-20		Prepare Bridge Substructure Plans (1st Submission)
	DES3000-3000	Submit Preliminary Bride Substructure Design	0	08-20-20	Submit Preliminary Bride Substructure Design
	DES3000-3100	VDOT/FHWA Review Preliminary Submission Bridge Substructure	21 08-21-20	09-10-20	■ VDQT/FHWAReview Preliminary Submission Bridge Substructure
				10-15-20	
	DES3000-3300 DES3000-3400	Comment Response Preliminary Submission Bridge Substructure/Prepare 1st Submission	25 09-11-20		Comment Response Preliminary Submission Bridge Substructure/Prepare 1st Submission
		Design QA/QC (1st Submission)	8 10-16-20	10-23-20	Design QA/QC (1st Submission)
	DES3000-3500	Submit Bridge Substructure Plans (1st Submission)	0 10-26-20	44.45.00	♦ Şubmit Bridge Şubstructure Plans (1st Şubmission)
	DES3000-3600	VDOT/FHWA Review/Comment Bridge Substructure Plans (1st Submission)	21 10-26-20	11-15-20	VDOT/FHWA Review/Comment Bridge Substructure Plans (1st Submission)
	DES3000-3700	Prepare Final Bridge Substructure Plans	20 11-16-20	12-15-20	Prepare Final Bridge Substructure Plans
	DES3000-3800	Design QA/QC (Final Submission)	5 12-16-20	12-22-20	■ Design QA/QC (Final Submission)
	DES3000-3900	Submit Final Bridge Substructure Plans	0 12-23-20		♦ Submit Final Bridge Substructure Plans
	DES3000-4000	VDOT/FHWA Review/Comment Bridge Substructure Plans (Final Submission)	21 12-23-20	01-12-21	■ VDQT/FHWA Review/Comment Bridge Substructure Plans (Final Submission)
	DES3000-4050	Perfrom Confirmatory Borings for Pier 6 and 7 and Abut. B	5 01-11-21	01-18-21	Perfrom Confirmatory Borings for Pier 6 and 7 and Abut. B
	DES3000-4100	Final Comment Resolution Bridge Substructure Plans	10 01-13-21	01-26-21	Final Comment Resolution Bridge Substructure Plans
	DES3000-4200	RFC Early Substructure Bridge Plans Issued for Construction	0 01-27-21		♦ RFC Early Substructure Bridge Plans Issued for Construction
	<u> </u>	HNNOCK RIVER CROSSING	194 07-24-20		05-05-21, BRIDGE B609 RAPPAHNNOCK RIVER CROSSING
	DES3000-1000	Prepare Stage I Bridge Reports/TS&Ls	40 07-24-20		Prepare Stage I Bridge Reports/TS&Ls
	DES3000-1100	Submit Preliminary Bridge Design (Stage 1)	0 09-21-20		◆ Submit Preliminary Bridge Design (Stage 1)



I-95 NORTHBOUND RAPPAHANN	IOCK RIVER CROSSING	4.6.1 F	PROPOSAL	SCHEDULE	FEBRUARY 25, 202
ctivity ID	Activity Name	Original Duration		Finish	2020 2021 2022 2023 2024 1
DES3000-1200	VDOT/FHWA Review/Comment Bridge Preliminary Design	21	09-22-20	10-12-20	VDOT/FHWA Review/Comment Bridge Preliminary Design
DES3000-1300	Prepare Bridge Plans (1st Submission)	45	10-13-20	12-16-20	Prepare Bridge Plans (1st Submission)
DES3000-1400	Comment Response Stage I Bridge Report	20	10-13-20	11-09-20	Comment Response Stage li Bridge Report
DES3000-1500	2nd Submission-Preliminary Bridge Design (Stage 1)	0		11-09-20	♦ 2nd Submission-Preliminary Bridge Design (Stage 1)
DES3000-1600	VDOT/FHWA Review 2nd Submission Stage I Bridge Design	21	11-10-20	11-30-20	□ VDOT/FHWA Review 2nd Submission Stage I Bridge Design
DES3000-1700	2nd Submission Stage 1 Bridge RPT Approved	0		11-30-20	♦ 2nd Submission Stage 1 Bridge RPT Approved
DES3000-1800	Design QA/QC (1st Submission)	8	12-17-20	01-05-21	Design QA/QC (1st Submission)
DES3000-1900	Submit Bridge Plans (1st Submission)	0	01-06-21		♦ Submit Bridge Plans (1st Submission)
DES3000-2000	VDOT/FHWA Review/Comment Bridge Plans (1st Submission	21	01-06-21	01-26-21	□ VDOT/FHWA Review/Comment Bridge Plans (1st Submission)
DES3000-2100	Prepare Final Bridge Plans	30	01-27-21	03-09-21	Prepare Final Bridge Plans
DES3000-2200	Design QA/QC (Final Submission)	5	03-10-21	03-16-21	□ Design QA/QC (Final Submission)
DES3000-2300	Submit Final Bridge Plans	0	03-17-21		→ Submit Final Bridge Plans
DES3000-2400	VDOT/FHWA Review/Comment Bridge Plans (Final Submission	n) 21	03-17-21	04-06-21	VDOT/FHWAReview/Comment Bridge Plans (Final Submission)
DES3000-2500	Final Comment Resolution Bridge Plans	20	04-07-21	05-04-21	Final Comment Resolution Bridge Plans
DES3000-2600	RFC Bridge Plans Issued for Construction	0	05-05-21		♦ RFC Bridge Plans Issued for Construction
BID OPTION #2 - B	RIDGE B608 95 NB CD LANES OVER RTE. 17	194	07-24-20	05-05-21	05-05-21, BID OPTION #2 - BRIDGE B608 95 NB CD LANES OVER RTE. 17
DES3000-4300	Prepare Stage I Bridge Reports/TS&Ls	40	07-24-20	09-18-20	Prepare Stage Bridge Reports/TS&Ls
DES3000-4400	Submit Preliminary Bridge Design (Stage 1)	0	09-21-20		♦ Şubmit Preliminary Bridge Design (Ştage 1)
DES3000-4500	VDOT/FHWA Review/Comment Bridge Preliminary Design	21	09-22-20	10-12-20	□ VDOT/FHWA'Review/Comment Bridge Preliminary Design
DES3000-4600	Prepare Bridge Plans (1st Submission)	45	10-13-20	12-16-20	Prepare Bridge Plans (1st Submission)
DES3000-4700	Comment Response Stage I Bridge Report	20	10-13-20	11-09-20	Comment Response Stage I Bridge Report
DES3000-4800	2nd Submission-Preliminary Bridge Design (Stage 1)	0		11-09-20	♦ 2nd Submission-Preliminary Bridge Design (Stage 1)
DES3000-4900	VDOT/FHWA Review 2nd Submission Stage I Bridge Design	21	11-10-20	11-30-20	□ VDOT/FHWA Review 2nd Submission Stage I Bridge Design
DES3000-5000	2nd Submission Stage 1 Bridge RPT Approved	0		11-30-20	◆ 2nd Submission Stage 1 Bridge RPT Approved
DES3000-5100	Design QA/QC (1st Submission)	8	12-17-20	01-05-21	Design QA/QC (1st Submission)
DES3000-5200	Submit Bridge Plans (1st Submission)	0	01-06-21		♦ Submit Bridge Plans (1st Submission)
DES3000-5300	VDOT/FHWA Review/Comment Bridge Plans (1st Submission	21	01-06-21	01-26-21	□ VDOT/FHWA Review/Comment Bridge Plans (1st Submission)
DES3000-5400	Prepare Final Bridge Plans	30	01-27-21	03-09-21	Prepare Final Bridge Plans
DES3000-5500	Design QA/QC (Final Submission)	5	03-10-21	03-16-21	Design QA/QC (Final Submission)
DES3000-5600	Submit Final Bridge Plans	0	03-17-21		Submit Final Bridge Plans:
DES3000-5700	VDOT/FHWA Review/Comment Bridge Plans (Final Submission	n) 21	03-17-21	04-06-21	□ VDOT/FHWA Review/Comment Bridge Plans (Final Submission)
DES3000-5800	Final Comment Resolution Bridge Plans	20	04-07-21	05-04-21	Final Comment Resolution Bridge Plans
DES3000-5900	RFC Bridge Plans Issued for Construction	0	05-05-21		♦ RFC Bridge Plans Issued for Construction
PUBLIC INVOLVEMEN	Т	975	07-10-20	06-06-24	▼
PUB0000-1000	Submit Emergency Contact List	7	07-10-20	07-16-20	■ Submit Emergency Contact List
PUB0000-1100	First Responder Meeting #1	0		07-16-20	◆ First Responder Meeting #1
PUB0000-1200	Meet wtih District Public Affairs to Discuss Public Involvement	15	07-17-20	08-06-20	☐ Meet wtih District Public Affairs to Discuss Public Involvement
PUB0000-1300	Design Public Information Mtg #1 - Early Coordination	0		07-23-20	Design Public Information Mtg.#1 - Early Coordination
PUB0000-1400	Assist VDOT to Develop Public Info and Comm Plan (PICP)	45	08-07-20	09-20-20	Assist VDOT to Develop Public Info and Comm Plan (PICP)
PUB0000-1500	Design Public Information Mtg #2 - Mid-Design	0	08-21-20		◆ Design Public Information Mtg.#2 - Mid-Design
PUB0000-1600	VDOT Review PICP with Team and Modify	21	09-21-20	10-11-20	□ VDOT Review PICP with Team and Modify
PUB0000-1700	First Responder Meeting #2	0		09-21-20	◆ First Responder Meeting #2
PUB0000-1800	Final PICP Approved	0	10-12-20		→ Final PICP Approved
PUB0000-1900	Public Involvement - Ongoing Coordination	910	10-12-20	06-06-24	iPublic linvolv
PUB0000-2000	Design Public Information Mtg #3 - Start of Construction	0		05-14-21	◆ Design Public Information Mtg #3 - Start of Construction
PUB0000-2100	Construction - Public Outreach Mtg #1	0	04-10-23		→ Construction - Public Outreach Mtg #1
PUB0000-2200	Construction - Public Outreach Mtg #2	0	11-02-23		♦ Construction - Public Outread
Actual Work Remaining Work	Critical Remaining Work ▼ Summary ♦ Milestone	·			\$\shirt \text{SHIRLEY}{\text{CONTRACTING COMPANY, LLC}}

D		4.6.1 PROPOSAL SCHE	
	Activity Name	Original Start Finis	2020 2021 2022 2023 2024 A
		Duration	
ENVIRONMENTAL PERI	MITTING	217 06-18-20 05-0	05-03-21 ▼ 05-03-21, ENVIRONMENTAL PERMITTING
ENV0000-1000	Begin Environmental Permitting	0 07-10-20	Begin Environmental Permitting
ENV0000-1100	Environmental Permitting Complete	0 05-03-21	◆ Environmental Permitting Complete
JOINT WETLANDS and	WATERS PERMITTING	202 07-10-20 04-3	<mark>-30-21 </mark>
ENV1000-1000	Wetland Delineations - Survey & Flagging	20 07-10-20 08-0	3-06-20 Wetland Delineations - Survey & Flagging
ENV1000-1100	COE Jurisdictional Determination	30 08-07-20 09-1	9-18-20 COE Jurisdictional Determination
ENV1000-1200	Environmental Permit "Early Coordination-USACE/DEQ/VMRC"	20 08-21-20 09-1	0-18-20 Environmental Permit "Early Coordination-USACE/DEQ/VMRC"
ENV1000-1300	Prepare Joint Permit Application	20 09-21-20 10-1	0-16-20 Prepare Joint Permit Application
ENV1000-1400	Submit Joint Permit Application	0 11-03-20	♦ Sulbmit Joint Permit Application
ENV1000-1500	Agency Review of JPA	90 11-03-20 01-3	-31-21 Agency Review of JPA
ENV1000-1600	Provisional Permit Approval- NTP Mitigation Purchases	0 02-01-21	♦ Provisional Permit Approval- NTP Mitigation Purchases
ENV1000-1700	DEQ PUBLIC NOTICE Period	30 02-01-21 03-0	3-02-21 DEQ:PUBLIC NOTICE Period
ENV1000-1800	Purchase Wetland and Stream Mitigation Credits	20 02-01-21 02-2	2-26-21 Purchase Wetland and Stream Mitigation Credits
ENV1000-1900	Purchase Nutrient Credits		-26-21 □ Purchase Nútrient Credits
ENV1000-2000	Final Agency Review of JPA /VDOT Final Approval		3-31-21 Final Agency, Review of JPA /VDOT Final Approval
ENV1000-2100	JPA Approved	0 04-01-21	→ JPA Approved
ENV1000-2100	VDOT Environmental Clearance		-30-21 □ VDOT Environmental Clearance
	DANGERED SPECIES / CULTURAL RESOURCES		
ENV1000-2300	T&E Species Identifation and Impacts Coordination		0-02-20 T&E Species Identifation and Impacts Coordination
ENV1000-2400	Prepare and Submit T&E Species Documentation with AHJs		0-02-20 Prepare and Submit T&E Species Documentation with AHJs
ENV1000-2500	Perform Culteral Resources Research		0-03-20 Perform Culteral Resources Research
ENV1000-2600	Prepare and Submit Cultural Resources Findings and Mitigation Plans with AHJs		0-02-20 Prepare and Submit Cultural Resources Findings and Mitigation Plans with AHJs
	IMENTAL SITE ASSESSMENTS Phase 1 Environmental Site Assessments		2-23-20 Tu-vi 10-23-20, HAZMAT and ENVIRONMENTAL SITE ASSESSMENTS 3-20-20 Phase 1 Environmental Site Assessments
ENV2000-1000			
ENV2000-1100	Prepare/Submit Phase 1 ESA Reports		0-02-20 Prepare/Submit Phase 1 ESA/Reports
ENV2000-1200	VDOT Review Phase 1 ESA		0-23-20 D VDOT Review Phase 1 ESA
ENV2000-1300	VDOT Approve Phase 1 ESA's (Hold Point)		0-23-20 ♦ VDOT Approve Phase 1 ESA's (Hold Point)
LD 445 / VPDES / STOR			-19-21 V 04-19-21, LD 445 / VPDES / STORMWATER PERMIT
PROJECT WIDE LAN	ND DISTURBANCE PERMIT		-19-21 04-19-21, PROJECT WIDE LAND DISTURBANCE PERMIT -21-21 LD-445 Forms - Update with 60% Plans
			-71-71 I
ENV3000-1000	LD-445 Forms - Update with 60% Plans		
ENV3000-1000 ENV3000-1100	Request Updated Permit Coverage (Application Complete - Hold Point)	0 01-22-21	◆ Request Updated Permit Coverage (Application Complete - Hold Point)
ENV3000-1000 ENV3000-1100 ENV3000-1200	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP	0 01-22-21 50 01-22-21 03-1	Agency Review of Updated LD-445 / SWPPP
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications	0 01-22-21 50 01-22-21 03-1 5 03-15-21 03-1	Agency Review of Updated LD-445 / SWPPP □ Complete Updated SWPPP (LD-455E) Certifications
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point)	0 01-22-21 50 01-22-21 03-1 5 03-15-21 03-1 30 03-20-21 04-1	Agency Review of Updated LD-445 / SWPPP 3-19-21
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications	0 01-22-21 03-1 50 01-22-21 03-1 5 03-15-21 03-1 30 03-20-21 04-1 0 04-19-21	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP 3-19-21 Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANA LYSIS	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide	0 01-22-21 03-1 50 01-22-21 03-1 5 03-15-21 03-1 30 03-20-21 04-1 0 04-19-21 129 06-18-20 12-2	Agency Review of Updated LD-445 / SWPPP 3-19-21 □ Complete Updated SWPPP (LD-455E) Certifications □ VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide 12-21-20, NOISE ANALYSIS
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANALYSIS ENV4000-1000	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study	0 01-22-21 50 01-22-21 03-1 5 03-15-21 03-1 30 03-20-21 04-1 0 04-19-21 129 06-18-20 12-2 25 06-18-20 07-2	Agency Review of Updated LD-445 / SWPPP 3-12-21
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANA LYSIS ENV4000-1000 ENV4000-1100	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study Perform Noise Analysis - Modeling Activities	0 01-22-21	Request Updated Permit Coverage (Application Complete - Hold Point) 3-12-21 Agency Review of Updated LD-445 / SWPPP 3-19-21 Complete Updated SWPPP (LD-455E) Certifications Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide 3-21-20 Perform Noise Study Perform Noise Analysis - Modeling Activities
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANALYSIS ENV4000-1000	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study	0 01-22-21	Agency Review of Updated LD-445 / SWPPP 3-12-21
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANA LYSIS ENV4000-1000 ENV4000-1100	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study Perform Noise Analysis - Modeling Activities	0 01-22-21	Request Updated Permit Coverage (Application Complete - Hold Point) 3-12-21 Agency Review of Updated LD-445 / SWPPP 3-19-21 Complete Updated SWPPP (LD-455E) Certifications Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide 3-21-20 Perform Noise Study Perform Noise Analysis - Modeling Activities
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANA LYSIS ENV4000-1000 ENV4000-1100 ENV4000-1200	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study Perform Noise Analysis - Modeling Activities Optimization of Noise Wal Analysis	0 01-22-21	Request Updated Permit Coverage (Application Complete - Hold Point) 3-12-21 Agency Review of Updated LD-445 / SWPPP 3-19-21 Complete Updated SWPPP (LD-455E) Certifications UDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide 12-21-20 Perform Noise Study Perform Noise Study Optimization of Noise Wall Analysis
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANA LYSIS ENV4000-1000 ENV4000-1100 ENV4000-1200 ENV4000-1300	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study Perform Noise Analysis - Modeling Activities Optimization of Noise Wal Analysis Submit Noise Report	0 01-22-21	Request Updated Permit Coverage (Application Complete - Hold Point) 3-12-21 Agency Review of Updated LD-445 / SWPPP 3-19-21 Complete Updated SWPPP (LD-455E) Certifications 3-18-21 VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide 3-21-20 12-21-20, NOISE ANALYSIS -23-20 Perform Noise Study 3-27-20 Perform Noise Analysis - Modeling Activities 3-10-20 Optimization of Noise Wall Analysis Submit Noise Report
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANA LYSIS ENV4000-1000 ENV4000-1100 ENV4000-1200 ENV4000-1300 ENV4000-1400	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study Perform Noise Analysis - Modeling Activities Optimization of Noise Wal Analysis Submit Noise Report VDOT Review & Comment on Noise Report	0 01-22-21	Agency Review of Updated LD-445 / SWPPP 3-19-21 □ Complete Updated SWPPP (LD-455E) Certifications: □ VDΦT Obtain Updated Permit Coverage and Release Work (Hold Point) □ Approved Land Disturbance Permit Application and SWPPP Project Wide 3-21-20 □ Perform Noise Study 3-27-20 □ Perform Noise Analysis - Modeling Activities 0-10-20 □ Optimization of Noise Wall Analysis □ VDOT Review & Comment on Noise Report
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANA LYSIS ENV4000-1000 ENV4000-1100 ENV4000-1200 ENV4000-1300 ENV4000-1400 ENV4000-1500	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study Perform Noise Analysis - Modeling Activities Optimization of Noise Wal Analysis Submit Noise Report VDOT Review & Comment on Noise Report Comment Response/Re-Submit Noise Report	0 01-22-21	Request Updated Permit Coverage (Application Complete - Hold Point) 3-12-21 Agency Review of Updated LD-445 / SWPPP 3-19-21 Complete Updated SWPPP (LD-455E) Certifications 3-18-21 VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide 3-21-20 Perform Noise Study 3-27-20 Perform Noise Analysis - Modeling Activities 3-10-20 Optimization of Noise Wal Analysis Submit Noise Report 3-01-20 Comment Response/Re-Submit Noise Report
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANA LYSIS ENV4000-1000 ENV4000-1100 ENV4000-1300 ENV4000-1300 ENV4000-1400 ENV4000-1500 ENV4000-1500 ENV4000-1600	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study Perform Noise Analysis - Modeling Activities Optimization of Noise Wal Analysis Submit Noise Report VDOT Review & Comment on Noise Report Comment Response/Re-Submit Noise Report Re-Submit Noise Report	0 01-22-21	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP 3-19-21 I Complete Updated SWPPP (LD-455E) Certifications 1-18-21 VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide 12-21-20 Perform Noise Study 2-23-20 Perform Noise Analysis - Modeling Activities 1-10-20 Optimization of Noise Wal Analysis Submit Noise Report 1-15-20 Re-Submit Noise Report Comment Response/Re-Submit Noise Report
ENV3000-1000 ENV3000-1100 ENV3000-1200 ENV3000-1300 ENV3000-1400 ENV3000-1500 NOISE ANA LYSIS ENV4000-1000 ENV4000-1100 ENV4000-1300 ENV4000-1400 ENV4000-1500 ENV4000-1500 ENV4000-1600 ENV4000-1700	Request Updated Permit Coverage (Application Complete - Hold Point) Agency Review of Updated LD-445 / SWPPP Complete Updated SWPPP (LD-455E) Certifications VDOT Obtain Updated Permit Coverage and Release Work (Hold Point) Approved Land Disturbance Permit Application and SWPPP Project Wide Perform Noise Study Perform Noise Analysis - Modeling Activities Optimization of Noise Wal Analysis Submit Noise Report VDOT Review & Comment on Noise Report Comment Response/Re-Submit Noise Report Re-Submit Noise Report VDOT Review 2nd Submission Noise Report	0 01-22-21	Agency Review of Updated LD-445 / SWPPP 3-19-21

NORTHBOUND RAPPAHANN		4.6.1 PROPOSAL		1 0000	FEBRUARY
/ ID	Activity Name	Original Duration	Finish		2021 2022 2023 2024
RIGHT OF WAY ACQU	ISITION/EASEMENTS	320 10-17-20	02-07-22		V:02-07-22, RIGHT OF WAY ACQUISITION/EASEMENTS
RIGHT OF WAY PLAN	NS		01-26-21		-21, RIGHT OF WAYPLANS
R/W PLANS			01-26-21		-21, R/W PLANS
ROW0000-1000	, , ,	•	11-23-20	<u> </u>	ght of Way Plans (with 60% 1st Submission Roadway Plans)
ROW0000-1100	VDOT Review/Comment Right of Way Plans	21 11-24-20	12-14-20		eview/Comment Right of Way Plans
ROW0000-1200	1 0	10 12-15-20	01-05-21		ent Response / Plan changes
ROW0000-1300		21 01-06-21	01-26-21		ΓReview 2nd Round R/W Plans
ROW0000-1400	3	0	01-26-21	 : : : : : : : : : : : : : : : : : : :	of Way Plan's Approved
	IC ACQUISITION and RELOCATION PLAN	47 10-17-20	12-25-20		O, PROJECT SPECIFIC ACQUISITION and RELOCATION PLAN
ROW0000-1500	·	20 10-17-20	11-05-20		Submit R/W Aquisition and Relocation Plan
ROW0000-1600	<u> </u>	21 11-06-20	11-26-20		Aquisition and Relocation Plan
ROW0000-1700		5 11-30-20	12-04-20	— :	Response/Re-Submit Aquisition Plan
ROW0000-1800		21 12-05-20	12-25-20		Review/Approve 2nd Submission Aquisition Plan
ROW ACQUISITIONS		273 01-04-21	02-07-22		▼ 02-07-22, ROW ACQUISITIONS
R/W GROUP 1 ACC ROW1000-1000		261 01-04-21 15 01-04-21	01-20-22	TO DAM A	Group 1- Complete 60, Yr Title Exam
ROW1000-1000	R/W Group 1- Complete 60 11 Title Exam R/W Group 1- Complete Appraisal	32 01-27-21	03-11-21	<u> </u>	W Group 1- Complete Appraisal
ROW1000-1100		8 03-12-21	03-11-21		W Group 1- Complete Appraisal W Group 1- Review Appraiser Completes Review
ROW1000-1200	·	3 03-24-21	03-25-21		R/W Group 1- Neview Appraise Completes Review R/W Group 1- Submit Appraisal to VDOT (RUMS)
ROW1000-1300 ROW1000-1400	1 11 7	21 03-29-21	03-26-21		R/W Group 1- VDOT Approves Appraisal
ROW1000-1400 ROW1000-1500	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 03-29-21	04-26-21		R/W Group 1- Prepare Offer Package
		10 04-27-21	05-10-21	<u> </u>	
ROW1000-1600					R/W Group 1- Negotiator Make Initial Contact:/ Present Offer
ROW1000-1700	1 3	45 05-11-21	07-14-21	-	R/W Group 1; Negotiations
ROW1000-1800	R/W Group 1- Send Notice of Filing Certif. to Property Owner	3 07-15-21	07-19-21	_	I R/W Group 1- Send Notice of Filing Certif. to Property Owner
ROW1000-1900	1 2 2	4 07-15-21	07-20-21		R/W Group 1- Prepare!/ Finalize Plat
ROW1000-2000	1 1	5 07-15-21	07-21-21	_	R/W Group 1- Prepare Certificate Package
ROW1000-2100	, , ,	5 07-15-21	07-21-21	_	R/W Group 1- Obtain Signed Option
ROW1000-2200	R/W Group 1- Property Access for Construction - If By Option		07-21-21	_	R/W Group 1- Property Access for Construction - If By Option
ROW1000-2300		0 07-22-21			◆ R/W Group 1- Submit Certificate Package to VDOT
ROW1000-2400	•	30 07-22-21	09-01-21		R/W Group 1-VDOT Reviews / Issues Certificate & Check
ROW1000-2500	R/W Group 1- Option / Settlement Docs Submitted to VDOT	5 07-22-21	07-28-21		R/W Group 1- Option / Settlement Docs Submitted to VDOT
ROW1000-2600	R/W Group 1- VDOT Reviews Settlement Documents	21 07-29-21	08-26-21		R/W Group 1- VDOT Reviews Settlement Documents
ROW1000-2700	R/W Group 1- Design Builder Files Certificate @ Court house	2 09-02-21	09-03-21		R/W Group 1- Design Builder Files Certificate @ Court house
ROW1000-2800	R/W Group 1- Property Access for Constr & Utilities - If By Ce	ertificate 0	09-03-21		R/W Group 1- Property Access for Constr & Utilities - If By Certificate
ROW1000-2900	R/W Group 1 - Design Builder Requests NTCC by Parcels	5 09-07-21	09-13-21		I R/W Group 1 - Design Builder Requests NTCC by Parcels
ROW1000-3000	R/W Group 1- Settlement Documents to Settlement Attorney	2 08-27-21	08-30-21		R/W Group 1- Settlement Documents to Settlement Attorney
ROW1000-3100		60 08-31-21	11-23-21		R/W Group 1- Obtain release of Liens if Required
ROW1000-3200	R/W Group 1- Access to Parcel	0	09-13-21		♦ R/W Group 1- Access to Parcel
ROW1000-3300	R/W Group 1- Notice to VDOT that all Liens Are Cleared	1 11-24-21	11-24-21		I R/W Group 1- Notice to VDOT that all Liens Are Cleared
ROW1000-3400	·	21 11-29-21	01-06-22		R/W/ Group 1- VDOT Issues Settlement Check
ROW1000-3500		10 01-07-22	01-20-22		□ R/W Group 1- Settlement Atty. Holds Settlement / Records
ROW1000-3600			01-20-22		◆ R/W Group 1- R/W Process Complete - Utilities Access to Parcels
R/W GROUP 2 ACC		273 01-04-21	02-07-22		V 02-07-22, R/W GROUP 2 ACQUISITIONS
ROW1000-3700	·	15 01-04-21	01-22-21	− ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	Group 2- Complete 60 Yr Title Exam
ROW1000-3800		32 02-12-21	03-29-21		R/W Group 2- Complete Appraisal
ROW1000-3900	R/W Group 2- Review Appraiser Completes Review	8 03-30-21	04-08-21	— ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	R/W Group 2- Review Appraiser Completes Review
ROW1000-4000	R/W Group 2- Submit Appraisal to VDOT (RUMS)	3 04-09-21	04-13-21		R/W Group 2- Submit Appraisal to VDOT (RUMS)
Actual Work Remaining Work ◆	Critical Remaining Work ▼ Summary ♦ Milestone				SHIRLEY CONTRACTING COMPANY, LIC

NORTHBOUND RAPPAHANNOC	CK RIVER CROSSING	4.6.1	PROPOSAL	SCHEDULE	FEBRUARY 25, 2
ty ID	Activity Name	Origina		Finish	2020 2021 2022 2023 2024 MAMJJJASONDJJFMAMJJJASONDJJFMAMJJJASONDJJFMAMJJJASONDJJFMAMJJJASO
		Duration	וו		
ROW1000-4100	R/W Group 2- VDOT Approves Appraisal	21	04-14-21	05-12-21	R/W, Group; 2+ V/DOT; Approves Appraisal
ROW1000-4200	R/W Group 2- Prepare Offer Package		04-14-21	04-20-21	I R/W Group 2- Prepare Offer Package
ROW1000-4300	R/W Group 2- Negotiator Make Initial Contact / Present Offer	10	05-13-21	05-26-21	R/W Group 2- Negotiator Make Initial Contact / Present Offer
ROW1000-4400	R/W Group 2- Negotiations	45	05-27-21	07-30-21	R/W Group 2- Negotiations
ROW1000-4500	R/W Group 2- Send Notice of Filing Certif. to Property Owner	3	08-02-21	08-04-21	■ R/W Group 2-Send Notice of Filing Certif. to Property Owner
ROW1000-4600	R/W Group 2- Prepare / Finalize Plat	4	1 08-02-21	08-05-21	I R/W Group 2-; Prepare / Finalize Plat
ROW1000-4700	R/W Group 2- Prepare Certificate Package	Ę	08-02-21	08-06-21	R/W Group 2- Prepare Certificate Package
ROW1000-4800	R/W Group 2- Obtain Signed Option	5	08-02-21	08-06-21	I R/W Group 2- Obtain Signed Option
ROW1000-4900	R/W Group 2- Property Access for Construction - If By Option	()	08-06-21	♦ R/W Group 2- Property Access for Construction - If By Option
ROW1000-5000	R/W Group 2- Submit Certificate Package to VDOT	(08-09-21		R/W Group 2- Submit Certificate Package to VDOT
ROW1000-5100	R/W Group 2- VDOT Reviews / Issues Certificate & Check	30	08-09-21	09-20-21	R/W Group 2- VDOT Reviews / Issues Certificate & Check
ROW1000-5200	R/W Group 2- Option / Settlement Docs Submitted to VDOT	5	08-09-21	08-13-21	I R/W Group 2- Option / Settlement Docs Submitted to VDOT
ROW1000-5300	R/W Group 2- VDOT Reviews Settlement Documents	21	08-16-21	09-14-21	R/W Group 2- VDOT Reviews Settlement Documents
ROW1000-5400	R/W Group 2- Design Builder Files Certificate @ Court house		09-21-21	09-22-21	R/W Group 2- Design Builder Files Certificate @ Court house
ROW1000-5500	R/W Group 2- Property Access for Constr & Utilities - If By Certificate)	09-22-21	◆ R/W Group 2- Property Access for Constr & Utilities - If By Certificate
ROW1000-5600	R/W Group 2 - Design Builder Requests NTCC by Parcels	5	09-23-21	09-29-21	l R/W Group 2 - Design Builder Requests NTCC by Parcels
ROW1000-5700	R/W Group 2- Settlement Documents to Settlement Attorney	2	09-15-21	09-16-21	I R/W Group 2- Settlement Documents to Settlement Attorney
ROW1000-5800	R/W Group 2- Obtain release of Liens if Required	60	09-17-21	12-14-21	R/W Group 2- Obtain release of Liens if Required
ROW1000-5900	R/W Group 2- Access to Parcel	(09-29-21	◆ R/W Group 2- Access to Parcel
ROW1000-6000	R/W Group 2- Notice to VDOT that all Liens Are Cleared	1	12-15-21	12-15-21	I R/W Group 2- Notice to VDQT that all Liens Are Cleared
ROW1000-6100	R/W Group 2- VDOT Issues Settlement Check	21	12-16-21	01-24-22	R/W Group 2- VDOT Issues Settlement Check
ROW1000-6200	R/W Group 2- Settlement Atty. Holds Settlement / Records	10	01-25-22	02-07-22	R/W Group 2- Settlement Atty. Holds Settlement / Records
ROW1000-6300	R/W Group 2- R/W Process Complete - Utilities Access to Parcels	(02-07-22	R/W Group 2- R/W Process Complete - Utilities Access to Parcels
UTILITY RELOCATIONS		388	07-10-20	02-03-22	O2-03-22, UTIĻITY RELOCATIONS
UTL0000-1000	Begin Utility Relocation Coordination	(07-10-20		♦ Begin Utility Relocation Coordination
UTL0000-1100	Meeting w/VDOT D-B Projects Utility Coordinator	1	07-10-20	07-10-20	I Meeting w/VDOT D-B Projects Utility Coordinator
UTL0000-1200	Preliminary Utility Conflict Investigations	20	08-14-20	09-11-20	Preliminary Utility Conflict Investigations
UTL0000-1300	Prepare Preliminary Utility Status Report	10	09-14-20	09-25-20	□ Prepare: Pteliminary Utility Status Report
UTL0000-1400	Submit Preliminary Utility Status Report	()	09-25-20	♦ Şubmit Preliminary Utility Status Report
UTL0000-1500	VDOT Review Preliminary Utility Status Report		09-26-20	10-16-20	□ VDOT Review Preliminary Utility Status Report
I-95			3 09-28-20		▼ 02-03-22, I-95
SUMMIT IG TRUNK LII UTL1000-1000	NE Hold UFI Meeting with Summit		09-28-20		▼ 01-06-22, SUMMIT IG TRUNK LINE
UTL1000-1100	Š		10-19-20	01-21-21	Hold UFI Meeting with Summit Prepare;Red+Line/Conceptual;Relocation Design
UTL1000-1100	Prepare Red-Line/Conceptual Relocation Design Summit Submits PE Estimate		0 10-20-20 01-22-21	03-04-21	Summit Submits PE Estimate
UTL1000-1300			03-05-21	03-04-21	Summit Submits PE Estimate 1 Review/Approve PE Estimate
UTL1000-1400	Review/Approve PE Estimate Summit Completes Utility Design		03-05-21	06-04-21	Summit Completes Utility Design
UTL1000-1500	Approve Utility Design		03-12-21	06-04-21	Sufficiency Design
UTL1000-1600	Prepare Conceptual Relocation Design for Area 5 - Interim Milestone		0 09-28-20	10-23-20	Prepare;Conceptual;Relocation Design for Area 5;- Interim Milestone
UTL1000-1700	Summit Submit PE / Complete Utility Design for Area 5 - Interim Mileston		5 10-26-20	11-13-20	□ Summit Submit PE / Complete Utility Design for Area 5 - Interim Mileston
UTL1000-1700	Approve Utility Design for Area 5 - Interim Milestone		11-16-20	12-15-20	Approve; Utility Design for Area 5 - Interim Milestone
UTL1000-1900	Summit Lower in Place / Relocate Conduit / JB in Area 1		10-29-21	01-06-22	Summit Lower in Place / Relocate Conduit / JB in Area 1
UTL1000-1900	Summit Lower in Place / Relocate Conduit / JB in Area 3		0 09-23-21	11-18-21	Summit Lower in Place / Relocate Conduit / JB in Area 3
UTL1000-2100	Summit Lower in Place / Relocate Conduit / JB in Area 5		12-21-20	01-25-21	Summit Lower in Place / Relocate Conduit/ JB in Area 5
VDOT ITS / VERIZON	Zammin Zamar in ri idad / richosata dariadit / OB in riida d		7 11-03-20	02-03-22	▼ 02-03-22, VDQT ITS / VERIZON
UTL1000-2200	Prepare Relocation / New ITS Plans for VDOT Facilities		11-03-20	03-18-21	Prepare Relocation / New ITS Plans for VDOT Facilities
UTL1000-2300	Install / Relocate VDOT Facilities Area 1 / Remove Old Facilities		10-29-21	02-03-22	Install / Relocate VDOT Facilities Area 1 / Remove Old Facilities
Actual Work	Critical Remaining Work Summary Milestone	J	1	1.	SHIRLEY CONTRACTING COMPANY, LIC

ate VDOT Facilities Area 3 / Remove Old Facilities ate VDOT Facilities Area 5 / Remove Old Facilities Imain Relocation / New Facility Plans Ive Relocation / New Facility Plans with Utility Owner Itall New Water main / Facilities - Area 1 Itall New Water main / Facilities - Area 3 Itall New Water main / Facilities - Area 5 Imain Relocation / New Facility Plans Ive Relocation / New Facility Plans Ive Relocation / New Facilities - Rte. 17 - Stage 1 Itall New Water main / Facilities - Rte. 17 - Stage 2 Itall New Water main / Facilities - Rte. 17 - Stage 2	Original Duration Start Duration Finish 60 09-09-21 12-07-1 45 12-14-20 02-22-1 272 11-03-20 12-07-1 90 11-03-20 03-18-1 60 03-19-21 06-11-2 30 10-22-21 12-07-1 30 12-14-20 02-01-1 268 10-19-20 11-11-2 257 11-03-20 11-11-2 90 11-03-20 03-18-1 60 03-19-21 06-11-2 30 08-19-21 09-30-1	Install / Relocate VDOT Facilities Area 5 / Remove Old Facilities 12-07-21; WATERMAIN (I-95 CROSSINGS) Prepare Watermain Relocation / New Facility Plans Review/Approve Relocation / New Facility Plans: with Utility Owner Relocate / Install New Water main / Facilities - Area 1 Relocate / Install New Water main / Facilities - Area 3 Relocate / Install New Water main / Facilities - Area 5 11-11-21; ROUTE 17 11-11-21; WATERMAIN
main Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Area 1 tall New Water main / Facilities - Area 3 tall New Water main / Facilities - Area 5 main Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	45 12-14-20 02-22-1 272 11-03-20 12-07-1 90 11-03-20 03-18-1 60 03-19-21 06-11-2 30 10-22-21 12-07-1 30 08-25-21 10-07-1 30 12-14-20 02-01-1 268 10-19-20 11-11-2 257 11-03-20 11-11-2 90 11-03-20 03-18-1 60 03-19-21 06-11-2	Install / Relocate VDOT Facilities Area 5 / Remove Old Facilities 12-07-21, WATERMAIN (I-95 CROSSINGS) Prepare Watermain Relocation / New Facility Plans Review/Approve Relocation / New Facility Plans: with Utility Owner Relocate / Install New Watermain / Facilities - Area 1 Relocate / Install New Watermain / Facilities - Area 3 Relocate / Install New Water main / Facilities - Area 5 11-11-21, ROUTE 17
main Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Area 1 tall New Water main / Facilities - Area 3 tall New Water main / Facilities - Area 5 main Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	45 12-14-20 02-22-1 272 11-03-20 12-07-1 90 11-03-20 03-18-1 60 03-19-21 06-11-2 30 10-22-21 12-07-1 30 08-25-21 10-07-1 30 12-14-20 02-01-1 268 10-19-20 11-11-2 257 11-03-20 11-11-2 90 11-03-20 03-18-1 60 03-19-21 06-11-2	Install / Relocate VDOT Facilities Area 5 / Remove Old Facilities 12-07-21, WATERMAIN (I-95 CROSSINGS) Prepare Watermain Relocation / New Facility Plans Review/Approve Relocation / New Facility Plans: with Utility Owner Relocate / Install New Watermain / Facilities - Area 1 Relocate / Install New Watermain / Facilities - Area 3 Relocate / Install New Water main / Facilities - Area 5 11-11-21, ROUTE 17
rmain Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Area 1 tall New Water main / Facilities - Area 3 tall New Water main / Facilities - Area 5 rmain Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	272 11-03-20 12-07- 90 11-03-20 03-18- 60 03-19-21 06-11-2 30 10-22-21 12-07- 30 08-25-21 10-07- 30 12-14-20 02-01- 268 10-19-20 11-11-2 257 11-03-20 03-18- 60 03-19-21 06-11-2	Prepare Watermain Relocation / New Facility Plans Review/Approve Relocation / New Facility Plans with Utility Owner Relocate / Install New Watermain / Facilities - Area 1 Relocate / Install New Watermain / Facilities - Area 3 Relocate / Install New Water main / Facilities - Area 5 11-11-21 ROUTE 17
ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Area 1 tall New Water main / Facilities - Area 3 tall New Water main / Facilities - Area 5 main Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	90 11-03-20 03-18-3 06-11-2 06-11-2 06-11-2 06-11-2 06-11-2 06-11-2 06-11-2 07-3 07-3 07-3 07-3 07-3 07-3 07-3 07-3	Prepare Watermain Relocation / New Facility Plans Review/Approve Relocation / New Facility Plans: with Utility Owner Relocate / Install New Watermain / Facilities - Area 1 Relocate / Install New Watermain / Facilities - Area 3 Relocate / Install New Water main / Facilities - Area 5 11-11-21 ROUTE 17
ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Area 1 tall New Water main / Facilities - Area 3 tall New Water main / Facilities - Area 5 main Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	60 03-19-21 06-11-2 30 10-22-21 12-07-3 30 08-25-21 10-07-3 30 12-14-20 02-01-3 268 10-19-20 11-11-2 257 11-03-20 11-11-2 90 11-03-20 03-18-3 60 03-19-21 06-11-2	Review/Approve Relocation / New Facility Plans with Utility Owner Relocate / Install New Water main / Facilities - Area 1 Relocate / Install New Water main / Facilities - Area 3 Relocate / Install New Water main / Facilities - Area 5 11-11-21 ROUTE 17
tall New Water main / Facilities - Area 1 tall New Water main / Facilities - Area 3 tall New Water main / Facilities - Area 5 rmain Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	30 10-22-21 12-07-1 30 08-25-21 10-07-1 30 12-14-20 02-01-1 268 10-19-20 11-11-2 257 11-03-20 11-11-2 90 11-03-20 03-18-1 60 03-19-21 06-11-2	Rélocate / Install New Water main / Facilities - Area 1 Relocate / Install New Water main / Facilities - Area 3 Relocate / Install New Water main / Facilities - Area 5 11-11-21 ROUTE 17 11-11-21 WATERMAIN
tall New Water main / Facilities - Area 3 tall New Water main / Facilities - Area 5 tall New Water main / Facilities - Area 5 tall New Cation / New Facility Plans to Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	30 08-25-21 10-07-3 30 12-14-20 02-01-3 268 10-19-20 11-11-2 257 11-03-20 11-11-2 90 11-03-20 03-18-3 60 03-19-21 06-11-2	Relocate / Install New Water main / Facilities - Area 3 Relocate / Install New Water main / Facilities - Area 5 11-11-21, ROUTE 17 11-11-21, WATERMAIN
main Relocation / New Facilities - Area 5 main Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	30 12-14-20 02-01-1 268 10-19-20 11-11-2 257 11-03-20 11-11-2 90 11-03-20 03-18-1 60 03-19-21 06-11-2	Relocate / Install New Water main / Facilities - Area 5 11-11-21, ROUTE 17 11-11-21, WATERMAIN
rmain Relocation / New Facility Plans ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	268 10-19-20 11-11-2 257 11-03-20 11-11-2 90 11-03-20 03-18-3 60 03-19-21 06-11-2	11-11-21, ROUTE 17 11-11-21, WATERMAIN
ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	257 11-03-20 11-11-2 90 11-03-20 03-18-3 60 03-19-21 06-11-2	
ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	90 11-03-20 03-18-3 60 03-19-21 06-11-2	Prepare Waterman Relocation / New Facility Plans
ve Relocation / New Facility Plans with Utility Owner tall New Water main / Facilities - Rte. 17 - Stage 1 tall New Water main / Facilities - Rte. 17 - Stage 2	60 03-19-21 06-11-2	Prepare waterman Relocation/ New Facility Plans
tall New Watermain / Facilities - Rte. 17 - Stage 1 tall New Watermain / Facilities - Rte. 17 - Stage 2		The state of the s
tall New Watermain / Facilities - Rte. 17 - Stage 2	30 08-19-21 09-30-2	Review/Approve Relocation / New Facility Plans with Utility Owner
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ry Sewer Relocation / New Facility Plans	30 10-01-21 11-11-2	Relocate / Install New Water main / Facilities - Rite. 17 - Stage 2
ary Sewer Relocation / New Facility Plans	257 11-03-20 11-11-2	
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ve Relocation / New Facility Plans with Utility Owner	60 03-19-21 06-11-2	Review/Approve Relocation / New Facility Plans with Utility Owner
tall New Sanitary Sewer / Facilities - Rte. 17 - Stage 1	30 08-19-21 09-30-	
tall New Sanitary Sewer / Facilities - Rte. 17 - Stage 2	30 10-01-21 11-11-2	Relocate / Install New Sanitary Sewer / Facilities - Rte. 17 - Stage 2
	268 10-19-20 11-11-2	
ting with Utility Owner(s)	1 10-19-20 10-19-2	
ine/Conceptual Relocation Design	60 10-20-20 01-21-	
s) Submits PE Estimate	30 01-22-21 03-04-2	
ve PE Estimate	5 03-05-21 03-11-2	☐ Review/Approve PE Estimate
s) Completes Utility Design	60 03-12-21 06-04-2	Utility Owner(s) Completes Utility Design
Design	5 06-07-21 06-11-2	Il Approve Utility Design
tall New Gas Line / Facilities - Rte. 17 - Stage 1	30 08-19-21 09-30-2	Relocate / Install New Gas Line / Facilities - Rte. 17 - Stage 1
tall New Gas Line / Facilities - Rte. 17 - Stage 2	30 10-01-21 11-11-2	Relocate / Install New Gas Line / Facilities - Rte. 17 - Stage 2
	268 10-19-20 11-11-2	<mark> </mark>
ting with Utility Owner(s)	1 10-19-20 10-19-	I: Hold UFI Meeting with Utility Owner(s)
Line/Conceptual Relocation Design	60 10-20-20 01-21-	Prepare Red-Line/Conceptual Relocation Design
s) Submits PE Estimate	30 01-22-21 03-04-2	Utility Owner(s) Submits PE Estimate
ve PE Estimate	5 03-05-21 03-11-2	i i i i i i i i i i i i i i i i i i i
s) Completes Utility Design	60 03-12-21 06-04-2	Utility Owner(s) Completes Utility Design
Design	5 06-07-21 06-11-2	: Il Approve Utility Design
tall New OH Power and Comm - Rte. 17 - Stage 1	30 08-19-21 09-30-3	Relocate / Install New OH Power and Comm - Rte. 17 - Stage 1
tall New OH Power and Comm - Rte. 17 - Stage 2	30 10-01-21 11-11-2	Relocate:/ Install New OH:Power and Comm - Rte. 17 - Stage 2
	965 08-14-20 06-27-	
MATERIAL PROCUREMENT	965 08-14-20 06-27-	<mark></mark> : ::::: ; ▼
et Field Office for Construction	30 10-05-20 11-13-2	Mobilization/Set Field Office for Construction
Controls	10 10-19-20 10-30-	☐ Initial:Survey Controls
N TASKS	917 10-22-20 06-27-	
ule Update / Monthly Reports	915 10-22-20 06-25-	
ruction Support	900 11-16-20 06-27-	
ly Audits	900 11-16-20 06-27-	
	307 10-12-20 01-12-	U 19 19 19 19 19 19 19 19 19 19 19 19 19
Submit Intial C-25's / Material SUBMITTALS	7 10-12-20 10-18-	
v & Approve Intial C-25's	21 10-19-20 11-08-2	□ VDOT Review & Approve Intial C-25's
tal tal Net Co	MATERIAL PROCUREMENT Field Office for Construction ontrols TASKS le Update / Monthly Reports lection Support	New OH Power and Comm - Rte. 17 - Stage 1 30 08-19-21 09-30-21 11-11-21 11-1



		CK RIVER CROSSING Activity Name	4.6.1 PROPOSAL Original Start	Finish	LE FEBRUAF 2020 2021 2022 2023 2024
		Activity Name	Duration	I IIIISII	TAMANTIC DINOISAIC LIMANTIC DINCISIALIC MANTIC DINOISAIC LIMANTIC
	GEN0000-1700	Prepare and Submit Shop Drawings for Signal Structures	30 05-14-21	06-25-21	
	GEN0000-1800	Review/Approve Shop Drawings for Signal Structures	30 06-26-21	07-25-21	1 Review/Approve Shop Drawings for Signal Structures
	GEN0000-1900	Fabricate Signal Structures	80 07-26-21	11-15-21	1 Fabricate Signal Structures
	GEN0000-2000	Prepare and Submit Shop Drawings for OH Sign Structures / ITS E	Equipment 60 11-16-20	02-17-21	1 Prepare and Submit Shop Drawings for OH Sign Structures / ITS Equipment
	GEN0000-2100	Review/Approve Shop Drawings for OH Sign Structures / ITS Equip	ipment 30 02-18-21	03-19-21	1 Review/Approve Shop Drawings for OH Sign Structures / ITS Equipment
	GEN0000-2200	Fabricate OH Sign Structures / ITS Equipment	120 03-22-21	09-08-21	1 Fabricate OH Sign Structures / ITS Equipment
	GEN0000-2400	Prepare and Submit Soundwall Plans	60 05-14-21	08-09-21	1 Prepare and Submit Soundwall Plans
	GEN0000-3900	Review/Approve Soundwall Plans	30 08-10-21	09-08-21	1 Réview/Approve/Soundwall Plans
	GEN0000-4200	Fabricate Soundwall Materials	80 09-09-21	01-12-22	2 Fabricate Soundwall Materials
	BRIDGE B609 (NB RA	PPAHANNOCK CROSSING)	355 01-27-21	06-27-22	2 06-27-22, BRIDGE B609 (NB RAPPAHANNOCK CROSSIN
	GEN0000-2300	B609 - Prepare and Submit Structrual Steel Shop Drawings	90 05-05-21	09-10-21	1 B609 - Prepare and Submit Structrual Steel Shop Drawings
	GEN0000-2500	B609 - Prepare and Submit MSE/Pile Shop Drawings	90 05-05-21	09-10-21	1 B609 - Prepare and Submit MSE/Pile Shop Drawings
	GEN0000-2600	B609 - Prepare and Submit Substructure Rebar Shop Drawings	20 01-27-21	02-23-21	1 🗀 \$609 - Prepare and Submit Substructure Rebar Shop Drawings
	GEN0000-2650	B609 - Prepare and Submit Superstructure Rebar Shop Drawings	40 05-05-21	06-30-21	1 B609'- Prepare and Submit Superstructure Rebar Shop Drawings
	GEN0000-2700	B609 - Prepare and Submit SIP Shop Drawings	60 05-05-21	07-29-21	
	GEN0000-2800	B609 - Prepare and Submit Bearing Pad Shop Drawings	60 05-05-21	07-29-21	
	GEN0000-2900	B609 - Review/Approve MSE/Pile Shop Drawings	21 09-11-21	10-01-21	
	GEN0000-3000	B609 - Review/Approve Bearing Pad Shop Drawings	21 07-30-21	08-19-21	
	GEN0000-3100	B609 - Review/Approve Substructure Rebar Shop Drawings	21 02-24-21	03-16-21	
	GEN0000-3150	B609 - Review/Approve Superstructure Rebar Shop Drawings	21 07-01-21	07-21-21	
	GEN0000-3190	B609 - Review/Approve SIP Shop Drawings	21 07-30-21	08-19-21	
	GEN0000-3200	B609 - Fabricate MSE Wall/Pie Material	60 10-04-21	01-07-22	
	GEN0000-3300 GEN0000-3400	B609 - Fabricate Bearing Pads	80 08-20-21	12-15-21	
	GEN0000-3400 GEN0000-3500	B609 - Fabricate Substructure Rebar	20 03-17-21	04-13-21	
	GEN0000-3550	B609 - Fabricate Supertructure Rebar	60 07-22-21	10-14-21	
	GEN0000-3600	B609 - Fabricate SIP	80 08-20-21	12-15-21	
	GEN0000-3700	B609 - Review/Approve Structural Steel Shop Drawings	21 09-11-21	10-01-21	
	GEN0000-3800	B609 - Fabricate Structural Steel Girders	120 10-04-21	04-01-22	
	GEN0000-4000	B609 - Prepare and Submit Erection Plan	45 04-04-22	06-06-22	
	GEN0000-4100	B609 - Review/Approve Erection Plan	21 06-07-22	06-27-22	
		LANE BRIDGE REPLACEMENT)	209 05-05-21	03-10-22	
	GEN0000-4300	B608 - Prepare and Submit PCBT Shop Drawings	75 05-05-21	08-19-21	
	GEN0000-4400	B608 - Prepare and Submit SOE Plan	60 05-05-21	07-29-21	
	GEN0000-4500	B608 - Prepare and Submit MSE/Pile Shop Drawings	60 05-05-21	07-29-21	B608 - Prepare and Submit MSE/Pile Shop Drawings
	GEN0000-4600	B608 - Prepare and Submit Rebar Shop Drawings	50 05-05-21	07-15-21	
	GEN0000-4700	B608 - Prepare and Submit SIP Shop Drawings	50 05-05-21	07-15-21	
	GEN0000-4800	B608 - Prepare and Submit Erection Plan	80 05-05-21	08-26-21	1 B608 - Prepare and Submit Erection Plan
	GEN0000-4900	B608 - Prepare and Submit Bearing Pad Shop Drawings	60 05-05-21	07-29-21	1 B608 - Préparé and Submit Beating Pad Shop Drawings
	GEN0000-5000	B608 - VDOT Review/Approve PCBT Shop Drawings	21 08-20-21	09-09-21	1 B608 - VDOT Review/Approve; PCBT Shop Drawings
	GEN0000-5100	B608 - VDOT Review/Approve SOE Plan	21 07-30-21	08-19-21	1 B608 - VDOT Review/Approve SOE Plan
	GEN0000-5200	B608 - VDOT Review/Approve MSE/Pile Shop Drawings	21 07-30-21	08-19-21	1 □ B608 - VDOT Review/Approve MSE/Pile Shop Drawings
	GEN0000-5300	B608 - VDOT Review/Approve Erection Plan	21 08-27-21	09-16-21	1 B608 - VDQT Review/Approve Erection Plan
	GEN0000-5400	B608 - VDOT Review/Approve Bearing Pad Shop Drawings	21 07-30-21	08-19-21	1 B608 - VDOT Review/Approve Bearing Pad Shop Drawings
	GEN0000-5500	B608 - VDOT Review/Approve Rebar Shop Drawings	21 07-16-21	08-05-21	1 B608 - VDOT Review/Approve Rebar Shop Drawings
	GEN0000-5600	B608 - VDOT Review/Approve SIP Shop Drawings	21 07-16-21	08-05-21	
	GEN0000-5700	B608 - Fabricate Pile/MSE Wall Materials	40 08-20-21	10-15-21	
	GEN0000-5800	B608 - Fabricate Bearing Pads	75 08-20-21	12-08-21	
			1. 1.		
l A ofu	al Work	Critical Remaining Work Summary			\$ SHIRLEY

ORTHBOUND RAPPAHANNOCH	K RIVER CROSSING	4.6.1 PROPOSAL SCHEDULE	FEBRUARY 25
0	Activity Name	Original Start Finish Duration	2020 2021 2022 2023 2024 A M J J S O N D J F M A M J J S O N D J F M A M J J S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J F M A M J J S S O N D J
GEN0000-5900	B608 - Fabricate Rebar	40 08-06-21 10-01-21	B608 - Fabricate Rebar
GEN0000-6000	B608 - Fabricate SIP	60 08-06-21 10-29-21	B608 - Fabricate SIP
GEN0000-6100	B608 - Fabricate PCBT Girders	120 09-10-21 03-10-22	B608 - Fabricate PCBT Girders
CONSTRUCTION QUA	LITY ASSURANCE / QUALITY CONTROL PROCESS	965 08-14-20 06-27-24	
QAQC000-1000	Prepare/Submit Construction QA/QC Plan	15 08-14-20 09-03-20	Prepare/Submit Construction QA/QC Plan
QAQC000-1100	VDOT Review Construction QA/QC Plan	21 09-04-20 09-24-20	UDOT Review Construction QA/QC Plan
QAQC000-1200	Comment Responses and Resubmit Construction QA/QC Plan	10 09-25-20 10-08-20	Comment Responses and Resubmit Construction QA/QC Plan
QAQC000-1300	VDOT Review 2nd Submission Construction QA/QC Plan	21 10-09-20 10-29-20	☐ VDOT Review 2nd Submission Construction QA/QC Plan
QAQC000-1400	Construction QA/QC Plan Approved	0 10-29-20	◆ Construction QA/QC Plan Approved
QAQC000-1500	QA/QC Preparatory Meeting - Road Widening / E&S Controls / Clearing	1 11-16-20 11-16-20	I QA/QC Preparatory Meeting - Road Widening / E&S Controls / Clearing
QAQC000-1600	QA/QC Preparatory Meeting - Grading & Drainage	1 11-16-20 11-16-20	I QA/QC Preparatory Meeting - Grading & Drainage
QAQC000-1700	QA/QC Preparatory Meeting - Cement Treated Subbase	1 11-17-20 11-17-20	I QA/QC Preparatory Meeting - Cement Treated Subbase
QAQC000-1800	QA/QC Preparatory Meeting - SWM Ponds	1 11-17-20 11-17-20	I QA/QC Preparatory Meeting - SWM Ponds
QAQC000-1900	QA/QC Preparatory Meeting - Intermediate Paving	1 11-18-20 11-18-20	I QA/QC Preparatory Meeting - Intermediate Paving
QAQC000-1900 QAQC000-2000	QA/QC Preparatory Meeting - Intermediate Faving QA/QC Preparatory Meeting - Surface Paving / Pavement Markings	1 11-19-20 11-19-20	I QA/QC Preparatory Meeting - Intermediate Faving
QAQC000-2100	QA/QC Preparatory Meeting - Surface Paving / Pavement Markings QA/QC Preparatory Meeting - Guardrail & Signs	1 11-19-20 11-19-20	I QA/QC Preparatory Meeting - Guardrail & Signs
	, , , , ,		
QAQC000-2200	QA/QC Preparatory Meeting - Bridge Piles	1 01-27-21 01-27-21	I QA/QC Preparatory Meeting - Bridge Piles
QAQC000-2300	QA/QC Preparatory Meeting - Bridge Foundation/Concrete	1 01-28-21 01-28-21	QA/QC Preparatory Meeting - Bridge Foundation/Concrete
QAQC000-2400	QA/QC Preparatory Meeting - Bridge Superstructure / Erection	1 06-28-22 06-28-22	QA/QC Preparatory Meeting - Bridge Superstructure / Erection
QAQC000-2500	QA/QC Preparatory Meeting - Bridge Decks	1 06-29-22 06-29-22	QA/QC Preparatory Meeting - Bridge Decks
QAQC000-2600	QA/QC Inspections/Reporting/As-Builts	900 11-16-20 06-27-24	QA/C
	OF RAPPAHANNOCK RIVER BRIDGE	842 11-16-20 04-05-24	i i i i i i i i v
AREA 1 - G ENERAL		5 11-16-20 11-20-20	▼ 11-20-20, AREA 1 - GENERAL
AR10000-1000	Begin Stage 1 Construction - Area 1	0 11-16-20	● Begin Stage 1 Construction - Area 1
AR10000-1100	Install Initial MOT / Construction Signage	5 11-16-20 11-20-20	II Install Initial MOT / Construction Signage
Area 1 - Zone 1 - SOUT Area 1 - Zone 1 - SO	TH OF RTE 3 INTERCHANGE (SWM / SOUNDWALL)	98 07-18-22 12-06-22 98 07-18-22 12-06-22	12-06-22, Area 1 - Zone 1 - SOUTH OF RTE 3 INT 12-06-22, Area 1 - Zone 1 - SOUNDWALL €
Area 1 - Zone 1 - SO AR1Z1SND-1000		4 07-18-22 07-22-22	Rte:3 SW C - Install Construction Entrance / Access Road to
AR1Z1SND-1100	Rte 3 SW C - Install E&S / Perimeter Controls	5 07-22-22 07-29-22	Rte 3 SW C - Install E&S / Perimeter Controls
AR1Z1SND-1200		7 07-29-22 08-09-22	Rte 3 SW C - Clear and Grubb for Soundwall Construction
AR1Z1SND-1300	Rte 3 SW C - Earth work for Soundwall Construction	12 08-09-22 08-25-22	: Rte 3/SW C + Earth work for Soundwall Construction
AR1Z1SND-1400	Rte 3 SW C - Mobilize Drill Rig / Crane	2 08-25-22 08-29-22	Rte 3 SW C - Mobilize Drill Rig / Crane
AR1Z1SND-1500	Rte 3 SW C - Drill Caissons / Set Posts - Soundwall	30 08-30-22 10-11-22	Rte 3 \$W C - Drill Caissons / Set Posts - Soundwall
AR1Z1SND-1600		14 10-11-22 10-31-22	☐ Rte 3 SW C - Install Panels - Soundwall
AR1Z1SND-1700		10 10-31-22 11-14-22	Rte 3 SW C - Finish Grade Soundwall/ Ditches
AR1Z1SND-1800	Rte 3 SW C - Final Stabilization / Remove Construction Enrances / MOT Devices	7 11-23-22 12-06-22	Rte 3 SW, C Final Stabilization / Remove Construc
Area 1 - Zone 1 - Rte		75 08-09-22 11-23-22	▼ 11-23-22, Area 1 - Zone 1 - Rte. 3 \$WM
	Install Temp Signage / MOT / E&S and Access to SWM Location	4 08-09-22 08-15-22	☐ Install Temp Signage / MOT / E&\$ and Access to \$WM Loc
	Clear and Grubb for SWM Facilities	5 08-15-22 08-22-22	Clear and Grubb for SWM Facilities
AR1Z1SWM-1200	Mass Earthwork for SWM Facilities	28 08-22-22 09-30-22	Mass Earthwork for SWM Facilities
AR1Z1SWM-1300	Install Drainage Pipe / SWM Structures	12 09-30-22 10-18-22	☐ Install Drainage Pipe / SWM Structures
AR1Z1SWM-1400	Install SWM Features	10 10-18-22 11-01-22	☐ Install SWM;Features
AR1Z1SWM-1500	Final Grading / Stabilizatoin	8 11-02-22 11-11-22	☐ Final Grading / Stabilizatoin
AR1Z1SWM-1600	Install Access Roads / Fence / Gates	8 11-11-22 11-23-22	☐ Install Access Roads / Fence / Gates
Area 1 - Zone 3 - RAM	P C - FROM RTE 3 TO 5502+00	458 09-14-21 07-18-23	▼ 07-18-23, Area 1 - Zone 3 - RAM
Area 1 - Zone 3 - Ra	mp C from Rte. 3 to 5502 - MOT Stage 1B	208 09-14-21 07-18-22	▼ 07-18+22, Area 1 - Zone 3 - Ramp C from Rte. 3 to 5502 + MO
AR1Z31B-1000	Set Temp Barrier / MOT Devices - Right Shoulder	5 09-14-21 09-20-21	I Set Temp Barrier / MOT Devices - Right Shoulder
AR1Z31B-1100	Install Temporary Construction Entrance	3 09-21-21 09-23-21	I Install Temporary Construction Entrance
AR1Z31B-1000 AR1Z31B-1100 Actual Work	Set Temp Barrier / MOT Devices - Right Shoulder	5 09-14-21 09-20-21	▼ 07-18÷22, Area 1 - Zone 3 - Ramp C from Rte. 3 to Set Temp Barrier / MOT Devices - Right Shoulder

NORTHBO	OUND RAPPAHANNOCK	RIVER CROSSING	4.6.1 PROPOSAL SCHE	DULE		FEBRUARY 25, 202
ity ID		Activity Name	Original Start Finis Duration	sh M	2020 A M J J A S O N D J F M A 	2021 2022 2023 2024 VMJJJASONDJFMAMJJJASONDJFMAMJJJASONDJFMAMJJJASON
	AR1Z31B-1200	Remove / Adjust Existing Roadway Signage	5 09-24-21 09-3	0-21		Remove /Adjust Existing Roadway Signage
	AR1Z31B-1300	Install Perimeter E&S Controls	5 09-24-21 09-3	0-21		Install Perimeter E&S Controls
	AR1Z31B-1400 AR1Z31B-1500	Clear and Grubb Ramp C / NB CD Lanes	15 10-01-21 10-2	1-21		Clear and Grubb Ramp C / NB CD Lanes
		Demo Existing Guardrail / Barrier Wals	10 10-08-21 10-2	1-21		☐ Demo Existing Guardrail / Barrier Wals
	AR1Z31B-1600	Strip Top soil / Earthwork - Ramp C to Cowan Blvd	10 10-15-21 10-2	8-21		Strip Top soil / Earthwork - Ramp C to Cowan Blvd
	AR1Z31B-1700	Install Deep Drainage / Culvert Pipes - Ramp C to Cowan Blvd	12 10-22-21 11-0	8-21		☐ Install Deep Drainage / Culvert Pipes - Ramp C to Cowan Blvd
	AR1Z31B-1800	Install Embankment/Cut to Fill to Sub-Grade - Ramp C to Cowan Blvd FPS OH Sign Structure Foundations / ITS Infrastructure	20 11-09-21 12-0	9-21		Install Embankment/Cut to Fill to Sub-Grade - Ramp C to Cowan Blvd
	AR1Z31B-1900		20 11-18-21 12-2	.0-21		FP\$ OH Sign Structure Foundations / ITS Infrastructure
	AR1Z31B-2000	Place Sub-Base Aggregate - Ramp C to Cowan Blvd	10 12-10-21 01-1	0-22		Place Sub-Base Aggregate - Ramp C to Cowan Blvd
	AR1Z31B-2100	Install Underdrain - Ramp C to Cowan Blvd Install BBPS at Cowan Blvd Bridge	5 01-10-22 01-1	7-22		☐ Install Underdrain - Ramp Cito Cowan Blvd
	AR1Z31B-2200		12 01-10-22 01-2	26-22		
	AR1Z31B-2300	Install Drainage Structures / Pipe / Rough Grade Ditches	14 01-17-22 02-0	4-22		☐ Install Drainage Structures / Pipe / Rough Grade Ditches
	AR1Z31B-2400	Pavement Section - Ramp C to Cowan Blvd	8 02-07-22 02-2	3-22		Pavement Section - Ramp C to Cowan Blvd
	AR1Z31B-2500	Install Permanent Signage / OH Sign Structures / Lighting	20 02-04-22 03-0	4-22		Install Permanent Signage / OH Sign Structures / Lighting
	AR1Z31B-2600	Install Guardrail / Finish Grade Ditches	8 03-04-22 03-1	6-22		□ Install Guardrail / Finish Grade Ditches
	AR1Z31B-2700	Install Rip Rap at Cowan Blvd Bridge Abutment / Pier		2-22		Install Rip Rap at Cowan Blvd Bridge Abutment / Pier
	AR1Z31B-2800	Cut / Fill to Subgrade - Cowan Blvd to Fall Hill Rd		1-22		Cut / Fill to Subgrade - Cowan Blvd to Fall Hill Rd
	AR1Z31B-2900	Install Drainage Pipe / Structures - Cowan Blvd to Fall Hill Rd		1-22		Install Drainage Pipe / Structures - Cowan Blvd to Fall Hill Rd
	AR1Z31B-3000	Place Sub-base Aggregate - Cowan Blvd to Fall Hill Rd		5-22		☐ Place Sub-base Aggregate - Cowan Blvd to Fall Hill Rd
	AR1Z31B-3100	Install Underdrain - Cowan Blvd to Fall Hill Rd		25-22		I Install Underdrain - Cowan Blvd to Fall Hill Rd
	AR1Z31B-3200	FPS Median Barrier / BPPS Footings		9-22		☐ FP\$ Median Barrier / BPPS Footings
	AR1Z31B-3300	Pavement Section - Ramp C to to Fall Hill Rd		11-22		□ Pavement Section - Ramp C to to Fall Hill Rd
	AR1Z31B-3400	Pour Median Barrier / BPPS Wals		11-22		Pour Median Barrier / BPPS Wals
	AR1Z31B-3500	Install Permanent Signage / ITS / Lighting		9-22		Install Permanent Signage / ITS / Lighting
	AR1Z31B-3600	Install Guardrail / Finish Grade Ditches		8-22		☐ Install Guardrail / Finish Grade Ditches
				8-22		
	AR1Z31B-3700	Section Ready for Surface Pave or Open to Traffic		-		◆ Section Ready for Surface Pave or Open to Traffic
	RETAINING WALL	#1 - 5485 to 5496 Install Access Road for Retaining Wall		.6-22 .8-21		
		Drill Caissons / Install Soldier Pile				Drill Calssons / Install Soldier Pile
	1			11-21		
		Excavate / Install Temp Lagging		2-21		Excavate / Install Temp Lagging
		Install Pre-cast Panels	10 12-23-21 01-1			☐ Install Pre-cast Panels
		Backfill Wall Panels / Install Drainage Ditch	8 01-17-22 01-2			Backfill Wall Panels / Install Drainage Ditch
	RETAINING WALL		75 11-19-21 03-1			
		Install Access Road for Retaining Wall	7 11-19-21 12-0			
		Drill Caissons / Install Soldier Pile	28 12-02-21 01-2			Drill Caissons / Install Soldier Pile
		Excavate / Install Temp Lagging		5-22		Excavaté / Install Temp Lagging
				3-22		🗓 Install Pre-cast Panels
		Backfill Wall Panels / Install Drainage Ditch		7-22	; }-+-+-+	Backfill Wall Panels / Install Drainage Ditch
		te. 3 - SWM (Modify Existing Ponds)		6-22		▼ 02-16-22, Area 1 - Zone 3 - Rte. 3 - SWM (Modify Existing Ponds)
		Install Temp Signage / MOT / Access to SWM Locations	8 10-22-21 11-0			Install Temp Signage / MOT / Access to SWM Locations
		Modify Existing SWM Facilities at Rte. 3 Interchange		7-21		Modify Existing \$WM Facilities at Rte. 3 Interchange
				31-22		Final Grading / Stabilizatoin
		Install Access Roads / Fence / Gates		6-22		☐ Install Access Roads / Fence / Gates
		p C from Rte. 3 to 5502 - MOT Stage 2B		8-23		▼ 07-18-23, Area 1 - Zone 3 - Ramp C fi
	AR1Z32B-1000	Install Stage 2 MOT / Signage		2-23		🚺 Install Stage 2 MOT / Signage
	AR1Z32B-1100	Reconstruct Ramp C Left Shoulder - 5442 to 5448		6-23		Reconstruct Ramp C Left Shoulder - 5442
	AR1Z32B-1200	Finish Grade / Matt Ditches and Slopes	10 05-17-23 05-3	31-23		☐ Finish Grade / Matt Ditches and Slopes



Area	Area 1 - Zone 2 - GP AR1Z21A-1000 AR1Z21A-1100 AR1Z21A-1200 AR1Z21A-1300 AR1Z21A-1400 Area 1 - Zone 2 - GP AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	Complete Permanent Signage / ITS Remove Temp Barrier / MOT Devices Final Surface Pave / Mill and Overlay / Permanent Striping Ram Install Guardrail / Signage Ramp C / 95 NB CD Lanes Section Complete - Area 1 Ramp C / 95 NB CD Lanes GP LANES 4493+00 TO 4543+00 (RRC) Lanes Rte. 3 to RRC - MOT Stage 1A Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Shoul Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances Install Temp Sediment Basins / Initial E&S / Perimeter Controls	I and Pave Rumble Strip	3 12 8 0 837 47 3 5 12 15 4	05-31-23 06-14-23 06-19-23 07-06-23	Finish 06-14-23 06-19-23 07-06-23 07-18-23 04-05-24 02-05-21 11-30-20 12-07-20 12-23-20 01-27-21 02-05-21	2020 2021 2022 2023 2024 [A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S Complete Permanent Signage / ITS Remove Temp Barrier / MOT Devi Install Guardrail / Signage Ramp Section Complete - Area 1 Ramp Od-05-24, / Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening
Area	AR1Z32B-1400 AR1Z32B-1500 AR1Z32B-1600 AR1Z32B-1700 a 1 - Zone 2 - 95 NB Area 1 - Zone 2 - GP AR1Z21A-1100 AR1Z21A-1100 AR1Z21A-1300 AR1Z21A-1400 AR1Z21A-1400 AR1Z21B-1400 AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1300 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1500	Remove Temp Barrier / MOT Devices Final Surface Pave / Mill and Overlay / Permanent Striping Ram Install Guardrail / Signage Ramp C / 95 NB CD Lanes Section Complete - Area 1 Ramp C / 95 NB CD Lanes GP LANES 4493+00 TO 4543+00 (RRC) Lanes Rte. 3 to RRC - MOT Stage 1A Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances	I and Pave Rumble Strip	3 12 8 0 837 47 3 5 12 15 4	06-14-23 06-19-23 07-06-23 11-23-20 11-23-20 12-01-20 12-08-20 12-16-20 01-29-21	06-19-23 07-06-23 07-18-23 07-18-23 04-05-24 02-05-21 11-30-20 12-07-20 12-23-20 01-27-21 02-05-21	Remove Temp Barrier / MOT Devi ☐ Final Surface Pave / Mill and Ove ☐ Install Guardrail / Signage Ramp ◆ Section Complete - Area 1 Ram ✓ 04-05-24, / ✓ 02-05-21, Area 1 - Zone 2 - GP Lanes Rte. 3 to RRC - MOT Stage 1A ☐ Install Temp MOT Devices - Right Shoulder 95 NB ☐ Install Initial E&S / Perimeter Controls
Area	AR1Z32B-1400 AR1Z32B-1500 AR1Z32B-1600 AR1Z32B-1700 a 1 - Zone 2 - 95 NB Area 1 - Zone 2 - GP AR1Z21A-1100 AR1Z21A-1100 AR1Z21A-1300 AR1Z21A-1400 AR1Z21A-1400 AR1Z21B-1400 AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1300 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1500	Remove Temp Barrier / MOT Devices Final Surface Pave / Mill and Overlay / Permanent Striping Ram Install Guardrail / Signage Ramp C / 95 NB CD Lanes Section Complete - Area 1 Ramp C / 95 NB CD Lanes GP LANES 4493+00 TO 4543+00 (RRC) Lanes Rte. 3 to RRC - MOT Stage 1A Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances	I and Pave Rumble Strip	3 12 8 0 837 47 3 5 12 15 4	06-14-23 06-19-23 07-06-23 11-23-20 11-23-20 12-01-20 12-08-20 12-16-20 01-29-21	06-19-23 07-06-23 07-18-23 07-18-23 04-05-24 02-05-21 11-30-20 12-07-20 12-23-20 01-27-21 02-05-21	Remove Temp Barrier / MOT Devi ☐ Final Surface Pave / Mill and Ove ☐ Install Guardrail / Signage Ramp ◆ Section Complete - Area 1 Ram ✓ 04-05-24, / ✓ 02-05-21, Area 1 - Zone 2 - GP Lanes Rte. 3 to RRC - MOT Stage 1A ☐ Install Temp MOT Devices - Right Shoulder 95 NB ☐ Install Initial E&S / Perimeter Controls
Area	AR1Z32B-1500 AR1Z32B-1600 AR1Z32B-1700 a 1 - Zone 2 - 95 NB Area 1 - Zone 2 - GP AR1Z21A-1000 AR1Z21A-1200 AR1Z21A-1300 AR1Z21A-1400 Area 1 - Zone 2 - GP AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	Final Surface Pave / Mill and Overlay / Permanent Striping Ram Install Guardrail / Signage Ramp C / 95 NB CD Lanes Section Complete - Area 1 Ramp C / 95 NB CD Lanes GP LANES 4493+00 TO 4543+00 (RRC) Lanes Rte. 3 to RRC - MOT Stage 1A Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances	I and Pave Rumble Strip	12 8 0 837 47 3 5 12 15 4	06-19-23 07-06-23 11-23-20 11-23-20 11-23-20 12-01-20 12-08-20 12-16-20 01-29-21	07-06-23 07-18-23 07-18-23 04-05-24 02-05-21 11-30-20 12-07-20 12-23-20 01-27-21 02-05-21	☐ Final Surface Pave / Mill and Ove ☐ Install Guardrail / Signage Ramp ◆ Section Complete - Area 1 Ram • Section Complete - Area 1 Ram • O4-05-24, / • O2-05-21, Area 1 - Zone 2 - GP Lanes Rte. 3 to RRC - MOT Stage 1A ☐ Install Temp MOT Devices - Right Shoulder 95 NB ☐ Install Initial E&S / Perimeter Controls
Area	AR1Z32B-1600 AR1Z32B-1700 a 1 - Zone 2 - 95 NB Area 1 - Zone 2 - GP AR1Z21A-1000 AR1Z21A-1100 AR1Z21A-1300 AR1Z21A-1400 AR1Z21B-1400 AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1300 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	Install Guardrail / Signage Ramp C / 95 NB CD Lanes Section Complete - Area 1 Ramp C / 95 NB CD Lanes GP LANES 4493+00 TO 4543+00 (RRC) Lanes Rte. 3 to RRC - MOT Stage 1A Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances	I and Pave Rumble Strip	80 837 47 3 5 12 15 4	07-06-23 11-23-20 11-23-20 11-23-20 12-01-20 12-08-20 12-16-20 01-29-21	07-18-23 07-18-23 04-05-24 02-05-21 11-30-20 12-07-20 12-23-20 01-27-21 02-05-21	□ Install Guardrail / Signage Ramp Section Complete - Area 1 Ramp 1 02-05-21, Area 1: - Zone 2: GP Lanes Rte. 3 to RRC - MOT Stage 1A 1 Install Temp MOT Devices - Right Shoulder 95 NB 1 Install Initial E&S / Perimeter Controls
Area	AR1Z32B-1700 a 1 - Zone 2 - 95 NB Area 1 - Zone 2 - GP AR1Z21A-1000 AR1Z21A-1100 AR1Z21A-1200 AR1Z21A-1300 AR1Z21A-1400 Area 1 - Zone 2 - GP AR1Z21B-1000 AR1Z21B-1100 AR1Z21B-1300 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	Section Complete - Area 1 Ramp C / 95 NB CD Lanes GP LANES 4493+00 TO 4543+00 (RRC) Lanes Rte. 3 to RRC - MOT Stage 1A Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances		0 837 47 3 5 12 15 4	11-23-20 11-23-20 11-23-20 12-01-20 12-08-20 12-16-20 01-29-21	07-18-23 04-05-24 02-05-21 11-30-20 12-07-20 12-23-20 01-27-21 02-05-21	◆ Section Complete - Area 1 Ram 04-05-24, 1 Install Temp MOT Devices - Right Shoulder 95 NB I Install Initial E&S:/ Perimeter Controls
Area	AT - Zone 2 - 95 NB Area 1 - Zone 2 - GP AR1Z21A-1000 AR1Z21A-1100 AR1Z21A-1200 AR1Z21A-1300 AR1Z21A-1400 AR1Z21A-1400 AR1Z21B-1400 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	GP LANES 4493+00 TO 4543+00 (RRC) Lanes Rte. 3 to RRC - MOT Stage 1A Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances		837 47 3 5 12 15 4	11-23-20 11-23-20 11-23-20 12-01-20 12-08-20 12-16-20 01-29-21	04-05-24 02-05-21 11-30-20 12-07-20 12-23-20 01-27-21 02-05-21	
An	Area 1 - Zone 2 - GP AR1Z21A-1000 AR1Z21A-1100 AR1Z21A-1200 AR1Z21A-1300 AR1Z21A-1400 Area 1 - Zone 2 - GP AR1Z21B-1100 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	Lanes Rte. 3 to RRC - MOT Stage 1A Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances		47 3 5 12 15 4 367	11-23-20 11-23-20 12-01-20 12-08-20 12-16-20 01-29-21	02-05-21 11-30-20 12-07-20 12-23-20 01-27-21 02-05-21	02-05-21; Area 1; - Zone 2; - GP Lanes Rte. 3 to RRC; - MOT Stage 1A: Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls
Ar	AR1Z21A-1000 AR1Z21A-1100 AR1Z21A-1200 AR1Z21A-1300 AR1Z21A-1400 Area 1 - Zone 2 - GP AR1Z21B-1000 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances		3 5 12 15 4 367	11-23-20 12-01-20 12-08-20 12-16-20 01-29-21	11-30-20 12-07-20 12-23-20 01-27-21 02-05-21	Install Temp MOT Devices - Right Shoulder 95 NB Install Initial E&S:/ Perimeter Controls
Ar	AR1Z21A-1200 AR1Z21A-1300 AR1Z21A-1400 Area 1 - Zone 2 - GP AR1Z21B-1000 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	Install Initial E&S / Perimeter Controls Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances		5 12 15 4 367	12-01-20 12-08-20 12-16-20 01-29-21	12-23-20 01-27-21 02-05-21	☐ Install Initial E&S:/ Perimeter Controls
An	AR1Z21A-1200 AR1Z21A-1300 AR1Z21A-1400 Area 1 - Zone 2 - GP AR1Z21B-1000 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	Saw Cut / Excavate for Shoulder Sliver Widening Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances		12 15 4 367	12-08-20 12-16-20 01-29-21	12-23-20 01-27-21 02-05-21	4
Ar	AR1Z21A-1300 AR1Z21A-1400 Area 1 - Zone 2 - GP AR1Z21B-1000 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1400 AR1Z21B-1500	Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances		15 4 367	12-16-20 01-29-21	01-27-21 02-05-21	I''' I''' I''' Oaw Gul/Excavale ioronouiceroliver widening '''' '''' '''' '''' ''''
Ar	AR1Z21A-1400 Area 1 - Zone 2 - GP AR1Z21B-1000 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1500	Re-Stripe 95 NB GP Lanes - Shift to Right Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder 195 NB Install Temporary Construction Entrances		4 367	01-29-21	02-05-21	Grade/Sub-Base Aggregate/Pave Shoulder Sliver Widening/Mill and Pave Rumble Strip
An	Area 1 - Zone 2 - GP AR1Z21B-1000 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1500	Lanes Rte. 3 to RRC - MOT Stage 1B 95 SB RRC Project Substantially Complete on 95 SB Left Should Install Temp Barrier / MOT Devices - Left Shoulder I95 NB Install Temporary Construction Entrances	der	367			Re-Stripe 95 NB GP Lanes - Shift to Right
	AR1Z21B-1000 AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1500	95 SB RRC Project Substantially Complete on 95 SB Left Shoul Install Temp Barrier / MOT Devices - Left Shoulder I95 NB Install Temporary Construction Entrances	der			05-18-22	University of the second seco
	AR1Z21B-1100 AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1500	Install Temp Barrier / MOT Devices - Left Shoulder I95 NB Install Temporary Construction Entrances			09-15-21*	03-10-22	
	AR1Z21B-1200 AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1500	Install Temporary Construction Entrances		4	11-23-20	12-01-20	□ Install Temp Barrier / MOT Devices - Left Shoulder I95 NB
	AR1Z21B-1300 AR1Z21B-1400 AR1Z21B-1500	, ,			12-02-20	12-01-20	Install Temporary Construction Entrances
	AR1Z21B-1400 AR1Z21B-1500				12-04-20	12-15-20	☐ Install Temp Sediment Basins / Initial E&S / Perimeter Controls
	AR1Z21B-1500	Clear and Grubb NB/SB Median Area			05-03-21	05-07-21	Clear and Grubb NB/SB Median Area
		Strip Top Soil / Prep Area for Embankment Fill			05-03-21	05-07-21	Strip Top Soil / Prep Area for Embankment Fill
	AR1Z21B-1600	Place Embankment Fill 95 NB Lanes to Abut. A			05-10-21	08-12-21	Place Embankment Fill 95 NB Lanes to Abut. A
	AR1Z21B-1700				06-17-21	07-15-21	Install Deep Culverts / Drainage Pipes
	AR1Z21B-1700 AR1Z21B-1800	Install Deep Culverts / Drainage Pipes		-	09-15-21	07-15-21	┡╾╫╼╫═╫═╫═╫═╫═╫═╫═╫═╫═╫═╫═╫═╫═╫═╫═╫═╫═╫═╫
		Install Temp Barrier / MOT Devices 95 SB Left Shoulder				09-21-21	II Install Temp Barrier / MOT Devices 95 SB Left Shoulder
	AR1Z21B-1900	Demo Existing Asphalt / Guardrail where needed			09-22-21		Demo Existing Asphalt / Guardrail where needed
	AR1Z21B-2000	Install Drainage Pipe / Structures - 95 SB Left Shoulder			10-01-21	10-21-21	□ Install Drainage Pipe / Structures - 95 SB Left Shoulder
	AR1Z21B-2100	Install MSE Wall between NB/SB GP Lanes			10-08-21	11-18-21	Install MSE Wall between NB/SB GPLanes
	AR1Z21B-2200	FPS Moment Slab MSE Wall			11-19-21	12-21-21	FP\$ Moment Slab MSE Wal)
	AR1Z21B-2300	Backfill 95 SB Shoulder / Install Underdrain			11-19-21	12-07-21	□ Backfill 95 SB Shoulder / Install Underdrain
	AR1Z21B-2400	Set Structure Tops / Pour Median Barrier Footing - 95 SB Shou	lder		12-08-21	12-21-21	☐ Set Structure Tops / Pour Median Barrier Footing - 95 \$B Shoulder
	AR1Z21B-2500	Place Sub-base Aggregate / Pave 95 SB Shoulder			12-22-21	01-21-22	Place Sub-base Aggregate / Pave 95 SB Shoulder
	AR1Z21B-2600	Finish Grade Ditch Between 95 SB / NB GP Lanes		10	01-24-22	02-14-22	Finish Grade Ditch Between 95 SB / NB GP Lanes
	AR1Z21B-2700	Install Guardrail / Signage 95 SB / NB Median Area			02-14-22	03-07-22	🗖 İnstall Guardrail / Signage 95 SB / NB Median Area
	AR1Z21B-2800	Install Temp Barrier / Construction Entrances 95 NB Left Should	der after Lane Shift		02-05-21	02-11-21	🗓 Install Temp Barrier / Construction Entrances 95 NB Left Shoulder after Lane Shift
	AR1Z21B-2900	Install / Modify E&S Controls			02-11-21	02-18-21	□ Install / Modify E&\$ Controls
	AR1Z21B-3000	Install Drainge Pipe and Structures - New 95 NB GP Lanes			07-16-21	08-26-21	Install Drainge Pipe and Structures - New 95 NB GP Lanes
	AR1Z21B-3100	Cut / Fill to Subgrade - 95 NB GP Lanes			08-27-21	10-08-21	Cut / Fill to Subgrade - 95 NB GP Lanes
	AR1Z21B-3200	Install OH Sign Foundations / ITS Infrastructure		30	09-17-21	10-29-21	Install OH Sign Foundations / ITS Infrastructure
	AR1Z21B-3300	Place Sub-Base Aggregate - 95 NB GP Lanes		16	10-11-21	11-01-21	□ Place Sub-Base Aggregate - 95 NB GP Lanes
	AR1Z21B-3400	Install Underdrain - 95 NB GP Lanes		8	11-01-21	11-11-21	🗓 Install Underdrain - 95 NB GP Lanes
	AR1Z21B-3500	FPS Median Barrier Footings		30	11-11-21	01-06-22	FPS Median Barrier Footings
	AR1Z21B-3600	Pavement Section - 95 NB GP Lanes		20	01-24-22	03-09-22	Pavement Section + 95 NB GP Lanes
	AR1Z21B-3700	Pour Median Barriers - 95 NB GP Lanes		30	03-09-22	04-20-22	Pour Median Barriers - 95 NB GP Lanes
	AR1Z21B-3800	Install Permanent Signage / ITS / OH Sign Strcutures - 95 NB C	GP Lanes	30	03-09-22	04-20-22	Install Permanent Signage / ITS / OH Sign Stroutures - 95 NB GP La
	AR1Z21B-3900	Install Guardrail / Finish Grade Ditches		20	04-20-22	05-18-22	□ Install Guardrail / Finish Grade Ditches
	AR1Z21B-4000	Section Ready for Surface Pave or Open to Traffic		0		05-18-22	◆ Section Ready for Surface Pave or Open to Traffic
Ar	Area 1 - Zone 2 - GP	Lanes Rte. 3 to RRC - MOT Stage 2B		89	11-22-23	04-05-24	04-05-24,,
		Remove Temp Barrier / MOT - Open new 95 NB GP Lanes to 1	Traffic	5	11-22-23	12-01-23	☐ Remove Temp Barrie
	AR1Z22B-1000	Complete Median Ditches / Drainage / Rip Rap		20	12-01-23	01-08-24	Complete Median



`	OUND RAPPAHANNOCK			SAL SCHEDULE	LE FEBRUAR 2020 2021 2022 2023 2024
)		Activity Name	Original Start Duration	Finish	ZOZO ZOZO ZOZO ZOZO ZOZO ZOZO ZOZO ZOZ
	AR1Z22B-1200	Complete Median Signage / Guadrail / Final Stabilization	20 01-08-	-24 02-05-24	4 Complete Me
	AR1Z22B-1300	Mill and Overlay / Permanent Striping / Reflectors 95 NB GP La	anes 15 03-18-	-24 04-05-24	4
	AR1Z22B-1400	Section Complete	0	04-05-24	4 Section
_	Area 1 - Zone 4 - I-95 NI	B CD LANES 5502+00 TO 5543+50 (RRC)	657 05-14-	-21 01-08-24	4 ▼ 01-08-24, Area
	Area 1 - Zone 4 - CD	Lanes 5502 to RRC - MOT Stage 1B	239 05-14-	-21 05-02-22	2
	AR1Z41B-1000	Install Temp Barrier / MOT Devices - Right Shoulder 95 NB	5 05-14-	-21 05-20-21	1 Install Temp Barrier / MOT Devices - Right Shoulder 95 NB
	AR1Z41B-1100	Install Initial E&S / Perimeter Controls	3 05-21-	-21 05-25-21	1 Initial E&\$ / Perimeter Controls
	AR1Z41B-1200	Clear and Grubb - 95 NB for CD Lanes / NB Widening	4 05-26-	-21 06-01-21	1 Clear and Grubb - 95 NB for CD Lanes / NB Widening
	AR1Z41B-1300	Initial Cut / Fill / Earthwork - 95 NB to Existing Bridge	18 06-02-	-21 06-25-21	1 Initial Cut / Fill / Earthwork - 95 NB to Existing Bridge
	AR1Z41B-1400	Install Drainage Pipe / Structures	10 06-28-	-21 07-12-21	1 💮 💮 💮 💮 💮 🖟 🔲 İlniştallı Drainage Pipe / Structures 💮 💮 💮 💮 💮 💮 💮 💮 💮
	AR1Z41B-1500	Fill / Grade to Sub-grade - CD Lanes to Existing 95 NB Bridge	5 07-13-	-21 07-19-21	1 D Fill / Grade to Sub-grade - CD Lanes to Existing 95 NB Bridge
	AR1Z41B-1600	Rough Grade Ditches / Slopes	5 07-19-	-21 07-26-21	1
	AR1Z41B-1700	Place Sub-grade Aggregate - CD Lanes to Existing 95 NB Brid	ge 5 07-27-	-21 08-02-21	1 Place Sub-grade Aggregate - CD Lanes to Existing 95 NB Bridge
	AR1Z41B-1800	Install Underdrain	3 08-02-	-21 08-05-21	1 Install Underdrain
	AR1Z41B-1900	Pavement Section - CD Lanes to Existing 95 NB Bridge	4 08-06-	-21 08-11-21	1 Pavement Section - CD Lanes to Existing 95 NB Bridge
	AR1Z41B-2000	Install Permanent Signage / ITS / Lighting	12 03-25-	-22 04-12-22	2
	AR1Z41B-2100	Install Guardrail / Fine Grade Ditches	7 04-12-	-22 04-21-22	
	AR1Z41B-2200	Temporary Shift 95 NB Lanes to Right Approaching Existing 95	NB Bridge 7 04-21-	-22 05-02-22	
	Area 1 - Zone 4 - F	FALL HILL SOUNDWALL	52 01-13-	-22 03-25-22	
	AR1Z41B-2300		7 01-13-		
	AR1Z41B-2400	Mobilize Drill Rig / Crane	2 01-24-	-22 01-25-22	
	AR1Z41B-2500		15 01-26-	-22 02-28-22	
	AR1Z41B-2600		6 02-28-		
	111	Backfill / Final Grade around Soundwall / Grade Drainage Ditcl			
		Lanes 5502 to RRC - MOT Stage 2A	145 04-28-		
	AR1Z42A-1000	Set Temp Barrier / MOT Devices - 95 NB Shoulder	5 04-28-		
	AR1Z42A-1100	Install Temporary Construction Entrances	3 05-05-	-23 05-10-23	
	AR1Z42A-1200	Install / Modify E&S Controls - 95 NB	5 05-10-	-23 05-17-23	
	AR1Z42A-1300	Demo Existing Pavement / Guadrail / Barrier Wall	15 05-17-		
	AR1Z42A-1400	Install Drainage Pipe and Structures - 95 NB CD Lanes / Shou			
	AR1Z42A-1500	Cut / Fill to Subgrade - 95 NB CD Lanes / Shoulder	20 07-06-		`
	AR1Z42A-1600	Place Sub-base Aggregate - 95 NB CD Lanes / Shoulder	12 08-03-		
	AR1Z42A-1700	Install Underdrain	6 08-18-		
	AR1Z42A-1800	FPS Barrier Wall Footings - 95 NB CD Lanes / Shoulder	14 08-28-		
	AR1Z42A-1900	Pavement Section/Final Surface and Striping - 95 NB CD Lane			
	AR1Z42A-1900 AR1Z42A-2000	Pour Barrier Walls - 95 NB CD Lanes / Shoulder	10 09-19- 10 10-02-		
	AR1Z42A-2100	Install Permanent Signage - 95 NB CD Lanes / Shoulder	15 10-16-		
	AR1Z42A-2200	Install Guardrail / Finish Grade Ditches - 95 NB CD Lanes / St			
	Area 1 - Zone 4 - CD AR1Z42B-1000	Lanes 5502 to RRC - MOT Stage 2B Remove Temp Barrier / MOT Devices / Open new 95 NB CD I	25 11-22- Lanes to Traffic 5 11-22-		
	AR1Z42B-1100	Complete Median Ditches / Drainage / Rip Rap	10 12-01-		
	AR1Z42B-1100 AR1Z42B-1200	Complete Median Signage / Guadrail / Final Stabilization	10 12-01-		
	AR1Z42B-1400		0		
		Section Complete 95 NB CD Lanes 5502 to RRC		01-08-24	
	REA 2 - RAPPAHANNOC AREA 2 - GENERAL	K RIVER BRIDGE 8609	764 11-03- 399 11-03-		
	B609000-1000	95 SB RRC Project Complete Structural Steel SB RRC Bridge	0 12-15-		♦ 95 SB RRC Project Complete Structural Steel SB RRC Bridge
	B609000-1000	95 SB RRC Project Demobilize from RRC Causeway	0 12-13-	10-08-21*	
	D009000-1100	00 00 Take I Toject Demobilize Hom take Causeway	U	10-00-21	. A say an trivolutioninte traininted dataseman.

ABOUND RAPPAHANNOCK	RIVER CROSSING	4.6.1 PROPOS	SAL SCHEDULE	FEBRUARY 25
	Activity Name	Original Start Duration	Finish	2020
B609000-1200	Obtain Rappahannock River Permits / Early Bridge Substructu	e Package 0 11-03-2	20	♦ Obtain Rappahannock River Permits / Early Bridge Substructure Package
B609000-1300	Install MOT Devices / Construction Entrance from 95 NB to Al	ut. B 5 01-27-2	21 02-02-21	I Install MOT Devices / Construction Entrance from 95 NB to Abut. B
B609000-1400	Install Temp. Sediment Basins / E&S Controls for RRC Bridge	Construction 10 02-03-2	21 02-16-21	☐ Install Temp. Seidiment Balsins / E&S Controls for RRC Bridge Construction
B609000-1500	Install Temporary Ramp / Access Road from Abut. B to Pier 7	15 02-17-2	21 03-09-21	□ Install Temporary Ramp / Access Road from Abut. B to Pier 7
B609000-1600	Install / Modify Access Road to Abut. A / Pier 1 from Old Quarr	Road 15 03-10-2	21 03-30-21	Install / Modify Access Road to Abut. A / Pier 1 from Old Quarry Road
B609000-1700	Install MOT Devices / Lane Shift on Existing NB Bridge and Ap	roaches 5 06-07-2	22 06-14-22	☐ Install MOT Devices / Lane Shift on Existing NB Bridge and Appro
RAPPAHANNOCK RIVER	R CAUSEWAY RE-CONFIGURATION / CONSTRUCTION	736 12-15-2	20 11-28-23	11-28-23, RAPPAHANI
B609CWY-1000	Modify Existing Causeway/Mob Crane/Install In-Stream Northe	n Causeway to Pier 6 & 7	20 01-11-21	Modify Existing Causeway/Mob Crane/Install In-Stream Northern Causeway to Pier 6 & 7
B609CWY-1100	Modify Existing Causeway / Install Causeway Souther Portion	ier 2 to Pier 5 30 10-15-2	21 11-29-21	Modify Existing Causeway / Install Causeway Souther Portion Pier 2 to Pier 5
B609CWY-1200	Temporary (First) Shut Down Boat Traffic	0 10-17-2	22	◆ Temporary;(First) Shut;Down Boat Traffic
B609CWY-1300	Install Temporary Caus eway	5 10-17-2	22 10-21-22	I Install Temporary Caus eway
B609CWY-1400	Demobilize Crane from Pier 6/7	2 10-24-2	22 10-25-22	Demobilize Crahe from Pier 6/7
B609CWY-1500	Grading Abut. B / Pier 6/7 Area / Install Permanent Drainage a			☐ Grading Abut. B / Pier 6/7 Area / Install Permanent Dra
B609CWY-1600	Remove Causeway Northern Portion	5 11-09-2		Remove Causeway Northern Portion
B609CWY-1700	Remove Temporary Caus eway	5 11-09-2		I Remove Temporary Causeway
B609CWY-1800	Open (First) Shut Down Boat Traffic	0	11-15-22	◆ Open (First) Shut Down Boat Traffic
B609CWY-1900	Remove Causeway Southern Portion	25 10-16-2		Remove Causeway So
	·			<u> </u>
B609CWY-2000	Restore Abut. A / Pier 1 Area / Install Permanent Drainage and	· · ·		☐ Restore Abut. A / Pier
B609 - SUBSTRUCTURE		342 03-10-2 136 09-28-2		07-21-22, B609'- SUBSTRUCTURE
B609 - A BUTMENT B B609SUB-5200	Backfill Temporary Ramp at Abut. B	7 09-28-2		V 04-19-22, ₿609 - ABUTMENT B Backfill Temporary Ramp at Abut. B
B609SUB-5300	Drive Abutment B Piles	12 01-10-2		□ Drive Abutment B Piles
		1 1		
	Abutment B MSE Wall	30 01-26-2		Abutment B MSE Wall
	FPS Abutment B	25 03-09-2		FPS Abutment B
	Backfill Abutment B	5 04-13-2		☐ Backfill Abutment B
B609 - PIER 7		141 03-10-2		09-27-21, B609 - PIER 7
111 1 111	Install SOE Pier 7 / Excavate Pier 7	10 03-10-2		□ Install SOE Pier 7 / Excavate Pier 7
	FPS Pier 7 Footing	7 05-05-2		□ FPS Pier 7 Footting
1111111111111	FPS Pier 7 Stem Lift 1 of 2	20 05-25-2		FPS Piet 7: Stern Lift 1 of 2
B609SUB-4900	FPS Pier 7 Stem Lift 2 of 2	12 06-23-2		□ FPS Pier 7 Stem Lift 2 of 2
B609SUB-5000	Remove SOE / Backfill Pier 7 Footing	3 07-12-2	21 07-14-21	
B609SUB-5100	FPS Pier 7 Cap	30 08-16-2	21 09-27-21	FPS Pier 7 Cap
B609 - PIER 6		161 03-24-2	21 11-08-21	
B609SUB-4000	Install Cofferdam Pier 6	7 03-24-2	21 04-01-21	🏮 İnstall Çofferdam Pier 6
B609SUB-4100	FPS Pier 6 Footing	7 05-14-2	21 05-24-21	□ FPS Pier 6 Footing
B609SUB-4200	FPS Pier 6 Stem Lift 1 of 2	12 07-15-2	21 07-30-21	□ FPS Pier 6 Stem Lift 1 of 2
B609SUB-4300	FPS Pier 6 Stem Lift 2 of 2	12 08-02-2	21 08-17-21	□ FPS Pier 6 Stem Lift 2 of 2
B609SUB-4400	Asemble Cap Form	10 08-02-2	21 08-13-21	□ Asemble Cap Form
B609SUB-4500	FPS Pier 6 Cap	30 09-28-2	21 11-08-21	FPS Pier 6 Cap
B609 - PIER 5		68 11-29-2	21 03-15-22	▼
B609SUB-3500	Install Cofferdam Pier 5	7 11-29-2	21 12-09-21	□ Install Cofferdam Pier 5
B609SUB-3600	FPS Pier 5 Footing	7 12-09-2	21 12-20-21	■ FPS Riet 5 Footing
B609SUB-3700	FPS Pier 5 Stem Lift 1 of 2	12 12-20-2	21 01-14-22	FP\$ Pier 5 Stem Lift 1 of 2
B609SUB-3800	FPS Pier 5 Stem Lift 2 of 2	12 01-14-2		FPS Pier 5 Stem Lift 2 of 2
	FPS Pier 5 Cap	30 02-01-2		FPS Pier 5 Cap
B609 - PIER 4	<u> </u>	84 12-20-2		▼ 04-26-22, B609 - PIER 4
		5 . 12 20 2		- 1



I-95 NOR	RTHBOUND RAPPAHANNOCK	RIVER CROSSING	4.6.1	PROPOSAL SCH	HEDULE		FEBRUARY 25, 2020
ctivity ID		Activity Name	Original Duration		nish	2020 1AMJJJASONDJFMAN	
	B609SUB-3100	FPS Pier 4 Footing	7	01-07-22 01	l-18-22		□ FP\$ Pier 4 Footing
	B609SUB-3200	FPS Pier 4 Stem Lift 1 of 2	12	2 02-01-22 02	2-17-22	1	☐ FP\$ Pier 4 Stem Lift 1 of 2
	B609SUB-3300	FPS Pier 4 stem Lift 2 of 2	12	02-17-22 03	3-07-22	1	☐ FPS Pier 4 stem Lift 2 of 2
	B609SUB-3400	FPS Pier 4 Cap	30	03-15-22 04	l-26-22	1	FPS Pier 4 Cap
	B609 - PIER 3		100	01-18-22 06	6-08-22		V 06-08-22, B609 - PIER 3
	B609SUB-2500	Install Cofferdam Pier 3	7	01-18-22 01	-27-22		☐ Install Cofferdam Pier 3
	B609SUB-2600	FPS Pier 3 Footing	7	01-27-22 02	2-07-22		
	B609SUB-2700	FPS Pier 3 Stem Lift 1 of 2	12	03-07-22 03	3-23-22		□ FP\$ Pier 3 Stem Lift 1 of 2
	B609SUB-2800	FPS Pier 3 Stem Lift 2 of 2	12	03-23-22 04	I-08-22		FPS Pier 3 Stem Lift 2 of 2
	B609SUB-2900	FPS Pier 3 Cap	30	04-26-22 06	6-08-22		FPS Pier 3 Cap
	B609 - PIER 2			02-07-22 07			V 07-21-22, β609- PIER 2
	B609SUB-2000	Excavate Pier 2 Footing		02-07-22 02			I Excavate Pier 2 Footing
	B609SUB-2100	FPS Pier 2 Footing			2-21-22		□ FPS Rier 2 Footing
	B609SUB-2200	FPS Pier 2 Stem Lift 1 of 2			1-26-22		□ FPS Pier 2 Stem Lift;1 of 2
	B609SUB-2300	FPS Pier 2 Stem Lift 2 of 2	12	04-26-22 05	5-12-22		□ FPS Pier 2 Stem Lift 2 of 2
	B609SUB-2400	FPS Pier 2 Cap	30	06-08-22 07	7-21-22		FP\$ Pier 2 Cap
	B609 - PIER 1				2-23-21		▼ 12-23-21, B609 - PIÈR 1
	B609SUB-1500	Excavate Pier 1 Footing		1 1	7-22-21		Excavate Pier 1 Footing
	B609SUB-1600	FPS Pier 1 Footing		1 1	3-03-21		☐ FPS Pier 1 Footing
	B609SUB-1700	FPS Pier 1 Stem Lift 1 of 2		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9-02-21		☐ FRS Pier 1 Stem Lift 1 of 2
	B609SUB-1800	FPS Pier 1 Stem Lift 2 of 2			9-21-21		☐ FP\$ Pier 1 Stem Lift 2 of 2
	B609SUB-1900	FPS Pier 1 Cap			2-23-21		FPS Pier 1 Cap
	B609 - A BUTMENT A				5-15-22		06-15-22, B609 - ABÚTMÉNT A
	B609SUB-1000	Excavate Access to Abutment A)-01-21		Excavate Access to Abutment A:
	B609SUB-1100	Drive Abutment A Piles			2-10-22		Drive Abutment A Piles
	B609SUB-1200	Abutment A MSE Wall			1-26-22		Abutment A MSE Wall
	B609SUB-1300	FPS Abutment A			6-01-22		FPS Abutment A
	B609SUB-1400	Backfill Abutment A		06-02-22 06			□ Backfill Abutment A
	B609 - SUPERSTRUCTU	_		06-14-22 01			01-27-23, B609 - SUPERSTRUCTURE
	B609 - STRUCTURAL	Mobilize Crane / Equipment - Stage 1		06-14-22 09 5 06-14-22 06			09-09-22, B609 + STRUCTURAL STE⊞L Mobilize Crane / Equipment - Stage 1
	B609SPR-4900	Erect Structural Steel Spans H and G			7-20-22		☐ Erect Structural Steel Spans H and G
	B609SPR-5000	Mobilize Crane / Equipment - Stage 2			-20-22 7-28-22		Mobilize Crane / Equipment - Stage 2
	B609SPR-5100	Erect Structural Steel Spans F, E, D, C and B			3-25-22		Erect Structural Steel Spans F, E, D, C and B
	B609SPR-5200	Mobilize Crane / Equipment - Stage 3			9-01-22		Mobilize Crane;/ Equipment - Stage 3
	B609SPR-5300	Erect Structural Steel Span A			9-09-22		☐ Erect Structural Steel Span A
	B609 - SPAN H DECK	·			9-27-22		▼ 09-27-22, B609 - SPAN H DECK
	B609SPR-4400	Install SIP Forms / Studs			9-06-22		Install SIP Forms / Studs
	B609SPR-4500	Install Bridge Overhangs			9-13-22		□ Install Bridge Overhangs
	B609SPR-4600	Install Edge Forms			9-16-22		I Install Edge Forms
	B609SPR-4700	Install Deck Reinforcing			9-27-22	#	Install Deck Reinforcing
	B609 - SPAN G DECK	-)-06-22		10-06-22; B609 - SPAN G DECK
	B609SPR-4000	Install SIP Forms / Studs			9-15-22		■ Install SIP Forms / Studs
	B609SPR-4100	Install Bridge Overhangs			9-22-22		Ⅱ Install Bridge Overhangs
	B609SPR-4200	Install Edge Forms			9-27-22		D: Install Edge Forms
	B609SPR-4300	Install Deck Reinforcing	7	09-27-22 10)-06-22		□ Install Deck Reinforcing
	B609 - SPAN F DECK			2 09-15-22 11-	-14-22		▼ 11-14-22, B609 - SPAN F DECK
	B609SPR-3400	Install SIP Forms / Studs	7	09-15-22 09	9-26-22		Install SIP Forms / Studs
	Actual Work	Critical Remaining Work Summary	,	,			*SHIRLEY



	RIVER CROSSING	4.6.1	PROPOSAL	SCHEDULE		FEBRUARY 25,
	Activity Name	Original Duration		Finish		2022 2023 2024 JFMAMJJJASJOND JFMAMJJJASJOND JFMAMJJJASI
		Duration				
B609SPR-3500	Install Bridge Overhangs	5	09-26-22	10-03-22		Install Bridge Overhangs
B609SPR-3600	Install Edge Forms	3	10-03-22	10-06-22	1	I Install Édge Forms
B609SPR-3700	Install Deck Reinforcing	7	10-06-22	10-17-22		□ Install Deck Reinforcing
B609SPR-3800	Setup Screed / Form Bulkheads / Deck Preparation	5	10-17-22	10-24-22	1	Setup Screed / Form Bulkheads / Deck Preparation
B609SPR-3900	Pour / Cure Decks	15	10-25-22	11-14-22		□ Pour / Cure Decks
B609 - SPAN E DECK		22	09-26-22	10-26-22		10-26-22, B609 - SPAN E DECK
B609SPR-3000	Install SIP Forms / Studs	7	09-26-22	10-05-22		Install SIP Forms / Studs
B609SPR-3100	Install Bridge Overhangs	5	10-05-22	10-12-22		🗓 Install Bridge Overhangs
B609SPR-3200	Install Edge Forms	3	10-12-22	10-17-22		□ Install Edge Forms
B609SPR-3300	Install Deck Reinforcing	7	10-17-22	10-26-22		Install Deck Reinforcing
B609 - SPAN D DECK		22	10-05-22	11-04-22		11-04-22, B609 - SPAN D DECK
B609SPR-2600	Install SIP Forms / Studs	7	10-05-22	10-14-22		■ Install SIP Forms / Studs
B609SPR-2700	Install Bridge Overhangs	5	10-14-22	10-21-22		
B609SPR-2800	Install Edge Forms	3	10-21-22	10-26-22		🗓 Install Edge Forms
B609SPR-2900	Install Deck Reinforcing	7	10-26-22	11-04-22		🗓 Install Deck Reinforcing
B609 - SPAN C DECK		50	10-14-22	01-04-23		01-04-23, B609 - SPAN C DECK
B609SPR-2000	Install SIP Forms / Studs	7	10-14-22	10-25-22		Install SIP Forms / Studs
B609SPR-2100	Install Bridge Overhangs	5	10-25-22	11-01-22		Install Bridge Overhangs
B609SPR-2200	Install Edge Forms	3	11-01-22	11-04-22		I Install Edge Forms
B609SPR-2300	Install Deck Reinforcing	7	11-04-22	11-15-22		∷∎ Install Deck Reinfdrcing
B609SPR-2400	Setup Screed / Form Bulkheads / Deck Preparation	5	11-15-22	11-22-22	1	Setup Screed / Form Bulkheads / Deck Preparation
B609SPR-2500	Pour / Cure Decks	15	11-23-22	01-04-23		Pour / Cure Decks
B609 - SPAN B DECK		22	10-25-22	11-28-22		11-28-22, B609 - SPAN B DECK
B609SPR-1600	Install SIP Forms / Studs	7	10-25-22	11-03-22		Install SIP Forms / Studs
B609SPR-1700	Install Bridge Overhangs	5	11-03-22	11-10-22	1	Install Bridge Overhangs
B609SPR-1800	Install Edge Forms	3	11-10-22	11-15-22		□ Install Edge Forms
B609SPR-1900	Install Deck Reinforcing	7	11-15-22	11-28-22	1	Install Deck Reinforcing
B609 - SPAN A DECK		53	11-03-22	01-27-23		▼
B609SPR-1000	Install SIP Forms / Studs	7	11-03-22	11-14-22		Install SIP Forms / Studs
B609SPR-1100	Install Bridge Overhangs	5	11-14-22	11-21-22		II Install Bridge Overhangs
B609SPR-1200	Install Edge Forms	3	11-21-22	11-28-22		Install Edge Forms
B609SPR-1300	Install Deck Reinforcing	7	11-28-22	12-07-22		🗓 Install Deck Reinforcing
B609SPR-1400	Setup Screed / Form Bulkheads / Deck Preparation	5	12-07-22	12-14-22		Setup Screed:/ Form:Bulkheads / Deck Preparation
B609SPR-1500	Pour / Cure Decks	10	01-06-23	01-27-23		■ Pour / Cure Decks
B609 - PARAPETS / APP	ROACH SLABS / FINISHES	106	11-14-22	04-21-23		▼ 04-21-23, B609 - PARAPETS / APPROA
B609FIN-1000	FPS Backwall / Cheek Walls - Abut. B	15	11-14-22	12-07-22		FPS Backwall / Cheek Wals - Abut. B
B609FIN-1100	Backfill Abut. B / Gade for Approach Slabs	5	12-07-22	12-14-22		■ Backfill Abut. B / Gade for Approach Slabs
B609FIN-1200	FPS Approach Slab - Abut. B	10	12-14-22	01-05-23		FPS Approach Slab - Abut, B
B609FIN-1300	Cure Appoach Slab / Build Access to Bridge Deck	5	01-05-23	01-12-23	1 : : : : : : : : : : : : : : : : : : :	Cure Appoach Slab / Build Access to Bridge Decl
B609FIN-1400	Slip Form Bridge Parapets	15	02-24-23	03-17-23	1::::::::::::::::::::::::::::::::::::::	■ Slip Form Bridge Parapets
B609FIN-1500	FPS Backwall / Cheek Wals - Abut. A	15	01-27-23	02-17-23	1 : : : : : : : : : : : : : : : : : : :	FP\$ Backwall / Cheek Walls - Abut A
B609FIN-1600	Backfill Abut. A / Gade for Approach Slabs	5	02-17-23	02-24-23	1	■ Backfill Abut. A / Gade for Approach Slabs
B609FIN-1700	FPS Approach Slab - Abut. A	10	02-24-23	03-10-23		☐ FPS Approach Slab - Abut A
B609FIN-1800	Strip Overhangs		03-17-23	04-14-23	1 : : : : : : : : : : : : : : : : : : :	Strip Overhangs
	Deck Grooving		03-17-23	03-28-23		□ Deck Grooving
	Bridge Pavement Markings		03-29-23	04-05-23		Bridge Pavement Markings
	Bridge Safety Inspection		04-14-23	04-21-23		Bridge Safety Inspection



)	Activity Name	,	Original Start	Finish	2020 2021 2022 2023 2024
			Duration		IAMJJASONDJEMAMJJASONDJEMAMJJASONDJEMAMJJASONDJEMAMJJASONDJEMAMJJ
AREA 3 - WO	RK FROM RAPPAHANNOCK RIVER BRIDGE TO RTE 17		860 11-16-20	05-01-24	
AREA 3 - 0			5 11-16-20	11-20-20	
AR3000	0-1000 Begin Stage 1 Construction - Area 1		0 11-16-20		◆ Begin Stage 1 Construction - Area 1
AR3000	0-1100 Install Initial MOT / Construction Signage		5 11-16-20	11-20-20	Install Initial MOT / Construction Signage
Area 3 - Z	one 1 - I-95 NB GP LANES 4555+00 TO 4606+00 (RTE 17)		855 11-23-20	05-01-24	05÷0
Area 3	Zone 1 - GP Lanes RRC to Rte. 17 - MOT Stage 1A		44 11-23-20	02-02-21	▼ ▼ 02-02-21, Area 3 - Zone 1 - GP Lanes RRC to Rte. 17 - MOT Stage 1A
AR32	Z11A-1000 Install Temp MOT Devices - Right Shoulder 95 NE	.	3 11-23-20	11-30-20	🗓 İnstall Temp;MOT Devices - Right;Shoulder 95 NB
AR32	Z11A-1100 Install Initial E&S / Perimeter Controls		5 12-01-20	12-07-20	☐ Install Initial E&S / Perimeter Controls
AR32	Z11A-1200 Saw Cut / Excavate for Shoulder Sliver Widening		12 12-08-20	12-23-20	□ Saw Cut / Excavate for Shoulder Sliver Widening
AR32	Z11A-1300 Grade/Sub-Base Aggregate/Pave Shoulder Sliver	Widening/Mill and Pave Rumble Strip	15 12-16-20	01-27-21	Grade/Şub-Başe Aggregate/Pave Shoulder Sliver Widening/Mill and Pave Rumble Strip
AR32	Re-Stripe 95 NB GP Lanes - Shift to Right		4 01-27-21	02-02-21	Re-Stripe 95 NB GP Lanes - Shift to Right
Area 3	Zone 1 - GP Lanes RRC to Rte. 17 - MOT Stage 1B		402 09-15-21	04-28-23	04-28-23, Area 3 - Zone 1 - GP La
	211B-1000 95 SB RRC Project Substantially Complete on 95 S	SB Left Shoulder	0 09-15-21*		
AR32	Z11B-1100 Install Temp Barrier / MOT Devices - Left Shoulde	r 195 NB	3 09-15-21	09-17-21	I Install Temp Barrier / MOT Devices - Left Shoulder 195 NB
AR32	Z11B-1200 Install Temporary Construction Entrances from 95	NB	2 09-20-21	09-21-21	I Install Temporary Construction Entrances from 95 NB
AR32	Z11B-1300 Install Temp Sediment Basins / Initial E&S / Perime		8 09-22-21	10-01-21	I Install Temp Sediment Basins / Initial E&S / Perimeter Controls by RRC
AR32	Z11B-1400 Clear and Grubb NB/SB Median Area	<u> </u>	5 10-04-21	10-08-21	I Clear and Grubb NB/\$B Median Area
	Z11B-1500 Strip Top Soil / Prep Area for Embankment Fill		7 10-11-21	10-19-21	□ Strip Top Soil!/ Prep Area for Embankment Fill
	Z11B-1600 Place Embankment Fill 95 NB GP Lanes Abut B to	4579	35 10-20-21	12-10-21	Place Embankment Fill 95 NB GP Lanes Abut B to 4579
	Z11B-1700 Install Deep Culverts / Drainage Pipes	1010	10 11-01-21	11-12-21	I Install Deep Culverts / Drainage Pipes
	Z11B-1800 Install Drainge Pipe / Structures - 95 NB GP Lane	s Abu t R to 4579	10 12-13-21	01-04-22	Install Drainge; Pipe; / Structures; - 95, NB GP Lanes; Abu.t B to 4579
	Z11B-1900 Saw cut / Demo Existing Pavement	5 ADU. (D to 407 9	7 01-05-22	01-04-22	Saw cut / Demo Existing Pavement
	Z11B-2000 Cut / Fill to Sub-grade - 95 NB GP Lanes Abut. B t	0.4570	14 01-14-22	01-13-22	Cut:/ Fill to Sub-grade - 95 NB GP Lanes Abut. B to 4579
	3 11 1	0 4579			<u>-</u>
	Install OH Sign Foundations / ITS Infrastructure		25 12-13-21	01-25-22	Install OH Sign Foundations / TS Infrastructure
	711B-2200 Place Aggregate Sub-base - 95 NB GP Lanes Abu	It. B to 4579	5 02-16-22	02-25-22	Place Aggregate Sub-base - 95 NB GP Lanes Abut B to 4579
	Z11B-2300 Install Underdrain		5 02-25-22	03-04-22	📗 İnştall Ünderdrain
	Z11B-2400 Pour Median Barrier Footing - 95 NB GP Lanes Ab		10 03-04-22	03-18-22	□ Pour Median Barrier Footing - 95 NB GP Lanes Abut B to 4579
	Pavement Section - 95 NB GP Lanes Abut. B to 48	* *	6 03-18-22	03-28-22	☐ Pavement Section - 95 NB GP Laries Abut. B to 4579
	Z11B-2600 Pour Barrier Wall - 95 NB GP Lanes Abut. B to 45	·	8 03-28-22	04-07-22	☐ Pour Barrier Wall - 95 NB GP Lanes Abut. B to 4579
AR32	Z11B-2700 Finish Grade Ditch Between 95 SB / NB GP Lanes	S	7 03-30-22	04-08-22	Finish Grade Ditch Between 95 SB / NB GP Lanes
AR32	Z11B-2800 Install Guardrail / Signage 95 SB / NB Median Area	1	8 04-08-22	04-20-22	Install Guardrail / \$ignage 95 \$B;/ NB Median Area
AR32	Install Temp Barrier/MOT Devices - Left Shoulder	I95 NB GP Lanes 4579 to Rte. 17	5 10-04-21	10-13-21	☐ Install Temp BarrierMOT Devices - Left Shoulder l95 NB GP Lanes 4579 to Rte
AR32	Install Construction Entrances from 95 NB Lanes		5 10-14-21	10-20-21	Install Construction Entrances from 95 NB Lanes
AR32	Z11B-3100 Saw Cut / Demo Existing Pavement		5 10-21-21	10-27-21	: : : : : : : : : : : : : : : : : : :
AR32	Z11B-3200 Cut / Fill to Sub-grade - 95 NB GP 4579 to Rte. 17		14 10-28-21	11-16-21	Cut / Fill to Sub-grade - 95 NB GP 4579 to Rte. 17
AR32	Z11B-3300 Install OH Sign Foundations		10 11-16-21	12-02-21	☐ Install OH Sign Foundations
AR32	Z11B-3400 Place Aggregate Sub-base - 95 NB GP Lanes 457	9 to Rte. 17	5 11-17-21	11-23-21	D Place Aggregate Sub-base - 95 NB GP Lanes 4579 to Rte. 17
AR32	Z11B-3500 Install Underdrain		5 11-23-21	12-02-21	i i i i i i i i i i i i i i i i i i i
AR32	Z11B-3600 Pour Median Barrier Footing - 95 NB GP Lanes 45	579 to Rte. 17	10 12-02-21	12-17-21	☐ Pour Median Barrier Footing - 95 NB GP Lanes 4579 to Rte: 17
AR32	Z11B-3700 Pavement Section - 95 NB GP Lanes 4579 to Rte.	17	6 12-20-21	01-10-22	Pavement Section - 95 NB GP Lanes 4579 to Rte. 17
AR32	Z11B-3800 Pour Barrier Wall - 95 NB GP Lanes 4579 to Rte.		8 01-10-22	01-20-22	Pour Barrier Wall + 95 NB GP Lanes 4579 to Rte. 17:
	Z11B-3900 Finish Grade Ditch Between 95 SB / NB GP Lanes	8	7 01-12-22	01-26-22	☐ Finish Grade Ditch Between 95 SB / NB GP Lanes
	Z11B-4000 Install OH Sign Structures / Permanent and Temp.		25 01-26-22	03-01-22	Install OH Sign Structures / Permanent and Temp. Signage
	Z11B-4100 Install Guardrail / Signage 95 SB / NB Median Area		8 01-26-22	02-07-22	☐ Install Guardrail / Signage 95 SB / NB Median Area
	Z11B-4200 Construct Temporary Ramp from GP Lanes to Rte		10 04-08-22	04-22-22	Construct Temporary Ramp from GP Lanes to Rté. 17 Exit / CD I
	Z11B-4300 Remove Temp Barrier / Shift 95 NB GP Lanes to N		5 04-21-23	04-22-22	Remove Temp Barrier / Shift 95 NE
	·	acw ravincii. / NNO blidge	26 03-26-24	05-01-24	<u>-</u>
Area 3	Zone 1 - GP Lanes RRC to Rte. 17 - MOT Stage 2B		20 03-20-24	05-01-24	05-01 to 1 to 1 to 1 to 1 to 1 to 1 to 1 to



I-95 NORT	HBOUND RAPPAHANNOCH	K RIVER CROSSING	4.6.1 PROPOSAL	SCHEDULE	LE FEBRUARY 25, 2
Activity ID		Activity Name	Original Start	Finish	2020 2021 2022 2023 2024
			Duration		
	AR3Z12B-1000	Remove Temp Barrier / MOT Devices	2 03-26-24	03-28-24	
	AR3Z12B-1100	Final Mill and Overlay / Permanent Striping 95 NB GP Lanes RRC to Rte. 17	10 03-28-24	04-11-24	Final Mill and 0
	AR3Z12B-1200	Finish Grade Slopes / Ditches	6 04-12-24	04-19-24	4
	AR3Z12B-1300	Install Guardrail / Signage 95 NB GP Lanes RRC to Rte. 17	8 04-19-24	05-01-24	1
	AR3Z12B-1400	Section Complete	0	05-01-24	
		B CD LANES 5554+50 TO 5606+00 (RTE 17)	684 08-02-21	05-01-24	
		Lanes RRC to Rte. 17 - MOT Stage 1B	209 08-02-21	06-07-22	
	AR3Z21B-1000	Install Temp. Barrier / MOT Devices - 95 NB CD Lanes Right Shoulder	5 08-02-21	08-09-21	
	AR3Z21B-1100	Install Temporary Construction Entrances	3 08-09-21	08-12-21	I Install Temporary Construction Entrances
	AR3Z21B-1200	Install Initial E&S / Perimeter Controls	4 08-12-21	08-18-21	I Install Initial E&\$ / Perimeter Controls
	AR3Z21B-1300	Clear and Grubb - 95 NB Right Shoulder to Rte. 17	5 08-18-21	08-25-21	1
	AR3Z21B-1400	Initial Cut / Fill / Earthwork - 95 NB	20 08-25-21	09-23-21	
	AR3Z21B-1500	Install OH Sign Foundations / ITS Infrastructure	20 09-23-21	10-21-21	
	AR3Z21B-1600	Install Drainage Pipe / Structures	18 12-07-21	01-11-22	
	AR3Z21B-1700	Cut / Fill to Sub-grade - CD Lanes to Rte. 17	20 01-12-22	02-25-22	<u> </u>
	AR3Z21B-1800	Rough Grade Ditches / Slopes	12 02-25-22	03-15-22	
	AR3Z21B-1900	Place Sub-grade Aggregate - CD Lanes to Rte. 17	8 03-16-22	04-01-22	
	AR3Z21B-2000	Install Underdrain	5 04-01-22	04-08-22	
	AR3Z21B-2100	Pavement Section - CD Lanes to Rte. 17	8 04-11-22	04-20-22	
	AR3Z21B-2200	Install Signage / ITS / OH Signs	20 04-20-22	05-18-22	
	AR3Z21B-2300	Install Guardrail / Fine Grade Ditches	8 05-18-22	05-10-22	
	AR3Z21B-2400	Pull Temp Barrier / Shift 95 NB Lanes to Right	5 05-31-22	06-07-22	
		Lanes RRC to Rte. 17 - MOT Stage 2A	119 04-28-23	10-17-23	
	Area 3 - Zone 2 - CD AR3Z22A-1000	Install Temp. Barrier / MOT Devices - 95 NB CD Lanes Left Shoulder	5 04-28-23	05-05-23	
	AR3Z22A-1100	Install Temporary Construction Entrances	3 05-05-23	05-00-23	
	AR3Z22A-1200	Install Initial E&S / Perimeter Controls	4 05-10-23	05-16-23	
	AR3Z22A-1200 AR3Z22A-1300	Saw Cut / Demo Existing Pavement	10 05-16-23	05-10-23	
	AR3Z22A-1300 AR3Z22A-1400	Initial Cut / Fill to Sub-grade	10 05-10-23	06-14-23	
	AR3Z22A-1400 AR3Z22A-1500	Install Drainage Pipe / Structures	20 06-14-23	07-13-23	
	AR3Z22A-1500 AR3Z22A-1600	• •			
		Cut / Fill to Sub-grade - CD Lanes to Rte. 17	15 07-14-23	08-03-23	
	AR3Z22A-1700	Rough Grade Ditches / Slopes	12 08-03-23	08-21-23	
	AR3Z22A-1800	Place Sub-grade Aggregate - CD Lanes to Rte. 17	10 08-22-23	09-05-23	
	AR3Z22A-1900	Install Underdrain	6 09-05-23	09-13-23	
	AR3Z22A-2000	Pavement Section / Surface Pave and Striping - CD Lanes to Rte. 17	12 09-14-23	09-29-23	
	AR3Z22A-2100	Install Permanent Signage / ITS / Lighting	25 08-21-23	09-26-23	
	AR3Z22A-2200	Install Guardrail / Fine Grade Ditches	12 09-29-23	10-17-23	
	AR3Z22A-2300	Area 3 95 NB CD Lanes - Section Ready for Lane Shift / Stage 2B	0	10-17-23	
		Lanes RRC to Rte. 17 - MOT Stage 2B	81 11-27-23	03-26-24	
	AR3Z22B-1000	Shift Barrier/MOT Devices - Ramp D Left Shoulder to Construct CD Lane/GP Lane Median	3 11-27-23	11-29-23	
	AR3Z22B-1100	Install Temporary Construction Entrances	1 11-30-23	11-30-23	
	AR3Z22B-1200	Install Initial E&S / Perimeter Controls	1 12-01-23	12-01-23	
	AR3Z22B-1300	Saw Cut / Demo Existing Pavement	5 12-04-23	12-08-23	
	AR3Z22B-1400	Initial Cut / Fill / Earthwork - CD Lane / GP Lane Median - RRC to Rte. 17	6 12-11-23	12-18-23	
	AR3Z22B-1500	Install Drainage Pipe / Structures - CD Lane / GP Lane Median - RRC to Rte. 17	8 12-19-23	01-05-24	
	AR3Z22B-1600	Cut / Fill / Grade to Sub-grade - CD Lane / GP Lane Median - RRC to Rte. 17	10 01-08-24	01-29-24	
	AR3Z22B-1700	Place Sub-grade Aggregate - CD Lane / GP Lane Median - RRC to Rte. 17	6 01-31-24	02-12-24	
	AR3Z22B-1800	Install Underdrain - CD Lane / GP Lane Median - RRC to Rte. 17	3 02-12-24	02-15-24	I Install Underdrain
		Critical Remaining Work Summary Milestone			SHIRLEY CONTRACTING COMPANY, LLC

I-95 NOF	RTHBOUND RAPPAHANNOCK	RIVER CROSSING	4.6.1 PROPO	SAL SCHEDULE		FEBRUARY 25, 2020
Activity ID		Activity Name	Original Start	Finish	2020	2021 2022 2023 2024 2021 Male Male Male Male Male Male Male Male
			Duration			MJJASONDJFMAMJJASONDJFMAMJJASOND
	AR3Z22B-1900	Install Median Barrier Footings - CD Lane / GP Lane Median - RRC to R	Rte. 17 10 02-15	-24 02-29-24		■ Instatl Median Barrier F
	AR3Z22B-2000	Pavement Section - CD Lane / GP Lane Median - RRC to Rte. 17	5 03-01	-24 03-11-24		Pavement Section - C
	AR3Z22B-2100	Install Median Barriers	6 03-11	-24 03-19-24	7	■ Install:Median Bartier
	AR3Z22B-2200	Install Permanent Signage / ITS / Lighting	11 03-11	-24 03-26-24	7	Install Permanent Sig
	AR3Z22B-2300	Install Guardrail / Fine Grade Ditches - CD Lane / GP Lane Median - RR	RC to Rte. 17 5 03-19	-24 03-26-24	7	Il Install Guardrail / Fin
	AR3Z22B-2400	CD Lanes - Area 3 - Section Ready for Mill and Overlay / Final Pavemen	nt and Striping 0	03-26-24	1	◆ ¢D Lanes - Area 3 -
	Area 3 - Zone 2 - CD	Lanes RRC to Rte. 17 - MOT Stage 3	26 03-26	-24 05-01-24		▼ 05-01-24, Area 3
	AR3Z203-1000	Shift CD Lanes to Perm. Configuration / Open Ramp D in Perm. Configu	ration 2 03-26	-24 03-28-24		I Shift CD Lanes to Pe
	AR3Z203-1100	Final Mill and Overlay / Permanent Striping 95 NB CD Lanes at Temp. Ra	amp 10 03-28	-24 04-11-24	7	■ Final Mill and Over
	AR3Z203-1200	Finish Grade Slopes / Ditches	6 04-12	-24 04-19-24	7	■ Finish Grade Slope
	AR3Z203-1300	Install Guardrail / Signage 95 NB CD Lanes	8 04-19	-24 05-01-24	71	■ Install Guardrail /
	AR3Z203-1400	Section Complete	0	05-01-24		◆ Section Complete
· 1	AREA 4 - RTE 17 INTERCH	IANGE	777 11-16	-20 01-05-24		U1-05-24, AREA 4 - RTE 1
	AREA 4 - GENERAL		5 11-16	-20 11-20-20		REA 4 - GENERAL
	AR40000-1000	Begin Stage 1 Construction - Area 1	0 11-16	-20	◆ Begin Stage	1 Construction - Area 1
	AR40000-1100	Install Initial MOT / Construction Signage	5 11-16	-20 11-20-20		MOT / Construction Signage
		D - NB CD LANES TO RTE 17	611 05-14			V 10-24-23, Area 4 - Zone 1 - RAM
		np D - MOT Stage 1B - Step 1		-21 09-22-21		▼ : : : : • : • U9-22-21, Area 4 - Zone I - Ramp D - MO1 Stage IB - Step I: : : : : : : : : : : : : : : : : :
	AR4Z11B-1000	Install Temp. Barrier / MOT Devices - Ramp D Right Shoulder	5 05-14		-11: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1:	I Install Temp. Barrier / MOT Devices - Ramp D Right Shoulder
	AR4Z11B-1100	Install Temporary Construction Entrances	3 05-21		-1: : : : : : : : : : : : : : : :	II Install Temporary Construction Entrances
	AR4Z11B-1200	Install Initial E&S / Perimeter Controls	4 05-26			I Install Initial E&S / Perimeter Controls
	AR4Z11B-1300	Clear and Grubb - Ramp D Right Shoulder to Rte. 17	5 06-02			1 Clear and Grubb - Ramp D Right Shoulder to Rte. 17
	AR4Z11B-1400	Initial Cut / Fill / Earthwork - Ramp D	18 06-09			. Initial Cut / Fill / Earthwork - Ramp D
	AR4Z11B-1500	Install OH Sign Foundations	20 07-06			☐ Install OH Sign Foundations
	AR4Z11B-1600	Install Drainage Pipe / Structures	10 07-06	-21 07-19-21		□ Install Drainage Pipe / Structures
	AR4Z11B-1700	Cut / Fill / Grade to Sub-grade - Ramp D	5 07-20			Il Cut / Fill / Grade to Sub-grade - Ramp D
	AR4Z11B-1800	Rough Grade Ditches / Slopes	5 07-26	-21 08-02-21		Rough Grade Ditches / \$lopes
	AR4Z11B-1900	Place Sub-grade Aggregate - Ramp D	5 08-03	-21 08-09-21		Place Sub-grade Aggregate - Ramp D
	AR4Z11B-2000	Install Underdrain	3 08-09	-21 08-12-21		I Install Underdrain
	AR4Z11B-2100	Pavement Section - Ramp D	4 08-13	-21 08-18-21		□ Pavement Section - Ramp D
	AR4Z11B-2200	Install Permanent Signage / ITS / Lighting	12 08-18	-21 09-03-21		☐ Install Permanent Signage / ITS/ Lighting
	AR4Z11B-2300	Install Guardrail / Fine Grade Ditches	7 09-03	-21 09-15-21		☐ Install Guardrail / Fine Grade Ditches
	AR4Z11B-2400	Temporary Traffic Shift on Ramp D	5 09-15	-21 09-22-21	7	Temporary Traffic Shift on Ramp D
	AR4Z11B-2500	Rte. 17 Ramp D - Section Ready for Lane Shift to Stage 2	0	09-22-21	7	♦ Rte. 17 Ramp D - Section Ready for Lane Shift to Stage 2
	Area 4 - Zone 1 - Ran	np D - MOT Stage 1B - Step 2	87 09-22	-21 02-04-22		02-04-22, Area 4 - Zone 1 - Ramp D - MOT Stage 1B - Step 2
	AR4Z12A-1000	Install Temp. Barrier / MOT Devices - Ramp D Left Shoulder	5 09-22	-21 09-29-21		🏮 🖟 lnstall Temp. Barrier / MOT Devices - Ramp D Left Shoulder
	AR4Z12A-1100	Install Temporary Construction Entrances	3 09-29	-21 10-04-21		Install Temporary Construction Entrances
	AR4Z12A-1200	Install Initial E&S / Perimeter Controls	4 10-04	-21 10-08-21		Il Install Initial E&S / Perimeter Controls
	AR4Z12A-1300	Clear and Grubb - Ramp D Right Shoulder to Rte. 17	5 10-08	-21 10-15-21		Clear and Grubb - Ramp D Right Shoulder to Rte. 17
	AR4Z12A-1400	Install Traffic Signal Ramp D / Rte. 17	40 11-16	-21 01-24-22		Install Traffic Signal Ramp D / Rte. 17
	AR4Z12A-1500	Initial Cut / Fill / Earthwork - Ramp D	16 10-15	-21 11-08-21		□ Initial Cut/ Fill / Earthwork - Ramp D
	AR4Z12A-1600	Construct Barrier Wall Between Ramp D and Loop D	10 11-08	-21 11-22-21		Construct Barrier Wall Betweein Ramp D and Loop D
	AR4Z12A-1700	Install Drainage Pipe / Structures	10 11-08	-21 11-22-21		☐ Install Drainage Pipe / Structures
	AR4Z12A-1800	Cut / Fill / Grade to Sub-grade - Ramp D	5 11-23	-21 12-01-21		Cut / Fill / Grade to Sub-grade - Ramp D
	AR4Z12A-1900	Rough Grade Ditches / Slopes	5 12-01	-21 12-09-21		I Rough Grade Ditches / Slopes
	AR4Z12A-2000	Place Sub-grade Aggregate - Ramp D	5 12-10	-21 12-20-21		□ Place Sub-grade Aggregate - Ramp D
	AR4Z12A-2100	Install Underdrain	3 12-20	-21 12-23-21		I Install Underdrain
			, ,			
	Actual Work	Critical Remaining Work Summary				⇒ SHIRLEY
	Remaining Work ◆ • N	/lilestone				CONTRACTING COMPANY, LLC
						CONTRACTING COMPANY, LLC

ity ID	BOUND RAPPAHANNOCK	Activity Name		4.6.1 PROPOSAL Original Start	Finish	2020		FEBRUARY 2 2021 2023 2024
y ID		Activity Natife		Duration Start	FIIIISII		SONDJEMA	2022 AMJJJASIONDJEMAMIJJASIONDJEMAMAJJJASIONDJEMAMAJJJASIONDJEMAMAJJJASIONDJEMAMAJJJASIONDJEMAMAJJJASIONDJEMAMAJJJAS
	AR4Z12A-2200	Pavement Section - Ramp D		4 01-03-22	01-10-22			Pavement Section - Ramp D
	AR4Z12A-2300	Insatll OH Sign Structures		10 01-10-22	01-24-22			□ Insattl OH Sign Structures
	AR4Z12A-2400	Install Permanent Signage / ITS / Lighting / Striping		12 01-10-22	01-26-22			□ Install Permanent Signage / ITS / Lighting / Striping
	AR4Z12A-2500	Install Guardrail / Fine Grade Ditches		7 01-26-22	02-04-22			🗓 İnstall Guardrail / Fine Grade Ditches
	AR4Z12A-2600	Rte. 17 Ramp D - Section Ready Open to Traffic for Unique Int	terim MS #1	0	02-04-22			◆ Rte. 17 Ramp D - Section Ready Open to Traffic for Unique Interim MS#1
	Area 4 - Zone 1 - Rar	mp D - MOT Stage 2A		86 04-28-23	08-30-23			08÷30-23, Area; 4 - Zone; 1 -
	AR4Z12B-1000	Shift Barrier/MOT Devices - Ramp D Left Shoulder to Complet	te Ramp D-CD Lane Shoulders	3 04-28-23	05-03-23			☐ Shift Barrier/MOT Devices - Ramp D
	AR4Z12B-1100	Install Temporary Construction Entrances		3 05-03-23	05-08-23			I Install Temporary Construction Entra
	AR4Z12B-1200	Install Initial E&S / Perimeter Controls		4 05-08-23	05-12-23			□ Install Initial E&S / Perimeter Controls
	AR4Z12B-1300	Saw Cut / Demo Existing Pavement		3 05-12-23	05-17-23			□ Saw Cut;/ Demo Existing Pavement
	AR4Z12B-1400	Initial Cut / Fill / Earthwork - Ramp D/CD Lane Shoulder		7 05-17-23	05-26-23			☐ Initial Cut / Fill / Earthwork - Ramp D
	AR4Z12B-1500	Install Drainage Pipe / Structures - Ramp D/CD Lane Shoulde	er	8 05-26-23	06-08-23			□ Install Drainage Pipe / Structures
	AR4Z12B-1600	Cut / Fill / Grade to Sub-grade - Ramp D/CD Lane Shoulder		10 06-09-23	06-22-23			☐ Cut / Fill / Grade to Sub-grade: - F
	AR4Z12B-1700	Rough Grade Ditches / Slopes		6 06-22-23	06-30-23	1		□ Rough Grade Ditches / Slopes
	AR4Z12B-1800	Place Sub-grade Aggregate - Ramp D/CD Lane Shoulder		5 07-03-23	07-10-23			
	AR4Z12B-1900	Install Underdrain - Ramp D/CD Lane Shoulder		3 07-10-23	07-13-23			I Install Underdrain - Ramp D/CD
	AR4Z12B-2000	Pavement Section - Ramp D/CD Lane Shoulder		12 07-14-23	07-13-23			☐ Pavement Section - Ramp D/C
	AR4Z12B-2100 AR4Z12B-2100	Install Permanent Signage / ITS / Lighting		12 07-14-23	07-31-23			
		0 0 0				-		☐ Install Permanent Signage / I
	AR4Z12B-2200	Install Guardrail / Fine Grade Ditches - Ramp D/CD Lane Shot		10 08-16-23	08-30-23			Install Guardrall //Fine/Grad
	AR4Z12B-2300	Ramp D/CD Lanes - Area 3 - Section Ready for Mill and Overla	ay/Final Pavement and Striping	0	08-30-23			♦ Ramp D/CD Lanes - Area 3
		mp D - MOT Stage 2B		38 08-30-23	10-24-23			10-24-23, Area 4 - Zone
	AR4Z103-1000	Remove Temp Barrier / MOT Devices	_	3 08-30-23	09-05-23			I Remove Temp Barrier / MC
	AR4Z103-1100	Final Mill and Overlay / Permanent Striping 95 NB CD / Ramp [D	20 09-05-23	10-03-23	4		☐ Final Mill and Overlay / Pe
	AR4Z103-1200	Finish Grade Slopes / Ditches		7 10-04-23	10-12-23			☐ Finish Grade Slopes / Di
	AR4Z103-1300	Install Guardrail / Signage 95 NB CD / RAMP D		8 10-12-23	10-24-23			□ Install Guardrail / Signa
	AR4Z103-1400	Section Complete		0	10-24-23			→ Section Complete
	_	17 MAINLINE WORK SOUTH OF 95		596 08-03-21	12-21-23			▼ 12-21-23, Area 4 -
	AR40000-2000	95 SB RRC Project Complete Rte. 17 Bridge Work		0 08-03-21*				♦ 95 SB RRC Project Complete Rte. 17 Bridge Work
		te. 17 - MOT Stage 1B		94 08-03-21	12-16-21			12-16-21, Area 4 - Zone 3A - Rte. 17 - MOT \$tage 1B
	AR4Z3A1B-1000	Install Temp. Barrier / MOT Devices - Rte. 17 EB/WB Outside	Shoulders	5 08-03-21	08-09-21			I Install Temp. Barrier / MOT Devices - Rte. 17 EB/WB Outside Shoulders
	AR4Z3A1B-1100	Install Temporary Construction Entrances		3 08-10-21	08-12-21			I Install Temporary Construction Entrances
	AR4Z3A1B-1200	Install Initial E&S / Perimeter Controls		4 08-13-21	08-18-21			I Install Initial E&\$ / Perimeter Controls
	AR4Z3A1B-1300	Saw Cut / Demo Pvmt / Initial Cut / Fill / Earthwork - Rte. 17 Ma	ainline Outside Widening	18 08-19-21	09-14-21			Saw Cut / Demo Pymt / Initial Cut / Fill / Earthwork - Rte. 17 Mainline Outside Widenin
	AR4Z3A1B-1400	Install Drainage Pipe / Structures		10 09-15-21	09-28-21			☐ Install Drainage Pipe / Structures
	AR4Z3A1B-1500	Install Retaining Wall at Culvert Crossing		12 09-15-21	09-30-21			☐ Install Retaining Wall at Culvert Crossing
	AR4Z3A1B-1600	Fill / Grade to Sub-grade - Rte. 17 Mainline Outside Widening		5 10-01-21	10-07-21			☐ Fill / Grade to Sub-grade - Rte. 17 Mainline Outside Widening
	AR4Z3A1B-1700	Install OH Sign Foundations		10 10-07-21	10-21-21			□ Install;OH Sign Foundations
	AR4Z3A1B-1800	Rough Grade Ditches / Slopes		5 10-07-21	10-14-21	-		Rough Grade Ditches / Slopes
	AR4Z3A1B-1900	Place Sub-grade Aggregate - Rte. 17 Mainline Outside Widenir	na	5 10-15-21	10-21-21	1		Place:Sub-grade Aggregate: - Rté. 17 Mainline Outside:Widening:
	AR4Z3A1B-2000	Install Underdrain		3 10-21-21	10-26-21			Install Underdrain
	AR4Z3A1B-2100	Install Median Barirer Foundations		6 10-26-21	11-03-21			Install Median Barirer Foundations
	AR4Z3A1B-2200	Pavement Section - Rte. 17 Mainline Outside Widening		4 11-04-21	11-09-21			Pavement Section - Rte. 17 Mainline Outside Widening
	AR4Z3A1B-2300	Pour Median Barrier		8 11-09-21	11-19-21			Pour Median Barrier
	AR4Z3A1B-2400	Install Permanent Signage / ITS / Lighting		12 11-09-21	11-19-21	-		☐ Install Permanent Signage / ITS / Lighting
	AD470A4D 0500	Install Guardrail / Fine Grade Ditches		7 11-29-21	12-09-21	-		☐ Install Guardrail / Fine Grade Ditches
	AR4Z3A1B-2500	Chiff Traffia Dta 47 FDAMD Mainting		E 40 00 01				
ı	AR4Z3A1B-2500 AR4Z3A1B-2600 AR4Z3A1B-2700	Shift Traffic Rte. 17 EB/WB Mainline Rte. 17 Mainline - Section Ready Open to Traffic for Unique Int		5 12-09-21 0	12-16-21 12-16-21	4: : : : : :		Shift Traffic Rte. 17 EB/WB Mainline Rte. 17 Mainline - Section Ready Open to Traffic for Unique Interim MS #1

I-95 NORTHBO	OUND RAPPAHANNOCK	RIVER CROSSING	4.6.1 PROPOSAL	SCHEDULE	E FEBRUARY 25, 202
ctivity ID		Activity Name	Original Start Duration	Finish	2020 2024 2021 2022 2023 2024 2021 2021 2022 2023 2024 2024 2024 2025 2025 2024 2025 2025
	Area 4 - Zone 3A- Rte		96 05-16-23	10-02-23	
	AR4Z3A2A-1000	Install Temp. Barrier / MOT Devices - Rte. 17 EB/WB Inside Shoulders	5 05-16-23	05-23-23	-1000000000000000000000000000000000000
	AR4Z3A2A-1100	Install Temporary Construction Entrances	3 05-23-23	05-26-23	
	AR4Z3A2A-1200	Install Initial E&S Controls	4 05-26-23	06-02-23	
	AR4Z3A2A-1300	Saw Cut / Demo Pvmt. / Initial Cut / Fill / Earthwork - Rte. 17 Median	18 06-02-23	06-28-23	
	AR4Z3A2A-1400	Install Drainage Pipe / Structures	10 06-28-23	07-13-23	
	AR4Z3A2A-1500	Fill / Grade to Sub-grade - Rte. 17 Median	5 07-14-23	07-20-23	li i i i i i i i i i i i i i i i i i i
	AR4Z3A2A-1600	Modify Signal - Rte. 17 / Sanford Dr.	30 07-20-23	08-31-23	Modify \$ignal - Rte. 17 / \$ahford D
	AR4Z3A2A-1700	Place Sub-grade Aggregate - Rte. 17 Mainline Outside Widening	5 07-21-23	07-27-23	□ Place Sub-grade Aggrégate - Rté. 17
	AR4Z3A2A-1800	Install Underdrain	3 07-27-23	08-01-23	i i i i i i i i i i i i i i i i i i i
	AR4Z3A2A-1900	Pour Concrete Median / Barrier Walls	15 08-01-23	08-22-23	□ Pour Concrete Median / Barrier Wa
	AR4Z3A2A-2000	Pavement Section - Rte. 17 Mainline Outside Widening	4 08-23-23	08-28-23	I Pavement Section - Rte. 17 Mainlir
	AR4Z3A2A-2100	Install Permanent Signage	12 08-28-23	09-14-23	
	AR4Z3A2A-2200	Install OH Sign Structure	10 08-28-23	09-12-23	
	AR4Z3A2A-2300	Install Guardrail	7 09-14-23	09-25-23	
	AR4Z3A2A-2400	Shift Traffic Rte. 17 EB/WB Mainline to Final Configuration	5 09-25-23	10-02-23	
		ŭ .	0		
	AR4Z3A2A-2500	Section Ready for Mill and Overlay / Final Pavement & Striping		10-02-23	
		te. 17 - MOT Stage 2B	40 10-24-23	12-21-23	
	AR4Z3A2B-1000	Remove Temp Barrier / MOT Devices	3 10-24-23	10-27-23	
	AR4Z3A2B-1100	Final Mill and Overlay / Permanent Striping Rte. 17 Mainline	20 10-27-23	11-28-23	
	AR4Z3A2B-1200	Finish Grade Slopes / Ditches	7 11-29-23	12-11-23	
	AR4Z3A2B-1300	Install Guardrail / Signage Rte. 17 Mainline	8 12-11-23	12-21-23	
	AR4Z3A2B-1400	Section Complete	0	12-21-23	
	Area 4 - LOOP D Area 4 - Loop D - MO	T Stage 1B	57 04-15-22 46 04-15-22	07-07-22 06-21-22	
	AR4LPD1B-1000	Install Temp Barrier / MOT Devices -Temp. Shift Loop	3 04-15-22	04-20-22	
	AR4LPD1B-1100	Saw Cut / Demo Existing Pavement	2 04-20-22	04-22-22	
	AR4LPD1B-1200	Reconstruct Ramp Shoulder / Mainline Pavement	10 04-22-22	05-06-22	
	AR4LPD1B-1300	Rough Grade Slopes / Dtiches	5 05-06-22	05-13-22	
	AR4LPD1B-1400	Temp. Shift Ramp to New Pavement	2 05-13-22	05-17-22	
	AR4LPD1B-1500		3 05-17-22		
		Demo Existing Pavement		05-20-22	
	AR4LPD1B-1600	Reconstruct Ramp Should / Mainline Pavement	10 05-20-22	06-06-22	
	AR4LPD1B-1700	Rough Grade Slopes / Ditches	5 06-06-22	06-13-22	
	AR4LPD1B-1800	Install Guardrail / Signage	4 06-13-22	06-17-22	
	AR4LPD1B-1900	Shift Ramp to permanent configuration	2 06-17-22	06-21-22	
	AR4LPD1B-2000	Ramp Ready for Final Surface Pavement and Striping	0	06-21-22	
	Area 4 - Loop D - MO		11 06-21-22	07-07-22	
	AR4LPD1C-1000	Remove Temp Barrier / MOT Devices	1 06-21-22	06-22-22	
	AR4LPD1C-1100	Final Mill and Overlay / Permanent Striping Loop D	2 06-22-22	06-24-22	II. Final Mill and Overlay / Permanent Striping Loop D
	AR4LPD1C-1200	Finish Grade Slopes / Ditches	5 06-27-22	07-01-22	I Finish Grade Slopes / Ditches
	AR4LPD1C-1300	Install Guardrail / Signage Loop D	3 07-01-22	07-07-22	☐ Install Guardrail / Signage Loop D
	AR4LPD1C-1400	Section Complete	0	07-07-22	Section Complete
	Area 4 - Zone 2 - RAMP	B - SB CD LANES TO NB RTE 17	412 10-06-21	06-05-23	06-05-23, Area 4:- Zone: 2 + RAMP B:- SB
	AR40000-3000	95 SB RRC Project Remove Temporary Signal / Restore Ramp B / Rte. 17 Area	0 10-06-21*		♦ 95 SB RRC Project Remove Temporary Signal / Relstore Ramp B / Rtel 17 Area
	Area 4 - Zone 2 - Rar	mp B - MOT Stage 2A	94 07-07-22	11-17-22	11-17-22, Area 4 - Zone 2 - Ramp B - MOT Stage 2A
	AR4Z22A-1000	Install Temp. Barrier / MOT Devices - Ramp B Left Shoulder	5 07-07-22	07-14-22	
	AR4Z22A-1100	Install Temporary Construction Entrances	3 07-14-22	07-19-22	
		Critical Remaining Work ▼ Summary Milestone	<u> </u>		SHIRLEY CONTRACTING COMPANY, LLC

D		K RIVER CROSSING Activity Name	4.6.1 PROPOSAL Original Start	Finish	2020 2021 2022 2023 2024
_		Nouvely Hame	Duration	1 111011	NAM JIJASOND JEMAM JIJASOND JEMAM JIJASI DNO JEMAM JIJASI
	AR4Z22A-1200	Install Initial E&S / Perimeter Controls	4 07-19-22	07-25-22	Install Initial E&S / Perimeter Controls
	AR4Z22A-1300	Clear and Grubb - Ramp B Right Shoulder to Rte. 17	5 07-25-22	08-01-22	
	AR4Z22A-1400	Initial Cut / Fill / Earthwork - Ramp B	18 08-01-22		
	AR4Z22A-1500	Install OH Sign Foundations	10 08-25-22	09-09-22	
	AR4Z22A-1600	Install Drainage Pipe / Structures	10 08-25-22		
	AR4Z22A-1700	Cut / Fill / Grade to Sub-grade - Ramp B	5 09-12-22	09-16-22	
	AR4Z22A-1800	Rough Grade Ditches / Slopes	5 09-16-22		
	AR4Z22A-1900	Place Sub-grade Aggregate - Ramp B	5 09-26-22	09-30-22	
	AR4Z22A-2000	Install Underdrain	3 09-30-22	10-05-22	
	AR4Z22A-2100	Pavement Section - Ramp B	4 10-06-22	10-03-22	
	AR4Z22A-2100 AR4Z22A-2200	Install Permanent Signage / ITS / Lighting	12 10-11-22	10-11-22	
	AR4Z22A-2200 AR4Z22A-2300	Install Guardrail / Fine Grade Ditches	7 10-17-22	11-07-22	
	AR4Z22A-2400	Temporary Traffic Shift on Ramp B	5 11-07-22	11-17-22	
	AR4Z22A-2500	Rte. 17 Ramp B - Section Ready for Lane Shift to Stage 2	0	11-17-22	
		mp B - MOT Stage 2B	95 11-17-22	04-11-23	
	AR4Z22B-1000	Install Temp. Barrier / MOT Devices - Ramp B Right Shoulder	5 11-17-22	11-29-22	
	AR4Z22B-1100	Install Temporary Construction Entrances	3 11-29-22	12-02-22	
	AR4Z22B-1200	Install Initial E&S / Perimeter Controls	4 12-02-22	12-08-22	
	AR4Z22B-1300	Clear and Grubb - Ramp B Right Shoulder to Rte. 17	5 12-08-22	12-15-22	
	AR4Z22B-1400	Install Traffic Signal Ramp B / Rte. 17	50 01-18-23	03-29-23	
	AR4Z22B-1500	Initial Cut / Fill / Earthwork - Ramp B	18 12-15-22	01-18-23	
	AR4Z22B-1600	Install Drainage Pipe / Structures	10 01-18-23	02-01-23	
	AR4Z22B-1700	Cut / Fill / Grade to Sub-grade - Ramp B	5 02-03-23	02-13-23	
	AR4Z22B-1800	Rough Grade Ditches / Slopes	5 02-13-23	02-20-23	
	AR4Z22B-1900	Place Sub-grade Aggregate - Ramp B	5 02-22-23	03-01-23	
	AR4Z22B-2000	Install Underdrain	3 03-01-23	03-06-23	II linstall Underdrain
	AR4Z22B-2100	Pavement Section - Ramp B	4 03-08-23	03-15-23	B
	AR4Z22B-2200	Install OH Sign Structures	10 03-15-23	03-29-23	III (nstal) OH;Sign;Structures
	AR4Z22B-2300	Install Permanent Signage / ITS / Lighting	12 03-15-23	03-31-23	Install Permanent Signage / ITS / Lighting
	AR4Z22B-2400	Install Guardrail / Fine Grade Ditches	7 03-31-23	04-11-23	☐ Install Guardrail / Fine Grade Ditches
	AR4Z22B-2500	Rte. 17 Ramp B - Section Ready for Mill and Overlay / Final Pavement and S	Striping 0	04-11-23	♦ Rte. 17 Ramp B - Section Ready for Mill a
	Area 4 - Zone 2 - Ra	mp B - MOT Stage 3	38 04-11-23	06-05-23	
	AR4Z203-1000	Remove Temp Barrier / MOT Devices	3 04-11-23	04-14-23	Remove Temp Barrier / MOT Devices
	AR4Z203-1100	Final Mill and Overlay / Permanent Striping Ramp B	20 04-14-23	05-12-23	Final Mill and Overlay, / Permanent Strip
	AR4Z203-1200	Finish Grade Slopes / Ditches	7 05-15-23	05-23-23	□ Finish Grade Slopes / Ditches
	AR4Z203-1300	Install Guardrail / Signage Ramp B	8 05-23-23	06-05-23	□ Install Guardrail / Signage Ramp B
	AR4Z203-1400	Section Complete	0	06-05-23	♦ Section Complete
-	Area 4 - Zone 3B - RTE	17 MAINLINE WORK NORTH OF 95	366 07-14-22	01-05-24	
	Area 4 - Zone 3B - R	Rte. 17 - MOT Stage 2A	104 07-14-22	12-12-22	▼ 12-12-22, Area 4 - Zone 3B - Rte. 17 - MOT Stage
	AR4Z3B2A-1000	Install Temp. Barrier / MOT Devices - Rte. 17 EB/WB Outside Shoulders	5 07-14-22	07-21-22	! □ Install Temp. Barrier / MOT Devices - Rte. 17 EB/WB Outside
	AR4Z3B2A-1100	Install Temporary Construction Entrances	3 07-21-22	07-26-22	!
	AR4Z3B2A-1200	Install Initial E&S / Perimeter Controls	4 07-26-22	08-01-22	! Install Initial E&S / Perimeter Controls
	AR4Z3B2A-1300	Saw Cut / Demo Pvmt / Initial Cut / Fill / Earthwork - Rte. 17 Mainline Outsid	e Widening 18 08-01-22	08-25-22	Saw Cut / Demo Pvmt / Initial Cut / Fill / Earthwork - Rte. 17
	AR4Z3B2A-1400	Install Drainage Pipe / Structures	10 08-25-22	09-09-22	! Install Drainage Pipe / Structures
	AR4Z3B2A-1500	Install Retaining Wall at Culvert Crossing	12 08-25-22		
	AR4Z3B2A-1600	Fill / Grade to Sub-grade - Rte. 17 Mainline Outside Widening	5 09-14-22		
	AR4Z3B2A-1700	Install OH Sign Foundations	10 09-20-22	_	
	(12022) (1700		10 00 20-22		I i i i i i i i i i i i i i i i i i i i



		(RIVER CROSSING			SCHEDULE	2020			2021		20	22		2023		BRUARY 2
)		Activity Name	Original Duration	Start	Finish		SOND	JIFIMA		OND			DJFMA		NDJFMA	
	AR4Z3B2A-1800	Rough Grade Ditches / Slopes	5	10-04-22	10-11-22	1 : : : : : :	; ; ; ; ;		<u> </u>	<u> </u>	 		ough;Grade;	Ditches / Slope	68; ; ; ; ;	
	AR4Z3B2A-1900	Place Sub-grade Aggregate - Rte. 17 Mainline Outside Wideni	ng 5	10-12-22	10-18-22							I P	ace Sub-gra	de Aggregate	- Rte. 17 Main	ıline Outsid
	AR4Z3B2A-2000	Install Underdrain	3	10-18-22	10-21-22							l là	stall Underd	ain		
	AR4Z3B2A-2100	Install Median Barirer Foundations	6	10-21-22	10-31-22					<u> </u>			nstall Mediar	Barirer Foun	dations	
	AR4Z3B2A-2200	Pavement Section - Rte. 17 Mainline Outside Widening	4	11-01-22	11-04-22							1	Pavement S	ction - Rte. 1	Mainline Out	side Widen
	AR4Z3B2A-2300	Pour Median Barrier	8	11-04-22	11-16-22								Pour Media	Barrier		
	AR4Z3B2A-2400	Install Permanent Signage / ITS / Lighting	12	11-04-22	11-22-22								Install Perm	anent Signag	e / ITS / Lightin	ng
	AR4Z3B2A-2500	Install Guardrail / Fine Grade Ditches	7	11-22-22	12-05-22								Install Gua	rdrail / Fine G	rade Ditches	
	AR4Z3B2A-2600	Shift Traffic Rte. 17 EB/WB Mainline	5	12-05-22	12-12-22	1: - ! - ! - ! - ! - ! - ! - ! -] Shift Traff	c Rte. 17 EB/\	VB Mainline	
	AR4Z3B2A-2700	Rte. 17 Mainline - Section Ready for Lane Shift to Stage 2	0		12-12-22								▶ Rte. 17 M	ainline - Sectio	n Ready for L	ane Shift to
	Area 4 - Zone 3B- Rt	e. 17 - MOT Stage 2B	104	05-16-23	10-12-23										10-12-23, Are	ea 4 - Zone
	AR4Z3B2B-1000	Install Temp. Barrier / MOT Devices - Rte. 17 EB/WB Inside S	houlders 5	05-16-23	05-23-23				1 1 1 1					Install Tem	p. Barrier / M.C	OT Devices
	AR4Z3B2B-1100	Install Temporary Construction Entrances	3	05-23-23	05-26-23									I Install Tem	porary Constr	ruction Entra
	AR4Z3B2B-1200	Install Initial E&S Controls	4	05-26-23	06-02-23		- + 	+ 1 1 1 1 1 1 1 1 1	 	F - 4 F -		+ + 	- + +	Install Initi	al E&S Control	ols : : : :
	AR4Z3B2B-1300	Saw Cut / Demo Pvmt. / Initial Cut / Fill / Earthwork - Rte. 17 N	Median 18	06-02-23	06-28-23	1								Saw Cu	t / Demo Pvmt	t. / Initial Cı
	AR4Z3B2B-1400	Install Drainage Pipe / Structures	10	06-28-23	07-13-23				1 1 1 1					The state of the state of	Drainage Pipe	1 1 1 1 1
	AR4Z3B2B-1500	Fill / Grade to Sub-grade - Rte. 17 Median		07-14-23	07-20-23										rade to Sub-g	
	AR4Z3B2B-1600	Modify Signal - Rte. 17 / Sanford Dr.	30	07-20-23	08-31-23									1 1 1 1 1	dify Signal - Ri	
	AR4Z3B2B-1700	Place Sub-grade Aggregate - Rte. 17 Mainline Outside Wideni	na 5	07-21-23	07-27-23										Sub-grade Ag	
	AR4Z3B2B-1800	Install Underdrain	3	07-27-23	08-01-23	-									l Underdrain	99. 79.10
	AR4Z3B2B-1900	Pour Concrete Median / Curb / Barrier Walls		08-01-23	08-22-23									- i i i i i	r Concrete Me	edian / Curl
	AR4Z3B2B-2000	Pavement Section - Rte. 17 Mainline Outside Widening		08-23-23	08-28-23	-									ement Section	
	AR4Z3B2B-2100	Install Permanent Signage		08-28-23	09-14-23	1								1 1 1 1 1	stall Permane	1 1 1 1 1
	AR4Z3B2B-2200	Install OH Sign Structure		08-28-23	09-12-23									· - i + i i +	stall OH Sigh	
	AR4Z3B2B-2300	Install Guardrail / Sidewalks / Fine Grade/Stabilize Slopes and		09-14-23	10-02-23	1									nstall Guardra	
	AR4Z3B2B-2400	Shift Traffic Rte. 17 EB/WB Mainline to Final Configuration		10-02-23	10-02-23	-									Shift Traffic R	1 1 1 1 1
	AR4Z3B2B-2500	Section Ready for Mill and Overlay / Final Pavement & Striping		10-02-23	10-12-23	-									Section Read	1 1 1 1 1
	Area 4 - Zone 3B - Ri	, ,		10-27-23	01-05-24									1 1 1 1 1	01-05-	3 1 1 1 1
	AR4Z3B03-1000	Remove Temp Barrier / MOT Devices		10-27-23	11-01-23	4					-			;	Remove Ter	-1111
	AR4Z3B03-1100	Final Mill and Overlay / Permanent Striping Rte. 17 Mainline		11-01-23	12-01-23	-								1 1 1 1 1	Final Mill a	
	AR4Z3B03-1100	Finish Grade Slopes / Ditches		12-04-23	12-18-23										Finish G	
	AR4Z3B03-1200 AR4Z3B03-1300	Install Guardrail / Signage Rte. 17 Mainline		12-04-23		1 1 1 1 1 1									Install (
	AR4Z3B03-1300 AR4Z3B03-1400	Section Complete	0	12-10-23	01-05-24	-									1 1 1 1 1	n Complete
		EMENT OF EXISTING CD LANES BRIDGE B608	Ţ.	02-04-22							<u> </u>				▼ 11-20-23,	41-4-4-4
Б	B608100-1000	Open Ramp D with New Signal on Rte. 17		02-04-22	11-20-23	4					♠ 'Open Ra	mp D with Ne	w Signal on	 	▼; I;1-20 ; 23, i	BID OP I IO
	B608100-1100	Close Loop C at Rte. 17 Interchange		02-04-22		-						p C at Rte.		1 1 1 1 1		
	B608100-1100	Shift Traffc w/ Bolt Down Barrier - I-95 NB CD Lanes		02-04-22	02-11-22	-					1 1 1 1 1			-95 NB CD La	undo.	
	B608100-1200	Shift Traffic - Rte. 17 Mainline / Close Inside Lanes for Pier Wo		02-04-22		1					1 1 1 1 1		1 1 1 1 1		es for Pier Wo	sele i i i
	BO #2 - MOT Stage 1C			02-04-22	01-09-23						and the second of				T Stage 1C -	
	B608 - DEMOLITION			02-11-22		<u> </u>						15-22, B608			Ji Stage IIO -	FIIAGE
	B608DEM1-1000	Demo Existing Birdge B634 Superstructure		02-11-22	03-04-22						1 1 1 1 1	Existing Birds				
	B608DEM1-1100	Demo Existing Bridge B634 Pier		03-04-22		1 1 1 1 1 1 1					1 1 1 1 1	Existing Brid		1 1 1 1 1		
	B608DEM1-1200	Excavate / Temp Shoring / Demo Existing Bridge B634 Abutm		03-04-22											Bridge B634 Al	butments
	B608 - SUBSTRUCTI	· · · · · · · · · · · · · · · · · · ·		03-18-22		<u> </u>					1 - 1 - 1 - 1 - 1 - 1 - 1			STRUCTURE		
	B608SUB1-1000	Excavate for Pier Foundation / Support of Excavation		03-18-22										/ Support of E		
	B608SUB1-1100	Drive Pier Piles		04-11-22	04-18-22	1 1 1 1 1 1 1					1 1 1 1 1	e Pier Piles		. , ,		
	B608SUB1-1200	FPS Pier Footing		04-18-22					1 1 1 1			S Pier Footin	na.			
	50005051 1200		10	31 10 22	00 02 22	<u> </u>	<u> </u>	<u> </u>	1 1 1 1	<u> </u>	<u>: : : = !'</u>	- 1 .5. II 55tii	' ; ; ; ;	<u> </u>	<u> </u>	<u> </u>



HBOUND RAPPAHANNOCH				SCHEDULE	FEBRUARY 25
	Activity Name	Original Duration	Start	Finish	2020 2021 2022 2023 2024 A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S
B608SUB1-1300	FPS Pier Column		05-02-22	05-23-22	□ FP\$ Pier Column
B608SUB1-1400	FPS Pier Cap		05-23-22	06-14-22	□ FPS Pier Cap
B608SUB1-1500	Drive Abutment A Piles		04-18-22	04-25-22	
B608SUB1-1600	Drive Abutment B Piles	5	04-25-22	05-02-22	Drive Abutment B Piles
B608SUB1-1700	Construct MSE / Wire Wall Abutment A	25	04-25-22	05-31-22	Construct/MSE/Wire WallAbutment/A
B608SUB1-1800	Construct MSE / Wire Wall Abutment B	25	05-23-22	06-28-22	Construct;MSE/Wire;Wal/Abutment;B
B608SUB1-1900	FPS Abutment A Pile Cap / Footing	8	06-14-22	06-24-22	FPS Abutment A Pile Cap / Footing
B608SUB1-2000	FPS Abutment B Pile Cap / Footing	8	06-28-22	07-11-22	☐ FPS Abutment B Pile Cap / Footing
B608 - SUPERSTRU	CTURE	84	07-11-22	11-07-22	
B608SPR1-1000	Mobilize Cranes / Prep for Beam Erection	5	07-11-22	07-18-22	□ Mobilize Cranes: / Prep for Beam Erection
B608SPR1-1100	Erect Bulb T Beams and Diaphragms	10	07-18-22	08-01-22	Erect Bulb T Beams and Diaphragms
B608SPR1-1200	FPS Integral Backwall Abutment A	15	08-01-22	08-22-22	☐ FPS Integral Backwall Abutment A
B608SPR1-1300	FPS Integral Backwall Abutment B	15	08-15-22	09-06-22	FPS;Integral Backwall Abutment B
B608SPR1-1400	Install SIP Forms	10	08-29-22	09-13-22	□ Install SIP Forms
B608SPR1-1500	Form Pier Diaphragm	5	09-13-22	09-20-22	□ Form Pier Diaphragm
B608SPR1-1600	Install Overhangs / Edge Forms	12	09-13-22	09-29-22	☐ Install Overhangs / Edge Forms
B608SPR1-1700	Install Deck Rebar	10	09-29-22	10-13-22	Install Deck Rebar:
B608SPR1-1800	Setup Screed	5	10-13-22	10-20-22	□ Setup Screed
B608SPR1-1900	Pour / Cure Bridge Deck and Closure Diaphragm	12	10-21-22	11-07-22	Pour / Cure Bridge Deck and Closure Diaphragm
B608 - PARAPETS / /	APPROACH SLABS / FINISHES		09-06-22	01-09-23	01-09-23, B608 - PARAPETS / APPROACH SL
B608FIN1-1000	Backfill Abutments / Wire Walls		11-07-22	11-21-22	Backfill Abutments: / Wire Walls
B608FIN1-1100	FPS Approach Slab / Sleeper Slab - Abut. A	8	11-14-22	11-28-22	☐ FPS Approach Slab / Sleeper Slab - Abut. A
B608FIN1-1200	FPS Apprach Slab / Sleep Slab - Abut. B	8	11-28-22	12-08-22	☐ FPS Apprach Slab / Sleep Slab - Abut. B
B608FIN1-1300	FPS Bridge Parapets and Terminal Walls	10	11-28-22	12-12-22	☐ ;FPS Bridge;Parapets; and Terminal Walls;
B608FIN1-1400	Groove Bridge Deck / Approach Slabs / Pavement Markings	5	12-14-22	12-23-22	☐ Groove Bridge Deck / Approach Slabs / Pavemer
B608FIN1-1500	Phase 1 Safety Inspection		12-23-22	01-09-23	Phase:1 Safety Inspection:
B608FIN1-1600	Construct Roadway Approaches to New Bridge		09-06-22	12-01-22	Construct Roadway Approaches to New Bridge
BO #2 - MOT Stage 1C			01-09-23	11-20-23	11-20-23, BO #2 - MO
B608200-1000	Modify Loop D - Switch Traffic to New Bridge	5	01-09-23		☐ Modify Loop D - Switch Traffic to New Bridge
B608 - DEMOLITION	•		01-16-23	03-13-23	V
B608DEM2-1000	Demo Existing Bridge B634 Superstructure	15	01-16-23	02-06-23	□ Demo Existing Bridge B634 Superstructure
B608DEM2-1100	Demo Existing Bridge B634 Pier	10	02-06-23	02-20-23	□ Demo Existing Bridge B634 Pier
B608DEM2-1200	Excavate / Demo Existing Bridge B634 Abutments	25	02-06-23	03-13-23	Excavate / Demo Existing Bridge B634 Abi
B608 - SUBSTRUCT	URE	79	02-20-23	06-12-23	USTRUCTUR
B608SUB2-1000	Excavate for Pier Foundation / Support of Excavation	16	02-20-23	03-14-23	☐ Excavate for Pier Foundation / Support of
B608SUB2-1100	Drive Pier Piles	5	03-14-23	03-21-23	The state of the s
B608SUB2-1200	FPS Pier Footing	10	03-21-23	04-04-23	☐ FPS Pier Footing
B608SUB2-1300	FPS Pier Column		04-04-23	04-25-23	□ FPS Pier Column:
B608SUB2-1400	FPS Pier Cap		04-25-23	05-16-23	— FPS Pier Cap
B608SUB2-1500	Drive Abutment A Piles		03-21-23	03-28-23	
B608SUB2-1600	Drive Abutment B Piles		03-28-23	04-04-23	Drive Abutment B Piles
B608SUB2-1700	Construct MSE Wall Abutment A		03-28-23	05-02-23	Construct MSE Wall Abutment A
B608SUB2-1800	Construct MSE Wall Abutment B		04-25-23	05-31-23	Construct/MSE Wall Abutment B
B608SUB2-1900	FPS Abutment A Pile Cap / Footing		05-16-23	05-26-23	☐ FPS Abutment A Pile Cap / Footing
B608SUB2-2000	FPS Abutment B Pile Cap / Footing		05-10-23	06-12-23	□ FPS Abutment Β' Pile Cap / Footing
B608 - SUPERSTRU	·		06-12-23	10-04-23	10-04-23, B608 - SUPERS
B608SPR2-1000	Mobilize Cranes / Prep for Beam Erection		06-12-23	06-19-23	I Mobilize Cranes / Prep for Beam E
D00001 1\Z-1000	INTO STILL OF A TOP TOT DEATH LIEUTUH	3	JU-12-2J	00-13-23	



I-95 NORTH	IBOUND RAPPAHANNOCK	RIVER CROSSING	4.6.1 I	PROPOSAL	SCHEDULE	LE FEBRUARY 25, 20
Activity ID		Activity Name	Original		Finish	2020 2021 2022 2023 2024
			Duration	וו		NAM JIJASOND JEMAM JI
	B608SPR2-1100	Erect Bulb T Beams and Diaphragms	10	06-19-23	07-03-23	B ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;
	B608SPR2-1200	FPS Integral Backwall Abutment A	15	07-03-23	07-25-23	Backwall Abutment A
	B608SPR2-1300	FPS Integral Backwall Abutment B	15	07-18-23	08-08-23	B
	B608SPR2-1400	Install SIP Forms	10	08-01-23	08-15-23	B Install SIP Forms
	B608SPR2-1500	Form Pier Diaphragm	5	08-15-23	08-22-23	
	B608SPR2-1600	Install Overhangs / Edge Forms		8 08-15-23	08-25-23	
	B608SPR2-1700	Install Deck Rebar		08-25-23	09-11-23	
	B608SPR2-1800	Setup Screed		09-11-23	09-18-23	
	B608SPR2-1900	Pour / Cure Bridge Deck and Closure Diaphragm		2 09-19-23	10-04-23	
		PPROACH SLABS / FINISHES		8 08-08-23	11-20-23	
	B608FIN2-1000	Backfill Abutments / Wire Walls		10-04-23	10-18-23	
	B608FIN2-1100	FPS Approach Slab / Sleeper Slab - Abut. A		3 10-11-23	10-23-23	
	B608FIN2-1200	FPS Apprach Slab / Sleep Slab - Abut. B		3 10-23-23	11-02-23	
	B608FIN2-1300	FPS Bridge Parapets and Terminal Walls		10-23-23	11-06-23	———————————————————————————————————————
	B608FIN2-1400	Groove Bridge Deck / Approach Slabs / Pavement Markings		5 11-07-23	11-13-23	<u> </u>
	B608FIN2-1500	Phase 1 Safety Inspection		5 11-13-23	11-20-23	
	B608FIN2-1600	Construct Roadway Approaches to New Bridge		0 08-08-23	11-01-23	
	B608FIN2-1700	95 NB CD Opens Ready for Final Paving / Striping / Open to Traffic	00	1	11-20-23	
		.K CONNECTION THRU I-95/RTE 17 INTERCHANGE	106	08-28-23	02-05-24	
	BO30000-1000	Install E&S Controls / Construction Access for Bike Trail Construction		6 08-28-23	09-06-23	
	BO30000-1000	Rough Grade for Bike Trail		09-06-23	09-29-23	
	BO30000-1100	Fine Grade for Bike Trail / Place Sub-base Aggregate		2 10-02-23	10-17-23	
	BO30000-1200	Pave Bike Trail		0 10-18-23	10-17-23	
	BO30000-1300	Install CG-12's at Crossings		6 10-16-23	11-07-23	
	BO30000-1400	Install Crosswalk Striping / Signage		12-22-23	01-08-24	
	BO30000-1500 BO30000-1600	Install HR-1 Handrail		01-08-24	01-06-24	
	BO30000-1700	Fine Grade / Back up Asphalt / Final Stabilization		01-19-24	01-31-24	
	BO30000-1800	Remove E&S Controls		01-31-24	02-05-24	
		F RTE 17 INTERCHANGE TO NORTHERN TERMINUS	_		10-28-22	
	AREA 5 - G ENERAL AR50000-1000	Begin Stage 1 Construction - Area 1		11-16-20	11-20-20	♦ Begin Stage 1 Construction - Area 1
	AR50000-1000 AR50000-1100	Install Initial MOT / Construction Signage		5 11-16-20	11-20-20	
	Area 5 - Zone 1 - I-95 NE	5 0			10-28-22	
		17 to Truslow GP Lanes - MOT Stage 1C		06-09-21		
	AR5Z11C-1000	Install Temp Barrier / MOT Devices - Right Shoulder I-95 NB	_	3 06-09-21	06-14-21	
	AR5Z11C-1100	Install E&S Controls / Temporary Construction Entrances from 95 NB		06-14-21	06-18-21	
	AR5Z11C-1200	Saw cut / Demo Existing Pavement		06-18-21	06-29-21	
	AR5Z11C-1300	Install Modify Drainage Pipe/Structures - 95 NB GP Shoulder - Rte. 17 to CD Lane Tie-in		06-10-21	07-14-21	
	AR5Z11C-1400	Cut / Fill to Sub-grade - 95 NB GP Shoulder - Rte. 17 to CD Lane Tie-in		07-15-21	08-03-21	
	AR5Z11C-1500	Install OH Sign Foundations		07-13-21	08-04-21	
	AR5Z11C-1600	Place Aggregate Sub-base - 95 NB GP Shoulder - Rte. 17 to CD Lane Tie-in		08-04-21	08-10-21	
	AR5Z11C-1700	Install Underdrain		08-10-21	08-10-21	
	AR5Z11C-1700 AR5Z11C-1800	Pavement Section - 95 NB GP Shoulder - Rte. 17 to CD Lane Tie-in		6 08-18-21	08-17-21	
	AR5Z11C-1800 AR5Z11C-1900	Finish Grade Ditch Between 95 NB GP Lanes / CD Lanes		08-18-21	08-25-21	
	AR5Z11C-2000	Install Guardrail / Signage 95 NB GP Shoulder - Rte. 17 to CD Lane Tie-in		09-03-21	09-16-21	
	Area 5 - Zone 1 - Rte. AR5Z12B-1000	17 to Truslow GP Lanes - MOT Stage 2B Remove Temp Barrier / MOT Devices		3 09-06-22 3 09-06-22	10-28-22 09-09-22	
	MUDI -QZI 76.UM	Tremove remp pamer / NIO r Devices	3	09-00-22	09-09-22	The interpretation of the interpretation of
		Critical Remaining Work Summary filestone				\$\frac{\text{SHIRLEY}}{\text{contracting company, llc}}

111111111111111111111111111111111111111	K RIVER CROSSING			SCHEDULE	FEBRUARY 2
	Activity Name	Origina Duration		Finish	2020 2021 2022 2023 2024
AR5Z12B-1100	Final Mill and Overlay / Permanent Striping 95 NB GP Lanes / Rte. 17 Bridge Approa	iches 20	0 09-09-22	10-07-22	Final Mill and Overlay/ Permanent Striping 95 NB GP.L
AR5Z12B-1200	Finish Grade Slopes / Ditches	-	7 10-10-22	10-18-22	☐ Finish Grade Slopes / Ditches
AR5Z12B-1300	Install Guardrail / Signage 95 NB GP Lanes / Rte. 17 Bridge Approaches	8	3 10-18-22	10-28-22	Install Guardrall / Signage 95 NB GP Lanes / Rte. 17
AR5Z12B-1400	Section Complete)	10-28-22	◆ Section Complete
Area 5 - Zone 2 - I-95 N	B CD LANES / RAMP HWN TO NORTHERN LIMITS (FREDEX OVERLAP AREA)	239	9 11-16-20	10-29-21	10-29-21, Area 5 - Zone 2 - I-95 NB CD LANES / RAMP HWN TO NORTHERN LI
	. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1A	(6 11-16-20	11-23-20	▼ 11-23-20, Area 5 - Zone 2 - Rte. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1A
AR5Z21A-1000	Install Temp MOT Devices	2	2 11-16-20	11-17-20	I Install Temp MOT Devices
AR5Z21A-1100	Mill and Overlay Left Shoulder 95 NB to remove Rumble Strips	2	2 11-18-20	11-19-20	I Mill and Overlay Left Shoulder 95 NB to remove Rumble Strips
AR5Z21A-1200	Shift 95 NB Lanes towards Left Shoulder	4	11-18-20	11-23-20	i i i i i i i i i i i i i i i i i i i
Area 5 - Rte. 17 to Tr	uslow CD Lanes/Ramp HWN - MOT Stage 1B	130	11-24-20	06-04-21	V 06-04-21, Area 5 - Rte. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1B
AR5Z21B-1000	Install Temp Barrier / MOT Devices - Right Shoulder Ramp C / I-95 NB CD Lanes	;	3 11-24-20	12-01-20	I (nstall Temp Barrier) MOT Devices - Right Shoulder Ramp C / 1-95 NB CD Lanes
AR5Z21B-1100	Install E&S Controls / Temporary Construction Entrances from 95 NB		3 12-02-20	12-04-20	Install E&S Controls / Temporary Construction Entrances from 95 NB
AR5Z21B-1200	Clear and Grubb 95 NB		5 12-07-20	12-11-20	
AR5Z21B-1300	Strip Top Soil / Prep Area for Embankment Fill		5 12-14-20	12-18-20	II Strip Top Soil / Prep Area for Embankment Fill
AR5Z21B-1400	Place Embankment Fill 95 NB CD / RAMP HWN - Ramp C to Northern Tie In (Sta. 4	1661) 20	12-21-20	01-25-21	Place Embarikment Fill 95 NB;CD / RAMP;HWN - Ramp C to Northern Tie In (\$ta. 4661)
AR5Z21B-1500	Install Deep Culverts / Drainage Pipes	10	0 01-05-21	01-18-21	☐ Install Deep Culverts / Drainage Pipes
AR5Z21B-1600	Install Drainage Pipe / Structures - 95 NB CD / RAMP HWN - Ramp C to Northern T	Tie In 10	0 01-26-21	02-08-21	☐ Install Drainage Pipe / Structures - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z21B-1700	Saw cut / Demo Existing Pavement		5 02-09-21	02-15-21	I Saw cut / Demo∣Existing Pavement
AR5Z21B-1800	Cut / Fill to Sub-grade - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In		1 02-17-21	03-19-21	Gut / Fill to Sub-grade - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z21B-1900	Install OH Sign Foundations		0 01-26-21	02-22-21	☐ Install OH Sign Foundations
AR5Z21B-2000	Install Duct Bank / Junction Boxes / Foundations for ITS Devices		5 12-21-20	02-15-21	Install Duct Bank / Junction Boxes / Foundations for IT\$ Devices
AR5Z21B-2100	Place Aggregate Sub-base - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In		5 03-22-21	03-31-21	☐ Place Aggregate Sub-base - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z21B-2200	Install Underdrain		1 03-31-21	04-06-21	I Install Underdrain
AR5Z21B-2300	Pour Median Barrier Footing - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In		2 04-06-21	04-00-21	Pour Median Barrier Footing - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z21B-2400	Pavement Section - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In		3 04-23-21	05-04-21	Pavement Section - 95 NB;CD / RAMP;HWN - Ramp C to Northern Tie In
AR5Z21B-2500	·		3 05-04-21	05-04-21	-
AR5Z21B-2600	Pour Barrier Wall - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In				Deur Barrier Wall -95 NB CD / RAMP HWN - Ramp C to Northern Tie In
	Finish Grade Slopes / Ditches		3 05-05-21	05-14-21	II Finish Grade Slopes / Ditches
AR5Z21B-2700	Install ITS Poles / OH Signs / Lighting-95 NB CD/RAMP HWN - Ramp C to Northern		3 05-14-21	05-26-21	Install ITS Poles / OH Signs / Lighting-95 NB CD/RAMP HWN - Ramp C to Northern Tie In
AR5Z21B-2750	Install Guardrail / Signage-95 NB CD/RAMP HWN - Ramp C to Northern Tie In		3 05-14-21	05-26-21	Install Guardrail / Signage-95 NB CD/RAMP HWN - Ramp C to Northern Tie In
AR5Z21B-2800	Shift Traffic - Ramp C / 95 NB CD Lanes		4 05-26-21	06-04-21	□ Shift Traffic + Ramp C / 95 NB CD Lands
	Trulsow - BOX CULVERT EXTENSION		12-14-20	03-01-21	03-01-21, Area 5 - Rte. 17 to Trulsow - BOX CULVERT EXTENSION
AR5Z21B-3000			3 12-14-20	12-16-20	I Install E&S Controls / Access to Box Culvert
	Install Temporary Diversion		5 12-17-20	12-23-20	D Install Temporary Diversion
AR5Z21B-3200			3 12-24-20	01-05-21	☐ Excavate for Invert Pours
AR5Z21B-3300			3 01-06-21	01-15-21	□ FP\$ Inverts
	FPS Walls / Roof		6 01-18-21	02-08-21	FPS Walls / Roof
AR5Z21B-3500	0		3 02-09-21	02-18-21	☐ FPS Wings
	Backfill Box Culvert / Install Rip Rap		7 02-19-21	03-01-21	☐ Backfill Box Culvert / Install Rip Rap
	uslow CD Lanes/Ramp HWN - MOT Stage 1C		3 06-04-21	09-24-21	▼ 09-24-21, Area 5 - Rte. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1C
AR5Z21C-1000	Install Temp Barrier / MOT Devices - Left Shoulder Ramp C / I-95 NB CD Lanes		3 06-04-21	06-09-21	I Install Temp Barrier / MOT Devices - Left Shoulder Ramp C / I-95 NB CD Lanes
AR5Z21C-1100	Install Temporary Construction Entrances		2 06-09-21	06-11-21	I Install Temporary Construction Entrances
AR5Z21C-1200	Saw cut / Demo Existing Pavement		6 06-11-21	06-21-21	□ Saw cut / Demo Existing Pavement
AR5Z21C-1300	Install Drainage Pipe / Structures - 95 NB CD / RAMP HWN - Ramp C to Northern T		0 06-21-21	07-06-21	☐ Install Drainage Pipe / Structures + 95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z21C-1400	Cut / Fill to Sub-grade - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In		2 07-07-21	07-22-21	Cut / Fill to Sub-grade - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z21C-1500	Install OH Sign Foundations		0 06-21-21	07-06-21	□ Install OH Sign Foundations
AR5Z21C-1600	Install Duct Bank / Junction Boxes for ITS Devices		5 06-21-21	07-13-21	Install Duct Bank / Junction Boxes for ITS Devices
AR5Z21C-1700	Place Aggregate Sub-base - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In		07-23-21	07-30-21	II Place Aggregate Sub-base - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In



IORTHBOUND RAPPAHANNO	OCK RIVER CROSSING	4	.6.1 PROPOSAL	SCHEDULE	FEBRUARY 25,
ID	Activity Name		iginal Start ration	Finish	2020 2021 2022 2023 2024 AM J J J A S O N D J F M A M J J J A S O N D J F M A M J J J A S O N D J F M A M J J J A S O N D J F M A M J J J A S O
AR5Z21C-1800	Install Underdrain		4 07-30-21	08-05-21	I Install Underdrain
AR5Z21C-1900	Pour Median Barrier Footing - 95 NB CD / RAMP HWN - Ram	np C to Northern Tie In	10 08-05-21	08-19-21	D Pour Median Barrier Footing - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z21C-2000	Pavement Section - 95 NB CD / RAMP HWN - Ramp C to No	rthern Tie In	6 08-20-21	08-27-21	Pavement Section - 95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z21C-2100	Pour Barrier Wall - 95 NB CD / RAMP HWN - Ramp C to Nort	thern Tie In	5 08-27-21	09-03-21	D Pour Barrier Wall - 95 NB CD/ RAMP HWN - Ramp C to Northern Tie In
AR5Z21C-2200	Finish Grade Slopes / Ditches		7 08-30-21	09-08-21	☐ Finish Grade Slopes / Ditches
AR5Z21C-2300	Install ITS Poles / OH Signs / Lighting-95 NB CD / RAMP HWI	N - Ramp C to Northern Tie In	10 09-03-21	09-20-21	☐ Install IT'S Poles / OH \$igns:/ Lighting+95 NB;CD /;RAMP;HWN - Ramp C to Northern Ti
AR5Z21C-2350	Install Guardrail / Signage-95 NB CD / RAMP HWN - Ramp C	to Northern Tie In	10 09-03-21	09-20-21	☐ Install Guardrail / \$ignage-95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z21C-2400	Shift Traffic - Ramp C / 95 NB CD Lanes to Permanent Config	uration	4 09-20-21	09-24-21	□ Shift Traffic - Ramp C / 95 NB CD Lanes to Permanent Configuration
Area 5 - Rte. 17 to	Truslow CD Lanes/Ramp HWN - MOT Stage 2B		25 09-24-21	10-29-21	10-29-21, Area 5 - Rte. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 2B
AR5Z22B-1000	Remove Temp Barrier / MOT Devices		2 09-24-21	09-28-21	I Remove Temp Barrier/ MOT Devices
AR5Z22B-1100	Final Mill and Overlay / Surface Pave / Permanent Striping 95	NB CD / Ramp HWN Lanes	10 09-28-21	10-12-21	🖟 Final Mill and Overlay / Şurface Pave / Permanent Striping 95 NB CD / Ramp HWN La
AR5Z22B-1200	Finish Grade Slopes / Ditches		5 10-13-21	10-19-21	☐ Finish Grade Slopes / Ditches
AR5Z22B-1300	Complete Guardrail / Signage 95 NB CD / RAMP HWN - Ram	p C to Northern Tie In	8 10-19-21	10-29-21	Complete Guardrail / Signage 95 NB CD / RAMP HWN - Ramp C to Northern Tie In
AR5Z22B-1400	Section Complete		0	10-29-21	◆ Section Complete
Area 5 - Rte. 17 to	Truslow - SWM		70 12-14-20	03-29-21	03-29-21, Area, 5 - Rte. 17 to Truslow - SWM
AR5Z2SWM-10	00 Install Temp Signage / MOT / E&S and Access to SWM Locat	ions	5 12-14-20	12-18-20	I Install Temp Signage / MOT / E&S and Access to SWM Locations
AR5Z2SWM-11	OO Clear and Grubb for SWM Facilities		5 12-21-20	01-04-21	Clear and Grubb for SWM Facilities
AR5Z2SWM-12	00 Mass Earthwork for SWM Facilities		22 01-05-21	02-03-21	Mass Earthwork for SWM Facilities
AR5Z2SWM-13	00 Install Drainage Pipe / SWM Structures		10 02-04-21	02-17-21	☐ Install Drainage Pipe / SWM Structures
AR5Z2SWM-14	00 Install SWM Features		8 02-18-21	03-01-21	☐ Install SWM Features
AR5Z2SWM-15	00 Final Grading / Stabilizatoin		7 03-03-21	03-17-21	Final Grading:/ Stabilizatoin
	00 Install Access Roads / Fence / Gates		8 03-17-21	03-29-21	☐ Install Access Roads / Fence / Gates
	JARY LANE EXTENSION TO EXIT 136		247 10-29-21		10-28-22, BID OPTION #1 - AUXILIARY L'ANE EXTENS
	LIARY LANE EXT TO EXIT 136 - MOT Stage 1A			11-17-21	▼ 11-17-21, Area 5 - BO #1 AUXILIARY LANE EXT TO EXIT 136 - MOT Stage 1A
AR5BO11A-1000	Install Temp MOT Devices		2 10-29-21	11-02-21	□ Install Temp MOT Devices
AR5BO11A-1100	Mill and Overlay Left Shoulder 95 NB to remove Rumble Strips	S	5 11-03-21	11-09-21	1 Mill and Overlay Left Shoulder 95 NB to remove Rumble Strips
AR5BO11A-1200	Shift 95 NB Lanes towards Left Shoulder		8 11-03-21	11-17-21	☐ Shift 95 NB Lanes towards Left Shoulder
Area 5 - BO #1 AUXI	LIARY LANE EXT TO EXIT 136 - MOT Stage 1B		196 11-18-21	09-06-22	09-06-22, Area 5 - BO #1 AUXILIARY LANE EXT TO EXIT.
AR5BO11B-1000	Install Temp Barrier / MOT Devices - Right Shoulder 95 NB S	TA 4681 to Truslow	3 11-18-21	11-22-21	I Install Temp Barrier / MOT Devices - Right Shoulder 95 NB STA 4681 to Truslow
AR5BO11B-1100	Install E&S Controls / Temporary Construction Entrances from	n 95 NB	4 11-23-21	11-30-21	Install E&\$ Controls / Temporary Construction Entrances from 95 NB
AR5BO11B-1200	Clear and Grubb 95 NB		8 12-01-21	12-13-21	☐ Clear and Grubb 95 NB
AR5BO11B-1300	Strip Top Soil / Prep Area for Embankment Fill		7 12-14-21	12-22-21	D Strip Top Soil / Prep Area for Embankment Fill
AR5BO11B-1400	Place Embankment Fill 95 NB STA 4681 to Truslow		30 12-23-21	02-11-22	Place Embankment Fill 95 NB STA 4681 to Truslow
AR5BO11B-1500	Install Deep Culverts / Drainage Pipes		18 01-10-22	02-02-22	lnstall Deep Culverts / Drainage Pipes
AR5BO11B-1600	Install / Modify Drainage Pipe / Structures - 95 NB STA 4681 to	o Truslow	20 02-14-22	03-11-22	Install / Modify Drainage Pipe / Structures - 95 NB STA 4681 to Truslow
AR5BO11B-1700	Saw cut / Demo Existing Pavement		14 03-14-22	03-31-22	Saw put / Demp Existing:Pavement
AR5BO11B-1800	Cut / Fill to Sub-grade - 95 NB STA 4681 to Truslow		22 04-01-22	05-02-22	Cut / Fill to Sub-grade - 95 NB STA 4681 to Truslow
AR5BO11B-1900	Install OH Sign Foundations		20 02-14-22	03-11-22	☐ Install OH Sign Foundations
AR5BO11B-2000	Place Aggregate Sub-base - 95 NB STA 4681 to Centreport P	kwy	14 05-03-22	05-20-22	☐ Place Aggregate Sub-base - 95 NB STA4681 to Centreport Pkwy
AR5BO11B-2100	Install Underdrain		10 05-20-22	06-06-22	☐ Install Underdrain
AR5BO11B-2200	Pour Median Barrier Footing - 95 NB STA 4681 to 4668+25		18 06-06-22	06-30-22	Pour Median Barrier, Footing - 95 NB STA 4 681 to 4 668+25
AR5BO11B-2300	Pavement Section - 95 NB STA 4681 to Truslow		14 07-01-22	07-21-22	☐ Pavement Section - 95 NB STA 4681 to Truslow
AR5BO11B-2400	Pour Barrier Wall - 95 NB STA 4681 to 4668+25		12 07-21-22	08-08-22	Pour Barrier Wall - 95 NB STA 4681 to 4668+25
AR5BO11B-2500	Finish Grade Slopes / Ditches		12 07-22-22	08-08-22	□ Finish Grade Slopes / Ditches
AR5BO11B-2600	Install Guardrail / OH Signs / Signage 95 NB STA 4661 to Cen	ntreport Pkw v	20 08-08-22	09-06-22	Install Guardrail / OH Signs / Signage 95 NB STA 4661 to C
	IXILIARY LANE EXT TO EXIT 136 - RETAINING WALLS (At Exis		71 12-14-21	03-31-22	V 03+31-22, Area 5 - BO #1 AUXILIARY LANE EXT. TO EXIT 136 - RETAI
AR5BO11B-270	·		9 12-14-21	01-04-22	Install E&S Controls / Access



I-95 NORT	HBOUND RAPPAHANNOCK	KRIVER CROSSING	4.6.1 PROPOSAL	SCHEDULE								FEBRUARY	Y 25, 202
Activity ID		Activity Name	Original Start Duration	Finish	2020 MAMJJAS	ONDIJIFIM	202 AMJ	21 JIAISIOINID	2022 J F M A M J J A S D	NDJFMAMJ	23 J A S O N D J F	2024 MAMJJA	AISIOIN
	AR5BO11B-2800	Excavate for Retaining Wall Footings	12 01-05-22	01-20-22					Excavate for Retaini	ng Wall Footings			
	AR5BO11B-2900	FPS Retaining Wall Footings	15 01-21-22	02-10-22					FPS Retaining Wal	Footings			
	AR5BO11B-3000	FPS Retaining Wall	30 02-04-22	03-17-22					FPS Retaining V				
	AR5BO11B-3100	Backfill Wals / Install Ditches	20 03-04-22	03-31-22					Backfill Walls /	Install Ditches			
	Area 5 - BO #1 AUXILIA	RY LANE EXT TO EXIT 136 - MOT Stage 2B	38 09-06-22	10-28-22						7 10-28-22, Area 5	BO #1 AUXILIARY	LANE EXT T	O EXIT
	AR5BO12B-1000	Remove Temp Barrier / MOT Devices	3 09-06-22	09-09-22					I R	emove Temp Barrie	/ MOT Devices		
	AR5BO12B-1100	Final Mill and Overlay / Permanent Striping 95 NB STA 4661 to Centreport Pkwy	20 09-09-22	10-07-22						Final Mill and Overl	ay / Permanent Strip	ing 95 NB ST	ΓA 4661 f
	AR5BO12B-1200	Finish Grade Slopes / Ditches	7 10-10-22	10-18-22						Finish Grade Slope	es / Ditches		
	AR5BO12B-1300	Install Guardrail / Signage 95 NB STA 4661 to Centreport Pkwy	8 10-18-22	10-28-22						Install Guardrail /	Signage 95 NB STA	4661 to Cent	treport P
	AR5BO12B-1400	Section Complete	0	10-28-22						Section Complete			

Actual Work

Remaining Work ◆ Milestone

Critical Remaining Work Summary

I-95 NORTHBOUND RAPP	AHANNOCK RIVER CROSSING	4.6.1 CRITIC	CAL PATH	FEBRUARY 25, 202
Activity ID	Activity Name	Original Start	Finish	2020 2021 2022 2023 2024
		Duration		IAMJJASONDJEMAMJJASONDJEMAMJJASONDJEMAMJJASONDJEMAMJJASONDJEMAMJJASON
LOS NE DEC. T	och Proposal Schodulo Final	1021 05-28-20	06-30-24	
	ech Proposal Schedule Final			
CONTRACT: C	00105510DB106 I-95 NB RRC	1021 05-28-20	06-30-24	V 06-30-24,
SCHEDULE MIL	ESTONES	1021 05-28-20	06-30-24	▼
I-95 NB RRC M		1021 05-28-20	06-30-24	
MS00000-14	,	0 05-28-20*		♦ Notice to Proceed (05/28/2020)
MS00000-19	00 Complete RRC Bridge Plans	0	05-05-21	◆ Complete RRC Bridge Plans
MS00000-25	00 Open Traffic to New 95 NB GP Lanes	0 04-28-23		◆ Open Traffic to New 95 NB GP Lanes
MS00000-26	00 Open Permanent Rte. 3 Ramp C / 95 NB CD Lanes To Rte. 17	0	11-22-23	i i i i i i i i i i i i i i i i i i i
MS00000-27	00 Project Ready to Start Final Inspections / Punchlist	0	05-01-24	♦ Project Ready t
MS00000-28	00 Final Inspections / Complete Punchlist	60 05-01-24	06-30-24	ilia ilia ilia ilia ilia ilia ilia ilia
MS00000-29	00 Administrative End of Contract	0	06-30-24	♦ Administra
MS00000-30	00 Final Completion Date	0	06-30-24*	Till in the state of the state
ADJACENT PR	ROJECT KEY DATES / MILESTONES	0		
DESIGN PHASE		234 05-28-20	05-05-21	▼
PRELIMINARY	DESIGN WORK	40 05-28-20	07-23-20	▼
DESIGN QA	/QC PLAN	0		
SCHEDULE	DEVELOPMENT and UPDATES	0		
SURVEY and	d MAPPING	40 05-28-20	07-23-20	▼ 7 07-23-20, SURVEY and MAPPING
DES0000-	-2600 Obtain Right of Entry	30 05-28-20	07-09-20	Obtain Right of Entry
DES0000-	-2700 Perform Property Research / Field Surveys	40 05-28-20	07-23-20	Perform Property Research / Field Surveys
GEOTECHN	ICAL INVESTIGATIONS and REPORTING	20 05-28-20	06-24-20	♥▼ 06-24-20, GEOTECHNICAL INVESTIGATIONS and REPORTING
ROADWA	Y GER	0		
BRIDGE			06-24-20	▼▼ 06-24-20, BRIDGĖ ĠER
	00-3900 Prepare Bridge Boring Location Plans	20 05-28-20	06-24-20	Prepare Bridge Boring Location Plans
	SIGNATIONS and TEST-PITS	0		
	PACKAGE- INTERIM MILESTONE AREA/FREDEX OVERLAP / STAGE 1A	0		
ROADWAY / RO		0		
BRIDGE DESIG		234 05-28-20		05-05-21, BRIDGE DESIGN
DES3000	09 RRC - EARLY PACKAGE FOR SUBSTRUCTURE WORK		01-27-21 06-24-20	▼ 01-27-21, BRIDGE B609 RRC - EARLY PACKAGE FOR SUBSTRUCTURE WORK Obtain Access to Causeway for Conformatory Borings
DES3000-	, , ,			╃┡╌╁╌╣╌╬╶╬╌╬╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫╌╫
	, 5 , 1		07-23-20	Perform Conformatory Borings:/ Report for Abut A to Pier 5
DES3000-	, , ,		08-20-20	Prepare Bridge Substructure Plans (1st Submission)
DES3000-	·	0	08-20-20	♦ Submit Preliminary Bride Substructure Design
DES3000-	•		09-10-20	■ VDOT/FHWA Review Preliminary Submission Bridge Substructure
DES3000-	·		10-15-20	Comment Response Preliminary Submission Bridge Substructure/Prepare 1st Submission
DES3000-	. ,	8 10-16-20	10-23-20	■ Desigh QA/Q/C (1st Submission)
DES3000-	,	0 10-26-20		Submit Bridge Substructure Plans (1st Submission)
DES3000-	,	21 10-26-20	11-15-20	■ VDOT/FHWA/Review/Comment Bridge Substructure Plans (1st Submission)
DES3000-	-3700 Prepare Final Bridge Substructure Plans	20 11-16-20	12-15-20	Prepare Final Bridge Substructure Plans
DES3000-	Design QA/QC (Final Submission)	5 12-16-20	12-22-20	■ Design QA/QC (Final Submission)
DES3000-	-3900 Submit Final Bridge Substructure Plans	0 12-23-20		♦ Submit Final Bridge Substructure Plans
DES3000-	-4000 VDOT/FHWA Review/Comment Bridge Substructure Plans (Final Submission)	21 12-23-20	01-12-21	VDQT/FHWA Review/Comment Bridge Substructure Plans (Final Submission)
DES3000-	4100 Final Comment Resolution Bridge Substructure Plans	10 01-13-21	01-26-21	■ Final Comment Resolution Bridge Substructure Plans
DES3000-	-	0 01-27-21		RFC Early Substructure Bridge Plans Issued for Construction
	09 RAPPAHNNOCK RIVER CROSSING		05-05-21	▼ 05-05-21, BRIDGE B609 RAPPAHNNOCK RIVER CROSSING
DES3000-			09-18-20	Prepare Stage I Bridge Reports/TS&Ls
DES3000-		0 09-21-20		◆ Submit Preliminary Bridge Design (Stage 1)
DES3000-			10-12-20	VDOT/FHWAReview/Comment Bridge Preliminary Design
		_ : 30 == =3	= =0	
Actual Work	Critical Remaining Work Summary			⇒ SHIRLEY
Remaining Work	♦ Milestone			CONTRACTING COMPANY, LLC
				CONTINUE COMPANY, EEC

I-95 NOR	THBOUND RAPPAHANNOC	CK RIVER CROSSING	4.6.1 CRIT	TICAL PATH					FEBRUARY 25, 202
Activity ID		Activity Name	Original Start Duration	Finish	2020 2 1AMJJJASONDJFMAM	2021 2022 JJJASONDJJFMAMJJJA	2023 A S O N D J F M A M J J		2024 MAMJJJASON WINWINWIN
	DES3000-1300	Prepare Bridge Plans (1st Submission)	45 10-13-20	12-16-20	<u> — </u>	dge Plans (1st Submission)			
	DES3000-1800	Design QA/QC (1st Submission)	8 12-17-20	01-05-21		VQC (1st Submission)			
	DES3000-1900	Submit Bridge Plans (1st Submission)	0 01-06-21		◆ Submit Brid	idge Plans (1st Submission)			
	DES3000-2000	VDOT/FHWAReview/Comment Bridge Plans (1st Submission)	21 01-06-21	01-26-21	■ VDOT/FI	HWAReview/Comment Bridge Plans	s (1st Submission)		
	DES3000-2100	Prepare Final Bridge Plans	30 01-27-21	03-09-21	Prepa	are Final Bridge Plans			
	DES3000-2200	Design QA/QC (Final Submission)	5 03-10-21	03-16-21	■ Desi	ign QA/QC (Final Submission)			
	DES3000-2300	Submit Final Bridge Plans	0 03-17-21		♦ Subn	mit Final Bridge Plans			
	DES3000-2400	VDOT/FHWA Review/Comment Bridge Plans (Final Submission)	21 03-17-21	04-06-21	■ MD	OT/FHWA Review/Comment Bridge	Plans (Final Submission)		
	DES3000-2500	Final Comment Resolution Bridge Plans	20 04-07-21	05-04-21		Final Comment Resolution Bridge Pla	ans ans		
	DES3000-2600	RFC Bridge Plans Issued for Construction	0 05-05-21			RFC Bridge Plans Issued for Constru	uction		
	BID OPTION #2 - BRID	DGE B608 95 NB CD LANES OVER RTE. 17	0						
	PUBLIC INVOLVEMENT		0						
	ENVIRONMENTAL PERM	ITTING	0						
	JOINT WETLANDS and V	NATERS PERMITTING	0						
	THREATENED & ENDA	ANGERED SPECIES / CULTURAL RESOURCES	0						
	HAZMAT and ENVIRONM	MENTAL SITE ASSESSMENTS	0						
	LD 445 / VPDES / STORM		0						
		D DISTURBANCE PERMIT	0						
	NOISE ANALYSIS		0						
	RIGHT OF WAY ACQUISIT	FION/EASEMENTS	0						
	RIGHT OF WAY PLANS		0						
	R/W PLANS		0						
	ROW ACQUISITIONS	ACQUISITION and RELOCATION PLAN	0						
	R/W GROUP 1 ACQUIS	RITIONS	0						
	R/W GROUP 2 ACQUIS		0		<mark>=</mark>		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	UTILITY RELOCATIONS	oniono e e e e e e e e e e e e e e e e e e	0		<mark></mark>				
	1-95		0			}			
	SUMMIT IG TRUNK LII	NE	0						
	VDOT ITS / VERIZON		0				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	WATERMAIN (I-95 CR	OSSINGS)	0						
	ROUTE 17		0						
	WATERMAIN		0						
	SANITARY SEWER		0						
	GAS LINE		0						
	OH POWER& COMM		0	05.04.04					be 04 04 00 0
	CONSTRUCTION		632 10-15-21	05-01-24					05-01-24, CON
	<u> </u>	SUBMITTALS and MATERIAL PROCUREMENT	0						
	SUBMITTALS ROADW	ADMINISTRATION TASKS	0						
		PPAHANNOCK CROSSING)	0						
		LANE BRIDGE REPLACEMENT)	0	+					
		ALITY ASSURANCE / QUALITY CONTROL PROCESS	0	+					
		OF RAPPAHANNOCK RIVER BRIDGE	145 04-28-23	11-22-23			+	11-22-2	3, AREA 1 - WORK
	AREA 1 - GENERAL		0						
		TH OF RTE 3 INTERCHANGE (SWM / SOUNDWALL)	0						
	Area 1 - Zone 1 - SC		0						
	Area 1 - Zone 1 - Rt		0						
		MP C - FROM RTE 3 TO 5502+00	0						
		amp C from Rte. 3 to 5502 - MOT Stage 1B	0						
	RETAINING WAL	L #1 - 5485 to 5496	0						
	Actual Work	Critical Remaining Work Summary					◆ CHIDI I	IV	
	Remaining Work ◆ ◆	Milestone					SHIRLE CONTRACTING COMPAN	<u>1 ن</u>	
							CONTRACTING COMPAN	1Y, LLC	

NORTHBOUND RAPPA	HANNOCK RIVER CROSSING	4.6.1 CRITICAL PATH	FEBRUARY 25, 20
/ ID	Activity Name	Original Start Finish Duration	2020 2021 2022 2023 2024 [AM] JJA S O N D J F M A M J J A S O N D J A S O N D
		Duration	
	IING WALL #2 - 5496 to 5505	0	
	- Zone 3 - Rte. 3 - SWM (Modify Existing Ponds)	0	
	one 3 - Ramp C from Rte. 3 to 5502 - MOT Stage 2B	0	
	e 2 - 95 NB GP LANES 4493+00 TO 4543+00 (RRC) one 2 - GP Lanes Rte. 3 to RRC - MOT Stage 1A	0	
	one 2 - GP Lanes Rte. 3 to RRC - MOT Stage 1B	0	
	one 2 - GP Lanes Rte. 3 to RRC - MOT Stage 2B	0	
	e 4 - I-95 NB CD LANES 5502+00 TO 5543+50 (RRC)	145 04-28-23 11-22-23	11-22-23, Area 1 - Zóne
	one 4 - CD Lanes 5502 to RRC - MOT Stage 1B	0	
Area 1 -	Zone 4 - FALL HILL SOUNDWALL	0	
Area 1 - Zo	one 4 - CD Lanes 5502 to RRC - MOT Stage 2A	145 04-28-23 11-22-23	3
AR1Z42	A-1000 Set Temp Barrier / MOT Devices - 95 NB Shoulder	5 04-28-23 05-05-23	B Set Temp Barrier / MOT Devides - 95 NB
AR1Z42	A-1100 Install Temporary Construction Entrances	3 05-05-23 05-10-23	3 : : : : : : Install Temporary Construction Entrances
AR1Z42	A-1200 Install / Modify E&S Controls - 95 NB	5 05-10-23 05-17-23	B Install / Modify E&S Controls - 95 NB
AR1Z42	A-1300 Demo Existing Pavement / Guadrail / Barrier Wall	15 05-17-23 06-08-23	B Demo Existing Pavement / Guadrail / B
AR1Z42		18 06-08-23 07-05-23	
AR1Z42		20 07-06-23 08-02-23	
AR1Z42	•	12 08-03-23 08-18-23	P ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !
AR1Z42		6 08-18-23 08-28-23	
AR1Z42		14 08-28-23 09-18-23	
AR1Z42	•	10 09-19-23 10-02-23	<u> </u>
AR1Z42		10 10-02-23 10-16-23	
AR1Z42	0 0	15 10-16-23 11-06-23	
AR1Z42		12 11-06-23 11-22-23	B Install Guardrail / Finish G
	one 4 - CD Lanes 5502 to RRC - MOT Stage 2B AHANNOCK RIVER BRIDGE B609	0 375 10-15-21 04-21-23	3 04-21-23, AREA 2 - RAPPAHANNOCK RIV
AREA 2 - RAPPA		0	U4-21-23, AREA 2- RAPPAHAINOUR RIV
	IOCK RIVER CAUSEWAY RE-CONFIGURATION / CONSTRUCTION	30 10-15-21 11-29-21	11-29-21, RAPPAHANNOCK RIVER CAUSEWAY RE-CONFIGURATION / CONSTR
B609CWY-		30 10-15-21 11-29-21	
B609 - SUBS		158 11-29-21 07-21-22	
B609 - ABI		0	
B609 - PIE	R7	0	
B609 - PIE	R 6	0	
B609 - PIE	R 5	68 11-29-21 03-15-22	2 V 7 15-22, B609 + PIER 5
B609SU	B-3500 Install Cofferdam Pier 5	7 11-29-21 12-09-21	1 ■ Install Cofferdam Pier 5
B609SU	B-3600 FPS Pier 5 Footing	7 12-09-21 12-20-21	1 □ FP\$ Pier 5 Footing
B609SU	IB-3700 FPS Pier 5 Stem Lift 1 of 2	12 12-20-21 01-14-22	FPS Pier 5 Stem Lift 1 of 2
B609SU	IB-3800 FPS Pier 5 Stem Lift 2 of 2	12 01-14-22 02-01-22	PPS Pier 5 Stem Lift 2 of 2
B609SU	B-3900 FPS Pier 5 Cap	30 02-01-22 03-15-22	
B609 - PIE	'	30 03-15-22 04-26-22	
B609SU		30 03-15-22 04-26-22	
B609 - PIE		30 04-26-22 06-08-22	
B609SU		30 04-26-22 06-08-22	
B609 - PIE	·	30 06-08-22 07-21-22	
B609SU		30 06-08-22 07-21-22	
B609 - PIE	·	0	
B609 - ABI		0	
	RSTRUCTURE	127 07-21-22 01-27-23	01-27-23, B609 - SUPERSTRUCTURE
B609 - STF	RUCTURAL STEEL	25 07-21-22 08-25-22	
B609SP	R-5000 Mobilize Crane / Equipment - Stage 2	5 07-21-22 07-28-22	2 Mobilize Crane / Equipment - Stage 2
Actual Work Remaining Work	Critical Remaining Work ▼ Summary Milestone		*SHIRLEY CONTRACTING COMPANY, LLC

5 NORTHBOUND RAPPAHANNOC	CK RIVER CROSSING		4.6.1 CRIT	ICAL PATH	FEBRUARY 25, 2020
ity ID	Activity Name	Original Duration	Start	Finish	2020 2021 2022 2023 2024 A M J J A S O N D J F M A M J J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S
B609SPR-5100	Erect Structural Steel Spans F, E, D, C and B	20	07-28-22	08-25-22	Erect Structural Steel Spans F, E, D, C and B
B609 - SPAN H DEC	K	7	08-25-22	09-06-22	₩ 09-06-22, B609 - SPAN H DECK
B609SPR-4400	Install SIP Forms / Studs	7	08-25-22	09-06-22	Install SIP Forms:/ \$tuds
B609 - SPAN G DEC	CK	7	09-06-22	09-15-22	₩ 09-15-22, B609 - SPAN G DECK
B609SPR-4000	Install SIP Forms / Studs	7	09-06-22	09-15-22	Install SIP Forms / Studs
B609 - SPAN F DEC	К	7	09-15-22	09-26-22	₩ 09-26-22, B609 - \$PAN F.DECK
B609SPR-3400	Install SIP Forms / Studs	7	09-15-22	09-26-22	Install SIP Forms / Studs
B609 - SPAN E DEC	K	7	09-26-22	10-05-22	
B609SPR-3000	Install SIP Forms / Studs	7	09-26-22	10-05-22	Install SIP Forms / Studs
B609 - SPAN D DEC			10-05-22	10-14-22	■ 10-14-22, B609 - SPAN D DECK
B609SPR-2600	Install SIP Forms / Studs	7	10-05-22	10-14-22	I Install SIP Forms / Studs
B609 - SPAN C DEC			10-14-22	01-04-23	
B609SPR-2000	Install SIP Forms / Studs		10-14-22	10-25-22	□ Install SIP Forms / Studs
B609SPR-2100	Install Bridge Overhangs	5	10-25-22	11-01-22	I Install Bridge Overhangs
B609SPR-2200	Install Edge Forms	3	11-01-22	11-04-22	II linstall Edge Forms
B609SPR-2300	Install Deck Reinforcing	7	11-04-22	11-15-22	■ Install Deck Reinforcing
B609SPR-2400	Setup Screed / Form Bulkheads / Deck Preparation	5	11-15-22	11-22-22	Setup Screed / Form Bulkheads / Deck Preparation
B609SPR-2500	Pour / Cure Decks	15	11-23-22	01-04-23	Pour/ Çure Decks
B609 - SPAN B DEC	ek	0			
B609 - SPAN A DEC	K	10	01-06-23	01-27-23	▼ 01-27-23, B609 - \$PAN A DECK
B609SPR-1500	Pour / Cure Decks	10	01-06-23	01-27-23	Pour / Cure Decks
B609 - PARAPETS / AF	PPROACH SLABS / FINISHES	60	01-27-23	04-21-23	▼ 04-21-23, B609 - PARAPETS / APPROACH
B609FIN-1400	Slip Form Bridge Parapets	15	02-24-23	03-17-23	Slip Form Bridge Parapets
B609FIN-1500	FPS Backwall / Cheek Walls - Abut. A	15	01-27-23	02-17-23	FPS Backwall / Cheek Walls - Abut. A
B609FIN-1600	Backfill Abut. A / Gade for Approach Slabs	5	02-17-23	02-24-23	■ Backfill Abut. A / Gade for Approach Slabs
B609FIN-1800	Strip Overhangs	20	03-17-23	04-14-23	Strip Overhangs
B609FIN-2100	Bridge Safety Inspection	5	04-14-23	04-21-23	□ Bridge SafetyInspection
AREA 3 - WORK FROM R	A PPAHANNOCK RIVER BRIDGE TO RTE 17	257	04-21-23	05-01-24	
AREA 3 - GENERAL		0			
Area 3 - Zone 1 - I-95 N	NB GP LANES 4555+00 TO 4606+00 (RTE 17)	257	04-21-23	05-01-24	
Area 3 - Zone 1 - GF	P Lanes RRC to Rte. 17 - MOT Stage 1A	0			
	P Lanes RRC to Rte. 17 - MOT Stage 1B		04-21-23	04-28-23	
AR3Z11B-4300	Remove Temp Barrier / Shift 95 NB GP Lanes to New Pavment / RRC Bridge	5	04-21-23	04-28-23	■ Remove Temp Barrier / Shift 95 NB GP Lane
Area 3 - Zone 1 - GF	P Lanes RRC to Rte. 17 - MOT Stage 2B		03-26-24	05-01-24	▼ 05-01-24, Are
AR3Z12B-1000	Remove Temp Barrier / MOT Devices	2	03-26-24	03-28-24	
AR3Z12B-1100	Final Mill and Overlay / Permanent Striping 95 NB GP Lanes RRC to Rte. 17	10	03-28-24	04-11-24	Final Mill and O
AR3Z12B-1200	Finish Grade Slopes / Ditches	6	04-12-24	04-19-24	I Finish Grade S
AR3Z12B-1300	Install Guardrail / Signage 95 NB GP Lanes RRC to Rte. 17	8	04-19-24	05-01-24	□ Install Guardr
AR3Z12B-1400	Section Complete	0		05-01-24	◆ Seption Comp
Area 3 - Zone 2 - I-95 N	NB CD LANES 5554+50 TO 5606+00 (RTE 17)	107	11-27-23	05-01-24	■ 05-01-24, Area
	D Lanes RRC to Rte. 17 - MOT Stage 1B	0			
	D Lanes RRC to Rte. 17 - MOT Stage 2A	0			
	D Lanes RRC to Rte. 17 - MOT Stage 2B		11-27-23	03-26-24	03-26-24, Area 3
AR3Z22B-1000	Shift Barrier/MOT Devices - Ramp D Left Shoulder to Construct CD Lane/GP Lane Median		11-27-23	11-29-23	■ Shift Barrier/MOT Devices
AR3Z22B-1100	Install Temporary Construction Entrances		11-30-23	11-30-23	I (nstall Temporary Constru
AR3Z22B-1200	Install Initial E&S / Perimeter Controls		12-01-23	12-01-23	I Install Initial E&S / Perimete
AR3Z22B-1300	Saw Cut / Demo Existing Pavement	5	12-04-23	12-08-23	
AR3Z22B-1400	Initial Cut / Fill / Earthwork - CD Lane / GP Lane Median - RRC to Rte. 17	6	12-11-23	12-18-23	■ Initial Cut / Fill/ Earthwor
AR3Z22B-1500	Install Drainage Pipe / Structures - CD Lane / GP Lane Median - RRC to Rte. 17	8	12-19-23	01-05-24	Install Drainage Pipe / S
Actual Work Remaining Work ◆ ◆	Critical Remaining Work Summary Milestone				\$\frac{\\$SHIRLEY}{\}CONTRACTING COMPANY, LLC

I-95 NO	RTHBOUND RAPPAHANNOCI	K RIVER CROSSING			4.6.1 CRIT	ICAL PATH					FEBRUARY 25, 2020
Activity ID		Activity Name		Original Duration	Start	Finish	2020 A M J A S O N D J F M A	2021 IMLILII ALSI OLNI DI J		2023 	
				Duration							
	AR3Z22B-1600	Cut / Fill / Grade to Sub-grade - CD Lane / GP Lane Median -			01-08-24	01-29-24					Cut / Fill / Grade to Sub-g
	AR3Z22B-1700	Place Sub-grade Aggregate - CD Lane / GP Lane Median - RF			01-31-24	02-12-24					Place Sub-grade Aggreg
	AR3Z22B-1800	Install Underdrain - CD Lane / GP Lane Median - RRC to Rte.	17	3	02-12-24	02-15-24					I Install Underdrain - CD
	AR3Z22B-1900	Install Median Barrier Footings - CD Lane / GP Lane Median -	RRC to Rte. 17	10	02-15-24	02-29-24					Install Median Barrier F
	AR3Z22B-2000	Pavement Section - CD Lane / GP Lane Median - RRC to Rte.	17	5	03-01-24	03-11-24					Pavement Section - C
	AR3Z22B-2100	Install Median Barriers		6	03-11-24	03-19-24					Install Median Barrier
	AR3Z22B-2200	Install Permanent Signage / ITS / Lighting		11	03-11-24	03-26-24					■ Install Permanent Sign
	AR3Z22B-2300	Install Guardrail / Fine Grade Ditches - CD Lane / GP Lane Me	edian - RRC to Rte. 17	5	03-19-24	03-26-24					Install Guardrail / Fin
	AR3Z22B-2400	CD Lanes - Area 3 - Section Ready for Mill and Overlay / Final	Pavement and Striping	0		03-26-24					◆ CD Lanes - Area 3 -
	Area 3 - Zone 2 - CD	Lanes RRC to Rte. 17 - MOT Stage 3		26	03-26-24	05-01-24					05-01-24, Area 3
	AR3Z203-1000	Shift CD Lanes to Perm. Configuration / Open Ramp D in Pern	n. Configuration	2	03-26-24	03-28-24					Shift CD Lanes to Pe
	AR3Z203-1100	Final Mill and Overlay / Permanent Striping 95 NB CD Lanes a	Temp. Ramp	10	03-28-24	04-11-24					Final Mill and Overl
	AR3Z203-1200	Finish Grade Slopes / Ditches		6	04-12-24	04-19-24					Finish Grade Slope
	AR3Z203-1300	Install Guardrail / Signage 95 NB CD Lanes		8	04-19-24	05-01-24					■ Install Guardrail /
	AR3Z203-1400	Section Complete		0		05-01-24					◆ Section Complete
	AREA 4 - RTE 17 INTERC	·		0							
	AREA 4 - GENERAL			0							
	Area 4 - Zone 1 - RAMF	D - NB CD LANES TO RTE 17		0				;			
	Area 4 - Zone 1 - Ra	mp D - MOT Stage 1B - Step 1		0							
	Area 4 - Zone 1 - Ra	mp D - MOT Stage 1B - Step 2		0							
		mp D - MOT Stage 2A		0							
		mp D - MOT Stage 2B		0				; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;		
		17 MAINLINE WORK SOUTH OF 95		0							
		te. 17 - MOT Stage 1B		0							
		te. 17 - MOT Stage 2A		0							
	Area 4 - LOOP D	te. 17 - MOT Stage 2B		0							
	Area 4 - Loop D - MO	OT Stane 1B		0			-		 		
	Area 4 - Loop D - MO			0							
		PB - SB CD LANES TO NB RTE 17		0							
		amp B - MOT Stage 2A		0							
	Area 4 - Zone 2 - Ra	mp B - MOT Stage 2B		0							
	Area 4 - Zone 2 - Ra	mp B - MOT Stage 3		0					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
		17 MAINLINE WORK NORTH OF 95		0							
		tte. 17 - MOT Stage 2A		0							
		te. 17 - MOT Stage 2B		0							
		te. 17 - MOT Stage 3		0							
		CEMENT OF EXISTING CD LANES BRIDGE B608		0							
	BO #2 - MOT Stage 1C B608 - DEMOLITION			0							
	B608 - SUBSTRUCT			0							
	B608 - SUPERSTRU			0							
		APPROACH SLABS / FINISHES		0					-,,,,,,,,,,,,,-		
	BO #2 - MOT Stage 1C			0							
	B608 - DEMOLITION			0							
	B608 - SUBSTRUCT	URE		0							
	B608 - SUPERSTRU			0					<u> </u>		
		APPROACH SLABS / FINISHES		0							
		LK CONNECTION THRU I-95/RTE 17 INTERCHANGE		0							
		OF RTE 17 INTER CHANGE TO NORTHERN TERMINUS		0							
	AREA 5 - G ENERAL			0					<u> </u>	<u> </u>	
		Critical Remaining Work Summary							\sim S	HIRLEY	
	Remaining Work ◆ ◆	Milestone							CON	NTRACTING COMPANY, LLC	

Area 5 - Zone Area 5 - Zone Area 5 - Zone 2 - Area 5 - Zone Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1	Activity Name 1 - I-95 NB GP LANES ne 1 - Rte. 17 to Truslow GP Lanes - MOT Stage 1C ne 1 - Rte. 17 to Truslow GP Lanes - MOT Stage 2B 2 - I-95 NB CD LANES / RAMP HWN TO NORTHERN LIMITS (FREDEX OVERLAP AREA) ne 2 - Rte. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1A e. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1B	Original Duration O O O O O O		2020 M J J A S	SONDJF)21		2022		2023	SIOINIDIJIFI	2024 MIAIMIJIJIA	
Area 5 - Zone Area 5 - Zone Area 5 - Zone 2 - Area 5 - Zone Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1	ne 1 - Rte. 17 to Truslow GP Lanes - MOT Stage 1C ne 1 - Rte. 17 to Truslow GP Lanes - MOT Stage 2B 2 - I-95 NB CD LANES / RAMP HWN TO NORTHERN LIMITS (FREDEX OVERLAP AREA) ne 2 - Rte. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1A e. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1B	0 0			TATTATI DA TATA	- MI A MI J	JJAJSJOJN	D J F M A N	MIJIJAISIO	NIDIJEIM	AIMIJIJIJI		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ASON
Area 5 - Zone Area 5 - Zone Area 5 - Zone 2 - Area 5 - Zone Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1	ne 1 - Rte. 17 to Truslow GP Lanes - MOT Stage 1C ne 1 - Rte. 17 to Truslow GP Lanes - MOT Stage 2B 2 - I-95 NB CD LANES / RAMP HWN TO NORTHERN LIMITS (FREDEX OVERLAP AREA) ne 2 - Rte. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1A e. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1B	0	i+	rituriuriuriuri	<u> </u>	<u> </u>	ritmitmitmitmi	irmitmitmitmitmit	<u> </u>	<u> </u>		<u> </u>	<u> </u>	THTTULL
Area 5 - Zone 2 - Area 5 - Zone 2 - Area 5 - Zone Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1	ne 1 - Rte. 17 to Truslow GP Lanes - MOT Stage 2B 2 - I-95 NB CD LANES / RAMP HWN TO NORTHERN LIMITS (FREDEX OVERLAP AREA) ne 2 - Rte. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1A e. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1B								1 1 1 1 1					
Area 5 - Zone Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1	ne 2 - Rte. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1A e. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1B	0												
Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1	e. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1B													
Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1		0		1 1 1 1 1 1 1 1 1 1 1 1					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Area 5 - Rte. 1 Area 5 - Rte. 1 Area 5 - Rte. 1		0								1 1 1 1 1 1				
Area 5 - Rte. 1 Area 5 - Rte. 1	Rte. 17 to Trulsow - BOX CULVERT EXTENSION	0												
Area 5 - Rte. 1	e. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 1C	0												
	e. 17 to Truslow CD Lanes/Ramp HWN - MOT Stage 2B	0												
RID OPTION #1 - A	e. 17 to Truslow - SWM	0												
	AUXILIARY LANE EXTENSION TO EXIT 136	0	i i i											
	AUXILIARY LANE EXT TO EXIT 136 - MOT Stage 1A	0		1 1 1 1										
	AUXILIARY LANE EXT TO EXIT 136 - MOT Stage 1B	0												
	#1 AUXILIARY LANE EXT TO EXIT 136 - RETAINING WALLS (At Exist. Box Culverts) AUXILIARY LANE EXT TO EXIT 136 - MOT Stage 2B	0												
			1 1	<u>i i i i</u>	1 1 1 1 1	1 1 1 1	1 1 1 1	<u> </u>						1 1

Actual Work

Remaining Work ◆ Milestone

Critical Remaining Work Summary

