

Response to Request for Proposals

I-64 HAMPTON ROADS EXPRESS LANES (HREL) SEGMENT 1A City of Norfolk, Virginia

State Project No.: 0064-122-470
Federal Project No.: NHPP-064-3(520)
Contract ID No.: C00117840DB112

AUGUST 17, 2022



VOLUME I - TECHNICAL PROPOSAL

4.1: Letter of Submittal



August 17, 2022

Commonwealth of Virginia
Department of Transportation (VDOT)
Alternative Project Delivery
1401 E. Broad Street
Richmond, VA 23219
Attn: Bryan W. Stevenson, PE, DBIA
Dear Mr. Stevenson:

**RE: I-64 Hampton Roads Express Lanes (HREL)
Segment 1A**
City of Norfolk, Virginia
State Project No.: 0064-122-470
Federal Project No.: NHPP-064-3(520)
Contract ID No.: C00117840DB112

Archer Western Construction, LLC (AWC), as the offeror, along with Dewberry Engineers Inc. (Dewberry) as our lead designer, is pleased to submit our technical proposal for the VDOT **I-64 Hampton Roads Express Lanes (HREL) Segment 1A**. Our proposal is organized in accordance with the RFP. Volume I includes our narrative and the required forms and appendices. Volume II – Conceptual Project Plans consists of our conceptual design and schedule. Also included are the Proposal Schedule native files (.XER format) and two required layered PDF roll plots.
4.1.1 OFFEROR: The full legal name and address of the Offeror is Archer Western Construction, LLC, 13454 Sunrise Valley Drive, Suite 440, Herndon, VA 20171.

4.1.2-4.1.3 DECLARATION OF INTENT TO ENTER INTO A CONTRACT: AWC, if selected will enter into a contract with VDOT for the I-64 Hampton Roads Express Lanes (HREL) Segment 1A Project, in accordance with the terms of the RFP and subsequent addendum. Further, the offer represented by our Technical and Price Proposals will remain in full force and effect for one hundred and twenty (120) days after the date that the price proposal is submitted.

4.1.4 OFFEROR'S POINT OF CONTACT:

Jeffrey Mays, Program Manager
13454 Sunrise Valley Dr, Suite 440
Herndon, VA 20171
Phone: 301-347-4680 Fax: 301-347-4681
jmays@walshgroup.com

4.1.5 PRINCIPAL OFFICER OF THE OFFEROR:

EJ O'Neill, Vice President
13454 Sunrise Valley Dr, Suite 440
Herndon, VA 20171
Phone: 301-347-4680 Fax: 301-347-4681
ejoneill@walshgroup.com

4.1.6 INTERIM MILESTONE DATE: N/A FINAL COMPLETION: 12/15/2025

4.1.7 UNIQUE MILESTONE DATES (AND LIDS): N/A

4.1.8 PROPOSAL PAYMENT AGREEMENT: Please refer to the Appendix for executed Proposal Payment Agreement Form Attachment 9.3.1.

4.1.9 DEBARMENT FORMS: Please refer to the Appendix for executed debarment forms 11.8.6(a) and 11.8.6(b) from all team members.

4.1.10 DBE PARTICIPATION: AWC is committed to achieving the 12% DBE goal for entire value of the contract.

4.1.11 SCC AND DPOR REGISTRATION: AWC confirms that all commercial and professional registration requirements set forth in our SOQ, including, but not limited to requirements of the Virginia SCC and the Virginia DPOR are complete and accurate and AWC and all business entities on our team remain in good standing with all applicable regulatory bodies and are eligible to provide the services required on the Project.

We appreciate the opportunity to submit our proposal for the design and construction of the **I-64 Hampton Roads Express Lanes (HREL) Segment 1A**. In consideration of our extensive experience and project approach, we are confident that the AWC Team has the professional and financial resources to make the project a resounding success. We look forward to working with you on this critical project for the Norfolk area.

Sincerely,
Archer Western Construction, LLC


EJ O'Neill
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, except for the replacement of Scott Glass with Glen “Trey” Martin as Construction Manager (CM) as Scott is no longer with the company. This change was approved by VDOT on August 4, 2022 in accordance with Part 1, Section 11.4.

Our Team is submitting the following personnel for the Deputy Key Personnel positions:

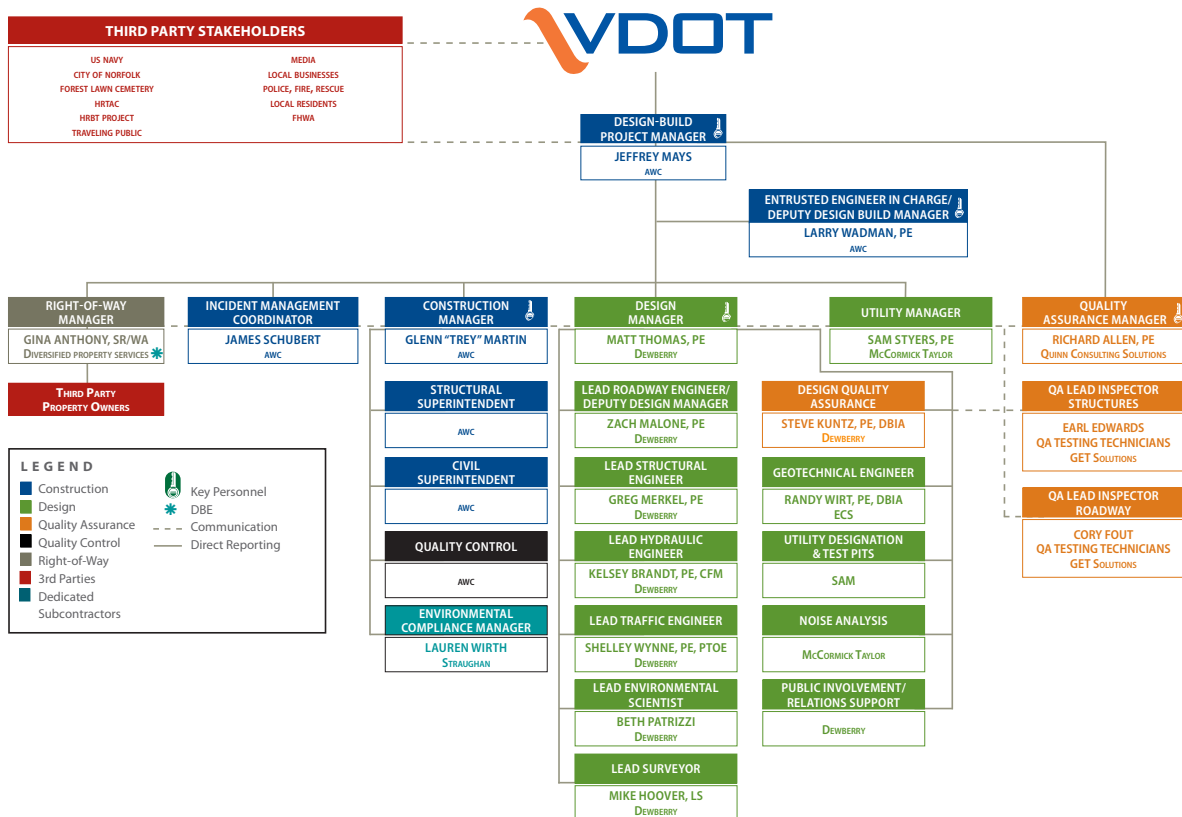
- Larry Wadman, PE as Deputy Design-Build Project Manager (DDBPM); and
- Zach Malone, PE as Deputy Design Manager (DDM).

Resumes for each of these Deputy Positions are included in the Appendix.

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 shown below is updated to reflect the addition of the Deputy Key Personnel, the replacement of the CM described above, the designation of Lauren Wirth as the Environmental Compliance Manager (ECM), and the designation of James Schubert as the Contractor Incident Management Coordinator (CIMC).

As there are no other changes to key staff or functional relationships among the participants since submittal of the SOQ than described above, no further updates to the narrative are required.



4.3: Design Concept

4.3 - Design Concept

Introduction

As our Team prepared our conceptual design and Technical Proposal, we did so with recognition that an extensive amount of work had already been completed by VDOT to develop the RFP and conceptual plans. We reviewed the RFP documents, made multiple visits to the Project site, and held weekly meetings to discuss the scope of the Project and identify areas where enhancements could be implemented. Based on our extensive efforts to date, our Team has identified and incorporated modifications and enhancements to achieve the VDOT priorities set for success including:

- ◆ Reduction of construction and long-term maintenance costs for VDOT;
- ◆ Development of an efficient design
- ◆ Minimization of construction impacts; and
- ◆ Mitigation of risks through our Project Approach.

A summary of these enhancements is shown in Table 4.3.1, are described in detail throughout our technical proposal, and many are depicted in our Volume II – Conceptual Project Plans. We also confirm that our Design Concept:

- ◆ Meets or exceeds all requirements listed in the Design Criteria Table;
- ◆ Is wholly contained within the right-of-way limits shown in the RFP Conceptual Plans with the exception of temporary construction, permanent drainage, and utility easements, other than permanent drainage easements for stormwater management facilities; and
- ◆ Does not include design elements that require Design Exceptions and/or Design Waivers unless they are identified or included in the RF or Addendum, or approved through the ATC process.

Our Team presented two preliminary ATCs during the 2nd ATC/Proprietary Meeting for VDOT consideration. Our ATC #02 – I-64 EB over Tidewater Drive – Minimum Girder Depth Reduction (ATC #02) was reviewed and approved by VDOT with conditions on July 27, 2022 and has been included within our Team’s Design Concept. The conditions for approval include:

1. The Design-Builder will be required to prepare and receive approval of a Design Waiver for the span-to-depth ratio. VDOT final approval is contingent on the Design Waiver.
2. The final design shall have an equivalent stiffness between the existing beams and the proposed beams. Supporting calculations shall be submitted for review and approved by VDOT.

Incorporating ATC #02, and completing the conditions listed above during final design, meets the minimum vertical clearance of 14’-11” for I-64 EB over Tidewater Drive; it also benefits the project by ***reducing impacts to existing utilities, eliminates a retaining wall, eliminates impacts to existing tidal wetlands, minimizes impacts to Loop C, provides additional construction staging area, and simplifies temporary traffic control sequencing.***

Table 4.3.1 – Enhancements:

Enhancement	Project Benefit
Roadway	
Redesigned entrance for I-64 WB HOT lane prior to I-564 exit.	<ul style="list-style-type: none"> • Provides additional 490 LF of space between Tidewater Drive Ramp A and entrance to HOT lane. • Reduces the number of flexible post delineators at gore
Shifted horizontal alignment of I-64 WB at Tidewater Drive between Loop A and Ramp A.	<ul style="list-style-type: none"> • Provides full gore widths of Loop A and Ramp A. • Minimizers impacts to wetlands.

Enhancement	Project Benefit
Shifted horizontal alignment to widen I-64 EB over Tidewater Drive to median.	<ul style="list-style-type: none"> Eliminates the proposed retaining wall. Eliminates widening of Loop C from Tidewater Drive SB to I-64 EB. Eliminates realignment of Loop B from I-64 EB to Tidewater Drive NB. Provides additional construction staging area. Simplifies temporary traffic control sequence Eliminates impact to existing tidal wetlands. Reduces impact with existing 6" gas line.
Maximized the use of spline grades.	<ul style="list-style-type: none"> Reduces amount of pavement build-up. Increases safety during construction by minimizing variable depth overlay and impacts to traffic Avoids trapping water adjacent to median construction and eliminates the need for temporary pavement wedges to maintain surface runoff
Drainage / Stormwater Management	
Reduced number of facilities from 7 to 2.	<ul style="list-style-type: none"> Reduces long-term maintenance. 71% reduction of the number of treatment facilities.
Proposed facilities accommodate additional phosphorus removal.	<ul style="list-style-type: none"> Allows nutrient credits already purchased by VDOT to be applied to other VDOT projects.
Structure	
Revised RFP plan to widen I-64 EB over Tidewater Drive to the median.	<ul style="list-style-type: none"> Eliminates conflict with the existing 6" gas line parallel to Tidewater Drive. Maintains minimum vertical clearance of 14'-11" (ATC #02).
Revised retaining wall alignments and optimized profiles	<ul style="list-style-type: none"> Eliminated 4 retaining walls. Reduces the total retaining wall length by 240 LF. Reduces long-term maintenance costs. Reduces construction costs. Avoids wetland and stream impacts.
Traffic	
Proposed early relocation of a portion of the ITS trunkline	<ul style="list-style-type: none"> Reduces the risk of an accidental strike during construction. Allows for earlier access to the reversible lanes for construction of WB express lane.
Introduced a temporary left turn at the Tidewater Drive and Thole Street traffic signal.	<ul style="list-style-type: none"> Reduces the number of TTC stages required for the I-64 EB bridge over Tidewater Drive. Improves safety on I-64.
Environmental	
Optimized horizontal alignments and grading.	<ul style="list-style-type: none"> Reduces non-tidal wetland impacts by 0.10 acres.

4.3.1 Conceptual Roadway Plans

Completion of this project will provide an 8-lane typical section consisting of three general purpose lanes and one high occupancy express managed part time shoulder lane in each direction of travel. The existing reversible high occupancy lanes facility will be modified to carry the westbound managed lane through the Little Creek and Granby interchanges. These improvements will connect to the work currently taking place as part of the Hampton Roads Bridge Tunnel (HRBT) Expansion Project and will substantially improve operations and increase peak hour capacity in the region.

(a) General Geometry

The general geometry of our Team's concept is depicted on our Volume II – Conceptual Project Plans including horizontal curve data, number and widths of lanes and shoulders, superelevation rates, and design speeds. Improvements to I-64 have been designed for a 60-MPH design speed in accordance with GS-INT criteria and provides one high occupancy express managed part time shoulder lane in each direction of travel while maintaining the three existing general purpose lanes. Reduced shoulder widths will be utilized

in accordance with previously approved design exceptions and design waiver. The Eastbound shoulders will generally be 3' wide and will vary to as narrow as 2" and as wide as 12'. The Westbound shoulders will generally be 2' wide and will vary to as narrow as 2" and as wide as 12' on the outside and 17' on the inside. In addition, interchange ramp improvements are incorporated to accommodate the interstate widening and gore area modifications. Ramp widths vary from 15' to 18' for single lane ramps while the two-lane ramps are as wide as 24'. Ramp right side paved shoulder widths are generally 6' wide, and left side paved shoulders are generally 4' wide, except where design exceptions or design waivers have already been approved. Interchange ramp design speeds vary from 25-MPH to 50-MPH, consistent with the RFP Conceptual Plans and the Design Criteria Table.

(b) Horizontal Alignments

The horizontal alignments proposed are similar to the RFP with a few key optimizations that limit the Projects impacts. With the acceptance of ATC #02, our Team proposes to widen eastbound I-64 to the median through the Tidewater interchange, thus reducing the impacts to the interchange ramps, eliminating a proposed retaining wall, eliminating fee simple right-of-way take, avoiding a direct gas line conflict, and reducing the number of construction phases. The provisions of ATC #02 allow for the median widening of the I-64 eastbound bridge over Tidewater while maintaining the vertical clearance required by design exception number 03. Additionally, the alignment of I-64 eastbound has been shifted, between the Little Creek and Tidewater interchanges, further away from the existing retaining wall and noise barrier. This shift allows our Team to reduce the limits of retaining wall modifications and noise barrier replacements by 118 linear feet compared to the RFP conceptual plans. Finally, realignment of westbound I-64 between Tidewater Loop A and Tidewater Ramp A minimizes wetland impacts between these two ramps and provides full gore widths for both ramps. Horizontal alignments for the interchange ramps are consistent with those identified in the RFP with the exception of improvements to the ramp gore designs to incorporate standard layouts per VDOT Road Design Manual requirements and the two loop ramps connecting Tidewater drive to eastbound I-64. By reconfiguring the gore areas, our Concept will improve safety and operations by accommodating re-entry of vehicles should

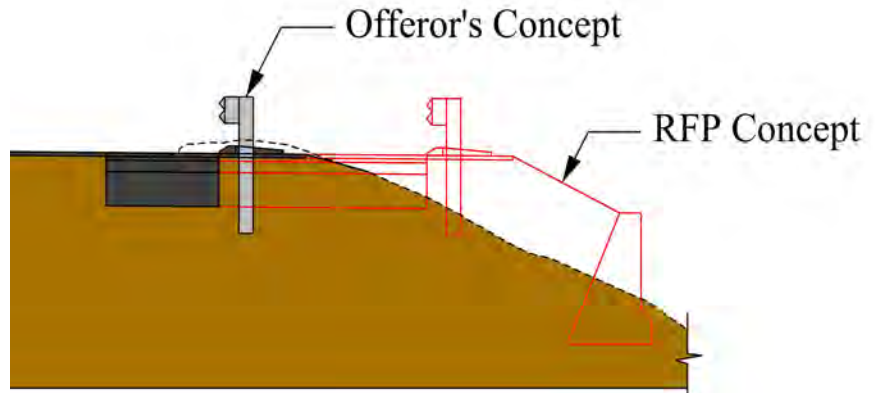


Figure 4.3.1.1 - Our Team's Design Concept along I-64 EB at Tidewater Drive Compared to the RFP Section Shown in Red – Station 1060+00 RT

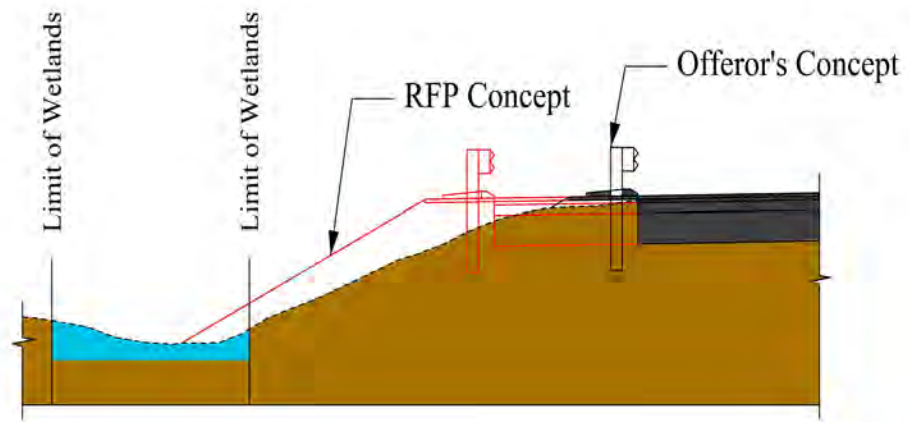


Figure 4.3.1.2 - Our Team's Design Concept along I-64 WB at Tidewater Drive Compared to the RFP Section Shown in Red – Station 2891+00 LT

motorists make a late decision to not exit the interstate. Our Team’s unique proposal to utilize median widening of eastbound I-64 through the Tidewater interchange reduces the required reconstruction and realignment of Tidewater Loop Ramps B and C, thus minimizing impacts to motorists.

(c) Maximum Grades

Utilizing our extensive experience in developing widening plans for previous interstate projects, including multiple segments of I-64, we optimized the I-64 profiles through the preparation of detailed spreadsheets to calculate existing cross slopes, longitudinal grades, and grade breaks. Through development of these spreadsheets, we determined that this segment of I-64 was well suited for a “spline grade” profile on the eastbound, westbound, and reversible lanes corridors. Special attention was given to the longitudinal grade breaks during the design of the profiles, ensuring a comfortable riding experience at the 60 MPH design speed while minimizing vertical adjustments. Similar to our successful design approach on other recently completed sections of I-64, our design minimizes variable depth overlays, reduces schedule risk, improves temporary drainage, enhances safety, reduces impacts to motorists, and decreases Project cost.

Minimal ramp profile adjustments have been incorporated based on the revised gore layouts and improved I-64 profiles. Maximum grades for each alignment are identified in Table 4.3.2

(d) Typical Sections

Typical sections for each of the roadways, ramps, and bridges are included in our Volume II - Conceptual Project Plans. Eastbound and westbound I-64 will consist of three 12’ wide general purpose lanes and one 12’ wide high occupancy express managed part time shoulder lane throughout the project limits except for westbound I-64 through the Little Creek and Granby interchanges. Widening of the I-64 westbound bridges over Little Creek and Granby has been eliminated by diverting the new westbound managed lane onto the existing reversible express lane corridor through this area. In accordance with the previously approved design exceptions and waivers, the corridor will utilize narrow shoulder widths. The proposed shoulder cross slopes on the high side of superelevation shall match the travel lane cross slopes. This shoulder design eliminates the need for high side drainage infrastructure and minimizes the number of I-64 drainage crossings. Implementing this uniquely narrow typical section allows for the peak hour capacity of I-64 to increase while limiting wetland disturbance and property acquisition.

(e) Hydraulic and Stormwater Management Design

Hydraulic Design

Our Team’s hydraulic design improvements incorporate a range of facility types including open channels, ditches, closed-system storm sewers, culverts, and underdrains. All these facilities will be used to convey flow to adequate outfalls and/or major channels while avoiding impacts to sensitive areas. Roadway drainage infrastructure has been minimized by eliminating the shoulder break on the high

Alignment	Maximum Grades
Eastbound I-64	4.0%
Westbound I-64	3.5%
I-64 Reversible Lanes	5.2% (Match Existing)
Patrol Road Ramp A	3.9%
I-564 Ramp B	3.9%
I-564 Ramp C	3.9%
I-564 Ramp D	2.4%
I-564 Ramp G	3.2%
Granby Ramp A	5.1%
Little Creek Ramp A	0.4%
Little Creek Ramp B	1.0%
Tidewater Ramp A	0.9%
Tidewater Ramp B	1.7%
Tidewater Ramp C	3.5%
Tidewater Ramp D	0.6%
Tidewater Ramp E	2.7%
Tidewater Loop A	3.5%
Tidewater Loop B	5.7%
Tidewater Loop C	3.9%

Table 4.3.2 - Maximum Grades

side of superelevation. This roadway design eliminated the need for high side drainage inlets and reduces the number of I-64 drainage crossings. In areas where water will collect in narrow shoulders, our drainage design avoids water spread in the travel lane in the permanent configuration through the use of closely spaced drainage structures and trench drains that will intercept pavement runoff. Along the outsides of I-64, existing channels and ditches will be maintained to convey drainage to existing outfalls while avoiding extensive wetland and stream impacts. The profile adjustments described in Section 4.3.1 (c) beneficially reduce grading impacts and retaining wall lengths and thereby maintain existing drainage patterns.

Stormwater Management Design

Stormwater Management is based on Part IIB Criteria of the Virginia Administrative Code 9VAC25-870-62 et seq. The project is located within the Elizabeth River (JL56) and the Frontal Hampton Roads-Willoughby Bay (JL57) Hydrologic Unit Codes (HUCs) all within the Hampton Roads watershed (HUC8-02080208).

Preliminary Virginia Runoff Reduction Method (VRRM) analyses were performed for each HUC6 per VDM 11.4.1 (6). The overall post construction phosphorus reduction requirement for the project is 15.36 lbs/yr. 6.94 lbs/yr and 8.42 lbs/yr reduction required in HUC-JL56 and HUC-JL57 respectively. With a purchase of 11.52 lbs/yr from VDOT per RFP Part 2, Section 2.7.3, 75.0% of the Project’s phosphorus removal is met from nutrient credit purchase requiring 25.0% (3.84 lbs/yr) to be treated on site. VDOT obtained approval from DEQ to use off-site compliance options of up to 79.7% based on their preliminary phosphorus removal requirements per DEQ memorandum dated May 13,2021.

A level 1 Wet Pond and a level 1 Extended Detention Pond will be constructed, ***a 71% reduction from the seven facilities proposed with the RFP***, to provide a combined phosphorus removal of 5.54 lbs/yr are proposed to meet the post construction phosphorus reduction requirement for the project. ***Our Team’s Concept exceeds the total on-site treatment required by 1.70 lbs/yr, providing VDOT a surplus of credits available to be applied to other VDOT project.***

Concentrated flow leaving the project outfalls to both natural and manmade systems. There are approximately eight outfalls within the project limits. Two of these outfalls discharge to Mason Creek along Granby Street and to Wayne Creek along Tidewater Drive. All outfalls will be analyzed to meet both flood and channel protection requirements to their appropriate limits of analyses as outlined in the Part IIB Technical Criteria. Proposed BMPs will be utilized to meet these requirements.

(f) Proposed Right-of-Way Limits

Our Team’s Concept to revise the horizontal alignment of eastbound I-64 through the Tidewater interchange allows our team to eliminate the fee simple right-of-way takes on parcels number 001 and 002 proposed with the RFP design. This adjustment ***eliminates fee-simple ROW acquisition for the proposed improvements to I-64 within the limits of HREL Segment 1A corridor.*** Locations of ROW reductions are shown hatched on our Volume II – Conceptual Project Plans, and Figure 4.3.1.3 highlights the ROW elimination on Parcels 001 and 002.

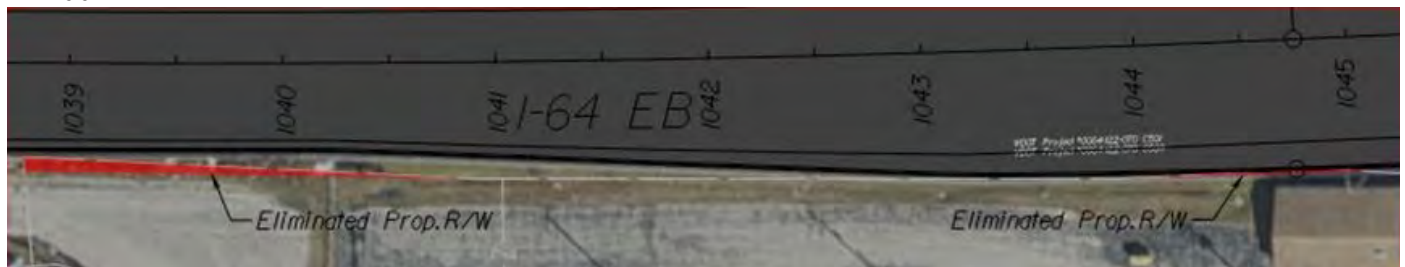


Figure 4.3.1.3: ROW elimination on Parcels 001 and 002.

(g) Proposed Utility Impacts

Proposed utility impacts and our approach mitigating them are described in section 4.4.2. Potential relocations are depicted on our Volume II - Conceptual Project Plans. With acceptance of ATC #02, our Team proposed to widen the I-64 eastbound bridge over Tidewater to the median. This design enhancement will eliminate a direct conflict with the existing 6” gas line that runs from southbound Tidewater into the interchange loop. Since development of ATC #02 and through coordination with Virginia Natural Gas (VNG), we have learned that VNG will be relocating this 6” gas line to the northbound lanes of Tidewater Drive later in 2022. The relocation plans provided by VNG reflect that the new line should avoid the I-64 EB piers and foundations. However, the existing line remains a conflict, as the VNG plans reflect the line to be abandoned in place, which means that widening I-64 EB to the outside as depicted in the RFP plans would still lead to a conflict and removal of the existing gas line

(h) Noise Barrier Locations

Consistent with the RFP requirements, we have accounted for construction of potential noise barrier BA-S05-01 in our proposal with a total of 39,905 square feet and depicted the conceptual alignment on our Volume II – Conceptual Project Plans. We have minimally adjusted the eastbound I-64 alignment and refined the grading to reduce the Project’s impacts to the existing retaining wall and lightweight noise barrier between the Little Creek and Tidewater interchanges by 118 linear feet. For the areas where the existing concrete barrier and noise barrier are impacted, our design will retain the existing retaining wall and utilize a combination noise barrier/retaining wall and special design parapet with a moment slab, as shown in Figure 4.3.1.4. This will be designed and constructed to resist the new loading and not impact the existing retaining wall. Where the existing retaining wall and concrete barrier are not impacted, the existing lightweight noise barrier will be replaced within the limits identified in the RFP. These two scenarios, totaling 6,225 square feet, have been accounted for in our Team’s Concept. Using the preliminary TNM information provided with the RFP documents, we have confirmed that the minor adjustments reflected in our Volume II - Conceptual Project Plans will not impact noise modeling results, which will be confirmed during the final noise analysis

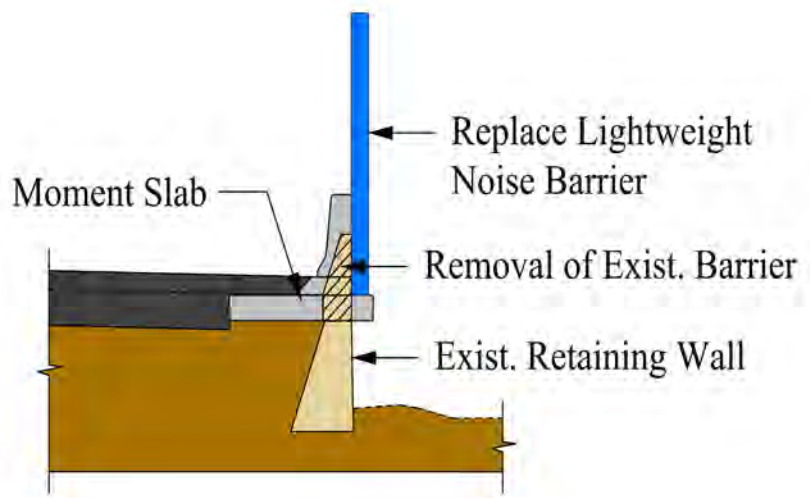


Figure 4.3.1.4 - Our Team’s Design Concept for Modifying Existing Retaining Wall and Replacement of Lightweight Noise Barrier along I-64 EB - Station 125+00 RT

(i) Lighting

Our Team will provide a continuous lighting system utilizing VDOT standard LP-1 and/or LP-2 poles. All existing lighting within the station ranges listed in Part 2, Section 2.9.5 of the RFP will be replaced. Existing lighting along the remaining length of the Project that is impacted by construction will also be replaced.

Furthermore, an under-bridge lighting system will be provided for the 5 widened bridges. Light pole locations are coordinated with noise barriers, guardrail, and retaining wall locations to meet the lighting criteria as required by VDOT for the I-64 EB and WB mainlines. As required by the RFP, existing lighting will either be maintained during construction, or temporary lighting will be provided until the proposed lighting system is installed and operational.

(j) Guardrail/Barrier

Consistent with the RFP, our Team's roadway design incorporates the use of MB-12 or 13 barriers within the median where bifurcation may create a glare issue. Where barrier is required along the outside shoulders, standard MB-7D and MB-7F is provided. Adjacent to noise barriers, standard MB-7D is used in accordance with the VDOT Road Design Manual. The remaining areas will be reviewed for the use of standard Midwest Guardrail System (MGS). Existing guardrail or barrier provided on cross streets will be replaced in kind except for I-564. The pier protection on I-564 will be upgraded to standard BPPS along each shoulder with the exception of the eastern abutment. Preliminary barrier and guardrail locations are identified in our Volume II - Conceptual Project Plans.

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

Overall pavement buildup is reduced by our Team's Concept to provide a spline grade for the vertical geometry and by utilizing the provision for matching existing superelevation rates through the horizontal curves in the previously approved Design Exception 04. In addition, our concept proposes the use of variable depth build-up to achieve the vertical profile of the ramp from Patrol Road to eastbound I-64 and from eastbound I-64 to I-564/Granby Street. The use of variable depth build-up in these locations along with the revised gore area layouts allow for the reuse of existing pavement versus the full depth replacement indicated within the RFP. This also allows our temporary traffic control to be sequenced such that the existing ramp can remain open as opposed to being fully shut down and a detour in place, *which eliminates this schedule risk to gain approval from the Naval Base and the City of Norfolk prior to implementation of detours.*

(l) Tolling Infrastructure Locations

Devices associated with the permanent tolling and ITS system are shown in our Volume II – Conceptual Project Plans. Existing devices include CCTV cameras, microwave vehicle detection sensors, a traffic counter, automated traffic control gates, Dynamic Message Signs, generator assemblies, and a toll gantry for the reversible lanes. New elements and systems include cabinets, junction boxes, communication and power cables/conduits, the toll registration point, and the two (2) new toll gantries. The fiber optic backbone will connect the applicable ITS and tolling devices to the communications network, with separate cables for the ITS and tolling system co-located in the same conduit. The routing of our fiber optic backbone is coordinated with the other Project elements to facilitate constructability, achieve resilience and ease of long-term maintenance, and ensure compatibility with the ITS/tolling system by others at the Project termini.

A portion of the existing ITS system in the reversible lanes shoulder, from Sta. 6031+00 near Little Creek Road all the way to Sta. 6059+00, will be in conflict with the future I-64 WB express lane. Our Team recognizes the criticality of avoiding outages of the existing ITS system during construction. To avoid this conflict, we will relocate the existing fiber and power systems to the outside of the I-64 WB lanes between Sta. 6031+00 and 6059+00 as an early activity, as shown in Figure 4.3.1.5. This relocation will reduce the risk of an accidental strike and it will allow for roadway construction of the I-64 WB express lane to proceed without impacting the active ITS system.

(m) Other Key Project Features

Traffic Signals

The existing traffic signal at the intersection of Little Creek Road and the I-64 EB ramps will be modified

to replace equipment impacted by construction activities. Also, Part 2, Section 2.9.2 of the RFP states, “For any existing signals that are impacted by the Project construction, pedestrian accommodations (countdown pedestrian signal heads, marked crosswalks, and pushbuttons) shall be included for all crossings that have pedestrian access on both sides of the crossing.” Since there are crosswalks at the existing traffic signal, our signal plans will include new pedestrian accommodations for crosswalks paralleling both sides of Little Creek Road.

Furthermore, as detailed in Section 4.5.1 of this Technical Proposal, our Team intends to introduce a temporary left turn at the signalized intersection of Tidewater Drive and Thole Street. Traffic on Tidewater Drive SB will make a temporary left turn at the traffic signal onto the ramp for I-64 EB, so that the existing loop from Tidewater Drive SB to I-64 EB can be closed during construction.

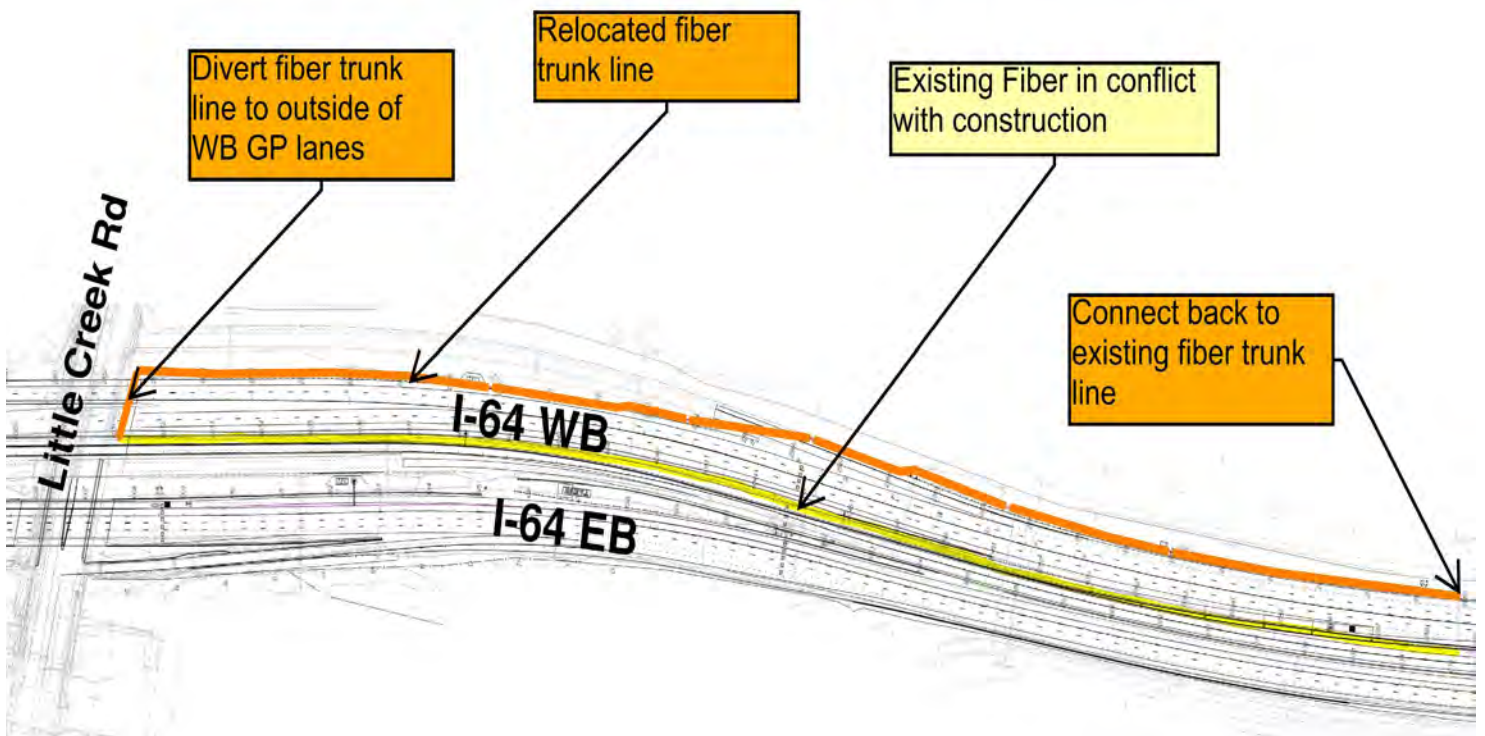


Figure 4.3.1.5 - ITS Relocation as of 8/15/2022

4.3.2 Conceptual Structural Plans

Our team has reviewed the existing and proposed configuration of the bridges included in the project with a focus on the goals of maximizing safety, minimizing construction related disruptions to traffic minimizing schedule risks, and reducing both initial and long-term maintenance costs.

Since the bridge scope of work is to modify and repair the existing bridges, the existing span layout and beam material will be maintained for these structures. Refer to Table 4.3.2.1 for a summary of the work to be performed on each bridge.

Table 4.3.2.1:

	Existing Width (Curb to Curb)	Superstructure Widening	Proposed Width After Widening (Curb to Curb)	Substructure Widening	Abutment Modified to Virginia Micro Abutment	Pier Joint Closure	Pier Joint Reconstruction	Existing Deck Repair and Overlay	Substructure Repair	Paint Existing Steel (Per Appendix A21-1)	Existing Steel Beam Repair (Per Appendix A21-1)	Existing Steel Ultrasonic Impact Treatment (Per Appendix A21-1)	Replace Existing Bearings	Bearing Seat Repair, Clean, and Wash	Approach Slab Modification	Slope Protection Repair (Per Appendix A21-1)	Bridge Pier Protection System (BPPS) Required	Deck Drainage Potentially Required
Widened Bridges																		
I-64 EB over Granby Street	51'-4"	●	65'-4" to 66'-5"	●	●	●		●	●	●		●	●	●	●	●		
I-64 EB over I-564	34'-8" to 35'-0"	●	53'-0" to 53'-6"	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
I-64 EB over Little Creek Road	64'-2" to 67'-8"	●	76'-10"	●	●	●		●	●	●		●	●	●	●	●		
I-64 EB over Tidewater Drive	56'-0"	●	68'-0"	●	●	●		●	●	●	●	●	●	●	●	●		●
I-64 WB over Tidewater Drive	77'-3"	●	82'-0"	●	●	●		●	●	●	●	●	●	●	●	●		●
Deck Overlay Bridges																		
I-64 WB over Granby Street	39'-4"		N/A		●	●		●					●	●	●			
I-64 WB over Little Creek Road	39'-4"		N/A		●	●		●					●	●	●			
I-64 HOV over I-564 and Little Creek Road	32'-0"		N/A		●		●	●					●	●	●			

Design of all new bridge elements will utilize AASHTO LRFD Bridge Design Specifications, 8th Edition and VDOT Modifications. Existing elements for which the loading is changed due to the modifications to the bridges will be analyzed utilizing the AASHTO bridge design specifications in effect when the bridge was originally designed.

The bridge design will be carefully coordinated with the roadway and temporary traffic control plans to ensure that the bridges match the final roadway design and the staging of the bridge superstructure work is coordinated with the staging of the approaches to each bridge.

After careful consideration of the configuration of the roadway alignments, our team has changed the widening of the roadway and the I-64 EB Bridge over Tidewater Drive from the outside as shown in the RFP plans to the inside. This change required the use of shallow depth girders for this bridge in order to meet the RFP required vertical clearance as described in our approved ATC#02. These proposed changes are shown in the Volume II - Conceptual Project Plans.

Selection of durable materials to be used for construction of these bridges is a significant factor in reducing future maintenance costs. Corrosion Resistant Reinforcing (CRR) steel and low permeability concrete will greatly reduce cracks and spalls in all portions of the bridges. Elimination of deck joints will minimize water leaking onto the pier and abutment seats and bearings, which will provide a more durable structure and reduce the need for future repairs. All of these will be incorporated into the design and construction of these bridges, which, combined with the repairs and deck overlays of the existing bridges, will significantly reduce maintenance costs and increase the service life of these bridges.

We have provided 11"x 17" graphics of a plan view, elevation view, transverse section, and abutment configuration for all proposed structures in Volume II - Conceptual Project Plans.

Bridge Inspection

As required by the RFP, our Team will conduct a detailed post-award inspection of each of the bridges to identify specific repairs and develop the repair program. A list of recommended repairs along with a photographic documentation of each location identified will be developed for each bridge and submitted to the Department for approval prior to developing repair plans.

Inspection and repair of the substructure will be limited to the five widened bridges, while the superstructure inspection and repair will also include the three deck overlay bridges, in accordance with the RFP.

Details of the repairs approved by the Department will be included in the Stage II plan submittal for each bridge.

Pier Joint Closure and Abutment Modification

The existing bridges have deck joints at the abutments and piers, which are required to be closed as part of the project. This will be accomplished in phases, utilizing the staging developed in the Temporary Traffic Control plans.

Joints over piers will be closed utilizing details in the VDOT Manual of the Structure and Bridge Division, Part 2, Chapter 32. The only exception are the joints over the piers of the I-64 EB bridge over I-564 and over Pier 4 of the I-64 HOV over I-564 and Little Creek Road, which are only required to be reconstructed to accommodate the deck overlays.

The existing abutments will be modified to utilize the Virginia Micro Abutments utilizing the details in the VDOT Manual of the Structure and Bridge Division, Part 2, Chapter 32 (see Figure 4.3.2.1). The abutments for the five bridges that are to be widened will match this detail for the widened abutments

We have analyzed the existing piers and abutments and have determined that they have sufficient capacity for the additional loads imparted on them in the final configuration without any modifications or strengthening.

Existing Bridge Deck Overlay

In order to maintain traffic as required by the RFP, this work will be completed in multiple stages. It will be coordinated with and as shown in the Temporary Traffic Control plans developed for each bridge location.

During each stage, the portions of the existing deck slabs that are to be retained will be milled in accordance with the RFP. Once the milling and Hydro-demolition is complete, the deck will be inspected to identify any deck repairs that are required. Deck repairs will include the installation of embedded galvanic anodes as required. Once repairs are complete, the entire section of the existing deck in each stage will be receive a 2" rigid concrete overlay.

For those bridges that are to be widened, the widening will occur prior to the deck overlay. At the interface between the new, widened deck slab and the existing deck, the overlay will be constructed to match the elevation of the new deck.

Bearing Replacement and Existing Steel Repair

With the exception of the pot bearings under the steel straddle bents at Piers 2 and 3 of the I-64 HOV Bridge over I-564, all bearings for all eight bridges in the scope of work for this project are to be completely replaced, including sole and masonry plates, clip angles and anchor bolts. Additionally, the bearing seats will be cleaned, washed and repaired as needed.

The replacement bearings are required to be steel-reinforced elastomeric bearing pads. The new bearings will be designed utilizing AASHTO LRFD Bridge Design Specifications, 8th Edition and VDOT Modifications. The bearings will use the configuration of the bridges resulting from the joint closures at the abutments and piers. Additionally, any repairs identified to the existing steel during the inspection of each bridge and with agreement of the Department (beams, diaphragms, connection plates, stiffeners) will be shown in the Stage II plans. Any Category E and E' fatigue details on the existing steel will be retrofitted utilizing ultrasonic impact treatment of the fatigue prone areas.

Widened Bridges

In addition to the existing deck overlay, pier joint closures, abutment modifications, bearing replacements and repairs described above, I-64 EB over Granby Street, I-64 EB over I-564, I-64 EB over Little Creek Road, and I-64 WB over Tidewater Drive will be widened as shown in the RFP plans and our Volume II - Conceptual Project Plans.

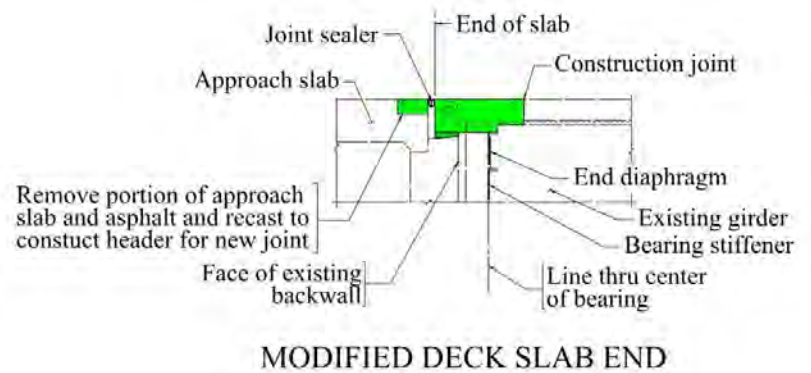
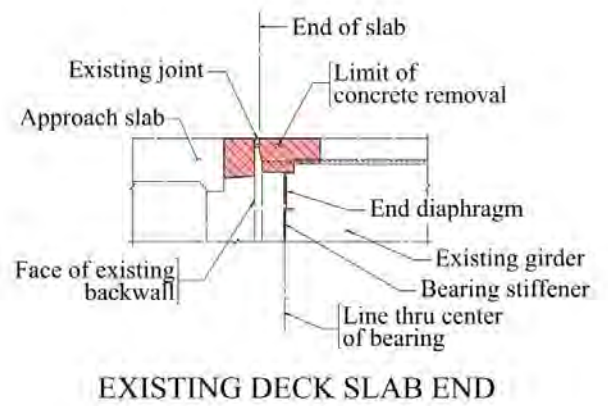


Figure 4.3.2.1 - Proposed Abutment Modifications

I-64 EB over Tidewater Drive will also be widened; however, as previously outlined, it will be widened to the outside of the existing bridge (see Figure 4.3.2.2) rather than the inside as shown in the RFP plans. In order to make this change and meet the vertical clearance requirement for this bridge, the new beams added will be shallower than the existing as described in our ATC #02.

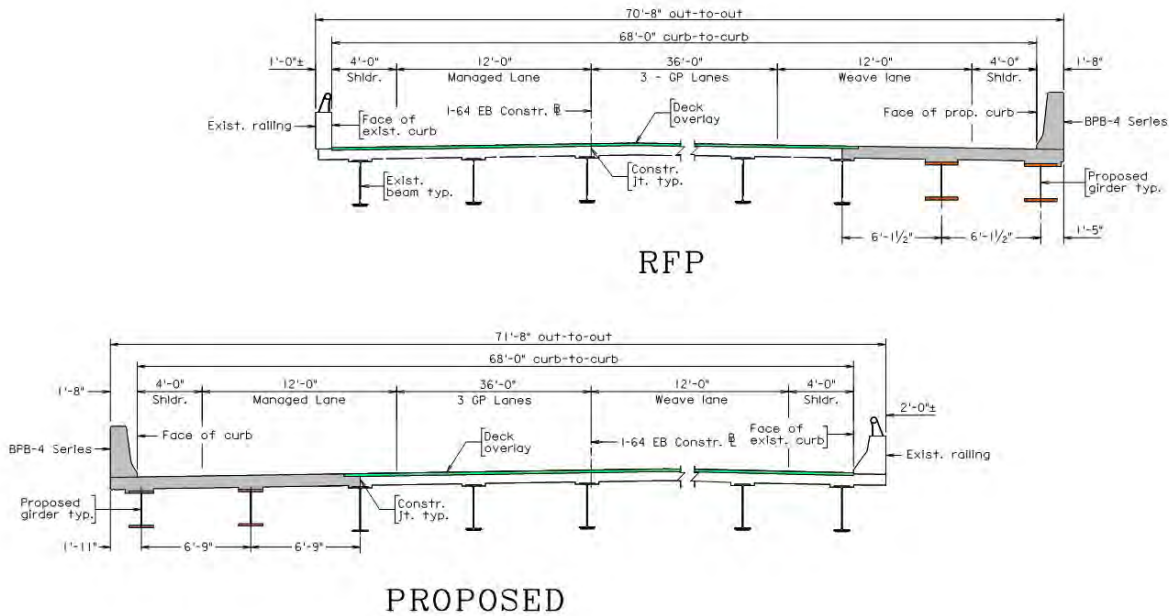


Figure 4.3.2.2 - Revised Widening of I-66 EB over Tidewater Drive

Design of the new, widened portions of these bridges will utilize AASHTO LRFD Bridge Design Specifications, 8th Edition and VDOT Modifications. Deflections of the new beams will be designed to be compatible with deflections of the existing beams to ensure that there will be no maintenance issues with the superstructure due to differential deflection between new and existin

The new beams for the widening of the superstructures will be supported on new substructure elements. New abutments will utilize the Virginia Micro Abutment detail to match the modifications to the existing abutments. Pier widenings will consist of either single column, hammerhead type or multi-column piers with concrete caps on new foundations. Both new abutments and new piers will utilize deep foundations.

Where new piles are driven through fill, they will be prebored to the elevation of the original ground and then driven to their final elevation. Pile capacities will consider any downdrag forces resulting from settlement of existing soils.

Approach slabs will be widened to extend the full width of the roadway, including shoulders. Existing approach slabs will be extended by dowelling into the existing concrete in accordance with VDOT requirements. Extended approach slabs will meet the length requirement, based on skew angle, in the Structure and Bridge Manual.

Bridge Deck Drainage

Our Team has analyzed both the temporary and final configuration of the eight bridges associated with this project using the appropriate required rainfall intensities and the permissible spreads shown in the table in Section 2.7.5 of Part 2 of the RFP. Based on this review, we do not anticipate the need for temporary bridge drainage, however, we anticipate the need to add deck drainage to some of the bridges in order to meet the project requirements. During final design we will re-evaluate the need for temporary or permanent drainage for the bridges and include these items with our Stage 1 Bridge Report.

Load Ratings

Load ratings will be prepared and submitted for any temporary construction conditions of the bridges as well as an as-designed and as-built configuration of each bridge

Bridges will be designed such that the rating results in a satisfactory load rating utilizing the required rating vehicles in IIM S&B-86.4 utilizing the LRFR rating method.

Retaining Walls

We thoroughly reviewed the retaining walls shown in the RFP plans and have made adjustments to the horizontal and vertical geometry to optimize the retaining wall locations and designs. This has resulted in a removal of 4 retaining walls, which represents a reduction of approximately 240 linear feet of retaining wall.

We anticipate utilizing either VDOT Standard RW walls or Mechanically Stabilized Earth (MSE) walls depending on the required height. We have performed preliminary global stability analyses of the walls based on the geotechnical information provided in the RFP Information Package and experience within this geology. In this geology, we typically anticipate that walls below 8 feet in height will be VDOT Standard RW-3 walls, while MSE walls will typically be used for heights greater than 8 feet.

An additional area of focus was on the existing retaining and noise barrier wall located approximately at I-64 EB station 1025+00. Through our horizontal alignment optimization, we have reduced the impact by 118 LF from the limits shown within the RFP. For the remaining portion of the existing combination wall, our design will retain the existing gravity wall and utilize a combination noise barrier / retaining wall and special design parapet with a moment slab. This will be designed and constructed to resist the new loading and not impact the existing retaining wall.

Major Drainage Structures

There are no existing major drainage structures that are impacted by the project, nor are there any new major drainage structures to be constructed within the project limits.

4.4: Project Approach

4.4 - Project Approach

4.4.1 Environmental Management

Our Team takes a comprehensive, proactive approach to environmental management efforts during both design and construction. We know that environmental management is one of the most critical aspects of a successful Project and requires close coordination between design engineers, construction personnel, right-of-way (ROW) staff, and safety staff to ensure the full scope of the Project is accounted for throughout each phase. Our approach to environmental management efforts began during the preparation of our technical proposal, and included involvement from our environmental team during each of our weekly coordination meetings, as well as throughout the day-to-day development of our Design Concept. Due to the close coordination and involvement of our environmental staff, we can provide the following

- ◆ Design is developed in a manner that reduces environmental impacts;
- ◆ Schedules which accurately reflect environmental constraints and permit approval timelines
- ◆ Confirmation that all necessary permits are identified and obtained prior to commencing construction efforts; an
- ◆ Construction is completed in accordance with permit requirements, NEPA commitments, and contract requirements.

Through coordination efforts we initiated during the procurement stage, we identified several design enhancements which had either a primary or secondary goal of reducing environmental impacts. These included horizontal and vertical adjustments to reduce grading impacts and retaining wall lengths, reduced the number of SWM basins and revised locations. The result of these enhancements is that we have reduced wetland impacts by over 0.10 acres from the RFP design. These avoidance and minimization efforts will continue during design, and our focus will become more detailed as final designs are prepared and additional field investigations are completed

Approach to Environmental Risk Management During Design

Environmental challenges on highly constrained transportation projects require in-depth, upfront, planning with the entire Project Team to reduce and address risk. Our Team initiates risk management and avoidance efforts during the design phase and continues to refine the design developed during the procurement phase to ensure all elements, inclusive of utility relocations, account for environmental commitments and constraints. To integrate environmental concerns into the overall plan and minimize the risk of unforeseen impacts and schedule delays, we refine the Constraints Map, which was developed during the procurement stage, to ensure all environmental constraints and commitments are accounted for as design progresses. This Constraints Map is an electronic design file which can be referenced and cross-checked with design plans and details. Preliminary development of the Constraints Map for this project has already identified areas of concern and we have identified solutions and strategies to minimize environmental risk:

Table 4.4.1.1 - Strategies to Minimize Environmental Impacts

Resource	Project Phase	Avoidance and Minimization Strategy
Wetlands & Streams	Design	<ul style="list-style-type: none"> • Researched available mitigation credits within service area and created action plan for out of service area requests and approvals • Reduced the number of SWM basins from 7 to 2 and revised locations and grading to minimize impacts to wetlands • Identify wetland locations and non-permitted areas on erosion & sediment control plans for quick reference and use by construction staff
	Construction	<ul style="list-style-type: none"> • Re-delineate wetlands and streams prior to land disturbing and clearing activities • Highlight permitted impact areas during pre-construction environmental commitments meeting

Resource	Project Phase	Avoidance and Minimization Strategy
Cultural Resources	Design	<ul style="list-style-type: none"> Develop constraints map tailored to the project, which includes the limits of the Norfolk Naval Base Historic District and Forest Lawn Cemetery Consider historic properties as design constraints and avoid impacts
	Construction	<ul style="list-style-type: none"> Avoid access to Norfolk Naval Base and Forest Lawn Cemetery Prior to working in close proximity to Cultural Resource areas, resources will be demarcated to ensure impacts are avoided Proper installation of the navy fence
Threatened & Endangered Species	Design	<ul style="list-style-type: none"> Early coordination with USFWS, DWR, and DCR during CZMA process The Northern Long-Eared Bat (NLEB) will likely be relisted as endangered at the end of the year and the 4(d) rule for tree clearing will no longer apply. We will work closely with design engineers to incorporate a Time of Year Restriction (TOYR) from April 1 to November 14 into the schedule or perform surveys to reduce the likely TOYR. Reduce clearing impacts associated with SWM facilities and acquisition of forested areas, including potential habitat areas
	Construction	<ul style="list-style-type: none"> Adhere to VDOT Special Provisions for Tree Removal TOYR, Tree Removal TOYR for Roosting Bat Habitat, and Protection of Nesting Migratory Initiate clearing activities outside of any TOYR Stop work if migratory birds or bats are discovered under bridges and coordinate with USFWS and DWR
Stormwater Pollution Prevention	Design	<ul style="list-style-type: none"> Prepare a Stormwater Pollution Prevention Plan (SWPPP) Prepare a Spill Prevention, Control, and Countermeasure Plan
	Construction	<ul style="list-style-type: none"> Maintain good housekeeping measures to minimize potential for run-off Conduct SWPPP management training and adhere to inspection schedules

Environmental Management Plan (EMP)

To achieve full compliance with environmental commitments, considerations, the NEPA document, and permit conditions, our Team will prepare and execute a comprehensive Environmental Management Plan (EMP). Development and use of the EMP will reduce risks and address compliance through tracking of environmental constraints, previous environmental commitments, permit conditions, and stakeholder communications. The EMP will also detail key milestones and timelines for the submittal of reports, permits, and monitoring documentation. Our Team will work directly with VDOT to provide documentation semi-annually, utilizing the EMP as a tracking mechanism to ensure the commitments of the NEPA documentation and associated state and federal permits are being met.

Environmental Permitting

In addition to focusing on implementing design enhancements to minimize impacts, close coordination within the Team is also critical to the success of the Project. Throughout the design phase, our Team will utilize consistent and open communication with VDOT and regulatory agencies through formal and informal processes to navigate the

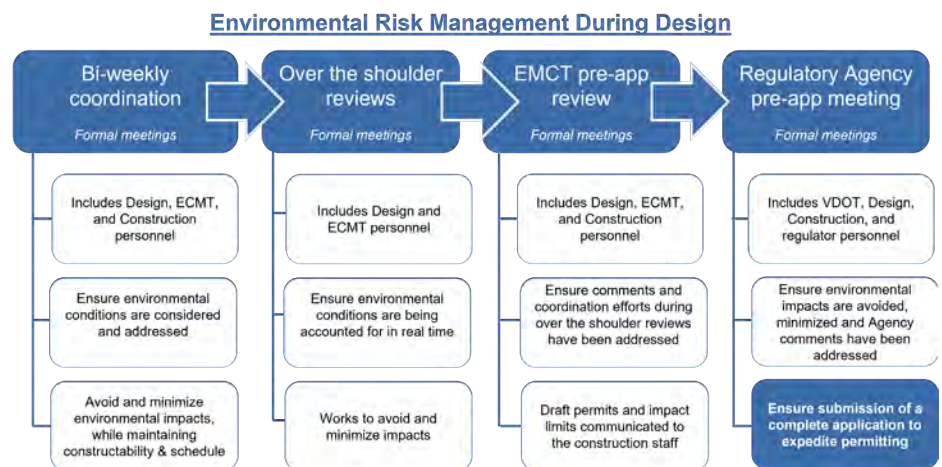


Figure 4.4.1.1 - Environmental Risk Management During Design

environmental process, resulting in comprehensive permits that are obtained in the timeline necessary to facilitate construction. These meetings and coordination efforts are outlined in Figure 4.4.1.1.

We know regulatory agencies are closely scrutinizing permit applications with attention given to the avoidance and minimization efforts made during the design stage. During design, we will document all avoidance and minimization efforts, including those already implemented through our design enhancements, and we will discuss those during the Joint Permit Application (JPA) process to minimize the risk of lengthier permitting and approval processes.

The goal of our Team with respect to environmental management, and the extensive coordination and documentation efforts outlined above, is to ensure all possible avoidance and minimization efforts are implemented, all impacts are properly identified, and an accurate schedule is developed for all necessary environmental permits. The Proposal Schedule we have developed realistically accounts for the time to obtain the required permits and approvals. Based on the impacts we have identified, we expect the Project will qualify for require a USACE Nationwide Permit (NWP) 23 and Section 401 Certification from DEQ. Our team anticipates no longer than 60 calendar days to obtain the NWP 23. There are no Virginia Marine Resource Commission (VMRC) regulated streams within the project area and a VMRC is not anticipated to be required for project. The permits which we anticipate needing to obtain prior to construction are summarized in Table 4.4.1.2 below:

Table 4.4.1.2 – Anticipated Permit List and Timelines

Agency	Permit Type/Approval	Anticipated Time Frame
Early Works Permits/Approvals		
VDOT	Environmental Management Plan	
USACE (Section 404, 408)	Nationwide Permit 6 (Survey Activities)	2-3 Months
Project-wide Construction Permits/Approvals		
USACE (Section 404, 408)	Nationwide Permit 23 (Categorical Exclusion)	3-6 Months
USFWS	Section 7 Threatened & Endangered Species	2 Months
VDEQ (Section 401)	Coastal Zone Management Act (CZMA) Determination and Section 401 Certification	3 Months
VMRC	No permit required	N/A
VDOT & VDEQ	VSMP Construction General Permit (LD-445)	3 Months

Approach to Risk Management During Construction

Environmental risk management continues through all phase of construction. We recognize the importance of environmental reviews and compliance during construction to ensure adherence to all permit and NEPA conditions and avoid unintended impacts. Our approach is outlined in detail in our EMP and developed with involvement from regulatory agencies, and uses previous experience and lessons learned to ensure environmental compliance is consistently maintained.

Environmental Management Plan During Construction

The Environmental Compliance Manager (ECM) is responsible for overseeing the inspection of construction activities to ensure environmental compliance with the plans and the commitments detailed in the EMP. The

EMP will also detail the following environmental management efforts that will be used during construction:

- ◆ Pre-Construction Coordination – Before any construction activities, our environmental Team will return to the field and re-delineate all wetlands, WOUS, and environmental resources, to ensure limits are easily identifiable by construction personnel. Permit impact plates detailing temporary and permanent impact limits will be provided to all construction staff and foremen to ensure avoidance of non-permitted areas. Additionally, a pre-construction environmental constraints and commitments meeting will be held to educate all parties on the allowable limits of work.
- ◆ C-107 Compliance Checks – Our Team takes an aggressive approach to environmental permit compliance by making the installation, maintenance, and inspection of ESCs a priority. C-107 inspections Completed on a twice-weekly basis, these field inspections are performed by construction personnel, to identify deficiencies in ESC measures and areas where additional controls may be necessary. These bi-weekly C-107 reviews will be combined with the monthly construction compliance inspections, as necessary, to ensure that compliance with the recently updated regulations released in the 2019 CGP are met.
- ◆ Virginia Water Protection (VWP) Permit Inspections – Due to additional scrutiny placed on environmental permit compliance, site visits during construction are vital to the Project’s success. These site visits ensure permit requirements are met, Erosion and Sediment Control (ESC) measures are correctly installed and maintained, and areas that may require additional attention are identified before any unintended impacts occur. To track compliance, our Team will utilize iPads, paired with GIS software, and KMZ files to display the Project area and jurisdictional impact limits on Google Earth. By pinpointing both the inspector’s location and impacts in real-time, any potential deviations from the permitted impacts can be assessed accurately and immediately.
- ◆ VWP Compliance Reporting – To ensure permit compliance, our Team will complete DEQ’s Monthly VWP Permit Inspection Checklist and Biannual Construction Status Update Forms to document construction progress and timing of impacts for all permitted jurisdictional areas. Our Team can provide additional site visits and utilize joint inspections to ensure permit compliance throughout the duration of construction. In the event that an undesired sediment release or non-permitted impact occurs during construction due to an unforeseen event, our Team will contact regulatory agencies to provide timely reporting, well within the 24-hour time frame as required per the VWP permits. Contact with these agencies will be completed efficiently and effectively, identifying and implementing an appropriate corrective action plan in the field.

In addition to these environmental compliance and monitoring efforts, we will continue to coordinate closely with VDOT environmental and construction staff, as well as communicate when necessary with the permitting agencies and Project stakeholders, to make them aware of construction progress and any challenging project areas. This close coordination has proved successful on past projects, and we will implement our experience from those successes, as well as “lessons learned”, to ensure successful completion of this Project.

4.4.2 Utilities

Approach to Utility Coordination, Adjustments and Relocations

Similar to our efforts on other design-build projects, we understand that utilities, particularly utility conflicts and relocations, play a critical role and can have a significant impact on the schedule and success of the Project. With this recognition, our Team’s ultimate goal relative to utilities is to prevent conflicts and relocations completely. If conflicts cannot be eliminated through further SUE efforts or avoided by design adjustments, then we work with the impacted utility owner(s) to find ways to protect their facilities in-place during construction, and only as a final option do we propose a relocation to remove the conflict. When a

utility conflict cannot be prevented then every effort is made to limit the extents of the relocation, and if possible, to complete the relocations within existing easements and/or right-of-way. Furthermore, we work with the utility companies to pinpoint schedules that help facilitate utility relocations as early as possible in the process so they are not on the critical path.

Led by our Utility Manager, our Team took a proactive approach relative to utilities, including a comprehensive review of the RFP documents and having detailed conversations with each utility owner about their facilities. This early communication and coordination process was completed as a benefit to our conceptual design and proposed schedule by:

- ◆ Identifying ways to maintain existing facilities during initial construction stages, especially at the bridge and interchange locations;
- ◆ Identifying design changes and implementing in-place measures to avoid relocations;
- ◆ Providing efficiency to potential relocations by developing schedules that minimize disruptions and are coordinated with the sequence of construction; and
- ◆ Identifying constructability concerns to avoid cost increases, schedule impacts, and/or secondary relocations.

Our focus during the procurement stage was to establish open and regular lines of communication with each utility company. As summarized in Table 4.4.2.1, we contacted eleven utility companies to obtain information related to their existing infrastructure.

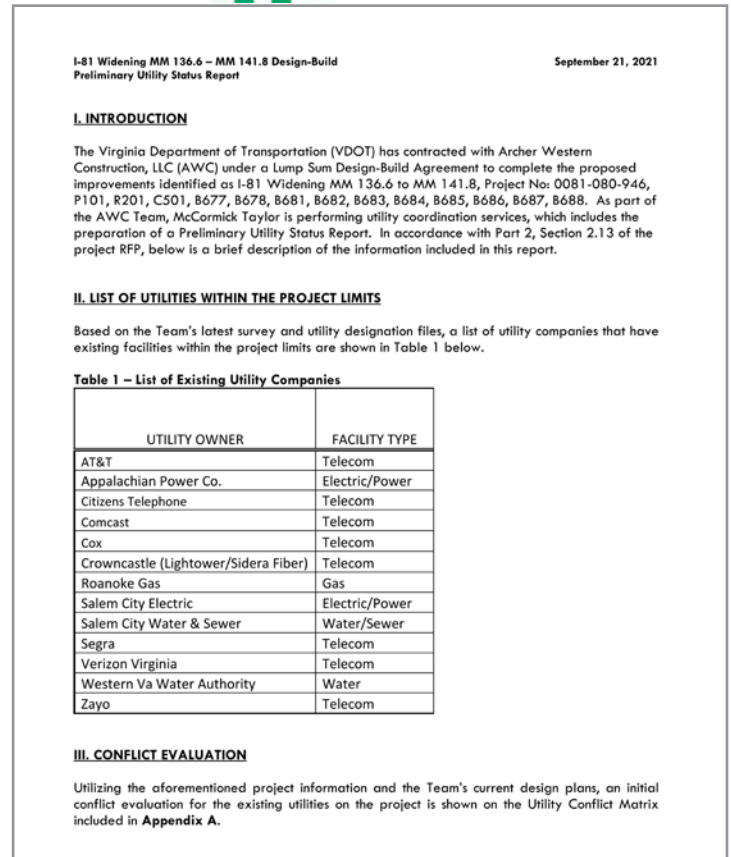
Table 4.4.2.1 – Summary of Contact with Utility Companies

Utility Owner	Outreach Efforts Completed by Our Team
City of Norfolk (Tele. Comm.)	One virtual meeting/phone call, four e-mails
City of Norfolk (Water/Sewer)	One virtual meeting/phone call, two e-mails
Cox	One virtual meeting/phone call, three e-mails
Crown Castle (Lighttower / Sidera Fiber)	One virtual meeting/phone call, three e-mails
Dominion Energy (Distribution)	Two virtual meetings/phone calls, five e-mail
Dominion Energy (Transmission)	One virtual meeting/phone call, two e-mails
Hampton Roads Sanitation District	Two virtual meetings/phone calls, three e-mails
Lumen	Two virtual meetings/phone calls, two e-mails
Segra	One virtual meeting/phone call, two e-mails
Verizon	One virtual meeting/phone call, three e-mails
Virginia Natural Gas	One virtual meeting/phone call, nine e-mails

Upon transitioning from the pursuit phase into final design, our Team will enhance our engagement efforts with each of the utility companies to reduce impacts and relocations. The following specific activities will be completed by our Team and Utility Manager to solidify the utility coordination and relocation efforts during design and construction:

- ◆ Compile an accurate depiction of existing facilities;
- ◆ Prepare a Preliminary Utility Status Report;
- ◆ Update utility designations and perform supplemental test holes;
- ◆ Administer a Preliminary Utility Review meeting with all utility owners;
- ◆ Hold a Utility Field Inspection (UFI) meeting with each utility owner to confirm existing facilities and potential conflicts

- ◆ Prepare UT-9 forms and perform a thorough review of each utility’s compensable or prior rights to accurately establish pro-rata cost responsibilities;
- ◆ Work with each utility owner to produce a relocation schedule, coordinate the relocations with all design disciplines, environmental permitting staff, and construction personnel and make certain the relocation schedule is reflected accurately in the comprehensive Project Schedule;
- ◆ Submit relocation plans and estimates to VDOT for review and upon approval, notify each utility in writing so relocations can commence;
- ◆ Identify critical path utility relocations, if any, and immediately complete P&E reviews so relocation plans can be approved and relocations scheduled promptly;
- ◆ Record and update the status of utility relocations in RUMS.
- ◆ Prepare master agreements with utility companies;
- ◆ Monitor relocation status during construction, confirming that relocations are complete in accordance with the approved plans so that re-work is not necessary; and
- ◆ Obtain as-built information from utility companies once relocations are complete.



I-81 Widening MM 136.6 – MM 141.8 Design-Build Preliminary Utility Status Report September 21, 2021

I. INTRODUCTION

The Virginia Department of Transportation (VDOT) has contracted with Archer Western Construction, LLC (AWC) under a Lump Sum Design-Build Agreement to complete the proposed improvements identified as I-81 Widening MM 136.6 to MM 141.8, Project No: 0081-080-946, P101, R201, C501, B677, B678, B681, B682, B683, B684, B685, B686, B687, B688. As part of the AWC Team, McCormick Taylor is performing utility coordination services, which includes the preparation of a Preliminary Utility Status Report. In accordance with Part 2, Section 2.13 of the project RFP, below is a brief description of the information included in this report.

II. LIST OF UTILITIES WITHIN THE PROJECT LIMITS

Based on the Team’s latest survey and utility designation files, a list of utility companies that have existing facilities within the project limits are shown in Table 1 below.

Table 1 – List of Existing Utility Companies

UTILITY OWNER	FACILITY TYPE
AT&T	Telecom
Appalachian Power Co.	Electric/Power
Citizens Telephone	Telecom
Comcast	Telecom
Cox	Telecom
Crowncastle (Lighttower/Sidera Fiber)	Telecom
Roanoke Gas	Gas
Salem City Electric	Electric/Power
Salem City Water & Sewer	Water/Sewer
Segra	Telecom
Verizon Virginia	Telecom
Western Va Water Authority	Water
Zayo	Telecom

III. CONFLICT EVALUATION

Utilizing the aforementioned project information and the Team’s current design plans, an initial conflict evaluation for the existing utilities on the project is shown on the Utility Conflict Matrix included in **Appendix A**.

Figure 4.4.2.1: Example Utility Status Report

Utility Conflicts and Proposed Solutions

Utilizing the in-depth knowledge gained from the correspondence and many discussions we had with the utilities, we have been able to determine where utilities are expected to be impacted and subsequently developed concepts to minimize such impacts. While this project stretches for over 2 miles, including modifications to three interchanges and associated adjustments on other roads, there are relatively few utility impacts based on our Team’s approach, including modifications we intend to implement. Table 4.4.2.2 provides a list of all of the utilities within the Project limits, potential relocation solutions for those that are in conflict, and the remaining ones that have been avoided due to design refinements (as shown in bold text). Our Volume II – Conceptual Project Plans also show the locations and alignments for utility relocations.

Table 4.4.2.2 – Potential Utility Conflicts

Utility Owner/ Description	Approximate Location	Known/Potential Conflict	Relocation Plan/ Avoidance Strategy
UNDERGROUND COMMUNICATION			
Verizon Virginia (18-1.25” Steel Conduits, encased on concrete)	Route 460 314+10 to 314+30	Bridge expansion and addition to bridge pier	Complete test holes to confirm exact position. Protect Ex. Duct Bank and construct Bridge Pier adjacent to and around conduits to avoid conflict

Utility Owner/ Description	Approximate Location	Known/Potential Conflc	Relocation Plan/ Avoidance Strategy
Verizon Virginia (12-12” Steel Conduits, encased in concrete)	Route 165 18+50 to 18+75	Bridge expansion and addition to bridge pier	Complete test holes to confirm exact position. Protect Ex. Duct Bank and construct Bridge Pier adjacent to and around conduits to avoid conflict
Verizon Virginia (2-3” Conduits)	Route 168 54+20 to 58+25	Bridge expansion and addition to bridge pier; Guardrail extension	Complete test holes to confirm exact position. Expose, protect and minimally adjust Ex. Conduits to avoid conflict. If relocation is necessary, then perform a spot offset of the facility.
Cox (2-6” Steel Conduits)	Route 460 314+10 to 314+30	Bridge expansion and addition of bridge pier; Guardrail extension	Complete test holes to confirm location, relocate if necessary.
Lumen (2” Conduit)	Route 165 18+40 to 21+50	Bridge expansion and addition of bridge pier	Relocated per HRBT project to avoid any future conflicts
Lumen (3-1.5” Conduits)	Route 168 54+20 to 54+35	Bridge expansion and addition of bridge pier	Complete test holes to confirm exact position. Expose, protect and minimally adjust Ex. Conduit to avoid conflict. If relocation is necessary, then perform a spot offset of the facility.
Lumen (4-1.5” Conduits)	Route 168 54+20 to 54+45	Bridge expansion and addition of bridge pier	Complete test holes to confirm exact position. Expose, protect and minimally adjust Ex. Conduit to avoid conflict. If relocation is necessary, then perform a spot offset of the facility.
Segra (4-1.5” Conduits)	Route 165 18+40 to 21+50	Bridge expansion and addition of bridge pier	Relocated per HRBT project on 8/10/21 to avoid any future conflict
UNDERGROUND POWER			
Dominion Energy (4’ Wide Duct Bank, encased in concrete)	Route 460 312+00 to 313+50	Bridge expansion and addition of bridge pier; Guardrail replacement	Complete test holes to confirm exact position. Protect Ex. Duct Bank and construct Bridge Pier and replace guardrail adjacent to and around duct bank to avoid conflict. If relocation is necessary , facility to be relocated at same time as water main relocation.
Dominion Energy (Utility Not Found)	Route 460 313+10 to 314+25	Bridge expansion and addition of bridge pier	Complete test holes to confirm exact position. Protect Ex. Duct Bank and construct Bridge Pier adjacent to and around duct bank to avoid conflict. If relocation is necessary, facility to be relocated at same time as water main relocation.

Utility Owner/ Description	Approximate Location	Known/Potential Conflic	Relocation Plan/ Avoidance Strategy
Dominion Energy (6-6" Conduits, encased in concrete)	Route 165 18+40 to 18+60	Bridge expansion and addition of bridge pier	Complete test holes to confirm exact position. Protect Ex. Duct Bank and construct Bridge Pier adjacent to and around conduits to avoid conflict
GAS			
Virginia Natural Gas (12" Steel)	Route 460 313+00 to 316+00	Bridge expansion and addition of bridge pier; Guardrail extension	Relocate existing main.
Virginia Natural Gas (6" Plastic)	Route 165 18+42 to 18+59	Bridge expansion and addition of bridge pier	No Conflict
Virginia Natural Gas (12" Steel)	Route 165 18+40 to 18+60	Proposed Drainage Improvements	Abandoned, pipes to be removed as needed during construction.
Virginia Natural Gas (6" Plastic)	Route 168 54+20 to 54+45	Bridge expansion and addition of bridge pier	Ex. 6" Gas Main is scheduled to be relocated by gas company prior to DB contract.
WATER			
City of Norfolk (16" Ductile Iron)	Route 460 312+75 to 314+75	Bridge expansion and addition of bridge pier; Guardrail extension	Relocate existing main.
City of Norfolk (16" Ductile Iron)	Route 165 18+40 to 18+60	Bridge expansion and addition of bridge pier; Guardrail extension	Relocated per HRBT project to avoid conflicts
City of Norfolk (16" Metallic Coated)	Route 168 54+20 to 54+45	Bridge expansion and addition of bridge pier; Guardrail extension	No Conflict
City of Norfolk (6")	I-64 6049+28 to 6049+30	Proposed Drainage Improvements	Drainage design adjusted to elimi- nate conflict
SANITARY SEWER			
HRSD (20" FM)	I-64 982+75 to 983+90	Proposed Drainage Improvements	Drainage design adjusted to eliminate conflict
HRSD (20" FM Cast Iron)	Route 165 18+40 to 18+60	Proposed Drainage Improvements	Drainage design adjusted to eliminate conflict
City of Norfolk (8")	I-64 6049+74 to 6049+75	Proposed Drainage Improvements	Drainage design adjusted to elimi- nate conflict
OVERHEAD / UTILITY POLES			
Dominion Energy	I-64 1038+65 to 1038+75	Proposed Roadway Improve- ments	No Conflicts
Dominion Energy	I-64 1057+05 to 1057+35	Proposed Roadway Improve- ments/Bridge Extension	No Conflicts

Process to Mitigate Unexpected Conflicts and Delays, and Utility Schedule Integration

The Team has successfully managed utility relocations on large interstate and urban highway projects by being well aware of costs related to utility conflicts and impacts to the project schedule. Continuing the in-depth coordination activities we initiated with each utility company during the proposal stage, we will add measures necessary to sustain open communication during design development and construction to promote a successful project completion. In addition, we will allocate extra focus to the areas of the Project that need to be completed sequentially, require extensive relocation timelines, or entail relocations of considerable

length. Our schedule for design and construction takes into account the utility relocation process and all communication with the utility companies, and our Utility Manager will monitor the schedule and progress of relocations to avoid adverse impacts, and identify issues early so proper resequencing efforts can be implemented to mitigate or avoid schedule delays.

Our Team's Proposal Schedule included in Volume II already accounts for the utility relocations that we anticipate need to be completed. As shown in Table 4.4.2.2 above, extensive efforts have already been undertaken to incorporate design modifications to avoid utility relocations. For instance, the proposed drainage design has been developed to avoid conflicts between new storm structures and existing utilities in several locations. Additionally, we anticipate the proposed improvements, associated with the design modifications we have incorporated, avoid the majority or all conflicts with facilities owned by Cox, City of Norfolk, Dominion Energy, HRSD, Lumen, Segra, Virginia Natural Gas, and Verizon Virginia.

As an example of potential cost and time savings to the project, our Team anticipates to reduce relocation costs and schedule by more than \$3M and at least a year of utility work by collectively avoiding the relocation of major underground facilities on Route 460 (Granby St.) owned by Verizon Virginia and on Route 165 (East Little Creek Rd.) owned by Verizon Virginia and Dominion Energy.

The primary areas of utility conflicts are associated with the Virginia Natural Gas facility and City of Norfolk water main located in the median of Route 460 (Granby Street), both of which will be in conflict with the proposed addition of guardrail, and the potential relocation of the Verizon Virginia conduits located in the median of Route 168 (Tidewater Drive), which will be in conflict with the proposed bridge pier and addition of guardrail.

We have also evaluated the sequence of construction to limit any downtime to existing facilities, positioned SWM features in such a way to reduce impacts to the existing utilities, and selected relocation routes that minimize overlap with proposed project activities, including earthwork operations. In addition, our strategy is to mitigate concerns by placing utilities away from project construction, particularly the bridge expansions.

In the event unexpected utilities are identified at some point during final design or construction, we know a rapid and robust approach must be taken to eliminate any impacts to the Project schedule. Our strategy for addressing these situations includes:

- ◆ **In-place adjustment:** If an unknown utility is identified and discovered to be in conflict, we will work with the associated utility company to determine if the facility can be adjusted without a complex relocation process.
- ◆ **Redesign proposed improvements:** If an unknown utility is identified, we will immediately complete additional surveys or SUE investigations to identify the location of the utility in relation to proposed improvements. The utility location then will be reviewed by the Utility Manager and design staff to determine if it will be in conflict, and to what extent. Applicable design leads will then discuss potential modifications to avoid the conflict, and if necessary a formal revision or redline plans will be prepared to enable the utility to remain in place, avoiding any schedule impacts.
- ◆ **Construction resequencing:** In the event redesign and in-place adjustment options do not result in a conflict being avoided with the unknown utility, then our entire Team will discuss options to re-sequence work so the utility can be relocated without producing impacts to the proposed improvements. This effort will require close coordination with the utility company to determine timelines and processes for relocation.

While unknown utilities can always be encountered, we believe our extensive efforts during the proposal phase with all of the utility companies, as well as the detailed efforts to redesignate all utilities immediately upon notice-to-proceed, will eliminate the likelihood of encountering any during design or construction, eliminating the potential for any schedule or cost impacts to the Project.

4.4.3 Geotechnical

The Project is located in Virginia’s Coastal Plain Geologic Region which presents a variety of challenging geotechnical conditions. This geology is characterized by soils ranging from wet and soft subgrade soils (near-surface) to deeper soft, compressible, plastic clay soils. These types of soils increase the risk for potential unsuitable subgrade soils, soft/loose soils for deep foundations, and settlement or reduced stability of new fills and embankments. Our Team has reviewed the geotechnical data presented by VDOT, drawn from our experience within the geologic region and along I-64, and participated in multiple Pursuit Design meetings to develop a concept and approach that minimizes or mitigates the geotechnical risks.

Prior to acquiring additional geotechnical data, a further comprehensive review and evaluation of all available Project geotechnical information will be completed. A thorough site review will be conducted to confirm the potential geotechnical risks, identify any additional site constraints, and tailor the geotechnical exploration program to address the geotechnical challenges relative to the proposed design. The sequence of the subsurface exploration will be coordinated such that the test borings required for the design of the bridge widenings, critical slopes, and pavement confirmations will be completed early, allowing design activities on critical elements to be advanced without impacting either the design or construction schedule. The final investigation plan will focus on soft soils at embankment widening locations, supplemental CBR and resilient modules testing of subgrade soils, retaining wall locations, and bridge substructure locations.

The challenges surrounding the soil types found within the Project limits could result in settlement for roadway embankments, bridge piers, abutments, and global stability issues. These soils can also present challenges in maintaining or reconstructing existing slopes, working within the vicinity of existing structures, and maintaining existing structures. Several of our Team’s proposed design enhancements provide benefits towards addressing or minimizing potential impacts associated with these risks.

Our supplemental geotechnical investigations will be developed based on VDOT’s Materials Manual of Instruction (MOI) Chapters III and VI minimum requirements. All additional exploration, investigation, and testing will be performed to enable preparation of a design level Geotechnical Engineering Report (GER). As the RFP GDR indicates, unsuitable soils, CBR values through the corridor, and possible layers of soft and/or highly-plastic soils warrant specific consideration. Sampling and testing of in-situ soils will be focused on obtaining field and laboratory soil data to provide an accurate estimate of the magnitude and time rate of settlement and stability of embankment widening and approach embankments. In addition to conventional SPT drilling, sampling and standard soil index testing, we plan to perform CPTu, Shelby tube sampling, consolidation tests, and direct shear and triaxial shear testing to support the settlement calculations, global stability analyses, and bridge and retaining wall structure foundation designs. Groundwater monitoring wells are also planned, where applicable, to document as-drilled and long-term water levels.

Table 4.4.3.1 – Potential Unsuitable Material Areas

Location	Geotechnical Considerations
Sta. 985+50 to Sta. 989+25	Settlement and Global Stability
Sta. 990+75 to Sta. 991+00	Settlement and Global Stability
Sta. 997+00 to Sta. 998+00	Settlement
Sta. 999+00 to Sta. 999+50	Settlement
Sta. 1002+00 to Sta. 1002+75	Settlement and Global Stability
Sta. 1008+00 to Sta. 1011+75	Settlement and Global Stability
Sta. 1053+00 to Sta. 1053+50	Settlement and Global Stability
Sta. 1055+00 to Sta. 1055+50	Settlement
Sta. 1057+50 to Sta. 1058+00	Settlement and Global Stability
Sta. 1064+00 to Sta. 1064+50	Settlement

Based on our Team’s review of the available geotechnical data, we have identified the station ranges below, which will be verified during final design, as areas that may require ground improvement or geometrical changes to satisfy settlement criteria and/or acceptable factors of safety for long-term global slope stability.

For each of the critical station ranges the Geotechnical Team will first obtain appropriate samples for pertinent laboratory testing to establish engineering parameters critical to the strength and compressibility

of the soft subsurface materials. Based on long-term settlement magnitudes and associated time rates and corresponding factors of safety for global slope stability, ground improvement alternatives will be analyzed. Based on our experience in the area and the planned slope geometries, we anticipate PV drains with staged filling, lightweight fills, and/or use of rammed aggregate piers will be feasible and economical alternatives to improve the underlying soft soils. Factors of safety and long-term settlement criteria will be addressed per using acceptable AASHTO specifications and VDOT MOI and Structure and Bridge criteria.

As described previously, retaining wall alternatives will be explored by the Team based on final design foundation and structural considerations. We anticipate the majority of walls will be required to support fills ranging in height from a couple of feet to about 20 feet in height. Based on our experience in this area and the potential for soft shallow subsurface soils we expect RW-3 style retaining walls to be used for fills up to about 8 feet in retained height. For fill soils above 8 feet in height, Mechanically Stabilized Earth Walls (MSEW) will likely be favorable due to the flexibility of the wall type with respect to long-term settlement tolerances and ability for the walls to be constructed in multiple stages, if required. Reinforcement ratios for MSE walls in this area typically extend beyond the AASHTO minimum value of 0.7H and are typically closer to 0.8H to 1.0H, where H is the height of the wall. The slightly longer reinforcement length is typically required to meet acceptable global stability factors of safety.

For pavement validation, the Team recognizes that a minimum CBR value will be used to identify unsuitable subgrade soils. The Geotechnical team will take supplement pavement borings with core samples to validate the existing pavement sections as presented in the RFP-phase GDR. The supplemental cores will be overlaid on the GPR plots provided in the RFP to validate consistency with existing pavement layers or areas that may require full depth replacement.

Detailed information on anticipated Project risks, potential impacts, and mitigation strategies our Team intends to utilize to minimize or avoid risks are outlined in Table 4.4.3.2 below:

Table 4.4.3.2 – Potential Geotechnical Challenges and Risk Mitigation Strategies

Challenge	Potential Impact	Potential Mitigation Strategies
Unsuitable Subgrade Soils	<ul style="list-style-type: none"> High moisture, unsuitable for support of roadway without treatment. Highly-plastic subgrades unsuitable for support of pavements and slopes Shallow groundwater table may cause temporary rise during construction. 	<ul style="list-style-type: none"> Mechanically dry the soils to optimum moisture content or add a drying additive to reduce the moisture. Install drains to relieve temporary water pressures. Complete additional field exploration to identify unsuitable soil locations. Adjust vertical profile to minimize embankment placement
Soft and/or Loose Soils for Deep Foundations	<ul style="list-style-type: none"> Large settlements. Additional downdrag on foundations. Global stability for embankments and retaining walls Vibration and stability with respect to adjacent existing foundation elements 	<ul style="list-style-type: none"> Excavation and replacement Lightweight fill alternative PV drains with staged or surcharge fill Rammed aggregate piers Staged construction Pre-drilling to minimize vibration near existing piles
Maintaining or Reconstructing Existing Slopes	<ul style="list-style-type: none"> Unacceptable slope stability FOS Discovery of shallow ground water Inadequate slope and global stability for placement of additional fill materia Long term settlement behavior of embankment Restricted right of way conditions require fill slopes to be designed a reinforced slope or require the use of retaining walls. 	<ul style="list-style-type: none"> Adjust vertical profile to minimize embankment heights Install temporary groundwater monitoring wells to record long-term groundwater Perform additional field investigations (CPT and DMT) Perform probabilistic analysis related to shear strength parameters and slope stability probability of failure Incorporate laboratory test results from vane shear testing Incorporate displacement monitoring during construction

Challenge	Potential Impact	Potential Mitigation Strategies
Working Within the Vicinity of Existing Structures	<ul style="list-style-type: none"> • Additional downdrag on existing foundations • Slope and global stability • Differential settlement • Vibration-induced movements in vicinity of existing piles • Borehole stability of potential drilled shafts adjacent to existing foundations 	<ul style="list-style-type: none"> • Adjust horizontal alignment and use spline grade to minimize slope widening • Use of pin piles to address global stability concerns • Develop a zone of influence based on the vibration and settlement criteria • Perform additional field investigations (VS and DMT). • Use of drilled foundation system • Instrumentation and monitoring • Permanent casing of drilled shafts
Maintaining Existing Structures	<ul style="list-style-type: none"> • Localized liquefaction due to consolidation of soils during pile driving. • Additional downdrag on existing foundations. • Pile heave 	<ul style="list-style-type: none"> • Perform preconstruction survey of existing structures and surrounding areas • Install structural monitoring points • Determine threshold level and action level vibration limits based on conditions of existing structures • Monitor vibrations on existing bridges during pile driving. • Prebore piles to eliminate vibration concerns • Complete instrumentation and monitoring during construction

4.4.4 Quality Assurance/Quality Control (QA/QC)

Our Team’s Quality Management System Plan (QMSP) is structured to meet the contractual requirements in not only VDOT’s Minimum Requirements for Quality Assurance & Quality Control on Design-Build & Public-Private Transportation Act Projects, July 2018 (July 2018 QA/QC Guide), also those defined throughout the RFP Technical Requirements. The QMSP is the foundation for defining the appropriate resource levels and time commitments for the entire Quality Assurance (QA) and Quality Control (QC) staff in support of the efforts of our Team’s Quality Assurance Manager (QAM), Mr. Richard Allen, PE, DBIA who is committed to the project on a full-time basis.

At the Project’s Kick-Off meeting, the complete Design Quality Management Plan (DQMP) and the initial Construction Quality Management Plan outline the Preparatory Inspection Meetings (PIM) for all work packages, addresses the process for QA Auditing and Nonconforming Work Recovery Plan (AR Plan), and provides additional details to the CQMP updating process as design work packages are developed, submitted, and released for construction. As part of the kickoff presentation, nine key scenarios will be discussed to allow the entire project team to have the same understanding about quality.

Design QA/QC Approach

Our approach to design QA/QC is based on a process of implementation which occurs consistently throughout the study, design, and production phases rather than being applied as a separate oversight activity. We complete a thorough process in accordance with VDOT’s Minimum Requirements for Quality Assurance and Quality Control on Design-Build and Public-Private Transportation Act Projects (July 2018 QA/QC Guide) and also in accordance with Dewberry’s Quality Control Manual which contains standardized procedures for QC, QA, and independent quality audits. Implementing these processes and procedures across all disciplines provides for consistent adherence to our high internal quality standards while also meeting or exceeding the quality expectations of VDOT. Dewberry’s QC Program is based on ISO 9001:2015 quality management standards, guided by our Plan-Do-Check-Act (PDCA) cycle of quality management. This four-step process is graphically displayed in Figure 4.4.4 and is as follows:

1. **Plan** - Define the requirements and processes needed to produce high quality deliverable.
2. **Do** – Perform the work per the define requirements and codified processes
3. **Check** – Validate that steps 1 and 2 yielded desired results.
4. **Act** – Act on the results of step 3.



Figure 4.4.4: Plan-Do-Check-Act Quality Control System

Our four-step PDCA process is integrated into our workflow throughout the project life cycle. While our QA/QC processes are implemented consistently throughout the design development phase, formal design QA/QC reviews are documented on marked-up plans, formal comment resolution spreadsheets, and through completion of the LD-436 checklists. These documents are retained for the contract duration so that they can be easily reviewed to verify completion of the QA/QC process. Internal checklists are based on meeting standards and specifications, incorporating lessons learned from past projects, utilizing the proper quality standards, selecting appropriate materials, and implementing in a safe manner. Reviews are not only completed by each discipline for their area of expertise, but also incorporate interdisciplinary reviews to account for proper coordination.

As the Engineer of Record, Dewberry is ultimately responsible for QA and QC of all of our design deliverables and supporting documentation and computations. However, we recognize that on design-build projects effective and complete QA/QC processes also require input from our contracting partner, specialty subcontractors, and our design subconsultants. Collectively, our Team implements design QA/QC processes by adhering to the approved QA/QC plan, requiring our design subconsultants follow the QA/QC plan and processes, incorporating constructability review input from our contracting partner and key subcontractors, and involving VDOT and in the design review process.

Nine Quality Management Scenarios Discussed at Kick-Off

1. Design QC and QA steps and documentation.
2. PIM meetings/procedures for VDOT buy-in on Witness and Hold Points.
3. VDOT materials testing and QA responsibilities (Table 5-21)
4. AR Plan / NCR's – Identification, documentation, tracking, audit, recovery for defective equipment and construction activity/material failures.
5. Inspection documentation approach: checklists, daily work reports, and test reports from QA, QC, and Geotechnical Engineer of Record QC.
6. Pay application review and evaluation process.
7. Buy America compliance process: advanced planning support with the builders (what we need), source of materials (C-25) evaluation, pre-supply certification (C-76), delivery reviews (materials invoices, mill certifications, certification statements as outlined in the Materials MOI, etc.).
8. Materials Notebook Program (TL-142DB/LAP): pre-delivery source of materials (C-25), approved sources/lists evaluations, delivery receipt reviews (invoices, manufacturer/supplier certifications). Considering project complexity two example entries may be increased to demonstrate additional scenarios.
9. ProjectWise and PlanGrid Document Management System integration: administrative and read/write access privileges recommendations. Organization of pay application support documentation.

Finally, we recognize that design QA/QC processes do not end with approval of right-of-way and construction plans. Throughout construction, field changes, formal revisions, and all submittals and shop drawings reviews will follow these same QA/QC processes.

Design QA/QC Plan

As the Design Manager, Matt Thomas, PE is responsible for implementing and managing the design QA/QC program which establishes the following:

- ◆ Identification by firm, discipline, name, qualification, duty, responsibility, and authority for all personnel and/or subconsultants responsible for design QA/QC;
- ◆ Establishment of design QA/QC functions, including scheduled activities for design QA/QC, and identifying the drawings, computations, and other documents that will be submitted to VDOT;
- ◆ Procedures for preparing and checking all plans, specifications, and calculations, as well as procedures to correct errors and deficiencies prior to submission;
- ◆ Processes to check that design submittals are signed and sealed by the responsible PE licensed in the Commonwealth of Virginia;
- ◆ Actions to confirm that the level, frequency, and methods for review of design (including independent reviews) are in compliance with VDOT's functional requirements; and
- ◆ Procedures for identifying elements of design that require special construction QA/QC attention or emphasis.

Matt verifies conformance with the QA/QC Plan using informal observations or by conducting audits of the processes established within the QA/QC Plan, and utilizes input from our Design QA Manager, Steve Kuntz, PE, DBIA to complete the proper QA and QC reviews and documented them prior to submittals being recommended for signature and formal submission to VDOT. Completion of the formal QA and QC processes are documented on checklists and forms, including signatures from all parties involved beginning with the design engineer through the QA Manager. All submissions to VDOT will be accompanied by a certification that the documents have been reviewed in accordance with the QA/QC Plan. Major components of our Design QA/QC plan include:

Design Reviews: Design Quality Control (QC) reviews will be completed on all drawings, engineering computations, and other design related documents for technical accuracy, conformance to contract requirements, grammar and style, and formatting. Design QC efforts begin with the project engineer self-certifying their work and preparing it for an independent QC review by someone not involved in the day-to-day design efforts. The QC review is completed by design discipline leads and more senior staff with appropriate knowledge and experience based on the level of complexity of the design element. This effort is managed by our Design Manager who assigns appropriately experienced staff for the QC review, and that reviews have been completed at the appropriate milestone stages. The design QC process is not complete until all comments are resolved to the satisfaction of the QC reviewer, or discussions have been elevated to the Design Manager and comments have been addressed appropriately.

Following completion of the design QC process, the design Quality Assurance (QA) process evaluates whether the designers assessed problems appropriately, applied correct analyses, and assigned qualified personnel to tasks when conducting design related activities. Steve Kuntz, PE, DBIA will oversee this Design QA process throughout the duration of the Project as set forth in the QA/QC Plan and will verify that required QC functions were performed properly.

Interdisciplinary Coordination: Coordination between disciplines is critical to the success of the Project and requires coordination not only from multiple design disciplines, but also environmental, right-of-way, utility, and construction staff. This involvement extends beyond the design phase and through the right-of-

way acquisition, utility relocation, and construction phases. Continuous interaction between all disciplines throughout the entire Project duration leads to comprehensive plans and approaches which minimize potential cost and schedule impacts.

During design, weekly design meetings are held with representatives of all disciplines where details, progress, and schedule is discussed. During these meetings, discipline leaders and pertinent roadway, structural, hydraulic, and traffic design staff can discuss critical elements so they are properly coordinated and incorporated in order to develop a comprehensive plan from the outset. These design meetings also involve representatives from our environmental permitting team to review for environmental compliance and account for avoidance and minimization efforts at the start.

Beyond the internal interdisciplinary coordination meetings, weekly progress meetings including design, environmental, right-of-way, utility and construction staff are also held verify that design is progressing as necessary to maintain schedules for the overall project, and for critical/long-lead elements such as environmental permits and specialty construction materials. Communication at these meetings also includes:

- ◆ Environmental regulation requirements and sensitive or restricted Project areas;
- ◆ Sequencing of construction and any advance work packages which may be necessary;
- ◆ Right-of-way acquisition and utility relocation sequencing; and
- ◆ Overall progress, upcoming milestone dates, and any areas where schedule adjustment needs to be investigated.

In the event specific elements have become critical, the entire Team is able to proactively identify alternate solutions which will address any concerns. These meetings continue beyond the design phase, timely addressing changes in field conditions or other concerns during construction without impact to the Project

Constructability Reviews: These reviews occur during the weekly progress meetings described above and provide construction staff an opportunity to give direct feedback on the plans as they are developed, avoiding the need to implement major changes immediately prior to formal submissions. Roll plots and review of design files “real-time” through computer/video displays provide opportunities to discuss challenging areas of the project and to check that designs are safe, constructible, and consistent with the scope envisioned by the construction team. Steve and the discipline leads incorporate feedback and suggestions from construction staff in the plans as design progresses. Additionally, explanations regarding design requirements are conveyed from design staff to construction personnel to provide a comprehensive understanding of the design approach and Project requirements. In addition to these informal weekly constructability reviews, Matt and Jeff Mays, our DBPM, will coordinate formal constructability reviews of the design prior to each plan submission. Comments generated from these formal reviews will be addressed by the design team, or further discussed with construction staff, prior to submission of any packages to VDOT for review, comment, and ultimately approval.

QA/QC of Changes During Construction: We recognize that despite a comprehensive involvement from all disciplines during design, changes following issuance of Released for Construction plans may be necessary due to impacts of weather, availability of right-of-way, utility relocation schedules, or identification of unforeseen conditions. When necessary changes are identified, they will be reviewed in accordance with the Design QA/QC plan and follow the processes outlined above for the design phase. The nature and scope of the field change will be discussed between the Construction Manager and Design Manager to determine if it is minor in nature and can be documented via a Request for Information (RFI), or if it is a more extensive change which will require development of a formal plan revision. Regardless of the scope of the change, no field adjustments will be made without approval of the engineer and confirmation that the change is compliant with applicable standards and contract requirements. If a plan revision is necessary, our Team will coordinate with VDOT prior to making the change to establish the necessary review and approval process. Formal plan

revisions will not be issued for construction, or conveyed to third-party entities, until they have been reviewed and approved by VDOT.

Design QA/QC Staffing Level

Design QA/QC staffing levels will vary throughout the design phase based on the design elements being developed; however, the involvement of Matt Thomas and Steve Kuntz will remain consistent throughout the entire design phase. Design QC involvement is anticipated to include senior staff from each design discipline as well as from subconsultant design team members. Design QC staff will be assigned for the duration of the project so that a consistent QC approach is maintained. As Design Manager, Steve will verify that QC staffing levels are appropriate, commensurate with the amount of work being completed.

Construction Quality Assurance Approach

During the Project's design phase, the CQMP will be concurrently updated with the design work package development, environmental studies, geotechnical reports, and other design efforts as needed in accordance with the Minimum Requirements and presented to VDOT for approval with each Approved for Construction (AFC) work package. The QAM, the lead QA inspectors, and the QA office engineer from Quinn will review these design efforts, estimate quantities, develop the inspection and testing plans specific to the requirements of the scope of work. Elements such as the staffing plan, inspection plan, testing plan, and inspection checklists will be updated to clearly communicate to QC, QA, and VDOT staff (collectively, the "QMS Team") the specific technical requirements for each AFC work package, and to deliver the adequate resources for the work. All updates to the QMSP will be tracked as Addendum items to the plan, all subject to VDOT review and approval, prior to implementation.

The Construction Quality Management Plan (CQMP) will be treated as a living document throughout the life of the project. As Work Packages are approved for construction, The QAM will hold Preparatory Inspection Meetings (PIMs) for the new features of work prior to the beginning of construction. In these meetings, the contractor/subcontractor, QA/QC Team, VDOT personnel (including NPDES and ECI staff), and design staff and other stakeholders, as needed, will discuss, and develop a clear understanding of the plan of operations, testing procedures, and acceptance requirements. Meeting attendees will also review applicable contract drawings, specifications, special provisions, materials submittals, inspection and testing requirements and plan, environmental concerns, public communications, safety issues, designer's intent, and contractor's approach. Also, at these meetings the proper QC inspection checklist to be used for monitoring the work will be identified and distributed to meeting attendees. The minutes of these meetings will be incorporated into the CQMP so that detailed information on the quality

Anticipated Preparatory Inspection Meetings:

- TTC & Temporary Construction Signage
- Temporary Pavement, Markings, and Markers
- Construction Survey and Layout
- E&SC and Stormwater Pollution Prevention
- Clearing & Grubbing
- Excavation/Embankment
- Drainage
- Underdrains
- Subbase & Base Aggregates
- Milling and Overlays
- Permanent Asphalt
- Permanent Pavement Markings and Markers
- Guardrail & Terminals
- Permanent Signage – Ground Mount
- Permanent Signage – Structural Overhead
- Roadway Lighting
- ITS – Infrastructure (Conduits, Fiber Optics, etc.)
- ITS – CCTV
- ITS – System Integration/Commissioning
- HOT Lane Toll - Infrastructure
- Bridge Widening/Rehabilitation
- Bridge Foundations
- Bridge Substructure
- Bridge Superstructure
- Bridge Deck Operations, Parapets
- Retaining Walls

process is included for each new AFC Work Package. All updates to the QMSP will be tracked as Addendum items to the plan, all subject to VDOT review and approval, prior to implementation.

As our Team mobilizes for construction operations, the CQMP will be reviewed with the QMSP Team to clarify expectations for quality management, documentation requirements, collaboration and coordination efforts, risk management, and potential quality issue resolution. The initial construction kick-off meeting will also be a Preparatory Inspection Meeting (PIM), which is a project Hold Point. At the start of each PIM, the QAM will review the quality management approach specific to the scope of work. The specific staffing inspection, testing, and checklists approved with the AFC work packages will be reviewed with the appropriate construction personnel as well as the QMS Team members who will be directly performing the quality management for that scope of work. VDOT's project staff including the NPDES and ECI staff assigned to the Project will also be invited and engaged for their limited oversight capacities. Hold and witness points will be discussed with the entire QMS Team so that the communications plan is followed, and the appropriate staff can 'sign-off' on the inspection point. The entire AWC Team will clearly understand that as the QAM, Mr. Allen will report directly to the Design-Build Project Manager and has been granted the written authority from AWC to stop work and withhold payment when circumstances necessitate such measures to achieve and maintain the required levels of quality work.

Regarding project records management, the QAM and the QA office engineer will collaborate with the Construction Manager to receive, evaluate, and process sources of materials (C-25), Buy America certifications (C-76), and relevant submittals in accordance with the Materials Manual of Instructions in advance of their manufacture and deliver. Quinn will review, complete, file for record, and provide the C-25 to VDOT for information and/or action. The VDOT PM will receive the C-25 for information for materials that the DB team is responsible for acceptance. The C-25s that require VDOT action in cases where VDOT maintains the QA inspection and testing responsibilities will be flagged so that VDOT responsibilities are clear and offsite inspection contracts can be established for fabricated items requiring VDOT QA. Special consideration is necessary for the acceptance/testing of ITS components and will follow the established protocols in the Technical Requirements and as defined in the commissioning plan for inspection, integration, and testing

Quinn will utilize GET, an AASHTO/AMRL accredited materials testing lab, to perform QA laboratory testing and support field testing as needed. The QA inspection and materials testing will be independent of the construction QC inspection and materials testing program and the Geotechnical Engineer of Record's efforts. Quinn will provide verification sampling and testing independently from the QC. The QA testing will be coordinated with QC, so this work is done 'shoulder to shoulder' by QC and QA staff. By performing these QC and QA concurrently in the field, comparisons and reconciliation can occur in real time to minimize unnecessary deliberation, delay, rework, and/or NCR's. Non-passing tests will be immediately coordinated with field personnel for remediation and retesting, and subsequently reported for the record as part of the QA Auditing and Nonconforming Work Recovery Plan (AR Plan). When a situation cannot be immediately corrected, the AR Plan will be implemented to resolve the deficiencies in a timeframe mutually acceptable to the design build team and the Department.

Materials documentation, test reports, completed checklists and daily work reports (DWR) from the QA and QC inspection teams will be completed within 24 hours of the completion of the work. QA documentation will then be compiled, reviewed, and approved by the QAM, and will be submitted into ProjectWise, the Project's document management. The QCM will review and compile QC documentation to be sent to the QAM for inclusion in the materials notebook and document management system. The QAM will coordinate with the QCM to resolve any questions related to the QC staff's reports prior to approval.

Materials documentation will be entered into the materials notebook (TL-142DB/LAP) by the QA Office Engineer (OE) in accordance with the requirements of the Materials Manual of Instructions, Chapter VII: Materials Acceptance and Materials Notebook Program. At the point of entry, the OE will backcheck the

field confirmation that materials came from approved sources with approved C-25's on file and reconfirm that the appropriate acceptance method and Buy America documentation has been provided following the 'audit' portion of the AR Plan. Each test report provided by the QMSP Team will also be entered into the TL-142DB/LAP after review and approval by the QAM, and both the QAM and/or OE will use this step to initiate the AR Plan process as appropriate.

The AR Plan will be implemented as a continuous process throughout the project, not just during construction. If an issue is identified, it gets listed in the deficiency log. If the deficiency is not correctable using conventional means and methods, does not have a corrective action plan agreed upon by VDOT prior to the next pay application, is a safety violation, or is an environmental permit violation, it then is elevated to nonconformance status, and a Nonconformance Report (NCR) is issued. Continuous monitoring and regular audits of the deficiency log may identify trends for corrective action or process improvements and trigger additional investigation or elevation of a deficiency to an NCR based on repeat performance issues. At the point an NCR is issued, the QAM will include the schedule activity ID's associated with the issue so payment for that activity is not included in pay applications until it has been fully resolved.

Construction Quality Management Team Organization

Quality Assurance Manager – Richard Allen, PE, DBIA (Quinn) – Mr. Allen will provide full-time on-site Quality Assurance Management during construction reporting directly to the Design-Build Project Manager. Due to the complexity and size of this project, the QAM will have a significant planning role during the Design phase. Our Team commits to 100% full time QAM participation from day one of construction. Mr. Allen's current assignment is the I-66 OTB Project, and the anticipated completion of his assignment is December 2022. He will be fully available to be on the Project site full-time for the duration of the project.

Lead QA Inspector – Structures – Earl Edwards (Quinn) – The Lead inspector for structures will provide full time on-site Quality Assurance for the duration of the of all construction of the Project. The Lead QA Inspector for structures shall be responsible for verifying that all construction activities performed by the Design-Builder were done in accordance with the Contract requirements and were observed by the quality assurance firm. This includes observation of all QC activities to ensure inspection and testing, and the observation of any approved corrective action for any non-conformities of the Work. The Lead QA Inspector - structures shall report directly to the QAM. The Lead QA Inspector shall be certified as a VDEQ ESC Inspector and shall be 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) Earl Edwards is fully certified by VDOT, DEQ, and ACI and holds the requisite safety training to perform his duties.

Lead QA Inspector – Roadway – Cory Fout (Quinn) – The Lead inspector for roadway will provide full time on-site Quality Assurance for the duration of the of all construction of the Project. The Lead QA Inspector for roadway shall be responsible for verifying that all construction activities performed by the Design-Builder were done in accordance with the Contract requirements and were observed by the quality assurance firm. This includes observation of all QC activities to ensure inspection and testing, and the observation of any approved corrective action for any non-conformities of the Work. The Lead QA Inspector shall report directly to the QAM. The Lead QA Inspector shall be certified as a VDEQ ESC Inspector and shall be 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) Earl Edwards is fully certified by VDOT, DEQ, and ACI and holds the requisite safety training to perform his duties.

QA Offic Engineer – (Quinn) – The QA offic engineer will work with the CM or appropriate project management staff to obtain material documentation records meeting VDOT acceptance criteria established with the C-25. The Offic Engineer will be on site full time during construction operations and be the lead person for periodic VDOT audits or project records. The offic engineer will also assist with document uploads to Project Wise to ensure that project records are readily available for stakeholders.

QA Inspector(s) – Structural and ITS – (Quinn) – Structural/ITS inspectors will be assigned to the project full time for the duration of structural and ITS work and will be responsible for verifying that all major structure new construction, reconstruction, and rehabilitation are performed in accordance with the contract documents. This will include the structural portions of ITS and overhead signage. These activities are anticipated to be performed in 40 – 50 hours per week. However, the schedule will be adjusted as necessary to provide QA inspectors and technicians, and to provide coverage of critical work items and hold or witness points during either weekend and/or nighttime activities as applicable. QA inspectors will be certified and experienced at inspection and testing of the materials and activities to which they are assigned.

QA Inspector(s) – Roadway – (Quinn) – The QA Inspectors will support the lead QA inspector in the inspection and testing of all roadway elements of the project. Initially, two (2) full- time inspectors will be employed once construction has mobilized and the workload is justified. However, in concert with both the Project Schedule, weekly workplan and approved QA/QC Plan requirements, additional staff will be provided as needed. Generally, the QA inspection team will be assigned to cover between one to three crews depending on the specific inspection requirements associated with the specific scope of work

QA Technicians – Structures & Bridges, and Roadway – (Quinn) – The QA technicians will support and supplement the QA inspection team’s field materials testing activities on an as needed basis. All QA technicians will possess the required VDOT, ACI, and nuclear safety certifications for their respective roles and responsibilities.

QA Laboratory – Quinn will utilize the services of GET Solutions an accredited laboratory, for all QA lab testing requirements. All laboratory results will be compared with QC Laboratory results, and any found discrepancies/non-compliance issues will be addressed immediately by the QAM and the QA team.

Construction Quality Control Approach

AWC’s construction QC approach mirrors the design QA/QC philosophy of PLAN-DO-CHECK-ACT. This 4-step approach provides the QAM and VDOT the confidence that the work was done correctly, the inspections occurred, and proper documentation was recorded and distributed.

Step 1 – Work Plans for Definable Features: The QCM will initiate and track development of the Work Plan for every new construction activity in conjunction with the Superintendents and Project Engineers to incorporate safety and quality procedures.

- ◆ **PLAN:** Evaluate the work to be done, whether across scope or for just a single day. Establish what success looks like. Identify all hazards and how you will address them.
- ◆ **DO:** Execute the plan as it was written. If circumstances change or if conditions arise that were not accounted for in the plan, stop. Re-evaluate and move ahead according to the new plan.
- ◆ **CHECK:** After the work is complete, evaluate the results. Did the plan work? Are there things that should be improved in the plan moving forward? Are there things from the original plan that were not covered?
- ◆ **ACT:** Make adjustments and create a new plan based on the evaluation. Begin the cycle again.

Step 2 – Develop/Review Quality Checklist: The Quality Review Checklist is a comprehensive listing of all the items and tasks that need to be accomplished prior to the work activity occurring. It includes the following items:

- ◆ Items to be inspected/verified
- ◆ Hold Points where work is halted until inspections and signoffs occur
- ◆ Signoff by multiple parties including the foreman, superintendent, quality control inspector, and the quality assurance inspector;
- ◆ Material Testing Requirements such as number of concrete cylinders to be made, additional concrete tests, and material certifications received

Step 3 – Review/Utilize Operational Checklist: The operational checklist describes items that occur during the specific construction activity (i.e. concrete placing operation - method of placement, when cylinders and concrete tests occur, and vibration and its interval).

Step 4 – Utilize Post Construction Checklist: The Post Construction Checklist identifies when tests occur occur and when test results reports will be distributed and to the project team, QC, QA, and VDOT.

Staffing Plan - Construction Quality Control (QC)

The QC Team, led by the CM, has the training and experience required to properly execute the quality program. Our approach and commitment provides assurance to VDOT that quality will be addressed and allows the Department to minimize its oversight resources. An outline of our QC resources and responsibilities is as follows:

- ◆ **Construction Manager (CM), Glen “Trey” Martin, Archer Western Construction, 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, Glenn 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 accommodate those means and methods 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 inspects and reviews all construction to confirm it 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)**
 - 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 so 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 (to mirror the QA organization). Additional inspectors and testing technicians will be utilized when required by the schedule to in order to provide sufficient coverage during construction.
- ◆ **QC Inspectors/Testing Technicians**
 - Time Commitment: Construction Phase: 3-4 Roadway Inspectors at peak of construction, one full-time Senior Structure/ Bridge Inspector during bridge construction, two support Structure/Bridge Inspectors during peak periods.
 - 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 Engine**
 - Time Commitment: Construction Phase: Estimated at 100%
 - A QC Office Engineer, reporting to the QCM, will be assigned and responsible for daily coordination with the CM to schedule the appropriate QC inspection and testing for the upcoming work. Our Team utilizes a Daily Activity Report (DAR) 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 checks that the inspectors are in the field, reviewing and verifying the work

4.5: Construction of Project

4.5 - Construction of the Project

4.5.1 Sequence of Construction

The development of the sequence of construction for this project has been a collaborative effort between construction staff and the designers responsible for TTC/MOT design, roadway design, bridge design, drainage and stormwater management design, noise barrier design, environmental permitting, ITS/Electric, and utility coordination and design. All of these groups met on a weekly basis during the proposal development process, resulting in an efficient sequence of construction that upholds safety and significantly reduces the impacts to the traveling public. Some of the construction enhancements and benefits incorporated into our sequence of construction are as follows:

- ◆ Logical segmentation of the project into five work areas
 - Facilitates focused construction management teams for efficient staging and sequencing
- ◆ Early relocation of ITS ductbank to be outside future travel lanes and shoulders
 - Accelerates integration of new devices to new ductbank
 - Allows for work to proceed earlier in the reversible lanes' northern shoulder (where the existing ITS ductbank is located)

Schedule Integration and Construction Areas

We established the general flow and the stages of the project in order to provide safe and efficient work zones and travel ways throughout the project. In order to efficiently manage construction, we will break the project into five (5) work areas as shown in the Figure 4.5.1, with construction teams assigned to each area

- ◆ **Area 1 – EB Sta. 964+50 to 1025+00 – includes the widening and rehabilitation of the I-64 EB bridges over Granby Street, I-564, and Little Creek Road**
- ◆ **Area 2 – EB Sta. 1025+00 to 1085+50 – includes the widening and rehabilitation of the I-64 EB bridge over Tidewater Drive**
- ◆ **Area 3 – WB Sta. 3032+00 to 3082+00 – includes the widening and rehabilitation of the I-64 WB bridge over Tidewater Drive**
- ◆ **Area 4 – WB Sta. 2810+40 to 2860+00 – includes the rehabilitation of the I-64 WB bridges over Little Creek Road and Granby Street**
- ◆ **Area 5 – WB Sta. 2860+00 to 3032+00 and Reversible Lanes Sta. 6007+00 to 6060+00 – includes the rehabilitation of the I-64 HOV bridge over I-564 and Little Creek Road**

This division of the project allows the construction team to be able to focus on smaller areas of the project while the Project Management team will continue to guide and monitor the overall project.

Sequencing Details

We developed four (4) stages of construction corresponding to our Team's Transportation Management Plan (TMP) which is detailed in Section 4.5.2. Each stage corresponds to a major traffic control sequence as construction activities progress. Work along the corridor, in all five work areas, will be constructed concurrently during each traffic stage. Figures 4.5.1.1 and 4.5.1.2 depict our Temporary Traffic Control (TTC) plan for each stage of construction.

A summary of each work area, broken down by construction stage, is shown in Tables 4.5.1 through 4.5.5.

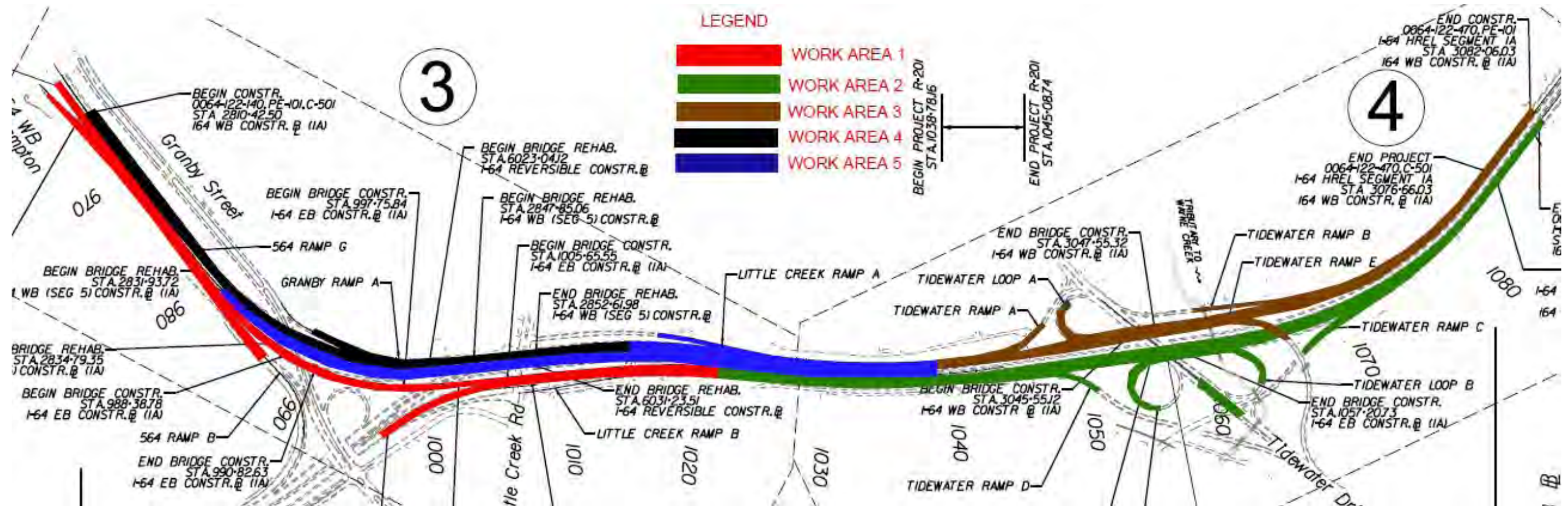


Figure 4.5.1 - Project work areas

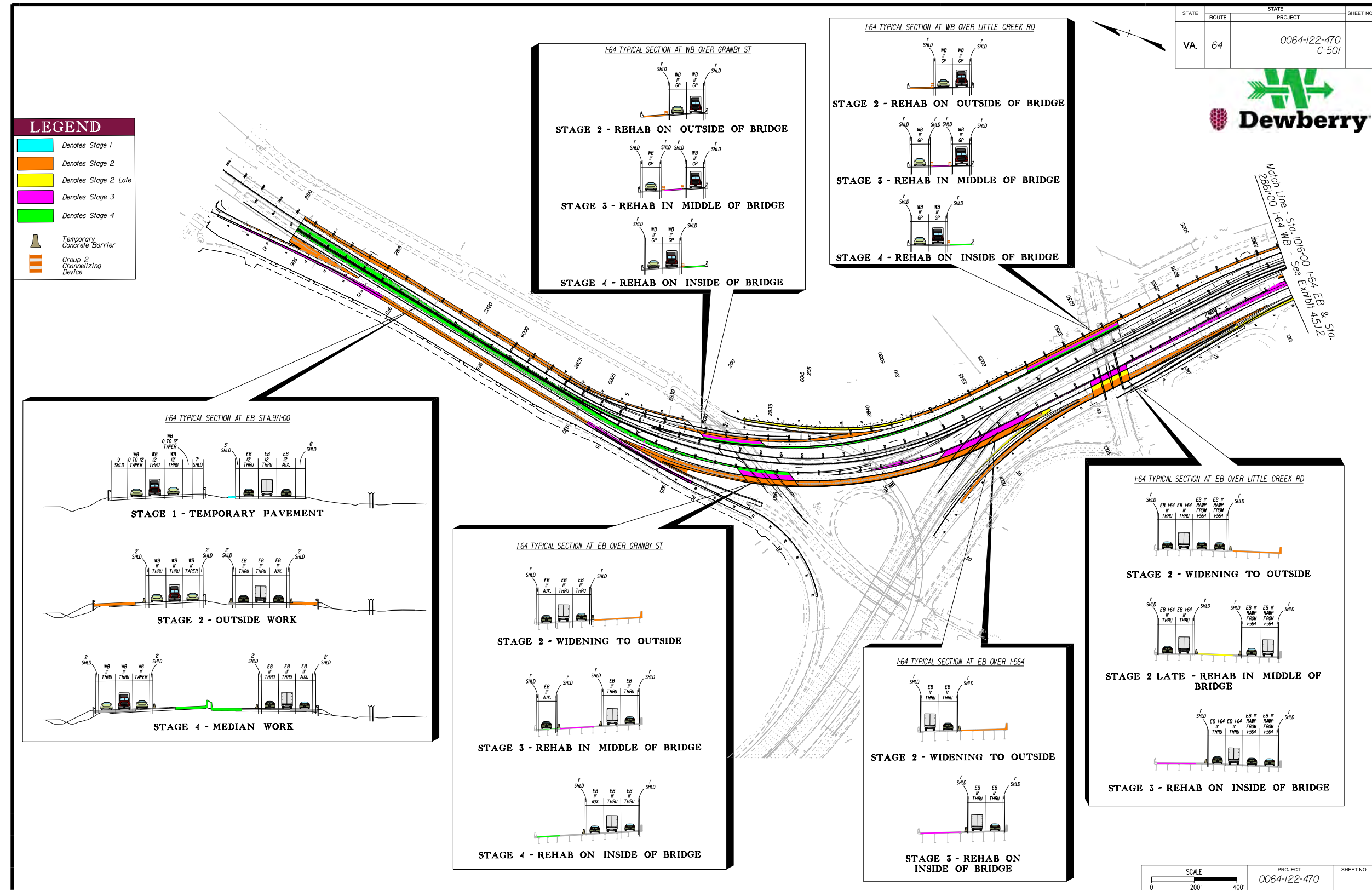


Figure 4.5.1A

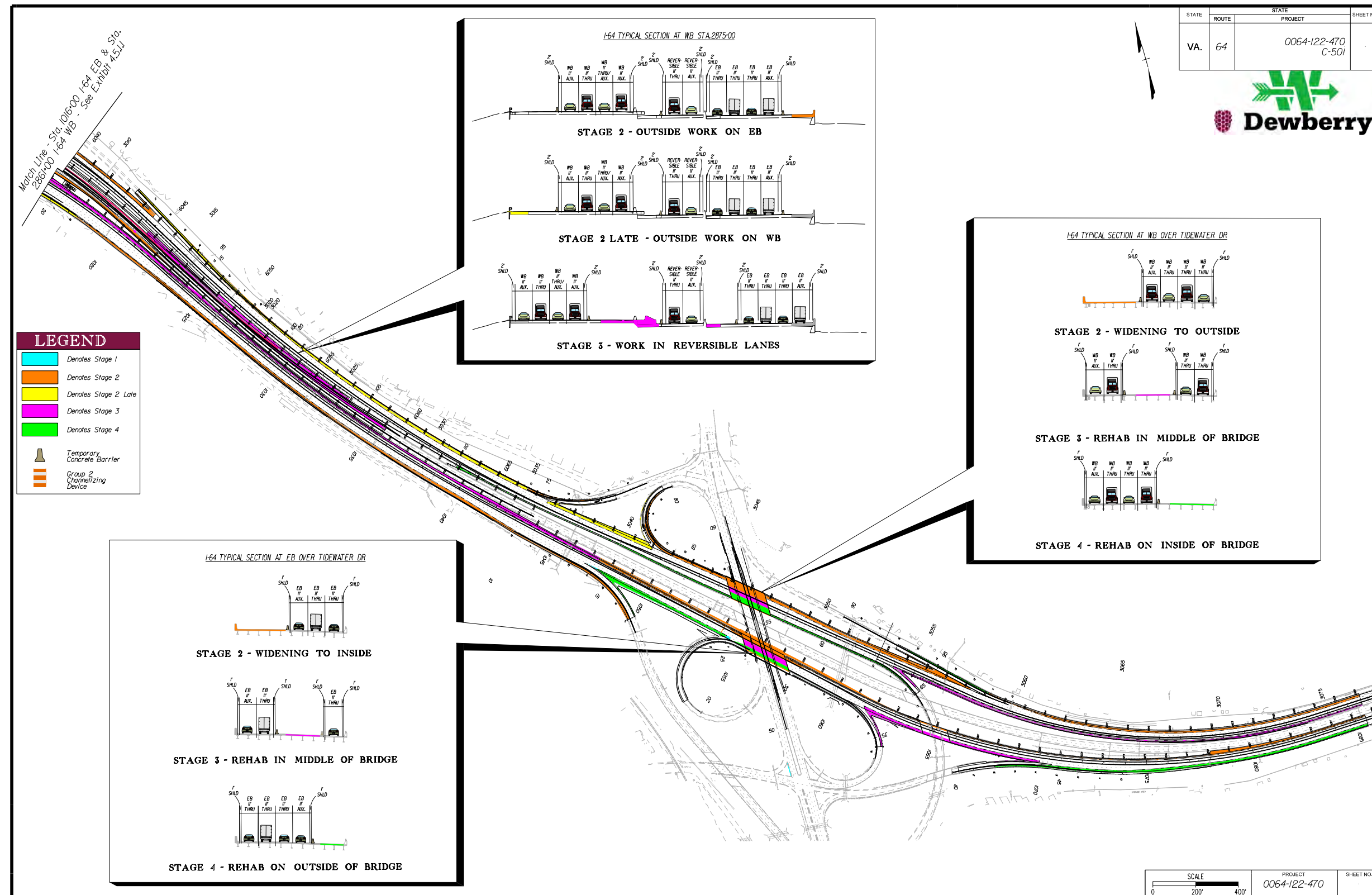


Figure 4.5.1B

Table 4.5.1 – Work Area 1

Area 1 - EB Sta. 964+50 to 1025+00	
Stage 1	<ul style="list-style-type: none"> Shoulder strengthening on inside of roadways
Stage 2	<ul style="list-style-type: none"> EB bridges over Granby St. I-564, and Little Creek Rd - widen to outside Full-depth sawcut and new pavement on outside of roadway Install ITS devices and sign foundations on right shoulder
Stage 2 Late	<ul style="list-style-type: none"> EB bridge over Little Creek - rehab in middle of bridge, so 2 GP lanes on inside of bridge, and 2 merge lanes from I-564 on outside of bridge
Stage 3	<ul style="list-style-type: none"> EB bridge over Granby - rehab in middle of bridge, so 2 GP lanes on outside of bridge, and auxiliary lane to reversible lane on inside of bridge EB bridges over I-564 and Little Creek - rehab on inside of bridge, with travel lanes on outside of bridge East of Little Creek only: full-depth sawcut, new pavement, ITS device and sign foundations on inside of roadway Install foundations and equipment for EB Toll Equipment Cabinet (TEC), toll gantry, and generator & propane tank
Stage 4	<ul style="list-style-type: none"> EB - bridge over Granby - rehab inside of bridge West of Little Creek only: full-depth sawcut, new pavement and barrier, and ITS device and sign foundations on inside of roadway

Table 4.5.2 – Work Area 2

Area 2 - EB Sta. 1025+00 to 1085+50	
Stage 1	<ul style="list-style-type: none"> Lay temporary pavement and perform signal modifications for left turn a Tidewater Drive / Thole Street traffic sign Open temporary left turn to traffic, close existing loop ramp fr Tidewater Drive SB to I-64 EB Shoulder strengthening on outside of I-64 EB mainline
Stage 2	<ul style="list-style-type: none"> EB bridge over Tidewater - widen to inside West of Tidewater: full-depth sawcut, new pavement, and sign foundations on outside of roadway; also replace noise panels on existing retaining wall East of Tidewater: full-depth sawcut, new pavement, ITS device and sign foundations on inside of roadway
Stage 3	<ul style="list-style-type: none"> EB bridge over Tidewater - rehab in middle of bridge, which requires splitting through traffic West of Tidewater only: full-depth sawcut, new pavement, ITS device and sign foundations on inside of roadway
Stage 4	<ul style="list-style-type: none"> Re-open loop ramp from Tidewater Drive SB to I-64 EB Remove temporary pavement on Tidewater Drive SB, restore signal timing at Tidewater Drive / Thole Street traffic signal to original conditio

Table 4.5.3 – Work Area 3

Area 3 - WB Sta. 3032+00 to 3082+00	
Stage 1	<ul style="list-style-type: none"> Shoulder strengthening on inside of roadway
Stage 2	<ul style="list-style-type: none"> WB bridge over Tidewater - widen to outside Full-depth sawcut, new pavement, ITS device and sign foundations on outside of roadway, from eastern Project limits up to Tidewater Loop A
State 2 Late	<ul style="list-style-type: none"> Full-depth sawcut, new pavement, ITS device and sign foundations on outside of roadway, between Tidewater Loop A and Ramp A
Stage 3	<ul style="list-style-type: none"> WB bridge over Tidewater - rehab in middle of bridge, which requires splitting through traffic Full-depth sawcut, new pavement, and sign foundations on inside of roadway, from eastern Project limits up to Tidewater Ramp E
Stage 4	<ul style="list-style-type: none"> WB bridge over Tidewater - rehab on inside of bridge Full-depth sawcut, new pavement, and sign foundations on inside of roadway, from Tidewater Ramp E to western area boundary

Table 4.5.4 – Work Area 4

Area 4 - WB Sta. 2810+50 to 2860+00	
Stage 1	<ul style="list-style-type: none"> Shoulder strengthening on inside of roadway
Stage 2	<ul style="list-style-type: none"> WB bridges over Granby and Little Creek - rehab on outside of bridges, traffic shifted to inside of bridge Full-depth sawcut, new pavement, and sign foundations on outside of roadway
Stage 3	<ul style="list-style-type: none"> WB bridges over Granby and Little Creek - rehab in middle of bridge, which will require splitting the two (2) through lanes
Stage 4	<ul style="list-style-type: none"> WB bridges over Granby and Little Creek - rehab on inside of bridges, traffic shifted to outside of bridges Full-depth sawcut, new pavement, ITS device and sign foundations on inside of roadway

Table 4.5.5 – Work Area 5

Area 5 - WB Sta. 2860+00 to 3032+00, and reversible lanes Sta. 6003+00 to 6060+00	
Stage 1	<ul style="list-style-type: none"> Shoulder strengthening on “south side” of reversible lanes
Stage 2	<ul style="list-style-type: none"> Demo existing barrier on “south side” of reversible lanes; install new pavement and new barrier; then shift reversible lanes to the south Perform ITS civil works (i.e. new conduits and junction boxes) on outside of WB roadway, from western area boundary to approximately WB Sta. 3027+00 Install foundation and equipment for WB Toll Equipment Cabinet (TEC), as well as retaining wall around TEC Perform cutover of ITS system from reversible lane shoulder to outside of WB roadway (in conjunction with area 4)

Area 5 - WB Sta. 2860+00 to 3032+00, and reversible lanes Sta. 6003+00 to 6060+00	
Stage 3	<ul style="list-style-type: none"> • Demo existing barrier separating reversible lanes from WB GP lanes • Full-depth sawcut of existing pavement on “north side” of reversible lanes and inside of WB GP lanes • Perform roadway grading / re-alignment for express lane “transition” from GP lane elevation to reversible lane elevation
Stage 4	<ul style="list-style-type: none"> • Lay new asphalt for express lane transition • Install new barrier separating express lane and reversible lane • Install gates at express lane entrance • Install foundation and equipment for WB toll gantry • During 21-day shutdown of reversible lane bridge over I-564: extend new barrier on bridge separating reversible lane and express lane; also perform deck overlay / rehab on bridge

Detailed descriptions of each work area and the benefits of our proposed sequence are described as follows:

Area 1 - EB Sta. 964+50 to 1025+00

Stage 1

All Stage 1 work is within existing VDOT ROW and requires no drainage adjustments. Upon approval of an early TTC plan set, our Team will begin the inside shoulder strengthening, as shown in Figure 4.5.1.2, from the western Project limit up to the I-64 EB bridge over Granby St. This strategy allows for the lane shift to the inside to be completed prior to final plan approval and receipt of environmental permits. The varying depth existing shoulder will be removed by milling and repaved with temporary base and intermediate asphalt. This shoulder strengthening operation will be performed at night with lane closures. Operations will be planned so that no drop-offs of more than 2” remained at the end of any work shift. Traffic will then be shifted to the inside at completion of this shoulder strengthening.

**STAGE 1 -
TEMPORARY
PAVEMENT**

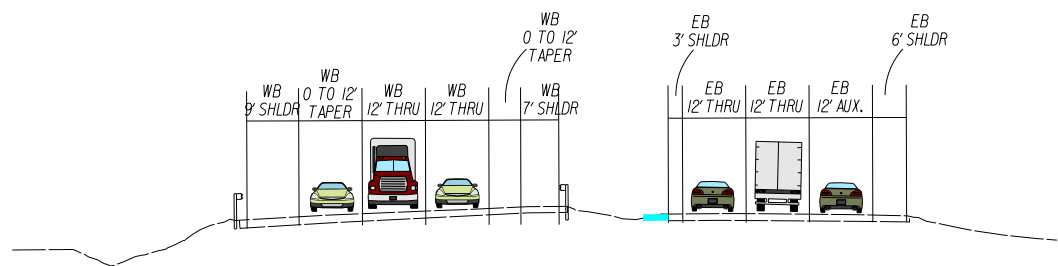


Figure 4.5.1.2 - Strengthen Inside Shoulder

Stage 2

Following the shoulder strengthening and traffic switch in Stage 1, temporary concrete barrier will be set along the entire length of the area, as shown in Figure 4.5.1.2. Work will then proceed to sawcut existing asphalt within the limits indicated by the RFP conceptual plans. The outside roadway will be reconstructed and widened to accommodate the future express lanes. Foundations for ITS devices, equipment cabinets, and sign foundations that are located on the outside of the roadway will also be installed. Finally, the Navy fence will be relocated to account for the roadway widening.

STAGE 2 - OUTSIDE WORK

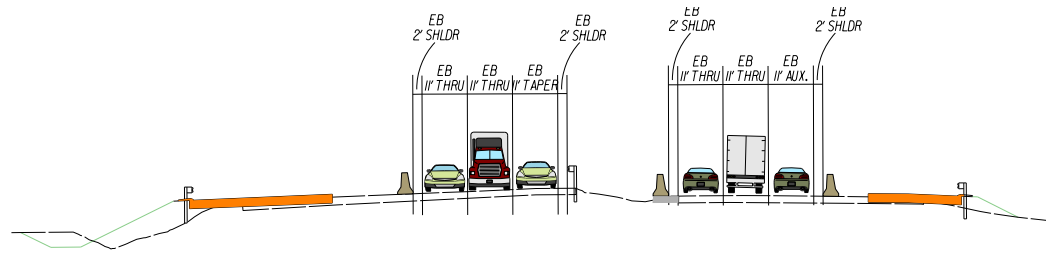


Figure 4.5.1.3 - Outside Work Area 1

Area 1 includes the I-64 EB bridges over Granby Street, I-564, and Little Creek Road. During Stage 2, each of these bridges will be widened to the outside, as shown in Figure 4.5.1.3. Because these bridges are close together, widening work for all three bridges will occur simultaneously, to allow for efficiency in the overall construction sequence.

Stage 2 Late

The three aforementioned bridges have different number of lanes to maintain, which presents a unique challenge to developing our construction sequence. The I-64 bridge over Granby St will have 3 lanes to maintain; the I-64 EB bridge over I-564 will have 2 lanes to maintain; and the I-64 EB bridge over Little Creek Rd will have 4 lanes to maintain. To accommodate the different MOT needs in this area, we developed a sub-stage called Stage 2 Late. For this stage, the I-64 EB bridges over Granby St and I-564 will remain the same as in Stage 2. However, for the I-64 EB bridge over Little Creek Rd, the two I-64 EB through lanes will be on the inside the bridge, while the two merge lanes from I-564 will be on the outside of the bridge. This configuration allows for repairs of the existing bridge deck to occur in the middle of the bridge, as shown in Figure 4.5.1.4, while maintaining a consistent traffic flow through Area 1.

STAGE 2 LATE - REHAB IN MIDDLE OF BRIDGE

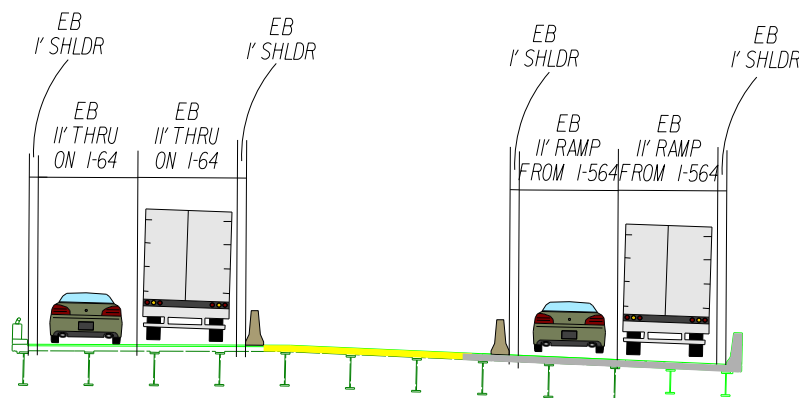


Figure 4.5.1.4 - Stage 2 Late for I-64 EB bridge over Little Creek Rd

Stage 3

Following completion of Stage 2 and Stage 2 Late work, all traffic will be shifted onto the newly reconstructed outside roadway and bridges. This will allow work to progress towards the inside of the I-64 EB bridges over I-564 and Little Creek Rd. For the I-64 EB bridge over Granby St, the two through lanes will be on the outside of the bridge, while the auxiliary lane that is used to enter the reversible lanes will be on the inside of the bridge. This configuration, as shown in Figure 4.5.1.5, will allow for deck overlay work to occur in the middle of the bridge. Likewise, east of the I-64 EB bridge over Little Creek, the inside of the roadway will be reconstructed with new pavement and drainage. Foundations for the new Toll Equipment Cabinet (TEC), toll gantry, and generator & propane tank will be constructed. Roadway reconstruction for west of the Little

Creek bridge will wait until Stage 4.

STAGE 3 - REHAB IN MIDDLE OF BRIDGE

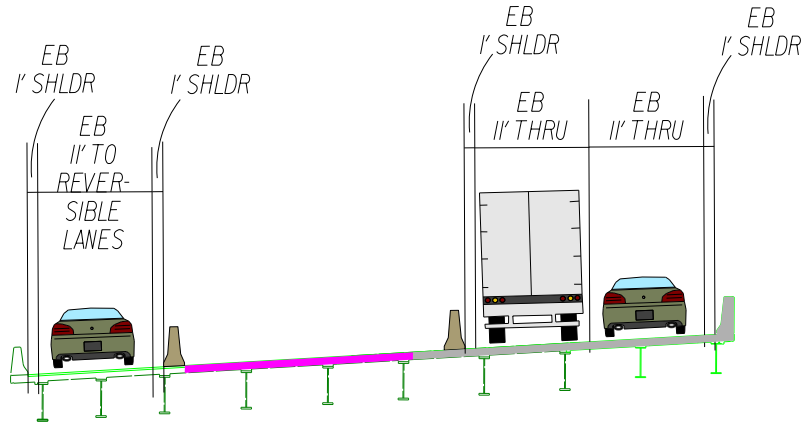


Figure 4.5.1.5 - Stage 3 for I-64 EB bridge over Granby St

Stage 4

The work for the I-64 EB bridges over I-564 and Little Creek Rd were completed in Stage 3. However, work on the I-64 EB bridge over Granby continues into Stage 4, with all traffic on the outside of the bridge, and deck overlay occurring on the inside of the bridge. Also, west of the I-64 EB bridge over Little Creek Rd, the existing pavement on the inside of the roadway will be sawcut and reconstructed. New foundations for ITS devices, equipment cabinets, and sign foundations will be constructed as well.

Area 2 - EB Sta. 1025+00 to 1090+90

Stage 1

The key part of Area 2 is the widening of the I-64 EB bridge over Tidewater Drive. Maintaining all four (4) existing lanes during work on this bridge would require five TTC stages, with three of the stages having through traffic being split. Realizing that this scenario is highly undesirable, we have developed an approach that only has three TTC stages, with only one stage having through traffic being split. To accomplish this 3-stage approach, the existing loop ramp Tidewater Drive SB to I-64 EB will be temporarily closed, and the traffic using this ramp will be diverted as follows: at the Tidewater Drive / Thole Street intersection, temporary pavement will be installed to create a left turn lane from Tidewater Drive SB onto the ramp that Tidewater Drive NB traffic uses to access I-64 EB, as shown in Figure 4.5.1.6. The signal timing at the Tidewater Drive / Thole St traffic light will be modified to accommodate this left turn. Once the temporary left turn is in place, the existing loop ramp can be closed. As required by the RFP, we understand this configuration is subject to approval upon completion of full traffic analysis during final design. For a discussion of preliminary traffic analysis results, see Section 4.5.2.

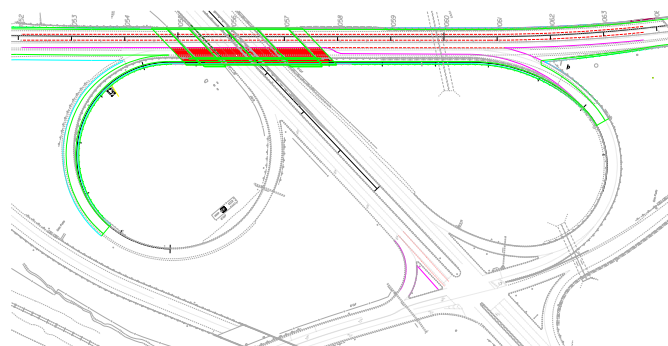


Figure 4.5.1.6 - Temporary left turn at Tidewater Drive / Thole Street intersection

Stage 2

The RFP conceptual plans show the I-64 EB bridge over Tidewater Drive being widened to the outside. However, this technical proposal details the bridge being widened to the inside, in order to avoid a major conflict with an existing gas line and further simplify the TTC stages in this area. Therefore, in Stage 2, the three through lanes will be shifted to the far outside of the bridge, and work will commence to widen the bridge towards the inside. Also, east of the I-64 bridge over Tidewater Drive, the inside of the roadway will be reconstructed, and foundations for new ITS devices and signs will be built. However, west of the I-64 EB bridge over Tidewater Drive, roadway work in Stage 2 will be on the outside of the roadway, in order to connect with the outside roadway reconstruction that will occur in Area 1, Stage 2.

Stage 3

This stage is the one time that the through lanes on I-64 EB will be split. In order to perform the deck overlay and associated bridge work in the middle of the I-64 EB bridge over Tidewater Drive, two through lanes will be on the outside of the bridge, and one through lane will be on the inside of the bridge, as shown in Figure 4.5.1.7. Also, during this stage, the inside of the I-64 EB roadway west of the Tidewater Drive bridge, as well as the outside of the I-64 EB roadway between Tidewater Loop B and Ramp C will be reconstructed.

STAGE 3 - REHAB IN MIDDLE OF BRIDGE

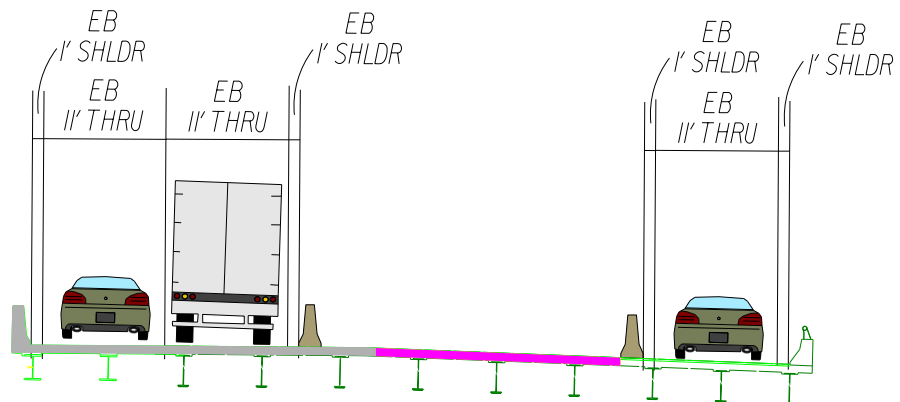


Figure 4.5.1.7 - Split through traffic on I-64 EB bridge over Tidewater Drive

Stage 4

By Stage 4, the I-64 EB bridge over Tidewater Drive is wide enough to accommodate four travel lanes, while still having enough room to complete the remaining deck work on the outside of the bridge. So, in the beginning on Stage 4, the temporary left turn at the Tidewater Drive / Thole Street traffic signal will be eliminated; the signal timing will revert back to its original form; and the loop ramp from Tidewater Drive SB to I-64 EB will re-open. This newly opened on-ramp will form a weave lane with the off-ramp from I-64 EB to Tidewater Drive NB. Finally, roadway reconstruction will occur east of the Tidewater Drive bridge, up to the eastern Project limits.

Area 3 - WB Sta. 3032+00 to 3082+00

Stage 1

Similar to Area 1, the roadway widening will happen first on the outside. Also, the main part of Area 3 is the I-64 WB bridge over Tidewater Drive, which will be widened to the outside. Therefore, this stage will focus on shoulder strengthening efforts on the inside of the roadway, to allow for traffic to shift towards the inside and create a work zone on the outside of the roadway.

Stage 2

The existing I-64 WB bridge over Tidewater Drive has five travel lanes. However, during construction, the merge taper for Tidewater Ramp E will be shortened, so that the merge ends before the bridge. This way, only four travel lanes will need to be maintained during construction. In Stage 2, all traffic will be shifted to the inside of the bridge, so that the bridge can be widened to the outside. Also, the roadway will be reconstructed on the outside, starting at the eastern Project limit and continuing west until Tidewater Loop A.

Stage 2 Late

The WB ramps at Tidewater are not wide enough to accomplish the full width of the required saw-cutting in one stage; we've therefore included Stage 2 Late in Area 3. In this stage, the outside roadway will be reconstructed between Tidewater Loop A and Ramp A, as shown in Figure 4.5.1.8. This sub-area between the ramps also includes foundations for a DMS sign, ITS device, and equipment cabinet that will be constructed during Stage 2 Late.

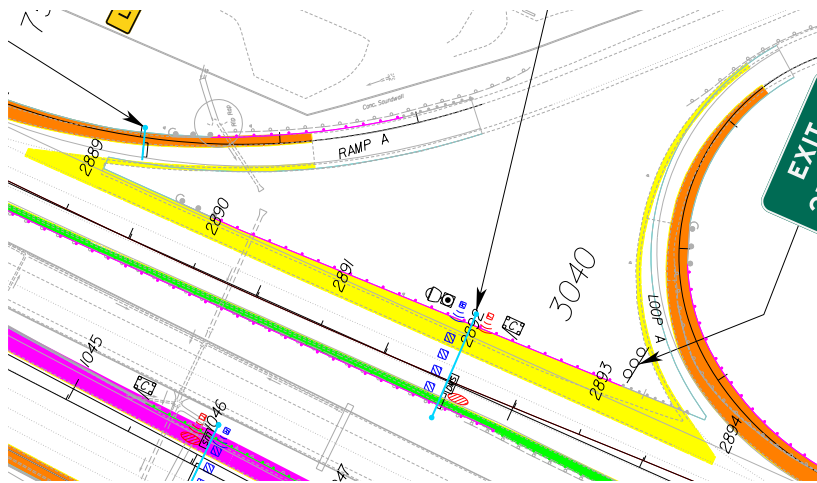


Figure 4.5.1.8 - Split through traffic on I-64 WB bridge over Tidewater Drive

Stage 3

Similar to the I-64 EB bridge over Tidewater Drive, the I-64 WB bridge over Tidewater Drive also requires splitting through traffic. During this stage, one through lane and the deceleration lane for Loop A will be on the outside of the bridge, while the remaining two through lanes will be on the inside of the bridge, as shown in Figure 4.5.1.9. This stage will also include reconstruction of the outside roadway, from the eastern project limit up to Ramp E.

STAGE 3 - REHAB IN MIDDLE OF BRIDGE

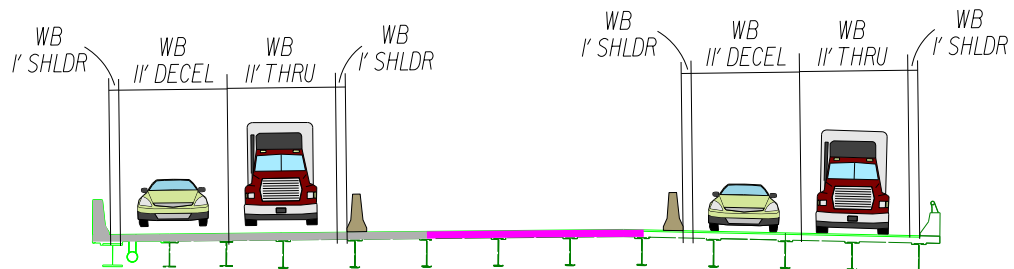


Figure 4.5.1.9 - Split through traffic on I-64 WB bridge over Tidewater Drive

Stage 4

In the final stage for Area 3, all I-64 WB traffic will be shifted to the outside of the bridge over Tidewater Drive, so that the deck work can be completed on the inside of the bridge. Also, the inside of the roadway will be reconstructed from Tidewater Ramp E to the western boundary of the area.

Area 4 - WB Sta. 2810+50 to 2860+00

Stage 1

Area 4 extends along I-64 WB from just before the bridge over Little Creek Rd to the western Project limit. The first stage will consist of inside shoulder strengthening so that traffic can be shifted to the inside of the roadway.

Stage 2

The work for the I-64 WB bridges over Little Creek Rd and Granby St is to consist of: deck resurfacing, bearing replacement, and joint elimination. The unique challenge for these 2-lane bridge is that they are not wide enough to maintain both travel lanes and have a concrete barrier separate the travel lanes from the work area. Therefore, our solution is to place Group 2 channelizing devices (drums) on the inside edge of the work area, as shown in Figure 4.5.1.10. Then, during the allowable temporary lane closure hours, the drums will be moved into the right travel lane, which will create enough room for work to safely occur on the bridges. Furthermore, the outside of the roadway throughout the entire length of Area 4 will be reconstructed during this stage.

STAGE 2 - REHAB ON OUTSIDE OF BRIDGE

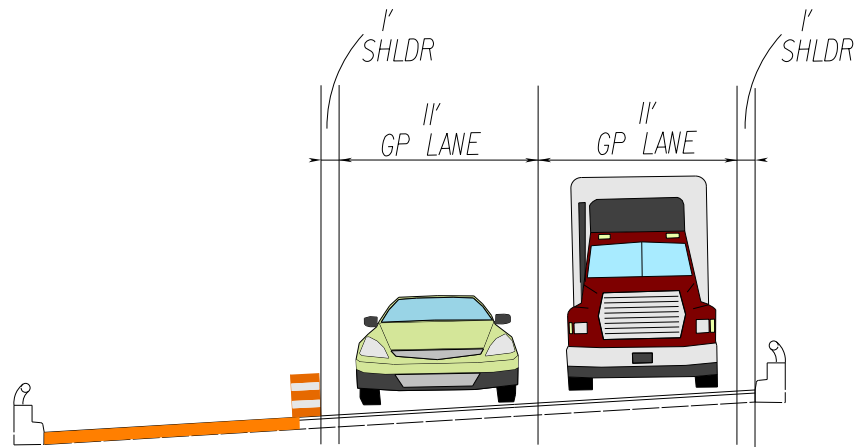


Figure 4.5.1.10 - Drums on outside of I-64 WB bridges over Little Creek Rd and Granby St

Stage 3

Once the work is finished on the outside of the I-64 WB bridges over Little Creek and Granby St, the two through lanes will be split so that work can proceed in the middle of the bridge. One through lane will shift to the recently refurbished outside of the bridge, and the other through lane will remain on the inside of the bridge.

Stage 4

For the last stage of Area 4, work will finish on the inside of the bridges, with all traffic shifted to the outside. The inside of the roadway between these two bridges will also be repaired. Note that responsibility for constructing the foundations for signs, ITS devices, and equipment cabinet on the inside of Area 4 is shared between this Project and the adjacent HRBT project. Coordination with HRBT will therefore be most important in Area 4.

Area 5 - WB Sta. 2860+00 to 3032+00 and reversible lanes Sta. 6003+00 to 6060+00

Stage 1

Area 5 will be the most complex portion of the Project from a MOT perspective because of the future I-64 WB express lane ramp that “transitions” from the general purpose lane elevation to the reversible lane elevation. The first stage to facilitate this express lane transition is to perform shoulder strengthening on the “south side” of the reversible lanes, between the existing edge of pavement and the existing barrier.

Stage 2

To create space for the future I-64 WB express lane, the existing reversible lanes need to be shifted southwards. To accomplish this shift, the existing barrier separating the reversible lanes from the I-64 EB general purpose lanes will be demolished. New roadway, drainage, and barrier will be constructed south of the old barrier, as shown in Figure 4.5.1.10. Then the reversible lanes can be shifted south.

Throughout Area 5, the existing ITS is in the current northern reversible lane shoulder. However, this northern shoulder becomes the new travel lane for the I-64 WB express lane. Since the ITS is not allowed to be in travel lanes, our Team proposes to relocate the ITS to the outside of the I-64 WB general purpose lanes, as explained in Section 4.3.1(l) of this Technical Proposal. The limits of the relocation are from Sta. 6031+00 at the Little Creek Rd bridges to Sta. 6059+00 near the eastern boundary of Area 5. The relocation will require installing temporary barrier along the outside of the I-64 WB general purpose lanes during Stage 2, even though figure 4.5.1.2 does not show any paving work on the outside of the roadway during this stage. Also, the relocation will include connecting the trunk fiber to the existing ITS devices and equipment cabinets, as well as constructing the Toll Equipment Cabinet (TEC) for the WB express lane and the retaining wall that goes around the TEC.

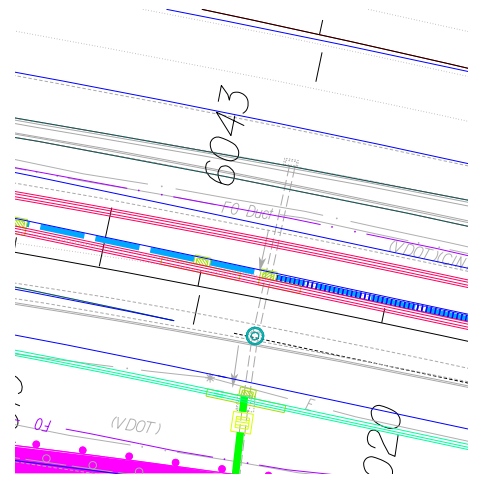


Figure 4.5.1.11 - Shift reversible lanes southwards with new EOP and barrier

Stage 2 Late

Once the ITS is relocated from the reversible lane shoulder to the outside of the I-64 WB general purpose lanes, then the outside of the general purpose roadway can be constructed. At the end of this stage, traffic will be shifted to the outside.

Stage 3

With the ITS relocated and traffic shifts for both the reversible lanes and the I-64 WB general purpose lanes completed, work can now begin to build the express lane transition. The existing barrier separating the reversible lanes and the general purpose lanes will be demolished; existing pavement on both the reversible lanes and general purpose lanes will be saw-cut and removed; and the roadway will be re-aligned with new grading to create the new express lane.

Stage 4

In the final stage for Area 5, the new barrier separating the WB express lane and reversible lanes, as well as the gates for controlling the flow of traffic onto the express lane, will be constructed. Also, the toll gantry for the WB express lane will be constructed in this stage. Then, our Team will utilize the 21-day shutdown of the reversible lanes, as permitted in Part 2, Section 2.10.3 of the RFP, to perform the deck overlay / rehab of

the reversible lane bridge over Little Creek Rd and I-564. When all work is done, the gates will keep access closed to the express lane while the Toll Systems Integrator (TSI) performs their ITS testing.

Other Major Work Elements

Safety

Safety is the core of our organization. It is imperative to the future of our employees and company that “No One Gets Hurt.” Our corporate safety program demonstrates the AWC Team’s commitment to safety and is evidenced by our best-in-class safety rate of 0.70. Our culture extends not only to our employees, but also our clients, subcontractors, vendors, third parties, and the public we encounter along the way.

Safety is personal, and it begins with each employee connecting personally with their peers and co-workers. Jeff Mays will set this tone from the beginning, expecting management to have open door policies, walking the field discussing safety with all craftsmen, leading safety meetings, and sharing his project safety stories to assure everyone that safety is personal to him.

Our Project Safety Manager will build relationships with the entire job team. Relationships are the key to making Safety personal. The Safety Manager will be supported by a team of safety professionals to assist with training, reporting, creating hazard analyses, indoctrinations, Reviewing Employees Actions and Performance (REAP) cards, and inspections.

One key component to a successful safety program is the involvement and buy-in from the craft. Each craft type will have a safety ambassador who will be part of the Craft Safety Committee. This committee will report concerns to the DBPM each week, go through leading indicators and plan for that week’s safety tour based on the weekly meeting and 3-week schedule.

Our design and construction approach establish a clear separation of construction activity from the traveling public. As interactions are eliminated, safety performance is increased. Each entrance and exit to the worksite will be identified with signs and illuminated so the traveling public knows to expect construction traffic and can begin maneuvers ahead of time.

Design

Safety begins with our design. Our Project Safety Manager will be a part of our design review process, in particular TTC/MOT, working hand in hand with the design team to ensure we are considering the safety of our employees and the travelling public first and foremost

Safety will be integrated into the TTC/MOT design by providing a plan that protects the field staff and the traveling public in this highly traveled corridor. We will do this by carefully assessing construction ingress/egress points, eliminating temporary crossovers, minimizing traffic shifts and exceeding the required minimums for clear zones, shoulder widths, and other elements, where possible, based on work zone constraints. Safety is incorporated into the design process for final design elements including balancing earthwork and vastly reducing sliver paving to minimize truck traffic entering/exiting the project

Planning

Planning for safety is an important first step to creating the project work plan. A full work plan will be created for every major operation. As an integral part of the planning and scheduling process, work plans will be developed with involvement from the Construction Manager, the Entrusted Engineer in Charge (EIC), the Safety Manager, QA and QC Managers, Superintendents, and Field Engineers. Each work plan includes a step-by-step procedure to complete the work. Each of these steps include an area in which hazards are identified and a workaround, elimination plan, or PPE is prescribed to deal with the hazard properly.

Once a week each crew is required to review their work plans and step by step hazard analysis. The crew will modify this living document each week based on any hazards not identified, location changes, or revisions to the step-by-step procedure. Each crew member will sign this document each week and ensure it is up to date and relevant.

Every day the crews will start the day with a morning huddle where the operation plan for the day is discussed including review of a task hazard analysis for what is to be done that day. The morning huddle is a chance for all employees to have a voice and identify what they see as safety hazards. A Task Hazard Analysis (THA) will be completed every day no matter how big or small the operation. The THA will address location access concerns, relevant housekeeping issues prior to starting the day, and any weather or other location specific issues that need addressed prior to beginning of shift.

All foremen and project construction staff will be required to participate in the Reviewing Employees Actions and Performance (REAP) program once a week. The REAP program is intended to bring the staff and craft together to discuss safety and improvements that can be made to operations to promote health and safety. The staff will observe an operation and document any issues, concerns or accolades. The staff person will discuss those items with the crews on the spot.

A weekly job-wide meeting will be held each Monday morning to discuss hot topics for safety, quality compliance and schedule. All personnel will be present at the meeting which will be chaired by the Construction Manager. This simple meeting will allow the craft and staff to build a solid and trusting relationship and make sure that the entire job team is focused on the safety and schedule goals for the project.

To maximize public safety throughout the project, design and construction will be coordinated with the adjacent VDOT projects to the west and east along with any other VDOT or local municipality project in our footprint. The AWC team will share information and meet regularly with the adjacent project design and construction staff to coordinate maintenance of traffic overhead signing throughout the corridor, ITS/Electric and interface points including the horizontal and vertical tie-ins of roadways.

Table 4.5.6 - Weekly Safety Items

Monday	Tuesday	Wednesday	Thursday	Friday
Weekly Safety Meeting THA Review	Weekly CSC / DBPM Meeting THA Review	Weekly CSC Safety Walk THA Review	Safety Team Walk THA Review	THA Review

Training

Our safety plan and programs evolve through the life of a project to address specific needs and changing conditions. The AWC Team has many practices and programs that will be utilized during the Project. Throughout the life of the project these programs will be refocused or modified to account for current situational needs. Our Safety Manager will lead the safety program which will include the following major items:

- ◆ **Indoctrination:** This is perhaps the most important tool we have to assure all our employees start off on the right foot with the information and initial training they need to do their job. At indoctrination, our Safety Managers, Construction Manager, and Design Build Project Manager have an opportunity to connect with each employee first thing to “set the tone and expectations” for safety performance on the job.
- ◆ **REAP Program:** Each foreman and salary employee will be required to complete a REAP card each week. The purpose is for each employee to step back and watch an operation in progress for 5-10 minutes. A brief write-up of observations, both good and bad, will be discussed on the spot with the crew and improvements made or accolades given. These simple interactions will help assure we have the right tools, best access, and build a team that trusts one another to make sure we all go home safely.
- ◆ **Near Miss Program:** We encourage our employees to call out “Near Misses” when they see them in the field. The employees verify a near miss, stop and correct the action and then notify their Superintendent so that the near miss can be turned in to our Safety Department. These near misses are tracked in a database that will identify leading indicators for determining training needs.
- ◆ **Craft Safety Committee:** Each craft group (operators, laborers, carpenters, electricians, etc.) will

nominate a Safety Champion to be a part of the Craft Safety Committee (CSC). The CSC will be responsible for a weekly jobsite safety tour. On this tour, they will meet with their peers, discuss operations, and listen to any concerns the employees might have. The CSC will meet with the DBPM and Safety Manager once a week to discuss the tour and voice any concerns from the craft on how to improve on safety (tools, access, personnel, etc.). During this meeting the group will also discuss upcoming operations or safety trends to focus on during the next week's walk. The CSC members will be identified to each new hire during their indoctrination process

- ◆ National Construction Safety Week: AWC is an active leader in this annual event dedicated to re-focusing attention on safety throughout the construction industry. During safety week, AWC will participate in many activities to train all craft, subcontractors, clients and designers on the hazards of our project. Items like Safety Rodeos are led by our craft and are excellent opportunities where craftsmen or experts will train the entire project team on their operations or areas of expertise.
- ◆ Celebration and Recognition programs: Celebration and recognition programs that will reward positive behavior and achieving milestones relating to safety will be established. Examples are project giveaways (hats, shirts, mugs, coats) and lunches (both crew specific and job wide)
- ◆ Training: The AWC Team provides comprehensive safety training for all employees to competently complete their work while building a culture where everyone looks out for each other. Some of the specific training classes we will provide are
 - OSHA 30 for all foremen and up
 - OSHA 10 for all employees
 - Equipment Trainings – crane, manlift, forklift
 - Excavation and Trench Safety
 - Confined Space
 - Fall Protection
 - First Aid / CPR – all foremen and up

Measurement

Our safety performance will be measured by many tools. These tools include but are not limited to:

- ◆ REAP indicators are tracked monthly to assure we are improving on the areas that needed focus per our staff and foremen inspections
- ◆ Monthly safety audits from off-site management personnel (“outside set of eyes”) to assure we are not missing any key details. Audits are reviewed with the DBPM and job team and action items will be assigned to specific team individuals.
- ◆ Weekly craft safety committee will tour the project and advise their peers on issues or corrections that need to be made, they will also be able to inform the DBPM of concerns or issues in the field that need to be addressed.
- ◆ Manhours will be tracked per foremen / superintendent along with their near misses, first aids, recordables, and restricted duty cases. Trainings will be targeted to groups as needed based on improving safety performance.

Data tracked and compiled as described above, will be used to modify and plan our safety programs, trainings, and incentives. The Craft Safety Committee feedback will help us to improve operations, assure we have the needed tools and resources to assure No One Gets Hurt.

Operations

Our approach to operations includes assigning separate construction teams to each of the Areas. This allows a smaller staff to focus on constructing a smaller portion of the Project while allowing senior staff to guide, plan and monitor overall project operations. Area staff will be assigned the resources, labor and equipment, required to meet the construction schedule. Senior staff will manage schedule and production and adjust resources in order to maintain the project schedule.

AWC has developed its project schedule to maximize resource utilization and keep crews productive for the duration of the project. All areas will start together in Stage 1 performing shoulder strengthening as needed during nighttime lane closures. We will then move to Stage 2. In Stage 2, earthwork and drainage crews will start progressing linearly from Area 1 and 2 and then proceed to Areas 3, 4 and 5. Bridge demolition will start at Area 1, proceed north to Area 2 and end in Area 3 (1 heading). One pile operation to include SOE and pile driving will follow the bridge demolition (1 heading). Switching traffic into Stage 2 opens up work to perform the bridge widenings. Dedicated crews will be assigned to erosion and sediment control and maintaining MOT for the length project length.

Once Stage 2 we will continue with Staging 3, 4. As work progresses, schedule and production will be closely monitored to identify activities that have challenges that may require the addition of resources to maintain the project schedule. Weather, production rates, and unanticipated conditions can provide challenges to the project team to keep the Project on time and within budget. Having multiple construction teams being able to focus within an area and communicate back to the DBPM, EIC and CM, will allow quick identification of issues that may impact the overall project schedule.

Staging and Storage

We have reviewed the project corridor and have identified five potential areas for staging and storage of materials. With our Team’s unique design concept to widen I-64 EB at Tidewater Drive to the median, this provides some additional area within the interchange for staging of materials. In addition to this location, the figures below reflect the other four potential locations for staging materials



Figure 4.5.2.1



Figure 4.5.2.2

4.5.2 Transportation Management Plan

Our Team is dedicated to delivering this Project in a way that upholds public safety and minimizes impacts for all stakeholders during construction. All aspects of our Transportation Management Plan (TMP) and our Temporary Traffic Control (TTC) Plans will be developed with a focus on improving safety for the traveling public and construction personnel while minimizing the likelihood of incidents and travel delays throughout all stages of construction. We are also committed to a robust public communications program to effectively inform long distance traffic tourist traffic local traffic and the community of traffic changes, thus mitigating impacts and improving safety. To accomplish these safety, mobility, and communication goals, we have committed to the following enhancement strategies of our approach:

- ◆ Utilizing enhanced safety devices that exceed the requirements of the RFP
- ◆ Analyzing and adjusting temporary lane closure hours to further reduce public impacts, especially during the peak summer travel season
- ◆ Conducting regular work zone reviews by our design engineers, to ensure that traffic controls are properly implemented and to suggest further enhancements

Traffic Management Task Force and Adjacent Project Coordination

Our Team is committed to reducing the Project’s anticipated impacts to the traveling public and exceeding the safety requirements of the RFP. Therefore, immediately following the Notice to Proceed (NTP), our Team will establish a multi-discipline Traffic Management Task Force (TMTF) that will be focused on planning and developing the TMP, as well as designing and implementing the Project’s work zone traffic control program. The TMTF will consist of contractors, engineers, and our safety team. Additionally, VDOT and third-party stakeholders such as the U.S. Navy, which operates the nearby Naval Base, are invited to participate in the TMTF. Establishing and maintaining this task force will help to ensure that safety, mobility, and constructability are optimized.

This Project’s eastern terminus will tie directly into the HREL Segment 1B project, and its western terminus will tie directly into the HRBT project, with construction activities occurring simultaneously. It is thus of paramount importance that seamless transitions between the projects as well as MOT operations are carefully coordinated, so that safety, mobility, construction sequencing, and design features are fully integrated.

TMP Philosophy

This Project’s TMP and TTC plans will place a particularly heavy emphasis on eliminating the need for temporary lane closures to the maximum extent possible, as we thoroughly understand the impact that lane closures can have on the traveling public, residents, and local businesses. To meet our high safety and mobility standards, the TMP and TTC plan development will be supervised by our Lead Traffic Engineer, Shelley Wynne, who is a Professional Traffic Operations Engineer (PTOE). Additionally, Dewberry has an in-house training program for our engineers, allowing all of our engineers involved in Maintenance of Traffic (MOT) design to achieve VDOT Advanced Work Zone Traffic Control certification

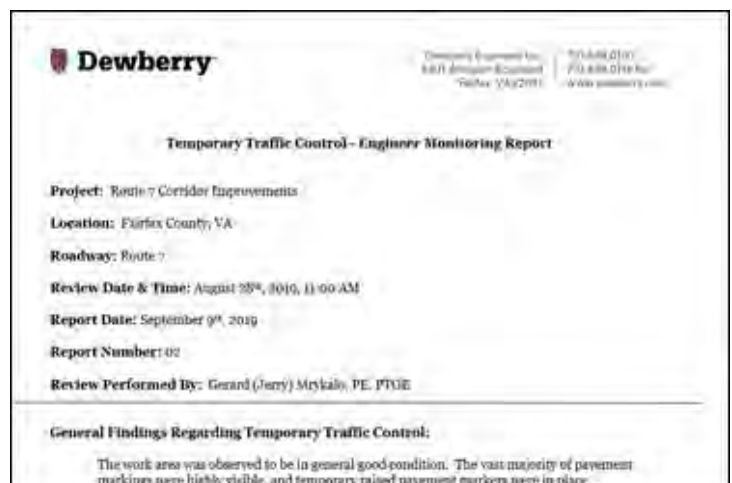


Figure 4.5.2.3 – Example TTC Monitoring Report

Furthermore, our traffic engineering staff will conduct field reviews throughout construction, especially after major traffic switches, in addition to the Work Zone Safety Inspections conducted by our TMTF and our QA

/ QC Team. These field reviews will verify that traffic controls have been implemented correctly and provide recommendations for future enhancements. An example of a field review can be seen in Figure 4.5.2.1.

Sequence of Construction / Phasing

As introduced in Section 4.5.1, this Project will be constructed in four stages, each of which has unique construction and temporary traffic control features. Figures 4.5.1A and 4.5.1B show a plan view of these stages. These figures also show typical sections at critical points along the I-64 corridor for each stage of construction. We carefully studied numerous options when developing this staging, resulting in a plan that minimizes the need for temporary lane closures and maximizes the construction zone areas.

Traffic Control Details for Maintaining Traffic During All Phases

In addition to the sequencing of construction and TTC typical sections found in Figures 4.5.1.1 and 4.5.1.2, this section outlines the traffic control details to be implemented. Upon Project Award, our Team will begin the design of the Type C, Category V TMP and will develop site-specific TTC plans for each stage of construction, along with corresponding Erosion & Sediment Control (ESC) 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. Further traffic control details are as follows:

I-64 Ramps, and City Streets

- ◆ All existing travel lanes will be continuously maintained during all Stages, with the exception of allowable lane closure hours outlined in Part 2, Section 2.10.3 of the RFP, as well as the following:
 - Temporary lane closures are expected for operations such as nighttime paving, placement of temporary traffic barrier, delivery of materials, and bridge work
 - Full closures are only expected for overhead work (such as sign structure erection) and new alignments
 - The reversible lanes will be closed for up to 21 days as allowed by the RFP
 - Ramp closures will be implemented in accordance with RFP requirements and further detailed in Section 4.5.1
 - Minimum lane widths on I-64 will be 11'
 - Flagging operations are limited to 2-lane city streets

Work Zone Speed Reductions

Our Team recommends maintaining the existing posted speed limits of 55 mph on the I-64 mainline and 65 mph on the I-64 reversible lanes for the following reasons:

- ◆ All temporary geometry and lane shifts will meet the standards for the full posted speed limit
- ◆ In addition to minimizing motorist delay, research has proven that lowering speed limits where geometric conditions do not require the reduction actually lessens safety, since large deviations between drivers' speeds commonly result in increased crashes.

Unique Project Challenges and Solutions

1. Crash Avoidance and Incident Managements

While the entirety of I-64 in Virginia is a vital roadway, the section within the Project limits is especially critical given the nearby U.S. Navy facilities and the peak summer travelers. Given this understanding, our Team commits to the following crash avoidance and incident management techniques:

- ◆ Forgiving Geometry: Our design will include temporary lane shifts that meet the criteria of the full posted speed limit. It will also focus on the avoidance of abrupt transitions, thereby reducing

the complexity for drivers to navigate alignment changes. These efforts are especially important to minimize side-swipe crashes and run-off-road crashes, as well as to accommodate trucks

- ◆ **Enhanced Safety Devices:** We commit to utilizing the following enhanced safety devices to reduce the likelihood of incidents:
 - Full continuous temporary raised pavement markers with installation of all temporary markings, for increased lane visibility 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 tighter than required channelizing device spacing for increased work zone delineation and construction personnel safety
 - As required by Part 2, Section 2.10.1 of the RFP, our Team will install congestion mitigation measures including access for emergency / incident responses vehicles and four (4) portable CCTV cameras
- ◆ **Incident Management and Detection:** Given that I-64 is already a congested corridor, our Team recognizes the critical importance of early incident detection, swift emergency response, and quick clearing of incident from travel lanes. Our Team will develop a comprehensive Incident Management Plan (IMP), focusing on proactive measures to rapidly detect, respond to, and clear incidents with coordination from VDOT, EMS, and stakeholders.

2. Staging of I-64 WB Bridges over Little Creek Road and Granby Street

The I-64 WB bridges over Little Creek Road and Granby Street are not wide enough to perform the required deck rehabilitation, joint work, and abutment work while having temporary barrier separate the work zone from the travel lanes. Our Team will therefore have the work zone separated from the travel lanes by Group II Channelizing devices (drums) that are placed inside the edge of the work zone. During off-peak temporary lane closures per the hours defined in the RFP, the drums will be moved into the closed lane of traffic to facilitate bridge work while maintaining a single lane of traffic. Also, one of the three TTC stages will require splitting through traffic with the work zone located in the middle of the two travel lanes. Appropriate temporary signing and pavement markings will be used for this split condition.

3. Staging of I-64 EB and I-64 WB Bridges over Tidewater Drive

In order to perform the necessary widening for the I-64 EB and I-64 WB bridges over Tidewater Drive, while maintaining all through travel lanes, at least TTC one stage for each direction of I-64 will require splitting the mainline traffic. Figure 4.5.2.4 shows a plan view for the TTC stages on both the I-64 EB and I-64 WB bridges over Tidewater Drive.

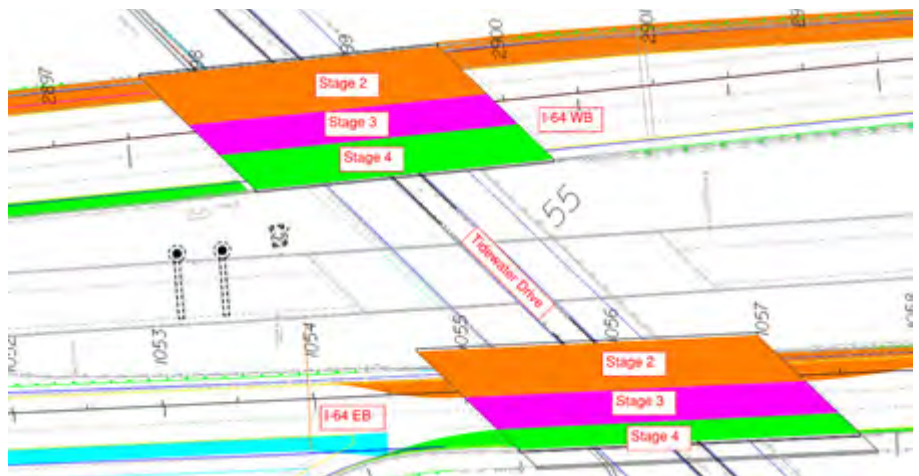


Figure 4.5.2.4 – Plan view of TTC stages for I-64 bridges over Tidewater Drive

- ◆ Additionally, our Team proposes the implementation of a detour for the on-ramp from Tidewater Drive SB to I-64 EB by routing drivers to the intersection of Tidewater Drive and Thole Street and accessing I-64 EB with a SB left-turn, as shown in Figure 4.5.2.5. This detour will require signal timing modifications and temporary pavement for the existing SB right-turn movement from Tidewater Drive to Thole Street to a revised shared

right-turn and through movement. Our Team did a preliminary analysis of this detour condition, and it resulted in acceptable Level of Service (LOS) for both the merge from SB Tidewater Drive to I-64 EB and the intersection of Tidewater Drive and Thole Street. In order to increase driver comprehension and safety during this detour, our Team commits to the following enhancements:

- ◆ Full deceleration lane length for the left-turn from Tidewater Drive SB to I-64 EB; and,
- ◆ Large temporary guide signs provided in advance of the ramp closure and temporary left-turn.

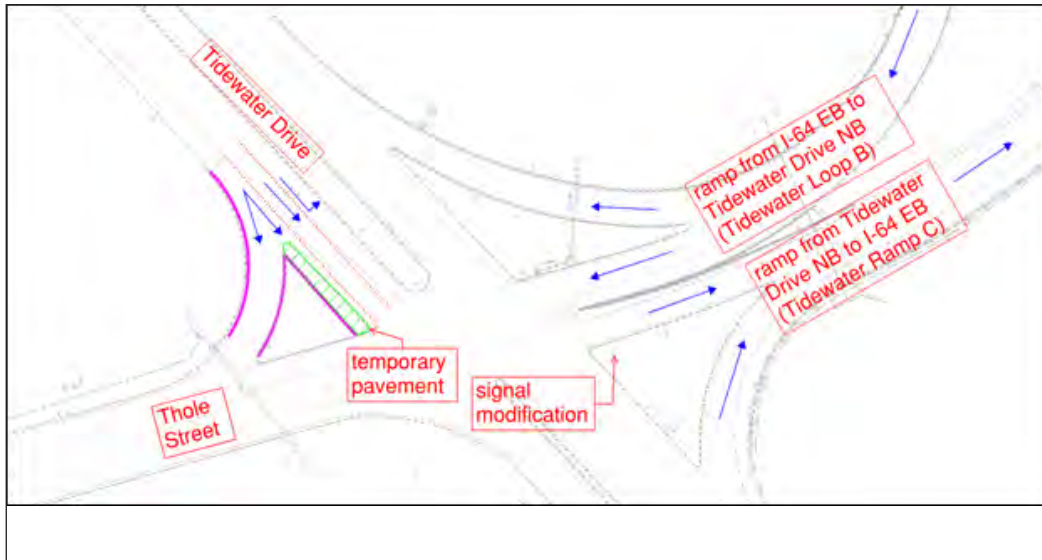


Figure 4.5.2.5 – Temporary left turn from Tidewater Drive SB to I-64 EB

4. Lane Closure Optimization

The allowable lane closure hours listed in Part 2, Section 2.10.3 of the RFP will be followed. However, we recognize that the impacts of closing a single lane of I-64 is a major impact to traffic operations that can have ripple effects on City of Norfolk streets. To

ensure that temporary lane closures are limited to the hours of least impact to the traveling public, our Team will collect current traffic volumes and analyze potential MOT operations using software such as Quick Zone and HCS. This strategy will account for seasonal variations in traffic volumes, especially the peak summer beach travel season. As shown in Figure 4.5.2.6, we are well versed in this exact type of analysis, which was recently performed as part of the I-64 Capacity Improvements Segment I and Segment III projects. Utilizing this type of analysis also gives us the ability to schedule short-term construction work during low-volume hours when feasible, providing a benefit that exceeds the RF requirements.

5. Pedestrian Safety

Our Team recognizes that the Little Creek Road and Tidewater Drive interchanges will be active work areas, given the residential and commercial areas located within the vicinity of the interchanges. Also, there are sidewalks along Little Creek Road where pedestrians will be crossing under the bridge widening activities. Therefore, we will install orange safety fence to safely and effectively delineate and separate pedestrians from work activities.

Stakeholder Communication and Mitigation Strategies

The high traffic volumes during peak travel periods, combined with the peak summer season, adjacent

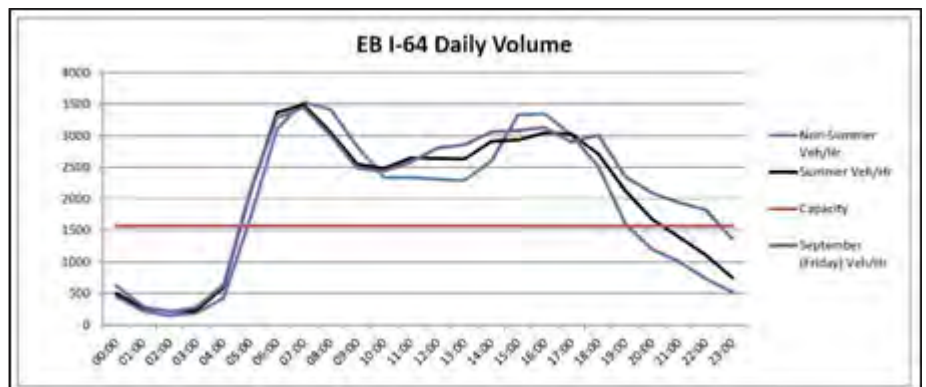


Figure 4.5.2.6 – Traffic Volumes for Lane Closure Optimization

projects on I-64, and nearby residences / businesses highlight the need for enhanced public communications during construction. For through traffic notification of work zone traffic conditions, including lane restrictions and new travel patterns, is critical to maximize safety. For local traffic utilizing intersecting streets and roadways, thorough advance communications for lane shifts and changes to access points are essential.

Our Team recognizes that proactive communication with all stakeholders is essential to a successful TMP implementation. As with any large-scale improvement project, some inconvenience is unavoidable, but our Team’s goal is to minimize these inconveniences to the greatest extent possible. VDOT has already engaged in a public involvement process by hosting a public hearing for the Project. Our Team commits to continuing the robust public involvement that VDOT has started during final design, ROW acquisition, and all construction phases of the Project. As detailed in Table 4.5.2.1, we have identified the Project’s stakeholders, determined how they will be impacted, and devised targeted communication and mitigation strategies to reduce these impacts.

Table 4.5.2.1 - Stakeholder Communication and Mitigation Strategies

Stakeholders	Impacts	Communication/Mitigation Strategies
Traveling Public	<ul style="list-style-type: none"> Potential time travel delays. Potential safety impacts due to exposure to construction vehicle traffic 	<ul style="list-style-type: none"> Conduct “Pardon Our Dust” meetings for the general public, public safety officials, and other stakeholders throughout design and construction. Utilize PCMS devices for public notices. Establish a robust public outreach program in accordance with Part 2, Section 2.11.1 of the RFP
City of Norfolk, HRTAC, FHWA, US Navy, Railroads (Norfolk Southern)	<ul style="list-style-type: none"> Coordination among various agencies. 	<ul style="list-style-type: none"> Operate as a liaison between VDOT and City of Norfolk to ensure compliance with local ordinances. Utilize our Traffic Management Task Force to coordinate construction activities and keep agencies informed.
Local Businesses, Community Representatives, and the Media	<ul style="list-style-type: none"> Overlapping jurisdictional boundaries can lead to conflicting ordinances. 	<ul style="list-style-type: none"> Utilize PCMS devices for public notices. Robust outreach campaign in accordance with Part 2, Section 2.11.1 of the RFP.
Schools and Local Colleges / Universities	<ul style="list-style-type: none"> Constituent questions and inquiries. Potential confusion about access points during and after construction of the Project. 	<ul style="list-style-type: none"> Direct coordination of construction activities with school staff. Advance notification of traffic pattern changes to local School Transportation Staff
Virginia State Police, City of Norfolk Fire & Rescue, and other emergency responders	<ul style="list-style-type: none"> Potential delays for emergency response times. 	<ul style="list-style-type: none"> Advance notification of temporary lane closures as well as changes to traffic patterns and ingress/egress points. Pre-switch emergency responder meetings for response planning. 24/7 Emergency Contact Information
Hampton Roads Transit (local buses)	<ul style="list-style-type: none"> Potential changes and delays to bus routes, stops, and transit time. 	<ul style="list-style-type: none"> Advance coordination of traffic pattern changes and short-term closures with Hampton Roads Transit staff. Display information on social media and at bus stops to alert riders of upcoming service changes.
HRBT Expansion Project, HREL Segment 1B, and other adjacent projects	<ul style="list-style-type: none"> Possible conflicting construction and traffic operations 	<ul style="list-style-type: none"> Utilization of the Traffic Management Task Force to coordinate construction activities and avoid conflicts. Seamless integration of construction activities across multiple projects. Coordinate public outreach to deliver a uniform, consistent message to drivers along I-64.

4.6: Proposal Schedule

4.6.1 - Proposal Schedule

The AWC Team’s Proposal Schedule is provided in our Volume II - Conceptual Project Plans.

4.6.2 - Proposal Schedule Narrative

We have carefully reviewed the Project’s schedule requirements and understand the complexities and interrelationships of the technical elements of the Project. As evidenced in our attached Proposal Schedule, we have taken into account internal and external plan reviews that are critical to a design build success, permitting constraints, right-of-way acquisition, utility relocations, design and construction integration, maintenance of traffic constraints, and QA/QC inspection and testing hold points. Our Maintenance of Traffic plan has been optimized to deliver the Project on schedule while minimizing impacts to the traveling public, thus providing for worker and motorist safety. A summary of the Contract and Schedule Milestones are shown in Table 4.6.2.1 below:

Table 4.6.2.1 - Summary of Contractual and Schedule Milestones

Contractual & Schedule Milestones	Contractual	Projected
Notice of Intent to Award	9/23/2022	9/23/2022
CTB Approval / Notice to Award	10/26/2022	10/26/2022
Design-Build Contract Execution	11/18/2022	11/18/2022
Notice to Proceed	11/19/2022	11/19/2022
Scope Validation Period (120 Days)	11/19/2022	3/18/2023
Final Completion	12/15/2025	12/15/2025

Work Breakdown Structure

We have organized the CPM Schedule into a hierarchical Work Breakdown Structure (WBS) in order to properly demonstrate the relationship and integration between the Contractual and schedule Milestones, Design, Procurement, Utilities, Construction, and Testing & Closeout. All Level 1 tasks are highlighted below with a brief description. Selected Level 2 and Level 3 WBS details are also provided in the Construction structure below:

- A. Milestones: Consist of Contractual Milestones as well as the 120-day scope validation period.
- B. Design: Includes Design Phase, Environmental Permitting and Right of Way Acquisition headings
 - ◆ Design Phase – The Design Phase includes QA/QC design reviews, field surveys, geotechnical investigations, roadway design, noise analysis and noise barrier plans, early temporary traffic plans, right of way plans, lighting and electrical plans, , and bridge plans. Activities inside the design phase plans include VDOT and FHWA reviews and approvals.
 - ◆ Environmental Permitting – This phase includes construction permit process and approvals, the Joint Permit Process (Wetlands & Stream Waters), Threatened & Endangered Species. Hazardous Material and Environmental Site Assessments, and the LD-445 Land Disturbance Permit/ / Storm Water Management Permit. The Land Disturbance Permit includes the Early Traffic Control Plan Land Disturbance and the Overall Project Land Disturbance.
 - ◆ Right of Way Acquisition Phase – This phase includes Project Specific Right-of-Way Acquisition and Relocation plan and the Right-of-Way Acquisition Phase.
- C. Procurement and Submittals: Includes shop drawings and fabrication/delivery timeframes for major items such as storm drainage, steel girders, retaining walls, noise barrier posts and panels, and electrical items.
- D. Utility Relocations: Includes all activities for utility relocations for VDOT, City of Norfolk, Dominion, Cox, and VA Natural Gas.

E. Construction: Includes all aspects of roadway, drainage, barrier wall, and bridge construction and rehabilitation. This section of the schedule is further broken down in our WBS Structure by Stage, Area and Work Type as described in the list below to provide schedule certainty and on-time completion while also allowing our operations team to focus on most efficiently prosecuting the work safe .

Stage 1

It includes shoulder strengthening as needed in Areas 1 through 5. It also includes the temporary left turn at Tidewater Drive/Thole St in Area 2.

Stage 2

Area 1 includes roadwork on EB from Sta. 964+00 to 1025+00 & bridge widening to the outside at I-64 EB bridges over Granby St, I-564, and Little Creek Rd. It also includes ramp realignment at Patrol Rd, I-564 & Little Creek Rd & underpass roadwork at Granby St and Little Creek Rd.

Area 2 includes roadwork on EB from Sta. 1025+00 to 1085+50 & bridge widening to the median at I-64 EB Bridge over Tidewater Drive. It also includes ramp realignment at Tidewater Drive and underpass roadwork at Tidewater Drive.

Area 3 includes roadwork on WB from Sta. 3032+00 to 3082+00 & bridge widening to the outside at I-64 WB Bridge over Tidewater Drive. It also includes ramp realignment at Tidewater Drive.

Area 4 includes roadwork on WB from Sta. 2810+50 to 2860+00 & bridge deck overlay/rehabilitation to the outside at I-64 WB Bridge over Little Creek and Granby. It also includes ramp realignment on Granby St.

Area 5 includes barrier demo & roadwork along the I-64 Reversible Lanes from Sta. 6003+00 to 6060+00. It also includes roadwork on WB from Sta. 2860+00 to 3032+00 and ramp work for the WB ramp to Little Creek Rd.

Stage 2 Late

Area 1 includes bridge work in the middle of the I-64 EB bridge over Little Creek.

Area 2 - N/A

Area 3 includes road work on I-64 WB between Tidewater Loop A and Tidewater Ramp A.

Area 4 - N/A

Area 5 includes widening to the outside of the WB roadway from Sta. 2860+00 to 3032+00.

Stage 3

Area 1 includes roadwork on EB from Sta. 964+00 to Sta. 1025+00 as well as bridge deck overlay/rehabilitation to the median at the I-64 EB bridges over I-564 and Little Creek Rd. It also includes bridge deck overlay/rehabilitation in the middle of the I-64 EB bridge over Granby St.

Area 2 includes roadwork on EB from Sta. 1025+00 to 1085+50 & bridge deck overlay/rehabilitation in the middle of the I-64 EB bridge over Tidewater Drive.

Area 3 includes roadwork on WB from Sta. 3032+00 to 3082+00 & bridge deck overlay/rehabilitation in the middle of the I-64 WB bridge over Tidewater Drive.

Area 4 includes roadwork on WB from Sta. 2810+50 to 2860+00 & bridge deck overlay/rehabilitation in the middle of the I-64 WB bridges over Little Creek Rd and Granby St.

Area 5 includes roadwork along the I-64 Reversible Lanes from Sta. 6003+00 to 6060+00 and along I-64 WB from Sta. 2860+00 to 3032+00.

Stage 4

Area 1 includes roadwork on EB from Sta. 964+00 to 1025+00 & bridge deck overlay to the median at the I-64 EB bridge over Granby St.

Area 2 includes roadwork on EB from Sta. 1025+00 to 1085+50 & bridge deck overlay to the outside at the I-64 EB bridge over Tidewater Drive.

Area 3 includes roadwork on WB from Sta. 3032+00 to 3082+00 & bridge deck overlay to the median at the I-64 WB Bridge over Tidewater Drive.

Area 4 includes roadwork on WB from Sta. 2810+50 to 2860+00 & bridge deck overlay to the median at I-64 WB bridges over Little Creek Rd and Granby St.

Area 5 includes roadwork along the I-64 Reversible Lanes from Sta. 6003+00 to 6060+00, barrier construction, and bridge deck overlay/rehabilitation at I-64 Reversible Lane Bridge over I-564. It also includes roadwork along I-64 WB from Sta. 2860+00 to 3032+00.

F. Testing and Closeout: Includes final inspections, TMS Testing, and Punchlist. In addition to our schedule being comprehensive of all elements required on a design-build project, it also properly accounts for the ability to overlap activities, realizing the full benefit of design-build project deliver .

The table below is a complete outline of the WBS Structure for the Project.

Table 4.6.2.2 - WBS Structure for the Project

WBS Code	WBS Name
C00107840DB112	I-64 Hampton Roads Express Lanes (HREL) Segment 1A
C00107840DB112.1	Milestones
C00107840DB112.2	Design
C00107840DB112.2.2	Design Phase
C00107840DB112.2.2.1	Design QA/QC Plan
C00107840DB112.2.2.2	Field Surveys & Investigation Phase
C00107840DB112.2.2.3	Geotechnical Investigations
C00107840DB112.2.2.4	Roadway Design
C00107840DB112.2.2.5	Early Temporary Traffic Control Plans - Stage 1
C00107840DB112.2.2.6	Right-of-Way Plans
C00107840DB112.2.2.7	Lightning & Electrical Plans
C00107840DB112.2.2.12	Bridge Plans - I-64 EB over Granby (B655)
C00107840DB112.2.2.13	Bridge Plans - I-64 EB over I-564 (B656)
C00107840DB112.2.2.8	Bridge Plans - I-64 EB over Little Creek (B657)
C00107840DB112.2.2.9	Bridge Plans - I-64 EB over Tidewater (B653)
C00107840DB112.2.2.10	Bridge Plans - I-64 WB over Tidewater (B654)

WBS Code	WBS Name
C00107840DB112.2.2.15	Bridge Plans - I-64 WB over Granby (B629)
C00107840DB112.2.2.11	Bridge Plans - I-64 WB over Little Creek (B630)
C00107840DB112.2.2.16	Bridge Plans - I-64 Reversible Lanes over I-564 and Little Creek (B677)
C00107840DB112.2.2.14	Noise Analysis & Noise Barrier Plans
C00107840DB112.2.3	Environmental Permitting
C00107840DB112.2.3.6	Joint Permit Process (Wetlands & Streams Waters)
C00107840DB112.2.3.5	Threatened & Endangered Species
C00107840DB112.2.3.1	Hazardous Material and Environmental Site Assessments (ESAs)
C00107840DB112.2.3.2	LD-445 Land Disturbance Permit / Storm Water Management Permit
C00107840DB112.2.3.2.1	Early TTC Plan Land Disturbance (Stage 1)
C00107840DB112.2.3.2.2	Overall Project Land Disturbance
C00107840DB112.2.4	Right-of-Way Acquisition Phase
C00107840DB112.2.4.1	Project Specific Right-of-Way Acquisition & Relocation Plan
C00107840DB112.2.4.2	Right-of-Way Acquisitions (Assume 5 Parcels)
C00107840DB112.3	Procurement & Submittals
C00107840DB112.3.6	Storm Drain
C00107840DB112.3.4	Steel Beams
C00107840DB112.3.4.1	I-64 EB over Granby
C00107840DB112.3.4.2	I-64 EB over I-564
C00107840DB112.3.4.3	I-64 EB over Tidewater
C00107840DB112.3.4.4	I-64 EB over Little Creek
C00107840DB112.3.4.5	I-64 WB over Tidewater
C00107840DB112.3.5	Retaining Wall
C00107840DB112.3.2	Noise Barrier
C00107840DB112.3.2.1	Noise Barrier Posts
C00107840DB112.3.2.2	Noise Barrier Panels
C00107840DB112.3.1	Lighting
C00107840DB112.4	Utility Relocations
C00107840DB112.5	Construction
C00107840DB112.5.1	Stage 1
C00107840DB112.5.1.4	Stage 1 Area 1 - I-64 EB 964+50 to 1025+00 Shoulder Strengthening
C00107840DB112.5.1.1	Stage 1 Area 2 - I-64 EB 1025+00 to 1085+50 Shoulder Strengthening
C00107840DB112.5.1.2	Stage 1 Area 3 - I-64 WB 3032+00 to 3082+00 Shoulder Strengthening
C00107840DB112.5.1.3	Stage 1 Area 4 - I-64 WB 2810+50 to 2860+00 Shoulder Strengthening
C00107840DB112.5.1.5	Stage 1 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00 Shoulder Strengthening
C00107840DB112.5.3	Stage 2

WBS Code	WBS Name
C00107840DB112.5.3.1	Stage 2 Area 1 - I-64 EB 964+50 to 1025+00 - Widen to the Outside
C00107840DB112.5.3.1.2	Stage 2 Area 1 - I-64 EB Sta. 964+50 to 1025+00 - Roadway
C00107840DB112.5.3.1.2.1	Stage 2 Area 1 - Ramps
C00107840DB112.5.3.1.2.1.1	Stage 2 Area 1 - Patrol Ramp A
C00107840DB112.5.3.1.2.1.2	Stage 2 Area 1 - I-564 Ramp B
C00107840DB112.5.3.1.2.1.3	Stage 2 Area 1 - I-564 Ramp B
C00107840DB112.5.3.1.2.1.4	Stage 2 Area 1 - Little Creek Ramp B
C00107840DB112.5.3.1.8	Stage 2 Area 1 - I-64 EB Sta. 964+50 to 1025+00 - Structures
C00107840DB112.5.3.1.8.1	Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby
C00107840DB112.5.3.1.8.1.3	Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Substructure Repairs
C00107840DB112.5.3.1.8.1.1	Stage 2 Area 1 - Structures - I-64 EB Bridges over Granby - Substructure
C00107840DB112.5.3.1.8.1.1.1	Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Abutment A
C00107840DB112.5.3.1.8.1.1.2	Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Abutment B
C00107840DB112.5.3.1.8.1.1.3	Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Pier 1
C00107840DB112.5.3.1.8.1.1.4	Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Pier 2
C00107840DB112.5.3.1.8.1.1.5	Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Pier 3
C00107840DB112.5.3.1.8.1.2	Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Superstructure
C00107840DB112.5.3.1.8.2	Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564
C00107840DB112.5.3.1.8.2.3	Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Substructure Repairs
C00107840DB112.5.3.1.8.2.1	Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Substructure
C00107840DB112.5.3.1.8.2.1.1	Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Abutment A
C00107840DB112.5.3.1.8.2.1.2	Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Abutment B
C00107840DB112.5.3.1.8.2.1.3	Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Pier 1
C00107840DB112.5.3.1.8.2.1.4	Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Pier 2
C00107840DB112.5.3.1.8.2.1.5	Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Pier 3
C00107840DB112.5.3.1.8.2.2	Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Superstructure
C00107840DB112.5.3.1.8.3.1	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek
C00107840DB112.5.3.1.8.3.1.3	Stage 2 Area 1 - Structures - I-64 EB bridge over Little Creek - Substructure Repairs
C00107840DB112.5.3.1.8.3.1.4	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Substructures
C00107840DB112.5.3.1.8.3.1.4.1	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Abutment A
C00107840DB112.5.3.1.8.3.1.4.2	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Abutment B

WBS Code	WBS Name
C00107840DB112.5.3.1.8.3.1.4.3	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Pier 1
C00107840DB112.5.3.1.8.3.1.4.4	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Pier 2
C00107840DB112.5.3.1.8.3.1.4.5	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Pier 3
C00107840DB112.5.3.1.8.3.1.5	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Superstructure
C00107840DB112.5.3.1.8.3.2	Stage 2 Late Area 1 - Structures - I-64 EB Bridge over Little Creek
C00107840DB112.5.3.1.8.3.2.2	Stage 2 Late Area 1 - Structures - I-64 EB Bridge over Little Creek - Superstructure Repairs
C00107840DB112.5.3.2	Stage 2 Area 2 - I-64 EB 1025+00 to 1085+50
C00107840DB112.5.3.2.1	Stage 2 Area 2 - I-64 EB 1025+00 to 1085+50 - Roadway
C00107840DB112.5.3.2.1.1	Stage 2 Area 2 - I-64 EB 1025+00 to 1054+90 - Roadway - Widen to the Outside
C00107840DB112.5.3.2.1.2	Stage 2 Area 2 - I-64 EB 1057+00 to 1085+50 - Roadway - Widen to the Inside
C00107840DB112.5.3.2.1.3	Stage 2 Area 2 - Ramps
C00107840DB112.5.3.2.1.3.1	Stage 2 Area 2 - Tidewater Ramp D
C00107840DB112.5.3.2.2	Stage 2 Area 2 - I-64 EB 1025+00 to 1085+50 - Structures - Widen to the Inside
C00107840DB112.5.3.2.2.4	Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater
C00107840DB112.5.3.2.2.4.3	Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Substructure Repairs
C00107840DB112.5.3.2.2.4.1	Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Substructure
C00107840DB112.5.3.2.2.4.1.1	Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Abutment A
C00117840DB112.5.3.2.2.4.1.2	Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Abutment B
C00117840DB112.5.3.2.2.4.1.3	Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Pier 1
C00117840DB112.5.3.2.2.4.1.4	Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Pier 2
C00117840DB112.5.3.2.2.4.1.5	Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Pier 3
C00117840DB112.5.3.2.2.4.2	Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Superstructure
C00117840DB112.5.3.3	Stage 2 Area 3 - I-64 WB 3032+00 to 3082+00 - Widen to the Outside
C00117840DB112.5.3.3.1	Stage 2 Area 3 - I-64 WB 3032+00 to 3082+00 - Roadway
C00117840DB112.5.3.3.1.1	Stage 2 Area 3 - I-64 WB 3032+00 to 3082+00 - Roadway
C00117840DB112.5.3.3.1.2	Stage 2 Late Area 3 - I-64 WB between Tidewater Ramp A and Loop A
C00117840DB112.5.3.3.1.4	Stage 2 - Area 3 Ramps
C00117840DB112.5.3.3.1.4.1	Stage 2 - Area 3 Tidewater Ramp A
C00117840DB112.5.3.3.1.4.2	Stage 2 - Area 3 Tidewater Loop A
C00117840DB112.5.3.3.1.4.3	Stage 2 - Area 3 Tidewater Ramp B

WBS Code	WBS Name
C00117840DB112.5.3.3.1.4.4	Stage 2 - Area 3 Tidewater Ramp E
C00117840DB112.5.3.3.2	Stage 2 Area 3 - I-64 WB 3032+00 to 3082+00 - Structures
C00117840DB112.5.3.3.2.5	Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater
C00117840DB112.5.3.3.2.5.3	Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Substructure Repairs
C00117840DB112.5.3.3.2.5.1	Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Substructure
C00117840DB112.5.3.3.2.5.1.1	Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Abutment A
C00117840DB112.5.3.3.2.5.1.2	Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Abutment B
C00117840DB112.5.3.3.2.5.1.3	Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Pier 1
C00117840DB112.5.3.3.2.5.1.4	Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Pier 2
C00117840DB112.5.3.3.2.5.1.5	Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Pier 3
C00117840DB112.5.3.3.2.5.2	Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Superstructure
C00117840DB112.5.3.4	Stage 2 Area 4 - I-64 WB 2810+50 to 2860+00
C00117840DB112.5.3.4.1	Stage 2 Area 4 - I-64 WB 2810+50 to 2860+00 - Roadway
C00117840DB112.5.3.4.1.1	Stage 2 Area 4 - Ramps
C00117840DB112.5.3.4.1.1.5	Stage 2 Area 4 - Granby Ramp A
C00117840DB112.5.3.4.1.1.1	Stage 2 Area 4 - I-564 Ramp G
C00117840DB112.5.3.4.2	Stage 2 Area 4 - I-64 WB 2810+50 to 2860+00 - Structures
C00117840DB112.5.3.4.2.6	Stage 2 Area 4 - Structures - I-64 WB Bridge over Little Creek
C00117840DB112.5.3.4.2.6.2	Stage 2 Area 4 - Structures - I-64 WB Bridge over Little Creek - Superstructure Repairs
C00117840DB112.5.3.4.2.13	Stage 2 Area 4 - Structures - I-64 WB Bridge over Granby
C00117840DB112.5.3.4.2.13.2	Stage 2 Area 4 - Structures - I-64 WB Bridge over Granby - Superstructure Repairs
C00117840DB112.5.3.5	Stage 2 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00
C00117840DB112.5.3.5.1	Stage 2 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00 - Roadway
C00117840DB112.5.3.5.1.1	Stage 2 Area 5 - I-64 HOV 6003+00 to 6060+00 - Roadway
C00117840DB112.5.3.5.1.2	Stage 2 Late Area 5 - I-64 WB 2860+00 to 3032+00 - Roadway
C00117840DB112.5.3.5.1.2.5	Stage 2 Area 5 - Little Creek Ramp A
C00117840DB112.5.4	Stage 3
C00117840DB112.5.4.7	Stage 3 Area 1 - I-64 EB 964+50 to 1025+00
C00117840DB112.5.4.7.6	Stage 3 Area 1 - I-64 EB Sta. 1007+00 to 1025+00 Roadway (East of Little Creek only)
C00117840DB112.5.4.7.7	Stage 3 Area 1 - I-64 EB Sta. 964+50 to 1025+00 Structures
C00117840DB112.5.4.7.7.1	Stage 3 Area 1 - Structures - I-64 EB Bridge over Granby
C00117840DB112.5.4.7.7.1.1	Stage 3 Area 1 - Structures - I-64 EB Bridge over Granby Superstructure Repairs

WBS Code	WBS Name
C00117840DB112.5.4.7.7.2	Stage 3 Area 1- Structures - I-64 EB Bridge over I-564
C00117840DB112.5.4.7.7.2.1	Stage 3 Area 1- Structures - I-64 EB Bridge over I-564 Superstructure Repairs
C00117840DB112.5.4.7.7.3	Stage 3 Area 1- Structures - I-64 EB Bridge over Little Creek
C00117840DB112.5.4.7.7.3.1	Stage 3 Area 1- Structures - I-64 EB Bridge over Little Creek Superstructure Repairs
C00117840DB112.5.4.1	Stage 3 Area 2 - I-64 EB 1025+00 to 1085+50
C00117840DB112.5.4.1.1	Stage 3 Area 2 - I-64 EB 1025+00 to 1054+90 - Roadway - Widen to the Inside (west of Tidewater)
C00117840DB112.5.4.1.2	Stage 3 Area 2 - I-64 EB 1025+00 to 1085+50 - Structures
C00117840DB112.5.4.1.2.1	Stage 3 Area 2 Structures - I-64 EB Bridge over Tidewater - Superstructure Repairs
C00117840DB112.5.4.2	Stage 3 Area 3 - I-64 WB 3032+00 to 3082+00
C00117840DB112.5.4.2.1	Stage 3 Area 3 - I-64 WB 3032+00 to 3082+00 - Roadway - Inside East End to Tidewater Ramp E
C00117840DB112.5.4.2.2	Stage 3 Area 3 - I-64 WB 3032+00 to 3082+00 - Structures
C00117840DB112.5.4.2.2.1	Stage 3 Area 3 - Structures I-64 WB Bridge over Tidewater
C00117840DB112.5.4.2.2.1.1	Stage 3 Area 3 - Structures I-64 WB Bridge over Tidewater Superstructure Repairs
C00117840DB112.5.4.3	Stage 3 Area 4 - I-64 WB 2810+50 to 2860+00
C00117840DB112.5.4.3.2	Stage 3 Area 4 - I-64 WB 2810+50 to 2860+00 - Structures
C00117840DB112.5.4.3.2.6	Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek
C00117840DB112.5.4.3.2.6.2	Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek - Superstructure Repairs
C00117840DB112.5.4.3.2.13	Stage 3 Area 4- Structures - I-64 WB Bridge over Granby
C00117840DB112.5.4.3.2.13.2	Stage 3 Area 4 - Structures - I-64 WB Bridge over Granby - Superstructure Repairs
C00117840DB112.5.4.5	Stage 3 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00
C00117840DB112.5.4.5.1	Stage 3 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00 - Roadway
C00117840DB112.5.5	Stage 4
C00117840DB112.5.5.7	Stage 4 Area 1 - I-64 EB 964+50 to 1025+00
C00117840DB112.5.5.7.2	Stage 4 Area 1- I-64 EB Sta. 964+50 to 1025+00 Roadway
C00117840DB112.5.5.7.1	Stage 4 Area 1- I-64 EB Sta. 964+50 to 1025+00 Structures
C00117840DB112.5.5.1	Stage 4 Area 2 - I-64 EB 1025+00 to 1085+50
C00117840DB112.5.5.1.1	Stage 4 Area 2 - I-64 EB 1025+00 to 1085+50 Roadway
C00117840DB112.5.5.1.1.2	Stage 4 Area 2 - I-64 EB 1057+00 to 1090+90 - Roadway - Widen to the Outside
C00117840DB112.5.5.1.1.1	Stage 4 Area 2 - Tidewater Loop C
C00117840DB112.5.5.1.1.3	Stage 4 Area 2 - Tidewater Loop B
C00117840DB112.5.5.1.1.4	Stage 4 Area 2 - Tidewater Ramp C
C00117840DB112.5.5.1.2	Stage 4 Area 2 - I-64 EB 1025+00 to 1085+50 Structures

WBS Code	WBS Name
C00117840DB112.5.5.1.2.1	Stage 4 Area 2 Structures - I-64 EB Bridge over Tidewater - Superstructure Repairs
C00117840DB112.5.5.2	Stage 4 Area 3 - I-64 WB 3032+00 to 3082+00
C00117840DB112.5.5.2.1	Stage 4 Area 3 - I-64 WB 3032+00 to Tidewater Ramp E - Roadway
C00117840DB112.5.5.2.2	Stage 4 Area 3 - I-64 WB 3032+00 to 3082+00 - Structures
C00117840DB112.5.5.3	Stage 4 Area 4 - I-64 WB 2810+50 to 2860+00
C00117840DB112.5.5.3.1	Stage 4 Area 4 - I-64 WB 2810+50 to 2860+00 - Roadway
C00117840DB112.5.5.3.2	Stage 4 Area 4 - I-64 WB 2810+50 to 2860+00 - Structures
C00117840DB112.5.5.3.2.6	Stage 4 Area 4 - Structures - I-64 WB Bridge over Little Creek
C00117840DB112.5.5.3.2.6.2	Stage 4 Area 4 - Structures - I-64 WB Bridge over Little Creek - Superstructure Repairs
C00117840DB112.5.5.3.2.13	Stage 4 Area 4- Structures - I-64 WB Bridge over Granby
C00117840DB112.5.5.3.2.13.2	Stage 4 Area 4 - Structures - I-64 WB Bridge over Granby - Superstructure Repairs
C00117840DB112.5.5.5	Stage 4 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00
C00117840DB112.5.5.5.1	Stage 4 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00 - Roadway
C00117840DB112.5.5.5.2	Stage 4 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6023+04.44 to 6031+23.51 - Structures - 21Day
C00117840DB112.5.5.5.2.2	Stage 4 Area 5 - Structures - I-64 HOV Bridge over Little Creek & I-564 - Superstructure Repairs
C00117840DB112.6	Testing & Closeout

The following provides a brief summary of how different phases of the Project will be sequenced to provide the greatest benefit to the schedule:

- Design:** Design will commence immediately upon Notice to Proceed. Preliminary design development will occur simultaneously with field surveys and environmental investigations. Field surveys will recover control used for the RFP conceptual plan development so that all new aerial mapping, field surveys, and investigations will align with design efforts already completed during the proposal development phase, eliminating any need to recreate design details. Design plans will be prepared in separate packages for roadway and bridge elements, and an advance temporary traffic control plan set will be prepared so that the Stage 1 construction can commence while final design of permanent roadway elements is being finalized. Following submission of approximately 60% roadway plans, all comments related to right-of-way acquisitions will be addressed to enable approval of right-of-way acquisition plans in advance of construction plan approval. This will facilitate right-of-way acquisition efforts being completed as early as possible.
- Public Involvement:** Public involvement will occur throughout both design and construction phases, and will include formal outreach efforts such as “Pardon our Dust” meetings as well as regular communication with VDOT, third party stakeholders, and property owners as the right-of-way acquisition phase is underway. Additionally, targeted public outreach efforts will be undertaken as part of the noise analysis and voting process to determine which noise barriers will be constructed.
- Environmental Permitting:** Environmental permitting efforts will begin during the design phase, with initial efforts including re-delineation and survey of wetlands and receiving concurrence on the Jurisdictional Determination (JD). As plans are further developed, impact quantities will be calculated

and the Joint Permit Application (JPA) will be prepared. Submission of the JPA will be made immediately following submission of approximately 60% roadway plans, at which time all major design elements will have been established. Since an Individual Permit is expected based on the amount of wetland and Waters of the US impacts, overlapping the permit approval process with final design efforts will allow us to obtain environmental permits in advance of when impacts need to occur during construction. Furthermore, an early Temporary Traffic Control Plan Land Disturbance Permit will allow the Construction Stage 1 to start while the final roadway design is being finalized.

4. **Right-of-Way Acquisitions:** As noted above, right-of-way acquisition plans will be finalized in advance of construction plan approval to facilitate overlapping acquisition and design phases. Once right-of-way plans are approved, acquisitions will be prioritized so that critical properties are obtained as soon as possible. The enhancements implemented by our Team allows our team to eliminate the fee simple right-of-way takes on parcels number 001 and 002 proposed with the RFP design.
5. **Utility Relocations:** Extensive efforts have been initiated to avoid utility relocations as much as possible, and these efforts have already enabled us to eliminate all utility easement acquisitions. With this effort, we will be able to coordinate with the utility companies early during the design phase to develop relocation plans and seek approval from VDOT for relocation efforts to commence prior to right-of-way and easements being acquired. This will help to shift the utility relocation efforts off the Project's critical path and moved facilities before major construction efforts (such as bridge widening) commence.
6. **Construction:** As the longest portion of a design-build project, all efforts have been and will continue to be made by our Team to begin construction as soon as possible. Separate development and early approval of the Advance Temporary Traffic Control (TTC) plans for Stage 1 construction will allow construction to begin while final design continues, as well as before right-of-way acquisitions have been initiated. As work on Stage 1 is being finalized, construction plans for the remainder of the improvements will be completed, allowing for a seamless transition from Stage 1 to Stage 2, when bridge widening will start.

Overall Geography & Sequencing

Our schedule mirrors the project segmentation discussed throughout the technical proposal. This segmented approach provides an ability to optimize our resources, provide "plan b" scenarios, and divides the project into more manageable pieces facilitating more accurate tracking and monitoring. Our Areas include:

- ◆ Area 1 – EB Sta. 964+50 to Sta. 1025+00
- ◆ Area 2 – EB Sta. 1025+00 to Sta. 1085+50
- ◆ Area 3 – WB Sta. 3032+00 to 3082+00
- ◆ Area 4 - WB Sta. 2810+50 to 2860+00
- ◆ Area 5 - WB Sta. 2860+00 to 3032+00 and Reversible Lanes Sta. 6003+00 to 6060+00

Critical Path

The longest path of the project begins with Field Surveys and the Investigation Phase followed by design activities for Roadway and the I-64 Eastbound Bridge over Little Creek Road. The longest path continues in Stage 2 Area 1 with the widening and superstructure rehabilitation of the I-64 Eastbound Bridge over Little Creek Rd. The longest path then proceeds in Stage 3 Area 1 through bridge superstructure rehabilitation activities for the three bridges in Area 1 (I-64 EB over Granby Street, I-564 and Little Creek Rd. The longest path then progresses in Area 1 Stage 4 with bridge superstructure rehabilitation activities of the I64 Bridge over Granby Street. The Longest path concludes with final punch list and closeout activities. AWC will closely monitor the critical path and near critical path utilizing the CPM and additional crews, if needed, will be added to maintain schedule certainty.

Calendars

Below is a description of the calendars used for the Project Schedule, including the following holidays:

- ◆ **I-64 HREL 1A 7-Day:** Based on seven days per week for activities that have durations based on calendar days instead of workdays. This calendar is assigned to activities such as VDOT 21 calendar day submittal reviews and project milestones.
- ◆ **I-64 HREL 1A 5-Day Holiday:** Based on five days per week with Saturdays, Sundays, New Year’s Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Eve Day, Christmas Day, and New Year’s Eve blocked out as non-workdays. This calendar is assigned to design, administrative, and procurement activities.
- ◆ **I-64 HREL 1A 5-Day Weather:** Based on five days per week with Saturdays, Sundays, and holidays blocked out as non-workdays. Additionally, monthly average number of anticipated inclement weather days are blocked out as non-workdays. These anticipated inclement weather days are shown in the Table below. This calendar is assigned to construction activities.

Table 4.6.2.3 - Anticipated inclement weather days

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8	8	6	6	6	4	5	5	5	6	6	6

- ◆ **I-64 HREL 1A 5-Day Paving:** Based on five days per week. Saturdays, Sundays, holidays, weather days, and December 15th through March 15th are blocked out as non-work days. This calendar is assigned to asphalt activities.
- ◆ **I-64 HREL 1A 5-Day TOY:** Based on five days per week. Saturdays, Sundays, holidays, weather days, and the time of year restriction period from April 1 to November 14 are blocked out as nonwork days. This calendar is assigned to construction activities that require the removal of trees greater than or equal to 3 inches diameter at breast height.

Key Schedule Assumptions

- ◆ Schedule is based on a NTP issued on or before November 19, 2022.
- ◆ Third Party Utility companies will coordinate, cooperate, and perform their work as shown in our Schedule.
- ◆ There are no hazardous materials, threatened or endangered species, or other environmental constraints not identified in the RF .
- ◆ Crews are primarily based on an 8-hour, five day per week schedule with weather and holidays accounted for in the Schedule as discussed above in the calendars section.
- ◆ Finish-Start relationships are used as much as possible to facilitate logical flow through the schedule.
- ◆ There are overlapping of certain activities such as earthwork and drainage within areas where multiple crews will be re-sourced. A second piling crew is used to allow overlapping of Support of Excavation and piling installation.
- ◆ Quantities and anticipated crew productivity have been input into most Schedule activities.

ATTACHMENT 4.2.1

DEPUTY KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Laurence Wadman, PE Senior Project Manager
b. Project Assignment: Deputy Design-Build Project Manager (DDBPM), Entrusted Engineer in Charge (EIC)
c. Name of the Firm with which you are employed at the time of submitting Technical Proposal: Archer Western Construction, LLC
d. Employment History: With this Firm <u>6</u> Years With Other Firms <u>39</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Archer Western Construction, 2015-Present. As Senior Project Manager, Mr. Wadman has corporate oversight responsibilities to deliver multiple projects (or a single larger project) to the expectations of his clients and the AWC ownership. He has direct responsibility for project staffing, schedule, budget, and cost control, subcontractor relations, and provides direction and coordination for Project Managers and other supervisory staff. TIC-The Industrial Company (a wholly owned subsidiary of Kiewit effective 2009) 1996-2015. As a Senior Construction Manager/Program Manager, Mr. Wadman has corporate oversight responsibilities to deliver multiple projects (or a single larger project) to the expectations of his clients and the company ownership. He has direct responsibility for project staffing, schedule, budget/cost control, subcontractor relations, and provides direction and coordination for Project Managers and other supervisory staff.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Delaware, Newark, DE–B.S. 1977 Civil Engineering
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1988/Professional Engineer/VA #0402018578
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none">1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects for which you have performed a similar function. On-call contracts with multiple task orders (on multiple projects) should not be listed as a single project. Hurricane Florence Milcon Pkg 4 (Bridges) Design-Build, Stella, North Carolina Role: Design-Build Coordinator Firm: Archer Western Construction, LLC Dates: 2020-2022 Specific Responsibilities: As the Design Build Coordinator, Larry was responsible for managing the design process and ensuring a well-integrated design in conformance with Contract Documents and specifications. Larry made engineering decisions on this complex, multi-discipline project and has also been responsible for temporary works design. Under Larry’s leadership the design was completed ahead of schedule. This Design-Build project will replace three bridges at MCB Camp LeJeune as part of the Hurricane Florence Recovery. Included in the work is the replacement of one existing 70-year-old swing bridge at Onslow Beach over the Intracoastal Waterway with a single-leaf bascule bridge and roadway approaches on a new alignment and replacement of two railroad trestle bridges on existing alignment; one trestle is 2,500 linear feet over the White Oak River; the other is 61 linear feet over Queens Creek. This project also includes an allotment for the replacement of timber ties and ballast along the entire 34-mile rail line between MCAS Cherry Point and MCB Camp LeJeune. <i>Similarities to I-64 Project: Design Build, bridge construction, asphalt, drainage, utility coordination and relocation, stormwater management, environmental considerations, stakeholder coordination.</i>

South Capital Street Corridor (Phase I), Washington, DC Role: Project Director

Firm: Archer Western Construction, LLC **Dates:** 2017-Present

Specific Responsibilities: As Project Director Larry was activity involved in the design process attending the weekly task force meetings during the design phase. Larry was also instrumental in identifying design concerns at the task force meetings and escalated the issues to senior DDOT personnel for resolution to minimize impact to the schedule. Larry worked with the project team to develop designs for pile driving, support of excavation, and steel erection.

Larry's involvement with the utility coordination (specifically PEPCO) resulted in a separate design-build project with Dewberry as the designer to install a new transmission duct bank through the South Cap Project.

The South Capitol Street Corridor PH 1 Project is a Design-Build Project that includes the replacement of the Frederick Douglas Memorial Bridge (FDMB) across the Anacostia River in DC. The new bridge will be located downstream of the existing bridge and consists of three steel arches with clear spans up to 492' and 168' high. The bridge is supported on two river piers with 60" steel pipe piles. Extensive approach work including 500' long ovals providing roadway connectivity to the FDMB. Coordination with several utility companies is required as extensive utility relocations are required. Roadway upgrades are also included between the east oval and 295. Three bridges are included in the rehabilitation of 1.5 miles of I-295. MOT is an extremely important part of the project with lane closure restrictions include normal rush hours and sporting events at the adjacent baseball and soccer stadiums.

Similarities to I-64 Project: Design Build, bridge construction, retaining walls, asphalt, drainage, utility coordination and relocation, stormwater management, environmental considerations, noise analysis, stakeholder coordination.

I-395 HOV Ramp at Seminary Rd. & NB Aux Lane (DB), Alexandria, VA Role: Design-Build Project Manager,

Firm: Archer Western Construction, LLC **Dates:** 2015-2016

Specific Responsibilities: Larry took over as the Design-Build Project Manager for the I-395 HOV Ramp at Seminary Road Project and was responsible for successfully bring the project to completion. Specific duties included:

- Risk Management and Mitigation strategies
- Managed public outreach and stakeholder coordination
- Supervised the design, permitting, and construction on the design-build project
- Coordinated with multiple stakeholders utilizing oral, written, and social media outlets to assure public and all stakeholders were informed
- Provided constructability reviews on design to minimize conflicts that could affect schedule
- Managed the project control and document control systems
- Managed labor and procured subcontractors and materials in time to meet a demanding schedule
- Managed the application of the project specific safety, environmental, and quality control plans

This design-build project includes constructing a new I-395 HOV Ramp to the existing Seminary Rd Bridge, replacing the superstructure of the Seminary Rd Bridge, constructing a new pedestrian bridge, widening, and rehabilitating the Sanger Ave Bridge, widening the I-395NB General Purpose Lanes, widening the Seminary Rd Off-Ramp, and widening the Duke St On-Ramp.

Similarities to I-64 Project: Design Build, bridge construction, asphalt, drainage, utility coordination and relocation, stormwater management, environmental considerations, safety oversight, and stakeholder coordination.

ATTACHMENT 4.2.1

DEPUTY KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.					
a. Name & Title: Zachary Malone, PE, Project Engineer					
b. Project Assignment: Lead Roadway Engineer/Deputy Design Manager					
c. Name of the Firm with which you are employed at the time of submitting RFP.: Dewberry Engineers Inc.					
d. Employment History: With this Firm <u>8</u> Years With Other Firms <u>0</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Dewberry Engineers Inc.; 2013-Present, Project Engineer: General responsibilities included setting horizontal and vertical roadway geometry, roadway plan development, drainage design, coordination with other roadway, drainage, stormwater management/water resources, structural, and environmental staff. During construction, responsibilities included reviewing shop drawings, submittals, and RFIs. <ul style="list-style-type: none">• Skiffes Creek Connector Design-Build (\$24.5M), 2/2020 to 10/2022 – Roadway and Drainage Engineer• I-64 Capacity Improvements – Segment III Design-Build (\$186M), 1/2018 to 12/2021 – Drainage Engineer• I-64 Capacity Improvements – Segment I Design-Build (\$101M), 3/2015 to 12/2017 – Roadway and Drainage Engineer					
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: George Mason University, Fairfax, VA / BS / 2013 / Civil, Environmental, and Infrastructure Engineering George Mason University, Fairfax, VA / MS / 2016 / Civil and Infrastructure Engineering					
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2016/Professional Engineer/Virginia #0402 058072					
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none">1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) <table border="0" style="width: 100%;"><tr><td style="width: 60%;">Skiffes Creek Connector (DB), (\$24.5M), James City County, VA</td><td>Role: Roadway and Drainage Engineer</td></tr><tr><td>Firm: Dewberry Engineers Inc.</td><td>Dates: 2/2020 – 10/2022</td></tr></table> <ul style="list-style-type: none">• Coordinate design elements with design staff• Responsible for the roadway design;• Responsible for the roadway drainage layout and design;• Responsible for erosion and sediment control layout and design;• Coordinated with subconsultants;• Provided construction support through RFI and submittal reviews <p>This project constructs 0.9 miles of a new two-lane roadway in James City County, including two new bridges, one of which was over Skiffes Creek that ultimately feeds the Skiffes Creek Reservoir. This Project also included the design of two new traffic signals, several MSE walls, multiple ground mounted signs, and multiple stormwater management facilities. Responsible for coordination of the roadway, drainage and stormwater management designs within a restrictively narrow environmental corridor. Zachary designed the vertical alignment of the connector roads to minimized embankment heights while maximizing stormwater treatment volumes adjacent to an environmentally sensitive area.</p> <p>Similarities to I-64 Project: <i>Design Build, bridge construction, retaining walls, asphalt, drainage, utility coordination and relocation, stormwater management, environmental considerations, noise analysis, stakeholder coordination.</i></p>		Skiffes Creek Connector (DB), (\$24.5M), James City County, VA	Role: Roadway and Drainage Engineer	Firm: Dewberry Engineers Inc.	Dates: 2/2020 – 10/2022
Skiffes Creek Connector (DB), (\$24.5M), James City County, VA	Role: Roadway and Drainage Engineer				
Firm: Dewberry Engineers Inc.	Dates: 2/2020 – 10/2022				

I-81 Widening MM 136.6 to 141.8 (DB), (\$179M) Salem, VA**Role:** Roadway and Drainage Engineer;**Firm:** Dewberry Engineers Inc.**Dates:** 5/2017 – 1/2022

- Developed and analyzed existing cross slopes for corrections;
- Responsible for the layout of and optimization of the vertical geometry;
- Coordinated roadway design with other design disciplines;
- Performed quality control drainage design review;
- Coordinated with subconsultants;

This project constructed 5.0 miles of one lane widening and resurfacing of the existing two lanes in each direction on I-81, including widening one set of bridges and complete replacement of three sets of bridges. Zachary was responsible optimizing pavement overlays within the limits of the contract required cross slope corrections and allowable longitudinal grades break. Additionally, he led the drainage design team and coordinated design elements between all design disciplines.

Similarities to I-64 Project: *Design Build, bridge construction, noise barriers, retaining walls, asphalt, drainage, utility coordination and relocation multi-phase TMP/MOT, stormwater management, environmental considerations, stakeholder coordination.*

I-64 Capacity Improvements – Segment I (DB), (\$101.4M) Newport News, VA**Role:** Roadway and Drainage Engineer**Firm:** Dewberry Engineers Inc.**Dates:** 3/2015 – 12/2017

- Responsible for roadway drainage design;
- Coordinate design elements with other disciplines;
- Performed quality control drainage design review;
- Provided construction support through RFI and submittal reviews.

This project consisted of the construction of 5.5 miles of one lane widening and resurfacing of the existing two lanes in each direction on I-64, including widening two sets of bridges and complete replacement of one set of bridges. Zachary was responsible for leading the drainage design team and for providing quality control design reviews. As part of an owner requested change order, he supported the design to strengthen the outside shoulders from Fort Eustis Boulevard to the eastern project limits to be used as a future managed lane. This change was designed, constructed, and delivered on time for the original completion date of December 1, 2017.

Similarities to I-64 Project: *Design Build, bridge construction, noise barriers, retaining walls, asphalt, drainage, utility coordination and relocation multi-phase TMP/MOT, stormwater management, environmental considerations, stakeholder coordination.*

* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **Not applicable for this position.**

ATTACHMENT 4.0.1.1

HREL Segment 1A

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	1
Identify the full legal name and address of Offeror	NA	Section 4.1.1	yes	1
Authorized representative's original signature	NA	Section 4.1.1	yes	1
Declaration of intent	NA	Section 4.1.2	yes	1
120 day declaration	NA	Section 4.1.3	yes	1
Point of Contact information	NA	Section 4.1.4	yes	1
Principal Officer information	NA	Section 4.1.5	yes	1
Final Completion Date	NA	Section 4.1.6	yes	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
Offeror's Qualifications	NA	Section 4.2		2

ATTACHMENT 4.0.1.1

HREL Segment 1A

TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
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	2
Organizational chart with any updates since the SOQ submittal clearly identified Including addition of the Environmental Compliance Manager and the Contractor Incident Management Coordinator	NA	Section 4.2.1	yes	2
Revised narrative when organizational chart includes updates since the SOQ submittal	NA	Section 4.2.1	yes	2
Design Concept	NA	Section 4.3		3
Conceptual Roadway Plans and description	NA	Section 4.3.1	yes	4
Conceptual Structural Plans and description	NA	Section 4.3.2	yes	12
Project Approach	NA	Section 4.4		17
Environmental Management	NA	Section 4.4.1	yes	17
Utilities	NA	Section 4.4.2	yes	20
Geotechnical	NA	Section 4.4.3	yes	26
Quality Assurance/ Quality Control (QA/QC)	NA	Section 4.4.4	yes	28
Construction of Project	NA	Section 4.5		38

ATTACHMENT 4.0.1.1

HREL Segment 1A

TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Sequence of Construction	NA	Section 4.5.1	yes	38
Transportation Management Plan	NA	Section 4.5.2	yes	55
Disadvantaged Business Enterprises (DBE)	NA	Section 4.1.10		
Written statement of percent DBE participation	NA	Section 4.1.10	yes	1
Proposal Schedule	NA	Section 4.6		
Proposal Schedule	NA	Section 4.6	no	Volume II
Proposal Schedule Narrative	NA	Section 4.6	no	S-1
Proposal Schedule in electronic format (CD-ROM)	NA	Section 4.6	no	N/A

ATTACHMENT 3.6.7
LIST OF APPROVED ATCs INCLUDED IN TECHNICAL PROPOSAL

OFFEROR:

List all approved ATCs included in the Technical Proposal along with the page number references from Technical Proposal.

ATC ID Number	ATC Name Description	Date ATC Approved	Technical Proposal Reference Page(s) #
02	I-64 EB over Tidewater Drive - Minimum Girder Depth Reduction	July 27, 2022	3-5, 8, 12, 14 Volume II

By signing this document, the Offeror hereby confirms that they are agreeing to all conditions that may have accompanied the ATC approval(s). The Offerors shall make a note of RFP Part 4 Section 2.1.10

“If the Contract Documents incorporate any ATCs and Design-Builder, for whatever reason: (a) does not comply with one or more Department conditions of pre-approval for the ATC; (b) does not obtain required third-party approval for the ATC; or (c) fails to implement the ATC, then Design-Builder shall: (1) provide written notice thereof to Department; and (2) comply with the requirements in the Contract Documents that would have applied in the absence of such ATC. Such compliance shall be without any increase in the Contract Price or extension to the Contract Time(s). For the avoidance of doubt, Design-Builder shall not be entitled to any increase in the Contract Price or extension of the Contract Time(s) as a result of any delay, inability or cost associated with the acquisition of any property that may be required to implement any ATC”.



[Signature: Offerors POC or Principal Officer]

EJ O'Neill

[Printed Name]

Vice President

[Title]

DATE: August 17, 2022

Attachment 3.7 Acknowledgment
of Receipt of RFP, Revisions, and/or
Addenda Form C-78-RFP

ATTACHMENT 3.76**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**RFP NO. C00117840DB112PROJECT NO.: 0064-122-470**ACKNOWLEDGEMENT OF RFP, REVISION AND/OR ADDENDA**

Acknowledgement shall be made of receipt of the Request for Proposals (RFP) and/or any and all revisions and/or addenda pertaining to the above designated project which are issued by the Department prior to the Letter of Submittal submission date shown herein. Failure to include this acknowledgement in the Letter of Submittal may result in the rejection of your proposal.

By signing this Attachment 3.76, the Offeror acknowledges receipt of the RFP and/or following revisions and/or addenda to the RFP for the above designated project which were issued under cover letter(s) of the date(s) shown hereon:

1. Cover letter of RFP – April 28, 2022
(Date)
2. Cover letter of Addendum #1- May 27, 2022
(Date)
3. Cover letter of Addendum #2- June 17, 2022
(Date)
4. Cover letter of Addendum #3- July 13, 2022
(Date)
5. Cover letter of Addendum #4- August 2, 2022
(Date)



SIGNATURE

August 17, 2022

DATE

EJ O'Neill

PRINTED NAME

Vice President

TITLE

Attachment 9.3.1 Proposal Payment Agreement Letter

ATTACHMENT 9.3.1
PROPOSAL PAYMENT AGREEMENT

THIS PROPOSAL PAYMENT AGREEMENT (this “Agreement”) is made and entered into as of this ____ day of _____, 2022, by and between the Virginia Department of Transportation (“VDOT”), and Archer Western Construction, LLC (“Offeror”).

WITNESSETH:

WHEREAS, Offeror is one of the entities who submitted Statements of Qualifications (“SOQs”) pursuant to VDOT’s January 20, 2022 (last addendum February 10, 2022) Request for Qualifications (“RFQ”) and was invited to submit proposals in response to a Request for Proposals (“RFP”) for the **I-64 Hampton Roads Express Lanes (HREL) Segment 1A, Project No. 0064-122-470** (“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:

1. **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 **One hundred and seventeen thousand dollars and 00/100 Dollars (\$117,000.00)** ("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. **Effective Date of this Agreement.** 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.

6. **Indemnity.** 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. **Assignment.** 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.

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.

VIRGINIA DEPARTMENT OF TRANSPORTATION

By: _____

Name: _____

Title: _____

Archer Western Construction, LLC

By:  _____

Name: EJ O'Neill

Title: Vice President

Attachment 11.8.6(a) Certification
Regarding Debarment; Primary Covered
Transactions

ATTACHMENT 11.8.6(a)
CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0064-122-470

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.

 August 17, 2022 Vice President
EJ O'Neill Date Title

Archer Western Construction, LLC
Name of Firm

Attachment 11.8.6(b) Certification
Regarding Debarment; Lower Tier
Covered Transactions


ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-122-470

- 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.

	8/16/22	Executive Vice President
Signature	Date	Title

Dewberry Engineers Inc.

Name of Firm

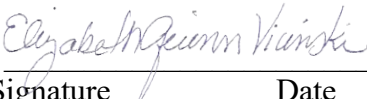
ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-122-470

- 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.

	7/28/2022	President
Signature	Date	Title

Quinn Consulting Services, Inc.
Name of Firm

ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-122-470

- 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.

<u>Justin M Haynes</u>	<u>8/11/22</u>	<u>Vice President</u>
Signature	Date	Title

Straughan Environmental, Inc.
Name of Firm

ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-122-470

- 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.

<small>DocuSigned by:</small> <i>Cathy F. Munson</i> <small>B830117A89C54AD...</small>	08-03-2022	Vice President, General Counsel & Secretary
Signature	Date	Title

Surveying And Mapping, LLC

Name of Firm

ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-122-470

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.

<u>James R. Wirt</u>	<u>8/2/22</u>	<u>VICE PRESIDENT</u>
Signature	Date	Title

ECS MID-ATLANTIC, LLC
Name of Firm

ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-122-470

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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

August 4, 2022

Date

Chief Executive Officer

Title

McCormick Taylor, Inc.

Name of Firm

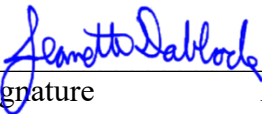
ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-122-470

- 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.

	7/28/22	President
Signature	Date	Title

Diversified Property Services, Inc.

Name of Firm

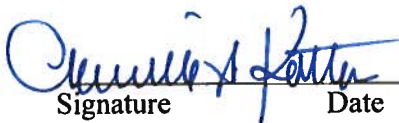
ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-122-470

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

August 15, 2022
Date

Senior Client Development
Manager
Title

GET Solutions, Inc., a Terracon Company
Name of Firm



www.walshgroup.com



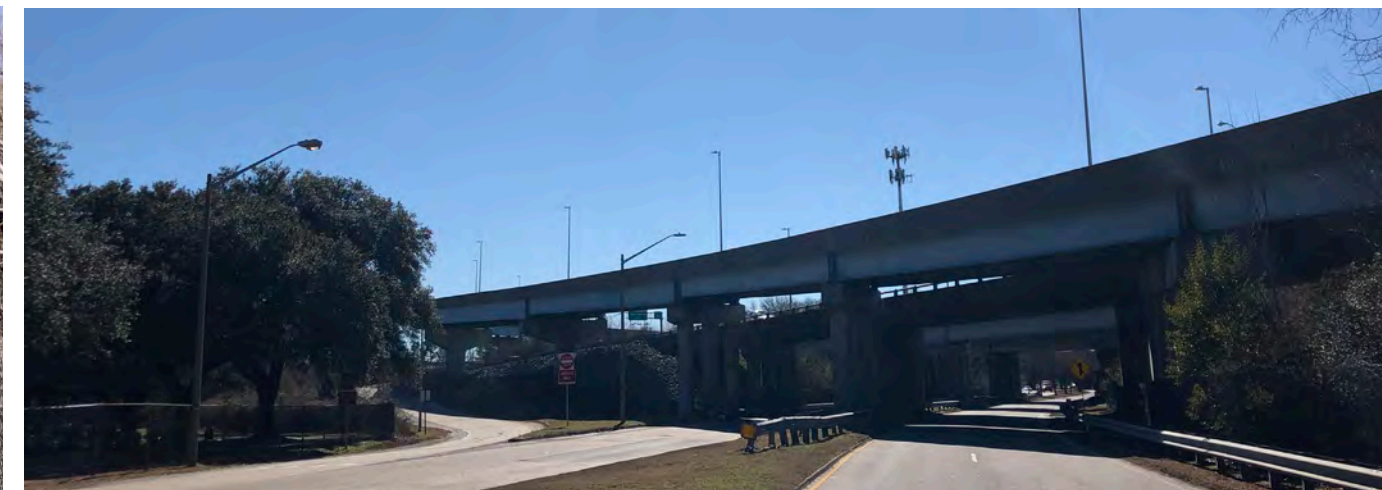
www.dewberry.com

I-64 HAMPTON ROADS EXPRESS LANES (HREL) SEGMENT 1A

City of Norfolk, Virginia

State Project No.: 0064-122-470
Federal Project No.: NHPP-064-3(520)
Contract ID No.: C00117840DB112

AUGUST 17, 2022



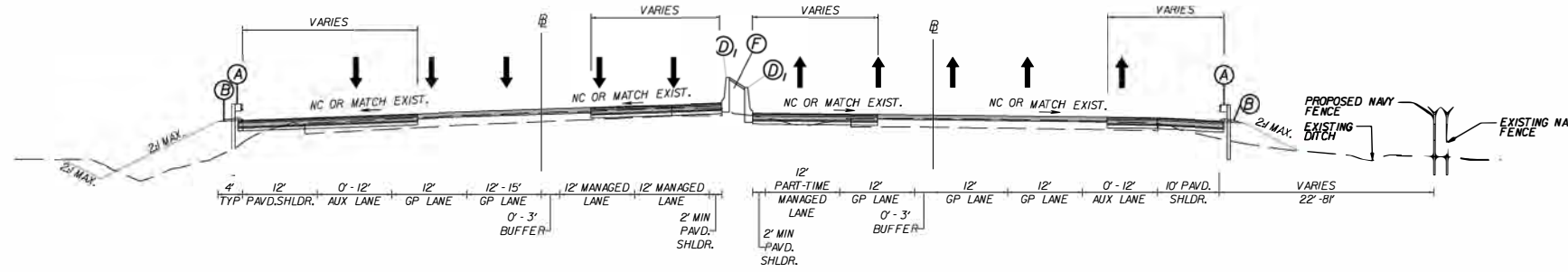
TYPICAL SECTIONS

NOTE: PAVEMENT WIDENING SHALL BE PERFORMED IN ACCORDANCE WITH ST'D.WP-2.

STATE	ROUTE	PROJECT	SHEET NO
VA.	64	0064-122-470	2A(1)



I-64 WB (GS-INT)

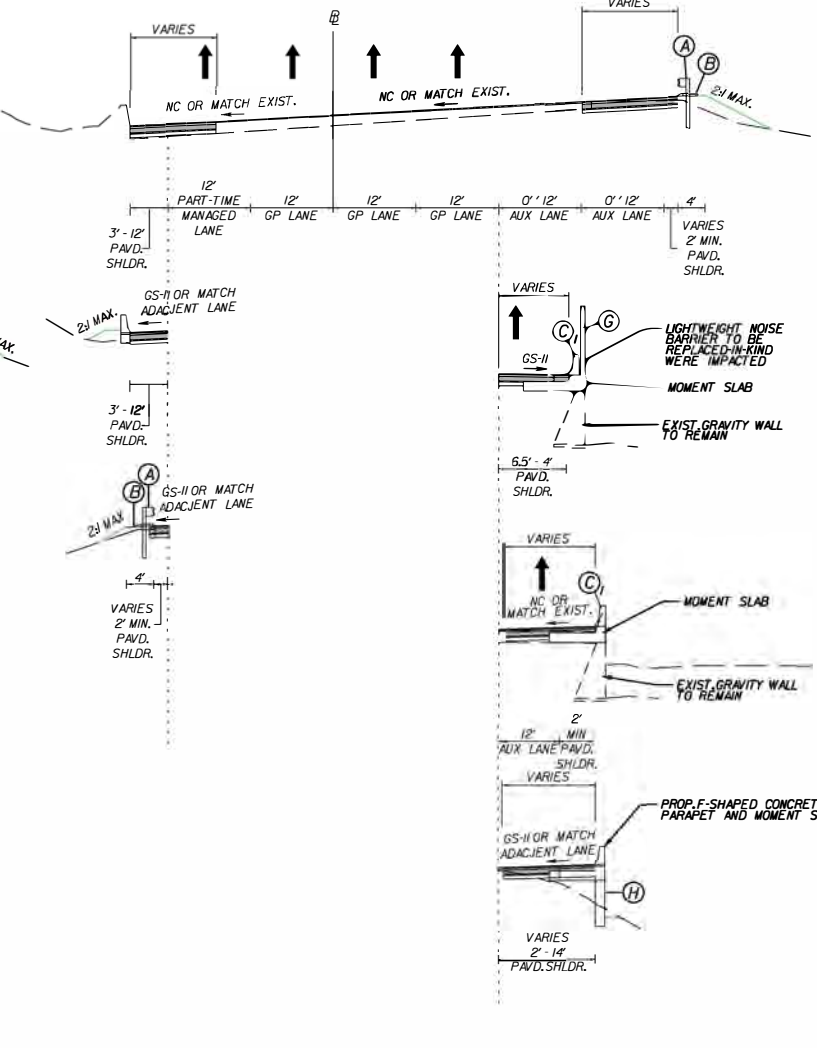
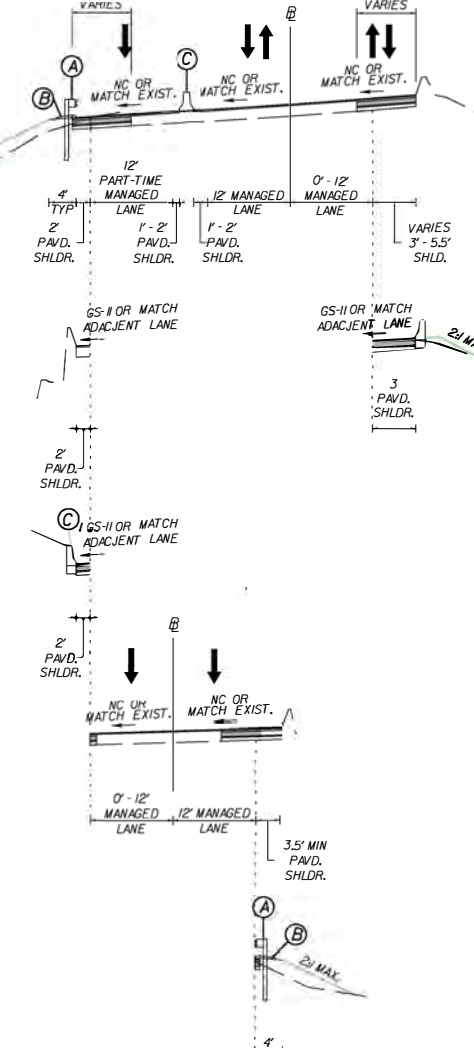
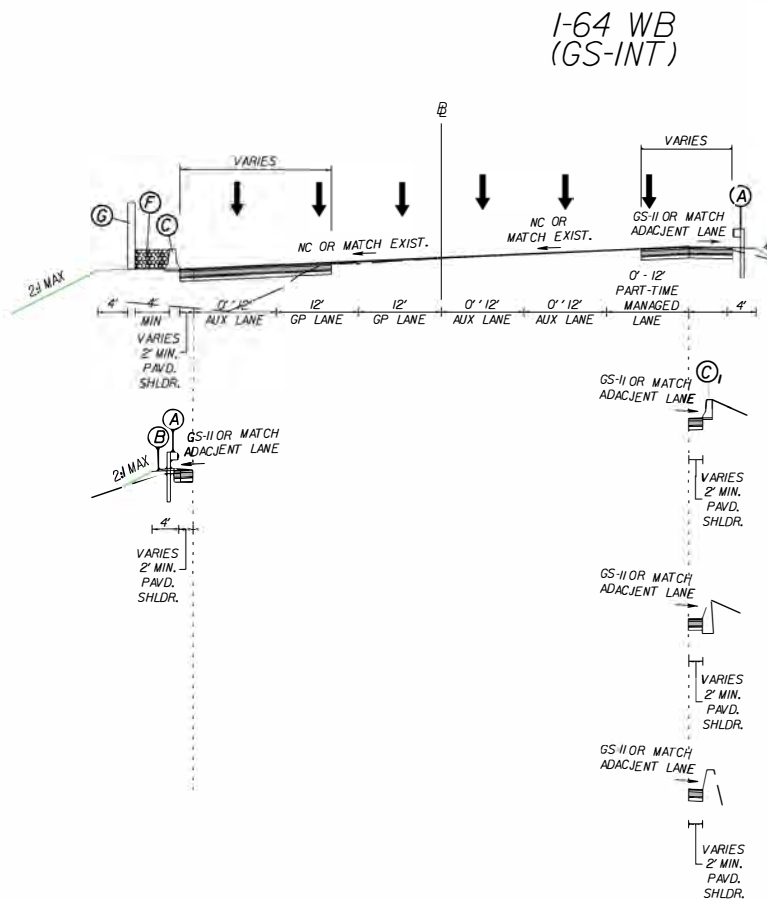


I-64 EB (GS-INT)

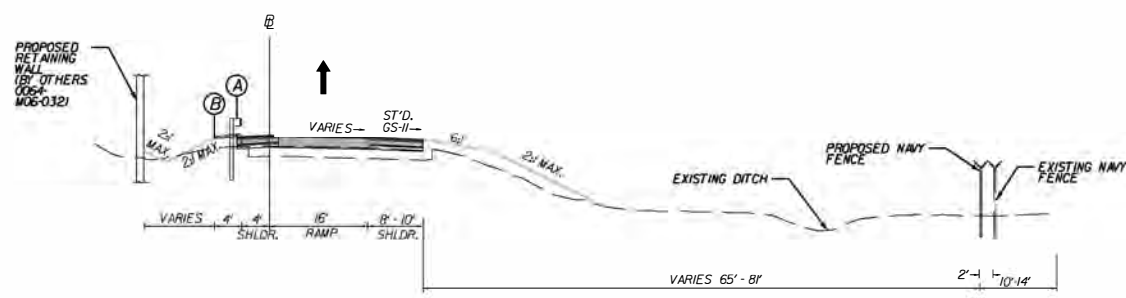
I-64 REVERSIBLE (GS-INT)

I-64 EB (GS-INT)

I-64 WB (GS-INT)

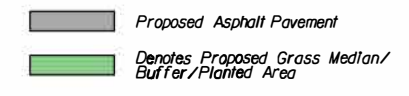


PATROL ROAD RAMP A (GS-R)



LEGEND

- (A) Potential S'd. GR-MGSI. See Plans for Locations
- (B) Potential S'd. MC-3B. See Plans for Locations
- (C) Proposed S'd. MB-7D Req'd.
- (D) Proposed S'd. MB-7F Req'd.
- (E) Proposed S'd. MB-12B Req'd.
- (F) Proposed S'd. MB-13 Req'd.
- (G) VDOT S'd. No. 7B Stone
- (H) Potential Retaining Wall

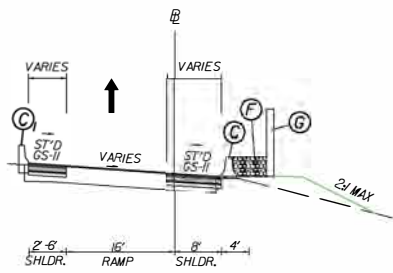


TYPICAL SECTIONS

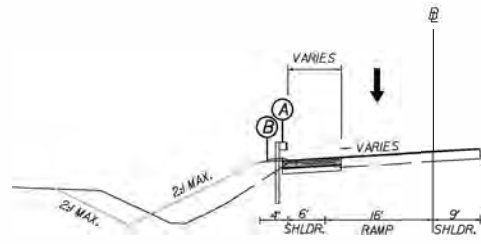
STATE	ROUTE	STATE	PROJECT	SHEET NO
VA.	64		0064-122-470	2A(2)



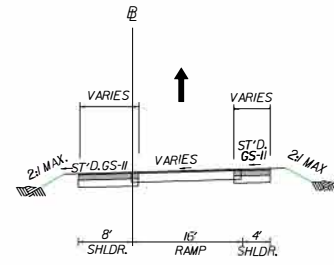
GRANBY RAMP A (GS-R)



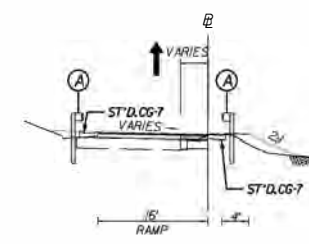
I-564 RAMP G (GS-R)



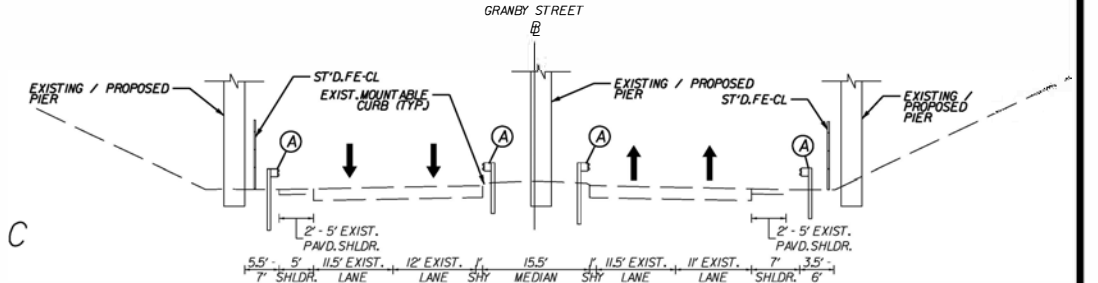
LITTLE CREEK RAMP A (GS-R)



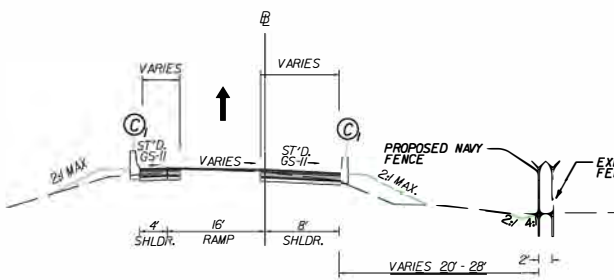
LITTLE CREEK RAMP B (GS-R)



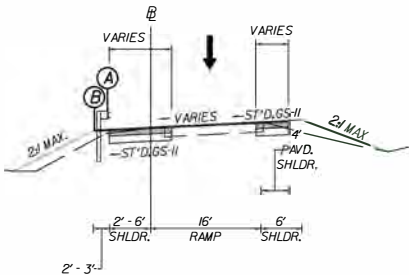
GRANBY STREET (GS-A)



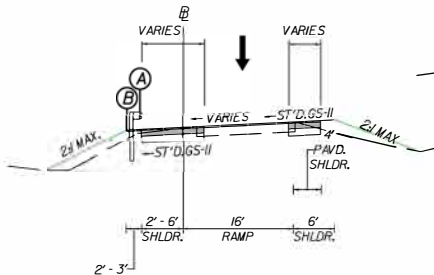
I-564 RAMP B (GS-R)



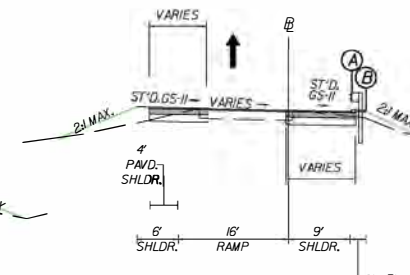
TIDEWATER RAMP A (GS-R)



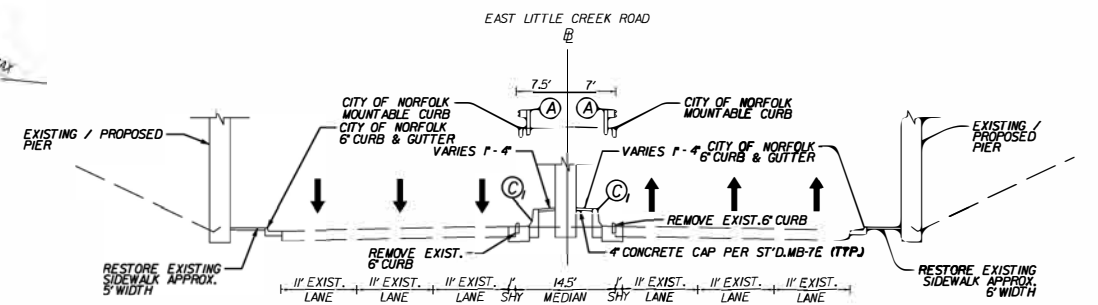
TIDEWATER RAMP B (GS-R)



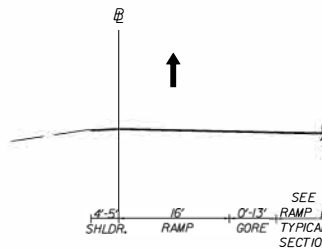
TIDEWATER RAMP C (GS-R)



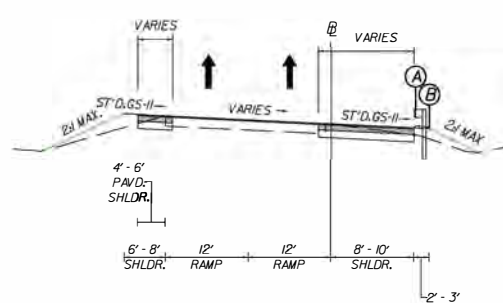
EAST LITTLE CREEK ROAD (GS-A)



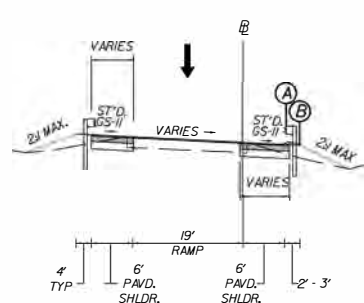
I-564 RAMP C (GS-R)



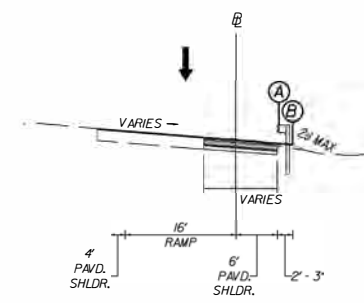
TIDEWATER RAMP D (GS-R)



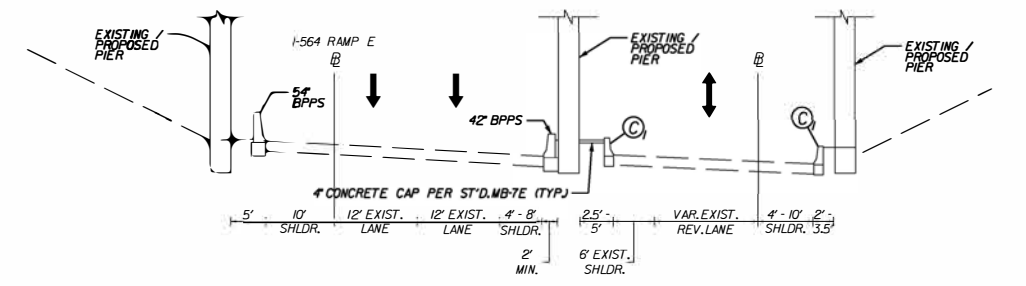
TIDEWATER RAMP E (GS-R)



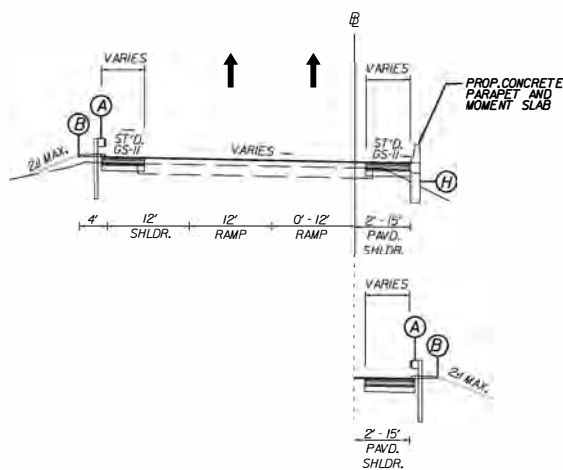
TIDEWATER LOOP A (GS-R)



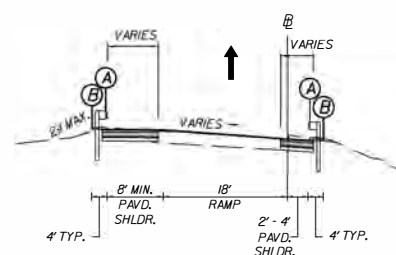
I-564 RAMP E (GS-R)



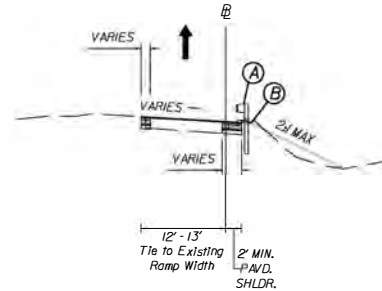
I-564 RAMP D (GS-R)



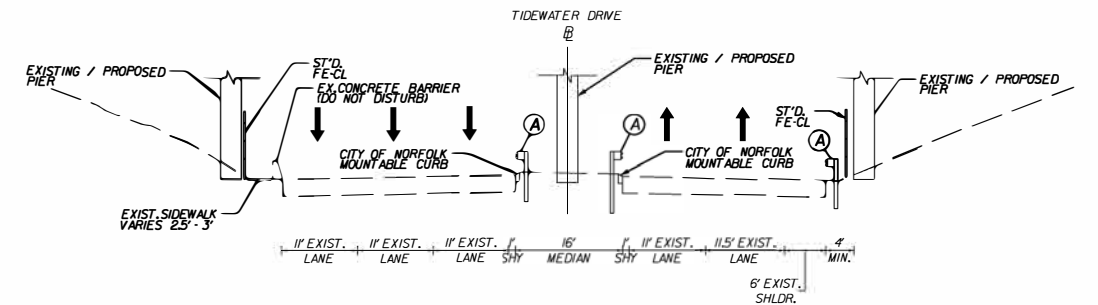
TIDEWATER LOOP B (GS-R)



TIDEWATER LOOP C (GS-R)

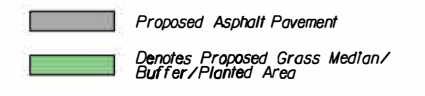


TIDEWATER DRIVE (GS-A)



LEGEND

- (A) Potential S'd.GR-MGSI. See Plans for Locations
- (B) Potential S'd.MC-3B. See Plans for Locations
- (C) Proposed S'd.MB-7D Req'd.
- (C) Proposed S'd.MB-7F Req'd.
- (D) Proposed S'd.MB-12A Req'd.
- (D) Proposed S'd.MB-12B Req'd.
- (E) Proposed S'd.MB-13 Req'd.
- (F) VDOT S'd.No. 7B Stone
- (G) Potential Noise Barrier
- (H) Potential Retaining Wall



NOT TO SCALE

PROJECT
0064-122-470

SHEET NO
2A(2)

CURVE DATA

STATE	ROUTE	STATE PROJECT	SHEET NO.
VA.	64	0064-122-470	2A(3)

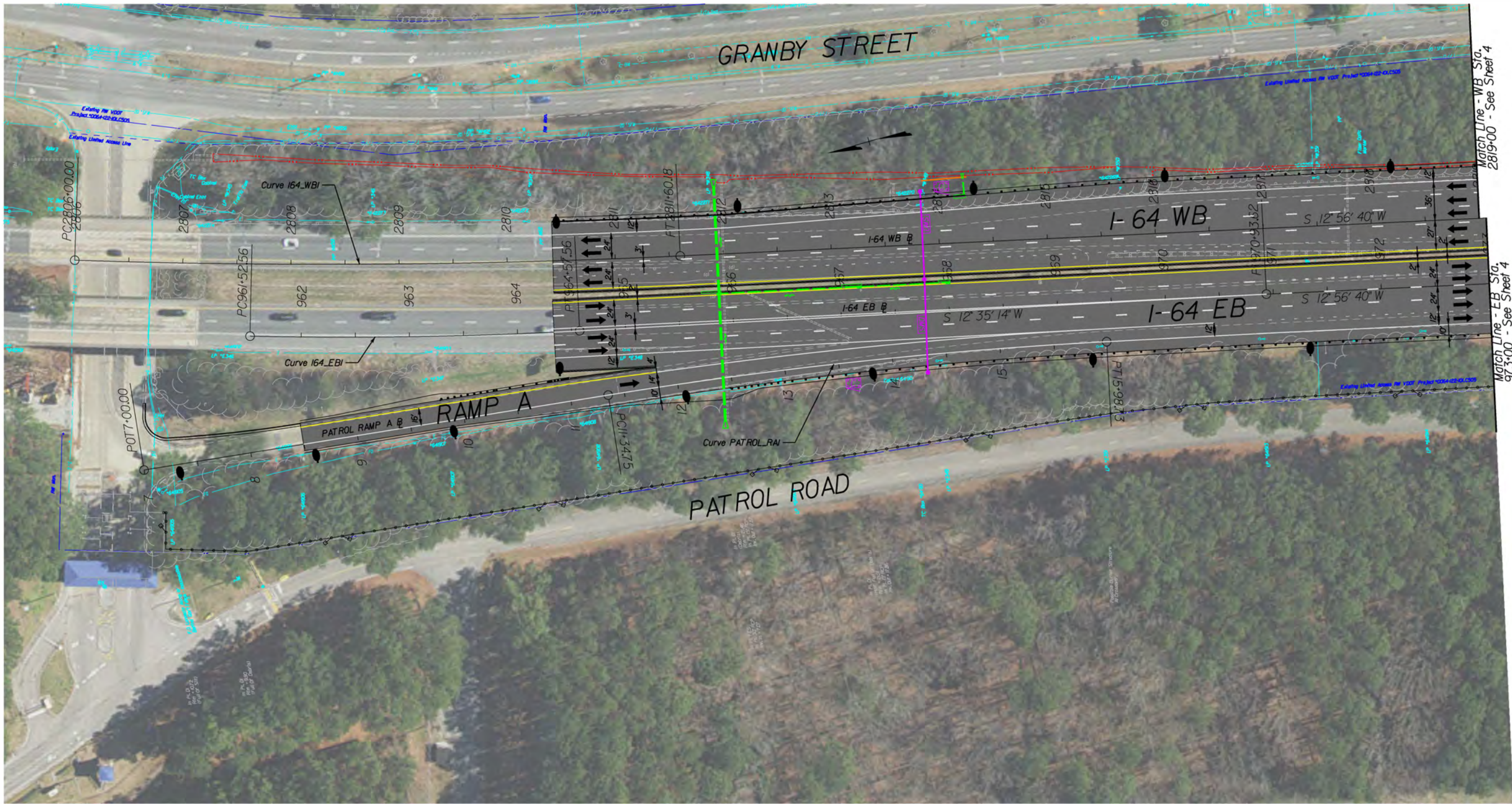


Curve No.	Location	Delta	Degree	Radius (Ft.)	Tangent (Ft.)	Length (Ft.)	E (Ft./Ft.)	V (mph)
EB64_01	PC Sta. 961+52.56 PI Sta. 963+05.13 Pt Sta. 964+57.56	415'19.42" (L.)	123°42'76"	4,066.6018	152.5701	305.0000	Ex. SE	60
EB64_02	PC Sta. 981+17.24 PI Sta. 991+60.79 Pt Sta. 1000+22.40	58'05"35.73" (L.)	3'02'57.37"	1,879.0000	1,043.5466	1,905.1531	Ex. SE	60
EB64_03	PC Sta. 1007+80.03 PI Sta. 1010+36.69 Pt Sta. 1012+93.32	128'13.71" (L.)	0'17"11.32"	20,000.0000	256.6603	513.2924	Ex. SE	60
EB64_04	PC Sta. 1012+93.32 PI Sta. 1017+65.06 Pt Sta. 1022+31.79	142'15.88" (R.)	132°24'75"	3,720.0000	471.7399	938.4706	Ex. SE	60
EB64_05	PC Sta. 1022+31.79 PI Sta. 1026+02.26 Pt Sta. 1029+72.49	33'158.98" (L.)	0'28'37.16"	12,011.9998	370.4675	740.7002	Ex. SE	60
EB64_06	PC Sta. 1029+72.49 PI Sta. 1034+03.50 PCC Sta. 1038+33.11	758'25.64" (L.)	0'55'35.46"	6,184.0002	431.0061	860.6204	Ex. SE	60
EB64_07	PC Sta. 1038+33.11 PI Sta. 1041+54.23 Pt Sta. 1044+75.19	3'11"32.27" (L.)	0'29'49.87"	11,523.9996	321.1191	642.0721	Ex. SE	60
EB64_08	PC Sta. 1057+57.04 PI Sta. 1059+30.33 Pt Sta. 1061+03.60	143'35.81" (R.)	0'29'53.61"	11,500.0000	173.2899	346.5536	Ex. SE	60
EB64_09	PC Sta. 1061+03.60 PI Sta. 1062+52.77 Pt Sta. 1064+01.45	8'05"52.44" (L.)	2'43'07.43"	2,107.4455	149.1763	297.8558	Ex. SE	60
EB64_10	PC Sta. 1064+01.45 PI Sta. 1074+05.53 Pt Sta. 1083+32.24	38'48"33.93" (L.)	2'00'36.11"	2,850.4920	1,004.0802	1,930.7871	Ex. SE	60
WB64_01	PCC Sta. 2806+00.00 PI Sta. 2808+80.24 Pt Sta. 2811+60.18	4'35"13.70" (L.)	0'49'07.90"	6,997.0000	280.2419	560.1844	Ex. SE	60
WB64_02	PC Sta. 2825+31.83 PI Sta. 2827+33.19 Pt Sta. 2829+32.58	13'53"39.98" (L.)	3'28'01.36"	1,652.5821	201.3664	400.7573	Ex. SE	60
WB64_03	PC Sta. 2829+32.58 PI Sta. 2832+12.88 Pt Sta. 2834+90.27	14'18"34.14" (L.)	2'33'57.12"	2,233.0000	280.3017	557.6864	Ex. SE	60
WB64_04	PC Sta. 2834+90.27 PI Sta. 2839+81.49 Pt Sta. 2844+49.91	30'09'49.47" (L.)	3'08'35.61"	1,822.8349	491.2199	959.6434	Ex. SE	60
WB64_05	PC Sta. 2852+80.57 PI Sta. 2854+74.52 Pt Sta. 2856+68.45	112'01.00" (R.)	0'18'34.03"	18,515.1129	193.9464	387.8786	Ex. SE	60
WB64_06	PC Sta. 2856+68.45 PI Sta. 2859+29.51 Pt Sta. 2861+89.95	6'47"42.44" (R.)	1'18'10.80"	4,397.2227	261.0554	521.4986	Ex. SE	60
WB64_07	PC Sta. 2861+89.95 PI Sta. 2863+66.32 Pt Sta. 2865+42.26	6'55"55.10" (R.)	1'58'03.27"	2,912.0005	176.3705	352.3105	Ex. SE	60
WB64_08	PC Sta. 2868+54.75 PI Sta. 2880+92.27 Pt Sta. 2893+00.42	21'35"51.98" (L.)	0'52'59.17"	6,488.0000	1,237.5215	2,445.6661	Ex. SE	60
WB64_09	PC Sta. 2893+00.42 PI Sta. 2895+24.74 Pt Sta. 2897+49.00	2'08"22.91" (R.)	0'28'37.16"	12,012.0000	224.3188	448.5855	Ex. SE	60
WB64_10	PC Sta. 2910+33.71 PI Sta. 2919+01.65 Pt Sta. 2926+91.46	41'54"58.40" (L.)	2'31'42.60"	2,266.0000	867.9356	1,657.7514	Ex. SE	60
Reverse64_01	PC Sta. 6002+97.94 PI Sta. 6006+76.86 Pt Sta. 6010+50.06	17'14"14.38" (L.)	2'17"30.59"	2,500.0000	378.9225	752.1203	Ex. SE	70
Reverse64_02	PC Sta. 6010+50.06 PI Sta. 6012+56.95 Pt Sta. 6014+62.31	12'03"26.38" (L.)	2'55'29.09"	1,959.0000	206.8901	412.2521	Ex. SE	70

Curve No.	Location	Delta	Degree	Radius (Ft.)	Tangent (Ft.)	Length (Ft.)	E (Ft./Ft.)	V (mph)
Reverse64_03	PC Sta. 6014+62.31 PI Sta. 6017+86.67 Pt Sta. 6021+02.74	22'24"55.33" (L.)	3'30'00.17"	1,637.0000	324.3629	640.4305	Ex. SE	70
Reverse64_04	PC Sta. 6021+02.74 PI Sta. 6022+01.20 Pt Sta. 6022+99.43	6'53"03.22" (L.)	3'30'00.17"	1,636.9999	98.4633	196.6896	Ex. SE	70
Reverse64_05	PC Sta. 6036+17.93 PI Sta. 6040+67.48 Pt Sta. 6045+11.01	16'14"39.19" (R.)	149'08.09"	3,150.0000	449.5516	893.0726	Ex. SE	70
Reverse64_06	PC Sta. 6045+11.01 PI Sta. 6046+28.86 Pt Sta. 6047+46.69	2'27"52.57" (L.)	1'02'44.64"	5,479.0068	117.8591	235.6818	Ex. SE	70
Reverse64_07	PC Sta. 6048+38.51 PI Sta. 6050+59.63 Pt Sta. 6052+80.63	3'22"57.69" (L.)	0'45'54.43"	7,488.4745	221.2107	442.1130	Ex. SE	70
Reverse64_08	PC Sta. 6052+80.63 PI Sta. 6056+41.74 Pt Sta. 6060+01.94	7'01'48.89" (L.)	0'58'28.71"	5,878.6428	361.1107	721.3152	Ex. SE	70
Reverse64_09	PC Sta. 6060+01.94 PI Sta. 6063+20.29 Pt Sta. 6066+38.22	5'06"25.13" (L.)	0'48'09.46"	7,138.5159	318.3517	636.2817	Ex. SE	70
564_RAMP_B01	PC Sta. 14+53.00 PI Sta. 16+52.16 Pt Sta. 18+51.19	3'29'18.59" (L.)	0'52'33.90"	6,540.0000	199.1580	398.1929	NC	50
564_RAMP_B02	PC Sta. 18+51.19 PI Sta. 18+95.46 Pt Sta. 19+39.71	2'40"09.70" (L.)	3'00'56.04"	1,900.0000	44.2677	88.5193	2.3%	50
564_RAMP_B03	PC Sta. 22+72.72 PI Sta. 25+63.26 Pt Sta. 28+10.61	53'42"32.37" (R.)	9'59'06.56"	573.8096	290.5375	537.8885	3.7%	35
564_RAMP_D01	PC Sta. 10+00.00 PI Sta. 14+50.57 Pt Sta. 18+80.06	30'17"03.93" (L.)	3'26'28.28"	1,665.0000	450.5677	880.0573	3.5%	50
564_RAMP_G01	PC Sta. 10+00.00 PI Sta. 11+99.03 Pt Sta. 13+95.82	14'53"07.49" (L.)	3'45'38.31"	1,523.5640	199.0313	395.8211	2.5%	47
564_RAMP_G02	PC Sta. 13+95.82 PI Sta. 15+27.03 Pt Sta. 16+58.14	3'55"05.35" (L.)	1'29'37.08"	3,836.0000	131.2129	262.3236	NC	35
564_RAMP_G03	PC Sta. 16+58.14 PI Sta. 18+88.74 Pt Sta. 21+17.28	13'15"54.09" (L.)	2'53'20.97"	1,983.1302	230.5965	459.1311	2.3%	35
EB_SLIP_RAMP	PC Sta. 10+00.00 PI Sta. 13+39.98 Pt Sta. 16+65.12	29'16"08.97" (L.)	4'24'02.15"	1,302.0000	339.9848	665.1178	2.7%	35
GRANBY_RA01	PC Sta. 10+00.00 PI Sta. 11+48.43 Pt Sta. 12+94.66	17'03"54.93" (R.)	5'47'29.38"	989.3090	148.4293	294.6607	3.0%	35
GRANBY_RA02	PC Sta. 12+94.66 PI Sta. 15+18.89 Pt Sta. 17+41.98	9'57"26.70" (R.)	2'13'33.64"	2,573.9209	224.2251	447.3210	2.0%	35
GRANBY_RA03	PC Sta. 17+41.98 PI Sta. 18+09.86 Pt Sta. 18+76.09	21'51"29.40" (R.)	16'17'55.33"	351.5359	67.8802	134.1099	4.0%	45
LC_RA01	PC Sta. 10+00.00 PI Sta. 11+73.00 Pt Sta. 13+45.67	6'11"21.14" (R.)	147'25.78"	3,200.0000	173.0035	345.6704	Ex. SE (2%)	35
LC_RB01	PC Sta. 10+00.00 PI Sta. 12+05.56 Pt Sta. 14+10.01	10'16"18.80" (L.)	2'30'19.01"	2,287.0000	205.5556	410.0094	2.4%	30
LC_RB02	PC Sta. 19+07.47 PI Sta. 19+57.35 Pt Sta. 20+07.23	10'16"18.80" (L.)	2'30'19.01"	2,287.0000	205.5556	410.0094	2.4%	60
PATROL_RA01	PC Sta. 11+34.75 PI Sta. 13+66.96 Pt Sta. 15+98.73	6'06"40.80" (R.)	119'01.72"	4,350.0000	232.2119	463.9835	NC	40

Curve No.	Location	Delta	Degree	Radius (Ft.)	Tangent (Ft.)	Length (Ft.)	E (Ft./Ft.)	V (mph)
TIDEWATER_LA01	PC Sta. 10+00.00 PI Sta. 11+28.57 Pt Sta. 12+57.13	113'22.15" (L.)	0'28'32.03"	12,048.0000	128.5704	257.1310	NC	25
TIDEWATER_LA02	PC Sta. 12+57.13 PI Sta. 13+24.09 Pt Sta. 13+86.77	35'22"10.03" (R.)	27'17"01.34"	210.0000	66.9579	129.6358	3.8%	25
TIDEWATER_LA03	PC Sta. 13+86.77 PI Sta. 15+85.70 Pt Sta. 16+65.95	105'14"10.32" (R.)	37'41'40.53"	152.0000	198.9380	279.812	4.0%	25
TIDEWATER_LB01	PC Sta. 10+00.00 PI Sta. 11+48.12 Pt Sta. 12+96.22	128'49.68" (R.)	0'29'59.24"	11,464.0000	148.1175	296.2185	NC	25
TIDEWATER_LB02	PC Sta. 12+96.22 PI Sta. 14+24.09 Pt Sta. 15+37.96	46'10"11.69" (R.)	19'05'54.94"	300.0000	127.8678	241.7451	3.4%	25
TIDEWATER_LB03	PC Sta. 15+37.96 PI Sta. 15+56.50 Pt Sta. 15+74.85	14'05"27.59" (R.)	38'11'49.87"	150.0000	18.5386	36.8901	4.0%	20
TIDEWATER_LB04	PC Sta. 15+74.85 PI Sta. 16+02.52 Pt Sta. 16+29.68	19'06"30.39" (R.)	34'51'08.41"	164.3958	27.6704	54.8269	4.0%	20
TIDEWATER_LC01	PC Sta. 10+68.96 PI Sta. 11+10.80 Pt Sta. 11+51.10	26'53"43.32" (L.)	32'44'25.60"	175.0000	41.8448	82.1472	4.0%	25
TIDEWATER_LC02	PC Sta. 11+51.10 PI Sta. 11+80.22 Pt Sta. 12+09.02	14'50"32.67" (L.)	25'37'41.82"	223.5646	29.1201	57.9142	3.8%	25
TIDEWATER_RA01	PC Sta. 10+00.00 PI Sta. 10+90.04 Pt Sta. 11+78.16	20'24"58.32" (L.)	1127'32.96"	500.0000	90.0372	178.1650	3.8%	35
TIDEWATER_RA02	PC Sta. 11+78.16 PI Sta. 12+42.25 Pt Sta. 13+05.84	12'21"23.23" (L.)	9'40'42.03"	592.0000	64.0842	127.6712	3.6%	35
TIDEWATER_RA03	PC Sta. 13+05.84 PI Sta. 13+89.14 Pt Sta. 14+71.35	16'05"18.58" (L.)	9'43'12.43"	589.4555	83.3068	165.5175	3.7%	34
TIDEWATER_RB01	PC Sta. 10+00.00 PI Sta. 11+04.74 Pt Sta. 12+08.95	9'58"35.71" (R.)	9'58'35.71"	1,200.0000	104.7393	208.9491	2.5%	30
TIDEWATER_RB02	PC Sta. 12+08.95 PI Sta. 13+47.18 Pt Sta. 14+85.40	110'49.08" (L.)	110'49.08"	13,420.0000	138.2316	276.4535	NC	30
TIDEWATER_RC01	PC Sta. 10+00.00 PI Sta. 11+78.19 Pt Sta. 13+55.92	7'03"57.87" (R.)	1'59'07.08"	2,886.0000	178.1857	355.9197	NC	35
TIDEWATER_RC02	PC Sta. 13+55.92 PI Sta. 14+57.25 Pt Sta. 15+57.84	12'00"03.39" (L.)	5'56'36.76"	964.0000	101.3285	201.9156	2.6%	35
TIDEWATER_RC03	PC Sta. 15+57.84 PI Sta. 16+64.64 Pt Sta. 17+71.02	8'47"28.36" (L.)	4'07'25.44"	1,389.4154	106.8025	213.1857	2.3%	35
TIDEWATER_RD01	PC Sta. 10+00.00 PI Sta. 10+78.23 Pt Sta. 11+56.46	0'46"28.84" (L.)	0'29'42.45"	11,572.0000	78.2318	156.4612	NC	25
TIDEWATER_RD02	PC Sta. 13+50.81 PI Sta. 15+37.37 Pt Sta. 17+07.92	40'55"21.15" (R.)	1127'32.96"	500.0000	186.5572	357.1165	3.4%	25
TIDEWATER_RE01	PC Sta. 10+00.00 PI Sta. 11+11.85 Pt Sta. 12+19.57	26'56"18.55" (R.)	12'16'08.05"	467.0000	111.8517	219.5672	2.9%	25
TIDEWATER_RE02	PC Sta. 12+19.57 PI Sta. 12+64.51 Pt Sta. 13+09.25	9'15"00.12" (R.)	10'18'51.55"	555.4974	44.9384	89.6815	2.8%	35

STATE	ROUTE	STATE PROJECT	SHEET NO.
VA.	64	0064-122-470 C-501	3



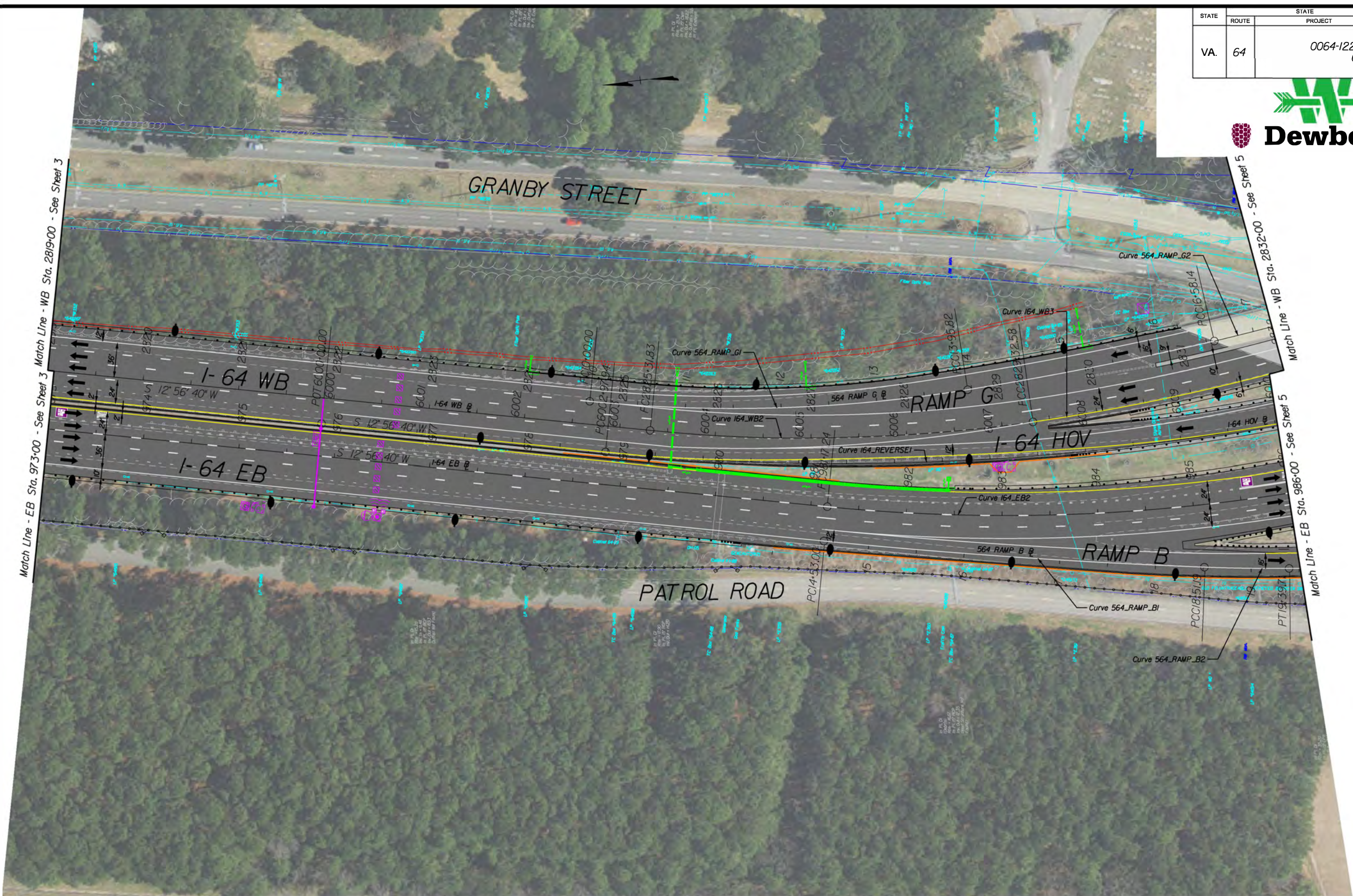
- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- Denotes Proposed Tolling / ITS Infrastructure
- Denotes Prop. Guardrail
- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exlst. R/W
- Exlst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

SCALE 0 50' 100'

PROJECT 0064-122-470

SHEET NO. 3

STATE	ROUTE	STATE PROJECT	SHEET NO.
VA.	64	0064-122-470 C-501	4



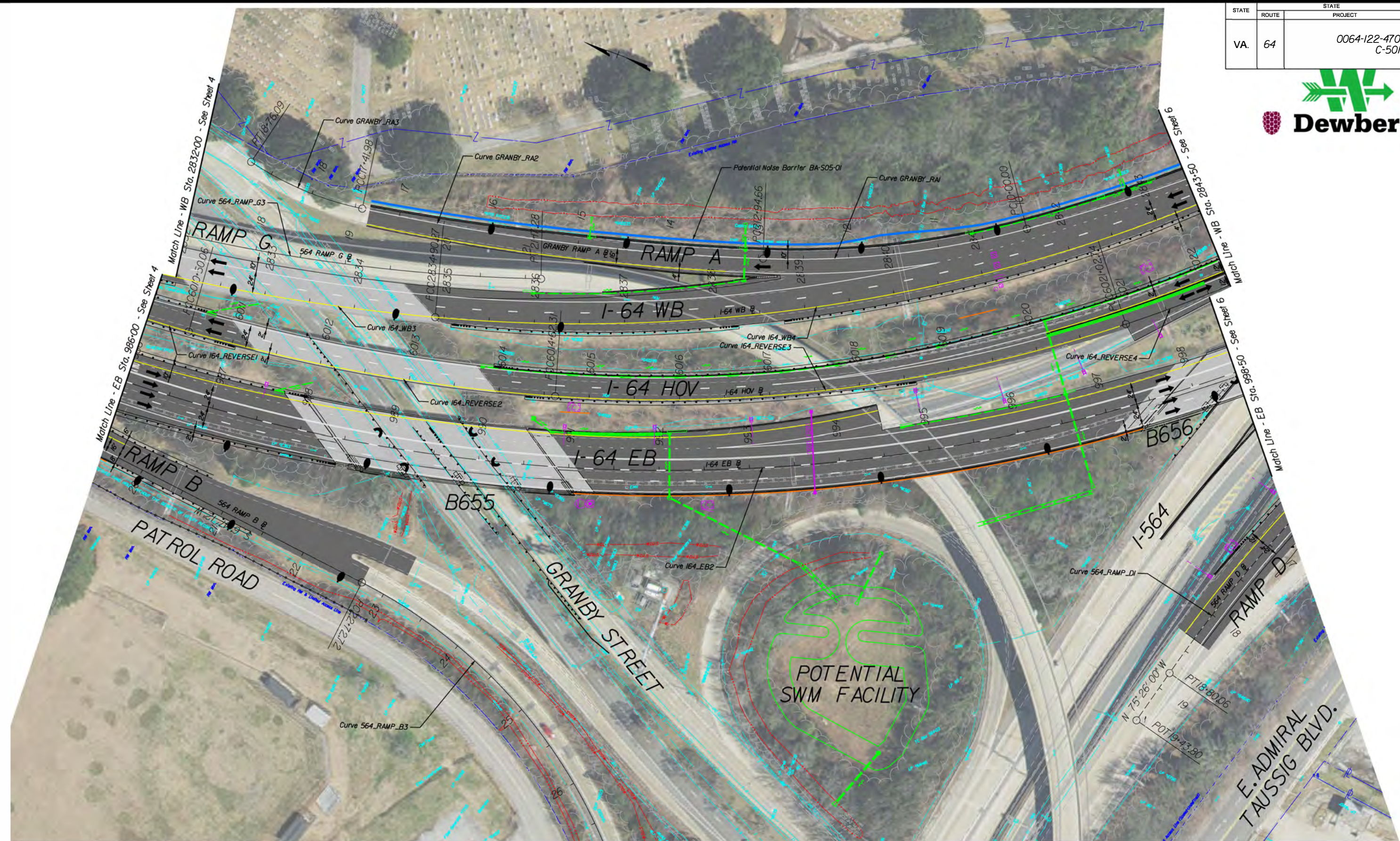
- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/ Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- Denotes Proposed Tolling / ITS Infrastructure
- Denotes Prop. Guardrail
- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exlst. R/W
- Exlst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

SCALE 0 50' 100'

PROJECT 0064-122-470

SHEET NO. 4

STATE	ROUTE	STATE PROJECT	SHEET NO.
VA.	64	0064-122-470 C-501	5



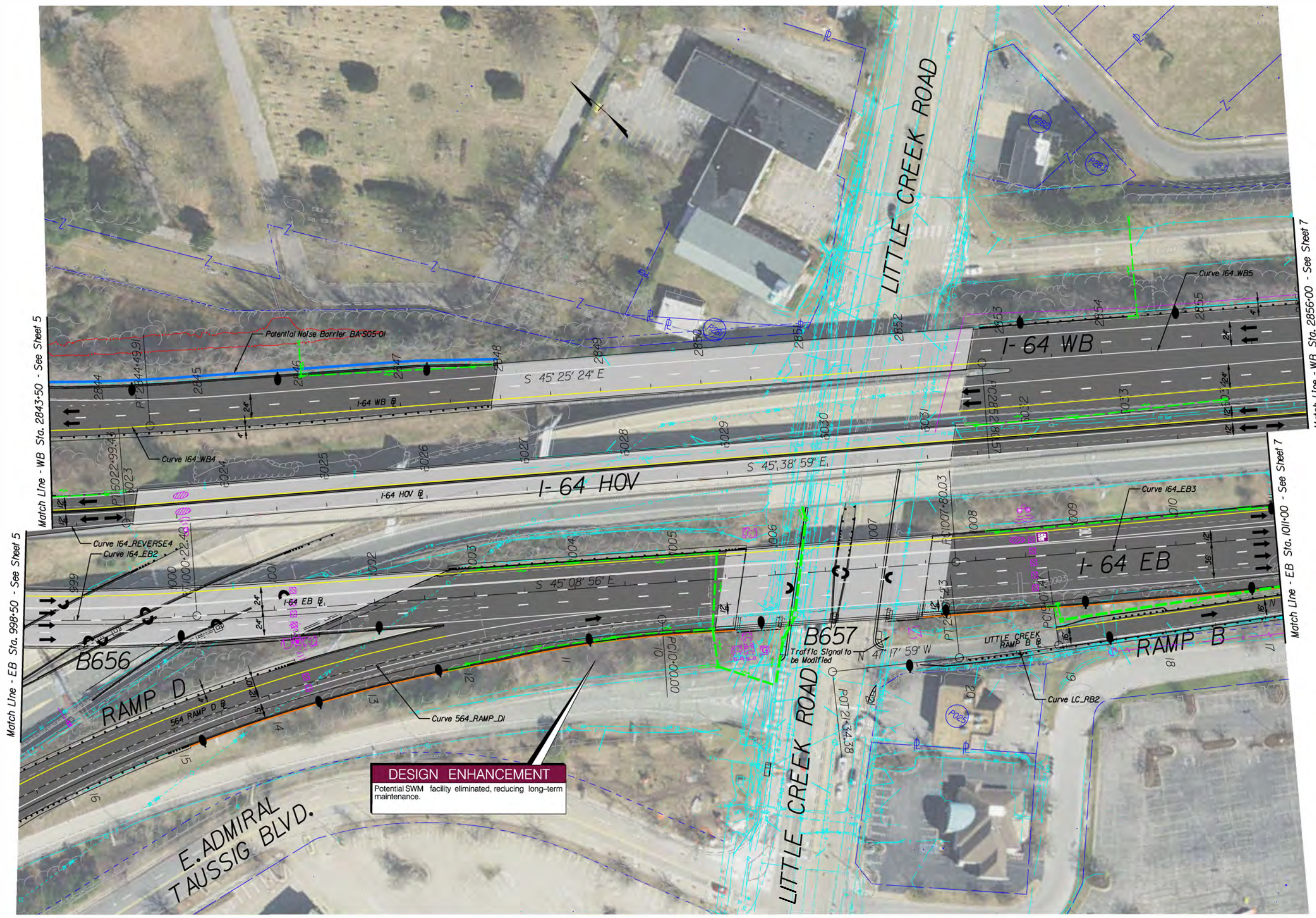
- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/ Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- Denotes Proposed Tolling / ITS Infrastructure
- Denotes Prop. Guardrail
- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exlst. R/W
- Exlst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

SCALE 0 50' 100'

PROJECT 0064-122-470

SHEET NO. 5

STATE	ROUTE	STATE PROJECT	SHEET NO
VA.	64	0064-122-470 C-501	6

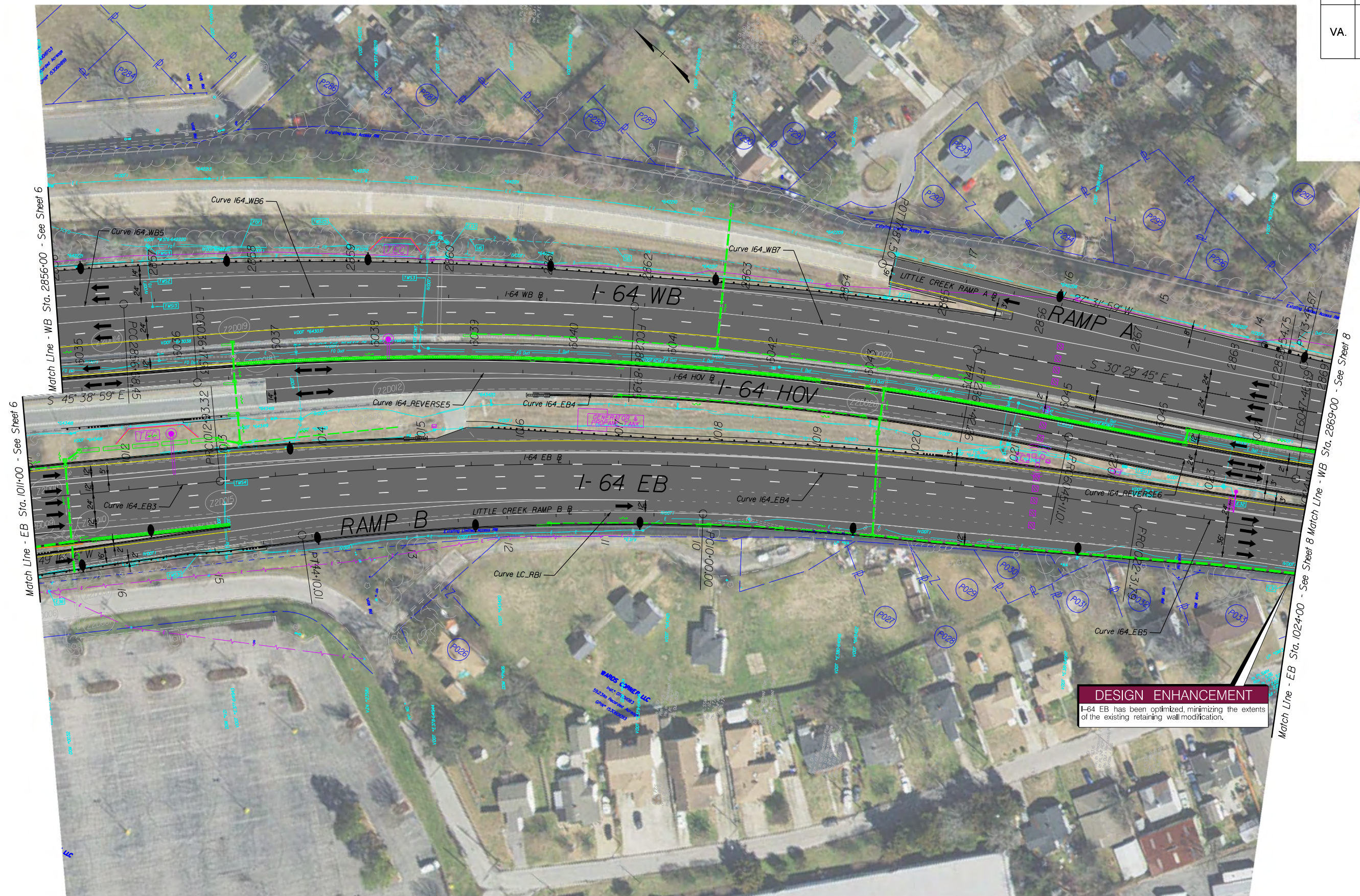


DESIGN ENHANCEMENT
 Potential SWM facility eliminated, reducing long-term maintenance.

- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/ Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- Denotes Proposed Tolling / ITS Infrastructure
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- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exlst. R/W
- Exlst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

SCALE 0 50' 100'	PROJECT 0064-122-470	SHEET NO. 6
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STATE	ROUTE	PROJECT	SHEET NO.
VA.	64	0064-122-470 C-501	7

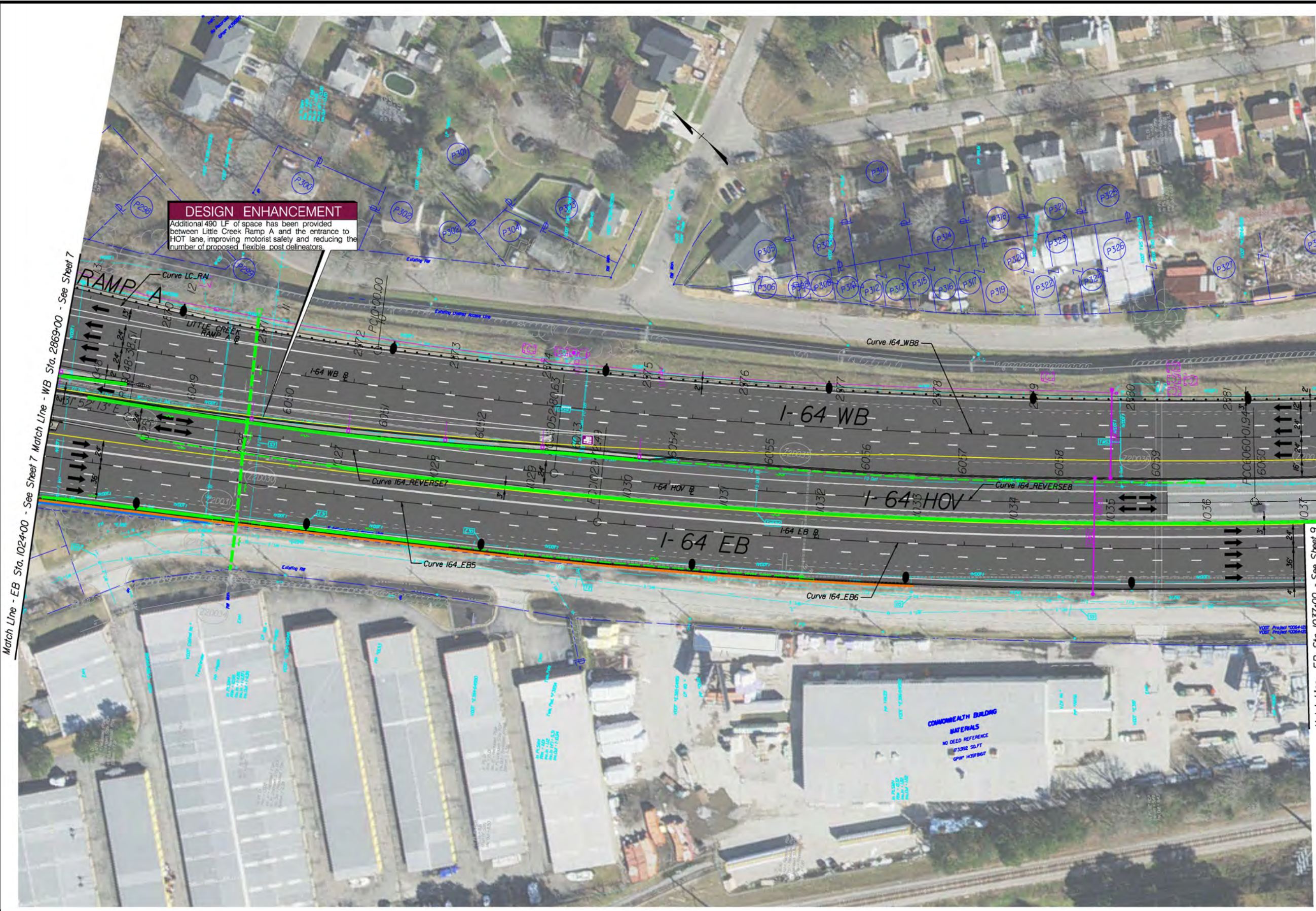


DESIGN ENHANCEMENT
I-64 EB has been optimized, minimizing the extents of the existing retaining wall modification.

- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/ Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- Denotes Proposed Tolling / ITS Infrastructure
- Denotes Prop. Guardrail
- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exst. R/W
- Exst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

SCALE	PROJECT	SHEET NO.
0 50' 100'	0064-122-470	7

STATE	ROUTE	STATE PROJECT	SHEET NO
VA.	64	0064-122-470 C-501	8



DESIGN ENHANCEMENT
 Additional 490 LF of space has been provided between Little Creek Ramp A and the entrance to HOT lane, improving motorist safety and reducing the number of proposed flexible post delineators.

Match Line - EB Sta. 1024+00 - See Sheet 7

Match Line - WB Sta. 2882+00 - See Sheet 9

Match Line - EB Sta. 1037+00 - See Sheet 9

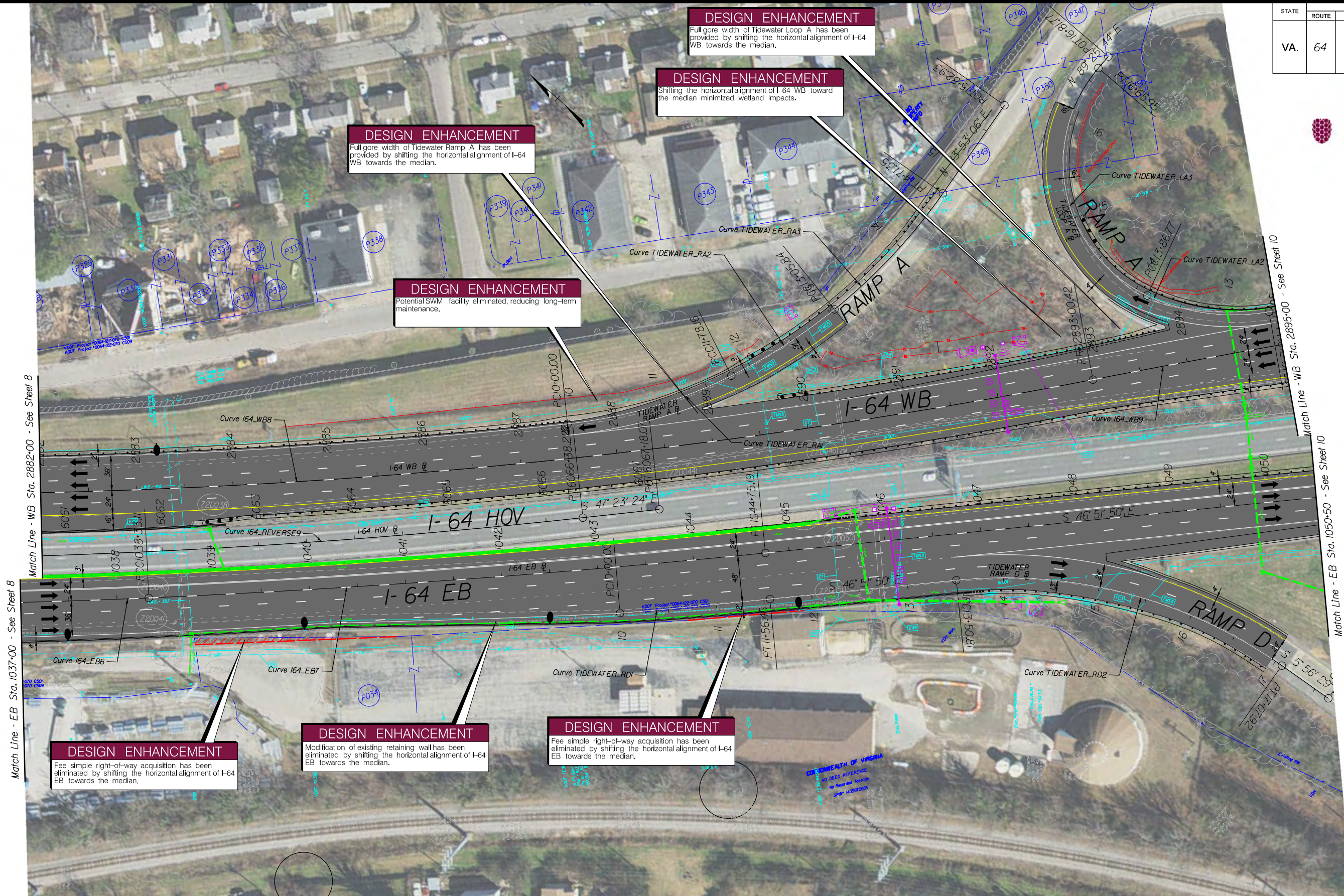
- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/ Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- Denotes Proposed Tolling / ITS Infrastructure
- Denotes Prop. Guardrail
- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exlst. R/W
- Exlst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

SCALE: 0 50' 100'

PROJECT: 0064-122-470

SHEET NO: 8

STATE	ROUTE	PROJECT	SHEET NO.
VA.	64	0064-122-470 C-501	9



DESIGN ENHANCEMENT
Full gore width of Tidewater Ramp A has been provided by shifting the horizontal alignment of I-64 WB towards the median.

DESIGN ENHANCEMENT
Shifting the horizontal alignment of I-64 WB toward the median minimized wetland impacts.

DESIGN ENHANCEMENT
Potential SWM facility eliminated, reducing long-term maintenance.

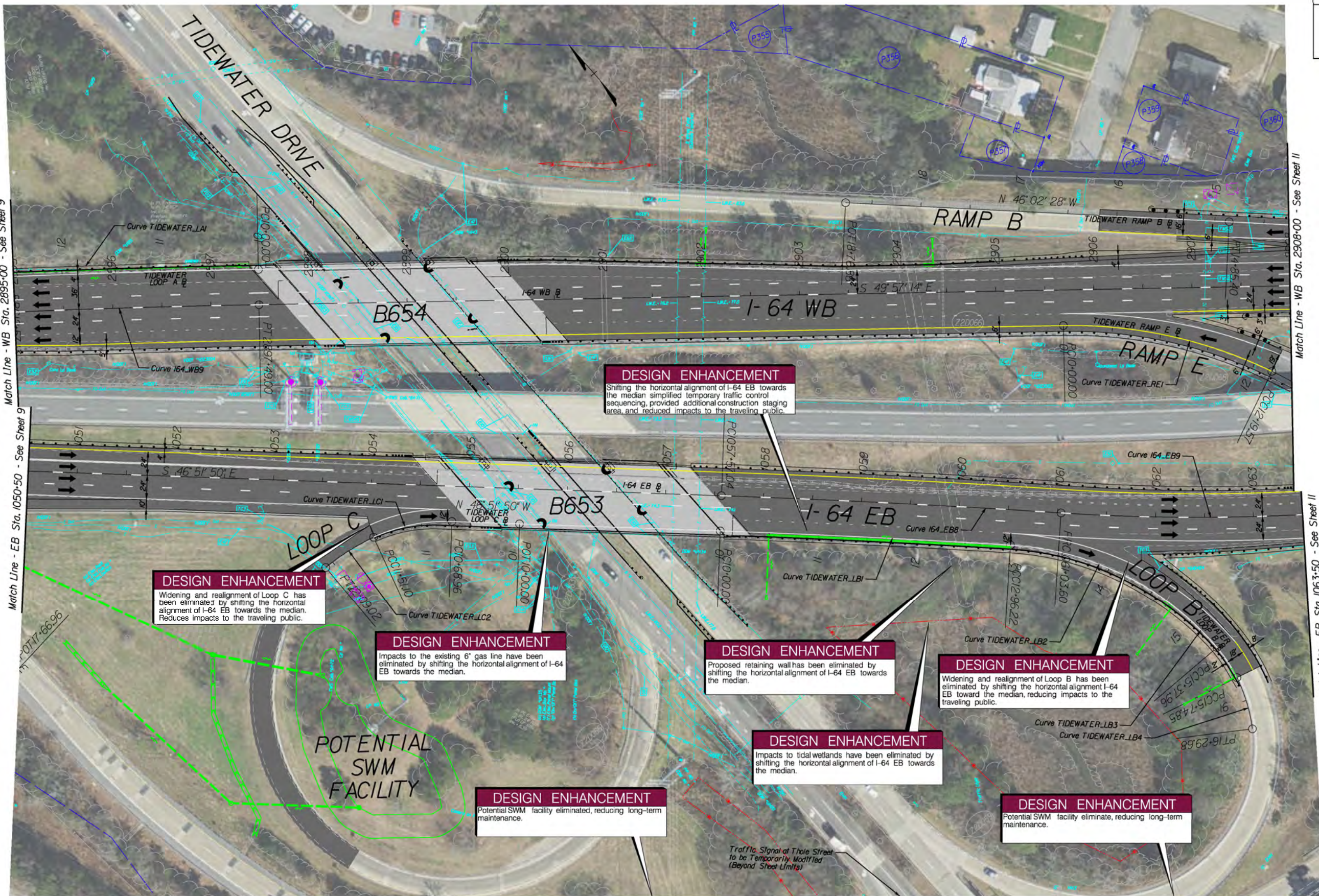
DESIGN ENHANCEMENT
Modification of existing retaining wall has been eliminated by shifting the horizontal alignment of I-64 EB towards the median.

DESIGN ENHANCEMENT
Fee simple right-of-way acquisition has been eliminated by shifting the horizontal alignment of I-64 EB towards the median.

DESIGN ENHANCEMENT
Fee simple right-of-way acquisition has been eliminated by shifting the horizontal alignment of I-64 EB towards the median.

- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/ Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- Denotes Proposed Tolling / ITS Infrastructure
- Denotes Prop. Guardrail
- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exst. R/W
- Exst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

STATE	ROUTE	STATE PROJECT	SHEET NO
VA.	64	0064-122-470 C-501	10



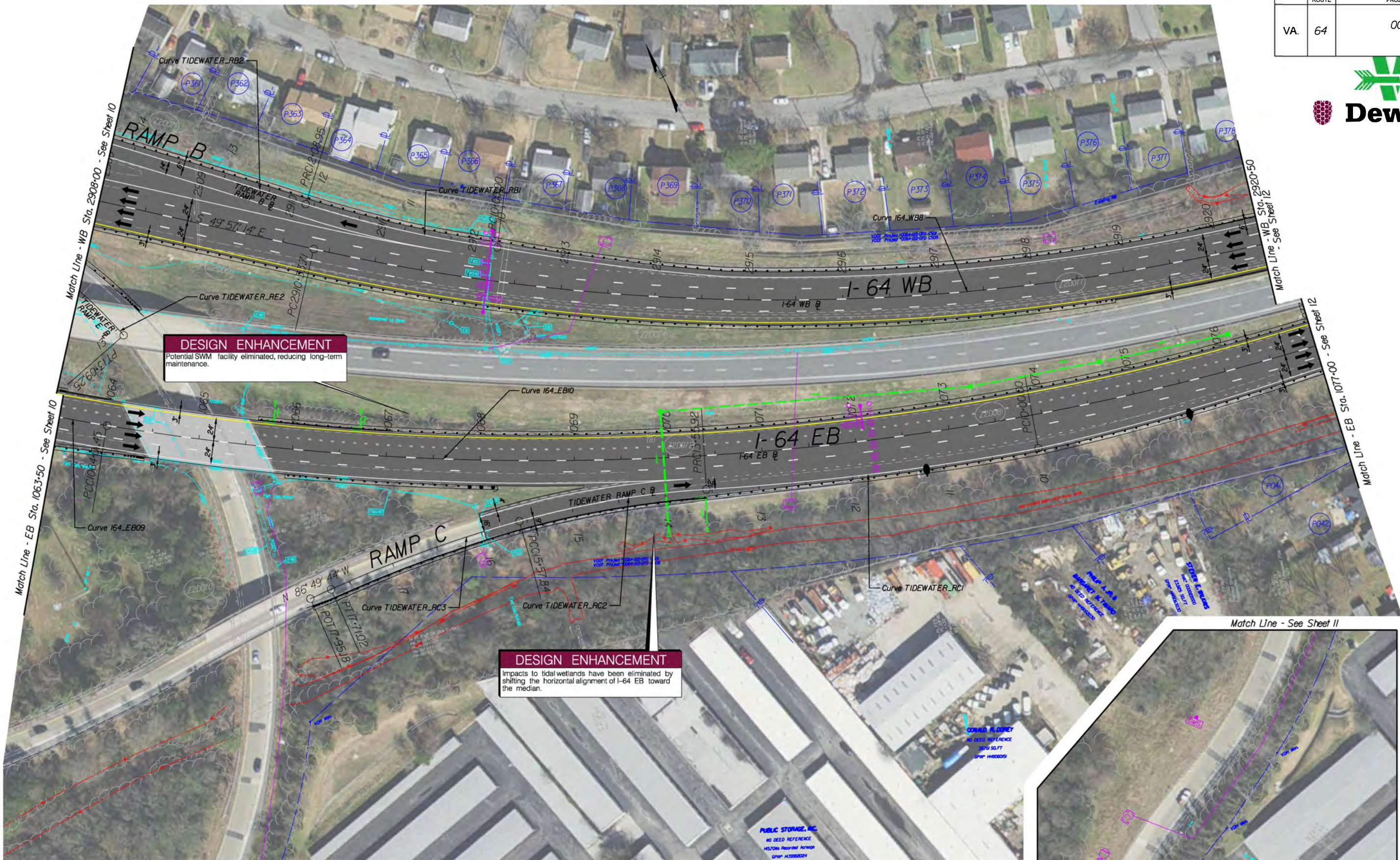
Match Line - WB Sta. 2895+00 - See Sheet 9
Match Line - EB Sta. 1050+50 - See Sheet 9

Match Line - WB Sta. 2908+00 - See Sheet 11
Match Line - EB Sta. 1063+50 - See Sheet 11

- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/ Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- DMS Denotes Proposed Tolling / ITS Infrastructure
- Denotes Prop. Guardrail
- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exlst. R/W
- Exlst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

SCALE 0 50' 100'	PROJECT 0064-122-470	SHEET NO. 10
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STATE	ROUTE	STATE PROJECT	SHEET NO
VA.	64	0064-122-470 C-501	11



DESIGN ENHANCEMENT
Potential SWM facility eliminated, reducing long-term maintenance.

DESIGN ENHANCEMENT
Impacts to tidal wetlands have been eliminated by shifting the horizontal alignment of I-64 EB toward the median.



- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/ Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- Denotes Proposed Tolling / ITS Infrastructure
- Denotes Prop. Guardrail
- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exlst. R/W
- Exlst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

SCALE 0 50' 100'	PROJECT 0064-122-470	SHEET NO. 11
---------------------	-------------------------	-----------------

STATE	ROUTE	STATE PROJECT	SHEET NO.
VA.	64	0064-122-470 C-501	12



- Proposed Asphalt Pavement
- Denotes Proposed Grass Median/ Buffer/Planted Area
- Denotes Proposed Bridge
- Denotes Area of R/W or Esm't Reduction
- Denotes Potential Proposed Light Pole
- Denotes Proposed Talling / ITS Infrastructure
- Denotes Prop. Guardrail
- Denotes Prop. R/W per RFP
- Denotes Offeror's Prop. R/W
- Denotes Prop. L/A
- Denotes Prop. Perm. Esm't.
- Denotes Temp. Esm't.
- Denotes Exlst. R/W
- Exlst. Utilities
- Existing Wetlands
- Denotes Prop. Travel Lane
- Denotes Potential Retaining Wall
- Denotes Potential Noise Barrier

SCALE 0 50' 100'

PROJECT 0064-122-470

SHEET NO. 12

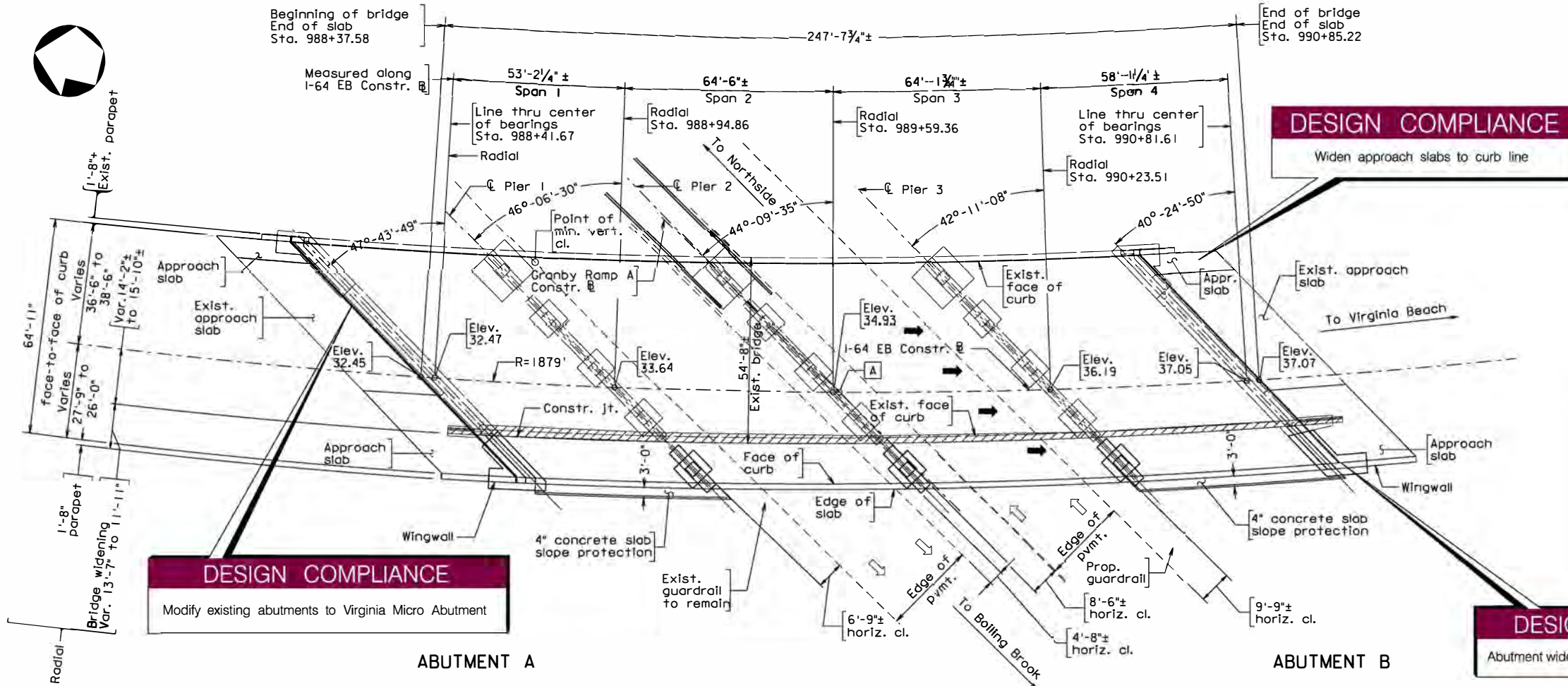
4.3.2 Conceptual Structural Plans

STATE	FEDERAL AID	STATE	SHEET NO.
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-064-3(520)	64	0064-122-470, BXXX
Federal Structure No. 00000000020902		FHWA Construction and Scour Code: X271-SN	
Federal Stewardship and Oversight Code: FO		UPC No. 119637	

DESIGN EXCEPTION(S):
 Stopping Sight Distance for I-64 GP lane pending VDOT approval.
 Superelevation Rate on existing bridge pending VDOT approval.
 Shoulder Width pending VDOT approval.

GENERAL NOTES:
 Width: 64'-11" face-to-face of curbs includes widening of 11'-11"± to 13'-7"± on the right side of traffic.
 Span layout: 53'-2 1/4"± - 64'-6"± - 64'-1 3/4"± - 58'-1 1/4"± simple steel beam / girder spans.
 Capacity: HL-93 loading (widened portion only), HS20-44 for existing.
 Specifications:
 Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.
 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 revision.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.
 Design loading includes 20 psf allowance for construction tolerances and construction methods.
 Design loading includes 15 psf allowance for future wearing surface.
 Bridge No. of existing bridge is 2876. Plan No. is 155-01 and 155-01A.
 The existing structure is designated a Type B structure in accordance with Sec. 411.



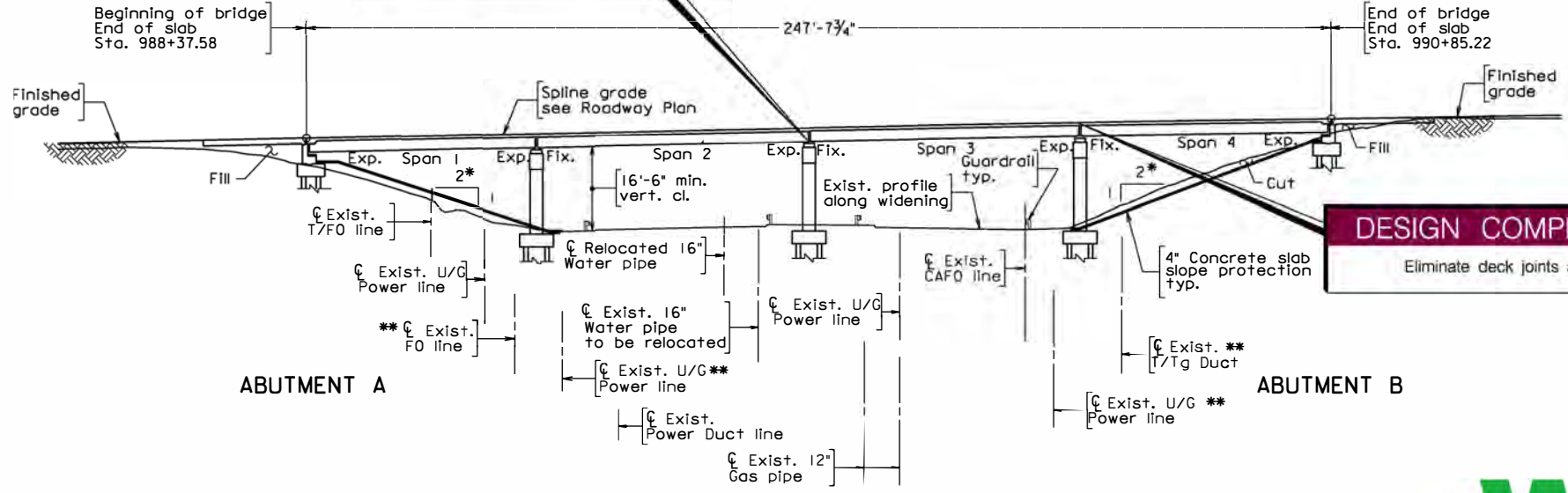
DESIGN COMPLIANCE
 Modify existing abutments to Virginia Micro Abutment

DESIGN COMPLIANCE
 Widen approach slabs to curb line

DESIGN COMPLIANCE
 Abutment widening using Virginia Micro Abutment

DESIGN COMPLIANCE
 Replace all existing bearings and components at piers and abutments

DESIGN COMPLIANCE
 Eliminate deck joints at piers



ABUTMENT A

PIER 1

PIER 2

PIER 3

ABUTMENT B

DEVELOPED SECTION ALONG WIDENING

* Normal to abutment. Slope to match existing.
 ** Utilities in conflict with the proposed foundations shall be relocated.

Legend:
 [Hatched Box] Denotes limits of removal

[A] POC Sta. 989+61.22 I-64 EB Constr. B
 POT Sta. 313+43.36 Granby Ramp A B
 Δ = 45°-42'-05" Lt.

I64 EB over Granby Street_1.dgn

Dewberry Engineers Inc. Fairfax, VA STRUCTURAL ENGINEER	
PLANS BY:	Dewberry Engineers Inc.
COORDINATED:	
SUPERVISED:	Gregory J. Merkel
DESIGNED:	
DRAWN:	John P. Doulls
CHECKED:	Gregory J. Merkel



COMMONWEALTH OF VIRGINIA
 DEPARTMENT OF TRANSPORTATION
 PROPOSED BRIDGE WIDENING
 I-64 EB OVER GRANBY STREET
 CITY OF NORFOLK
 2.63 MI. E. OF RTE. 60 (4th VIEW STREET)
 PROJ. 064-122-470, B655

Recommended for Approval: _____
 District Project Development Engineer Date

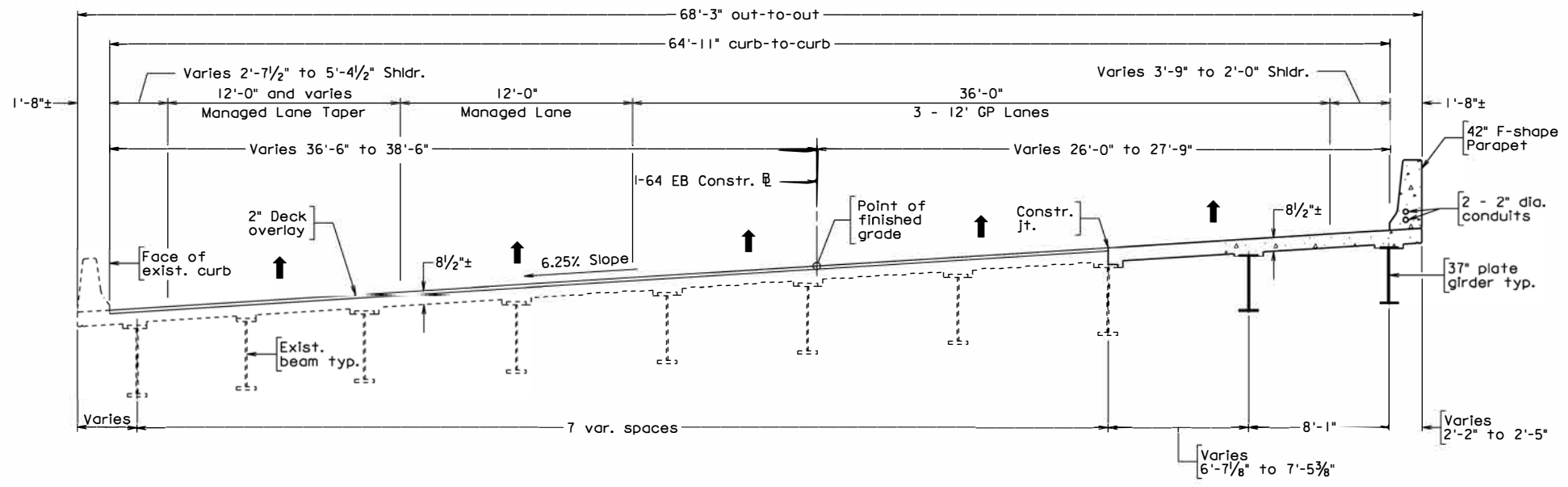
Approved: _____
 District Administrator Date

155-01B

Scale: 1" = 20'

Date: Aug. 17, 2022 © 2022, Commonwealth of Virginia Sheet 1 of 2

STATE	FEDERAL AID		STATE	SHEET
ROUTE	PROJECT	ROUTE	PROJECT	NO.
VA.		81	0064-122-470, BXXX	2



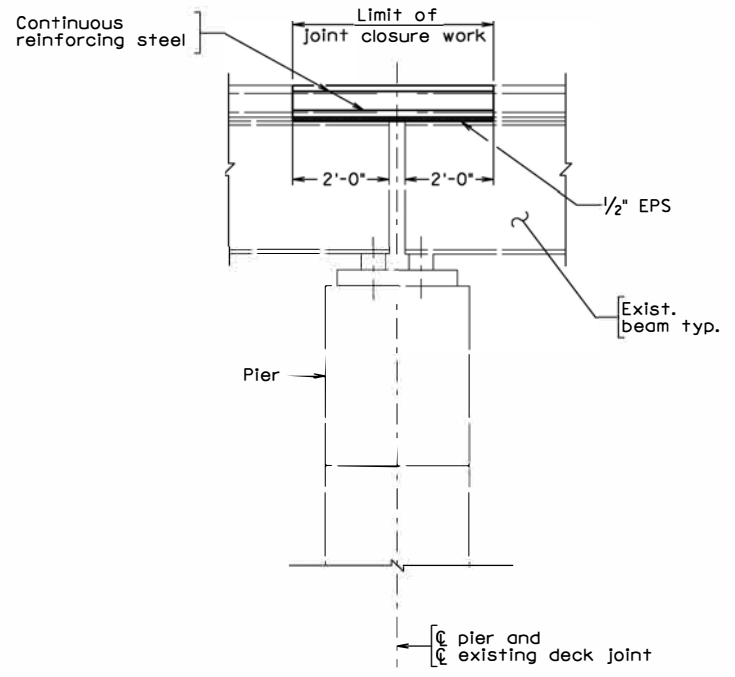
Notes:

Removal work shall conform to Section 412.

Exposed existing reinforcing bars shall be protected in conformance with Section 412.03.

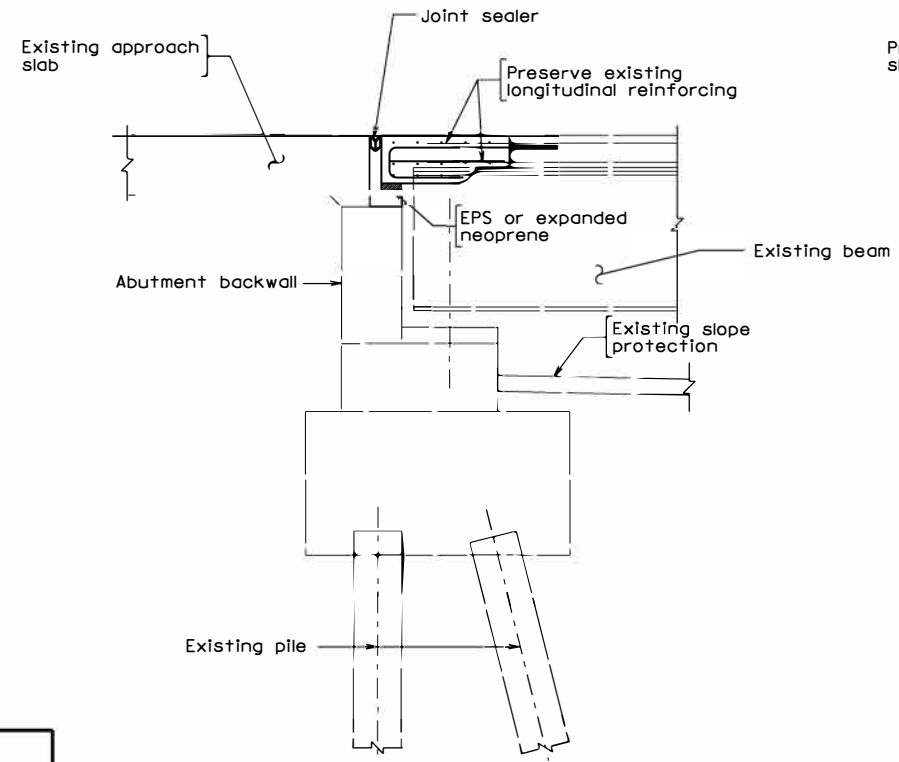
Existing superstructure is shown schematically and for information purpose only. The Contractor shall field verify the exact location and dimensions of the structure.

FINAL TRANSVERSE SECTION
Scale: 1/4" = 1'-0"

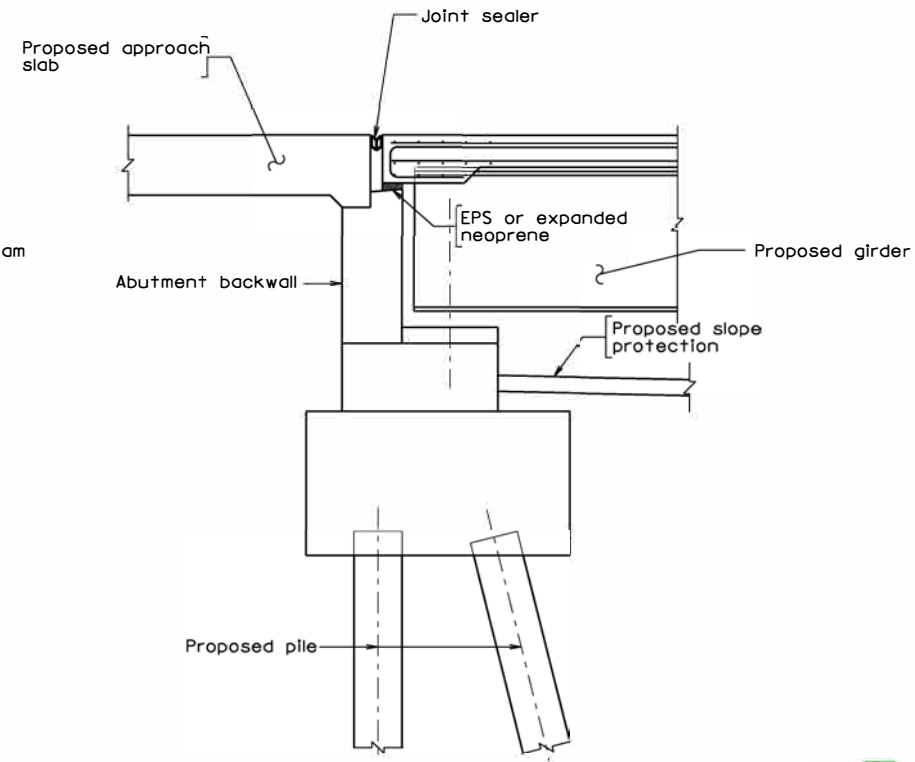


JOINT CLOSURE DETAIL AT PIERS

Minimum limits of joint closure are shown, actual limits will vary.



MODIFIED EXISTING ABUTMENT SECTION
Not to scale



PROPOSED ABUTMENT SECTION
Not to scale



COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION STRUCTURE AND BRIDGE DIVISION					
I-64 EB OVER GRANBY STREET TRANSVERSE SECTION					
No.	Description	Date	Designed: GJM	Date	Plan No.
			Drawn: JPD	Aug. 2022	Sheet No.
	Revisions		Checked: JPD		2 of 2

I64 EB over Granby Street.dgn



STATE	FEDERAL AID	STATE	SHEET NO.
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-064-3(520)	64	0064-122-470, BXXX
Federal Structure No. 00000000020900		FHWA Construction and Scour Code: X271-SN	
Federal Stewardship and Oversight Code: FO		UPC No. 119637	

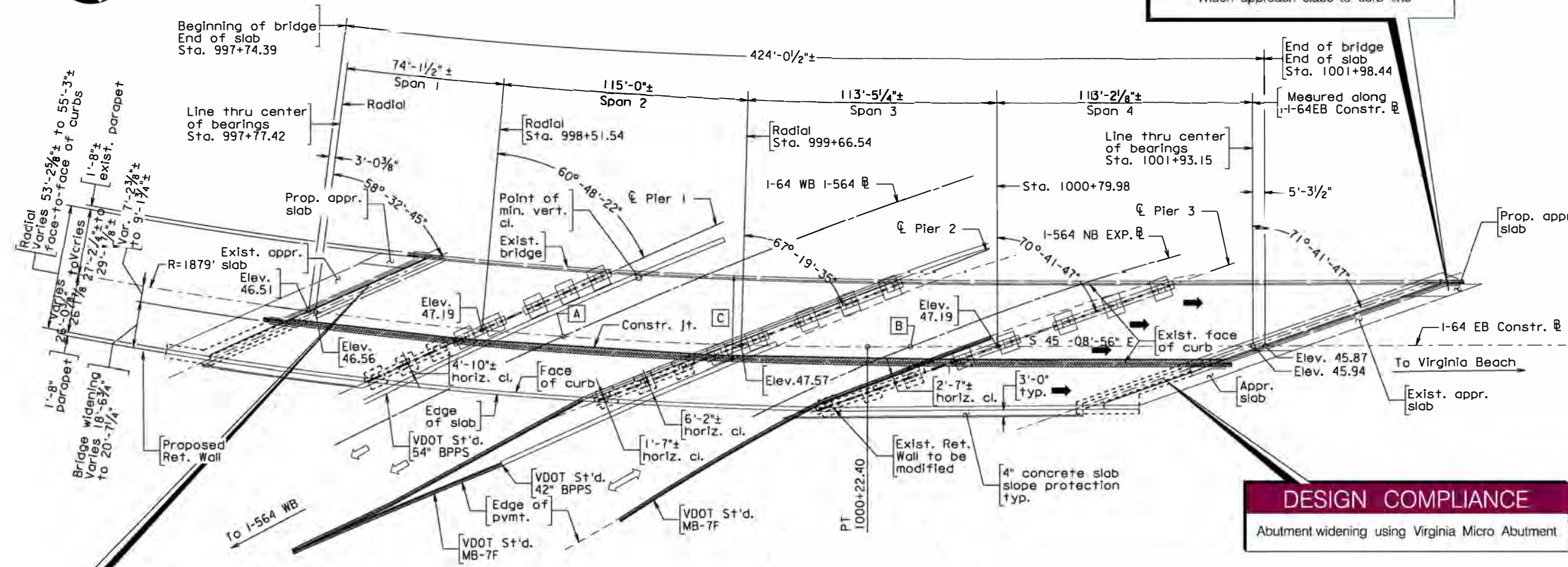
DESIGN COMPLIANCE
Widen approach slabs to curb line

DESIGN EXCEPTION(S):
 Stopping Sight Distance for I-64 GP lane pending VDOT approval.
 Superelevation Rate on existing bridge pending VDOT approval.
 Shoulder Width pending VDOT approval.

GENERAL NOTES:
 Width: 53'-2 5/8" TO 55'-3" face-to-face of curbs, including 18'-6 3/4" to
 Span layout: 74'-1 1/2" ± - 115'-0" ± - 113'-5 1/4" ± - 113'-2 1/8" ± simple steel plate girder spans.

Capacity: HL-93 loading (widened portion only). HS20-44 for existing.
 Specifications:
 Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.
 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 revision.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.
 Design loading includes 20 psf allowance for construction tolerances and construction methods.
 Design loading includes 15 psf allowances for future wearing surface.
 Bridge No. of existing bridge is 122-2873. Plan No. is 155-02.
 The existing structure is designated a Type B structure in accordance with Sec. 411.



DESIGN COMPLIANCE
Modify existing abutments to Virginia Micro Abutment

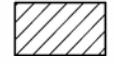
DESIGN COMPLIANCE
Replace all existing bearings and components at piers and abutments

DESIGN COMPLIANCE
Abutment widening using Virginia Micro Abutment

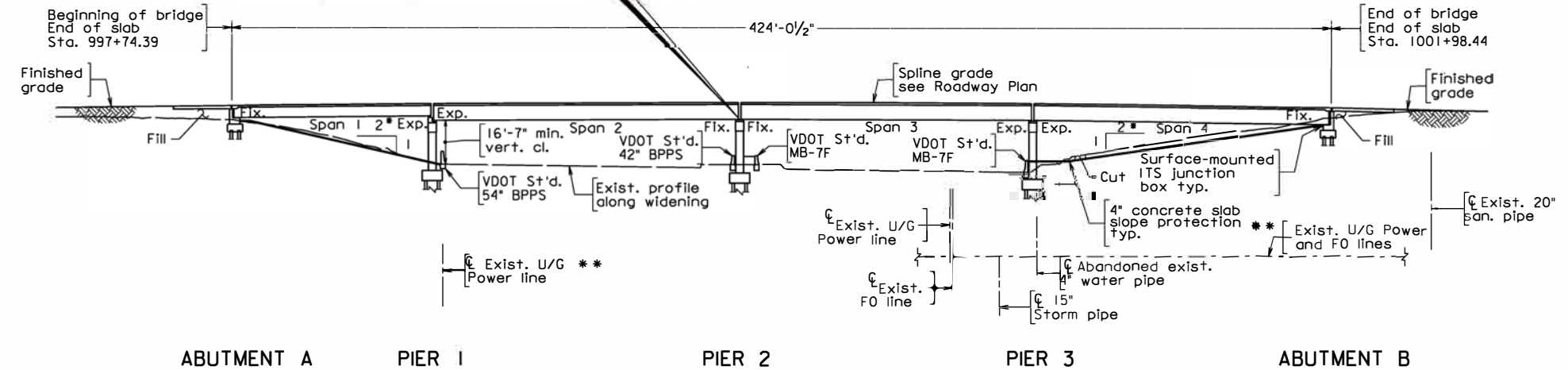
PLAN

- [A] POC Sta. 998+90.06 I-64 EB Constr. E
POC Sta. 2006+55.47 I-564 WB Constr. E
Δ = 27°-51'-14" L.
- [B] POC Sta. 1000+40.79 I-64 EB Constr. E
POT Sta. 3006+46.50 I-564 EB Constr. E
Δ = 20°-50'-44" L.
- [C] Var. 37'-10" ± to 38'-2" ± Radial
Exist. bridge

Legend:



Denotes limits of existing structure removal



ABUTMENT A PIER 1 PIER 2 PIER 3 ABUTMENT B

DEVELOPED SECTION ALONG WIDENING

- * Normal to abutment. Slope to match existing.
- ** Utilities in conflict with the proposed foundations shall be relocated.

Dewberry Engineers Inc. Fairfax, VA STRUCTURAL ENGINEER	
PLANS BY:	Dewberry Engineers Inc.
COORDINATED:	
SUPERVISED:	Gregory J. Merkel
DESIGNED:	
DRAWN:	John P. Doulls
CHECKED:	Gregory J. Merkel



VDOT
 COMMONWEALTH OF VIRGINIA
 DEPARTMENT OF TRANSPORTATION
 PROPOSED BRIDGE WIDENING
 I-64 EB OVER I-564
 CITY OF NORFOLK
 0.18 MI. E. OF RTE. 460 (GRANBY STREET)
 PROJ. 0064-122-470, B656

Recommended for Approval: _____ Date _____
 District Project Development Engineer

Approved: _____ Date _____
 District Administrator

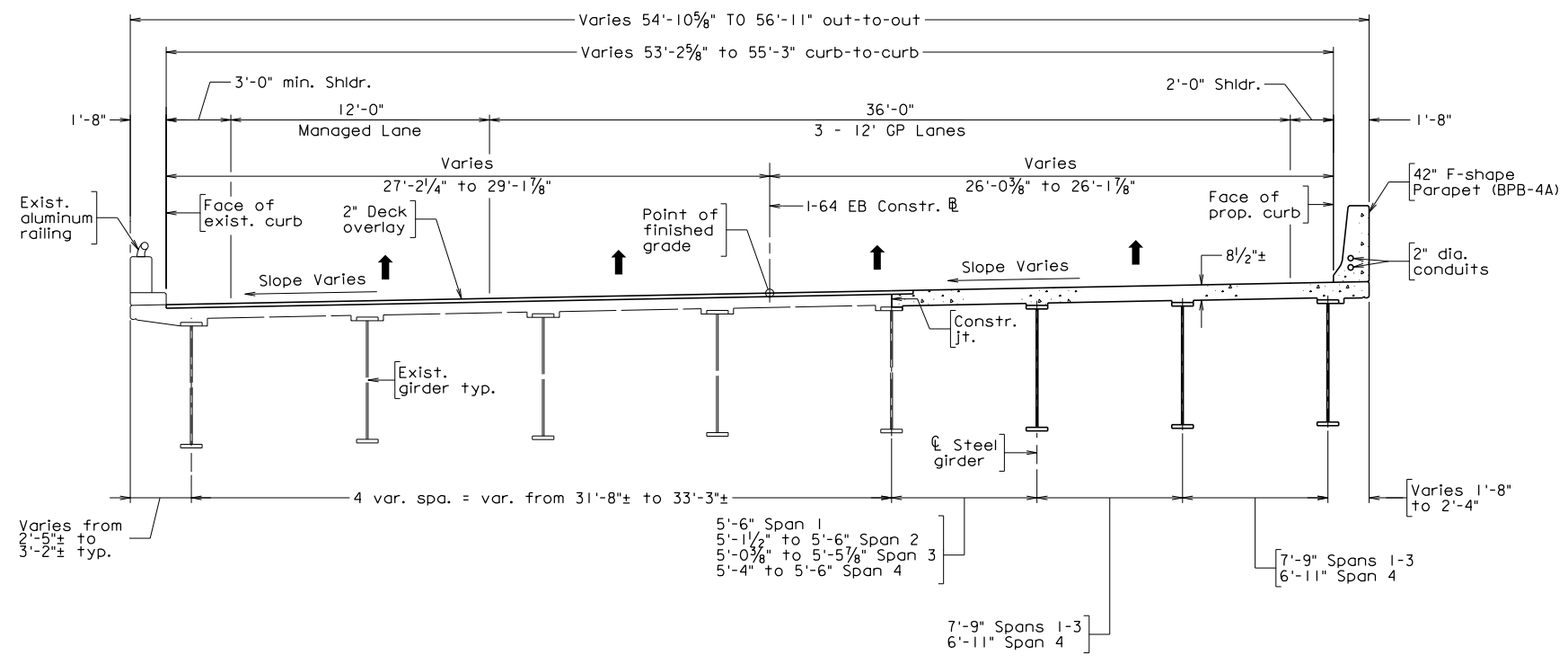
155-02A

Scale: 1" = 30'

Date: Aug 17, 2022 © 2022, Commonwealth of Virginia Sheet 1 of 2

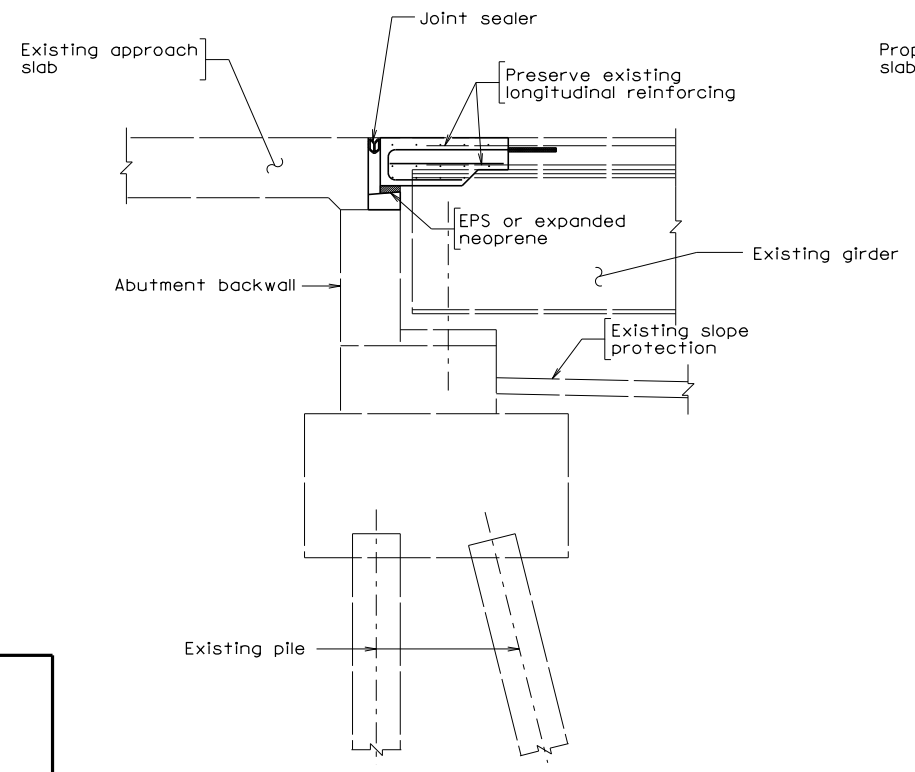
I64 EB over I-564.dgn

STATE	FEDERAL AID		STATE	SHEET
ROUTE	PROJECT		ROUTE	PROJECT
VA.			64	0064-WDB-032, B&B
				2

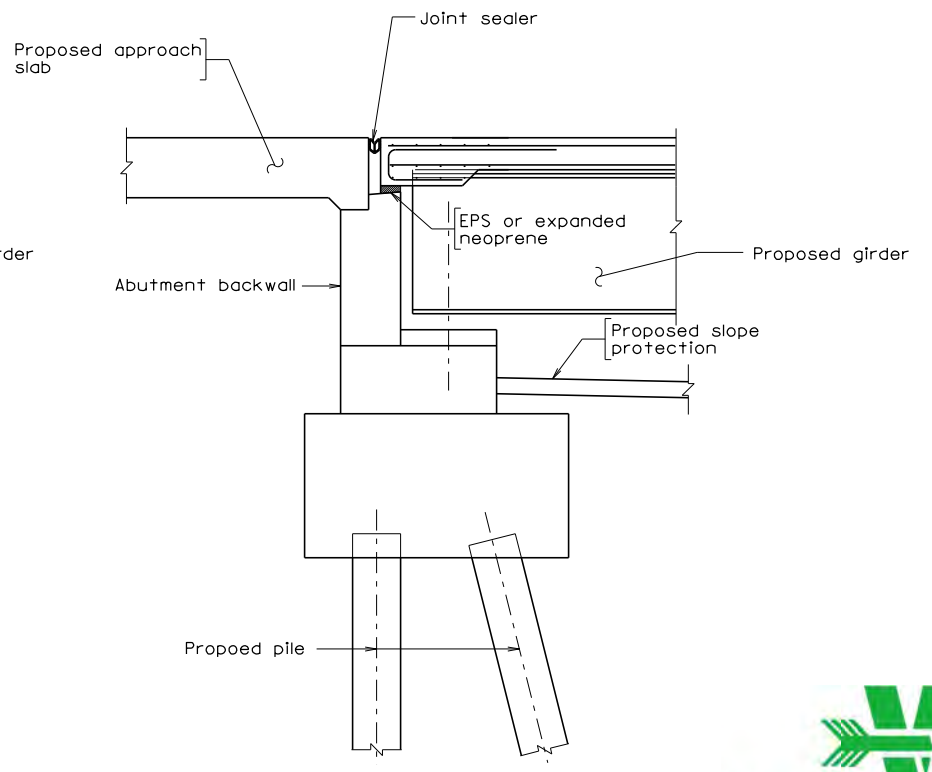


FINAL TRANSVERSE SECTION
 Scale: 1/4" = 1'-0"

Notes:
 Removal work shall conform to Section 412.
 Exposed existing reinforcing bars shall be protected in conformance with Section 412.03.
 Existing superstructure is shown schematically and for information purpose only. The Contractor shall field verify the exact location and dimensions of the structure.



MODIFIED EXISTING ABUTMENT SECTION
 Not to scale



PROPOSED ABUTMENT SECTION
 Not to scale



COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION					
STRUCTURE AND BRIDGE DIVISION					
I-64 EB OVER I-564 TRANSVERSE SECTION					
No.	Description	Date	Designed: GJM	Date	Plan No.
			Drawn: JDD	Aug. 2022	
			Checked: JDD		
Revisions					
					Sheet No. 2 of 2

I64 EB over I-564_2.dgn

DEWBERRY ENGINEERS INC.
 FAIRFAX, VA
 STRUCTURAL ENGINEER

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STATE	FEDERAL AID	STATE	SHEET
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-064-3(520)	64	0064-122-470, BXXX
Federal Structure No.	00000000020892	FHWA Construction and Scour Code:	X271-SN
Federal Stewardship and Oversight Code:	FO	UPC No.	119637

DESIGN COMPLIANCE
Modify existing abutments to Virginia Micro Abutment.

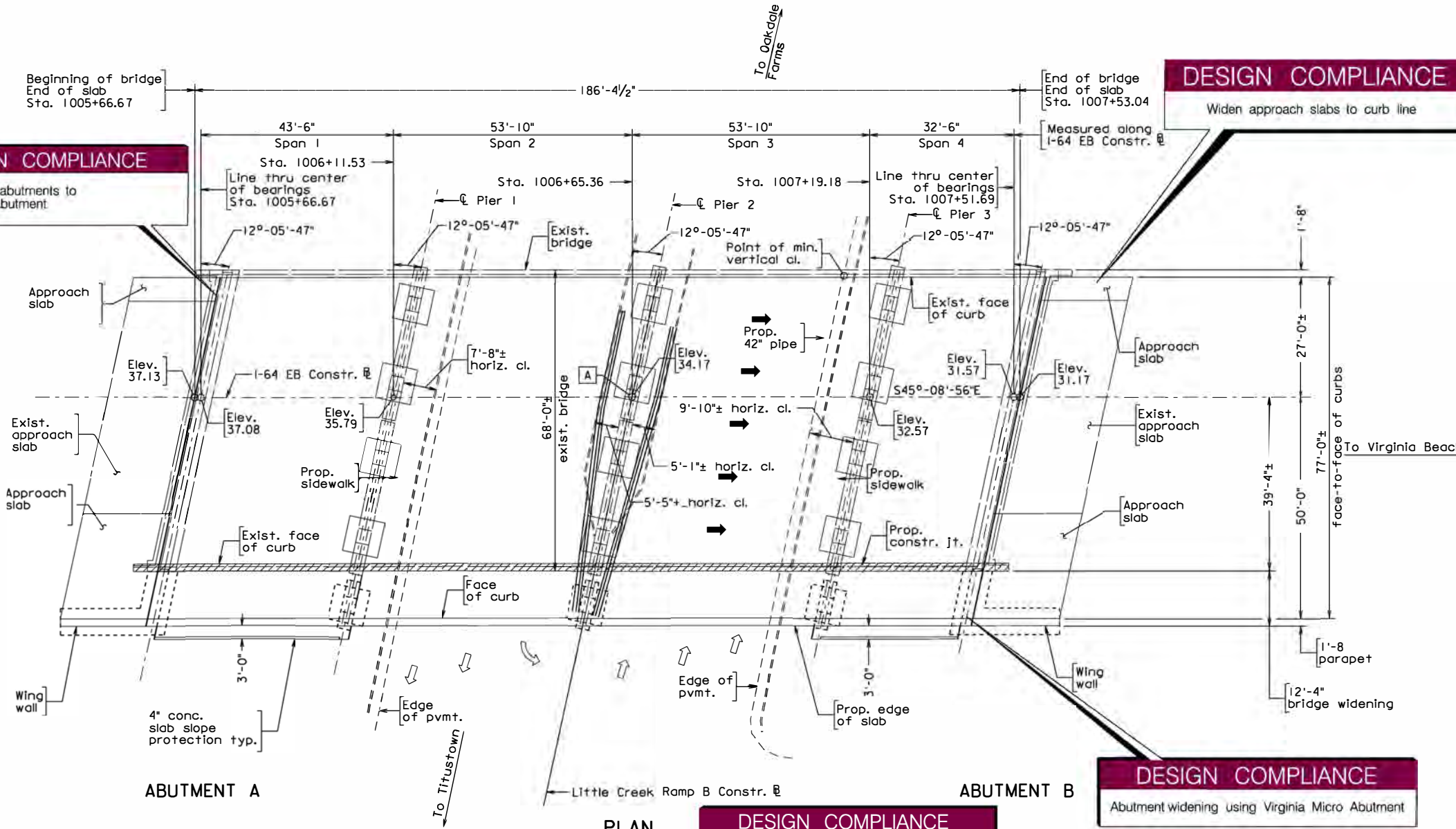
DESIGN COMPLIANCE
Widen approach slabs to curb line

DESIGN EXCEPTION(S):

Shoulder Width pending VDOT approval.
Vertical Clearance pending VDOT approval.

GENERAL NOTES:

Width: 77'-0" face-to-face of curbs, including 12'-4" widening on right of traffic.
Span layout: 43'-6" - 53'-10" - 53'-10" - 32'-6" simple steel plate girder spans.
Capacity: HL-93 loading (widened portion only), HS20-44 for existing.
Specifications:
Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.
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.
Design loading includes 20 psf allowance for construction tolerances and construction methods.
Design loading includes 15 psf allowances for future wearing surface.
Bridge No. of existing bridge is 2867. Plan No. is 209-05.
The existing structure is designated a Type B structure in accordance with Sec. 411.



[A] POT Sta. 1006+64.29 I-64 EB Constr. Ⓜ
POC Sta. 19+06.26 Little Creek Ramp B Constr. Ⓜ
Δ = 77°-45'-29" Lt.

Legend:
[Hatched box] Denotes limits of removal

DESIGN COMPLIANCE
Replace all existing bearings and components at piers and abutments

DESIGN COMPLIANCE
Abutment widening using Virginia Micro Abutment

DESIGN COMPLIANCE
Eliminate deck joints at piers



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED BRIDGE WIDENING
I-64 EB OVER LITTLE CREEK ROAD
CITY OF NORFOLK
0.33 MI. E. OF RTE 460 (GRANBY STREET)
PROJ. NO. 0064-122-470, B657

Recommended for Approval: _____ Date _____
District Project Development Engineer

Approved: _____ Date _____
District Administrator

209-05A

I64 EB over Little Creek Rd..I.dgn

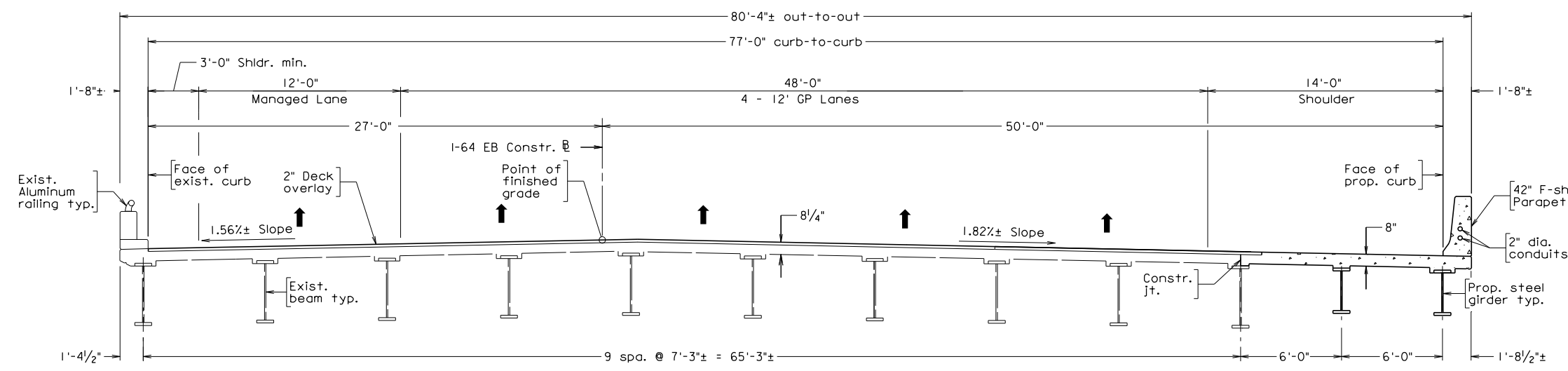
PLANS BY:	Dewberry Engineers Inc.
COORDINATED:	
SUPERVISED:	Gregory J. Merkel
DESIGNED:	
DRAWN:	John P. Doulls
CHECKED:	Gregory J. Merkel



DEVELOPED SECTION ALONG WIDENING

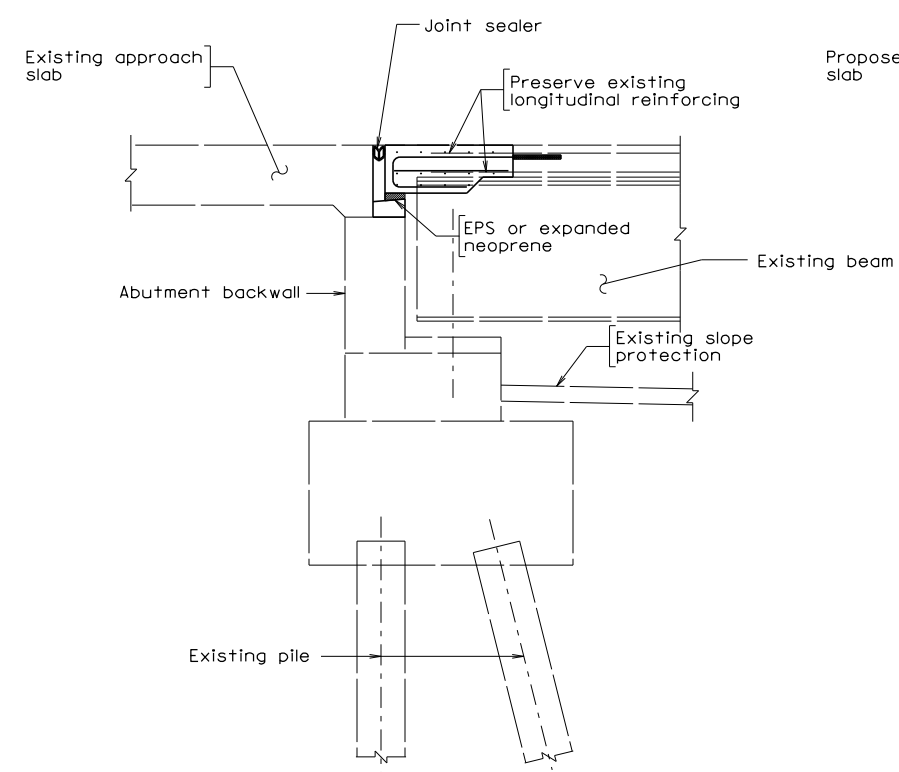
Scale: 1" = 15'

STATE	FEDERAL AID		STATE	SHEET
ROUTE	PROJECT	ROUTE	PROJECT	NO.
VA.		81	0064-122-470, BXXX	2

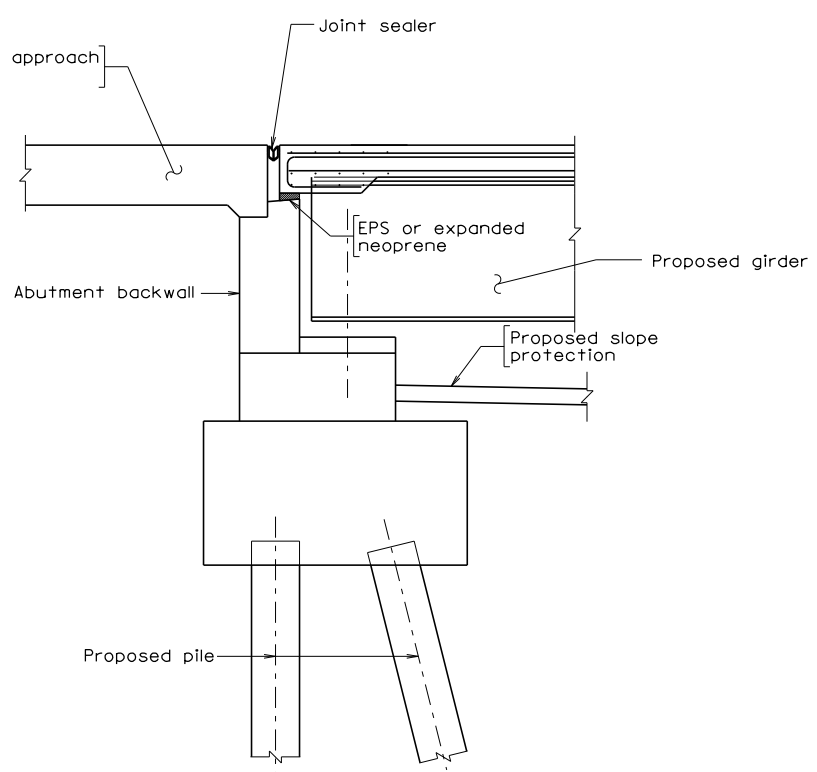


Notes:
 Removal work shall conform to Section 412.
 Exposed existing reinforcing bars shall be protected in conformance with Section 412.03.
 Existing superstructure is shown schematically and for information purpose only. The Contractor shall field verify the exact location and dimensions of the structure.

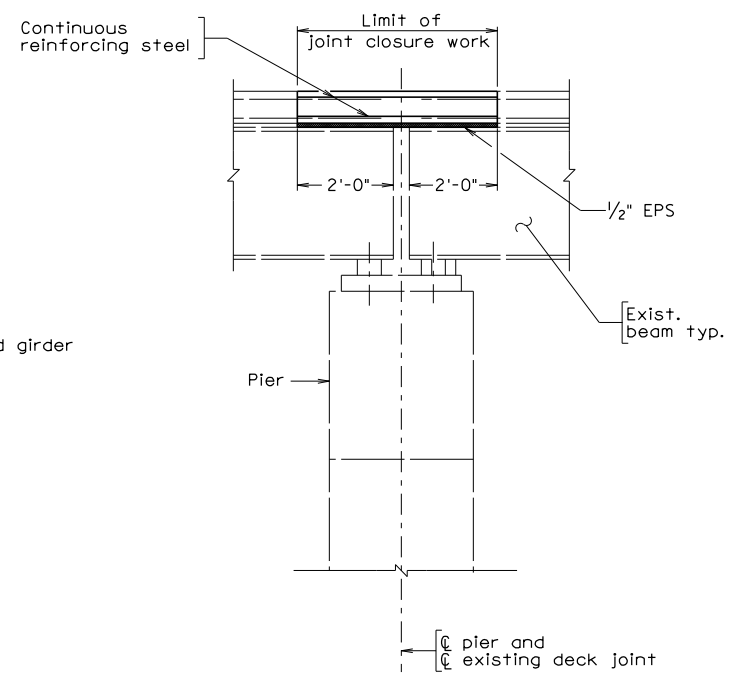
FINAL TRANSVERSE SECTION
 Scale: 1/4" = 1'-0"



MODIFIED EXISTING ABUTMENT SECTION
 Not to scale



PROPOSED ABUTMENT SECTION
 Not to scale



JOINT CLOSURE DETAIL AT PIERS

Minimum limits of joint closure are shown, actual limits will vary.

164 EB over Little Creek Rd.2.dgn

DEWBERRY ENGINEERS INC.
 FAIRFAX, VA
 STRUCTURAL ENGINEER



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COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
STRUCTURE AND BRIDGE DIVISION			
1-64 EB OVER LITTLE CREEK RD TRANSVERSE SECTION			
No.	Description	Date	Designed: GJM Drawn: JDD Checked: JDD
	Revisions		Date: Aug. 2022 Plan No.: Sheet No.: 2 of 2

STATE	FEDERAL AID	STATE	SHEET
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-064-3(520)	64	0064-122-470, BXXX
Federal Structure No. 00000000020841		FHWA Construction and Scour Code: X271-SN	
Federal Stewardship and Oversight Code: FO		UPC No. 119637	

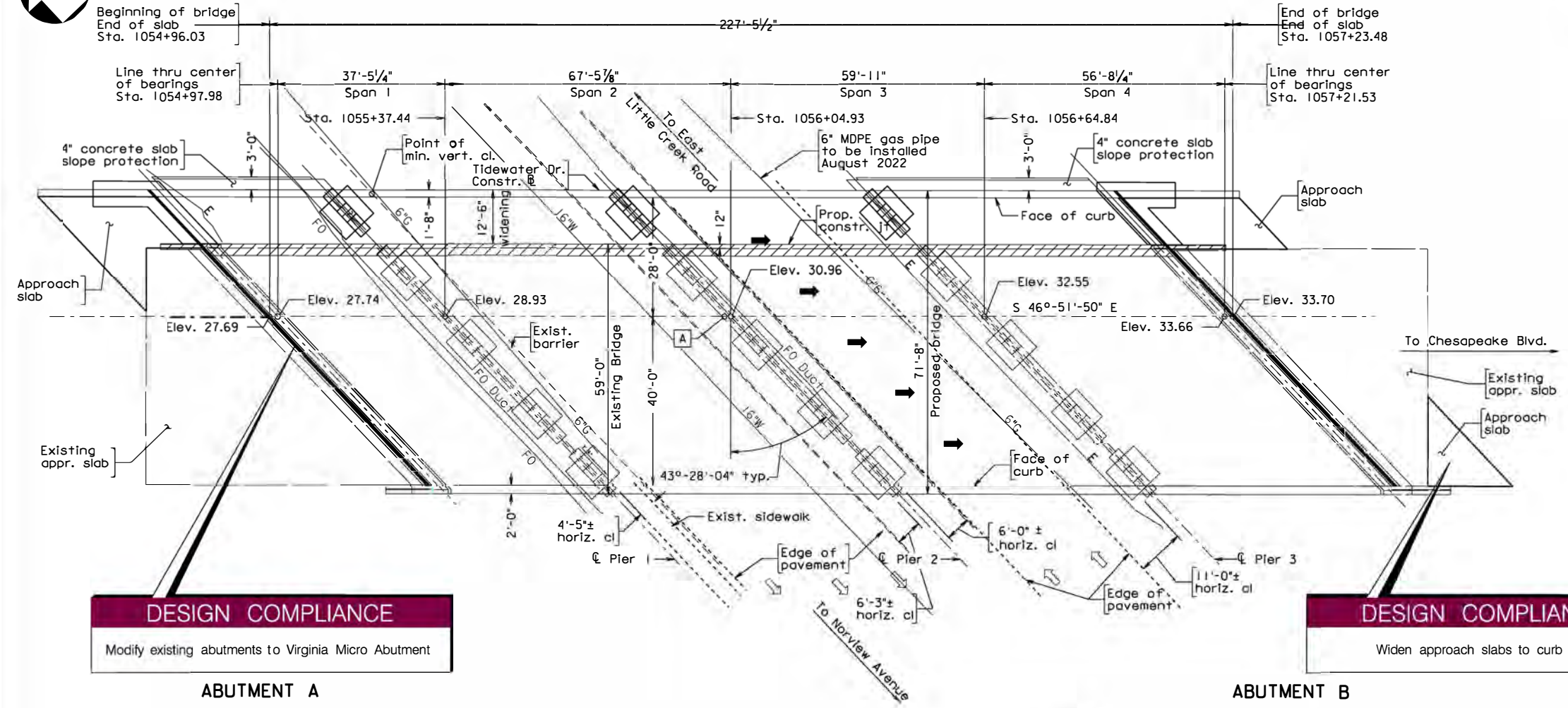
DESIGN EXCEPTION(S):

Shoulder Width pending VDOT approval.
Vertical Clearance pending VDOT approval.

GENERAL NOTES:

Width: 68'-0" face-to-face of curbs. Includes widening of 12'-6" on the left of traffic.
Span layout: 37'-5/4" - 67'-5/8" - 59'-11" - 56'-8/4" simple steel plate beam and girder spans.
Capacity: HL-93 loading (widened portion only). HS20-44 for existing.
Specifications:
Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.
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.
Design loading includes 20 psf allowance for construction tolerances and construction methods.
Design loading includes 15 psf allowance for future wearing surface.
Bridge No. of existing bridge is 2814. Plan No. is 155-04, 155-04A and 155-04C.
The existing structure is designated a Type B structure in accordance with Sec. 411.



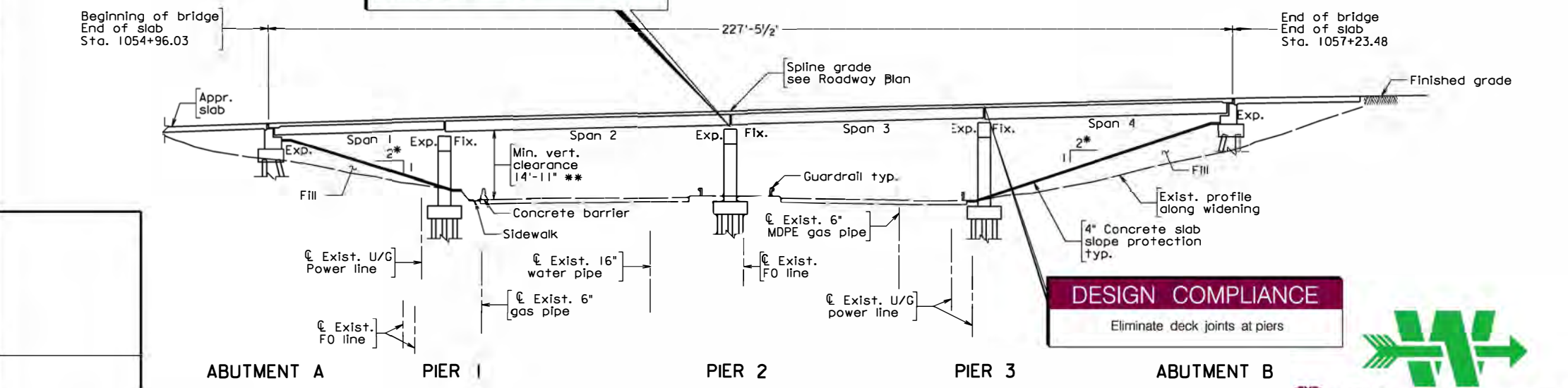
DESIGN COMPLIANCE
Modify existing abutments to Virginia Micro Abutment

DESIGN COMPLIANCE
Widen approach slabs to curb lines

DESIGN COMPLIANCE
Replace all existing bearings and components at piers and abutments

Legend:
[Hatched Box] Denotes limits of removal

164 EB over Tidewater Drive_1.dgn



DESIGN COMPLIANCE
Eliminate deck joints at piers

VDOT
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED BRIDGE WIDENING
I-64 EB OVER TIDEWATER DRIVE
CITY OF NORFOLK
1.0 MI. NW OF CHESAPEAKE BLVD.
PROJ. 0064-122-470, B653

PLANS BY:	Dewberry Engineers Inc.
COORDINATED:	Fairfax, VA
SUPERVISED:	Gregory J. Merkel
DESIGNED:	
DRAWN:	John P. Doulls
CHECKED:	Gregory J. Merkel

* Normal to abutment, slope to match existing.
** Minimum vertical clearance based on survey.



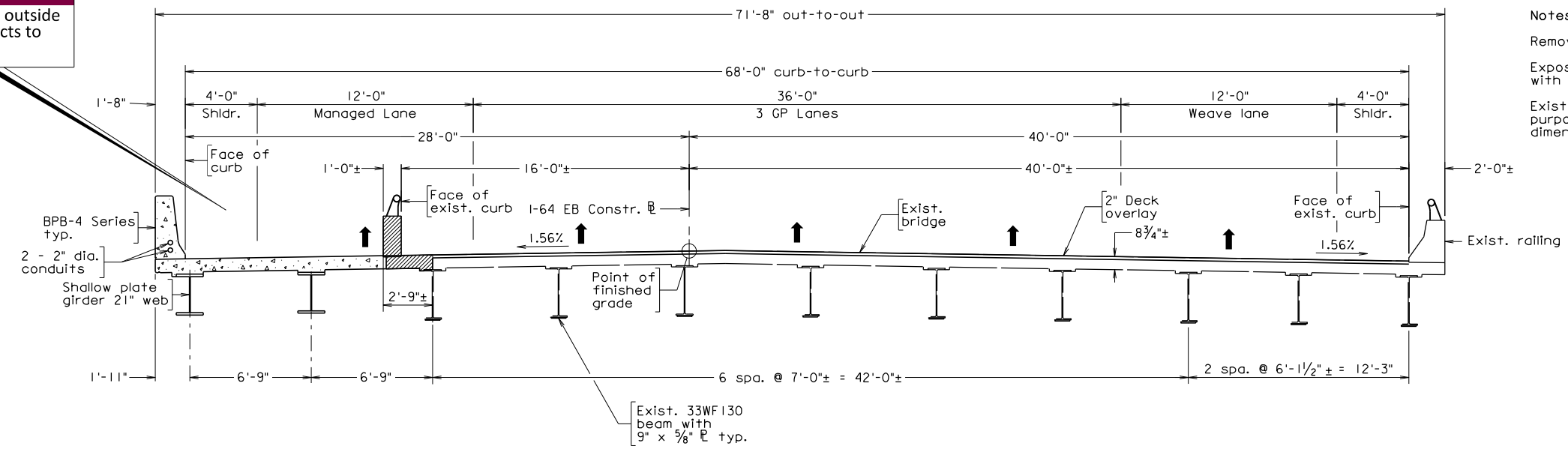
Recommended for Approval: _____ Date _____
District Project Development Engineer

Approved: _____ Date _____
District Administrator

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

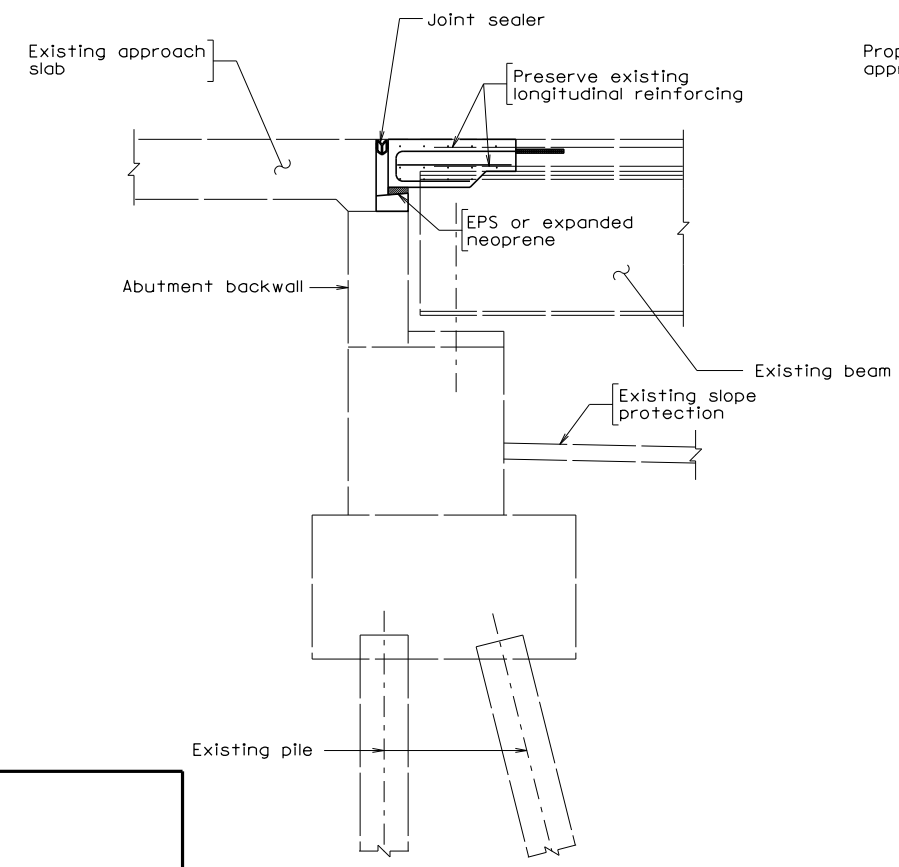
STATE	FEDERAL AID		STATE	SHEET
ROUTE	PROJECT		ROUTE	PROJECT
VA.			64	0064-122-470, BXXX
				2

DESIGN ENHANCEMENT
Switched widening from outside to inside. Reduces impacts to Loop Ramps B and C.

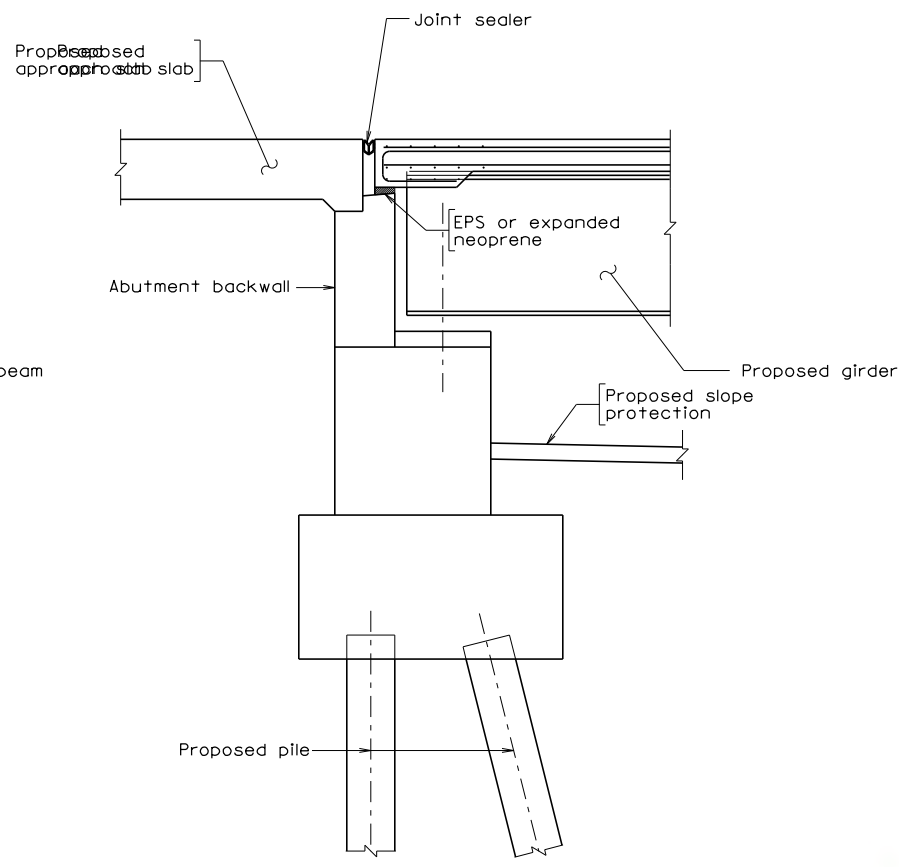


Notes:
Removal work shall conform to Section 412.
Exposed existing reinforcing bars shall be protected in conformance with Section 412.03.
Existing superstructure is shown schematically and for information purpose only. The Contractor shall field verify the exact location and dimensions of the structure.

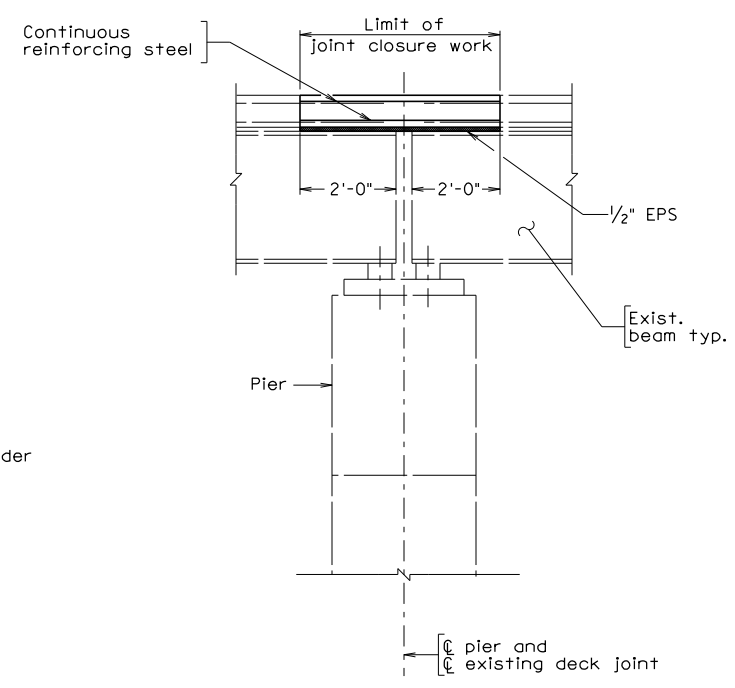
TRANSVERSE SECTION
Scale: 1/4" = 1'-0"



MODIFIED EXISTING ABUTMENT SECTION
Not to scale



PROPOSED ABUTMENT SECTION
Not to scale



JOINT CLOSURE DETAIL AT PIERS
Minimum limits of joint closure are shown, actual limits will vary.
Not to scale

164 EB over Tidewater Drive_2.dgn

DEWBERRY ENGINEERS INC.
FAIRFAX, VA
STRUCTURAL ENGINEER



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COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
STRUCTURE AND BRIDGE DIVISION			
I-64 EB OVER TIDEWATER DRIVE TRANSVERSE SECTION			
No.	Description	Date	Designed: GJM Drawn: JPB Checked: JDD
Revisions		Date	Plan No.
		Aug. 2022	Sheet No. 2 of 2



STATE	FEDERAL AID	STATE	SHEET
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-064-3(520)	64	0064-122-470, BXXX
Federal Structure No. 00000000020843		FHWA Construction and Scour Code: X271-SN	
Federal Stewardship and Oversight Code: FO		UPC No. 119637	

DESIGN EXCEPTION(S):

- Shoulder Width pending VDOT approval.
- Vertical Clearance pending VDOT approval.

GENERAL NOTES:

- Width: 82'-0" face-to-face of curbs. (Includes widening of 4'-9" on the right of traffic)
- Span layout: 40'-2" - 57'-1" - 57'-1" - 42'-2" simple steel beam and plate girder spans
- Capacity: HL-93 loading (widened portion only). HS20-44 for existing.
- Specifications:
 - Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.
 - 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.

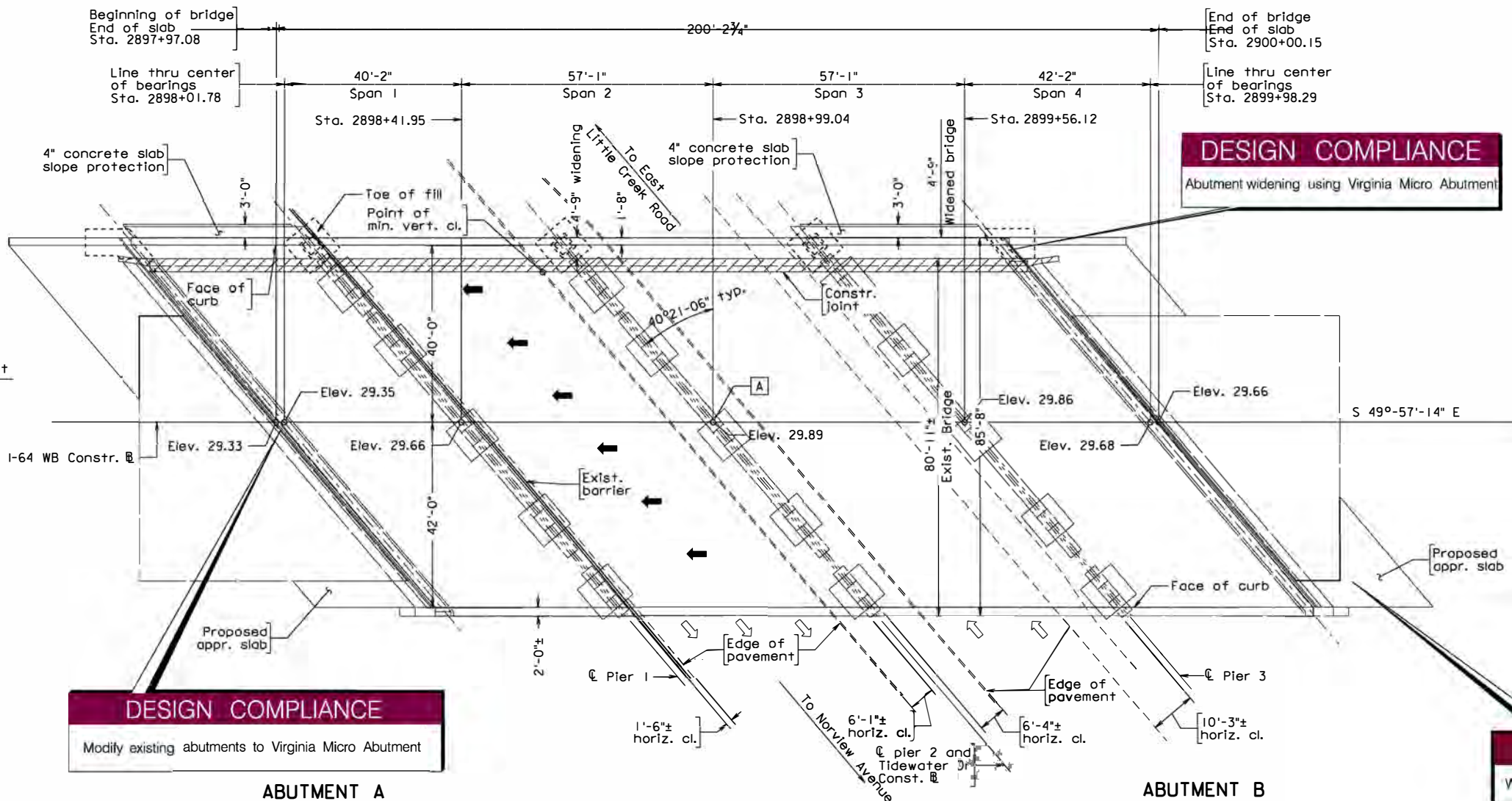
These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

Design loading includes 20 psf allowance for construction tolerances and construction methods.

Design loading includes 15 psf allowance for future wearing surface.

Bridge No. of existing bridge is 2815. Plan No. is 155-04, 155-04A and 155-05B.

The existing structure is designated a Type B structure in accordance with Sec. 411.



PLAN

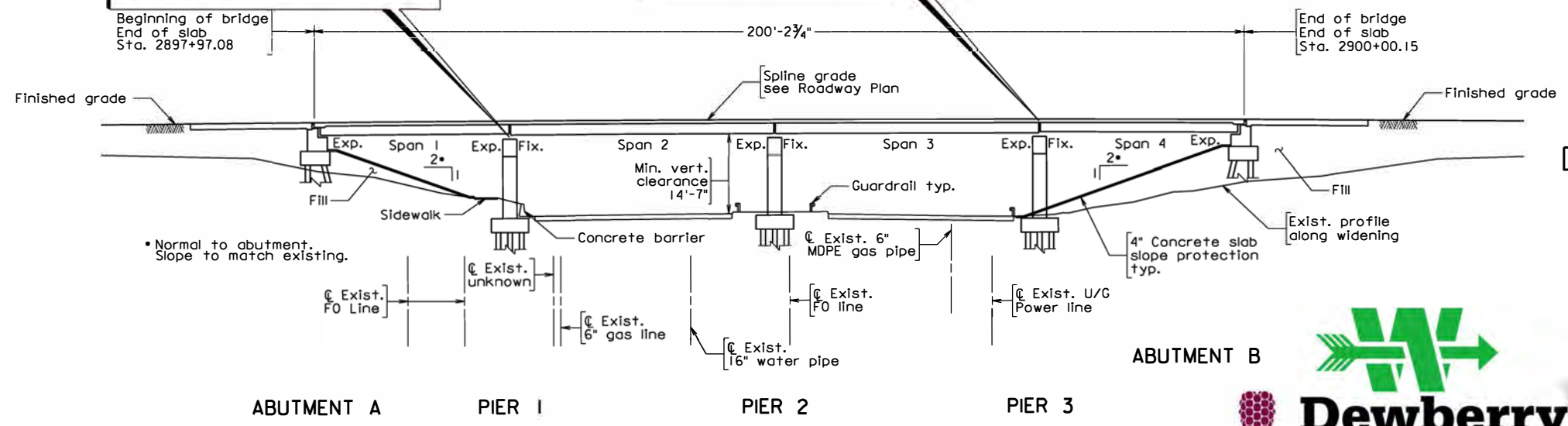
A POT Sta. 2898+99.04 I-64 WB R
 POT Sta. 56+33.82 Tidewater Drive R
 Δ = 49°-38'-54"

Legend:
 Denotes limits of removal

DESIGN COMPLIANCE
 Replace all existing bearings and components at piers and abutments

DESIGN COMPLIANCE
 Eliminate deck joints at piers.

DESIGN COMPLIANCE
 Widen approach slabs to curb line.



DEVELOPED SECTION ALONG WIDENING



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
 PROPOSED BRIDGE WIDENING
 I-64 WB OVER TIDEWATER DRIVE
 CITY OF NORFOLK
 1.0 MN. NW OF CHESAPEAKE BLVD.
 PROJ. 0063-122-470, B654

Recommended for Approval: _____ Date _____
 District Project Development Engineer

Approved: _____ Date _____
 District Administrator

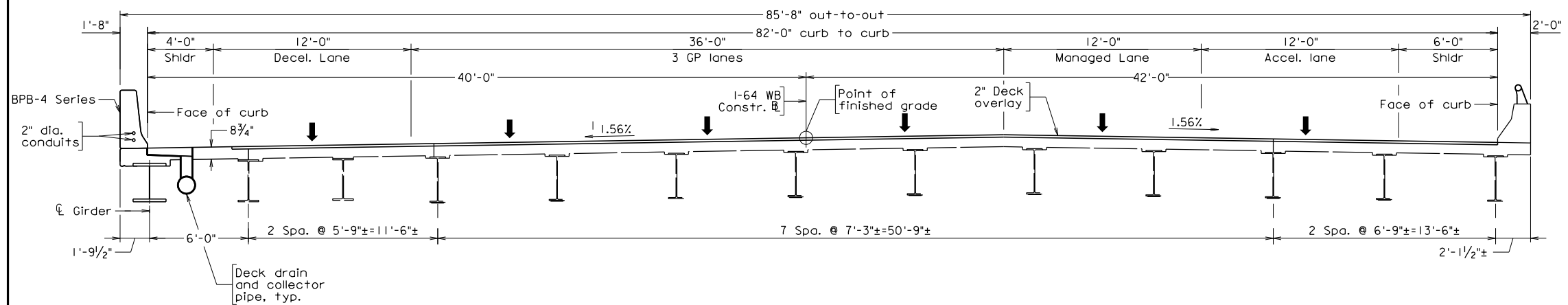
Dewberry Engineers Inc. Fairfax, VA STRUCTURAL ENGINEER
PLANS BY: Dewberry Engineers Inc.
COORDINATED:
SUPERVISED: Gregory J. Merkel
DESIGNED:
DRAWN: John P. Doulis
CHECKED: Gregory J. Merkel



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

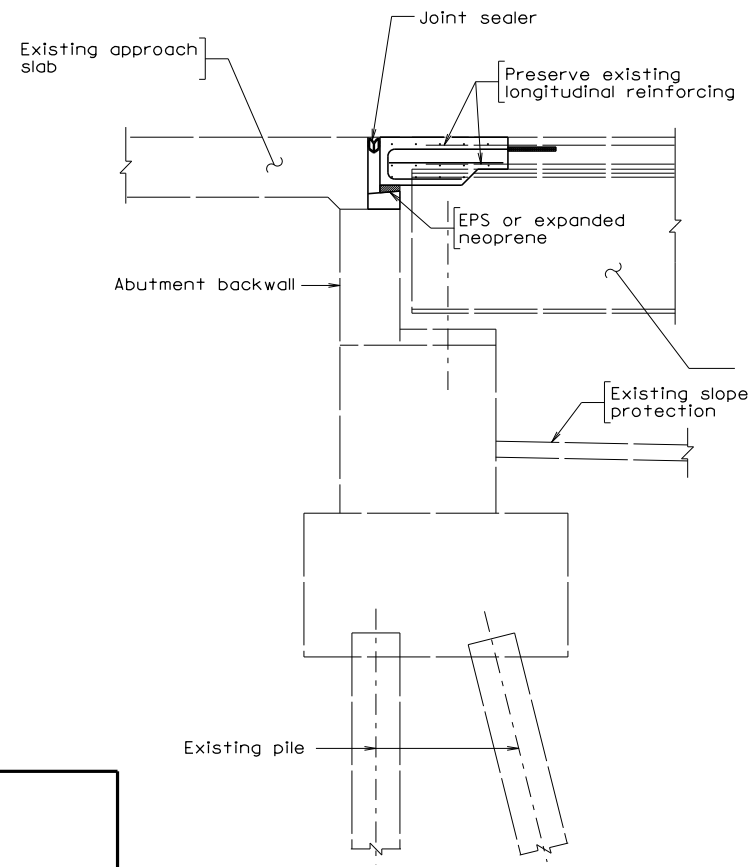
I64 WB over Tidewater Drive_1.dgn

STATE	FEDERAL AID		STATE	SHEET
ROUTE	PROJECT		ROUTE	PROJECT
VA.			64	0064-122-470, BXXX
				2

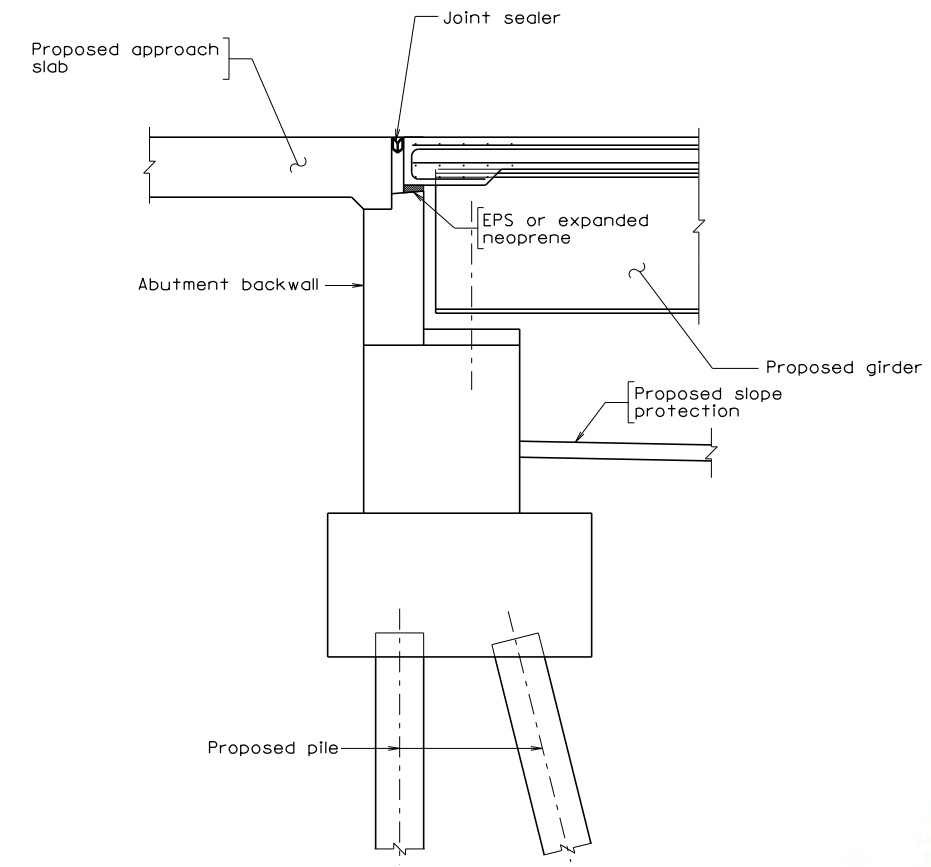


Notes:
 Removal work shall conform to Section 412.
 Exposed existing reinforcing bars shall be protected in conformance with Section 412.03.
 Existing superstructure is shown schematically and for information purpose only. The Contractor shall field verify the exact location and dimensions of the structure.

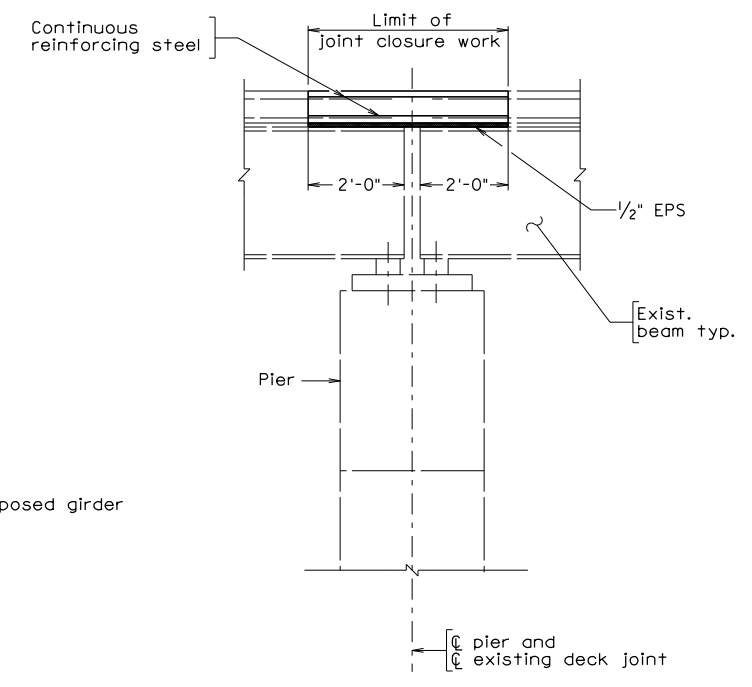
FINAL TRANSVERSE SECTION
 Scale: 1/4" = 1'-0"



MODIFIED EXISTING ABUTMENT SECTION
 Not to scale



MODIFIED EXISTING ABUTMENT SECTION
 Not to scale



JOINT CLOSURE DETAIL AT PIERS
 Minimum limits of joint closure are shown, actual limits will vary.

I64 WB over Tidewater Drive_2.dgn

DEWBERRY ENGINEERS INC.
 FAIRFAX, VA
 STRUCTURAL ENGINEER



Scale: 1/4" = 1'-0"

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COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
STRUCTURE AND BRIDGE DIVISION			
I-64 WB OVER TIDEWATER DRIVE TRANSVERSE SECTION			
No.	Description	Date	Designed: GJM Drawn: JEM Checked: JEM
	Revisions		Date: Aug. 2022
		Plan No.	Sheet No. 2 of 2

Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025							
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
I-64 Hampton Roads Express Lanes (HREL) Segment 1A Proposal Schedule						583	23-Sep-22	15-Dec-25	0												
Milestones						1180	23-Sep-22	15-Dec-25	0												
MS-1000	Notice of Intent to Award (Est 9-23-2022)	0	23-Sep-22		0	◆ Notice of Intent to Award (Est 9-23-2022)															
MS-1010	CTB Approval / Notice to Award (Est 10-26-2022)	0	26-Oct-22		0	◆ CTB Approval / Notice to Award (Est 10-26-2022)															
MS-1020	Design-Build Contract Execution (Est 11-18-2022)	0		18-Nov-22	0	◆ Design-Build Contract Execution (Est 11-18-2022)															
MS-1030	Notice to Proceed (Est 11-19-2022)	0	19-Nov-22*		0	◆ Notice to Proceed (Est 11-19-2022)															
MS-1070	Scope Validation Period	120	19-Nov-22	18-Mar-23	17	Scope Validation Period,															
MS-1060	Final Completion (Est 12-15-2025)	0		15-Dec-25*	0	◆ F															
Design						316	21-Nov-22	21-Aug-24	136												
Design Phase						270	21-Nov-22	28-May-24	182												
Design QA/QC Plan						21	21-Nov-22	05-Jan-23	62												
D-Q-1000	Prepare & Submit Design QA/QC Plan	16	21-Nov-22	14-Dec-22	90	Prepare & Submit Design QA/QC Plan,															
D-Q-1010	Present Design QA/QC Plan & Project Kick-off Meeting	1	15-Dec-22	15-Dec-22	90	Present Design QA/QC Plan & Project Kick-off Meeting,															
D-Q-1020	VDOT Review & Approve Design QA/QC Plan	21	16-Dec-22	05-Jan-23	132	VDOT Review & Approve Design QA/QC Plan,															
Field Surveys & Investigation Phase						113	21-Nov-22	04-May-23	142												
D-FS-1000	Prepare / Distribute Permission to Enter Letters	27	21-Nov-22	03-Jan-23	0	Prepare / Distribute Permission to Enter Letters,															
D-FS-1010	Perform Traffic Counts	17	21-Nov-22	15-Dec-22	137	Perform Traffic Counts,															
D-FS-1020	Reestablish Project Control / Set Aerial Mapping Photo Points	11	04-Jan-23	18-Jan-23	0	Reestablish Project Control / Set Aerial Mapping Photo Points,															
D-FS-1030	Perform Aerial Mapping	20	19-Jan-23	15-Feb-23	0	Perform Aerial Mapping,															
D-FS-1040	Perform Utility Designations	40	19-Jan-23	15-Mar-23	142	Perform Utility Designations,															
D-FS-1050	Perform Storm Sewer & Culvert Video Inspections	10	19-Jan-23	01-Feb-23	4	Perform Storm Sewer & Culvert Video Inspections,															
D-FS-1060	Perform Utility Test Holes	20	06-Apr-23	04-May-23	142	Perform Utility Test Holes,															
Geotechnical Investigations						180	21-Nov-22	15-Nov-23	37												
D-GER-1000	Prepare Boring Location Plan	7	21-Nov-22	01-Dec-22	45	Prepare Boring Location Plan,															
D-GER-1010	VDOT Review Boring Location Plan	21	02-Dec-22	22-Dec-22	68	VDOT Review Boring Location Plan,															
D-GER-1020	Geotechnical Field Investigations	57	27-Dec-22	16-Mar-23	45	Geotechnical Field Investigations,															
D-GER-1030	Geotechnical Lab Sampling & Testing	80	13-Jan-23	05-May-23	45	Geotechnical Lab Sampling & Testing,															
D-GER-1040	Prepare & Submit Roadway GER	28	08-May-23	15-Jun-23	45	Prepare & Submit Roadway GER,															
D-GER-1050	Prepare & Submit Bridges GER	38	08-May-23	29-Jun-23	55	Prepare & Submit Bridges GER,															
D-GER-1060	VDOT Review of Roadway GER	90	16-Jun-23	13-Sep-23	64	VDOT Review of Roadway GER,															
D-GER-1070	VDOT Review of Bridge GER	90	30-Jun-23	27-Sep-23	81	VDOT Review of Bridge GER,															
D-GER-1080	Incorporate VDOT Comments & Resubmit Roadway GER	15	14-Sep-23	04-Oct-23	46	Incorporate VDOT Comments & Resubmit Roadway GER,															
D-GER-1090	Incorporate VDOT Comments & Resubmit Bridges GER	20	28-Sep-23	25-Oct-23	55	Incorporate VDOT Comments & Resubmit Bridges GER,															
D-GER-1100	VDOT Review & Approve Roadway GER	21	05-Oct-23	25-Oct-23	82	VDOT Review & Approve Roadway GER,															
D-GER-1110	VDOT Review & Approve Bridges GER	21	26-Oct-23	15-Nov-23	84	VDOT Review & Approve Bridges GER,															
Roadway Design						196	21-Nov-22	21-Dec-23	29												
D-RD-1000	Establish / Finalize Horizontal Alignments & Vertical Profiles	68	21-Nov-22	01-Mar-23	0	Establish / Finalize Horizontal Alignments & Vertical Profiles,															
D-RD-1010	Roadway Drainage Design	60	04-Jan-23	28-Mar-23	5	Roadway Drainage Design,															
D-RD-1020	Stormwater Management & Adequate Outfall	40	02-Feb-23	29-Mar-23	4	Stormwater Management & Adequate Outfall,															
D-RD-1030	Prepare Roadway Plan Set & Details	30	30-Mar-23	11-May-23	4	Prepare Roadway Plan Set & Details,															
D-RD-1040	Design QA/QC & Submit Roadway Plans (1st Submission)	10	12-May-23	25-May-23	4	Design QA/QC & Submit Roadway Plans (1st Submission),															
D-RD-1050	VDOT / FHWA Review & Comment on Roadway Plans (1st Submission)	21	26-May-23	15-Jun-23	42	VDOT / FHWA Review & Comment on Roadway Plans (1st Submission),															
D-RD-1060	Address Comments / Prepare Roadway Plans (2nd Submission)	50	16-Jun-23	25-Aug-23	63	Address Comments / Prepare Roadway Plans (2nd Submission),															
D-RD-1070	Design QA/QC & Submit Roadway Plans (2nd Submission)	10	28-Aug-23	11-Sep-23	63	Design QA/QC & Submit Roadway Plans (2nd Submission),															
D-RD-1080	VDOT / FHWA Review & Comment on Roadway Plans (2nd Submission)	21	05-Oct-23	25-Oct-23	68	VDOT / FHWA Review & Comment on Roadway Plans (2nd Submission),															
D-RD-1090	Address Comments / Prepare Roadway Plans (Final Submission)	10	26-Oct-23	08-Nov-23	43	Address Comments / Prepare Roadway Plans (Final Submission),															

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
D-RD-1100	Design QA/QC & Submit Roadway Plans (Final Submission)	5	09-Nov-23	15-Nov-23	43													
D-RD-1110	VDOT / FHWA Review & Comment on Roadway Plans (Final Submission)	21	16-Nov-23	06-Dec-23	68													
D-RD-1120	Final Comment Resolution for Roadway Plans	10	07-Dec-23	20-Dec-23	45													
D-RD-1130	Released for Construction (RFC) Roadway Plans Issued	1	21-Dec-23	21-Dec-23	68													
Early Temporary Traffic Control Plans - Stage 1		126	21-Nov-22	05-Aug-23	24													
D-TTC-1000	Prepare Transportation Management Plans (TMP)	20	21-Nov-22	20-Dec-22	110													
D-TTC-1010	Prepare Early TTC Plans (Stage 1)	40	16-Feb-23	13-Apr-23	32													
D-TTC-1020	Design QA/QC & Submit Early TTC Plans (1st Submission)	10	14-Apr-23	27-Apr-23	32													
D-TTC-1030	VDOT / FHWA Review & Comment on Early TTC Plans (1st Submission)	21	28-Apr-23	18-May-23	47													
D-TTC-1040	Address Comments / Prepare Early TTC Plans (2nd Submission)	20	19-May-23	16-Jun-23	31													
D-TTC-1050	Design QA/QC & Submit Early TTC Plans (2nd Submission)	10	19-Jun-23	30-Jun-23	31													
D-TTC-1060	VDOT / FHWA Review & Comment on Early TTC Plans (2nd Submission)	21	01-Jul-23	21-Jul-23	46													
D-TTC-1070	Comment Resolution for Early TTC Plans	10	24-Jul-23	04-Aug-23	31													
D-TTC-1080	Released for Construction (RFC) Early TTC Plans Issued	1	05-Aug-23	05-Aug-23	46													
Right-of-Way Plans		39	16-Jun-23	26-Aug-23	22													
D-ROW-1000	Address Right-of-Way Comments from 1st Roadway Submission (ROW Plans)	20	16-Jun-23	14-Jul-23	29													
D-ROW-1010	Design QA/QC Right-of-Way Plans (Final Submission) (Right-of-Way Plans)	10	17-Jul-23	28-Jul-23	29													
D-ROW-1020	VDOT / FHWA Review & Comment on ROW Plans (Final Submission) (ROW Plans)	21	29-Jul-23	18-Aug-23	44													
D-ROW-1030	Comment Resolution for Right-of-Way Plans (Right-of-Way Plans)	5	21-Aug-23	25-Aug-23	29													
D-ROW-1040	Approved for Right-of-Way Acquisition Plans Issued (Right-of-Way Plans)	1	26-Aug-23	26-Aug-23	42													
Lighting & Electrical Plans		114	26-May-23	03-Jan-24	83													
D-LEP-1000	Prepare Lighting Photometric Plans	20	26-May-23	23-Jun-23	122													
D-LEP-1010	Design QA/QC & Submit Photometric Plans	10	26-Jun-23	10-Jul-23	122													
D-LEP-1020	VDOT / FHWA Review & Comment on Photometric Plans	21	11-Jul-23	31-Jul-23	178													
D-LEP-1030	Address Comments / Prepare Final Photometric Plans	10	01-Aug-23	14-Aug-23	122													
D-LEP-1040	Design QA/QC Photometric Plans	5	15-Aug-23	21-Aug-23	122													
D-LEP-1050	VDOT / FHWA Review & Approve Photometric Plans	21	22-Aug-23	11-Sep-23	202													
D-LEP-1060	Prepare Electrical Plans for Roadway Lighting	30	22-Aug-23	03-Oct-23	122													
D-LEP-1070	Design QA/QC & Submit Electrical Plans for Roadway Lighting (1st Submission)	10	04-Oct-23	17-Oct-23	122													
D-LEP-1080	VDOT / FHWA Review & Comment on Electrical Plans (1st Submission)	21	18-Oct-23	07-Nov-23	180													
D-LEP-1090	Address Comments / Prepare Electrical Plans for Lighting (Final Submission)	10	08-Nov-23	21-Nov-23	122													
D-LEP-1100	Design QA/QC & Submit Electrical Plans (Final Submission)	5	22-Nov-23	30-Nov-23	122													
D-LEP-1110	VDOT / FHWA Review & Comment on Electrical Plans (Final Submission)	21	01-Dec-23	21-Dec-23	178													
D-LEP-1120	Comment Resolution for Electrical Plans	5	26-Dec-23	02-Jan-24	121													
D-LEP-1130	Released for Construction (RFC) Lighting & Electrical Plans Issued	1	03-Jan-24	03-Jan-24	172													
Bridge Plans - I-64 EB over Granby (B655)		188	28-Nov-22	09-Dec-23	0													
D-BR-EBGB-1000	Complete Detailed Field Inspection (EB - Granby)	5	28-Nov-22	02-Dec-22	3													
D-BR-EBGB-1010	Prepare & Submit - Stage 1 Bridge Plans & Report (EB - Granby)	25	08-Dec-22	16-Jan-23	0													
D-BR-EBGB-1020	VDOT / FHWA Review & Comment on Stage 1 Plans & Report (EB - Granby)	21	17-Jan-23	06-Feb-23	0													
D-BR-EBGB-1030	Address Stage 1 Comments & Resubmit (EB - Granby)	10	07-Feb-23	20-Feb-23	0													
D-BR-EBGB-1040	Prepare Bridge Plans (1st Submission) (EB - Granby)	115	21-Feb-23	03-Aug-23	0													
D-BR-EBGB-1050	VDOT / FHWA Review & Approve - Stage 1 Plans & Report (EB - Granby)	21	04-Aug-23	24-Aug-23	0													
D-BR-EBGB-1060	Design QA/QC & Submit Bridge Plans (1st Submission) (EB - Granby)	10	25-Aug-23	08-Sep-23	0													
D-BR-EBGB-1070	VDOT / FHWA Review & Comment on Bridge Plans (1st Submission) (EB - Granby)	21	09-Sep-23	29-Sep-23	2													
D-BR-EBGB-1080	Address Comments / Prepare Bridge Plans (Final Submission) (EB - Granby)	15	02-Oct-23	20-Oct-23	0													
D-BR-EBGB-1090	Design QA/QC & Submit Bridge Plans (Final Submission) (EB - Granby)	10	23-Oct-23	03-Nov-23	0													

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025					
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
D-BR-EBGB-1100	VDOT / FHWA Review & Comment on Br. Plans (Final Submission) (EB - Granby)	21	04-Nov-23	24-Nov-23	2														
D-BR-EBGB-1110	Comment Resolution for Bridge Plans (EB - Granby)	10	27-Nov-23	08-Dec-23	0														
D-BR-EBGB-1120	Released for Construction Bridge Plans Issued (EB - Granby)	1	09-Dec-23	09-Dec-23	1														
Bridge Plans - I-64 EB over I-564 (B656)		188	28-Nov-22	08-Dec-23	22														
D-BR-EB564-1000	Complete Detailed Field Inspection (EB - I564)	5	28-Nov-22	02-Dec-22	48														
D-BR-EB564-1010	Prepare & Submit - Stage 1 Bridge Plans & Report (EB - 564)	25	05-Dec-22	11-Jan-23	61														
D-BR-EB564-1020	VDOT / FHWA Review & Comment on Stage 1 Plans & Report (EB - 564)	21	12-Jan-23	01-Feb-23	85														
D-BR-EB564-1030	Address Stage 1 Comments & Resubmit (EB - 564)	10	02-Feb-23	15-Feb-23	150														
D-BR-EB564-1040	Prepare Bridge Plans (1st Submission) (EB - 564)	115	02-Feb-23	17-Jul-23	60														
D-BR-EB564-1050	VDOT / FHWA Review & Approve - Stage 1 Plans & Report (EB - 564)	21	16-Feb-23	08-Mar-23	216														
D-BR-EB564-1060	Design QA/QC & Submit Bridge Plans (1st Submission) (EB - 564)	10	22-Aug-23	05-Sep-23	35														
D-BR-EB564-1070	VDOT / FHWA Review & Comment on Bridge Plans (1st Submission) (EB - 564)	21	06-Sep-23	26-Sep-23	49														
D-BR-EB564-1080	Address Comments / Prepare Bridge Plans (Final Submission) (EB - 564)	15	27-Sep-23	17-Oct-23	35														
D-BR-EB564-1090	Design QA/QC & Submit Bridge Plans (Final Submission) (EB - 564)	10	18-Oct-23	31-Oct-23	35														
D-BR-EB564-1100	VDOT / FHWA Review & Comment on Bridge Plans (Final Submission) (EB - 564)	21	01-Nov-23	21-Nov-23	55														
D-BR-EB564-1110	Comment Resolution for Bridge Plans (EB - 564)	10	22-Nov-23	07-Dec-23	34														
D-BR-EB564-1120	Released for Construction Bridge Plans Issued (EB - 564)	1	08-Dec-23	08-Dec-23	53														
Bridge Plans - I-64 EB over Little Creek (B657)		188	28-Nov-22	08-Dec-23	32														
D-BR-EBLC-1000	Complete Detailed Field Inspection (EB - Little Creek)	5	28-Nov-22	02-Dec-22	48														
D-BR-EBLC-1010	Prepare & Submit - Stage 1 Bridge Plans & Report (EB - Little Creek)	35	05-Dec-22	25-Jan-23	66														
D-BR-EBLC-1020	VDOT / FHWA Review & Comment on Stage 1 Plans & Report (EB - Little Creek)	21	26-Jan-23	15-Feb-23	95														
D-BR-EBLC-1030	Address Stage 1 Comments & Resubmit (EB - Little Creek)	10	16-Feb-23	01-Mar-23	156														
D-BR-EBLC-1040	Prepare Bridge Plans (1st Submission) (EB - Little Creek)	115	16-Feb-23	31-Jul-23	66														
D-BR-EBLC-1050	VDOT / FHWA Review & Approve - Stage 1 Plans & Report (EB - Little Creek)	21	02-Mar-23	22-Mar-23	224														
D-BR-EBLC-1060	Design QA/QC & Submit Bridge Plans (1st Submission) (EB - Little Creek)	10	22-Aug-23	05-Sep-23	51														
D-BR-EBLC-1070	VDOT / FHWA Review & Comment on Br. Plans (1st Submission) (EB - Little Creek)	21	06-Sep-23	26-Sep-23	71														
D-BR-EBLC-1080	Address Comments / Prepare Bridge Plans (Final Submission) (EB - Little Creek)	15	27-Sep-23	17-Oct-23	49														
D-BR-EBLC-1090	Design QA/QC & Submit Bridge Plans (Final Submission) (EB - Little Creek)	10	18-Oct-23	31-Oct-23	49														
D-BR-EBLC-1100	VDOT / FHWA Review & Comment on Br. Plans (Final Submission) (EB - Little Creek)	21	01-Nov-23	21-Nov-23	76														
D-BR-EBLC-1110	Comment Resolution for Bridge Plans (EB - Little Creek)	10	22-Nov-23	07-Dec-23	49														
D-BR-EBLC-1120	Released for Construction Bridge Plans Issued (EB - Little Creek)	1	08-Dec-23	08-Dec-23	74														
Bridge Plans - I-64 EB over Tidewater (B653)		194	28-Nov-22	21-Dec-23	36														
D-BR-EBTW-1000	Complete Detailed Field Inspection (EB - Tidewater)	5	28-Nov-22	02-Dec-22	48														
D-BR-EBTW-1010	Prepare & Submit Stage 1 Bridge Plans & Report (EB - Tidewater)	37	07-Dec-22	31-Jan-23	59														
D-BR-EBTW-1020	VDOT / FHWA Review & Comment on Stage 1 Plans & Report (EB - Tidewater)	21	01-Feb-23	21-Feb-23	84														
D-BR-EBTW-1030	Address Stage 1 Comments & Resubmit (EB - Tidewater)	10	22-Feb-23	07-Mar-23	164														
D-BR-EBTW-1040	Prepare Bridge Plans (1st Submission) (EB - Tidewater)	130	22-Feb-23	25-Aug-23	59														
D-BR-EBTW-1050	VDOT / FHWA Review & Approve Stage 1 Plans & Report (EB - Tidewater)	21	08-Mar-23	28-Mar-23	236														
D-BR-EBTW-1060	Design QA/QC & Submit Bridge Plans (1st Submission) (EB - Tidewater)	10	28-Aug-23	11-Sep-23	59														
D-BR-EBTW-1070	VDOT / FHWA Review & Comment on Br. Plans (1st Submission) (EB - Tidewater)	21	12-Sep-23	02-Oct-23	85														
D-BR-EBTW-1080	Address Comments / Prepare Bridge Plans (Final Submission) (EB - Tidewater)	20	03-Oct-23	30-Oct-23	57														
D-BR-EBTW-1090	Design QA/QC & Submit Bridge Plans (Final Submission) (EB - Tidewater)	10	31-Oct-23	13-Nov-23	57														
D-BR-EBTW-1100	VDOT / FHWA Review & Comment on Br. Plans (Final Submission) (EB - Tidewater)	21	16-Nov-23	06-Dec-23	84														
D-BR-EBTW-1110	Comment Resolution for Bridge Plans (EB - Tidewater)	10	07-Dec-23	20-Dec-23	57														
D-BR-EBTW-1120	Released for Construction Bridge Plans Issued (EB - Tidewater)	1	21-Dec-23	21-Dec-23	84														
Bridge Plans - I-64 WB over Tidewater (B654)		189	05-Dec-22	21-Dec-23	71														

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
D-BR-WBTW-1000	Complete Detailed Field Inspection (WB - Tidewater)	5	05-Dec-22	09-Dec-22	48													
D-BR-WBTW-1010	Prepare & Submit Stage 1 Bridge Plans & Report (WB - Tidewater)	37	12-Dec-22	03-Feb-23	107													
D-BR-WBTW-1020	VDOT / FHWA Review & Comment on Stage 1 Plans & Report (WB - Tidewater)	21	04-Feb-23	24-Feb-23	156													
D-BR-WBTW-1030	Address Stage 1 Comments & Resubmit (WB - Tidewater)	10	27-Feb-23	10-Mar-23	212													
D-BR-WBTW-1040	Prepare Bridge Plans (1st Submission) (WB - Tidewater)	130	27-Feb-23	30-Aug-23	107													
D-BR-WBTW-1050	VDOT / FHWA Review & Approve Stage 1 Plans & Report (WB - Tidewater)	21	11-Mar-23	31-Mar-23	311													
D-BR-WBTW-1060	Design QA/QC & Submit Bridge Plans (1st Submission) (WB - Tidewater)	10	31-Aug-23	14-Sep-23	107													
D-BR-WBTW-1070	VDOT / FHWA Review & Comment on Br. Plans (1st Submission) (WB - Tidewater)	21	15-Sep-23	05-Oct-23	158													
D-BR-WBTW-1080	Address Comments / Prepare Bridge Plans (Final Submission) (WB - Tidewater)	15	06-Oct-23	26-Oct-23	107													
D-BR-WBTW-1090	Design QA/QC & Submit Bridge Plans (Final Submission) (WB - Tidewater)	10	27-Oct-23	09-Nov-23	107													
D-BR-WBTW-1100	VDOT / FHWA Review & Comment on Br. Plans (Final Submission) (WB - Tidewater)	21	16-Nov-23	06-Dec-23	153													
D-BR-WBTW-1110	Comment Resolution for Bridge Plans (WB - Tidewater)	10	07-Dec-23	20-Dec-23	105													
D-BR-WBTW-1120	Released for Construction Bridge Plans Issued (WB - Tidewater)	1	21-Dec-23	21-Dec-23	153													
Bridge Plans - I-64 WB over Granby (B629)		125	05-Dec-22	15-Aug-23	101													
D-BR-WBG-1000	Complete Detailed Field Inspection (WB - Granby)	5	05-Dec-22	09-Dec-22	149													
D-BR-WBG-1010	Prepare List of Repairs & Submit Repair Program / Plan (WB - Granby)	22	12-Dec-22	13-Jan-23	149													
D-BR-WBG-1020	VDOT / FHWA Review & Comment on Repair Program/Plan (WB - Granby)	21	14-Jan-23	03-Feb-23	214													
D-BR-WBG-1030	Address Comments / Prepare Bridge Plans (1st Submission) (WB - Granby)	78	06-Feb-23	25-May-23	148													
D-BR-WBG-1040	Design QA/QC & Submit Bridge Plans (1st Submission) (WB - Granby)	5	26-May-23	02-Jun-23	148													
D-BR-WBG-1050	VDOT / FHWA Review & Comment on Bridge Plans (1st Submission) (WB - I564)	21	03-Jun-23	23-Jun-23	219													
D-BR-WBG-1060	Address Comments / Prepare Bridge Plans (Final Submission) (WB - Granby)	10	26-Jun-23	10-Jul-23	148													
D-BR-WBG-1070	Design QA/QC & Submit Bridge Plans (Final Submission) (WB - Granby)	5	11-Jul-23	17-Jul-23	148													
D-BR-WBG-1080	VDOT / FHWA Review & Comment on Br. Plans (Final Submission) (WB - Granby)	21	18-Jul-23	07-Aug-23	216													
D-BR-WBG-1090	Comment Resolution for Bridge Plans (WB - Granby)	5	08-Aug-23	14-Aug-23	148													
D-BR-WBG-1100	Released for Construction Bridge Plans Issued (WB - Granby)	1	15-Aug-23	15-Aug-23	215													
Bridge Plans - I-64 WB over Little Creek (B630)		129	05-Dec-22	23-Aug-23	35													
D-BR-WBLC-1000	Complete Detailed Field Inspection (WB - Little Creek)	5	05-Dec-22	09-Dec-22	48													
D-BR-WBLC-1010	Prepare List of Repairs & Submit Repair Program / Plan (WB - Little Creek)	27	12-Dec-22	20-Jan-23	48													
D-BR-WBLC-1020	VDOT / FHWA Review & Comment on Repair Program/Plan (WB - Little Creek)	21	21-Jan-23	10-Feb-23	68													
D-BR-WBLC-1030	Address Comments / Prepare Bridge Plans (1st Submission) (WB - Little Creek)	80	13-Feb-23	06-Jun-23	47													
D-BR-WBLC-1040	Design QA/QC & Submit Bridge Plans (1st Submission) (WB - Little Creek)	5	07-Jun-23	13-Jun-23	47													
D-BR-WBLC-1050	VDOT / FHWA Review & Comment on Br. Plans (1st Submission) (WB - Little Cr)	21	14-Jun-23	04-Jul-23	68													
D-BR-WBLC-1060	Address Comments / Prepare Bridge Plans (Final Submission) (WB - Little Creek)	10	05-Jul-23	18-Jul-23	47													
D-BR-WBLC-1070	Design QA/QC & Submit Bridge Plans (Final Submission) (WB - Little Creek)	5	19-Jul-23	25-Jul-23	47													
D-BR-WBLC-1080	VDOT / FHWA Review & Comment on Br. Plans (Final Submission) (WB - Little C)	21	26-Jul-23	15-Aug-23	68													
D-BR-WBLC-1090	Comment Resolution for Bridge Plans (WB - Little Creek)	5	16-Aug-23	22-Aug-23	47													
D-BR-WBLC-1100	Released for Construction Bridge Plans Issued (WB - Little Creek)	1	23-Aug-23	23-Aug-23	68													
Bridge Plans - I-64 Reversible Lanes over I-564 and Little Creek (B677)		129	05-Dec-22	22-Aug-23	316													
D-BR-RL564-1000	Complete Detailed Field Inspection (HOV - I564 & Little Creek)	5	05-Dec-22	09-Dec-22	447													
D-BR-RL564-1010	Prepare List of Repairs & Submit Repair Program / Plan (HOV - I564 & Little Cre)	25	12-Dec-22	18-Jan-23	447													
D-BR-RL564-1020	VDOT / FHWA Review & Comment on Repair Program/Plan (HOV - I564 & Little)	21	19-Jan-23	08-Feb-23	644													
D-BR-RL564-1030	Address Comments / Prepare Br. Plans (1st Submission) (HOV - I564 & Little Cre)	80	09-Feb-23	02-Jun-23	447													
D-BR-RL564-1040	Design QA/QC & Submit Bridge Plans (1st Submission) (HOV - I564 & Little Cree)	5	05-Jun-23	09-Jun-23	447													
D-BR-RL564-1050	VDOT / FHWA Review & Comment on Br. Plans (1st Submission) (HOV - I564 &	21	10-Jun-23	30-Jun-23	649													
D-BR-RL564-1060	Address Comments / Prepare Br. Plans (Final Submission) (HOV - I564 & Little C	10	03-Jul-23	17-Jul-23	447													
D-BR-RL564-1070	Design QA/QC & Submit Bridge Plans (Final Submission) (HOV - I564 & Little Cr)	5	18-Jul-23	24-Jul-23	447													

█ Remaining Level of Effort
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Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
D-BR-RL564-1080	VDOT / FHWA Review & Comment on Br. Plans (Final Submission) (HOV - I564)	21	25-Jul-23	14-Aug-23	647													
D-BR-RL564-1090	Comment Resolution for Bridge Plans (HOV - I564 & Little Creek)	5	15-Aug-23	21-Aug-23	447													
D-BR-RL564-1100	Released for Construction Bridge Plans Issued (HOV - I564 & Little Creek)	1	22-Aug-23	22-Aug-23	649													
Noise Analysis & Noise Barrier Plans		190	12-May-23	28-May-24	5													
D-NB-1000	Complete Noise Analysis / Field Data Collections	20	12-May-23	09-Jun-23	6													
D-NB-1010	Complete Noise Modeling	55	12-Jun-23	28-Aug-23	6													
D-NB-1020	Prepare Noise Report (1st Submission)	15	29-Aug-23	19-Sep-23	6													
D-NB-1030	QA/QC & Submit Noise Report (1st Submission)	5	20-Sep-23	26-Sep-23	6													
D-NB-1040	VDOT Review & Comment on Noise Report	21	27-Sep-23	17-Oct-23	8													
D-NB-1050	Address Comments and Prepare Noise Report (2nd Submission)	15	18-Oct-23	07-Nov-23	6													
D-NB-1060	QA/QC & Submit Noise Report (2nd Submission)	5	08-Nov-23	14-Nov-23	6													
D-NB-1070	VDOT / FHWA Review & Approve Noise Report	21	15-Nov-23	05-Dec-23	9													
D-NB-1080	Prepare & Distribute Noise Barrier Survey Letters (Letter #1)	10	06-Dec-23	19-Dec-23	7													
D-NB-1090	Receive Responses and Compile Survey Results (Letter #1)	25	20-Dec-23	26-Jan-24	7													
D-NB-1100	Prepare & Distribute Noise Barrier Survey Letters (Letter #2)	10	29-Jan-24	09-Feb-24	42													
D-NB-1110	Prepare Noise Barrier Plan / Profiles	35	29-Jan-24	15-Mar-24	7													
D-NB-1120	Receive Responses and Compile Survey Results (Letter #2)	15	12-Feb-24	01-Mar-24	42													
D-NB-1130	Prepare & Submit Noise Barrier Voting Addendum Report	10	04-Mar-24	15-Mar-24	42													
D-NB-1140	VDOT Review & Approve Noise Barrier Voting Addendum	21	16-Mar-24	05-Apr-24	61													
D-NB-1150	Design QA/QC & Submit Noise Barrier Plan/Profile Sheets (1st Submission)	5	18-Mar-24	22-Mar-24	7													
D-NB-1160	VDOT Review & Comment on Noise Barrier Plan / Profile Sheets (1st Submission)	21	23-Mar-24	12-Apr-24	12													
D-NB-1170	Address Comments on Noise Barrier Plan / Profile Sheets	10	15-Apr-24	26-Apr-24	8													
D-NB-1180	Design QA/QC & Submit Noise Barrier Plan/Profile Sheets (Final Submission)	5	29-Apr-24	03-May-24	8													
D-NB-1190	VDOT Review & Approve Noise Barrier Plan / Profile Sheets	21	04-May-24	24-May-24	12													
D-NB-1200	Noise Barrier Plan / Profile Released for Foundation & Panel Design and Constr.	1	28-May-24	28-May-24	7													
Environmental Permitting		182	19-Dec-22	19-Dec-23	119													
Joint Permit Process (Wetlands & Streams Waters)		168	19-Jan-23	19-Dec-23	30													
P-JPA-1000	Wetland Delineations - Flagging & Surveying	20	19-Jan-23	15-Feb-23	62													
P-JPA-1010	Submit & Obtain Jurisdictional Determination	45	16-Feb-23	20-Apr-23	62													
P-JPA-1020	Prepare Joint Permit Application (JPA)	27	12-May-23	20-Jun-23	47													
P-JPA-1030	JPA Pre-Application Meeting	1	12-Jun-23	12-Jun-23	53													
P-JPA-1040	Submit JPA	1	21-Jun-23	21-Jun-23	47													
P-JPA-1050	Agency Review and Comment on JPA	60	22-Jun-23	15-Sep-23	47													
P-JPA-1060	Conditional Approval of JPA - Initiate Purchase of Mitigation Credits	0		15-Sep-23	47													
P-JPA-1070	Public Notice for Environmental Permit (Individual Permit)	30	18-Sep-23	27-Oct-23	47													
P-JPA-1080	Purchase Wetland and Stream Credits	20	18-Sep-23	13-Oct-23	57													
P-JPA-1090	Final Agency Review of JPA & VDOT Approval	21	28-Oct-23	17-Nov-23	74													
P-JPA-1100	VDOT Issues Environmental Clearance	20	20-Nov-23	19-Dec-23	47													
Threatened & Endangered Species		55	04-Jan-23	21-Mar-23	236													
P-TE-1000	T&E Species Identification & Impact Coordination	35	04-Jan-23	21-Feb-23	236													
P-TE-1010	Prepare & Submit T&E Species Documentation	20	22-Feb-23	21-Mar-23	236													
Hazardous Material and Environmental Site Assessments (ESAs)		123	19-Dec-22	23-Aug-23	178													
P-HM-1000	Prepare & Submit Phase II ESA Reports	17	19-Dec-22	13-Jan-23	326													
P-HM-1010	VDOT Review & Approval Phase II ESA Reports	21	14-Jan-23	03-Feb-23	472													
P-HM-1020	Complete Phase I ESA Investigation on Additional Properties	17	26-May-23	20-Jun-23	248													
P-HM-1030	Prepare/Submit Phase I ESA Reports	30	21-Jun-23	02-Aug-23	248													

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						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
P-HM-1040	VDOT Review & Approval Phase I ESA Reports	21	03-Aug-23	23-Aug-23	361																
LD-445	Land Disturbance Permit / Storm Water Management Permit	71	19-Jun-23	30-Oct-23	54																
	Early TTC Plan Land Disturbance (Stage 1)	26	19-Jun-23	04-Aug-23	29																
P-LDE-1000	Prepare LD-445 Forms for Early TTC Plans	10	19-Jun-23	30-Jun-23	38																
P-LDE-1010	VDOT/Agency Review of LD-445 Forms for Early TTC Plans	21	01-Jul-23	21-Jul-23	55																
P-LDE-1020	Prepare SWPPP Documents for Early TTC Construction	10	24-Jul-23	04-Aug-23	38																
P-LDE-1030	Land Disturbance Approved for Early TTC Construction	0		04-Aug-23	38																
	Overall Project Land Disturbance	33	28-Aug-23	30-Oct-23	54																
P-LD-1000	Prepare LD-445 Forms	10	28-Aug-23	11-Sep-23	81																
P-LD-1010	VDOT/Agency Review of LD-445 Forms	21	12-Sep-23	02-Oct-23	120																
P-LD-1020	Prepare SWPPP Documents	20	03-Oct-23	30-Oct-23	81																
P-LD-1030	Land Disturbance Approved	0		30-Oct-23	81																
	Right-of-Way Acquisition Phase	229	26-May-23	21-Aug-24	3																
	Project Specific Right-of-Way Acquisition & Relocation Plan	43	26-May-23	11-Aug-23	3																
P-ROW-1000	Prepare & Submit Right-of-Way Acquisition & Relocation Plan	20	26-May-23	23-Jun-23	4																
P-ROW-1010	VDOT Review & Comment on Acquisition & Relocation Plan	21	24-Jun-23	14-Jul-23	6																
P-ROW-1020	Address Comments / Finalize Acquisition & Relocation Plan / Resubmit	5	17-Jul-23	21-Jul-23	4																
P-ROW-1030	VDOT Review / Approve Right-of-Way Acquisition & Relocation Plan	21	22-Jul-23	11-Aug-23	6																
	Right-of-Way Acquisitions (Assume 5 Parcels)	217	16-Jun-23	21-Aug-24	3																
P-ROW-P-1000	Update / Complete 60-Year Title Examinations	10	16-Jun-23	29-Jun-23	34																
P-ROW-P-1010	Complete Appraisals	35	14-Aug-23	02-Oct-23	4																
P-ROW-P-1020	Review Appraiser Perform / Complete Reviews	10	03-Oct-23	12-Oct-23	5																
P-ROW-P-1030	Submit Appraisal to VDOT (RUMS)	5	13-Oct-23	19-Oct-23	3																
P-ROW-P-1040	VDOT Approves Appraisals	21	20-Oct-23	09-Nov-23	5																
P-ROW-P-1050	Prepare Offer Packages	5	10-Nov-23	16-Nov-23	3																
P-ROW-P-1060	Negotiator Makes Initial Contact / Presents Offers	10	17-Nov-23	04-Dec-23	3																
P-ROW-P-1070	Negotiations Period	45	05-Dec-23	08-Feb-24	3																
P-ROW-P-1080	Provide Notice of Filing Certificate to Property Owner	3	09-Feb-24	13-Feb-24	3																
P-ROW-P-1090	Finalize Plans	4	14-Feb-24	19-Feb-24	4																
P-ROW-P-1100	Prepare & Submit Certificate Package	5	14-Feb-24	20-Feb-24	3																
P-ROW-P-1110	Obtain Signed Option (Property Access Available If Option Signed)	5	14-Feb-24	20-Feb-24	33																
P-ROW-P-1120	VDOT Review / Issue Certificate & Check	30	21-Feb-24	03-Apr-24	3																
P-ROW-P-1130	Option / Settlement Documents Submitted to VDOT	5	04-Apr-24	10-Apr-24	3																
P-ROW-P-1140	VDOT Reviews Settlement Documents	21	11-Apr-24	01-May-24	5																
P-ROW-P-1150	Settlement Documents Provided to Settlement Attorney	2	02-May-24	03-May-24	3																
P-ROW-P-1160	Obtain Release of Liens (If Required)	60	06-May-24	30-Jul-24	9																
P-ROW-P-1170	BD Files Certificate at Courthouse	2	08-May-24	09-May-24	3																
P-ROW-P-1180	Property Access Available (If by Certificate)	1	10-May-24	10-May-24	3																
P-ROW-P-1190	DB Requests NTCC on Available Parcels	5	13-May-24	17-May-24	3																
P-ROW-P-1200	Notice to VDOT that all Liens are Cleared	1	17-Jul-24	17-Jul-24	5																
P-ROW-P-1210	VDOT Issues Settlement Check	21	18-Jul-24	07-Aug-24	5																
P-ROW-P-1220	Settlement Attorney Holds Settlement / Records Acquisition	10	08-Aug-24	21-Aug-24	3																
P-ROW-P-1230	Right-of-Way Process Complete	0		21-Aug-24	5																
	Procurement & Submittals	152	01-Nov-23	05-Sep-24	45																
	Storm Drain	35	26-Dec-23	12-Mar-24	63																
PRO-SD-1000	Prepare & Submit Storm Drain Shop Drawings	20	26-Dec-23	23-Jan-24	85																

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						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
PRO-SD-1010	Review & Approve Storm Drain Shop Drawings	21	24-Jan-24	13-Feb-24	120																		
PRO-SD-1020	Fabricate & Deliver Storm Drain	20	14-Feb-24	12-Mar-24	84																		
Steel Beams		111	01-Nov-23	20-Jun-24	79																		
I64 EB over Granby		82	06-Nov-23	02-May-24	77																		
PRO-STL-1060	Prepare & Submit Steel Beams - EB over Granby St.	20	06-Nov-23	05-Dec-23	99																		
PRO-STL-1090	Review & Approve Steel Beams - EB over Granby St.	21	06-Dec-23	26-Dec-23	145																		
PRO-STL-1120	Fabricate & Deliver Steel Beams - EB over Granby St.	90	27-Dec-23	02-May-24	101																		
I64 EB over I564		84	01-Nov-23	01-May-24	75																		
PRO-STL-1000	Prepare & Submit Steel Beams Shop Dwgs - EB over 564	20	01-Nov-23	30-Nov-23	98																		
PRO-STL-1020	Review & Approve Steel Beams - EB over 564	21	01-Dec-23	21-Dec-23	144																		
PRO-STL-1040	Fabricate & Deliver Steel Beams - EB over 564	90	26-Dec-23	01-May-24	98																		
I64 EB over Little Creek		84	01-Nov-23	01-May-24	52																		
PRO-STL-1010	Prepare & Submit Steel Beams - EB over Little Creek	20	01-Nov-23	30-Nov-23	66																		
PRO-STL-1030	Review & Approve Steel Beams - EB over Little Creek	21	01-Dec-23	21-Dec-23	97																		
PRO-STL-1050	Fabricate & Deliver Steel Beams - EB over Little Creek	90	26-Dec-23	01-May-24	66																		
I64 EB over Tidewater		87	26-Dec-23	20-Jun-24	46																		
PRO-STL-1070	Prepare & Submit Steel Beams - EB over Tidewater	20	26-Dec-23	23-Jan-24	60																		
PRO-STL-1100	Review & Approve Steel Beams - EB over Tidewater	21	24-Jan-24	13-Feb-24	85																		
PRO-STL-1130	Fabricate & Deliver Steel Beams - EB over Tidewater	90	14-Feb-24	20-Jun-24	60																		
I64 WB over Tidewater		87	26-Dec-23	20-Jun-24	79																		
PRO-STL-1080	Prepare & Submit Steel Beams - WB over Tidewater	20	26-Dec-23	23-Jan-24	105																		
PRO-STL-1110	Review & Approve Steel Beams - WB over Tidewater	21	24-Jan-24	13-Feb-24	149																		
PRO-STL-1140	Fabricate & Deliver Steel Beams - WB over Tidewater	90	14-Feb-24	20-Jun-24	104																		
Retaining Wall		29	26-Dec-23	27-Feb-24	94																		
PRO-RW-1000	Prepare & Submit Retaining Wall - CIP	30	26-Dec-23	06-Feb-24	126																		
PRO-RW-1010	Review & Approve Retaining Wall - CIP	21	07-Feb-24	27-Feb-24	181																		
Noise Barrier		54	29-May-24	05-Sep-24	5																		
Noise Barrier Posts		39	29-May-24	06-Aug-24	20																		
P-SW-1000	Prepare & Submit Noise Barrier Posts	15	29-May-24	18-Jun-24	7																		
P-SW-1010	Review & Approve Noise Barrier Posts	21	19-Jun-24	09-Jul-24	40																		
P-SW-1020	Fabricate & Deliver Noise Barrier Posts	20	10-Jul-24	06-Aug-24	28																		
Noise Barrier Panels		42	19-Jun-24	05-Sep-24	5																		
P-SW-2000	Prepare & Submit Noise Barrier Panels	15	19-Jun-24	10-Jul-24	7																		
P-SW-2010	Review & Approve Noise Barrier Panels	21	11-Jul-24	31-Jul-24	11																		
P-SW-2020	Fabricate & Deliver Noise Barrier Panels	25	01-Aug-24	05-Sep-24	7																		
Lighting		79	04-Jan-24	14-Jun-24	89																		
PRO-LTG-1000	Prepare & Submit Lighting Shop Drawings	20	04-Jan-24	31-Jan-24	120																		
PRO-LTG-1010	Review & Approve Lighting Shop Drawings	21	01-Feb-24	21-Feb-24	173																		
PRO-LTG-1020	Fabricate & Deliver Light Poles & Lights	80	22-Feb-24	14-Jun-24	120																		
Utility Relocations		264	15-Dec-22	07-Jun-24	223																		
U-1000	Utility Kickoff Meeting with VDOT	1	15-Dec-22	15-Dec-22	89																		
U-1010	Conduct Preliminary Utility Meeting	1	11-Jan-23	11-Jan-23	89																		
U-1030	Input / Update RUMS data	280	12-Jan-23	20-Feb-24	382																		
U-1040	Review Prior Rights Documents	45	12-Jan-23	15-Mar-23	407																		
U-1070	Prepare VDOT forms	90	12-Jan-23	18-May-23	89																		
U-1005	Prepare Preliminary Utility Status Report	45	12-Jan-23	15-Mar-23	407																		

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						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
U-1110	Identify Test Holes	50	12-Jan-23	22-Mar-23	392														
U-1100	SUE Designations Complete	1	16-Mar-23	16-Mar-23	396														
U-1140	Review Test Holes	10	23-Mar-23	05-Apr-23	392														
U-1120	Prepare Draft Master Utility Agreements	25	06-Apr-23	11-May-23	392														
U-1130	60% Roadway Plans Submitted	1	26-May-23	26-May-23	83														
U-1150	Conduct UFI	1	30-May-23	30-May-23	83														
U-1090	Review Utility P&E's	45	31-May-23	02-Aug-23	83														
U-1080	Finalize Utility P&E's	15	03-Aug-23	23-Aug-23	83														
U-1180	Prepare Master Utility Relocation Sheets	25	03-Aug-23	07-Sep-23	310														
U-1160	VDOT Review/Approve Utility P&E's	21	24-Aug-23	13-Sep-23	120														
U-1170	Prepare Final Master Utility Agreements	5	14-Sep-23	20-Sep-23	306														
U-1190	Coordinate Utility Relocation CN - Verizon F.O. Duct Bank Relocation at TDW Dr.	80	14-Sep-23	10-Jan-24	81														
U-1220	Coordinate Utility Relocation CN - Lumen F.O. Duct Bank Relocation at TDW Dr.	40	14-Sep-23	08-Nov-23	121														
U-1200	Attend Utility Relocation CN Meetings	75	21-Sep-23	10-Jan-24	306														
U-1210	Prepare Utility Relocation As-Builts	105	11-Jan-24	07-Jun-24	306														
Construction		373	07-Aug-23	25-Aug-25	0														
Stage 1		40	07-Aug-23	20-Oct-23	110														
Stage 1 Area 1 - I-64 EB 964+50 to 1025+00 Shoulder Strengthening		8	07-Aug-23	18-Aug-23	24														
C-S1A1-RD1000	Stage 1 Area 1 Install MOT Devices	2	07-Aug-23	08-Aug-23	24														
C-S1A1-RD1010	Stage 1 Area 1 I64 EB Strengthen Shoulder on Inside	3	10-Aug-23	14-Aug-23	24														
C-S1A1-RD1020	Stage 1 Area 1 I64 EB Set MOT for Stage 2	3	15-Aug-23	18-Aug-23	24														
Stage 1 Area 2 - I-64 EB 1025+00 to 1085+50 Shoulder Strengthening		38	10-Aug-23	20-Oct-23	64														
C-S1A2-RD1000	Stage 1 Area 2 Install MOT Devices	2	10-Aug-23	11-Aug-23	28														
C-S1A2-RD1010	Stage 1 Area 2 I64 EB Strengthen Shoulder on Outside	3	21-Aug-23	24-Aug-23	24														
C-S1A2-RD1020	Stage 1 Area 2 Build temp. pave. for left turn from at TDW Dr / Thole St traffic lig	5	25-Aug-23	01-Sep-23	64														
C-S1A2-RD1030	Stage 1 Area 2 Perform signal modifications	20	05-Sep-23	11-Oct-23	64														
C-S1A2-RD1040	Stage 1 Area 2 Open temporary left turn, close existing Tidewater Loop ramp C	2	13-Oct-23	16-Oct-23	64														
C-S1A2-RD1050	Stage 1 Area 2 Set MOT Devices for Stage 2	2	18-Oct-23	20-Oct-23	64														
Stage 1 Area 3 - I-64 WB 3032+00 to 3082+00 Shoulder Strengthening		12	14-Aug-23	01-Sep-23	134														
C-S1A3-RD1000	Stage 1 Area 3 Install MOT Devices	2	14-Aug-23	15-Aug-23	29														
C-S1A3-RD1010	Stage 1 Area 3 I64 WB Strengthen Shoulder on Inside	3	25-Aug-23	29-Aug-23	24														
C-S1A3-RD1020	Stage 1 Area 3 Set MOT Devices for Stage 2	2	31-Aug-23	01-Sep-23	134														
Stage 1 Area 4 - I-64 WB 2810+50 to 2860+00 Shoulder Strengthening		13	17-Aug-23	08-Sep-23	24														
C-S1A4-RD1000	Stage 1 Area 4 Install MOT Devices	2	17-Aug-23	18-Aug-23	30														
C-S1A4-RD1010	Stage 1 Area 4 I64 WB Strengthen Shoulder on Inside	3	31-Aug-23	05-Sep-23	24														
C-S1A4-RD1020	Stage 1 Area 4 Install MOT Devices for Stage 2	2	07-Sep-23	08-Sep-23	24														
Stage 1 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00 Shoulder Strengthening		15	21-Aug-23	18-Sep-23	106														
C-S1A5-RD1000	Stage 1 Area 5 Install MOT Devices	2	21-Aug-23	22-Aug-23	113														
C-S1A5-RD1010	Stage 1 Area 5 I64 HOV Strengthen Shoulder on South Side of Reversible Lanes	3	07-Sep-23	11-Sep-23	106														
C-S1A5-RD1020	Stage 1 Area 5 I64 HOV Set MOT for Stage 2	3	13-Sep-23	18-Sep-23	106														
Stage 2		257	11-Sep-23	17-Feb-25	44														
Stage 2 Area 1 - I-64 EB 964+50 to 1025+00 - Widen to the Outside		207	11-Dec-23	05-Feb-25	49														
Stage 2 Area 1 - I-64 EB Sta. 964+50 to 1025+00 - Roadway		125	26-Dec-23	29-Aug-24	74														
C-S2A1-RD1000	Stage 2 Area 1 - Install E&S Controls	5	26-Dec-23	03-Jan-24	29														
C-S2A1-RD1010	Stage 2 Area 1 - Demo Existing Barrier / Guardrail	6	05-Jan-24	17-Jan-24	91														
C-S2A1-RD1020	Stage 2 Area 1 - Clearing & Grubbing	10	05-Jan-24	26-Jan-24	30														

█ Remaining Level of Effort
█ Actual Work
█ Critical Remaining Work
█ Actual Level of Effort
█ Remaining Work
◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
C-S2A1-RD1030	Stage 2 Area 1 - Sawcut/Demo/Mill Pavement	10	19-Jan-24	07-Feb-24	97														
C-S2A1-RD1040	Stage 2 Area 1 - Install Drainage/SWM	20	13-Mar-24	22-Apr-24	63														
C-S2A1-RD1050	Stage 2 Area 1 - Excavate / Embankment to Subgrade	10	23-Apr-24	09-May-24	63														
C-S2A1-RD1060	Stage 2 Area 1 - Fine Grade for Roadway / Barrier	5	10-May-24	20-May-24	73														
C-S2A1-RD1070	Stage 2 Area 1 - Install Underdrain	5	21-May-24	30-May-24	82														
C-S2A1-RD1080	Stage 2 Area 1 - Backfill/Grade Slopes	5	21-May-24	30-May-24	73														
C-S2A1-RD1090	Stage 2 Area 1 - Install Subbase (CTA/OGDL)	5	31-May-24	07-Jun-24	82														
C-S2A1-RD1100	Stage 2 Area 1 - Remove Electric/ITS Devices	10	31-May-24	17-Jun-24	73														
C-S2A1-RD1110	Stage 2 Area 1 - Asphalt Paving - Base Asphalt	5	10-Jun-24	17-Jun-24	85														
C-S2A1-RD1120	Stage 2 Area 1 - Asphalt Paving - Intermediate Asphalt	5	18-Jun-24	25-Jun-24	85														
C-S2A1-RD1130	Stage 2 Area 1 - Install TMS Ductbank / Junction Boxes	5	18-Jun-24	25-Jun-24	73														
C-S2A1-RD1140	Stage 2 Area 1 - Asphalt Paving - Surface Asphalt	5	27-Jun-24	05-Jul-24	85														
C-S2A1-RD1150	Stage 2 Area 1 - Install TMS / Sign Foundations / Light Foundations	10	27-Jun-24	15-Jul-24	73														
C-S2A1-RD1160	Stage 2 Area 1 - Install Barrier Walls	5	08-Jul-24	15-Jul-24	78														
C-S2A1-RD1170	Stage 2 Area 1 - Install Guardrail	5	16-Jul-24	23-Jul-24	78														
C-S2A1-RD1180	Stage 2 Area 1 - Install TMS / Sign Structures / Light Structures	10	16-Jul-24	01-Aug-24	73														
C-S2A1-RD1190	Stage 2 Area 1 - Install Navy Fence	15	25-Jul-24	20-Aug-24	78														
C-S2A1-RD1200	Stage 2 Area 1 - Finegrade slopes & Ditch/Seed	2	25-Jul-24	26-Jul-24	87														
C-S2A1-RD1210	Stage 2 Area 1 - Landscaping	2	29-Jul-24	30-Jul-24	87														
C-S2A1-RD1220	Stage 2 Area 1 - Pull & Terminate Power and Fiber	5	02-Aug-24	09-Aug-24	73														
C-S2A1-RD1230	Stage 2 Area 1 - Set MOT Barrier/Temp Striping/Shift Traffic for Stage 3	10	12-Aug-24	29-Aug-24	73														
Stage 2 Area 1 - Ramps		53	10-May-24	16-Aug-24	81														
Stage 2 Area 1 - Patrol Ramp A		14	10-May-24	06-Jun-24	102														
C-S2A1-PA-RD1000	Stage 2 Area 1 Patrol Ramp A - Install E&S Controls	2	10-May-24	13-May-24	63														
C-S2A1-PA-RD1010	Stage 2 Area 1 Patrol Ramp A - Demo Existing Barrier / Guardrail	2	15-May-24	17-May-24	63														
C-S2A1-PA-RD1020	Stage 2 Area 1 Patrol Ramp A - Install Drainage	2	15-May-24	17-May-24	65														
C-S2A1-PA-RD1030	Stage 2 Area 1 Patrol Ramp A - Demo/Mill Pavement	2	20-May-24	21-May-24	63														
C-S2A1-PA-RD1040	Stage 2 Area 1 Patrol Ramp A - Excavate / Embankment to Subgrade	3	23-May-24	28-May-24	63														
C-S2A1-PA-RD1050	Stage 2 Area 1 Patrol Ramp A - Asphalt Paving - Base Asphalt	2	30-May-24	31-May-24	64														
C-S2A1-PA-RD1070	Stage 2 Area 1 Patrol Ramp A - Install Barrier Walls	3	30-May-24	03-Jun-24	102														
C-S2A1-PA-RD1060	Stage 2 Area 1 Patrol Ramp A - Asphalt Paving - Surface Asphalt	2	03-Jun-24	04-Jun-24	64														
C-S2A1-PA-RD1080	Stage 2 Area 1 Patrol Ramp A - Install Guardrail	2	04-Jun-24	06-Jun-24	102														
Stage 2 Area 1 - I-564 Ramp B		13	06-Jun-24	27-Jun-24	92														
C-S2A1-564B-RD1000	Stage 2 Area 1 I-564 Ramp B - Install E&S Controls	2	06-Jun-24	07-Jun-24	63														
C-S2A1-564B-RD1020	Stage 2 Area 1 I-564 Ramp B - Demo Existing Barrier / Guardrail	2	10-Jun-24	11-Jun-24	63														
C-S2A1-564B-RD1030	Stage 2 Area 1 I-564 Ramp B - Install Drainage/SWM	2	10-Jun-24	11-Jun-24	65														
C-S2A1-564B-RD1040	Stage 2 Area 1 I-564 Ramp B - Demo/Mill Pavement	2	13-Jun-24	14-Jun-24	63														
C-S2A1-564B-RD1050	Stage 2 Area 1 I-564 Ramp B - Excavate / Embankment to Subgrade	3	17-Jun-24	20-Jun-24	63														
C-S2A1-564B-RD1060	Stage 2 Area 1 I-564 Ramp B - Asphalt Paving - Base Asphalt	2	21-Jun-24	24-Jun-24	71														
C-S2A1-564B-RD1010	Stage 2 Area 1 I-564 Ramp B - Install Guardrail	2	21-Jun-24	24-Jun-24	94														
C-S2A1-564B-RD1070	Stage 2 Area 1 I-564 Ramp B - Asphalt Paving - Surface Asphalt	2	25-Jun-24	27-Jun-24	71														
Stage 2 Area 1 - I-564 Ramp D		17	21-Jun-24	22-Jul-24	87														
C-S2A1-564D-RD1000	Stage 2 Area 1 I-564 Ramp D - Install E&S Controls	2	21-Jun-24	24-Jun-24	63														
C-S2A1-564D-RD1010	Stage 2 Area 1 I-564 Ramp D - Demo Existing Barrier / Guardrail	2	25-Jun-24	27-Jun-24	63														
C-S2A1-564D-RD1020	Stage 2 Area 1 I-564 Ramp D - Install Drainage/SWM	2	25-Jun-24	27-Jun-24	65														
C-S2A1-564D-RD1030	Stage 2 Area 1 I-564 Ramp D - Demo/Mill Pavement	2	28-Jun-24	01-Jul-24	63														

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025			
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						<ul style="list-style-type: none"> ■ Stage 2 Area 1 I-564 Ramp D - Excavate / Embankment to Subgrade, ■ Stage 2 Area 1 I-564 Ramp D - Asphalt Paving - Base Asphalt, ■ Stage 2 Area 1 I-564 Ramp D - Install Guardrail, ■ Stage 2 Area 1 I-564 Ramp D - Asphalt Paving - Surface Asphalt, ■ Stage 2 Area 1 I-564 Ramp D - Install Barrier, ■ Stage 2 Area 1 Little Creek Ramp B - Install E&S Controls, ■ Stage 2 Area 1 Little Creek Ramp B - Demo Existing Barrier / Guardrail, ■ Stage 2 Area 1 Little Creek Ramp B - Install Drainage/SWM, ■ Stage 2 Area 1 Little Creek Ramp B - Demo/Mill Pavement, ■ Stage 2 Area 1 Little Creek Ramp B - Excavate / Embankment to Subgrade, ■ Stage 2 Area 1 Little Creek Ramp B - Asphalt Paving - Base Asphalt, ■ Stage 2 Area 1 Little Creek Ramp B - Install Guardrail, ■ Stage 2 Area 1 Little Creek Ramp B - Asphalt Paving - Surface Asphalt, ■ Stage 2 Area 1 Little Creek Ramp B - Install Barrier, ■ Stage 2 Area 1 I-64 EB Bridge over Granby Concrete Substructure Surface Repair, ■ Stage 2 Area 1 I-64 EB Bridge over Granby Concrete Embedded Galvanic Anodes, ■ Stage 2 Area 1 I-64 EB Bridge over Granby Concrete Crack Repair Type B, ■ Stage 2 Area 1 I64 EB Bridge over Granby Demo - Set MOT Barrier / Temp Striping, ■ Stage 2 Area 1 I64 EB Bridge over Granby Demo Bridge Parapet, ■ Stage 2 Area 1 I64 EB Bridge over Granby Demo - Demo Existing Bridge Deck, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment A SOE, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment A Exc to SG for Driving Pile, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment A Install Pile, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment A FRP Abutment, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment A FRP Backwall/ Wing Wall, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment A Backfill Abutment, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment B SOE, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment B Exc. to SG for Driving Pile, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment B Install Pile, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment B FRP Abutment, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment B FRP Back Wall/ Wing Wall, ■ Stage 2 Area 1 I64 EB Bridge over Granby Abutment B Backfill Abutment, ■ Stage 2 Area 1 I64 EB Bridge over Granby Area 1 Pier 1 SOE, ■ Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 Exc. to SG for Driving Pile, ■ Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 Install Pile, ■ Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 FRP Pile Cap, ■ Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 FRP Pier Columns, ■ Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 FRP Pier Cap, 												
C-S2A1-564D-RD1040	Stage 2 Area 1 I-564 Ramp D - Excavate / Embankment to Subgrade	3	03-Jul-24	08-Jul-24	63													
C-S2A1-564D-RD1050	Stage 2 Area 1 I-564 Ramp D - Asphalt Paving - Base Asphalt	2	09-Jul-24	11-Jul-24	66													
C-S2A1-564D-RD1060	Stage 2 Area 1 I-564 Ramp D - Install Guardrail	4	09-Jul-24	15-Jul-24	87													
C-S2A1-564D-RD1070	Stage 2 Area 1 I-564 Ramp D - Asphalt Paving - Surface Asphalt	2	12-Jul-24	15-Jul-24	66													
C-S2A1-564D-RD1080	Stage 2 Area 1 I-564 Ramp D - Install Barrier	4	16-Jul-24	22-Jul-24	87													
Stage 2 Area 1 - Little Creek Ramp B		18	16-Jul-24	16-Aug-24	81													
C-S2A1-LCB-RD1000	Stage 2 Area 1 Little Creek Ramp B - Install E&S Controls	2	16-Jul-24	18-Jul-24	63													
C-S2A1-LCB-RD1010	Stage 2 Area 1 Little Creek Ramp B - Demo Existing Barrier / Guardrail	2	19-Jul-24	22-Jul-24	64													
C-S2A1-LCB-RD1020	Stage 2 Area 1 Little Creek Ramp B - Install Drainage/SWM	5	19-Jul-24	26-Jul-24	63													
C-S2A1-LCB-RD1030	Stage 2 Area 1 Little Creek Ramp B - Demo/Mill Pavement	2	23-Jul-24	25-Jul-24	64													
C-S2A1-LCB-RD1040	Stage 2 Area 1 Little Creek Ramp B - Excavate / Embankment to Subgrade	3	29-Jul-24	01-Aug-24	63													
C-S2A1-LCB-RD1050	Stage 2 Area 1 Little Creek Ramp B - Asphalt Paving - Base Asphalt	2	02-Aug-24	05-Aug-24	70													
C-S2A1-LCB-RD1060	Stage 2 Area 1 Little Creek Ramp B - Install Guardrail	4	02-Aug-24	08-Aug-24	81													
C-S2A1-LCB-RD1070	Stage 2 Area 1 Little Creek Ramp B - Asphalt Paving - Surface Asphalt	2	06-Aug-24	08-Aug-24	70													
C-S2A1-LCB-RD1080	Stage 2 Area 1 Little Creek Ramp B - Install Barrier	4	09-Aug-24	16-Aug-24	81													
Stage 2 Area 1 - I-64 EB Sta. 964+50 to 1025+00 - Structures		207	11-Dec-23	05-Feb-25	49													
Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby		135	11-Dec-23	06-Sep-24	69													
Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Substructure Repairs		7	11-Dec-23	26-Dec-23	131													
C-S2A1-EBBG-BR1000	Stage 2 Area 1 I-64 EB Bridge over Granby Concrete Substructure Surface Rep	5	11-Dec-23	19-Dec-23	123													
C-S2A1-EBBG-BR1010	Stage 2 Area 1 I-64 EB Bridge over Granby Concrete Embedded Galvanic Anod	3	13-Dec-23	18-Dec-23	134													
C-S2A1-EBBG-BR1020	Stage 2 Area 1 I-64 EB Bridge over Granby Concrete Crack Repair Type B	2	21-Dec-23	26-Dec-23	123													
Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Substructure		75	11-Dec-23	17-May-24	69													
C-S2A1-EBBG-BR1030	Stage 2 Area 1 I64 EB Bridge over Granby Demo - Set MOT Barrier / Temp Strip	2	11-Dec-23	13-Dec-23	0													
C-S2A1-EBBG-BR1060	Stage 2 Area 1 I64 EB Bridge over Granby Demo Bridge Parapet	5	15-Dec-23	26-Dec-23	0													
C-S2A1-EBBG-BR1090	Stage 2 Area 1 I64 EB Bridge over Granby Demo - Demo Existing Bridge Deck	5	28-Dec-23	05-Jan-24	0													
Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Abutment A		38	08-Jan-24	28-Mar-24	89													
C-S2A1-EBBG-BR1120	Stage 2 Area 1 I64 EB Bridge over Granby Abutment A SOE	2	08-Jan-24	10-Jan-24	0													
C-S2A1-EBBG-BR1150	Stage 2 Area 1 I64 EB Bridge over Granby Abutment A Exc to SG for Driving Pile	6	12-Jan-24	24-Jan-24	0													
C-S2A1-EBBG-BR1330	Stage 2 Area 1 I64 EB Bridge over Granby Abutment A Install Pile	3	31-Jan-24	02-Feb-24	73													
C-S2A1-EBBG-BR1360	Stage 2 Area 1 I64 EB Bridge over Granby Abutment A FRP Abutment	10	05-Feb-24	26-Feb-24	89													
C-S2A1-EBBG-BR1480	Stage 2 Area 1 I64 EB Bridge over Granby Abutment A FRP Backwall/ Wing Wall	10	28-Feb-24	19-Mar-24	89													
C-S2A1-EBBG-BR1720	Stage 2 Area 1 I64 EB Bridge over Granby Abutment A Backfill Abutment	5	21-Mar-24	28-Mar-24	89													
Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Abutment B		41	12-Jan-24	08-Apr-24	89													
C-S2A1-EBBG-BR1180	Stage 2 Area 1 I64 EB Bridge over Granby Abutment B SOE	2	12-Jan-24	15-Jan-24	4													
C-S2A1-EBBG-BR1300	Stage 2 Area 1 I64 EB Bridge over Granby Abutment B Exc. to SG for Driving Pile	6	26-Jan-24	05-Feb-24	0													
C-S2A1-EBBG-BR1390	Stage 2 Area 1 I64 EB Bridge over Granby Abutment B Install Pile	3	07-Feb-24	12-Feb-24	72													
C-S2A1-EBBG-BR1450	Stage 2 Area 1 I64 EB Bridge over Granby Abutment B FRP Abutment	10	14-Feb-24	06-Mar-24	90													
C-S2A1-EBBG-BR1600	Stage 2 Area 1 I64 EB Bridge over Granby Abutment B FRP Back Wall/ Wing Wall	10	08-Mar-24	26-Mar-24	90													
C-S2A1-EBBG-BR1870	Stage 2 Area 1 I64 EB Bridge over Granby Abutment B Backfill Abutment	5	01-Apr-24	08-Apr-24	89													
Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Pier 1		39	17-Jan-24	08-Apr-24	69													
C-S2A1-EBBG-BR1210	Stage 2 Area 1 I64 EB Bridge over Granby Area 1 Pier 1 SOE	2	17-Jan-24	19-Jan-24	8													
C-S2A1-EBBG-BR1420	Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 Exc. to SG for Driving Pile	6	07-Feb-24	19-Feb-24	0													
C-S2A1-EBBG-BR1510	Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 Install Pile	3	21-Feb-24	26-Feb-24	69													
C-S2A1-EBBG-BR1570	Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 FRP Pile Cap	5	28-Feb-24	08-Mar-24	69													
C-S2A1-EBBG-BR1690	Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 FRP Pier Columns	5	11-Mar-24	19-Mar-24	69													
C-S2A1-EBBG-BR1780	Stage 2 Area 1 I64 EB Bridge over Granby Pier 1 FRP Pier Cap	10	21-Mar-24	08-Apr-24	69													

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 ■ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025					
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Pier 2																			
C-S2A1-EBBG-BR1240	Stage 2 Area 1 I64 EB Bridge over Granby Pier 2 SOE	2	22-Jan-24	24-Jan-24	12														
C-S2A1-EBBG-BR1540	Stage 2 Area 1 I64 EB Bridge over Granby Pier 2 Exc. to SG for Driving Pile	6	21-Feb-24	04-Mar-24	0														
C-S2A1-EBBG-BR1630	Stage 2 Area 1 I64 EB Bridge over Granby Pier 2 Install Pile	3	06-Mar-24	11-Mar-24	3														
C-S2A1-EBBG-BR1750	Stage 2 Area 1 I64 EB Bridge over Granby Pier 2 FRP Pile Cap	5	13-Mar-24	21-Mar-24	73														
C-S2A1-EBBG-BR1840	Stage 2 Area 1 I64 EB Bridge over Granby Pier 2 FRP Pier Columns	5	22-Mar-24	01-Apr-24	73														
C-S2A1-EBBG-BR1960	Stage 2 Area 1 I64 EB Bridge over Granby Pier 2 FRP Pier Cap	10	10-Apr-24	29-Apr-24	69														
Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Pier 3																			
C-S2A1-EBBG-BR1270	Stage 2 Area 1 I64 EB Bridge over Granby Pier 3 SOE	2	26-Jan-24	29-Jan-24	16														
C-S2A1-EBBG-BR1660	Stage 2 Area 1 I64 EB Bridge over Granby Pier 3 Exc. to SG for Driving Pile	6	06-Mar-24	18-Mar-24	0														
C-S2A1-EBBG-BR1810	Stage 2 Area 1 I64 EB Bridge over Granby Pier 3 Install Pile	3	19-Mar-24	22-Mar-24	0														
C-S2A1-EBBG-BR1900	Stage 2 Area 1 I64 EB Bridge over Granby Pier 3 FRP Pile Cap	5	25-Mar-24	02-Apr-24	77														
C-S2A1-EBBG-BR1930	Stage 2 Area 1 I64 EB Bridge over Granby Pier 3 FRP Pier Columns	5	04-Apr-24	12-Apr-24	77														
C-S2A1-EBBG-BR1990	Stage 2 Area 1 I64 EB Bridge over Granby Pier 3 FRP Pier Cap	10	30-Apr-24	17-May-24	69														
Stage 2 Area 1 - Structures - I-64 EB Bridge over Granby - Superstructure																			
C-S2A1-EBBG-BR2020	Stage 2 Area 1 I64 EB Bridge over Granby Erect Girders Span (2 Girders, 4 Spa	5	20-May-24	28-May-24	69														
C-S2A1-EBBG-BR2050	Stage 2 Area 1 I64 EB Bridge over Granby Install SIP Decking Span	5	30-May-24	06-Jun-24	69														
C-S2A1-EBBG-BR2080	Stage 2 Area 1 I64 EB Bridge over Granby Install Rebar Span	5	07-Jun-24	14-Jun-24	69														
C-S2A1-EBBG-BR2110	Stage 2 Area 1 I64 EB Bridge over Granby Install Screed Rail / Dry Run	5	17-Jun-24	24-Jun-24	69														
C-S2A1-EBBG-BR2140	Stage 2 Area 1 I64 EB Bridge over Granby Deck Pour	10	25-Jun-24	12-Jul-24	69														
C-S2A1-EBBG-BR2170	Stage 2 Area 1 I64 EB Bridge over Granby Cure Deck Pour	5	15-Jul-24	22-Jul-24	69														
C-S2A1-EBBG-BR2200	Stage 2 Area 1 I64 EB Bridge over Granby FRP Sleeper Slab	5	23-Jul-24	30-Jul-24	69														
C-S2A1-EBBG-BR2230	Stage 2 Area 1 I64 EB Bridge over Granby FRP Approach Slab	5	01-Aug-24	08-Aug-24	69														
C-S2A1-EBBG-BR2260	Stage 2 Area 1 I64 EB Bridge over Granby FRP Barrier Walls / Install Conduit	10	09-Aug-24	27-Aug-24	69														
C-S2A1-EBBG-BR2290	Stage 2 Area 1 I64 EB Bridge over Granby Set MOT Barrier for Stage 2	5	29-Aug-24	06-Sep-24	69														
Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564																			
Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Substructure Repairs																			
C-S2A1-EB564-BR1000	Stage 2 Area 1 I-64 EB Bridge over 564 Concrete Substructure Surface Repair	10	28-Dec-23	17-Jan-24	123														
C-S2A1-EB564-BR1270	Stage 2 Area 1 I-64 EB Bridge over 564 Concrete Embedded Galvanic Anodes	8	29-Dec-23	15-Jan-24	130														
C-S2A1-EB564-BR1060	Stage 2 Area 1 I-64 EB Bridge over 564 Concrete Crack Repair Type B	5	19-Jan-24	29-Jan-24	123														
Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Substructure																			
C-S2A1-EB564-BR1030	Stage 2 Area 1 I-64 EB Bridge over 564 Demo - Set MOT Barrier / Temp Striping	2	15-Dec-23	18-Dec-23	20														
C-S2A1-EB564-BR1090	Stage 2 Area 1 I-64 EB Bridge over 564 Demo Bridge Parapet	5	08-Jan-24	17-Jan-24	12														
C-S2A1-EB564-BR1120	Stage 2 Area 1 I-64 EB Bridge over 564 Demo - Demo Existing Bridge Deck	5	19-Jan-24	29-Jan-24	12														
Stage 2 Area 1 - Structures - I-64 EB Bridge over 564 - Abutment A																			
C-S2A1-EB564-BR1150	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment A SOE	2	25-Mar-24	26-Mar-24	0														
C-S2A1-EB564-BR1180	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment A Exc. to SG for Driving Pile	7	28-Mar-24	10-Apr-24	5														
C-S2A1-EB564-BR1600	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment A Install Pile	3	11-Jun-24	14-Jun-24	5														
C-S2A1-EB564-BR1660	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment A FRP Abutment	10	17-Jun-24	03-Jul-24	21														
C-S2A1-EB564-BR1840	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment A FRP Back Wall/ Wing Wall	10	05-Jul-24	22-Jul-24	21														
C-S2A1-EB564-BR1960	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment A Backfill Abutment	5	23-Jul-24	30-Jul-24	21														
Stage 2 Area 1 - Structures - I-64 EB Bridge over 564 - Abutment B																			
C-S2A1-EB564-BR1210	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment B SOE	2	28-Mar-24	01-Apr-24	0														
C-S2A1-EB564-BR1360	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment B Exc. to SG for Driving Pile	7	12-Apr-24	25-Apr-24	5														
C-S2A1-EB564-BR1690	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment B Install Pile	3	17-Jun-24	20-Jun-24	5														
C-S2A1-EB564-BR1750	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment B FRP Abutment	10	21-Jun-24	09-Jul-24	23														

█ Remaining Level of Effort
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 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025						
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
C-S2A1-EB564-BR1900	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment B FRP Back Wall/ Wing Wall	10	11-Jul-24	26-Jul-24	23																Stage 2 Area 1 I-64 EB Bridge over 564 Abutment B FRP Back Wall/ Wing Wall
C-S2A1-EB564-BR1990	Stage 2 Area 1 I-64 EB Bridge over 564 Abutment B Backfill Abutment	5	01-Aug-24	08-Aug-24	21																Stage 2 Area 1 I-64 EB Bridge over 564 Abutment B Backfill Abutment
Stage 2 Area 1 - Structures - I-64 EB Bridge over 564 - Pier 1		90	02-Apr-24	19-Sep-24	46																
C-S2A1-EB564-BR1240	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 SOE	2	02-Apr-24	04-Apr-24	0																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 SOE
C-S2A1-EB564-BR1390	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 Exc. to SG for Driving Pile	7	26-Apr-24	07-May-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 Exc. to SG for Driving Pile
C-S2A1-EB564-BR1780	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 Install Pile	3	21-Jun-24	25-Jun-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 Install Pile
C-S2A1-EB564-BR1810	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 FRP Pile Cap	5	27-Jun-24	05-Jul-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 FRP Pile Cap
C-S2A1-EB564-BR1870	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 FRP Pier Columns	5	08-Jul-24	15-Jul-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 FRP Pier Columns
C-S2A1-EB564-BR1930	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 FRP Pier Cap	10	16-Jul-24	01-Aug-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 FRP Pier Cap
C-S2A1-EB564-BR2110	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 FRP Pier Protection	5	11-Sep-24	19-Sep-24	46																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 1 FRP Pier Protection
Stage 2 Area 1 - Structures - I-64 EB Bridge over 564 - Pier 2		98	05-Apr-24	04-Oct-24	46																
C-S2A1-EB564-BR1300	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 SOE	2	05-Apr-24	08-Apr-24	0																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 SOE
C-S2A1-EB564-BR1420	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 Exc. to SG for Driving Pile	7	09-May-24	21-May-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 Exc. to SG for Driving Pile
C-S2A1-EB564-BR1450	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 Install Pile	3	23-May-24	28-May-24	9																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 Install Pile
C-S2A1-EB564-BR1510	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 FRP Pile Cap	5	30-May-24	06-Jun-24	31																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 FRP Pile Cap
C-S2A1-EB564-BR1570	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 FRP Pier Columns	5	07-Jun-24	14-Jun-24	31																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 FRP Pier Columns
C-S2A1-EB564-BR2020	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 FRP Pier Cap	10	02-Aug-24	20-Aug-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 FRP Pier Cap
C-S2A1-EB564-BR2140	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 FRP Pier Protection	10	20-Sep-24	04-Oct-24	46																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 2 FRP Pier Protection
Stage 2 Area 1 - Structures - I-64 EB Bridge over 564 - Pier 3		101	10-Apr-24	14-Oct-24	46																
C-S2A1-EB564-BR1330	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 SOE	2	10-Apr-24	12-Apr-24	0																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 SOE
C-S2A1-EB564-BR1480	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 Exc. to SG for Driving Pile	7	23-May-24	04-Jun-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 Exc. to SG for Driving Pile
C-S2A1-EB564-BR1540	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 Install Pile	3	06-Jun-24	10-Jun-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 Install Pile
C-S2A1-EB564-BR1630	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 FRP Pile Cap	5	11-Jun-24	18-Jun-24	34																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 FRP Pile Cap
C-S2A1-EB564-BR1720	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 FRP Pier Columns	5	20-Jun-24	27-Jun-24	34																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 FRP Pier Columns
C-S2A1-EB564-BR2050	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 FRP Pier Cap	10	22-Aug-24	09-Sep-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 FRP Pier Cap
C-S2A1-EB564-BR2230	Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 FRP Pier Protection	5	07-Oct-24	14-Oct-24	46																Stage 2 Area 1 I-64 EB Bridge over 564 Pier 3 FRP Pier Protection
Stage 2 Area 1 - Structures - I-64 EB Bridge over I-564 - Superstructure		71	11-Sep-24	05-Feb-25	5																
C-S2A1-EB564-BR2080	Stage 2 Area 1 I-64 EB Bridge over 564 Erect Girders Span (3 Girders, 4 Spans)	7	11-Sep-24	23-Sep-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Erect Girders Span (3 Girders, 4 Spans)
C-S2A1-EB564-BR2170	Stage 2 Area 1 I-64 EB Bridge over 564 Install SIP Decking Span	7	24-Sep-24	03-Oct-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Install SIP Decking Span
C-S2A1-EB564-BR2200	Stage 2 Area 1 I-64 EB Bridge over 564 Install Rebar Span	7	04-Oct-24	16-Oct-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Install Rebar Span
C-S2A1-EB564-BR2260	Stage 2 Area 1 I-64 EB Bridge over 564 Install Screed Rail / Dry Run	5	18-Oct-24	28-Oct-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Install Screed Rail / Dry Run
C-S2A1-EB564-BR2290	Stage 2 Area 1 I-64 EB Bridge over 564 Deck Pour	10	29-Oct-24	15-Nov-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Deck Pour
C-S2A1-EB564-BR2320	Stage 2 Area 1 I-64 EB Bridge over 564 Cure Deck Pour	5	18-Nov-24	27-Nov-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 Cure Deck Pour
C-S2A1-EB564-BR2350	Stage 2 Area 1 I-64 EB Bridge over 564 FRP Sleeper Slab	5	02-Dec-24	11-Dec-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 FRP Sleeper Slab
C-S2A1-EB564-BR2380	Stage 2 Area 1 I-64 EB Bridge over 564 FRP Approach Slab	5	13-Dec-24	23-Dec-24	5																Stage 2 Area 1 I-64 EB Bridge over 564 FRP Approach Slab
C-S2A1-EB564-BR2410	Stage 2 Area 1 I-64 EB Bridge over 564 FRP Barrier Walls / Install Conduit	10	26-Dec-24	13-Jan-25	5																Stage 2 Area 1 I-64 EB Bridge over 564 FRP Barrier Walls / Install Conduit
C-S2A1-EB564-BR2440	Stage 2 Area 1 I-64 EB Bridge over 564 Set MOT Barrier for Stage 2	10	15-Jan-25	05-Feb-25	5																Stage 2 Area 1 I-64 EB Bridge over 564 Set MOT Barrier for Stage 2
Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek		200	19-Dec-23	29-Jan-25	52																
Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek		171	19-Dec-23	22-Nov-24	0																
Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Substructure Repairs		9	31-Jan-24	16-Feb-24	123																
C-S2A1-EBLC-BR1570	Stage 2 Area 1 I-64 I-64 EB Bridge over Little Creek Concr. Substr. Surface Rep	6	31-Jan-24	09-Feb-24	123																Stage 2 Area 1 I-64 I-64 EB Bridge over Little Creek Concr. Substr. Surface Repair
C-S2A1-EBLC-BR1840	Stage 2 Area 1 I-64 EB Bridge over Little Creek Concr. Embedded Galvanic Anodes	4	01-Feb-24	07-Feb-24	123																Stage 2 Area 1 I-64 EB Bridge over Little Creek Concr. Embedded Galvanic Anodes
C-S2A1-EBLC-BR1750	Stage 2 Area 1 I-64 I-64 EB Bridge over Little Creek Concrete Crack Repair Typ	3	12-Feb-24	16-Feb-24	123																Stage 2 Area 1 I-64 I-64 EB Bridge over Little Creek Concrete Crack Repair Type B
Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Substructure		114	19-Dec-23	05-Aug-24	0																
C-S2A1-EBLC-BR1000	Stage 2 Area 1 I-64 EB Bridge over Little Creek Demo - Set MOT Bar / Temp Str	2	19-Dec-23	21-Dec-23	28																Stage 2 Area 1 I-64 EB Bridge over Little Creek Demo - Set MOT Bar / Temp Striping
C-S2A1-EBLC-BR1030	Stage 2 Area 1 I-64 EB Bridge over Little Creek Demo Bridge Parapet	5	31-Jan-24	07-Feb-24	12																Stage 2 Area 1 I-64 EB Bridge over Little Creek Demo Bridge Parapet

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						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
C-S2A1-EBLC-BR1060	Stage 2 Area 1 I-64 EB Bridge over Little Creek Demo - Demo Existing Bridge Deck	5	09-Feb-24	19-Feb-24	12													
	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Abutment A	38	15-Apr-24	24-Jun-24	18													
C-S2A1-EBLC-BR109	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment A SOE	2	15-Apr-24	17-Apr-24	0													
C-S2A1-EBLC-BR112	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment A Exc. to SG for Driving Pile	7	19-Apr-24	30-Apr-24	3													
C-S2A1-EBLC-BR130	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment A Install Pile	3	03-May-24	07-May-24	2													
C-S2A1-EBLC-BR136	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment A FRP Abutment	10	09-May-24	28-May-24	18													
C-S2A1-EBLC-BR154	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment A FRP Back Wall/ Wing Wall	10	30-May-24	14-Jun-24	18													
C-S2A1-EBLC-BR187	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment A Backfill Abutment	5	17-Jun-24	24-Jun-24	18													
	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Abutment B	41	19-Apr-24	03-Jul-24	18													
C-S2A1-EBLC-BR115	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment B SOE	2	19-Apr-24	22-Apr-24	0													
C-S2A1-EBLC-BR121	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment B Exc. to SG for Driving Pile	7	23-Apr-24	03-May-24	0													
C-S2A1-EBLC-BR139	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment B Install Pile	3	09-May-24	13-May-24	2													
C-S2A1-EBLC-BR142	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment B FRP Abutment	10	15-May-24	03-Jun-24	20													
C-S2A1-EBLC-BR166	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment B FRP Back Wall/ Wing Wall	10	04-Jun-24	20-Jun-24	20													
C-S2A1-EBLC-BR196	Stage 2 Area 1 I-64 EB Bridge over Little Creek Abutment B Backfill Abutment	5	25-Jun-24	03-Jul-24	18													
	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Pier 1	37	23-Apr-24	28-Jun-24	0													
C-S2A1-EBLC-BR118	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 1 SOE	2	23-Apr-24	25-Apr-24	2													
C-S2A1-EBLC-BR133	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 1 Exc to SG for Driving Pile	7	06-May-24	17-May-24	0													
C-S2A1-EBLC-BR145	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 1 Install Pile	3	20-May-24	23-May-24	0													
C-S2A1-EBLC-BR151	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 1 FRP Pile Cap	5	24-May-24	03-Jun-24	0													
C-S2A1-EBLC-BR169	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 1 FRP Pier Columns	5	04-Jun-24	11-Jun-24	0													
C-S2A1-EBLC-BR178	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 1 FRP Pier Cap	10	13-Jun-24	28-Jun-24	0													
	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Pier 2	45	26-Apr-24	18-Jul-24	0													
C-S2A1-EBLC-BR124	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 2 SOE	2	26-Apr-24	29-Apr-24	2													
C-S2A1-EBLC-BR148	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 2 Exc to SG for Driving Pile	7	20-May-24	31-May-24	3													
C-S2A1-EBLC-BR160	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 2 Install Pile	3	03-Jun-24	06-Jun-24	3													
C-S2A1-EBLC-BR172	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 2 FRP Pile Cap	5	07-Jun-24	14-Jun-24	3													
C-S2A1-EBLC-BR190	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 2 FRP Pier Columns	5	17-Jun-24	24-Jun-24	3													
C-S2A1-EBLC-BR202	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 2 FRP Pier Cap	10	01-Jul-24	18-Jul-24	0													
	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Pier 3	53	30-Apr-24	05-Aug-24	0													
C-S2A1-EBLC-BR127	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 3 SOE	2	30-Apr-24	02-May-24	2													
C-S2A1-EBLC-BR163	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 3 Exc to SG for Driving Pile	7	03-Jun-24	13-Jun-24	6													
C-S2A1-EBLC-BR181	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 3 Install Pile	3	14-Jun-24	18-Jun-24	6													
C-S2A1-EBLC-BR193	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 3 FRP Pile Cap	5	20-Jun-24	27-Jun-24	6													
C-S2A1-EBLC-BR199	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 3 FRP Pier Columns	5	28-Jun-24	08-Jul-24	6													
C-S2A1-EBLC-BR205	Stage 2 Area 1 I-64 EB Bridge over Little Creek Pier 3 FRP Pier Cap	10	19-Jul-24	05-Aug-24	0													
	Stage 2 Area 1 - Structures - I-64 EB Bridge over Little Creek - Superstructure	57	06-Aug-24	22-Nov-24	0													
C-S2A1-EBLC-BR2080	Stage 2 Area 1 I-64 EB Bridge over Little Creek Erect Girders (2 Girders, 4 Span)	5	06-Aug-24	14-Aug-24	0													
C-S2A1-EBLC-BR2110	Stage 2 Area 1 I-64 EB Bridge over Little Creek Install SIP Decking Span	5	16-Aug-24	23-Aug-24	0													
C-S2A1-EBLC-BR2140	Stage 2 Area 1 I-64 EB Bridge over Little Creek Install Rebar Span	5	26-Aug-24	03-Sep-24	0													
C-S2A1-EBLC-BR2170	Stage 2 Area 1 I-64 EB Bridge over Little Creek Install Screed Rail / Dry Run	5	05-Sep-24	13-Sep-24	0													
C-S2A1-EBLC-BR2200	Stage 2 Area 1 I-64 EB Bridge over Little Creek Deck Pour	10	16-Sep-24	01-Oct-24	0													
C-S2A1-EBLC-BR2230	Stage 2 Area 1 I-64 EB Bridge over Little Creek Cure Deck Pour	5	02-Oct-24	08-Oct-24	0													
C-S2A1-EBLC-BR2260	Stage 2 Area 1 I-64 EB Bridge over Little Creek FRP Sleeper Slab	5	10-Oct-24	18-Oct-24	0													
C-S2A1-EBLC-BR2290	Stage 2 Area 1 I-64 EB Bridge over Little Creek FRP Approach Slab	5	21-Oct-24	29-Oct-24	0													
C-S2A1-EBLC-BR2320	Stage 2 Area 1 I-64 EB Bridge over Little Creek FRP Barrier Walls / Install Concrete	10	31-Oct-24	18-Nov-24	0													

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Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025					
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
C-S2A1-EBLC-BR2350	Stage 2 Area 1 I-64 EB Bridge over Little Creek Set MOT Barrier for Stage 2 Late	2	20-Nov-24	22-Nov-24	0														
	Stage 2 Late Area 1 - Structures - I-64 EB Bridge over Little Creek	29	25-Nov-24	29-Jan-25	52														
	Stage 2 Late Area 1 - Structures - I-64 EB Bridge over Little Creek - Superstructure Repairs	29	25-Nov-24	29-Jan-25	52														
C-S2LA1-EBLC-BR100	Stage 2 Late Area 1 - I-64 EB Bridge over Little Creek Jacking and Blocking Bear	5	25-Nov-24	06-Dec-24	0														
C-S2LA1-EBLC-BR103	Stage 2 Late Area 1 - I-64 EB Br over Little Creek Rpl Brg (Abut A,B,Pier 1-Pier	4	09-Dec-24	16-Dec-24	0														
C-S2LA1-EBLC-BR106	Stage 2 Late Area 1 - I-64 EB Br over Little Creek Deck Joint Closure - (Pier 1-Pi	9	18-Dec-24	03-Jan-25	0														
C-S2LA1-EBLC-BR109	Stage 2 Late Area 1 - I-64 EB Br over Little Creek Virginia Micro Abt & Appr Slab	8	18-Dec-24	02-Jan-25	1														
C-S2LA1-EBLC-BR122	Stage 2 Late Area 1 - I-64 EB Br over Little Creek Recoat Exi Str./ Ultrasonic Tre	10	18-Dec-24	06-Jan-25	62														
C-S2LA1-EBLC-BR112	Stage 2 Late Area 1 - I-64 EB Bridge over Little CreekType A Milling	3	06-Jan-25	10-Jan-25	0														
C-S2LA1-EBLC-BR115	Stage 2 Late Area 1 - I-64 EB Bridge over Little CreekType A Hydro-Demo 1/2"	3	13-Jan-25	17-Jan-25	0														
C-S2LA1-EBLC-BR118	Stage 2 Late Area 1 - I-64 EB Bridge over Little Creek Install Latex Mod Concrete	3	20-Jan-25	24-Jan-25	0														
C-S2LA1-EBLC-BR121	Stage 2 Late Area 1 - I-64 EB Bridge over Little Creek Set MOT Barrier for Stage	2	27-Jan-25	29-Jan-25	0														
	Stage 2 Area 2 - I-64 EB 1025+00 to 1085+50	190	05-Jan-24	22-Jan-25	3														
	Stage 2 Area 2 - I-64 EB 1025+00 to 1085+50 - Roadway	190	05-Jan-24	22-Jan-25	3														
	Stage 2 Area 2 - I-64 EB 1025+00 to 1054+90 - Roadway - Widen to the Outside	140	05-Jan-24	04-Oct-24	53														
C-S2A2-RD1000	Stage 2 Area 2 West - Install E&S Controls	2	05-Jan-24	08-Jan-24	29														
C-S2A2-RD1010	Stage 2 Area 2 West - Clearing and Grubbing	5	10-Jan-24	19-Jan-24	33														
C-S2A2-RD1020	Stage 2 Area 2 West - Demo Existing Barrier / Guardrail	2	19-Jan-24	22-Jan-24	91														
C-S2A2-RD1030	Stage 2 Area 2 West - Install Drainage/SWM	5	22-Jan-24	31-Jan-24	92														
C-S2A2-RD1040	Stage 2 Area 2 West - Demo/Mill Pavement	5	24-Jan-24	01-Feb-24	91														
C-S2A2-RD1050	Stage 2 Area 2 West - Excavate / Embankment to Subgrade	5	02-Feb-24	12-Feb-24	91														
C-S2A2-RD1060	Stage 2 Area 2 West - Install Underdrain	3	14-Feb-24	19-Feb-24	105														
C-S2A2-RD1070	Stage 2 Area 2 West - Install Guardrail	3	14-Feb-24	19-Feb-24	168														
C-S2A2-RD1080	Stage 2 Area 2 West - Backfill/Grade Slopes	3	14-Feb-24	19-Feb-24	91														
C-S2A2-RD1090	Stage 2 Area 2 West - Install Subbase (CTA/OGDL)	3	21-Feb-24	26-Feb-24	105														
C-S2A2-RD1100	Stage 2 Area 2 West - Remove Electric/ITS Devices	3	21-Feb-24	26-Feb-24	91														
C-S2A2-RD1110	Stage 2 Area 2 West - Install TMS Ductbank / Junction Boxes	3	28-Feb-24	04-Mar-24	91														
C-S2A2-RD1120	Stage 2 Area 2 West - Install TMS / Sign Foundations / Light Foundations	10	06-Mar-24	25-Mar-24	91														
C-S2A2-RD1130	Stage 2 Area 2 West - Asphalt Paving - Base Asphalt	3	18-Mar-24	21-Mar-24	100														
C-S2A2-RD1140	Stage 2 Area 2 West - Asphalt Paving - Intermediate Asphalt	3	22-Mar-24	26-Mar-24	100														
C-S2A2-RD1150	Stage 2 Area 2 West - Finegrade slopes & Ditch/Seed	2	26-Mar-24	28-Mar-24	152														
C-S2A2-RD1160	Stage 2 Area 2 West - Install TMS / Sign Structures / Light Structures	5	26-Mar-24	04-Apr-24	91														
C-S2A2-RD1170	Stage 2 Area 2 West - Asphalt Paving - Surface Asphalt	3	28-Mar-24	02-Apr-24	100														
C-S2A2-RD1180	Stage 2 Area 2 West - Pull & Terminate Power and Fiber	5	05-Apr-24	15-Apr-24	91														
C-S2A2-RD1190	Stage 2 Area 2 West - Landscaping	2	01-Aug-24	02-Aug-24	87														
C-S2A2-RD1200	Stage 2 Area 2 West - Modify Retaining Wall (Approx. 1022+90 to 1025+75)	10	22-Aug-24	09-Sep-24	3														
C-S2A2-RD1210	Stage 2 Area 2 West - Replace Noise Barrier (Approx. 1022+90 to 1025+75)	10	11-Sep-24	27-Sep-24	3														
C-S2A2-RD1220	Stage 2 Area 2 West - Set MOT Barrier/Temp Striping/Shift Traffic for Stage 3	5	30-Sep-24	04-Oct-24	3														
	Stage 2 Area 2 - I-64 EB 1057+00 to 1085+50- Roadway - Widen to the Inside	50	07-Oct-24	22-Jan-25	3														
C-S2A2-RD1230	Stage 2 Area 2 East- Install E&S Controls	2	07-Oct-24	08-Oct-24	3														
C-S2A2-RD1240	Stage 2 Area 2 East- Demo Existing Barrier / Guardrail	2	10-Oct-24	11-Oct-24	3														
C-S2A2-RD1250	Stage 2 Area 2 East- Install Drainage/SWM	5	10-Oct-24	18-Oct-24	5														
C-S2A2-RD1260	Stage 2 Area 2 East- Demo/Mill Pavement	5	14-Oct-24	23-Oct-24	3														
C-S2A2-RD1270	Stage 2 Area 2 East- Excavate / Embankment to Subgrade	5	25-Oct-24	01-Nov-24	3														
C-S2A2-RD1280	Stage 2 Area 2 East- Install Underdrain	3	04-Nov-24	07-Nov-24	5														
C-S2A2-RD1290	Stage 2 Area 2 East- Install Guardrail	3	04-Nov-24	07-Nov-24	32														

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
C-S2A2-RD1300	Stage 2 Area 2 East- Backfill/Grade Slopes	3	04-Nov-24	07-Nov-24	3														Stage 2 Area 2 East- Backfill/Grade Slopes,
C-S2A2-RD1310	Stage 2 Area 2 East- Install Subbase (CTA/OGDL)	3	08-Nov-24	13-Nov-24	5														Stage 2 Area 2 East- Install Subbase (CTA/OGDL),
C-S2A2-RD1320	Stage 2 Area 2 East- Remove Electric/ITS Equipment	3	08-Nov-24	13-Nov-24	3														Stage 2 Area 2 East- Remove Electric/ITS Equipment,
C-S2A2-RD1330	Stage 2 Area 2 East- Asphalt Paving - Base Asphalt	3	14-Nov-24	18-Nov-24	7														Stage 2 Area 2 East- Asphalt Paving - Base Asphalt,
C-S2A2-RD1340	Stage 2 Area 2 East- Install TMS Ductbank / Junction Boxes	3	15-Nov-24	20-Nov-24	3														Stage 2 Area 2 East- Install TMS Ductbank / Junction B
C-S2A2-RD1350	Stage 2 Area 2 East- Asphalt Paving - Intermediate Asphalt	3	19-Nov-24	22-Nov-24	7														Stage 2 Area 2 East- Asphalt Paving - Intermediate Asp
C-S2A2-RD1360	Stage 2 Area 2 East- Install TMS / Sign Foundations / Light Foundations	10	22-Nov-24	16-Dec-24	3														Stage 2 Area 2 East- Install TMS / Sign Foundations
C-S2A2-RD1370	Stage 2 Area 2 East- Asphalt Paving - Surface Asphalt	3	25-Nov-24	27-Nov-24	7														Stage 2 Area 2 East- Asphalt Paving - Surface Asphalt
C-S2A2-RD1380	Stage 2 Area 2 East- Finegrade slopes & Ditch/Seed	2	18-Dec-24	20-Dec-24	16														Stage 2 Area 2 East- Finegrade slopes & Ditch/See
C-S2A2-RD1390	Stage 2 Area 2 East- Install TMS / Sign Structures / Light Structures	10	18-Dec-24	06-Jan-25	3														Stage 2 Area 2 East- Install TMS / Signi Structure
C-S2A2-RD1400	Stage 2 Area 2 East- Pull & Terminate Power and Fiber	5	08-Jan-25	17-Jan-25	3														Stage 2 Area 2 East- Pull & Terminate Power a
C-S2A2-RD1410	Stage 2 Area 2 East- - Remove MOT Devices	2	20-Jan-25	22-Jan-25	3														Stage 2 Area 2 East- - Remove MOT Devices,
Stage 2 Area 2 - Ramps		20	14-Feb-24	26-Mar-24	134														
Stage 2 Area 2 - Tidewater Ramp D		20	14-Feb-24	26-Mar-24	134														
C-S2A2-TWD-RD1000	Stage 2 Area 2 Tidewater Ramp D - Install E&S Controls	2	14-Feb-24	16-Feb-24	140														Stage 2 Area 2 Tidewater Ramp D - Install E&S Controls,
C-S2A2-TWD-RD1010	Stage 2 Area 2 Tidewater Ramp D - Demo Existing Barrier / Guardrail	2	19-Feb-24	21-Feb-24	140														Stage 2 Area 2 Tidewater Ramp D - Demo Existing Barrier / Guardrail,
C-S2A2-TWD-RD1020	Stage 2 Area 2 Tidewater Ramp D - Install Drainage/SWM	2	19-Feb-24	21-Feb-24	142														Stage 2 Area 2 Tidewater Ramp D - Install Drainage/SWM,
C-S2A2-TWD-RD1030	Stage 2 Area 2 Tidewater Ramp D - Demo/Mill Pavement	2	23-Feb-24	26-Feb-24	140														Stage 2 Area 2 Tidewater Ramp D - Demo/Mill Pavement,
C-S2A2-TWD-RD1140	Stage 2 Area 2 Tidewater Ramp D - Excavate / Embankment to Subgrade	3	28-Feb-24	04-Mar-24	140														Stage 2 Area 2 Tidewater Ramp D - Excavate / Embankment to Subgrade,
C-S2A2-TWD-RD1150	Stage 2 Area 2 Tidewater Ramp D - Asphalt Paving - Base Asphalt	2	18-Mar-24	19-Mar-24	143														Stage 2 Area 2 Tidewater Ramp D - Asphalt Paving - Base Asphalt,
C-S2A2-TWD-RD1160	Stage 2 Area 2 Tidewater Ramp D - Asphalt Paving - Surface Asphalt	2	21-Mar-24	22-Mar-24	143														Stage 2 Area 2 Tidewater Ramp D - Asphalt Paving - Surface Asphalt,
C-S2A2-TWD-RD1170	Stage 2 Area 2 Tidewater Ramp D - Install Guardrail	2	25-Mar-24	26-Mar-24	143														Stage 2 Area 2 Tidewater Ramp D - Install Guardrail,
Stage 2 Area 2 - I-64 EB 1025+00 to 1085+50 - Structures - Widen to the Inside		160	10-Jan-24	18-Nov-24	31														
Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater		160	10-Jan-24	18-Nov-24	31														
Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Substructure Repairs		9	19-Feb-24	08-Mar-24	123														
C-S2A2-EBTW-BR1000	Stage 2 Area 2 I-64 EB Bridge over Tidewater Concr Substructure Surface Repair	6	19-Feb-24	01-Mar-24	123														Stage 2 Area 2 I-64 EB Bridge over Tidewater Concr Substructure Surface Repair,
C-S2A2-EBTW-BR1010	Stage 2 Area 2 I-64 EB Bridge over Tidewater Concr Embedded Galvanic Anode	4	21-Feb-24	28-Feb-24	127														Stage 2 Area 2 I-64 EB Bridge over Tidewater Concr Embedded Galvanic Anodes,
C-S2A2-EBTW-BR1030	Stage 2 Area 2 I-64 EB Bridge over Tidewater Concrete Crack Repair Type B	3	04-Mar-24	08-Mar-24	123														Stage 2 Area 2 I-64 EB Bridge over Tidewater Concrete Crack Repair Type B,
Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Substructure		95	10-Jan-24	18-Jul-24	96														
C-S2A2-EBTW-BR1020	Stage 2 Area 2 I64 EB Bridge over Tidewater Demo - Set MOT Bar / Temp Striping	2	10-Jan-24	12-Jan-24	29														Stage 2 Area 2 I64 EB Bridge over Tidewater Demo - Set MOT Bar / Temp Striping,
C-S2A2-EBTW-BR1040	Stage 2 Area 2 I64 EB Bridge over Tidewater Demo Bridge Parapet	5	21-Feb-24	01-Mar-24	12														Stage 2 Area 2 I64 EB Bridge over Tidewater Demo Bridge Parapet,
C-S2A2-EBTW-BR1050	Stage 2 Area 2 I64 EB Bridge over Tidewater Demo - Demo Existing Bridge Deck	5	04-Mar-24	13-Mar-24	12														Stage 2 Area 2 I64 EB Bridge over Tidewater Demo - Demo Existing Bridge Deck,
Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Abutment A		38	15-Mar-24	28-May-24	124														
C-S2A2-EBTW-BR1060	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A SOE	2	15-Mar-24	18-Mar-24	12														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A SOE,
C-S2A2-EBTW-BR1070	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A Exc to SG for Driving P	7	19-Mar-24	01-Apr-24	12														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A Exc to SG for Driving Pile,
C-S2A2-EBTW-BR1130	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A Install Pile	3	04-Apr-24	08-Apr-24	27														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A Install Pile,
C-S2A2-EBTW-BR1140	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A FRP Abutment	10	10-Apr-24	29-Apr-24	124														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A FRP Abutment,
C-S2A2-EBTW-BR1180	Stage 2 Area 2 I64 EB Bridge over Tidewater Abt A FRP Back Wall/ Wing Wall	10	30-Apr-24	17-May-24	124														Stage 2 Area 2 I64 EB Bridge over Tidewater Abt A FRP Back Wall/ Wing Wall,
C-S2A2-EBTW-BR1260	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A Backfill Abutment	5	20-May-24	28-May-24	124														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment A Backfill Abutment,
Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Abutment B		42	19-Mar-24	07-Jun-24	53														
C-S2A2-EBTW-BR1080	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B SOE	2	19-Mar-24	21-Mar-24	17														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B SOE,
C-S2A2-EBTW-BR1120	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B Exc to SG for Driving F	7	02-Apr-24	15-Apr-24	12														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B Exc to SG for Driving Pile,
C-S2A2-EBTW-BR1150	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B Install Pile	3	17-Apr-24	22-Apr-24	24														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B Install Pile,
C-S2A2-EBTW-BR1170	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B FRP Abutment	10	23-Apr-24	09-May-24	53														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B FRP Abutment,
C-S2A2-EBTW-BR1220	Stage 2 Area 2 I64 EB Bridge over Tidewater Abt B FRP Back Wall/ Wing Wall	10	10-May-24	30-May-24	53														Stage 2 Area 2 I64 EB Bridge over Tidewater Abt B FRP Back Wall/ Wing Wall,
C-S2A2-EBTW-BR1310	Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B Backfill Abutment	5	31-May-24	07-Jun-24	53														Stage 2 Area 2 I64 EB Bridge over Tidewater Abutment B Backfill Abutment,

█ Remaining Level of Effort
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 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025							
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Pier 1						42	22-Mar-24	11-Jun-24	31													
C-S2A2-EBTW-BR1090	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 1 SOE	2	22-Mar-24	25-Mar-24	22																	
C-S2A2-EBTW-BR1160	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 1 Exc to SG for Driving Pile	7	17-Apr-24	29-Apr-24	12																	
C-S2A2-EBTW-BR1190	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 1 Install Pile	3	30-Apr-24	03-May-24	20																	
C-S2A2-EBTW-BR1210	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 1 FRP Pile Cap	5	06-May-24	13-May-24	31																	
C-S2A2-EBTW-BR1250	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 1 FRP Pier Columns	5	15-May-24	23-May-24	31																	
C-S2A2-EBTW-BR1280	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 1 FRP Pier Cap	10	24-May-24	11-Jun-24	31																	
Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Pier 2						50	26-Mar-24	28-Jun-24	31													
C-S2A2-EBTW-BR1100	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 2 SOE	2	26-Mar-24	28-Mar-24	27																	
C-S2A2-EBTW-BR1200	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 2 Exc to SG for Driving Pile	7	30-Apr-24	10-May-24	12																	
C-S2A2-EBTW-BR1230	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 2 Install Pile	3	13-May-24	17-May-24	16																	
C-S2A2-EBTW-BR1270	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 2 FRP Pile Cap	5	20-May-24	28-May-24	34																	
C-S2A2-EBTW-BR1300	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 2 FRP Pier Columns	5	30-May-24	06-Jun-24	34																	
C-S2A2-EBTW-BR1340	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 2 FRP Pier Cap	10	13-Jun-24	28-Jun-24	31																	
Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Pier 3						58	01-Apr-24	18-Jul-24	31													
C-S2A2-EBTW-BR1110	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 3 SOE	2	01-Apr-24	02-Apr-24	27																	
C-S2A2-EBTW-BR1240	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 3 Exc to SG for Driving Pile	7	13-May-24	24-May-24	12																	
C-S2A2-EBTW-BR1290	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 3 Install Pile	3	28-May-24	31-May-24	12																	
C-S2A2-EBTW-BR1320	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 3 FRP Pile Cap	5	03-Jun-24	10-Jun-24	37																	
C-S2A2-EBTW-BR1330	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 3 FRP Pier Columns	5	11-Jun-24	18-Jun-24	37																	
C-S2A2-EBTW-BR1350	Stage 2 Area 2 I64 EB Bridge over Tidewater Pier 3 FRP Pier Cap	10	01-Jul-24	18-Jul-24	31																	
Stage 2 Area 2 - Structures - I-64 EB Bridge over Tidewater - Superstructure						65	19-Jul-24	18-Nov-24	31													
C-S2A2-EBTW-BR1360	Stage 2 Area 2 I64 EB Bridge over Tidewater Erect Girders (2 Girders, 4 Spans)	5	19-Jul-24	26-Jul-24	31																	
C-S2A2-EBTW-BR1370	Stage 2 Area 2 I64 EB Bridge over Tidewater Install SIP Decking Span	5	29-Jul-24	05-Aug-24	31																	
C-S2A2-EBTW-BR1380	Stage 2 Area 2 I64 EB Bridge over Tidewater Install Rebar Span	5	06-Aug-24	14-Aug-24	31																	
C-S2A2-EBTW-BR1390	Stage 2 Area 2 I64 EB Bridge over Tidewater Install Screed Rail / Dry Run	5	16-Aug-24	23-Aug-24	31																	
C-S2A2-EBTW-BR1400	Stage 2 Area 2 I64 EB Bridge over Tidewater Deck Pour	10	26-Aug-24	13-Sep-24	31																	
C-S2A2-EBTW-BR1410	Stage 2 Area 2 I64 EB Bridge over Tidewater Cure Deck Pour	5	16-Sep-24	23-Sep-24	31																	
C-S2A2-EBTW-BR1420	Stage 2 Area 2 I64 EB Bridge over Tidewater FRP Sleeper Slab	5	24-Sep-24	01-Oct-24	31																	
C-S2A2-EBTW-BR1430	Stage 2 Area 2 I64 EB Bridge over Tidewater FRP Approach Slab	5	02-Oct-24	08-Oct-24	31																	
C-S2A2-EBTW-BR1440	Stage 2 Area 2 I64 EB Bridge over Tidewater FRP Barrier Walls / Install Conduit	10	10-Oct-24	29-Oct-24	31																	
C-S2A2-EBTW-BR1450	Stage 2 Area 2 I64 EB Bridge over Tidewater Set MOT Barrier for Stage 3	10	31-Oct-24	18-Nov-24	31																	
Stage 2 Area 3 - I-64 WB 3032+00 to 3082+00 - Widen to the Outside						206	26-Dec-23	17-Feb-25	25													
Stage 2 Area 3 - I-64 WB 3032+00 to 3082+00 - Roadway						114	26-Dec-23	08-Aug-24	117													
Stage 2 Area 3 - I-64 WB 3032+00 to 3082+00 - Roadway						48	26-Dec-23	05-Apr-24	183													
C-S2A3-RD1000	Stage 2 Area 3 - Install E&S Controls	2	26-Dec-23	28-Dec-23	80																	
C-S2A3-RD1010	Stage 2 Area 3 - Demo Existing Barrier / Guardrail	2	29-Dec-23	02-Jan-24	80																	
C-S2A3-RD1020	Stage 2 Area 3 - Clearing and Grubbing	2	29-Dec-23	02-Jan-24	80																	
C-S2A3-RD1030	Stage 2 Area 3 - Demo/Mill Pavement	5	03-Jan-24	12-Jan-24	80																	
C-S2A3-RD1040	Stage 2 Area 3 - Install Drainage/SWM	5	03-Jan-24	12-Jan-24	80																	
C-S2A3-RD1050	Stage 2 Area 3 - Excavate / Embankment to Subgrade	5	15-Jan-24	24-Jan-24	80																	
C-S2A3-RD1060	Stage 2 Area 3 - Install Underdrain	3	26-Jan-24	31-Jan-24	86																	
C-S2A3-RD1070	Stage 2 Area 3 - Install Guardrail	3	26-Jan-24	31-Jan-24	96																	
C-S2A3-RD1080	Stage 2 Area 3 - Backfill/Grade Slopes	3	26-Jan-24	31-Jan-24	80																	
C-S2A3-RD1090	Stage 2 Area 3 - Install Subbase (CTA/OGDL)	3	01-Feb-24	05-Feb-24	86																	
C-S2A3-RD1100	Stage 2 Area 3 - Remove ITS/Elec Devices	3	01-Feb-24	05-Feb-24	80																	

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025					
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
C-S2A3-RD1110	Stage 2 Area 3 - Install TMS Ductbank / Junction Boxes	3	07-Feb-24	12-Feb-24	80															
C-S2A3-RD1120	Stage 2 Area 3 - Install TMS / Sign Foundations / Light Foundations	10	14-Feb-24	06-Mar-24	80															
C-S2A3-RD1130	Stage 2 Area 3 - Finegrade slopes & Ditch/Seed	2	08-Mar-24	11-Mar-24	80															
C-S2A3-RD1140	Stage 2 Area 3 - Install TMS / Sign Structures / Light Structures	10	08-Mar-24	26-Mar-24	183															
C-S2A3-RD1150	Stage 2 Area 3 - Asphalt Paving - Base Asphalt	3	18-Mar-24	21-Mar-24	71															
C-S2A3-RD1160	Stage 2 Area 3 - Asphalt Paving - Intermediate Asphalt	3	22-Mar-24	26-Mar-24	71															
C-S2A3-RD1170	Stage 2 Area 3 - Asphalt Paving - Surface Asphalt	3	28-Mar-24	02-Apr-24	71															
C-S2A3-RD1180	Stage 2 Area 3 - Pull & Terminate Power and Fiber	5	28-Mar-24	05-Apr-24	183															
Stage 2 Late Area 3 - I-64 WB between Tidewater Ramp A and Loop A		34	04-Apr-24	07-Jun-24	142															
C-S2LA3-RD1000	Stage 2 Late Area 3 - Install E&S Controls	2	04-Apr-24	05-Apr-24	69															
C-S2LA3-RD1010	Stage 2 Late Area 3 - Demo Existing Barrier / Guardrail	2	08-Apr-24	10-Apr-24	69															
C-S2LA3-RD1020	Stage 2 Late Area 3 - Install Drainage/SWM	5	08-Apr-24	17-Apr-24	71															
C-S2LA3-RD1030	Stage 2 Late Area 3 - Demo/Mill Pavement	5	12-Apr-24	22-Apr-24	69															
C-S2LA3-RD1040	Stage 2 Late Area 3 - Excavate / Embankment to Subgrade	5	23-Apr-24	30-Apr-24	69															
C-S2LA3-RD1050	Stage 2 Late Area 3 - Install Underdrain	3	02-May-24	06-May-24	104															
C-S2LA3-RD1060	Stage 2 Late Area 3 - Install Guardrail	3	02-May-24	06-May-24	152															
C-S2LA3-RD1070	Stage 2 Late Area 3 - Backfill/Grade Slopes	3	02-May-24	06-May-24	152															
C-S2LA3-RD1080	Stage 2 Late Area 3 - Install Subbase (CTA/OGDL)	3	07-May-24	10-May-24	104															
C-S2LA3-RD1090	Stage 2 Late Area 3 - Finegrade slopes & Ditch/Seed	2	07-May-24	09-May-24	152															
C-S2LA3-RD1100	Stage 2 Late Area 3 - Asphalt Paving - Base Asphalt	3	13-May-24	17-May-24	109															
C-S2LA3-RD1110	Stage 2 Late Area 3 - Asphalt Paving - Intermediate Asphalt	3	20-May-24	23-May-24	109															
C-S2LA3-RD1120	Stage 2 Late Area 3 - Asphalt Paving - Surface Asphalt	3	24-May-24	30-May-24	109															
C-S2LA3-RD1130	Stage 2 Late Area 3 - Set MOT Barrier/Temp Striping/Shift Traffic for Stage 3	5	31-May-24	07-Jun-24	142															
Stage 2 - Area 3 Ramps		54	02-May-24	08-Aug-24	108															
Stage 2 - Area 3 Tidewater Ramp A		15	02-May-24	30-May-24	101															
C-S2A3-TDRA-RD1000	Stage 2 Area 3 Tidewater Ramp A - Install E&S Controls	2	02-May-24	03-May-24	69															
C-S2A3-TDRA-RD1010	Stage 2 Area 3 Tidewater Ramp A - Demo Existing Barrier / Guardrail	2	06-May-24	07-May-24	69															
C-S2A3-TDRA-RD1020	Stage 2 Area 3 Tidewater Ramp A - Install Drainage/SWM	2	06-May-24	07-May-24	71															
C-S2A3-TDRA-RD1030	Stage 2 Area 3 Tidewater Ramp A - Demo/Mill Pavement	2	09-May-24	10-May-24	69															
C-S2A3-TDRA-RD1040	Stage 2 Area 3 Tidewater Ramp A - Excavate / Embankment to Subgrade	3	13-May-24	17-May-24	69															
C-S2A3-TDRA-RD1050	Stage 2 Area 3 Tidewater Ramp A - Asphalt Paving - Base Asphalt	2	20-May-24	21-May-24	70															
C-S2A3-TDRA-RD1060	Stage 2 Area 3 Tidewater Ramp A - Asphalt Paving - Surface Asphalt	2	23-May-24	24-May-24	70															
C-S2A3-TDRA-RD1070	Stage 2 Area 3 Tidewater Ramp A - Install Guardrail	2	28-May-24	30-May-24	108															
Stage 2 - Area 3 Tidewater Loop A		15	28-May-24	21-Jun-24	130															
C-S2A3-TDLA-RD1000	Stage 2 Area 3 Tidewater Loop A - Install E&S Controls	2	28-May-24	30-May-24	69															
C-S2A3-TDLA-RD1010	Stage 2 Area 3 Tidewater Loop A - Demo Existing Barrier / Guardrail	2	31-May-24	03-Jun-24	69															
C-S2A3-TDLA-RD1020	Stage 2 Area 3 Tidewater Loop A - Install Drainage/SWM	2	31-May-24	03-Jun-24	71															
C-S2A3-TDLA-RD1030	Stage 2 Area 3 Tidewater Loop A - Demo/Mill Pavement	2	04-Jun-24	06-Jun-24	69															
C-S2A3-TDLA-RD1040	Stage 2 Area 3 Tidewater Loop A - Excavate / Embankment to Subgrade	3	07-Jun-24	11-Jun-24	69															
C-S2A3-TDLA-RD1050	Stage 2 Area 3 Tidewater Loop A - Asphalt Paving - Base Asphalt	2	13-Jun-24	14-Jun-24	70															
C-S2A3-TDLA-RD1060	Stage 2 Area 3 Tidewater Loop A - Asphalt Paving - Surface Asphalt	2	17-Jun-24	18-Jun-24	70															
C-S2A3-TDLA-RD1070	Stage 2 Area 3 Tidewater Loop A - Install Guardrail	2	20-Jun-24	21-Jun-24	97															
Stage 2 - Area 3 Tidewater Ramp B		15	20-Jun-24	16-Jul-24	119															
C-S2A3-TDRB-RD1000	Stage 2 Area 3 Tidewater Ramp B - Install E&S Controls	2	20-Jun-24	21-Jun-24	67															
C-S2A3-TDRB-RD1010	Stage 2 Area 3 Tidewater Ramp B - Demo Existing Barrier / Guardrail	2	24-Jun-24	25-Jun-24	67															
C-S2A3-TDRB-RD1020	Stage 2 Area 3 Tidewater Ramp B - Install Drainage/SWM	2	24-Jun-24	25-Jun-24	69															

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
C-S2A3-TDRB-RD1030	Stage 2 Area 3 Tidewater Ramp B - Demo/Mill Pavement	2	27-Jun-24	28-Jun-24	67														
C-S2A3-TDRB-RD1040	Stage 2 Area 3 Tidewater Ramp B - Excavate / Embankment to Subgrade	3	01-Jul-24	05-Jul-24	67														
C-S2A3-TDRB-RD1050	Stage 2 Area 3 Tidewater Ramp B - Asphalt Paving - Base Asphalt	2	08-Jul-24	09-Jul-24	70														
C-S2A3-TDRB-RD1060	Stage 2 Area 3 Tidewater Ramp B - Asphalt Paving - Surface Asphalt	2	11-Jul-24	12-Jul-24	70														
C-S2A3-TDRB-RD1070	Stage 2 Area 3 Tidewater Ramp B - Install Guardrail	2	15-Jul-24	16-Jul-24	86														
Stage 2 - Area 3 Tidewater Ramp E		15	15-Jul-24	08-Aug-24	108														
C-S2A3-TDRE-RD1000	Stage 2 Area 3 Tidewater Ramp E - Install E&S Controls	2	15-Jul-24	16-Jul-24	66														
C-S2A3-TDRE-RD1010	Stage 2 Area 3 Tidewater Ramp E - Demo Existing Barrier / Guardrail	2	18-Jul-24	19-Jul-24	66														
C-S2A3-TDRE-RD1020	Stage 2 Area 3 Tidewater Ramp E - Install Drainage/SWM	2	18-Jul-24	19-Jul-24	68														
C-S2A3-TDRE-RD1030	Stage 2 Area 3 Tidewater Ramp E - Demo/Mill Pavement	2	22-Jul-24	23-Jul-24	66														
C-S2A3-TDRE-RD1040	Stage 2 Area 3 Tidewater Ramp E - Excavate / Embankment to Subgrade	3	25-Jul-24	29-Jul-24	66														
C-S2A3-TDRE-RD1050	Stage 2 Area 3 Tidewater Ramp E - Asphalt Paving - Base Asphalt	2	30-Jul-24	01-Aug-24	73														
C-S2A3-TDRE-RD1060	Stage 2 Area 3 Tidewater Ramp E - Asphalt Paving - Surface Asphalt	2	02-Aug-24	05-Aug-24	73														
C-S2A3-TDRE-RD1070	Stage 2 Area 3 Tidewater Ramp E - Install Guardrail	2	06-Aug-24	08-Aug-24	75														
Stage 2 Area 3 - I-64 WB 3032+00 to 3082+00 - Structures		172	11-Mar-24	17-Feb-25	12														
Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater		172	11-Mar-24	17-Feb-25	12														
Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Substructure Repairs		9	11-Mar-24	26-Mar-24	123														
C-S2A3-WBTW-BR1000	Stage 2 Area 3 I-64 WB Bridge over Tidewater Concr Substr Surface Repair	5	11-Mar-24	19-Mar-24	123														
C-S2A3-WBTW-BR1010	Stage 2 Area 3 I-64 WB Bridge over Tidewater Concr Embedded Galvanic Anod	3	15-Mar-24	19-Mar-24	123														
C-S2A3-WBTW-BR1020	Stage 2 Area 3 I-64 WB Bridge over Tidewater Concrete Crack Repair Type B	4	21-Mar-24	26-Mar-24	123														
Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Substructure		78	03-Jun-24	23-Oct-24	12														
C-S2A3-WBTW-BR1030	Stage 2 Area 3 I-64 WB Bridge over Tidewater Demo - Set MOT Bar / Temp Stri	2	03-Jun-24	04-Jun-24	12														
C-S2A3-WBTW-BR1040	Stage 2 Area 3 I-64 WB Bridge over Tidewater Demo Bridge Parapet	5	06-Jun-24	13-Jun-24	12														
C-S2A3-WBTW-BR1050	Stage 2 Area 3 I-64 WB Bridge over Tidewater Demo - Demo Existing Bridge De	5	14-Jun-24	21-Jun-24	12														
Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Abutment A		38	24-Jun-24	30-Aug-24	35														
C-S2A3-WBTW-BR1060	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abutment A SOE	2	24-Jun-24	25-Jun-24	12														
C-S2A3-WBTW-BR1070	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abt A Exc to SG for Driving Pile	7	27-Jun-24	09-Jul-24	12														
C-S2A3-WBTW-BR1100	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abutment A Install Pile	3	12-Jul-24	16-Jul-24	19														
C-S2A3-WBTW-BR1140	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abutment A FRP Abutment	10	18-Jul-24	02-Aug-24	35														
C-S2A3-WBTW-BR1160	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abt A FRP Back Wall/ Wing Wall	10	05-Aug-24	22-Aug-24	35														
C-S2A3-WBTW-BR1200	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abutment A Backfill Abutment	5	23-Aug-24	30-Aug-24	35														
Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Abutment B		42	27-Jun-24	13-Sep-24	34														
C-S2A3-WBTW-BR1080	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abutment B SOE	2	27-Jun-24	28-Jun-24	17														
C-S2A3-WBTW-BR1120	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abt B Exc to SG for Driving Pile	7	11-Jul-24	22-Jul-24	12														
C-S2A3-WBTW-BR1160	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abutment B Install Pile	3	23-Jul-24	26-Jul-24	16														
C-S2A3-WBTW-BR1170	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abutment B FRP Abutment	10	29-Jul-24	14-Aug-24	34														
C-S2A3-WBTW-BR1200	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abt B FRP Back Wall/ Wing Wall	10	16-Aug-24	03-Sep-24	34														
C-S2A3-WBTW-BR1300	Stage 2 Area 3 I-64 WB Bridge over Tidewater Abutment B Backfill Abutment	5	05-Sep-24	13-Sep-24	34														
Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Pier 1		42	01-Jul-24	17-Sep-24	12														
C-S2A3-WBTW-BR1090	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 1 SOE	2	01-Jul-24	03-Jul-24	19														
C-S2A3-WBTW-BR1160	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 1 Exc to SG for Driving Pile	7	23-Jul-24	02-Aug-24	12														
C-S2A3-WBTW-BR1190	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 1 Install Pile	3	05-Aug-24	08-Aug-24	12														
C-S2A3-WBTW-BR1200	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 1 FRP Pile Cap	5	09-Aug-24	19-Aug-24	12														
C-S2A3-WBTW-BR1200	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 1 FRP Pier Columns	5	20-Aug-24	27-Aug-24	12														
C-S2A3-WBTW-BR1200	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 1 FRP Pier Cap	10	29-Aug-24	17-Sep-24	12														
Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Pier 2		50	05-Jul-24	03-Oct-24	12														

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 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025			
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
C-S2A3-WBTW-BR11C	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 2 SOE	2	05-Jul-24	08-Jul-24	19													
C-S2A3-WBTW-BR12C	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 2 Exc to SG for Driving Pile	7	05-Aug-24	16-Aug-24	15													
C-S2A3-WBTW-BR12I	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 2 Install Pile	3	19-Aug-24	22-Aug-24	15													
C-S2A3-WBTW-BR12I	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 2 FRP Pile Cap	5	23-Aug-24	30-Aug-24	15													
C-S2A3-WBTW-BR13C	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 2 FRP Pier Columns	5	03-Sep-24	11-Sep-24	15													
C-S2A3-WBTW-BR13I	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 2 FRP Pier Cap	10	19-Sep-24	03-Oct-24	12													
Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Pier 3		58	09-Jul-24	23-Oct-24	12													
C-S2A3-WBTW-BR11I	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 3 SOE	2	09-Jul-24	11-Jul-24	19													
C-S2A3-WBTW-BR12I	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 3 Exc to SG for Driving Pile	7	19-Aug-24	29-Aug-24	18													
C-S2A3-WBTW-BR12I	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 3 Install Pile	3	30-Aug-24	05-Sep-24	18													
C-S2A3-WBTW-BR13I	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 3 FRP Pile Cap	5	06-Sep-24	16-Sep-24	18													
C-S2A3-WBTW-BR13I	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 3 FRP Pier Columns	5	17-Sep-24	24-Sep-24	18													
C-S2A3-WBTW-BR13I	Stage 2 Area 3 I-64 WB Bridge over Tidewater Pier 3 FRP Pier Cap	10	04-Oct-24	23-Oct-24	12													
Stage 2 Area 3 - Structures - I-64 WB Bridge over Tidewater - Superstructure		52	25-Oct-24	17-Feb-25	12													
C-S2A3-WBTW-BR1360	Stage 2 Area 3 I-64 WB Bridge over Tidewater Erect Girders (1 Girders, 4 Spans)	3	25-Oct-24	29-Oct-24	12													
C-S2A3-WBTW-BR1370	Stage 2 Area 3 I-64 WB Bridge over Tidewater Install SIP Decking Span	3	31-Oct-24	04-Nov-24	12													
C-S2A3-WBTW-BR1380	Stage 2 Area 3 I-64 WB Bridge over Tidewater Install Rebar Span	3	05-Nov-24	08-Nov-24	12													
C-S2A3-WBTW-BR1390	Stage 2 Area 3 I-64 WB Bridge over Tidewater Install Screed Rail / Dry Run	3	11-Nov-24	15-Nov-24	12													
C-S2A3-WBTW-BR1400	Stage 2 Area 3 I-64 WB Bridge over Tidewater Deck Pour	5	18-Nov-24	27-Nov-24	12													
C-S2A3-WBTW-BR1410	Stage 2 Area 3 I-64 WB Bridge over Tidewater Cure Deck Pour	5	02-Dec-24	11-Dec-24	12													
C-S2A3-WBTW-BR1420	Stage 2 Area 3 I-64 WB Bridge over Tidewater FRP Sleeper Slab	5	13-Dec-24	23-Dec-24	12													
C-S2A3-WBTW-BR1430	Stage 2 Area 3 I-64 WB Bridge over Tidewater FRP Approach Slab	5	26-Dec-24	02-Jan-25	12													
C-S2A3-WBTW-BR1440	Stage 2 Area 3 I-64 WB Bridge over Tidewater FRP Barrier Walls / Install Condu	10	03-Jan-25	24-Jan-25	12													
C-S2A3-WBTW-BR1450	Stage 2 Area 3 I-64 WB Bridge over Tidewater Set MOT Barrier for Stage 3	10	27-Jan-25	17-Feb-25	12													
Stage 2 Area 4 - I-64 WB 2810+50 to 2860+00		108	11-Sep-23	25-Apr-24	161													
Stage 2 Area 4 - I-64 WB 2810+50 to 2860+00 - Roadway		57	11-Sep-23	05-Jan-24	212													
C-S2A4-RD1000	Stage 2 Area 4 - Install E&S Controls	2	11-Sep-23	13-Sep-23	24													
C-S2A4-RD1010	Stage 2 Area 4 - Demo Existing Barrier / Guardrail	2	15-Sep-23	18-Sep-23	183													
C-S2A4-RD1020	Stage 2 Area 4 - Install Drainage/SWM	5	15-Sep-23	22-Sep-23	185													
C-S2A4-RD1030	Stage 2 Area 4 - Demo/Mill Pavement	5	19-Sep-23	26-Sep-23	183													
C-S2A4-RD1040	Stage 2 Area 4 - Excavate / Embankment to Subgrade	5	28-Sep-23	05-Oct-23	183													
C-S2A4-RD1050	Stage 2 Area 4 - Install Underdrain	3	06-Oct-23	11-Oct-23	201													
C-S2A4-RD1060	Stage 2 Area 4 - Install Guardrail	3	06-Oct-23	11-Oct-23	248													
C-S2A4-RD1070	Stage 2 Area 4 - Backfill/Grade Slopes	3	06-Oct-23	11-Oct-23	248													
C-S2A4-RD1080	Stage 2 Area 4 - Install Subbase (CTA/OGDL)	3	13-Oct-23	18-Oct-23	201													
C-S2A4-RD1090	Stage 2 Area 4 - Finegrade slopes & Ditch/Seed	2	13-Oct-23	16-Oct-23	248													
C-S2A4-RD1100	Stage 2 Area 4 - Asphalt Paving - Base Asphalt	3	19-Oct-23	23-Oct-23	173													
C-S2A4-RD1110	Stage 2 Area 4 - Asphalt Paving - Intermediate Asphalt	3	24-Oct-23	27-Oct-23	173													
C-S2A4-RD1120	Stage 2 Area 4 - Asphalt Paving - Surface Asphalt	3	30-Oct-23	02-Nov-23	173													
C-S2A4-RD1130	Stage 2 Area 4 - Set MOT Devices for Stage 3	2	03-Nov-23	06-Nov-23	238													
Stage 2 Area 4 - Ramps		43	06-Oct-23	05-Jan-24	183													
Stage 2 Area 4 - Granby Ramp A		41	06-Oct-23	02-Jan-24	183													
C-S2A4-GBRA1000	Stage 2 Area 4 Granby Ramp A - Install E&S Controls	2	06-Oct-23	09-Oct-23	183													
C-S2A4-GBRA1010	Stage 2 Area 4 Granby Ramp A - Demo Existing Barrier / Guardrail	2	11-Oct-23	13-Oct-23	183													
C-S2A4-GBRA1020	Stage 2 Area 4 Granby Ramp A - Install Drainage/SWM	2	11-Oct-23	13-Oct-23	185													
C-S2A4-GBRA1030	Stage 2 Area 4 Granby Ramp A - Demo/Mill Pavement	2	16-Oct-23	18-Oct-23	183													

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█ Remaining Work
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Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025					
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
C-S2A4-GBRA1040	Stage 2 Area 4 Granby Ramp A - Excavate / Embankment to Subgrade	3	20-Oct-23	24-Oct-23	183														
C-S2A4-GBRA1050	Stage 2 Area 4 Granby Ramp A - Asphalt Paving - Base Asphalt	2	26-Oct-23	27-Oct-23	174														
C-S2A4-GBRA1080	Stage 2 Area 4 Granby Ramp A - Install Noise Barrier Posts	15	26-Oct-23	22-Nov-23	183														
C-S2A4-GBRA1060	Stage 2 Area 4 Granby Ramp A - Asphalt Paving - Surface Asphalt	2	30-Oct-23	31-Oct-23	174														
C-S2A4-GBRA1090	Stage 2 Area 4 Granby Ramp A - Install Noise Barrier Panels	15	27-Nov-23	28-Dec-23	183														
C-S2A4-GBRA1070	Stage 2 Area 4 Granby Ramp A - Install Guardrail	2	29-Dec-23	02-Jan-24	183														
Stage 2 Area 4 - I-564 Ramp G		34	26-Oct-23	05-Jan-24	183														
C-S2A4-564RG1000	Stage 2 Area 4 I-564 Ramp G - Install E&S Controls	2	26-Oct-23	27-Oct-23	192														
C-S2A4-564RG1010	Stage 2 Area 4 I-564 Ramp G - Demo Existing Barrier / Guardrail	2	30-Oct-23	31-Oct-23	192														
C-S2A4-564RG1020	Stage 2 Area 4 I-564 Ramp G - Install Drainage/SWM	2	30-Oct-23	31-Oct-23	194														
C-S2A4-564RG1030	Stage 2 Area 4 I-564 Ramp G - Demo/Mill Pavement	2	01-Nov-23	02-Nov-23	192														
C-S2A4-564RG1040	Stage 2 Area 4 I-564 Ramp G - Excavate / Embankment to Subgrade	3	03-Nov-23	08-Nov-23	192														
C-S2A4-564RG1050	Stage 2 Area 4 I-564 Ramp G - Asphalt Paving - Base Asphalt	2	09-Nov-23	10-Nov-23	166														
C-S2A4-564RG1060	Stage 2 Area 4 I-564 Ramp G - Asphalt Paving - Surface Asphalt	2	13-Nov-23	14-Nov-23	166														
C-S2A4-564RG1070	Stage 2 Area 4 I-564 Ramp G - Install Guardrail	2	03-Jan-24	05-Jan-24	183														
Stage 2 Area 4 - I-64 WB 2810+50 to 2860+00 - Structures		106	15-Sep-23	25-Apr-24	24														
Stage 2 Area 4 - Structures - I-64 WB Bridge over Little Creek		62	15-Sep-23	22-Jan-24	24														
Stage 2 Area 4 - Structures - I-64 WB Bridge over Little Creek - Superstructure Repairs		62	15-Sep-23	22-Jan-24	24														
C-S2A4-WBLC-BR1000	Stage 2 Area 4 - Structures - I-64 WB Bridge over Little Creek Set MOT Devices	5	15-Sep-23	22-Sep-23	24														
C-S2A4-WBLC-BR1010	Stage 2 Area 4 - Structures - I-64 WB Bridge over Little Creek Jacking and Blocki	4	25-Sep-23	29-Sep-23	24														
C-S2A4-WBLC-BR1020	Stage 2 Area 4 - Str - I-64 WB Br over Little Creek Rpl Brg (Abut A,B, Pier 1-Pier	6	02-Oct-23	11-Oct-23	24														
C-S2A4-WBLC-BR1030	Stage 2 Area 4 - Str - I-64 WB Br over Little Creek Deck Joint Closure -(Pier 1-Pi	24	13-Oct-23	30-Nov-23	24														
C-S2A4-WBLC-BR1040	Stage 2 Area 4 - Str - I-64 WB Br over Little Creek Virginia Micro Abt & Appr Slab	8	01-Dec-23	18-Dec-23	24														
C-S2A4-WBLC-BR1050	Stage 2 Area 4 - Structures - I-64 WB Bridge over Little Creek Type A Milling	5	19-Dec-23	29-Dec-23	24														
C-S2A4-WBLC-BR1060	Stage 2 Area 4 - Structures - I-64 WB Br over Little Creek Type A Hydro-Demo 1	5	02-Jan-24	10-Jan-24	24														
C-S2A4-WBLC-BR1070	Stage 2 Area 4 - Structures - I-64 WB Br over Little Creek Install Latex Mod Concr	5	12-Jan-24	22-Jan-24	24														
Stage 2 Area 4 - Structures - I-64 WB Bridge over Granby		44	24-Jan-24	25-Apr-24	24														
Stage 2 Area 4 - Structures - I-64 WB Bridge over Granby - Superstructure Repairs		44	24-Jan-24	25-Apr-24	24														
C-S2A4-WBGB-BR1000	Stage 2 Area 4 - Structures - I-64 WB Bridge over Granby Set MOT Devices	5	24-Jan-24	01-Feb-24	24														
C-S2A4-WBGB-BR1010	Stage 2 Area 4 - Structures - I-64 WB Br over Granby Jacking and Blocking Bear	4	02-Feb-24	09-Feb-24	24														
C-S2A4-WBGB-BR1020	Stage 2 Area 4 - Str - I-64 WB Br over Granby Repl Bearing (Abut A,B, Pier 1-Pi	4	12-Feb-24	19-Feb-24	24														
C-S2A4-WBGB-BR1030	Stage 2 Area 4 - Str - I-64 WB Br over Granby Deck Joint Closure - (Pier 1 to Pie	9	21-Feb-24	11-Mar-24	24														
C-S2A4-WBGB-BR1040	Stage 2 Area 4 - Str - I-64 WB Br over Granby Virginia Micro Abt & Appr Slab Ext	10	13-Mar-24	01-Apr-24	24														
C-S2A4-WBGB-BR1050	Stage 2 Area 4 - Structures - I-64 WB Bridge over Granby Type A Milling	3	02-Apr-24	05-Apr-24	24														
C-S2A4-WBGB-BR1060	Stage 2 Area 4 - Str - I-64 WB Br over Granby Type A Hydro-Demolition 1/2"	3	08-Apr-24	12-Apr-24	24														
C-S2A4-WBGB-BR1070	Stage 2 Area 4 - Str - I-64 WB Br over Granby Install Latex Modified Concrete 2"	3	15-Apr-24	19-Apr-24	24														
C-S2A4-WBGB-BR1080	Stage 2 Area 4 - Str - I-64 WB Br over Granby - Set MOT Devices for Stage 4	3	22-Apr-24	25-Apr-24	24														
Stage 2 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00		103	19-Sep-23	23-Apr-24	106														
Stage 2 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00 - Roadway		103	19-Sep-23	23-Apr-24	106														
Stage 2 Area 5 - I-64 HOV 6003+00 to 6060+00 - Roadway		60	19-Sep-23	22-Jan-24	106														
C-S2A5-RD1000	Stage 2 Area 5 - Demo ext barrier on south side of reversible lanes, closer to I64	5	19-Sep-23	26-Sep-23	106														
C-S2A5-RD1030	Stage 2 Area 5 - Remove ITS/Elec Devices	3	28-Sep-23	02-Oct-23	106														
C-S2A5-RD1010	Stage 2 Area 5 - Install New Barrier on south side of rever lanes, closer to I64 EB	5	28-Sep-23	05-Oct-23	138														
C-S2A5-RD1040	Stage 2 Area 5 - Install TMS Ductbank / Junction Boxes	20	03-Oct-23	08-Nov-23	106														
C-S2A5-RD1020	Stage 2 Area 5 - Install Subbase (CTA/OGDL)	5	06-Oct-23	16-Oct-23	138														
C-S2A5-RD1050	Stage 2 Area 5 - Asphalt Paving - Base Asphalt	2	17-Oct-23	19-Oct-23	105														

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						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
C-S2A5-RD1070	Stage 2 Area 5 - Asphalt Paving - Intermediate Asphalt	2	20-Oct-23	23-Oct-23	105														
C-S2A5-RD1080	Stage 2 Area 5 - Asphalt Paving - Surface Asphalt	2	24-Oct-23	26-Oct-23	105														
C-S2A5-RD1060	Stage 2 Area 5 - Install Foundation and Equipment for WB Toll Equipment Cabinet	10	10-Nov-23	01-Dec-23	106														
C-S2A5-RD1100	Stage 2 Area 5 - Construct Retaining Wall around TEC	10	04-Dec-23	26-Dec-23	106														
C-S2A5-RD1110	Stage 2 Area 5 - Pull & Terminate Pwr and Fiber & Cutover ITS from HOV to WE	5	28-Dec-23	05-Jan-24	106														
C-S2A5-RD1090	Stage 2 Area 5 - Set MOT Barrier/Temp Striping/Shift Traffic for Stage 3	5	08-Jan-24	17-Jan-24	106														
C-S2A5-RD1120	Stage 2 Area 5 - Shift reversible lanes to the south	2	19-Jan-24	22-Jan-24	106														
Stage 2 Late Area 5 - I-64 WB 2860+00 to 3032+00 - Roadway		43	24-Jan-24	23-Apr-24	106														
C-S2LA5-RD1000	Stage 2 Late Area 5 - Install Erosion Controls	5	24-Jan-24	01-Feb-24	106														
C-S2LA5-RD1010	Stage 2 Late Area 5 - Demo/Mill Pavement	5	02-Feb-24	12-Feb-24	106														
C-S2LA5-RD1020	Stage 2 Late Area 5 - Install Subbase (CTA/OGDL)	5	14-Feb-24	23-Feb-24	119														
C-S2LA5-RD1030	Stage 2 Late Area 5 - ITS/Elec	3	14-Feb-24	19-Feb-24	106														
C-S2LA5-RD1040	Stage 2 Late Area 5 - Install TMS Ductbank / Junction Boxes	3	21-Feb-24	26-Feb-24	106														
C-S2LA5-RD1050	Stage 2 Late Area 5 - Install TMS / Sign Foundations / Light Foundations	10	28-Feb-24	19-Mar-24	106														
C-S2LA5-RD1080	Stage 2 Late Area 5 - Asphalt Paving - Base Asphalt	2	18-Mar-24	19-Mar-24	122														
C-S2LA5-RD1090	Stage 2 Late Area 5 - Asphalt Paving - Intermediate Asphalt	2	21-Mar-24	22-Mar-24	122														
C-S2LA5-RD1060	Stage 2 Late Area 5 - Install TMS / Sign Structures / Light Structures	10	21-Mar-24	08-Apr-24	106														
C-S2LA5-RD1100	Stage 2 Late Area 5 - Asphalt Paving - Surface Asphalt	2	25-Mar-24	26-Mar-24	122														
C-S2LA5-RD1070	Stage 2 Late Area 5 - Pull & Terminate Power and Fiber	5	10-Apr-24	19-Apr-24	106														
C-S2LA5-RD1110	Stage 2 Late Area 5 - Set MOT Barrier/Temp Striping/Shift Traffic for Stage 3	2	22-Apr-24	23-Apr-24	106														
Stage 2 Area 5 - Little Creek Ramp A		15	26-Feb-24	26-Mar-24	119														
C-S2A5-LCRA-RD1000	Stage 2 Area 5 Little Creek Ramp A - Install E&S Controls	2	26-Feb-24	28-Feb-24	119														
C-S2A5-LCRA-RD1010	Stage 2 Area 5 Little Creek Ramp A - Demo Existing Barrier / Guardrail	2	01-Mar-24	04-Mar-24	119														
C-S2A5-LCRA-RD1020	Stage 2 Area 5 Little Creek Ramp A - Install Drainage/SWM	2	01-Mar-24	04-Mar-24	121														
C-S2A5-LCRA-RD1030	Stage 2 Area 5 Little Creek Ramp A - Demo/Mill Pavement	2	06-Mar-24	08-Mar-24	119														
C-S2A5-LCRA-RD1040	Stage 2 Area 5 Little Creek Ramp A - Excavate / Embankment to Subgrade	3	11-Mar-24	15-Mar-24	119														
C-S2A5-LCRA-RD1050	Stage 2 Area 5 Little Creek Ramp A - Asphalt Paving - Base Asphalt	2	18-Mar-24	19-Mar-24	124														
C-S2A5-LCRA-RD1060	Stage 2 Area 5 Little Creek Ramp A - Asphalt Paving - Surface Asphalt	2	21-Mar-24	22-Mar-24	124														
C-S2A5-LCRA-RD1070	Stage 2 Area 5 Little Creek Ramp A - Install Guardrail	2	25-Mar-24	26-Mar-24	119														
Stage 3		197	25-Apr-24	23-May-25	40														
Stage 3 Area 1 - I-64 EB 964+50 to 1025+00		50	31-Jan-25	12-May-25	27														
Stage 3 Area 1 - I-64 EB Sta. 1007+00 to 1025+00 Roadway (East of Little Creek only)		49	31-Jan-25	09-May-25	1														
C-S3A1-RD1000	Stage 3 Area 1 - Install E&S Controls	2	31-Jan-25	03-Feb-25	1														
C-S3A1-RD1010	Stage 3 Area 1 - Demo Existing Barrier / Guardrail	2	05-Feb-25	07-Feb-25	1														
C-S3A1-RD1020	Stage 3 Area 1 - Demo/Mill Pavement	2	10-Feb-25	12-Feb-25	1														
C-S3A1-RD1030	Stage 3 Area 1 - Excavate / Embankment to Subgrade	3	14-Feb-25	19-Feb-25	1														
C-S3A1-RD1040	Stage 3 Area 1 - Fine Grade for Roadway / Barrier	2	21-Feb-25	24-Feb-25	24														
C-S3A1-RD1050	Stage 3 Area 1 - Install TMS Ductbk / Jtc Boxes / Equip / Generator & Propane Tan	15	21-Feb-25	24-Mar-25	1														
C-S3A1-RD1060	Stage 3 Area 1 - Install Underdrain	2	26-Feb-25	28-Feb-25	24														
C-S3A1-RD1070	Stage 3 Area 1 - Install Subbase (CTA/OGDL)	2	03-Mar-25	05-Mar-25	24														
C-S3A1-RD1080	Stage 3 Area 1 - Asphalt Paving - Base Asphalt	2	17-Mar-25	18-Mar-25	22														
C-S3A1-RD1090	Stage 3 Area 1 - Asphalt Paving - Intermediate Asphalt	2	20-Mar-25	21-Mar-25	22														
C-S3A1-RD1100	Stage 3 Area 1 - Asphalt Paving - Surface Asphalt	2	24-Mar-25	25-Mar-25	22														
C-S3A1-RD1110	Stage 3 Area 1 - Install TMS / Sign Foundations / Light Foundations	10	25-Mar-25	11-Apr-25	1														
C-S3A1-RD1120	Stage 3 Area 1 - Install TMS / Sign Structures / Light Structures	10	14-Apr-25	01-May-25	1														
C-S3A1-RD1130	Stage 3 Area 1 - Set MOT Barrier/Temp Striping/Shift Traffic for Stage 4	5	02-May-25	09-May-25	1														

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
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Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025						
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Stage 3 Area 1 - I-64 EB Sta. 964+50 to 1025+00 Structures						50	31-Jan-25	12-May-25	27											
Stage 3 Area 1 - Structures - I-64 EB Bridge over Granby						32	31-Jan-25	07-Apr-25	30											
Stage 3 Area 1- Structures - I-64 EB Bridge over Granby Superstructure Repairs						32	31-Jan-25	07-Apr-25	30											
C-S3A1-EBGB-BR1000	Stage 3 Area 1 - I-64 EB Bridge over Granby Jacking and Blocking Beam	5	31-Jan-25	10-Feb-25	0															Stage 3 Area 1 - I-64 EB Bridge over Granby
C-S3A1-EBGB-BR1010	Stage 3 Area 1 - I-64 EB Br over Granby Replace Bearing (Abut A,B, Pier 1-Pier	4	12-Feb-25	19-Feb-25	0															Stage 3 Area 1 - I-64 EB Br over Granby R
C-S3A1-EBGB-BR1020	Stage 3 Area 1 - I-64 EB Br over Granby Deck Joint Closure - Piers (Pier 1 to Pie	6	21-Feb-25	05-Mar-25	0															Stage 3 Area 1 - I-64 EB Br over Granby
C-S3A1-EBGB-BR1070	Stage 3 Area 1 - I-64 EB Br over Granby Recoat Existing Str./ Ultrasonic Imct Tre	10	21-Feb-25	14-Mar-25	43															Stage 3 Area 1 - I-64 EB Br over Granby
C-S3A1-EBGB-BR1030	Stage 3 Area 1 - I-64 EB Br over Granby Virginia Micro Abt & Appr Slab Extensior	8	07-Mar-25	21-Mar-25	0															Stage 3 Area 1 - I-64 EB Br over Gran
C-S3A1-EBGB-BR1040	Stage 3 Area 1 - I-64 EB Bridge over Granby Type A Milling	3	24-Mar-25	27-Mar-25	10															Stage 3 Area 1 - I-64 EB Bridge over
C-S3A1-EBGB-BR1050	Stage 3 Area 1 - I-64 EB Bridge over Granby Type A Hydro-Demolition 1/2"	3	28-Mar-25	01-Apr-25	10															Stage 3 Area 1 - I-64 EB Bridge over
C-S3A1-EBGB-BR1060	Stage 3 Area 1 - I-64 EB Bridge over Granby Install Latex Modified Concrete 2"	3	03-Apr-25	07-Apr-25	10															Stage 3 Area 1 - I-64 EB Bridge ove
Stage 3 Area 1- Structures - I-64 EB Bridge over I-564						38	12-Feb-25	30-Apr-25	34											
Stage 3 Area 1- Structures - I-64 EB Bridge over I-564 Superstructure Repairs						38	12-Feb-25	30-Apr-25	34											
C-S3A1-EB564-BR1000	Stage 3 Area 1 - I-64 EB Bridge over 564 Jacking and Blocking Beam	5	12-Feb-25	21-Feb-25	3															Stage 3 Area 1 - I-64 EB Bridge over 564
C-S3A1-EB564-BR1010	Stage 3 Area 1 - I-64 EB Br over 564 Replace Bearing (Abut A, B, Pier 1 to Pier :	4	24-Feb-25	03-Mar-25	3															Stage 3 Area 1 - I-64 EB Br over 564 Re
C-S3A1-EB564-BR1020	Stage 3 Area 1 - I-64 EB Br over 564 Deck Joint Cls - Piers (Pier1- Pier 3) & Rec	12	07-Mar-25	28-Mar-25	2															Stage 3 Area 1 - I-64 EB Br over 564
C-S3A1-EB564-BR1070	Stage 3 Area 1 - I-64 EB Br over 564 Recoat Ex. Str./ Ultrasonic Treat/Repair Be	15	17-Mar-25	11-Apr-25	43															Stage 3 Area 1 - I-64 EB Br over 56
C-S3A1-EB564-BR1030	Stage 3 Area 1 - I-64 EB Bridge over 564 Virginia Micro Abutments & Approach E	8	24-Mar-25	04-Apr-25	0															Stage 3 Area 1 - I-64 EB Bridge over
C-S3A1-EB564-BR1040	Stage 3 Area 1 - I-64 EB Bridge over 564 Type A Milling	10	31-Mar-25	17-Apr-25	2															Stage 3 Area 1 - I-64 EB Bridge ov
C-S3A1-EB564-BR1050	Stage 3 Area 1 - I-64 EB Bridge over 564 Type A Hydro-Demolition 1/2"	3	21-Apr-25	25-Apr-25	2															Stage 3 Area 1 - I-64 EB Bridge o
C-S3A1-EB564-BR1060	Stage 3 Area 1 - I-64 EB Bridge over 564 Install Latex Modified Concrete 2"	3	28-Apr-25	30-Apr-25	2															Stage 3 Area 1 - I-64 EB Bridge o
Stage 3 Area 1- Structures - I-64 EB Bridge over Little Creek						40	24-Feb-25	12-May-25	0											
Stage 3 Area 1- Structures - I-64 EB Bridge over Little Creek Superstructure Repairs						40	24-Feb-25	12-May-25	0											
C-S3A1-EBLC-BR1000	Stage 3 Area 1 - I-64 EB Bridge over Little Creek Jacking and Blocking Beam	5	24-Feb-25	05-Mar-25	3															Stage 3 Area 1 - I-64 EB Bridge over Litt
C-S3A1-EBLC-BR1010	Stage 3 Area 1 - I-64 EB Br over Little Creek Repl Bearing (Abut A,B, Pier 1-Pier	4	07-Mar-25	14-Mar-25	3															Stage 3 Area 1 - I-64 EB Br over Little C
C-S3A1-EBLC-BR1020	Stage 3 Area 1 - I-64 EB Br over Little Creek Deck Joint Closure - Piers (Pier 1-P	9	17-Mar-25	31-Mar-25	3															Stage 3 Area 1 - I-64 EB Br over Littl
C-S3A1-EBLC-BR1030	Stage 3 Area 1 - I-64 EB Br over Little Creek Virginia Micro Abt & Appr Slab Ext	8	07-Apr-25	23-Apr-25	0															Stage 3 Area 1 - I-64 EB Br over l
C-S3A1-EBLC-BR1040	Stage 3 Area 1 - I-64 EB Bridge over Little Creek Type A Milling	3	25-Apr-25	29-Apr-25	0															Stage 3 Area 1 - I-64 EB Bridge o
C-S3A1-EBLC-BR1050	Stage 3 Area 1 - I-64 EB Bridge over Little Creek Type A Hydro-Demolition 1/2"	3	30-Apr-25	02-May-25	0															Stage 3 Area 1 - I-64 EB Bridge
C-S3A1-EBLC-BR1060	Stage 3 Area 1 - I-64 EB Bridge over Little Creek Install Latex Modified Concrete	3	05-May-25	08-May-25	0															Stage 3 Area 1 - I-64 EB Bridge
C-S3A1-EBLC-BR1070	Stage 3 Area 1 - I-64 EB Bridge over Little Creek Set MOT Barrier for Stage 4	2	09-May-25	12-May-25	0															Stage 3 Area 1 - I-64 EB Bridge
Stage 3 Area 2 - I-64 EB 1025+00 to 1085+50						58	24-Jan-25	23-May-25	25											
Stage 3 Area 2 - I-64 EB 1025+00 to 1054+90 - Roadway - Widen to the Inside (west of Tidewater)						58	24-Jan-25	23-May-25	3											
C-S3A2-RD1000	Stage 3 Area 2 - Install E&S Controls	2	24-Jan-25	27-Jan-25	3															Stage 3 Area 2 - Install E&S Controls,
C-S3A2-RD1010	Stage 3 Area 2 - Demo Existing Barrier / Guardrail	2	29-Jan-25	31-Jan-25	3															Stage 3 Area 2 - Demo Existing Barrier / Gua
C-S3A2-RD1020	Stage 3 Area 2 - Install Drainage/SWM	5	29-Jan-25	07-Feb-25	5															Stage 3 Area 2 - Install Drainage/SWM,
C-S3A2-RD1030	Stage 3 Area 2 - Demo/Mill Pavement	5	03-Feb-25	12-Feb-25	3															Stage 3 Area 2 - Demo/Mill Pavement,
C-S3A2-RD1040	Stage 3 Area 2 - Excavate / Embankment to Subgrade	5	14-Feb-25	24-Feb-25	3															Stage 3 Area 2 - Excavate / Embankment
C-S3A2-RD1050	Stage 3 Area 2 - Install Underdrain	3	26-Feb-25	03-Mar-25	22															Stage 3 Area 2 - Install Underdrain,
C-S3A2-RD1060	Stage 3 Area 2 - Install Guardrail	3	26-Feb-25	03-Mar-25	32															Stage 3 Area 2 - Install Guardrail,
C-S3A2-RD1070	Stage 3 Area 2 - Backfill/Grade Slopes	3	26-Feb-25	03-Mar-25	3															Stage 3 Area 2 - Backfill/Grade Slopes,
C-S3A2-RD1080	Stage 3 Area 2 - Install Subbase (CTA/OGDL)	3	05-Mar-25	10-Mar-25	22															Stage 3 Area 2 - Install Subbase (CTA/C
C-S3A2-RD1090	Stage 3 Area 2 - ITS/Elec	3	05-Mar-25	10-Mar-25	3															Stage 3 Area 2 - ITS/Elec,
C-S3A2-RD1100	Stage 3 Area 2 - Install TMS Ductbank / Junction Boxes	3	12-Mar-25	17-Mar-25	3															Stage 3 Area 2 - Install TMS Ductbank
C-S3A2-RD1110	Stage 3 Area 2 - Asphalt Paving - Base Asphalt	3	17-Mar-25	20-Mar-25	22															Stage 3 Area 2 - Asphalt Paving - Base
C-S3A2-RD1120	Stage 3 Area 2 - Install TMS / Sign Foundations / Light Foundations	10	18-Mar-25	03-Apr-25	3															Stage 3 Area 2 - Install TMS / Sign F

█ Remaining Level of Effort
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 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025						
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
C-S3A2-RD1130	Stage 3 Area 2 - Asphalt Paving - Intermediate Asphalt	3	21-Mar-25	25-Mar-25	22															
C-S3A2-RD1140	Stage 3 Area 2 - Asphalt Paving - Surface Asphalt	3	27-Mar-25	31-Mar-25	22															
C-S3A2-RD1150	Stage 3 Area 2 - Finegrade slopes & Ditch/Seed	2	04-Apr-25	07-Apr-25	16															
C-S3A2-RD1160	Stage 3 Area 2 - Install TMS / Sign Structures / Light Structures	10	04-Apr-25	25-Apr-25	3															
C-S3A2-RD1170	Stage 3 Area 2 - Pull & Terminate Power and Fiber	5	28-Apr-25	02-May-25	3															
C-S3A2-RD1180	Stage 3 Area 2 - Set MOT Barrier/Temp Striping/Shift Traffic for Stage 4	10	05-May-25	23-May-25	3															
Stage 3 Area 2 - I-64 EB 1025+00 to 1085+50 - Structures		40	24-Jan-25	17-Apr-25	43															
Stage 3 Area 2 Structures - I-64 EB Bridge over Tidewater - Superstructure Repairs		40	24-Jan-25	17-Apr-25	43															
C-S3A2-EBTW-BR1000	Stage 3 Area 2 - I-64 EB Bridge over Tidewater Jacking and Blocking Beam	5	24-Jan-25	03-Feb-25	15															
C-S3A2-EBTW-BR1010	Stage 3 Area 2 - I-64 EB Br over Tidewater Rpl Bearing (Abut A, B, Pier 1-Pier	4	05-Feb-25	12-Feb-25	15															
C-S3A2-EBTW-BR1020	Stage 3 Area 2 - I-64 EB Br over Tidewater Deck Joint Closure - Piers (Pier 1-Pie	9	14-Feb-25	05-Mar-25	15															
C-S3A2-EBTW-BR1030	Stage 3 Area 2 - I-64 EB Br over Tidewater Virginia Micro Abt & Appr Slab Extens	8	07-Mar-25	21-Mar-25	15															
C-S3A2-EBTW-BR1040	Stage 3 Area 2 - I-64 EB Bridge over Tidewater Type A Milling	3	24-Mar-25	27-Mar-25	15															
C-S3A2-EBTW-BR1050	Stage 3 Area 2 - I-64 EB Bridge over Tidewater Type A Hydro-Demolition 1/2"	3	28-Mar-25	01-Apr-25	15															
C-S3A2-EBTW-BR1060	Stage 3 Area 2 - I-64 EB Bridge over Tidewater Install Latex Modified Concrete 2	3	03-Apr-25	07-Apr-25	15															
C-S3A2-EBTW-BR1070	Stage 3 Area 2 - I-64 EB Bridge over Tidewater Set MOT Barrier for Stage 4	3	09-Apr-25	14-Apr-25	15															
C-S3A2-EBTW-BR1080	Stage 3 Area 2 - I-64 EB Br over Tdw Recoat Ex Str./ Ultrasonic Treat/Repair Be	3	14-Apr-25	17-Apr-25	43															
Stage 3 Area 3 - I-64 WB 3032+00 to 3082+00		44	19-Feb-25	16-May-25	43															
Stage 3 Area 3 - I-64 WB 3032+00 to 3082+00 - Roadway - Inside East End to Tidewater Ramp E		33	19-Feb-25	28-Apr-25	17															
C-S3A3-RD1000	Stage 3 Area 3- Install E&S Controls	2	19-Feb-25	21-Feb-25	16															
C-S3A3-RD1010	Stage 3 Area 3- Demo Existing Barrier / Guardrail	2	24-Feb-25	26-Feb-25	16															
C-S3A3-RD1020	Stage 3 Area 3- Install Drainage/SWM	5	24-Feb-25	05-Mar-25	18															
C-S3A3-RD1030	Stage 3 Area 3- Demo/Mill Pavement	5	28-Feb-25	10-Mar-25	16															
C-S3A3-RD1040	Stage 3 Area 3- Excavate / Embankment to Subgrade	5	12-Mar-25	20-Mar-25	16															
C-S3A3-RD1050	Stage 3 Area 3- Install Underdrain	3	21-Mar-25	25-Mar-25	16															
C-S3A3-RD1060	Stage 3 Area 3- Install Guardrail	3	21-Mar-25	25-Mar-25	26															
C-S3A3-RD1070	Stage 3 Area 3- Backfill/Grade Slopes	3	21-Mar-25	25-Mar-25	26															
C-S3A3-RD1080	Stage 3 Area 3- Install Subbase (CTA/OGDL)	3	27-Mar-25	31-Mar-25	16															
C-S3A3-RD1090	Stage 3 Area 3- Finegrade slopes & Ditch/Seed	2	27-Mar-25	28-Mar-25	26															
C-S3A3-RD1100	Stage 3 Area 3- Asphalt Paving - Base Asphalt	3	01-Apr-25	04-Apr-25	18															
C-S3A3-RD1110	Stage 3 Area 3- Asphalt Paving - Intermediate Asphalt	3	07-Apr-25	10-Apr-25	18															
C-S3A3-RD1120	Stage 3 Area 3- Asphalt Paving - Surface Asphalt	3	11-Apr-25	15-Apr-25	18															
C-S3A3-RD1130	Stage 3 Area 3- Set MOT Barrier/Temp Striping/Shift Traffic for Stage 4	5	17-Apr-25	28-Apr-25	17															
Stage 3 Area 3 - I-64 WB 3032+00 to 3082+00 - Structures		44	19-Feb-25	16-May-25	43															
Stage 3 Area 3 - Structures I-64 WB Bridge over Tidewater		44	19-Feb-25	16-May-25	43															
Stage 3 Area 3 - Structures I-64 WB Bridge over Tidewater Superstructure Repairs		44	19-Feb-25	16-May-25	43															
C-S3A3-WBTW-BR1000	Stage 3 Area 3 - Structures I-64 WB Br over Tdw Jacking and Blocking Beam	5	19-Feb-25	28-Feb-25	12															
C-S3A3-WBTW-BR1010	Stage 3 Area 3 - Str I-64 WB Br over Tidewater Rpl Bearing (Abut A, B, Pier 1-Pi	4	03-Mar-25	10-Mar-25	12															
C-S3A3-WBTW-BR1020	Stage 3 Area 3 - Str I-64 WB Br over Tidewater Deck Joint Closure - (Pier 1 to P	9	12-Mar-25	27-Mar-25	12															
C-S3A3-WBTW-BR1030	Stage 3 Area 3 - Str I-64 WB Br over Tidewater Virginia Micro Abt & Appr Slab E	8	28-Mar-25	11-Apr-25	12															
C-S3A3-WBTW-BR1040	Stage 3 Area 3 - Structures I-64 WB Bridge over Tidewater Type A Milling	3	14-Apr-25	17-Apr-25	12															
C-S3A3-WBTW-BR1050	Stage 3 Area 3 - Structures I-64 WB Bri over Tidewater Type A Hydro-Demol 1/2'	3	21-Apr-25	25-Apr-25	12															
C-S3A3-WBTW-BR1080	Stage 3 Area 3 - Str I-64 WB Br over Tdw Recoat Ex. Str./ Ultrasonic /Repair Be	15	21-Apr-25	16-May-25	43															
C-S3A3-WBTW-BR1060	Stage 3 Area 3 - Structures I-64 WB Br over Tidewater Install Latex Mod Concr	3	28-Apr-25	30-Apr-25	12															
C-S3A3-WBTW-BR1070	Stage 3 Area 3 - Structures I-64 WB Bri over Tidewater Set MOT Barrier for Sta	3	01-May-25	05-May-25	12															
Stage 3 Area 4 - I-64 WB 2810+50 to 2860+00		108	26-Apr-24	13-Nov-24	24															

█ Remaining Level of Effort
 █ Actual Work
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Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025					
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Stage 3 Area 4 - I-64 WB 2810+50 to 2860+00 - Structures						108	26-Apr-24	13-Nov-24	24											
Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek						64	26-Apr-24	22-Aug-24	24											
Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek - Superstructure Repairs						64	26-Apr-24	22-Aug-24	24											
C-S3A4-WBLC-BR1000	Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek Set MOT Devices	5	26-Apr-24	03-May-24	24															
C-S3A4-WBLC-BR1010	Stage 3 Area 4 - Str - I-64 WB Bri over Little Creek Jacking and Blocking Beam	4	06-May-24	10-May-24	24															
C-S3A4-WBLC-BR1020	Stage 3 Area 4 - Str - I-64 WB Bri over Little Creek Repl Brg (Abut A,B, Pier 1-Pi	6	13-May-24	23-May-24	24															
C-S3A4-WBLC-BR1030	Stage 3 Area 4 - Str- I-64 WB Br over Little Creek Deck Joint Closure - (Pier 1- F	24	24-May-24	08-Jul-24	24															
C-S3A4-WBLC-BR1040	Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek Virginia Micro Abu	10	09-Jul-24	25-Jul-24	24															
C-S3A4-WBLC-BR1050	Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek Type A Milling	5	26-Jul-24	02-Aug-24	24															
C-S3A4-WBLC-BR1060	Stage 3 Area 4 - Str - I-64 WB Bridge over Little Creek Type A Hydro-Demol 1/2"	5	05-Aug-24	12-Aug-24	24															
C-S3A4-WBLC-BR1070	Stage 3 Area 4 - Structures - I-64 WB Br over Little Creek Install Latex Mod Conc	5	14-Aug-24	22-Aug-24	24															
Stage 3 Area 4- Structures - I-64 WB Bridge over Granby						44	23-Aug-24	13-Nov-24	24											
Stage 3 Area 4 - Structures - I-64 WB Bridge over Granby - Superstructure Repairs						44	23-Aug-24	13-Nov-24	24											
C-S3A4-WBGB-BR1000	Stage 3 Area 4 - Structures - I-64 WB Bridge over Granby Set MOT Devices	5	23-Aug-24	30-Aug-24	24															
C-S3A4-WBGB-BR1010	Stage 3 Area 4 - Structures - I-64 WB Br over Granby Jacking and Blocking Bear	4	03-Sep-24	09-Sep-24	24															
C-S3A4-WBGB-BR1020	Stage 3 Area 4 - Str - I-64 WB Br over Granby Repl Bearing (Abut A, B, Pier 1-P	4	11-Sep-24	17-Sep-24	24															
C-S3A4-WBGB-BR1030	Stage 3 Area 4 - Str - I-64 WB Br over Granby Deck Joint Closure - (Pier 1 to Pie	9	19-Sep-24	02-Oct-24	24															
C-S3A4-WBGB-BR1040	Stage 3 Area 4 - Str - I-64 WB Br over Granby Virginia Micro Abt & Appr Slab Ext	10	03-Oct-24	21-Oct-24	24															
C-S3A4-WBGB-BR1050	Stage 3 Area 4 - Structures - I-64 WB Bridge over Granby Type A Milling	3	23-Oct-24	28-Oct-24	24															
C-S3A4-WBGB-BR1060	Stage 3 Area 4 - Structures - I-64 WB Br over Granby Type A Hydro-Demo 1/2"	3	29-Oct-24	01-Nov-24	24															
C-S3A4-WBGB-BR1070	Stage 3 Area 4 - Structures - I-64 WB Br over Granby Install Latex Mod Concr 2"	3	04-Nov-24	07-Nov-24	24															
C-S3A4-WBGB-BR1080	Stage 3 Area 4 - Str - I-64 WB Bri over Granby - Set MOT Devices for Stage 4	3	08-Nov-24	13-Nov-24	24															
Stage 3 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00						26	25-Apr-24	11-Jun-24	144											
Stage 3 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00 - Roadway						26	25-Apr-24	11-Jun-24	144											
C-S3A5-RD1000	Stage 3 Area 5 - Demo exist barrier on north side of rev lanes, closer to 64 WB	5	25-Apr-24	02-May-24	106															
C-S3A5-RD1010	Stage 3 Area 5 - Install Subbase (CTA/OGDL)	5	03-May-24	10-May-24	106															
C-S3A5-RD1020	Stage 3 Area 5 - Asphalt Paving - Base Asphalt	2	13-May-24	15-May-24	112															
C-S3A5-RD1030	Stage 3 Area 5 - Asphalt Paving - Intermediate Asphalt	2	17-May-24	20-May-24	112															
C-S3A5-RD1040	Stage 3 Area 5 - Asphalt Paving - Surface Asphalt	2	21-May-24	23-May-24	112															
C-S3A5-RD1050	Stage 3 Area 5 - Set MOT Devices for Stage 4	10	24-May-24	11-Jun-24	144															
Stage 4						221	13-Jun-24	25-Aug-25	0											
Stage 4 Area 1 - I-64 EB 964+50 to 1025+00						55	14-May-25	25-Aug-25	0											
Stage 4 Area 1- I-64 EB Sta. 964+50 to 1025+00 Roadway						55	14-May-25	25-Aug-25	0											
C-S4A1-RD1000	Stage 4 Area 1 - Install E&S Controls	2	14-May-25	16-May-25	0															
C-S4A1-RD1010	Stage 4 Area 1 - Demo Existing Barrier / Guardrail	2	19-May-25	21-May-25	0															
C-S4A1-RD1020	Stage 4 Area 1 - Demo/Mill Pavement (West of Little Creek)	2	23-May-25	27-May-25	0															
C-S4A1-RD1030	Stage 4 Area 1 - Excavate / Embankment to Subgrade	2	29-May-25	30-May-25	0															
C-S4A1-RD1040	Stage 4 Area 1 - Fine Grade for Roadway / Barrier	2	02-Jun-25	03-Jun-25	20															
C-S4A1-RD1050	Stage 4 Area 1 - Install TMS Ductbk / Jcti Boxes / Eq. / Generator & Propane Tan	10	02-Jun-25	17-Jun-25	0															
C-S4A1-RD1060	Stage 4 Area 1 - Install Underdrain	2	05-Jun-25	06-Jun-25	20															
C-S4A1-RD1070	Stage 4 Area 1 - Install Subbase (CTA/OGDL)	2	09-Jun-25	10-Jun-25	20															
C-S4A1-RD1080	Stage 4 Area 1 - Asphalt Paving - Base Asphalt	2	12-Jun-25	13-Jun-25	20															
C-S4A1-RD1090	Stage 4 Area 1 - Asphalt Paving - Intermediate Asphalt	2	16-Jun-25	17-Jun-25	20															
C-S4A1-RD1100	Stage 4 Area 1 - Asphalt Paving - Surface Asphalt	2	19-Jun-25	20-Jun-25	20															
C-S4A1-RD1120	Stage 4 Area 1 - Install TMS / Sign Foundations / Light Foundations	10	19-Jun-25	07-Jul-25	12															
C-S4A1-RD1110	Stage 4 Area 1 - Mill/Overlay/Pavement Markings 964+50 to 1025+00	5	23-Jun-25	30-Jun-25	20															

- Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek Set MOT Devices,
- Stage 3 Area 4 - Str - I-64 WB Bri over Little Creek Jacking and Blocking Beam,
- Stage 3 Area 4 - Str - I-64 WB Bri over Little Creek Repl Brg (Abut A,B, Pier 1-Pi
- Stage 3 Area 4 - Str- I-64 WB Br over Little Creek Deck Joint Closure - (P
- Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek Virginia
- Stage 3 Area 4 - Structures - I-64 WB Bridge over Little Creek Type A
- Stage 3 Area 4 - Str - I-64 WB Bridge over Little Creek Type A Hydro
- Stage 3 Area 4 - Structures - I-64 WB Br over Little Creek Install La
- Stage 3 Area 4 - Structures - I-64 WB Bridge over Granby Set MO
- Stage 3 Area 4 - Structures - I-64 WB Br over Granby Jacking and
- Stage 3 Area 4 - Str - I-64 WB Br over Granby Repl Bearing (Ab
- Stage 3 Area 4 - Str - I-64 WB Br over Granby Deck Joint Clo
- Stage 3 Area 4 - Str - I-64 WB Br over Granby Virginia Micro
- Stage 3 Area 4 - Structures - I-64 WB Bridge over Granby
- Stage 3 Area 4 - Structures - I-64 WB Br over Granby Typ
- Stage 3 Area 4 - Structures - I-64 WB Br over Granby In
- Stage 3 Area 4 - Str - I-64 WB Bri over Granby - Set MO
- Stage 3 Area 5 - Demo exist barrier on north side of rev lanes, closer to 64 WB,
- Stage 3 Area 5 - Install Subbase (CTA/OGDL),
- Stage 3 Area 5 - Asphalt Paving - Base Asphalt,
- Stage 3 Area 5 - Asphalt Paving - Intermediate Asphalt,
- Stage 3 Area 5 - Asphalt Paving - Surface Asphalt,
- Stage 3 Area 5 - Set MOT Devices for Stage 4,
- Stage 4 Area 1 - Install E&S Co
- Stage 4 Area 1 - Demo Existin
- Stage 4 Area 1 - Demo/Mill P
- Stage 4 Area 1 - Excavate / E
- Stage 4 Area 1 - Fine Grade
- Stage 4 Area 1 - Install TM
- Stage 4 Area 1 - Install Und
- Stage 4 Area 1 - Install Sub
- Stage 4 Area 1 - Asphalt P
- Stage 4 Area 1 - Asphalt P
- Stage 4 Area 1 - Asphalt P
- Stage 4 Area 1 - Mill/Ove

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
C-S4A1-RD1130	Stage 4 Area 1 - Place High Friction Epoxy Aggr Surface Treat 981+27 to 998+10	5	01-Jul-25	10-Jul-25	20													Stage 4 Area 1 - Place
C-S4A1-RD1140	Stage 4 Area 1 - Install TMS / Sign Structures / Light Structures	10	08-Jul-25	24-Jul-25	12													Stage 4 Area 1 - Insta
C-S4A1-RD1150	Stage 4 Area 1 - Remove MOT Devices	5	18-Aug-25	25-Aug-25	0													Stage 4 Area 1 -
Stage 4 Area 1- I-64 EB Sta. 964+50 to 1025+00 Structures		42	02-Jun-25	15-Aug-25	0													
C-S4A1-EBGB-BR1000	Stage 4 Area 1 - I-64 EB Bridge over Granby Jacking and Blocking Beam	5	02-Jun-25	09-Jun-25	0													Stage 4 Area 1 - I-64 EB Br
C-S4A1-EBGB-BR1010	Stage 4 Area 1 - I-64 EB Br over Granby Repl Bearing (Abut A, B, Pier 1 to Pier 3)	4	10-Jun-25	16-Jun-25	0													Stage 4 Area 1 - I-64 EB B
C-S4A1-EBGB-BR1020	Stage 4 Area 1 - I-64 EB Br over Granby Deck Joint Closure - (Pier 1 to Pier 3)	9	17-Jun-25	01-Jul-25	0													Stage 4 Area 1 - I-64 EB
C-S4A1-EBGB-BR1030	Stage 4 Area 1 - I-64 EB Br over Granby Virginia Micro Abt & Appr Slab Extensior	10	03-Jul-25	21-Jul-25	0													Stage 4 Area 1 - I-64
C-S4A1-EBGB-BR1040	Stage 4 Area 1 - I-64 EB Bridge over Granby Type A Milling	3	22-Jul-25	25-Jul-25	0													Stage 4 Area 1 - I-64
C-S4A1-EBGB-BR1050	Stage 4 Area 1 - I-64 EB Bridge over Granby Type A Hydro-Demolition 1/2"	3	28-Jul-25	31-Jul-25	0													Stage 4 Area 1 - I-64
C-S4A1-EBGB-BR1060	Stage 4 Area 1 - I-64 EB Bridge over Granby Install Latex Modified Concrete 2"	3	01-Aug-25	05-Aug-25	0													Stage 4 Area 1 - I-6
C-S4A1-EBGB-BR1070	Stage 4 Area 1 - I-64 EB Bridge over Granby Remove MOT Devices	5	07-Aug-25	15-Aug-25	0													Stage 4 Area 1 - I-
Stage 4 Area 2 - I-64 EB 1025+00 to 1085+50		67	15-Apr-25	19-Aug-25	3													
Stage 4 Area 2 - I-64 EB 1025+00 to 1085+50 Roadway		55	15-Apr-25	28-Jul-25	15													
Stage 4 Area 2 - I-64 EB 1057+00 to 1090+90 - Roadway - Widen to the Outside		55	15-Apr-25	28-Jul-25	15													
C-S4A2-RD1000	Stage 4 Area 2 - Install E&S Controls	2	15-Apr-25	17-Apr-25	15													Stage 4 Area 2 - Install E&S Contro
C-S4A2-RD1010	Stage 4 Area 2 - Demo Existing Barrier / Guardrail	2	21-Apr-25	23-Apr-25	15													Stage 4 Area 2 - Demo Existing B
C-S4A2-RD1020	Stage 4 Area 2 - Install Drainage/SWM	5	21-Apr-25	29-Apr-25	17													Stage 4 Area 2 - Install Drainage/
C-S4A2-RD1030	Stage 4 Area 2 - Demo/Mill Pavement	5	25-Apr-25	01-May-25	15													Stage 4 Area 2 - Demo/Mill Pave
C-S4A2-RD1040	Stage 4 Area 2 - Excavate / Embankment to Subgrade	5	02-May-25	09-May-25	15													Stage 4 Area 2 - Excavate / Em
C-S4A2-RD1050	Stage 4 Area 2 - Install Underdrain	3	12-May-25	16-May-25	33													Stage 4 Area 2 - Install Underc
C-S4A2-RD1060	Stage 4 Area 2 - Install Guardrail	3	12-May-25	16-May-25	49													Stage 4 Area 2 - Install Guardr
C-S4A2-RD1070	Stage 4 Area 2 - Backfill/Grade Slopes	3	12-May-25	16-May-25	15													Stage 4 Area 2 - Backfill/Grade
C-S4A2-RD1080	Stage 4 Area 2 - Install Subbase (CTA/OGDL)	3	19-May-25	23-May-25	33													Stage 4 Area 2 - Install Subba
C-S4A2-RD1090	Stage 4 Area 2 - ITS/Elec	3	19-May-25	23-May-25	15													Stage 4 Area 2 - ITS/Elec,
C-S4A2-RD1100	Stage 4 Area 2 - Asphalt Paving - Base Asphalt	3	27-May-25	30-May-25	33													Stage 4 Area 2 - Asphalt Pav
C-S4A2-RD1110	Stage 4 Area 2 - Install TMS Ductbank / Junction Boxes	3	27-May-25	30-May-25	15													Stage 4 Area 2 - Install TMS
C-S4A2-RD1120	Stage 4 Area 2 - Asphalt Paving - Intermediate Asphalt	3	02-Jun-25	05-Jun-25	33													Stage 4 Area 2 - Asphalt Pa
C-S4A2-RD1130	Stage 4 Area 2 - Install TMS / Sign Foundations / Light Foundations	10	02-Jun-25	17-Jun-25	15													Stage 4 Area 2 - Install TM
C-S4A2-RD1140	Stage 4 Area 2 - Asphalt Paving - Surface Asphalt	3	06-Jun-25	10-Jun-25	33													Stage 4 Area 2 - Asphalt Pa
C-S4A2-RD1150	Stage 4 Area 2 - Mill/Overlay/Pavement Markings 1025+00 to 1085+50	3	12-Jun-25	16-Jun-25	33													Stage 4 Area 2 - Mill/Overl
C-S4A2-RD1160	Stage 4 Area 2 - Place High Friction Epoxy Aggr Surface Treat 1060+71 to 1083+	3	17-Jun-25	20-Jun-25	33													Stage 4 Area 2 - Place Hig
C-S4A2-RD1170	Stage 4 Area 2 - Finegrade slopes & Ditch/Seed	2	19-Jun-25	20-Jun-25	33													Stage 4 Area 2 - Finegrad
C-S4A2-RD1180	Stage 4 Area 2 - Install TMS / Sign Structures / Light Structures	10	19-Jun-25	07-Jul-25	15													Stage 4 Area 2 - Install
C-S4A2-RD1190	Stage 4 Area 2 - Pull & Terminate Power and Fiber	5	08-Jul-25	15-Jul-25	15													Stage 4 Area 2 - Pull &
C-S4A2-RD1200	Stage 4 Area 2 - Re-open Loop Ramp from Tidewater Drive SB to I-64 EB	5	17-Jul-25	24-Jul-25	15													Stage 4 Area 2 - Re-o
C-S4A2-RD1210	Stage 4 Area 2 - Remove MOT Devices	2	25-Jul-25	28-Jul-25	15													Stage 4 Area 2 - Re
Stage 4 Area 2 - Tidewater Loop C		15	21-Apr-25	16-May-25	49													
C-S4A2-TWLC1000	Stage 4 Area 2 Tidewater Loop C- Install E&S Controls	2	21-Apr-25	23-Apr-25	38													Stage 4 Area 2 Tidewater Loop C
C-S4A2-TWLC1010	Stage 4 Area 2 Tidewater Loop C- Demo Existing Barrier / Guardrail	2	25-Apr-25	28-Apr-25	38													Stage 4 Area 2 Tidewater Loop C
C-S4A2-TWLC1020	Stage 4 Area 2 Tidewater Loop C- Install Drainage/SWM	2	25-Apr-25	28-Apr-25	40													Stage 4 Area 2 Tidewater Loop C
C-S4A2-TWLC1030	Stage 4 Area 2 Tidewater Loop C- Demo/Mill Pavement	2	29-Apr-25	30-Apr-25	38													Stage 4 Area 2 Tidewater Loop C
C-S4A2-TWLC1040	Stage 4 Area 2 Tidewater Loop C- Excavate / Embankment to Subgrade	3	01-May-25	05-May-25	38													Stage 4 Area 2 Tidewater Loop
C-S4A2-TWLC1050	Stage 4 Area 2 Tidewater Loop C- Asphalt Paving - Base Asphalt	2	06-May-25	08-May-25	38													Stage 4 Area 2 Tidewater Loop
C-S4A2-TWLC1060	Stage 4 Area 2 Tidewater Loop C - Surface Asphalt	2	09-May-25	12-May-25	38													Stage 4 Area 2 Tidewater Loop
C-S4A2-TWLC1070	Stage 4 Area 2 Tidewater Loop C - Install Guardrail	2	14-May-25	16-May-25	49													Stage 4 Area 2 Tidewater Loop

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025					
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Stage 4 Area 2 - Tidewater Loop B						15	14-May-25	12-Jun-25	38											
C-S4A2-TWLB1000	Stage 4 Area 2 Tidewater Loop B - Install E&S Controls	2	14-May-25	16-May-25	38														Stage 4 Area 2 Tidewater Loop B - Install E&S Controls	
C-S4A2-TWLB1010	Stage 4 Area 2 Tidewater Loop B - Demo Existing Barrier / Guardrail	2	19-May-25	21-May-25	38														Stage 4 Area 2 Tidewater Loop B - Demo Existing Barrier / Guardrail	
C-S4A2-TWLB1020	Stage 4 Area 2 Tidewater Loop B - Install Drainage/SWM	2	19-May-25	21-May-25	40														Stage 4 Area 2 Tidewater Loop B - Install Drainage/SWM	
C-S4A2-TWLB1030	Stage 4 Area 2 Tidewater Loop B - Demo/Mill Pavement	2	23-May-25	27-May-25	38														Stage 4 Area 2 Tidewater Loop B - Demo/Mill Pavement	
C-S4A2-TWLB1040	Stage 4 Area 2 Tidewater Loop B - Excavate / Embankment to Subgrade	3	29-May-25	02-Jun-25	38														Stage 4 Area 2 Tidewater Loop B - Excavate / Embankment to Subgrade	
C-S4A2-TWLB1050	Stage 4 Area 2 Tidewater Loop B - Asphalt Paving - Base Asphalt	2	03-Jun-25	05-Jun-25	38														Stage 4 Area 2 Tidewater Loop B - Asphalt Paving - Base Asphalt	
C-S4A2-TWLB1060	Stage 4 Area 2 Tidewater Loop B - Asphalt Paving - Surface Asphalt	2	06-Jun-25	09-Jun-25	38														Stage 4 Area 2 Tidewater Loop B - Asphalt Paving - Surface Asphalt	
C-S4A2-TWLB1070	Stage 4 Area 2 Tidewater Loop B - Install Guardrail	2	10-Jun-25	12-Jun-25	38														Stage 4 Area 2 Tidewater Loop B - Install Guardrail	
Stage 4 Area 2 - Tidewater Ramp C						15	19-May-25	16-Jun-25	38											
C-S4A2-TWRC1000	Stage 4 Area 2 Tidewater Ramp C - Install E&S Controls	2	19-May-25	21-May-25	38														Stage 4 Area 2 Tidewater Ramp C - Install E&S Controls	
C-S4A2-TWRC1010	Stage 4 Area 2 Tidewater Ramp C - Demo Existing Barrier / Guardrail	2	23-May-25	27-May-25	38														Stage 4 Area 2 Tidewater Ramp C - Demo Existing Barrier / Guardrail	
C-S4A2-TWRC1020	Stage 4 Area 2 Tidewater Ramp C - Install Drainage/SWM	2	23-May-25	27-May-25	40														Stage 4 Area 2 Tidewater Ramp C - Install Drainage/SWM	
C-S4A2-TWRC1030	Stage 4 Area 2 Tidewater Ramp C - Demo/Mill Pavement	2	29-May-25	30-May-25	38														Stage 4 Area 2 Tidewater Ramp C - Demo/Mill Pavement	
C-S4A2-TWRC1040	Stage 4 Area 2 Tidewater Ramp C - Excavate / Embankment to Subgrade	3	02-Jun-25	05-Jun-25	38														Stage 4 Area 2 Tidewater Ramp C - Excavate / Embankment to Subgrade	
C-S4A2-TWRC1050	Stage 4 Area 2 Tidewater Ramp C - Asphalt Paving - Base Asphalt	2	06-Jun-25	09-Jun-25	38														Stage 4 Area 2 Tidewater Ramp C - Asphalt Paving - Base Asphalt	
C-S4A2-TWRC1060	Stage 4 Area 2 Tidewater Ramp C - Asphalt Paving - Surface Asphalt	2	10-Jun-25	12-Jun-25	38														Stage 4 Area 2 Tidewater Ramp C - Asphalt Paving - Surface Asphalt	
C-S4A2-TWRC1070	Stage 4 Area 2 Tidewater Ramp C - Install Guardrail	2	13-Jun-25	16-Jun-25	38														Stage 4 Area 2 Tidewater Ramp C - Install Guardrail	
Stage 4 Area 2 - I-64 EB 1025+00 to 1085+50 Structures						47	27-May-25	19-Aug-25	3											
Stage 4 Area 2 Structures - I-64 EB Bridge over Tidewater - Superstructure Repairs						47	27-May-25	19-Aug-25	3											
C-S4A2-EBTW-BR1000	Stage 4 Area 2 - I-64 EB Bridge over Tidewater Jacking and Blocking Beam	5	27-May-25	03-Jun-25	3														Stage 4 Area 2 - I-64 EB Bridge over Tidewater Jacking and Blocking Beam	
C-S4A2-EBTW-BR1010	Stage 4 Area 2 - I-64 EB Br over Tidewater Repl Bearing (Abut A, B, Pier 1-Pier 2)	4	05-Jun-25	10-Jun-25	3														Stage 4 Area 2 - I-64 EB Bridge over Tidewater Repl Bearing (Abut A, B, Pier 1-Pier 2)	
C-S4A2-EBTW-BR1020	Stage 4 Area 2 - I-64 EB Bridge over Tidewater Deck Joint Closure - (Pier 1-Pier 2)	9	12-Jun-25	26-Jun-25	3														Stage 4 Area 2 - I-64 EB Bridge over Tidewater Deck Joint Closure - (Pier 1-Pier 2)	
C-S4A2-EBTW-BR1030	Stage 4 Area 2 - I-64 EB Br over Tidewater Virginia Micro Abt & Appr Slab Extens	10	27-Jun-25	15-Jul-25	3														Stage 4 Area 2 - I-64 EB Bridge over Tidewater Virginia Micro Abt & Appr Slab Extens	
C-S4A2-EBTW-BR1040	Stage 4 Area 2 - I-64 EB Bridge over Tidewater Type A Milling	3	17-Jul-25	21-Jul-25	3														Stage 4 Area 2 - I-64 EB Bridge over Tidewater Type A Milling	
C-S4A2-EBTW-BR1050	Stage 4 Area 2 - I-64 EB Bridge over Tidewater Type A Hydro-Demolition 1/2"	3	22-Jul-25	25-Jul-25	3														Stage 4 Area 2 - I-64 EB Bridge over Tidewater Type A Hydro-Demolition 1/2"	
C-S4A2-EBTW-BR1060	Stage 4 Area 2 - I-64 EB Bridge over Tidewater Install Latex Modified Concrete 2	3	28-Jul-25	31-Jul-25	3														Stage 4 Area 2 - I-64 EB Bridge over Tidewater Install Latex Modified Concrete 2	
C-S4A2-EBTW-BR1070	Stage 4 Area 2 - I-64 EB Bridge over Tidewater Remove MOT Devices	10	01-Aug-25	19-Aug-25	3														Stage 4 Area 2 - I-64 EB Bridge over Tidewater Remove MOT Devices	
Stage 4 Area 3 - I-64 WB 3032+00 to 3082+00						47	06-May-25	01-Aug-25	12											
Stage 4 Area 3 - I-64 WB 3032+00 to Tidewater Ramp E - Roadway						40	06-May-25	21-Jul-25	19											
C-S4A3-RD1000	Stage 4 Area 3 3032+00 to Ramp E - Install E&S Controls	2	06-May-25	08-May-25	19														Stage 4 Area 3 3032+00 to Ramp E - Install E&S Controls	
C-S4A3-RD1010	Stage 4 Area 3 3032+00 to Ramp E - Demo Existing Barrier / Guardrail	2	09-May-25	12-May-25	19														Stage 4 Area 3 3032+00 to Ramp E - Demo Existing Barrier / Guardrail	
C-S4A3-RD1020	Stage 4 Area 3 3032+00 to Ramp E - Install Drainage/SWM	5	09-May-25	19-May-25	21														Stage 4 Area 3 3032+00 to Ramp E - Install Drainage/SWM	
C-S4A3-RD1030	Stage 4 Area 3 3032+00 to Ramp E - Demo/Mill Pavement	5	14-May-25	23-May-25	19														Stage 4 Area 3 3032+00 to Ramp E - Demo/Mill Pavement	
C-S4A3-RD1040	Stage 4 Area 3 3032+00 to Ramp E - Excavate / Embankment to Subgrade	5	27-May-25	03-Jun-25	19														Stage 4 Area 3 3032+00 to Ramp E - Excavate / Embankment to Subgrade	
C-S4A3-RD1050	Stage 4 Area 3 3032+00 to Ramp E - Install Underdrain	3	05-Jun-25	09-Jun-25	19														Stage 4 Area 3 3032+00 to Ramp E - Install Underdrain	
C-S4A3-RD1060	Stage 4 Area 3 3032+00 to Ramp E - Install Guardrail	3	05-Jun-25	09-Jun-25	35														Stage 4 Area 3 3032+00 to Ramp E - Install Guardrail	
C-S4A3-RD1070	Stage 4 Area 3 3032+00 to Ramp E - Backfill/Grade Slopes	3	05-Jun-25	09-Jun-25	35														Stage 4 Area 3 3032+00 to Ramp E - Backfill/Grade Slopes	
C-S4A3-RD1080	Stage 4 Area 3 3032+00 to Ramp E - Install Subbase (CTA/OGDL)	3	10-Jun-25	13-Jun-25	19														Stage 4 Area 3 3032+00 to Ramp E - Install Subbase (CTA/OGDL)	
C-S4A3-RD1090	Stage 4 Area 3 3032+00 to Ramp E - Finegrade slopes & Ditch/Seed	2	10-Jun-25	12-Jun-25	35														Stage 4 Area 3 3032+00 to Ramp E - Finegrade slopes & Ditch/Seed	
C-S4A3-RD1100	Stage 4 Area 3 3032+00 to Ramp E - Asphalt Paving - Base Asphalt	3	16-Jun-25	19-Jun-25	19														Stage 4 Area 3 3032+00 to Ramp E - Asphalt Paving - Base Asphalt	
C-S4A3-RD1110	Stage 4 Area 3 3032+00 to Ramp E - Asphalt Paving - Intermediate Asphalt	3	20-Jun-25	24-Jun-25	19														Stage 4 Area 3 3032+00 to Ramp E - Asphalt Paving - Intermediate Asphalt	
C-S4A3-RD1120	Stage 4 Area 3 3032+00 to Ramp E - Asphalt Paving - Surface Asphalt	3	26-Jun-25	30-Jun-25	19														Stage 4 Area 3 3032+00 to Ramp E - Asphalt Paving - Surface Asphalt	
C-S4A3-RD1130	Stage 4 Area 3 Mill/Overlay/Pavement Markings WB 3032+00 to 3082+00	3	01-Jul-25	07-Jul-25	19														Stage 4 Area 3 Mill/Overlay/Pavement Markings WB 3032+00 to 3082+00	
C-S4A3-RD1140	Stage 4 Area 3 Place High Friction Epx Aggr Surface Trt WB 3057+58 to 3074+7	3	08-Jul-25	11-Jul-25	19														Stage 4 Area 3 Place High Friction Epx Aggr Surface Trt WB 3057+58 to 3074+7	
C-S4A3-RD1150	Stage 4 Area 3 - Remove MOT Devices	5	14-Jul-25	21-Jul-25	19														Stage 4 Area 3 - Remove MOT Devices	

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone

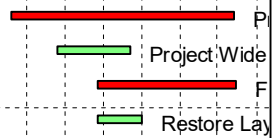


Activity ID	Activity Name	OD	Start	Finish	TF	2023				2024				2025				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Stage 4 Area 3 - I-64 WB 3032+00 to 3082+00 - Structures		47	06-May-25	01-Aug-25	12													
C-S4A3-WBTW-BR1000	Stage 4 Area 3 - Structures I-64 WB Br over Tidewater Jacking and Blocking Be	5	06-May-25	14-May-25	12													
C-S4A3-WBTW-BR1010	Stage 4 Area 3 - Str I-64 WB Br over Tidewater Rpl Bearing (Abut A, B, Pier 1-Pi	4	16-May-25	23-May-25	12													
C-S4A3-WBTW-BR1020	Stage 4 Area 3 - Str I-64 WB Br over Tidewater Deck Joint Closure - (Pier 1-Pier	9	27-May-25	10-Jun-25	12													
C-S4A3-WBTW-BR1030	Stage 4 Area 3 - Str I-64 WB Br over Tidewater Virginia Micro Abt & Appr Slab E	10	12-Jun-25	27-Jun-25	12													
C-S4A3-WBTW-BR1040	Stage 4 Area 3 - Structures I-64 WB Bridge over Tidewater Type A Milling	3	30-Jun-25	03-Jul-25	12													
C-S4A3-WBTW-BR1050	Stage 4 Area 3 - Structures I-64 WB Br over Tidewater Type A Hydro-Demol 1/2"	3	07-Jul-25	10-Jul-25	12													
C-S4A3-WBTW-BR1060	Stage 4 Area 4 - Structures I-64 WB Br over Tidewater Install Latex Mod Concr	3	11-Jul-25	15-Jul-25	12													
C-S4A3-WBTW-BR1070	Stage 4 Area 3 - Structures I-64 WB Bridge over Tidewater Remove MOT Devic	10	17-Jul-25	01-Aug-25	12													
Stage 4 Area 4 - I-64 WB 2810+50 to 2860+00		114	15-Nov-24	11-Jul-25	24													
Stage 4 Area 4 - I-64 WB 2810+50 to 2860+00 - Roadway		76	15-Nov-24	30-Apr-25	62													
C-S4A4-RD1000	Stage 4 Area 4 - Install E&S Controls	2	15-Nov-24	18-Nov-24	24													
C-S4A4-RD1010	Stage 4 Area 4 - Demo Existing Barrier / Guardrail	2	20-Nov-24	22-Nov-24	53													
C-S4A4-RD1020	Stage 4 Area 4 - Install Drainage/SWM	5	20-Nov-24	02-Dec-24	55													
C-S4A4-RD1030	Stage 4 Area 4 - Demo/Mill Pavement	5	25-Nov-24	06-Dec-24	53													
C-S4A4-RD1040	Stage 4 Area 4 - Excavate / Embankment to Subgrade	5	09-Dec-24	18-Dec-24	53													
C-S4A4-RD1050	Stage 4 Area 4 - Install Underdrain	3	20-Dec-24	26-Dec-24	93													
C-S4A4-RD1060	Stage 4 Area 4 - Install Guardrail	3	20-Dec-24	26-Dec-24	109													
C-S4A4-RD1070	Stage 4 Area 4 - Backfill/Grade Slopes	3	20-Dec-24	26-Dec-24	53													
C-S4A4-RD1080	Stage 4 Area 4 - Install Subbase (CTA/OGDL)	3	27-Dec-24	31-Dec-24	93													
C-S4A4-RD1090	Stage 4 Area 4 - ITS/Elec	3	27-Dec-24	31-Dec-24	53													
C-S4A4-RD1110	Stage 4 Area 4 - Install TMS Ductbank / Junction Boxes	3	02-Jan-25	06-Jan-25	53													
C-S4A4-RD1130	Stage 4 Area 4 - Install TMS / Sign Foundations / Light Foundations	10	08-Jan-25	29-Jan-25	53													
C-S4A4-RD1170	Stage 4 Area 4 - Finegrade slopes & Ditch/Seed	2	31-Jan-25	03-Feb-25	93													
C-S4A4-RD1180	Stage 4 Area 4 - Install TMS / Sign Structures / Light Structures	10	31-Jan-25	21-Feb-25	53													
C-S4A4-RD1190	Stage 4 Area 4 - Pull & Terminate Power and Fiber	5	24-Feb-25	05-Mar-25	53													
C-S4A4-RD1100	Stage 4 Area 4 - Asphalt Paving - Base Asphalt	3	17-Mar-25	20-Mar-25	63													
C-S4A4-RD1120	Stage 4 Area 4 - Asphalt Paving - Intermediate Asphalt	3	21-Mar-25	25-Mar-25	63													
C-S4A4-RD1140	Stage 4 Area 4 - Asphalt Paving - Surface Asphalt	3	27-Mar-25	31-Mar-25	63													
C-S4A4-RD1150	Stage 4 Area 4 - Mill/Overlay/Pavement Markings WB 2810+00 to 2860+00	3	01-Apr-25	04-Apr-25	63													
C-S4A4-RD1160	Stage 4 Area 4 - Place High Friction Epoxy Aggregate Surface Treatment 2824+0	3	07-Apr-25	10-Apr-25	63													
C-S4A4-RD1200	Stage 4 Area 4 - Remove MOT Devices	10	11-Apr-25	30-Apr-25	62													
Stage 4 Area 4 - I-64 WB 2810+50 to 2860+00 - Structures		112	20-Nov-24	11-Jul-25	24													
Stage 4 Area 4 - Structures - I-64 WB Bridge over Little Creek		64	20-Nov-24	09-Apr-25	24													
Stage 4 Area 4 - Structures - I-64 WB Bridge over Little Creek - Superstructure Repairs		64	20-Nov-24	09-Apr-25	24													
C-S4A4-WBLC-BR1000	Stage 4 Area 4 - Structures - I-64 WB Bridge over Little Creek Set MOT Devices	5	20-Nov-24	02-Dec-24	24													
C-S4A4-WBLC-BR1010	Stage 4 Area 4 - Str - I-64 WB Br over Little Creek Jacking and Blocking Beam	5	04-Dec-24	13-Dec-24	24													
C-S4A4-WBLC-BR1020	Stage 4 Area 4 - Str - I-64 WB Br over Little Creek Repl Brg (Abut A, B, Pier 1-Pi	5	16-Dec-24	26-Dec-24	24													
C-S4A4-WBLC-BR1030	Stage 4 Area 4 - Str - I-64 WB Br over Little Creek Deck Joint Closure - (Pier 1-Pi	24	27-Dec-24	17-Feb-25	24													
C-S4A4-WBLC-BR1040	Stage 4 Area 4 - Str - I-64 WB Br over Little Creek Virginia Micro Abt & Appr Slat	10	19-Feb-25	12-Mar-25	24													
C-S4A4-WBLC-BR1050	Stage 4 Area 4 - Structures - I-64 WB Bridge over Little Creek Type A Milling	5	14-Mar-25	21-Mar-25	24													
C-S4A4-WBLC-BR1060	Stage 4 Area 4 - Structures - I-64 WB Br over Little Creek Type A Hydro-Demo 1/	5	24-Mar-25	31-Mar-25	24													
C-S4A4-WBLC-BR1070	Stage 4 Area 4 - Structures - I-64 WB Br over Little Creek Install Latex Mod Con	5	01-Apr-25	09-Apr-25	24													
Stage 4 Area 4 - Structures - I-64 WB Bridge over Granby		48	11-Apr-25	11-Jul-25	24													
Stage 4 Area 4 - Structures - I-64 WB Bridge over Granby - Superstructure Repairs		48	11-Apr-25	11-Jul-25	24													
C-S4A4-WBGB-BR1000	Stage 4 Area 4 - Structures - I-64 WB Bridge over Granby Set MOT Devices	5	11-Apr-25	21-Apr-25	24													

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining Work
█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone



Activity ID	Activity Name	OD	Start	Finish	TF	2023					2024				2025				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
C-S4A4-WBGB-BR1010	Stage 4 Area 4 - Structures - I-64 WB Br over Granby Jacking and Blocking Bear	5	23-Apr-25	30-Apr-25	24														
C-S4A4-WBGB-BR1020	Stage 4 Area 4 - Str - I-64 WB Br over Granby Repl Bearing (Abut A, B, Pier 1-P	3	01-May-25	05-May-25	24														
C-S4A4-WBGB-BR1030	Stage 4 Area 4 - Str - I-64 WB Br over Granby Deck Joint Closure - (Pier 1-Pier	9	06-May-25	23-May-25	24														
C-S4A4-WBGB-BR1040	Stage 4 Area 4 - Str - I-64 WB Br over Granby Virginia Micro Abt & Appr Slab Ext	10	27-May-25	12-Jun-25	24														
C-S4A4-WBGB-BR1050	Stage 4 Area 4 - Structures - I-64 WB Bridge over Granby Type A Milling	2	13-Jun-25	16-Jun-25	24														
C-S4A4-WBGB-BR1060	Stage 4 Area 4 - Structures - I-64 WB Br over Granby Type A Hydro-Demo 1/2"	2	17-Jun-25	19-Jun-25	24														
C-S4A4-WBGB-BR1070	Stage 4 Area 4 - Structures - I-64 WB Br over Granby Install Latex Mod Conc 2"	2	20-Jun-25	23-Jun-25	24														
C-S4A4-WBGB-BR1080	Stage 4 Area 4 - Str - I-64 WB Br over Granby - Remove MOT Devices for Stage	10	24-Jun-25	11-Jul-25	24														
Stage 4 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00		50	13-Jun-24	13-Sep-24	171														
Stage 4 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6003+00 to 6060+00 - Roadway		40	13-Jun-24	23-Aug-24	170														
C-S4A5-RD1000	Stage 4 Area 5 - Express Lane Transition Install Subbase (CTA/OGDL)	5	13-Jun-24	20-Jun-24	144														
C-S4A5-RD1010	Stage 4 Area 5 - Express Lane Transition Asphalt Paving - Base Asphalt	2	21-Jun-24	24-Jun-24	117														
C-S4A5-RD1020	Stage 4 Area 5 - Install Drainage	10	21-Jun-24	09-Jul-24	144														
C-S4A5-RD1030	Stage 4 Area 5 - Express Lane Transition Asphalt Paving - Intermediate Asphalt	2	25-Jun-24	27-Jun-24	117														
C-S4A5-RD1040	Stage 4 Area 5 - Express Lane Transition Asphalt Paving - Surface Asphalt	2	28-Jun-24	01-Jul-24	117														
C-S4A5-RD1050	Stage 4 Area 5 - Mill/Overlay/Pavement Markings WB 2860+00 to 3032+00	2	03-Jul-24	05-Jul-24	160														
C-S4A5-RD1060	Stage 4 Area 5 - Place High Friction Ep Aggr Surf. Treat WB 3016+14 to 3037+1	2	08-Jul-24	09-Jul-24	160														
C-S4A5-RD1070	Stage 4 Area 5 - Install New Barrier to Separate WB Express Lane and Rev. Lan	10	11-Jul-24	26-Jul-24	144														
C-S4A5-RD1080	Stage 4 Area 5 - Place High Friction Ep Aggr Surf. Treat. HOV 6002+50 to 6005+	2	11-Jul-24	12-Jul-24	160														
C-S4A5-RD1090	Stage 4 Area 5 - Place High Friction Ep Aggr Surf. Treat. HOV 6007+16 to 6022+	2	15-Jul-24	16-Jul-24	160														
C-S4A5-RD1100	Stage 4 Area 5 - Install Gates at Express Lanes	5	29-Jul-24	05-Aug-24	144														
C-S4A5-RD1110	Stage 4 Area 5 - Install Foundation and Equipment for WB Toll Gantry	10	06-Aug-24	23-Aug-24	144														
Stage 4 Area 5 - I-64 WB 2860+00 to 3032+00 & HOV 6023+04.44 to 6031+23.51 - Structures - 21Day		21	24-Aug-24	13-Sep-24	346														
Stage 4 Area 5 - Structures - I-64 HOV Bridge over Little Creek & I-564 - Superstructure Repairs		21	24-Aug-24	13-Sep-24	346														
C-S4A5-HOV564-BR1000	Stage 4 Area 5 - Str - I-64 HOV Br over Little Creek & I-564 Close HOV Lanes	1	24-Aug-24	24-Aug-24	346														
C-S4A5-HOV564-BR1010	Stage 4 Area 5 - Str - I-64 HOV Br over Little Creek & I-564 Jacking and Block Br	1	25-Aug-24	25-Aug-24	346														
C-S4A5-HOV564-BR1020	Stage 4 Area 5 - Str - I-64 HOV Br over Ltl Creek & I-564 Rpl Brg (Abut A, B, Pie	2	26-Aug-24	27-Aug-24	346														
C-S4A5-HOV564-BR1030	Stage 4 Area 5 - Str - I-64 HOV Br over Ltl Crk & I-564 Reconstr Tooth Jnt at Pie	2	26-Aug-24	27-Aug-24	346														
C-S4A5-HOV564-BR1040	Stage 4 Area 5 - Str - I-64 HOV Br ovr Ltl Crk & I-564 VA Micro Abt/Ap Slab Ext.	5	28-Aug-24	01-Sep-24	346														
C-S4A5-HOV564-BR1050	Stage 4 Area 5 - Str - I-64 HOV Br over Little Creek & I-564 Type A Milling	2	02-Sep-24	03-Sep-24	346														
C-S4A5-HOV564-BR1060	Stage 4 Area 5 - Str - I-64 HOV Br over Little Creek & I-564 Type A HydroDemo	2	04-Sep-24	05-Sep-24	346														
C-S4A5-HOV564-BR1070	Stage 4 Area 5 - Str - I-64 HOV Br over Little Crk & I-564 Install Latex Mod Conc	2	06-Sep-24	07-Sep-24	346														
C-S4A5-HOV564-BR1080	Stage 4 Area 5 - Str - I-64 HOV Br over Little Crk & I-564 Construct Barrier on Br	5	08-Sep-24	12-Sep-24	346														
C-S4A5-HOV564-BR1090	Stage 4 Area 5 - Str - I-64 HOV Br over Little Crk & I-564 Reopen HOV to Traffic	1	13-Sep-24	13-Sep-24	346														
Testing & Closeout		92	18-Jun-25	15-Dec-25	0														
CO-1010	Project Wide Tolling Equipment Integration (180 Days)	180	18-Jun-25	14-Dec-25	0														
CO-1000	Project Wide ITS Testing and Integration (60 Days)	60	25-Jul-25	22-Sep-25	84														
CO-1020	Final Completion Punch List & Closeout Documentation	55	26-Aug-25	15-Dec-25	0														
CO-1030	Restore Laydown Areas	20	26-Aug-25	01-Oct-25	35														





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